

Foreign Official Institutions' Holdings of U.S.-issued and/or Dollar-denominated Financial Assets – Differences among Alternative Data Sources.

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A variety of data sources exist for foreign official holdings of financial assets which are either the liabilities of U.S. entities or are denominated in dollars (or both). The bulk of these assets are in the form of U.S. Treasury securities. The differences in the various sources of data are described in this memo. All figures in the following exposition were those reported as of 12/31/2003, except where noted.

One major reason, but not the only reason, for the differences in the data sources is that the underlying data collection systems which generate foreign official holdings data as part of their output vary in their goals. As will be made more precise below, some systems attempt to report only reserve asset holdings (i.e., holdings of those institutions which are, or perform the duties of, a central bank) while others seek to capture a broader definition of foreign official holdings which includes general government and government-sponsored investment funds.¹

Following the discussion of the various data sources, a table is provided as a summary of the major differences. The reader is cautioned that the table is intended only as a quick reference. The many distinctions described in the text cannot all be fit within the confines of a single table.

(1) Federal Reserve System (FRS) Release H.4.1, Factors Affecting Reserve Balances of Depository Institutions and Condition Statement of Federal Reserve Banks (weekly)

A memo entry to Table 1 shows the face value of marketable securities, including stripped securities, held in custody at the Federal Reserve Bank of New York (hereafter, FRBNY) for foreign official and international accounts.² U.S. Treasuries (\$855 billion), agency securities (\$211 billion), and the sum of the two (\$1,067 billion) are reported. The figures are the result of a tabulation of actual inventories of securities.

¹ It should be noted that foreign official holdings under the broader definition are not all dollar-denominated. It has been estimated from the latest Report of Foreign Holdings of U.S. Securities (data as of June 30, 2003, forthcoming; discussed in (2) below) that about ½ percent of the liabilities of U.S. agencies to foreign official institutions were non-dollar denominated, and about 2½ percent of U.S. corporate bonds were non-dollar denominated.

² A relatively small volume of non-marketable Treasuries have been issued to foreigner official institutions and are also held custodially at the FRBNY. The data submission by the FRBNY to the Board of Governors for the purpose of preparing the H.4.1 specifically excludes these non-marketable securities.

“Foreign official and international accounts” are defined to include those of foreign governments and central banks, as well as a small number of international organizations and government investment funds which have accounts at the FRBNY, including the IMF and the BIS. The reporting is based on what is termed “legal” ownership. Thus, if the foreign official holder acquired (or sold) a security temporarily as collateral in a resale/repurchase or securities lending agreement, it is included in (or excluded from) the total.

(2) Federal Reserve Bulletin, Statistical Supplement Table 3.13 Foreign Official Assets Held at Federal Reserve Banks (monthly)

The Table shows, for foreign official accounts, deposit holdings at Federal Reserve Banks (\$162 million), the face value of Treasury securities (\$845 billion), and earmarked gold valued at \$42.22 per ounce (\$9 billion). The total of these is not shown. The data source for (2) is the same as that for (1).

“Foreign official accounts” in (2) include foreign governments, central banks and a small number of government investment funds, just as in (1). However, in contrast to (1), accounts held for international and regional organizations are excluded from (2). An additional difference from (1) is that both marketable and nonmarketable Treasury securities are reported.

(3) Report on Foreign Holdings of U.S. Securities (annual, most recent report published 8/2003 showing data as of 6/2003 at <http://www.ustreas.gov/tic/shl2003.pdf>)

Table 10 of the Report (p.18) shows the market value of all U.S. issued long-term securities held by foreign official institutions. Equities (\$105 billion), U.S. Treasury debt (\$653 billion), U.S. agency debt (\$180 billion), corporate and municipal debt (\$21 billion) and the total (\$959 billion) are reported as of 6/30/2003.

The Report is based upon a survey conducted each year by the U.S. Treasury, with the assistance of the Board of Governors of the FRS and the FRBNY. The survey, referred to as the Liability Survey³, asks respondents to report the market values of their positions as of June 30.

“Foreign official institutions” are defined somewhat differently in this survey than in (1) and (2). In particular, all holdings of foreign governments and central banks are included in (3), including those of a larger number of government-sponsored investment funds than in (1) and (2), while holdings of international institutions other than the BIS and the ECB are not included. The reporting is based on what is termed “economic” ownership. Thus, if the foreign official holder acquired (or sold) the

³ Instructions for respondents to the survey are found in the pamphlet titled Foreign Holdings of U.S. Securities, Including Selected Money Market Instruments (Form SHL). The benchmark version of the survey is conducted once every five years and collects data from all significant U.S.-resident custodians and U.S.-resident security issuers. In non-benchmark years, only the very largest U.S.-resident custodians and U.S.-resident security issuers are asked to respond (Form SHLA).

security only temporarily as collateral in a repurchase or securities lending agreement, it is not included in (or excluded from) the total.

The Report is finalized and becomes publicly available with a lag of approximately one year from the date as of which respondents report their data.

It should be noted that the Liability Survey is just one element of an integrated set of surveys on cross-border financial flows and positions which is referred to as the Treasury International Capital (TIC) system.

(4) Treasury website file, table titled Major Foreign Holders of U.S. Treasury Securities (monthly, www.ustreas.gov/tic/mfh.txt)

A memo entry to the table (“of which official”) shows an estimate of the value of foreign official holdings of U.S. Treasury securities on a monthly basis. Marketable and nonmarketable bills (\$212 billion), bonds and notes (\$682 billion), and the sum of the two (\$894 billion) are reported.

“Foreign official” holdings in (4) are defined based upon the same TIC system source data as in (3). That is, all holdings of foreign governments and central banks are included, including those of a larger number of government-sponsored investment funds than in (1) and (2), while holdings of international institutions other than the BIS and the ECB are not included.

The monthly estimates are created by adding monthly flows of foreign official purchases and sales of long-term Treasury securities to the levels established from the most recent annual Liability Survey described in (3) and substituting the latest monthly foreign official holding levels of short-term Treasury securities for the respective amount on the previous annual survey.

These monthly data have, in turn, been collected from two other TIC surveys, the TIC S, which reports cross-border purchases and sales of long-term securities, and the TIC BL-2, which reports levels of short-term liabilities to foreigners which are held custodially by U.S. banks. Among these are short-term securities held by foreign official institutions).⁴ No attempt is made in the estimation process to adjust the annual survey data or preceding-period transactions data to account for subsequent price changes. In addition, consistent with TIC BL-2 reporting requirements, the short-term Treasury securities are reported at face value. Therefore, the data in (4) are a hybrid when compared to (1), (2), and (3).

(5) Treasury Bulletin Table IFS-2 Selected U.S. Liabilities to Foreigners (published quarterly, but showing data on a monthly basis through the most recent month)

⁴ Instructions for the two surveys are found, respectively, in (1) Instructions for Monthly TIC Form S and Memorandum Purchases and Sales of Long-Term Securities by Foreigners and (2) Instructions for Preparing the TIC B Reports.

The Table shows U.S. liabilities to foreign official institutions. Liabilities reported by U.S. banks⁵ (\$403 billion⁶), U.S. Treasury bonds and notes (\$679 billion marketable plus \$3 billion nonmarketable), other readily marketable liabilities⁷ (\$201 billion), and the total (\$1,285 billion) are reported.

“Foreign official institutions” in (5) are defined based upon the same TIC system source data as in (3) and (4). That is, all holdings of foreign governments and central banks are included, including those of a larger number of government-sponsored investment funds than in (1) and (2), while holdings of international institutions other than the BIS and the ECB are not included. Further, the monthly estimates are created from the annual Liability Survey and the monthly TIC S, BL-1 (which reports levels of direct short-term liabilities of U.S. banks to foreigners), and BL-2 data in the same way as in (4).

The following differences between (4) and (5) are noted. The total in (5) includes “other readily marketable liabilities” (e.g., agencies) and deposits and other liabilities to U.S. banks, which the total in (4) does not. Additionally, the total in (5) does not report Treasury bills separately but includes them among liabilities to foreign official institutions which are reported by U.S. banks.

(6) Federal Reserve Bulletin, Statistical Supplement Table 3.15 Selected Liabilities to Foreign Official Institutions (monthly)

The Table shows U.S. liabilities to foreign official institutions. Liabilities reported by U.S. banks (\$191 billion), U.S. Treasury bills and certificates (\$212 billion), U.S. Treasury bonds and notes (\$679 billion marketable plus \$3 billion nonmarketable), U.S. securities other than Treasuries (\$279 billion), and the total (\$1,349 billion) are reported.

“Foreign official institutions” in (6) are defined based upon the same TIC system source data as in (3) through (5). That is, all holdings of foreign governments and central banks are included, including those of a larger number of government-sponsored investment funds than in (1) and (2), while holdings of international institutions other than the BIS and the ECB are not included. Further, the monthly estimates are created from the annual Liability Survey and the monthly TIC S, BL-1, and BL-2 data in the same way as in (4) and (5).

However, (6) differs from (5) in two ways. First and most important, total foreign official liabilities in (6) are higher because estimates of official holdings of U.S. equities are included.⁸ These estimates are computed by adding monthly transactions

⁵ Including the FRBNY, which is the largest custodian of foreign official holdings.

⁶ Includes foreign official holdings of U.S. Treasury bills and negotiable and nonnegotiable deposits liabilities of U.S. banks (including the FRBNY)

⁷ Debt securities of U.S. government corporations, federally sponsored agencies, and private corporations

⁸ Holdings of equities by foreign official institutions are in part explained by the fact that the source data in (6), as in (3) through (5) include a number of government investment funds.

as reported on the TIC S Form to the levels from the most recent Liability Survey report.

Second, the reader is cautioned that although the line item “liabilities reported by banks” occurs in both (5) and (6), the definitions are not the same. “Liabilities reported by banks” in (6) includes only direct liabilities of banks and those custodial holdings by banks which are not U.S. Treasury bills. In contrast, “liabilities reported by banks” in (5) include direct liabilities of banks plus all of banks’ custodial holdings including U.S. Treasury bills.

(7) Bureau of Economic Analysis *Survey of Current Business* (hereafter “SCB”), Table 4. U.S. Official Reserve Assets and Foreign Official Assets in the United States (quarterly: yearend 2003 initially reported in April 2004 SCB; subsequently revised – see text)

The Table shows the levels of foreign official assets in the United States as of 12/31/2003 by instrument: overall total (\$1,343 billion), total of U.S. Treasury securities (\$827 billion), U.S. Treasury bills (\$212 billion), U.S. Treasury marketable bonds and notes (\$613 billion), U.S. Treasury nonmarketable bonds and notes (\$3 billion), other U.S. government securities⁹ (\$212 billion), other U.S. government liabilities (\$17 billion), total of U.S. liabilities reported by U.S. banks not included elsewhere¹⁰ (\$191 billion), total of banks’ own liabilities (\$118 billion), repos (\$88 billion), deposits and brokerage balances (\$24 billion), other bank liabilities for own account (\$6 billion), total of banks’ custodial liabilities not included elsewhere¹¹ (\$73 billion), negotiable CDs plus bank securities (\$70 billion), other banks’ custodial liabilities (\$2 billion), other foreign official assets¹² (\$97 billion). There is also a breakdown by broad geographical region.

“Foreign official assets” in (7) are defined based upon the same TIC system source data as in (3) through (6). That is, all holdings of foreign governments and central banks are included, including those of a larger number of government-sponsored investment funds than in (1) and (2), while holdings of international institutions other than the BIS and the ECB are not included.

The total includes the same list of foreign official holdings as in (6), plus one component which is included only in the BEA estimate: U.S. government liabilities to foreigners related to foreign military sales, which is the “other U.S. government liabilities” of \$17 billion listed above.

Just as in (4) through (6), the quarterly estimates are created from the annual Liability Survey and the monthly TIC S, BL-1, and BL-2 data. However, in contrast to the

⁹ Primarily U.S. agency securities

¹⁰ U.S. Treasury bills which are held custodially by banks are reported separately and therefore have been excluded from this total.

¹¹ Ibid.

¹² Primarily U.S. equities

approach taken in (4) through (6), wherein no attempt was made in the estimation process to adjust the annual Liability Survey data or preceding-period transactions data to account for subsequent changes in the prices of long-term securities, such price adjustments are made in (7). Moreover, the price indices are specific to the class of asset (i.e., equities vs. bonds).

It should also be noted that BEA makes use of the latest available annual Liability Survey to revise its estimates. In particular, the \$1,343 billion total figure listed above was subsequently revised to \$1,474 billion because of the incorporation of data from the June 2003 liability survey. The \$1,474 billion figure was reported in the BEA website file (www.bea.gov) Table 1 titled International Investment Position (hereafter, "IIP").

(8) Bank for International Settlements (BIS) Annual Report. Table V.2 Annual Changes in Official Foreign Exchange Reserves (annual)

A memo row shows amounts outstanding at year-end for various major countries and regions. The most recent publication was the 74th Annual Report (June 28, 2004, p.89, www.bis.org), in which an overall total of \$2,093 billion of official foreign exchange reserves denominated in dollars was reported for year-end 2002. Some country detail is provided, but there is no breakdown into dollar-denominated reserves by country.

With respect to definition of holder, the BIS indicates in its reporting form that the information be disclosed "by the monetary authorities and other central governments, excluding social security" and be reported at market value.¹³ Additionally, the BIS defines official monetary institutions as "mainly central banks or similar national and international bodies, such as the BIS".¹⁴ Thus, the BIS definition focuses on national and international central banks in contrast to the TIC System definition which includes all national governmental institutions but excludes international organizations except for the BIS and the ECB.

It should also be noted that the BIS reporting form mentioned in footnote 11 makes reference to the definition of monetary authorities in the IMF Balance of Payments Manual. The definition therein emphasizes that reserve assets consist of those external assets that are "readily available to and controlled by" monetary authorities for direct financing of payments imbalances and exchange stabilization.

Since the sources listed in the table include national data from various individual nations (holdings of international organizations are not included) along with estimates made by BIS, all of the precise characteristics of the data cannot be fully determined.

¹³ BIS Data Template on International Reserves/Foreign Currency Liquidity (information to be disclosed by monetary authorities and other central government, excluding social security), www.bis.org/publ/ecs09b.pdf

¹⁴ Guide to the International Banking Statistics, BIS Papers, No.16, April 2003, p.76

However, the value of SDRs and gold are not included in the estimate of dollar-denominated reserves.

The \$2,093 billion figure is larger than the totals reported in (1) through (7) for several reasons. First, it includes foreign official holding of dollar-denominated positions against non-U.S. banks. These positions would include Eurodollar deposits and also dollar-denominated securities issued by such banks. The BIS estimated this magnitude to be \$204 billion in the second quarter of 2003¹⁵. Second, the \$2,093 billion figure likely includes foreign official holdings of U.S. Treasury and agency securities which were originally purchased by foreign private entities, resold through foreign brokers to foreign official institutions, and are now held by foreign official institutions through foreign custodians, and thus are not included in (1) through (7) above. Other potential differences include holdings of dollar-denominated liabilities of non-U.S. nonbanks, generous definitions of dollar-denominated reserves by some countries¹⁶, and the inclusion of assets “controlled by” but not owned by the monetary authorities.

(9) IMF Survey of Geographical Distribution of Securities Held as Foreign Exchange Reserves (SEFER), reported in Coordinated Portfolio Investment Survey: Table 6: Securities Held as Reserve Assets and International Organizations’ Reported Portfolio Investment Assets by Economy of Nonresident Issuer: Total Portfolio Investment (annual, most recent data for 2002, <http://www.imf.org/external/np/sta/pi/sec.htm>; description of SEFER at <http://www.imf.org/external/pubs/ft/bop/news/pdf/0804.pdf>)

Total holdings of all U.S. securities held both as foreign official reserves and by international organizations were \$827,418 million in 2002. The data are reported at market value, and no additional detail is reported. The IMF does not make public the list of which countries and international organizations provided data on their reserve asset holdings on the SEFER.¹⁷

The \$827,418 IMF SEFER figure differs from the figures given in (1) through (7), i.e., those based upon TIC and Federal Reserve data, in that (9) does not include assets of foreign official institutions which are not specifically held as reserve assets, nor does it include any reserve assets in the form of deposit liabilities or loans.

IMF SEFER data differ from the BIS data in (8) in several additional ways. First, (9) includes only U.S.-issued securities held as official reserve assets, rather than the total of all dollar-denominated securities held by all foreign official institutions. Second, the data in (9) do not include deposits at or loans to U.S. banks (estimated at \$140

¹⁵ BIS Quarterly Review, December 2003, Table 5C, p.A18, “Currency Breakdown of Reporting Banks Cross-Border Positions vis-a-vis official monetary institutions”

¹⁶ The Peoples’ Republic of China, for example, includes repo agreements with nonresidents, inter-bank loans, foreign exchange swaps, and options in its definition of international reserves (International Monetary Fund website, <http://dsbb.imf.org/Applications/web/gdds/gddscountrycategorydcreport/?strcode=CHN&streat=BRES0>).

¹⁷ Although the IMF does publish the list of countries that participated in the Coordinated Portfolio Investment Survey (CPIS), SEFER participants may or may not have participated in the CPIS.

billion, based on data from the TIC BL-1 report on U.S. banks' own liabilities to foreigners). Third, the data in (9) do not include dollar-denominated positions against non-U.S. banks (\$204 billion as noted above).

Finally, in comparison with both the TIC-based and Federal Reserve-based data in (1) through (7), and also the BIS data in (8), (9) excludes the reserves of Taiwan.¹⁸ Moreover, since the list of countries in (9) is not disclosed by the IMF, there may be other countries whose reserves are also not reflected in (9) but which may be included in (1) through (7).

(10) IMF Annual Report: Appendix I Table 1.3 Currency Composition of Official Holdings of Foreign Exchange (CCOFER), End of Year (annual, www.imf.org/external/pubs/ft/ar/2003/eng/pdf/file4.pdf)

The total of all dollar-denominated assets held as foreign official reserves and by international organizations were SDR 1,065,682 million at the end of 2002. This translates to \$1,428,013 million using the dollar price of an SDR at that time of \$1.34 (<http://www.imf.org/external/np/tre/sdr/2002/sdr0212.htm>). The data are reported at market value, and no additional detail is reported. The IMF does not make public the list of which countries and international organizations provided data on their reserve asset holdings on the survey which is the basis for CCOFER, nor does it disclose whether the country list for SEFER is the same as that for CCOFER. An exception, as noted above, is that no information about Taiwan is reported.

The CCOFER figure of \$1,428,013 million differs from the figures given in (1) through (7), i.e., those based upon TIC and Federal Reserve data, in that (9) does not include assets of foreign official institutions which are not specifically held as reserve assets. The CCOFER figure does include reserve assets in the form of deposits.

The CCOFER figure is conceptually comparable to the BIS figure in (8), but differs in two ways. First, the BIS figure includes the reserves of Taiwan. Second, the BIS makes the assumption that a portion of those reserves reported by the IMF for which the currency of denomination was not reported was in fact denominated in dollars. The assumed proportion is the dollar's share in the total of reserves whose currencies are known.

(11) Federal Reserve Board of Governors Statistical Release Z.1 Flow of Funds Accounts

¹⁸ To be more precise, the IMF does not acknowledge the independent political status of Taiwan and refers to it as the Taiwan province of China. The BIS reported that Taiwan's total (dollar and non-dollar) international reserves were \$206 billion at the end of 2003 (per the source given in (8)).

of the United States, Table L.107 Rest of World, p.67 (quarterly, www.federalreserve.gov/releases/Z1/)

The Table shows the levels of foreign official holdings of U.S. Treasury securities (line 9, \$839.1 billion) and agency and GSE-backed securities (line 12, \$212.2 billion).

“Foreign official holdings” in (11) are defined based upon the same TIC system source data as in (3) through (7). That is, all holdings of foreign governments and central banks are included, including those of a larger number of government-sponsored investment funds than in (1) and (2), while holdings of international institutions other than the BIS and the ECB are not included.

Just as for (4) through (7), the ultimate data sources for (11) are the annual Liability Survey and the monthly TIC S, BL-1, and BL-2 data. However, in contrast to the approach taken in (4) through (6), wherein no attempt was made in the estimation process to make adjustments for subsequent changes in the prices of long-term securities, (10) is based upon the levels and flows estimated by BEA in (7) which do include such price adjustments. Moreover, (11) also reflects the revisions made by BEA based upon the latest available annual Liability Survey.

In sum, the alternative data sources of information on holdings of financial assets by foreign official institutions which are either the liabilities of U.S. entities or are denominated in dollars (or both) vary in terms of:

Frequency of reporting

Timing of reporting: data “as of” date; date on which data are published

Whether the data get revised

Financial instruments included in the total

Line items reported

Whether the included custodians are just the FRBNY, all U.S. custodians, or all custodians worldwide

Definition of which foreign official institutions’ holdings are included: national monetary authorities; international monetary authorities; other international and regional organizations; national governments; government investment funds

Inclusion of either marketable and nonmarketable assets or only marketable assets

Valuation: face value; market value; estimated value, with or without valuation adjustments

Ownership criterion: legal ownership; economic ownership; assets readily available to monetary authorities

Whether the data are exclusively dollar denominated holdings or instead include small amounts of non-dollar holdings