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Progress Report of the Technical Group on Reverse Transactions

Prepared by by the Statistics Department
International Monetary Fund

Progress report of the Technical Group on Reverse Transactions

Over the last several years, the IMF Committee on Balance of Payments Statistics (Committee) has considered the appropriate statistical way to treat reverse transactions (repurchase agreements (repos) and securities lending without cash collateral[1]). At its meeting in 2001, the Committee reconfirmed its decision to treat repos as collateralized loans, and to ignore securities lending/borrowing without cash collateral (SL/B) as a transaction, but asked the Technical Group on Reverse Transactions (TGRT) to explore the subject further. In 2002, the TGRT undertook a survey of various financial institutions in nine countries, to identify what their internal recording practices were for these reverse transactions. The results of the survey (BOPCOM-03/12) were discussed at the Committee's meeting in 2003. This paper provides an update on the work of the TGRT since the 2003 Committee meeting.

Among the results of that survey were indications that a significant minority of respondents may record reverse transactions using the so-called "four entry" approach, that is, they indicated that they record repurchase agreements as both collateralized loans and as transactions in the underlying security, simultaneously. As the "four entry" approach may offer a way of improving reporting of reverse transactions, the Committee asked the TGRT to explore the results further. To that end, the TGRT have prepared a questionnaire (Annex 1). However, before this questionnaire can be taken back to the financial institutions that responded to the survey, a number of issues have arisen.

Firstly, the focus of the questionnaire is on balance sheet positions, because those respondents that had indicated in their responses to the survey that they recorded reverse transactions using the "four entry" approach had indicated they recorded reverse transactions on balance sheet. However, on reflection, the TGRT feels that this approach may be too restricted – the TGRT is of the view that it is possible (even probable) that parties involved in repurchase agreements will know the counterparty and what is the security involved, regardless of whether this information is recorded on balance sheet, as any institution involved in such a transaction will want to know the credit and market risks. If this is correct, it may mean that the information required from financial institutions to measure repos in the desired manner could be provided to compilers, who could then make the adjustments to the data, regardless of whether or not the institutions use the "four entry" approach, and place the transactions on their balance sheets. Accordingly, the TGRT feels that the questionnaire may need to be revised to explore information systems in greater depth. Even so, it needs to be emphasized that, were such an approach to allow for the "four entry" approach to be adopted by balance of payments compilers, similar information would also be necessary for compilers of monetary and financial statistics, to ensure consistency of approaches.

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[1] Other reverse transactions, viz., gold swaps and gold loans/deposits, have also been considered by the Committee but this paper does not cover them.

Secondly, however, while such an approach may mean information on repos might be obtained more accurately when end-investors are approached, it will not assist those countries where nonbanks are involved in repos and balance of payments data are obtained through an ITRS. Moreover, in countries that use custodians to measure positions, and do not approach end-investors, such an avenue offers no solution, unless custodians are in a position to know when a transaction/holding is an outright sale or a reverse transaction. For the most part, custodians do not know this. To that end, it was noted in the BOPCOM-03/12, that certain financial institutions in the United States are using a tracking software to identify whether transactions are outright sales or reverse transactions. The Committee asked the TGRT to explore whether this software might be made available for use in other countries. It would appear that it is not, and that its use by these financial institutions is being restricted to only a few types of instruments. In addition, even if a survey of end-investors were able to provide the information required for the "four entry" approach, it is unlikely that such an approach would help identify securities lending without cash collateral. The reason for this is that, for the most part, end-investors are unaware that their securities are on loan at any given time – custodians usually have a master agreement with their investor customers, which permits the custodian to loan the investor's securities without having to seek approval for each loan. (Usually the custodian will indemnify the investor against loss.) As a consequence, while it may be worthwhile to undertake a survey of end-investors to see to what extent information on the "four entry" approach to the treatment of repos might be available in some countries, there will remain major gaps in the data, for one reason or another. To address these concerns, it may be necessary to hold a meeting on reverse transactions.

Thirdly, a possible positive development, raised at the 2003 meeting of the Committee, has been the increasing role of central clearing houses, raised in a paper by the Bank of England (see BOPCOM-03/13). A follow up paper has been prepared for the 2004 meeting (see BOPCOM-04/??). This paper indicates the work plan to find out more about the operations and role of central clearing houses in reverse transactions. It is probable that, as these institutions become more important in some markets, some of the information sought on reverse transactions might be more readily available, as these central clearing houses would be principal to all transactions conducted through them, which would mean that they would know their counterparties and the securities involved.

In addition to the above, the Committee asked the TGRT to prepare a few examples on how the "four entry" approach would work for repurchase agreements and securities lending/borrowing. Annex 2 to this paper provides three examples. Among the points that emerge from these examples is how income would be accrued on securities not held on balance sheet (see Examples 1 and 2). Given the proposal in the Annotated Outline (para. 10.4 and Table 10.1) that income streams be linked to the underlying asset, this might pose some problems.

Questions for the Committee

1. Does the Committee have any views as to how the work on reverse transactions should be taken forward?

2. Does the Committee have any comments on the manner in which the questionnaire (in Annex 2) might need to be modified?

3. Does the Committee agree with the treatment of the "four entry" approach shown in the examples in Annex 2?

Annex 1

Draft questionnaire on information regarding financial institutions' recording of transactions in and holdings of repurchase agreements

Preamble

"Reverse transactions" refer to **securities repurchase agreements** (*repo/reverse repo*), which involve a contract to sell and repurchase a security on a fixed date, or on demand, for an agreed amount and which involve the exchange of cash. As repos are neither unambiguously collateralized loans nor outright sales/purchases of the underlying security, they are difficult to characterize and capture for statistical purposes. The purpose of this questionnaire is to explore the extent to which the information may be more readily provided for statistical measurement.

In order to try to improve statisticians' understanding of how repos are treated by the parties that undertake them, a group of countries agreed, under the auspices of the International Monetary Fund, to survey some of their financial institutions on what information they maintained on repos in their internal information systems. Information obtained from that survey indicated that there are a significant number of financial institutions that record repos as both loans (receivable/payable) **and** as a purchase/sale of the underlying security, with an accompanying asset/liability to receive back/return the security at the maturity of the contract.

This questionnaire is attempting to build on the information gleaned from that survey to explore how such recording of reverse transactions could improve statistics on them.

We are very grateful for your participation in this exercise.

1. Please indicate your enterprise's total assets as at (date to be determined)

2. Do you undertake repurchase agreements? Yes No

If no, thank you for your participation. If yes, please continue to Question 3.

3. Please indicate the value of repurchase agreements outstanding (date to be determined)

Repos out
Reverse repos in

4. Please indicate the value of repurchase agreements undertaken during (period to be determined).

Repos out
Reverse repos in

5. Please indicate the value of securities outstanding, as at (date to be determined) on repo/reverse repo with:

	Repo	Reverse repo
Resident central bank		
Nonresident central bank		
Resident banks		
Nonresident banks		
Resident central clearing houses		
Nonresident central clearing houses		
Other resident financial institutions		
Other nonresident financial institutions		
Other residents		
Other nonresidents		

6. Please indicate the value of securities undertaken during (period to be determined) on repo/reverse repo with:

	Repo	Reverse repo
Resident central bank		
Nonresident central bank		
Resident banks		
Nonresident banks		
Resident central clearing houses		
Nonresident central clearing houses		
Other resident financial institutions		
Other nonresident financial institutions		
Other residents		
Other nonresidents		

Annex 2

Examples of reverse transactions for repurchase agreements where the transaction in the underlying instrument and the loan element of the transaction are both recognized (the so-called "four entry approach") and securities lending/borrowing without cash collateral where the transaction in the security is recognized

Example 1. "Four Entry" Approach for Repurchase Agreements

Cash taker (CT) repos, for one month, 200 in security for cash to cash provider (CP) and uses the funds to make a commercial loan. Repurchase price, at month's end, is 201, implying a 6 percent annual repo rate.

All securities earn 12 percent annual rate of interest.

The commercial loan earns 15 percent annual rate of interest. The commercial loan is repaid just prior to the settlement of the second leg of the repurchase agreement.

Cash holdings earn no interest.

No change in interest rates or market prices of the securities occur during the period.

CT's opening balance sheet (prior to repo)

Assets		*Liabilities*	
Cash	400		
Securities	250	Shareholders' Funds	650
Total	650		650

CP's opening balance sheet (prior to reverse repo)

Assets		*Liabilities*	
Cash	500		
Securities	350	Shareholders' Funds	850
	850		850

Following the repo, and after CT has lent the funds received under the repo for a commercial loan

<u>CT's balance sheet</u>
(after 1st leg repo, and after making commercial loan)

Assets		*Liabilities*	
Cash	400	Loan from CP	200
Commercial loan	200		
Securities	50		
Receivable from CP for return of repoed[(2)] securities	200	Shareholders' Funds	650
Total	850		850

<u>CP's balance sheet</u>
(after 1st leg of reverse repo)

Assets		*Liabilities*	
Cash	300		
Securities	550	Liability to return to CT securities acquired under reverse repo[(3)]	200
Loan receivable under repo	200		
		Shareholders' Funds	850
Total	1050		1050

[(2)] Would be classified as an "Other assets" in "Other investment"
[(3)] Would be classified as an "Other liabilities" in "Other investment"

<u>CT's income statement for month of repo</u>

	CR	DR
Interest receivable from commercial loan	2.5	
Interest payable to CP on repo		1
Accrued interest on repoed security [(4)]	2	
Accrued interest on other securities	0.5	
Total	5	1

<u>CP's income statement for month of repo</u>

	CR	DR
Interest receivable on repo	1	
Accrued interest on securities not received under reverse repo	3.5	
Total	4.5	0

[(4)] **N.B.** Interest would accrue on securities that were on repo, even though they would not be on balance sheet of the CT. This would cause something of an anomaly in the proposed balance of payments framework (in the Annotated Outline) linking income with the associated asset/liability.

Balance sheets just prior to unwinding of repo and repayment of commercial loan but after accruing income and expense items to the balance sheet.

<u>CT's balance sheet</u>

Assets		*Liabilities*	
Cash	400	Loan from CP	201
Commercial Loan	202.5		
Securities	50.5		
Receivable from CP for return of repoed securities	200		
Accrued int. on repoed securities	2	Shareholders' Funds	654
Total	855		855

<u>CP's balance sheet</u>

Assets		*Liabilities*	
Cash	300	Liability to return to CT security acquired under reverse repo	200
Securities	553.5		
Loan receivable under repo	201		
		Shareholders' Funds	854.5
	1054.5		1054.5

<u>CT's closing balance sheet</u>
(after conclusion of 2nd leg of repo)

Assets		*Liabilities*	
Cash	401.5		
Securities	252.5	Shareholders' Funds	654
Total	654		654

<u>CP's closing balance sheet</u>
(after conclusion of 2nd leg of reverse repo)

Assets		*Liabilities*	
Cash	501		
Securities	353.5	Shareholders' Funds	854.5
	854.5		854.5

If the securities CP has acquired under the reverse repo are repoed out, the recording of the transaction is similar.

Example 1A. Modified “Four Entry” Approach for Repurchase Agreements

Cash taker (CT) repos, for one month, 200 in security for cash to cash provider (CP) and uses the funds to make a commercial loan. Repurchase price, at month’s end, is 201, implying a 6 percent annual repo rate.

All securities earn 12 percent annual rate of interest.

The commercial loan earns 15 percent annual rate of interest. The commercial loan is repaid just prior to the settlement of the second leg of the repurchase agreement.

Cash holdings earn no interest.

No change in interest rates or market prices of the securities occur during the period.

CT’s opening balance sheet (prior to repo)

Assets		*Liabilities*	
Cash	400		
Securities	250	Shareholders’ Funds	650
- Of which: Portf. Inv.	250		
Total	650		650

CP’s opening balance sheet (prior to reverse repo)

Assets		*Liabilities*	
Cash	500		
Securities	350	Shareholders’ Funds	850
Total	850		850

Following the repo, and after CT has lent the funds received under the repo for a commercial loan

CT's balance sheet
(after 1st leg repo, and after making commercial loan)

Assets		*Liabilities*	
Cash	400	Loan from CP	200
Commercial loan	200		
Securities	50		
- Of which:			
Portf. Inv. 250			
Repoed - 200			
Receivable from CP for return of repoed[2] securities	200	Shareholders' Funds	650
Total	850		850

CP's balance sheet
(after 1st leg of reverse repo)

Assets		*Liabilities*	
Cash	300	Liability to return to CT securities acquired under reverse repo[3]	200
Securities	550		
- Of which:			
Portf. Inv. 350			
Rec. in repo 200			
Loan receivable under repo	200		
		Shareholders' Funds	850
Total	1050		1050

[2] Would be classified as an "Other assets" in "Other investment"
[3] Would be classified as an "Other liabilities" in "Other investment"

CT's income statement for month of repo

	CR	DR
Interest receivable from commercial loan	2.5	
Interest payable to CP on repo		1
Accrued interest on Portf. Investment sec. [4]	2,5	
Total	5	1

CP's income statement for month of repo

	CR	DR
Interest receivable on repo	1	
Accrued interest on Portf. Investment sec.	3.5	
Total	4.5	0

[4] **N.B.** Interest would accrue only on securities included under the sub-item Portfolio Investment and not on securities received or given under repo. The anomaly in the previous example disappears.

Balance sheets just prior to unwinding of repo and repayment of commercial loan but after accruing income and expense items to the balance sheet.

<u>CT's balance sheet</u>

Assets		*Liabilities*	
Cash	400	Loan from CP	201
Commercial Loan	202.5		
Securities	52.5		
- Of which:			
Portf. Inv. 252,5			
Repoed - 200			
Receivable from CP for return of repoed securities	200		
		Shareholders' Funds	654
Total	855		855

<u>CP's balance sheet</u>

Assets		*Liabilities*	
Cash	300	Liability to return to CT security acquired under reverse repo	200
Securities	553.5		
- Of which:			
Portf. Inv. 353,5			
Rec. in repo 200			
Loan receivable under repo	201		
		Shareholders' Funds	854.5
	1054.5		1054.5

<u>CT's closing balance sheet</u>
(after conclusion of 2nd leg of repo)

Assets		*Liabilities*	
Cash	401.5		
Securities	252.5	Shareholders' Funds	654
- Of which:			
Portf. Inv.252,5			
Total	654		654

<u>CP's closing balance sheet</u>
(after conclusion of 2nd leg of reverse repo)

Assets		*Liabilities*	
Cash	501		
Securities	353.5	Shareholders' Funds	854.5
- Of which:			
Portf. Inv. 353,5			
	854.5		854.5

If the securities CP has acquired under the reverse repo are repoed out, the recording of the transaction is similar.

Example 2. "Four Entry" Approach for Repurchase Agreements with Security Acquired by CP under the Reverse Repo with CT being repoed out to a third party

To simplify the recording, it is assumed that the repoing out of the security acquired by CP is done for the same amount and the same duration as the repo with CT, and that it occurs immediately after it has been acquired, and that the funds from the on-sale are used to make a commercial loan, for one month, at 18 per cent per annum. This commercial loan is unwound immediately prior to the settlement of the second leg of the second repo. The second leg of the first repo is then settled.

All other aspects of the transaction remain the same as in Example 1.

CT's opening balance sheet
(prior to 1st repo)

Assets		*Liabilities*	
Cash	400		
Securities	250	Shareholders' Funds	650
Total	650		650

CP's opening balance sheet
(prior to 1st reverse repo)

Assets		*Liabilities*	
Cash	500		
Securities	350	Shareholders' Funds	850
Total	850		850

Following the repo, and after CT has lent the funds received under the repo for a commercial loan:

CT's balance sheet
(after 1st leg of 1st repo)

Assets		*Liabilities*	
Cash	400	Loan from CP	200
Commercial Loan	200		
Securities	50		
Receivable from CP for return of repoed securities	200	Shareholders' Funds	650
Total	850		850

CP's balance sheet
(after 1st leg of 1st reverse repo but before 2nd repo)

Assets		*Liabilities*	
Cash	300	Liability to return to CT security acquired under reverse repo	200
Securities	550		
Loan receivable under repo	200		
		Shareholders' Funds	850
Total	1050		1050

Following the 2nd repo, and after CP has used the funds so acquired for a commercial loan:

CT's balance sheet (unchanged)

Assets		*Liabilities*	
Cash	400	Loan from CP	200
Commercial Loan	200		
Securities	50		
Receivable from CP for return of repoed securities	200	Shareholders' Funds	650
Total	850		850

CP's balance sheet (after 1st leg of 2nd repo and after CP has made commercial loan)

Assets		*Liabilities*	
Cash	300	Liability to return to CT security acquired under reverse repo	200
Securities	350	Loan payable to 3rd party	200
Loan receivable under repo	200		
Commercial loan	200		
Receivable from 3rd party for return of repoed securities	200	Shareholders' Funds	850
	1250		1250

CT's income statement for month of repo (as for Example 1)

	CR	DR
Interest receivable from commercial loan	2.5	
Interest payable to CP on repo		1
Accrued interest on repoed security [5]	2	
Accrued interest on other securities	0.5	
Total	5	1

CP's income statement for month of repo

	CR	DR
Interest receivable from commercial loan	3	
Interest receivable on repo with CT	1	
Interest payable to 3rd party on repo		1
Accrued interest on securities not received under reverse repo	3.5	
Total	7.5	1

[5] **N.B.** The same anomaly on the receipt of income on an asset that would not be recorded on balance sheet would occur, as in the first example.

Balance sheets just prior to unwinding of repo and repayment of commercial loans but after accruing income and expense items to the balance sheet.

CT's balance sheet

Assets		*Liabilities*	
Cash	400	Loan from CP	201
Commercial Loan	202.5		
Securities	50.5		
Receivable from CP for return of repoed securities	200	Shareholders' Funds	654
Accrued interest on repoed securities	2		
Total	855		855

CP's balance sheet

Assets		*Liabilities*	
Cash	300	Liability to return to CT security acquired under reverse repo	200
Securities	353.5		
Loan receivable under repo with CT	201		
Commercial loan	203	Loan payable to 3rd party	201
Receivable from 3rd party for return of repoed securities	200	Shareholders' Funds	856.5
	1257.5		1257.5

CT's closing balance sheet
(after conclusion of 2nd leg of repo)

Assets		*Liabilities*	
Cash	401.5		
Securities	252.5	Shareholders' Funds	654
Total	654		654

CP's closing balance sheet
(after conclusion of 2nd leg of repo)

Assets		*Liabilities*	
Cash	503		
Securities	353.5	Shareholders' Funds	856.5
	856.5		856.5

Example 2A. Modified "Four Entry" Approach for Repurchase Agreements with Security Acquired by CP under the Reverse Repo with CT being repoed out to a third party

To simplify the recording, it is assumed that the repoing out of the security acquired by CP is done for the same amount and the same duration as the repo with CT, and that it occurs immediately after it has been acquired, and that the funds from the on-sale are used to make a commercial loan, for one month, at 18 per cent per annum. This commercial loan is unwound immediately prior to the settlement of the second leg of the second repo. The second leg of the first repo is then settled.

All other aspects of the transaction remain the same as in Example 1.

CT's opening balance sheet (prior to 1st repo)

Assets		*Liabilities*	
Cash	400		
Securities	250	Shareholders' Funds	650
Total	650		650

CP's opening balance sheet (prior to 1st reverse repo)

Assets		*Liabilities*	
Cash	500		
Securities	350	Shareholders' Funds	850
Total	850		850

Following the repo, and after CT has lent the funds received under the repo for a commercial loan:

CT's balance sheet (after 1st leg of 1st repo)

Assets		*Liabilities*	
Cash	400	Loan from CP	200
Commercial Loan	200		
Securities	50		
- Of which:			
Portf. Inv. 250			
Repoed - 200			
Receivable from CP for return of repoed securities	200	Shareholders' Funds	650
Total	850		850

CP's balance sheet (after 1st leg of 1st reverse repo but before 2nd repo)

Assets		*Liabilities*	
Cash	300	Liability to return to CT security acquired under reverse repo	200
Securities	550		
- Of which:			
Portf. Inv. 350			
Rec. in repo 200			
Loan receivable under repo	200		
		Shareholders' Funds	850
Total	1050		1050

Following the 2nd repo, and after CP has used the funds so acquired for a commercial loan:

<u>CT's balance sheet</u>
(unchanged)

Assets			*Liabilities*	
Cash		400	Loan from CP	200
Commercial Loan		200		
Securities		50		
- Of which:				
Portf. Inv.	250			
Repoed	- 200			
Receivable from CP for return of repoed securities		200	Shareholders' Funds	650
Total		850		850

<u>CP's balance sheet</u>
(after 1st leg of 2nd repo and after CP has made commercial loan)

Assets			*Liabilities*	
Cash		300	Liability to return to CT security acquired under reverse repo	200
Securities		350		
- Of which:				
Portf. Inv.	350			
Rec. in repo	200			
Repoed	- 200			
Loan receivable under repo		200		
Commercial loan		200	Loan payable to 3rd party	200
Receivable from 3rd party for return of repoed securities		200	Shareholders' Funds	850
Total		1250		1250

<u>CT's income statement for month of repo</u>
(as for Example 1)

	CR	DR
Interest receivable from commercial loan	2.5	
Interest payable to CP on repo		1
Accrued interest on Portfolio Inv. securities (5)	2,5	
Total	5	1

<u>CP's income statement for month of repo</u>

	CR	DR
Interest receivable from commercial loan	3	
Interest receivable on repo with CT	1	
Interest payable to 3rd party on repo		1
Accrued interest on Portfolio Inv. Sec.	3.5	
Total	7.5	1

(5) **N.B.** The same treatment as in the Example 1A.

Balance sheets just prior to unwinding of repo and repayment of commercial loans but after accruing income and expense items to the balance sheet.

CT's balance sheet

Assets		*Liabilities*	
Cash	400	Loan from CP	201
Commercial Loan	202,5		
Securities	52,5		
- Of which:			
Portf. Inv. 252,5			
Repoed - 200			
Receivable from CP for return of repoed securities	200	Shareholders' Funds	655
Total	850		850

CP's balance sheet

Assets		*Liabilities*	
Cash	300	Liability to return to CT security acquired under reverse repo	200
Securities	353,5		
- Of which:			
Portf. Inv. 353,5			
Rec. in repo 200			
Repoed - 200			
Loan receivable under repo	201		
Commercial loan	203	Loan payable to 3rd party	201
Receivable from 3rd party for return of repoed securities	200	Shareholders' Funds	856,5
	1250		1250

CT's closing balance sheet
(after conclusion of 2nd leg of repo)

Assets		*Liabilities*	
Cash	401.5		
Securities	252.5	Shareholders' Funds	654
- Of which:			
Portf Inv.252,5			
Total	654		654

CP's closing balance sheet
(after conclusion of 2nd leg of repo)

Assets		*Liabilities*	
Cash	503		
Securities	353.5	Shareholders' Funds	856.5
- Of which:			
Portf Inv 353,5			
	856.5		856.5

Example 3. Security lending without cash collateral: recognizing the transaction

Security borrowing (SB) acquires 100 in securities from securities lender (SL) for one month. SB agrees to pay a fee to SL of 1, to be provided at the end of the contract. SB then delivers the securities to a 3rd party, for which it had acquired the securities previously, but on which it had not yet made delivery. At the end of the month, SB acquires equivalent securities in the market and turns them over to SL. The securities earn interest at 12 per cent per annum.

SB's opening balance sheet
(prior to security borrowing)

Assets		*Liabilities*	
Cash	400	Liability to deliver securities to 3rd party	100
Securities	250	Shareholders' Funds	550
Total	650		650

SL's opening balance sheet
(prior to security lending)

Assets		*Liabilities*	
Cash	500		
Securities	350	Shareholders' Funds	850
Total	850		850

Following the borrowing, but prior to the delivery by SB to 3rd party, their balance sheets are:

SB's balance sheet

Assets		*Liabilities*	
Cash	400	Liability to return borrowed securities to SL	100
Securities	350	Liability to deliver securities to 3rd party	100
		Shareholders' Funds	550
Total	750		750

SL's balance sheet

Assets		*Liabilities*	
Cash	500		
Securities	250		
Receivable of securities from SB	100		
		Shareholders' Funds	850
	850		850

Following the delivery of the securities by SB to 3rd party, the balance sheets are:

SB's balance sheet

Assets		Liabilities	
Cash	400	Liability to return borrowed securities to SL	100
Securities	250		
		Shareholders' Funds	550
Total	650		650

SL's balance sheet (unchanged)

Assets		Liabilities	
Cash	500		
Securities	250		
Receivable of securities from SB	100		
		Shareholders' Funds	850
	850		850

Income statement for month during which securities are on loan

SB's income statement for month of security borrowing

	CR	DR
Interest on securities	2.5	
Accrued interest on securities on loan from SL [6]		1
Fee payable for borrowing securities		1
Total	2.5	2

SL's income statement for month of security lending

	CR	DR
Accrued interest on securities on balance sheet	2.5	
Accrued interest on securities on loan	1	
Fee receivable for security lending	1	
Total	4.5	

[6] As the SB will have to buy back the security in the market at the end of the month, the interest that has accrued on the instrument during the period will need to be recognized in the income statement.

At end of month, SB acquires securities in market to be able to make delivery to SL. Balance sheet includes the accrual of income on the income statement.

SB's balance sheet

Assets		*Liabilities*	
Cash	299	Liability to return borrowed securities to SL	101[8]
Securities to be retained	252.5[7]	Fee payable to SL	1
Security acquired for return to SL [8]	101	Shareholders' Funds	550.5
Total	652.5		652.5

SL's balance sheet
(unchanged)

Assets		*Liabilities*	
Cash	500		
Securities	252.5		
Receivable of securities from SB	101[7]		
Receivable from SB for securities lending	1	Shareholders' Funds	854.5
Total	854.5		854.5

[7] The price of the securities reflects the accrual of interest on those securities held during month (i.e., those not lent/borrowed)

[8] The price of the security reflects the accrual of interest on the underlying security during the period of the securities borrowing

SB's closing balance sheet

Assets		*Liabilities*	
Cash	298		
Securities	252.5	Shareholders' Funds	550.5
Total	550.5		550.5

SL's closing balance sheet

Assets		*Liabilities*	
Cash	501		
Securities	353.5	Shareholders' Funds	854.5
Total	854.5		854.5

Example 3A. Modified security lending without cash collateral: recognizing the transaction

Security borrowing (SB) acquires 100 in securities from securities lender (SL) for one month. SB agrees to pay a fee to SL of 1, to be provided at the end of the contract. SB then delivers the securities to a 3rd party, for which it had acquired the securities previously, but on which it had not yet made delivery. At the end of the month, SB acquires equivalent securities in the market and turns them over to SL. The securities earn interest at 12 per cent per annum.

<u>SB's opening balance sheet</u>
(prior to security borrowing)

Assets		*Liabilities*	
Cash	400	Liability to	
Securities	250	deliver	
- Of which:		securities	
Portf. Inv. 150		to 3rd party	100
Sec. Sold. 100		Shareholders'	
		Funds	550
Total	650		650

<u>SL's opening balance sheet</u>
(prior to security lending)

Assets		*Liabilities*	
Cash	500		
Securities	350	Shareholders'	
- Of which:		Funds	850
Portf. Inv. 350			
Total	850		850

Following the borrowing, but prior to the delivery by SB to 3rd party, their balance sheets are:

<u>SB's balance sheet</u>

Assets		*Liabilities*	
Cash	400	Liability to	
Securities	350	return borrowed	
- Of which:		securities to	
Portf. Inv. 150		SL	100
Sec. Sold 100		Liability to	
Borrowed 100		deliver	
		securities to	
		3rd party	100
		Shareholders'	
		Funds	550
Total	750		750

<u>SL's balance sheet</u>

Assets		*Liabilities*	
Cash	500		
Securities	250		
- Of which:			
Portf. Inv. 350			
Sec. Lent - 100			
Receivable of			
securities from			
SB	100		
		Shareholders'	
		Funds	850
	850		850

Following the delivery of the securities by SB to 3rd party, the balance sheets are:

SB's balance sheet				SL's balance sheet (unchanged)			
Assets		*Liabilities*		*Assets*		*Liabilities*	
Cash	400	Liability to return borrowed securities to SL	100	Cash	500		
Securities	250			Securities	250		
- Of which:				- Of which:			
Portf. Inv. 150				Potf. Inv. 350			
Borrowed 100				Sec. Lent - 100			
		Shareholders' Funds	550	Receivable of securities from SB	100	Shareholders' Funds	850
Total	650		650		850		850

Income statement for month during which securities are on loan

SB's income statement for month of security borrowing	CR	DR	SL's income statement for month of security lending	CR	DR
Accrued Interest on Portf. Inv. securities	1.5		Accrued Interest on Portf. Inv. securities	3.5	
Fee payable for borrowing securities		1	Fee receivable for security lending	1	
Total	1.5	1	Total	4.5	

(6) As in the previous examples interest is accrued only on Portfolio Investment.

At end of month, SB acquires securities in market to be able to make delivery to SL. Balance sheet includes the accrual of income on the income statement.

SB's balance sheet

Assets		*Liabilities*	
Cash	299	Liability to return borrowed securities to SL	100[8]
Securities	352.5	Fee payable to SL	1
-Of which:			
Portf. Inv. 252,5[7]			
Borrowed 100 [8]			
		Shareholders' Funds	550.5
Total	651.5		652.5

SL's balance sheet (unchanged)

Assets		*Liabilities*	
Cash	500		
Securities	253.5		
- Of which:			
Portf. Inv. 353,5[7]			
Sec. Lent - 100[8]			
Receivable of securities from SB	100[8]		
Receivable from SB for securities lending	1	Shareholders' Funds	854.5
Total	854.5		854.5

[7] The price of the securities reflects the accrual of interest on those securities held during month (i.e., Portfolio Investment securities) and in the case of SB the price of the securities acquired (that includes also the interest accrued by these securities).

[8] The amount of securities lent/borrowed and subsequent assets/liabilities has remained unchanged, but it could be increased to reflect the increase of the price of the securities due to the interest accrued during the period for all securities. Nevertheless neither SB nor SL accrue interest on these securities, only interest on Portfolio Investment securities is accrued.

SB's closing balance sheet

Assets		*Liabilities*	
Cash	298		
Securities	252.5	Shareholders' Funds	550.5
- Of which:			
Portf. Inv. 252,5			
Total	550.5		550.5

SL's closing balance sheet

Assets		*Liabilities*	
Cash	501		
Securities	353.5	Shareholders' Funds	854.5
- Of which:			
Portf. Inv. 353,5			
Total	854.5		854.5