

# How BEA Aligns and Augments Source Data From the U.S. Treasury Department for Inclusion in the International Transactions Accounts

Like most of the U.S. economic accounts produced by the Bureau of Economic Analysis (BEA), the statistics on financial-account transactions in the international transactions accounts (ITAs) are based largely on source data collected by other federal government agencies—in this case, by the Treasury International Capital (TIC) reporting system of the U.S. Department of the Treasury. BEA makes adjustments to align the data with balance-of-payments concepts and to close gaps in coverage in preparing statistics for the financial account. This report explains these adjustments to help data users reconcile BEA's financial-account statistics with the TIC data that are available to the public on the Treasury Department's [TIC website](#) and in the *Treasury Bulletin*.

The relationships between the statistics in the ITAs and the data from the TIC reporting system are shown in tables 1 and 2, which identify the adjustments that BEA makes to the TIC source data. Table 1 presents statistics on transactions in portfolio investment assets and liabilities (equity and debt securities). Table 2 presents statistics on transactions in other investment assets and liabilities (currency, deposits, loans, insurance technical reserves, trade credit and advances, and allocations of special drawing rights (which are only included in liabilities)).

**Aligning with balance-of-payments concepts.** Holdings of U.S. assets and liabilities reported in the TIC system are the basis of BEA statistics on portfolio investment and are the largest component of BEA statistics on other investment assets and liabilities. To impute balance-of-payments transactions from the reported holdings, BEA removes (from the total change) the quarterly changes in holdings that do not result from transactions. As explained in greater detail in *U.S. International Economic Accounts: Concepts and Methods*, BEA removes quarterly changes in holdings

from the total change due to (1) changes in prices, (2) changes in exchange rates, and (3) changes caused by changes in volume and value (table 1, lines 5–7, 16–18, and 27–29, and table 2, lines 7, 8, 18, and 19).

BEA also aligns the TIC data with balance-of-payments concepts by removing changes in holdings that are already counted in other data sources for direct investment and reserve assets. For example, TIC balances that are reported by U.S. banks and securities brokers (table 2) also include claims on, and liabilities to, unincorporated branches by parent companies that are included in BEA's direct investment surveys as direct investment equity. Changes in balances covered in BEA's direct investment surveys are removed (table 2, lines 4 and 16). Foreign securities held as U.S. reserve assets are reported in TIC surveys of U.S. holdings of foreign securities with portfolio investment; changes in these reserve holdings are removed from portfolio investment (table 1, line 4).

In addition to removing changes in claims and liabilities that should be excluded from portfolio investment or other investment, BEA also separates transactions in short-term securities and negotiable certificates of deposit of any maturity from other investment and records them in portfolio investment (table 1, lines 9 and 20 and table 2, lines 6 and 17). The holdings of these types of portfolio investment are collected in the TIC system with other investment instruments, such as loans and deposits.

**Closing gaps in coverage.** Not all U.S. holdings of other investment are captured by the TIC reporting system. BEA closes gaps in the coverage of U.S. nonbanking concerns' claims and liabilities by supplementing TIC data with (1) estimates of U.S. claims based on data provided by the Depository Trust and Clearing Corporation and (2) estimates of U.S. nonbanks' claims on, and liabilities to, foreign banks based on partner country counterparty data from foreign banking authorities (table 2, lines 9 and 20).

BEA also includes transactions in the other investment claims and liabilities of the U.S. central bank sector (the U.S. Federal Reserve System) and the U.S. general government that are not included in the TIC data, using data provided by the U.S. Federal Reserve System, the U.S. Department of Defense, and other U.S. government agencies (table 2, lines 11 and 22).

BEA produces quarterly and annual estimates of portfolio investment transactions based on data from the TIC survey of [Aggregate Holdings of Long-Term Securities by U.S. and Foreign Residents \(TIC SLT\)](#), which are presented in table 1. BEA adopted this methodology in 2013 because it produces transactions estimates that are consistent with reported investment positions, significantly reducing unexplained changes in these positions and closing a gap in coverage that existed before the TIC SLT was introduced. Prior to the introduction of the TIC SLT, BEA estimated portfolio investment using the TIC survey of [Purchases and Sales of Long-term Securities by](#)

[Foreign-Residents \(TIC S\)](#). BEA's estimates of net U.S. acquisition of foreign stocks and bonds are presented in line 8, net U.S. incurrence of portfolio liabilities through U.S. stocks and bonds in line 19, and net U.S. incurrence of portfolio liabilities through U.S. Treasury bonds in line 30.

The TIC system releases [monthly transactions statistics](#) on the net purchases of foreign stocks and bonds by U.S. residents and the net purchases of U.S. stocks and bonds by foreign residents and adjustments to these transactions to account for acquisitions of stocks through stock swaps and principle repayments for U.S. asset-backed securities. The transactions statistics are based on the TIC S. To inform the public about the differences between the BEA estimates and the estimates released by the TIC system, U.S. net acquisitions of long-term assets or U.S. net incurrence of long-term liabilities based on the TIC S are shown in lines 11, 22, and 33. The estimates based on the TIC S include adjustments for stock swaps and prepayments for U.S. asset-backed securities, as appropriate. The differences between the BEA statistics and the adjusted TIC S net transactions are shown in lines 12, 23, and 34.

**Table 1. Relation of Transactions in Portfolio Investment Assets and Liabilities in the U.S. International Transactions Accounts (ITAs) to Treasury International Capital (TIC) Reporting System Data**

[Millions of dollars]

Line	Net increase in assets or liabilities (+); net decrease in assets or liabilities (-)	2015 <sup>r</sup>	2016 <sup>r</sup>	2017 <sup>p</sup>
<b>Net U.S. acquisition of portfolio investment assets</b>				
1	Total claims (foreign stocks and bonds held by U.S. residents) outstanding, beginning of year, TIC <sup>1</sup>	9,187,901	9,105,541	9,493,529
2	Total claims (foreign stocks and bonds held by U.S. residents) outstanding, end of year, TIC <sup>1</sup>	9,105,541	9,493,529	11,825,091
3	<b>Change in claims, TIC (line 2 – line 1)</b>	<b>-82,360</b>	<b>387,988</b>	<b>2,331,562</b>
4	<i>Minus:</i> Changes in foreign stocks and bonds held as reserve assets	-1,215	-423	-4,174
5	<i>Minus:</i> Changes in value caused by price changes	297,110	569,122	1,219,131
6	<i>Minus:</i> Changes in value caused by exchange-rate changes	-625,166	-287,702	701,150
7	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e	129,263	43,946	24,809
8	<b>Equals: Net U.S. acquisition of foreign stocks and bonds, ITAs</b>	<b>117,648</b>	<b>63,045</b>	<b>390,646</b>
9	<i>Plus:</i> Net U.S. acquisition of foreign short-term securities and negotiable certificates of deposit of any maturity, ITAs	42,762	-26,762	196,049
10	<b>Equals: Net U.S. acquisition of portfolio investment assets, ITA table 1.1, line 21</b>	<b>160,410</b>	<b>36,283</b>	<b>586,695</b>
11	Net U.S. acquisition of foreign stocks and bonds, TIC <sup>2</sup>	-48,373	-94,213	-83,921
12	Coverage difference for net U.S. acquisition of foreign stocks and bonds, ITAs less TIC (line 8 less line 11)	166,021	157,258	474,567
<b>Net U.S. incurrence of portfolio investment liabilities</b>				
13	Total liabilities (U.S. stocks and bonds held by foreign residents) outstanding, beginning of year, TIC <sup>1</sup>	16,080,706	15,725,544	16,463,313
14	Total liabilities (U.S. stocks and bonds held by foreign residents) outstanding, end of year, TIC <sup>1</sup>	15,725,544	16,463,313	18,574,328
15	<b>Change in liabilities, TIC (line 14 – line 13)</b>	<b>-355,162</b>	<b>737,769</b>	<b>2,111,015</b>
16	<i>Minus:</i> Changes in value caused by price changes	-400,532	413,296	1,187,853
17	<i>Minus:</i> Changes in value caused by exchange-rate changes	-55,260	-11,188	60,141
18	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e	-68,197	96,664	78,651
19	<b>Equals: Net U.S. incurrence of portfolio liabilities through U.S. stocks and bonds, ITAs</b>	<b>168,827</b>	<b>238,997</b>	<b>784,370</b>
20	<i>Plus:</i> Net U.S. incurrence of portfolio liabilities through U.S. short-term securities and negotiable certificates of deposit of any maturity, ITAs	45,083	-7,648	14,812
21	<b>Equals: Net U.S. incurrence of portfolio investment liabilities, ITA table 1.1, line 26</b>	<b>213,910</b>	<b>231,349</b>	<b>799,182</b>
22	Net U.S. incurrence of portfolio liabilities through U.S. stocks and bonds, TIC <sup>2</sup>	-7,080	-147,084	228,773
23	Coverage difference for net U.S. incurrence of portfolio liabilities through U.S. stocks and bonds, ITAs less TIC (line 19 less line 22)	175,907	386,081	555,597
<b>Net U.S. incurrence of portfolio investment liabilities through U.S. Treasury securities<sup>3</sup></b>				
24	Total liabilities (U.S. Treasury bonds held by foreign residents) outstanding, beginning of year, TIC <sup>1</sup>	5,486,325	5,421,490	5,333,930
25	Total liabilities (U.S. Treasury bonds held by foreign residents) outstanding, end of year, TIC <sup>1</sup>	5,421,490	5,333,930	5,582,513
26	<b>Change in liabilities, TIC (line 25 – line 24)</b>	<b>-64,835</b>	<b>-87,560</b>	<b>248,583</b>
27	<i>Minus:</i> Changes in value caused by price changes	-56,244	-43,034	-21,663
28	<i>Minus:</i> Changes in value caused by exchange-rate changes	.....	.....	.....
29	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e	1,811	7,466	-3,062
30	<b>Equals: Net U.S. incurrence of portfolio liabilities through U.S. Treasury bonds, ITAs</b>	<b>-10,402</b>	<b>-51,992</b>	<b>273,308</b>
31	<i>Plus:</i> Net U.S. incurrence of portfolio liabilities through short-term U.S. Treasury securities, ITAs	53,090	-55,864	33,539
32	<b>Equals: Net U.S. incurrence of portfolio investment liabilities through U.S. Treasury securities, ITA table 1.1, part of line 26</b>	<b>42,688</b>	<b>-107,856</b>	<b>306,847</b>
33	Net U.S. incurrence of portfolio liabilities through U.S. Treasury bonds, TIC <sup>2</sup>	-20,302	-325,792	19,980
34	Coverage difference for net U.S. incurrence of portfolio liabilities through U.S. Treasury bonds, ITAs less TIC (line 30 less line 33)	9,900	273,800	253,328

**p** Preliminary

**r** Revised

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- TIC data are as reported in the monthly TIC survey of Aggregate Holdings of Long-Term Securities by U.S. and Foreign Residents (TIC SLT). BEA uses the TIC SLT and the TIC annual and benchmark surveys—Report of U.S. Ownership of Foreign Securities, including Selected Money Market Instruments (SHC(A)) and Foreign-Residents' Holdings of U.S. Securities, including Selected Money Market Instruments (SHL(A))—to compile the ITAs and the U.S. international investment position (IIP) accounts. Positions in this table differ from investment positions in the IIP accounts because the TIC SLT is the only source of position estimates in this table. TIC data are often revised over time, so current reported values may differ from values in this table.
- TIC data for net U.S. acquisition of portfolio assets (line 11) and net U.S. incurrence of portfolio liabilities (lines 22 and 33) are based on Purchases and Sales of Long-term Securities by Foreign-Residents (TIC S) with adjustments to add net

acquisitions from stock swaps and to subtract estimated principle repayments of U.S. asset-backed securities, as appropriate.

- The net U.S. incurrence of portfolio investment liabilities through U.S. Treasury securities is included in lines 13–23. The analysis for U.S. Treasury securities is provided separately in lines 24–34 because of the interest in this market by users of BEA data.

**Table 2. Relation of Transactions in Other Investment Assets and Liabilities in the U.S. International Transactions Accounts (ITAs) to Treasury International Capital (TIC) Reporting System Data**

[Millions of dollars]

Line	Net increase in assets or liabilities (+); net decrease in assets or liabilities (-)	2015	2016	2017 <sup>p</sup>
<b>Net U.S. acquisition of other investment assets</b>				
1	Total claims outstanding, beginning of year, TIC <sup>1</sup>	3,855,618	3,676,306	3,668,208
2	Total claims outstanding, end of year, TIC <sup>1</sup>	3,676,306	3,668,208	3,886,110
3	<b>Change in claims, TIC (line 2 – line 1)</b>	<b>-179,312</b>	<b>-8,098</b>	<b>217,902</b>
4	<i>Minus:</i> Direct investment	2,576	2,216	2,572
5	<i>Plus:</i> Foreign commercial paper coverage adjustments	53,256	-1,206	28,649
6	<i>Minus:</i> Net U.S. acquisition of foreign short-term securities and negotiable certificates of deposit of any maturity, ITAs	42,762	-26,762	196,049
7	<i>Minus:</i> Changes in value caused by exchange-rate changes	-43,538	-17,737	40,073
8	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e.	-10,700	6,348	4,500
9	<i>Plus:</i> Supplemental source data <sup>2</sup>	-145,733	-34,451	207,646
10	<b>Equals: Net U.S. acquisition of other investment assets, excluding U.S. central bank and general government assets</b>	<b>-262,889</b>	<b>-7,820</b>	<b>211,003</b>
11	<i>Plus:</i> Net U.S. acquisition of other investment assets by the U.S. central bank and general government	3,921	5,097	7,519
12	<b>Equals: Net U.S. acquisition of other investment assets, ITAs (table 1.1, line 22)</b>	<b>-258,968</b>	<b>-2,723</b>	<b>218,522</b>
<b>Net U.S. incurrence of other investment liabilities</b>				
13	Total liabilities outstanding, beginning of year, TIC <sup>1</sup>	5,233,142	5,035,371	4,958,140
14	Total liabilities outstanding, end of year, TIC <sup>1</sup>	5,035,371	4,958,140	5,160,819
15	<b>Change in liabilities, TIC (line 14 – line 13)</b>	<b>-197,771</b>	<b>-77,231</b>	<b>202,679</b>
16	<i>Minus:</i> Direct investment	27,850	20,899	-7,247
17	<i>Minus:</i> Net U.S. incurrence of portfolio investment liabilities through U.S. short-term securities and negotiable certificates of deposit of any maturity, ITAs	45,083	-7,648	14,812
18	<i>Minus:</i> Changes in value caused by exchange-rate changes	-27,205	-7,755	21,968
19	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e.	52,258	9,300	-18,354
20	<i>Plus:</i> Supplemental source data <sup>2</sup>	26,356	57,091	115,308
21	<b>Equals: Net U.S. incurrence of other investment liabilities, excluding liabilities of general government and liabilities from U.S. currency held abroad</b>	<b>-269,401</b>	<b>-34,936</b>	<b>306,808</b>
22	<i>Plus:</i> Net U.S. incurrence of other investment liabilities by general government and liabilities from U.S. currency held abroad	47,525	50,661	76,863
23	<b>Equals: Net U.S. incurrence of other investment liabilities, ITAs (table 1.1, line 27)</b>	<b>-221,876</b>	<b>15,725</b>	<b>383,671</b>

**p** Preliminary

**r** Revised

- TIC data are as reported in the TIC B and C forms. The TIC B forms (BC, BL-1, BL-2, BQ-1, and BQ-2) are reports by financial institutions of liabilities to, and claims on, foreign residents by U.S. residents. The TIC C forms (CQ-1 and CQ-2) are reports of liabilities to, and claims on, unaffiliated foreign residents by U.S. resident non-financial institutions.
- Includes supplemental transactions from the Bank of England, the Deutsche Bundesbank, the Bank for International Settlements (BIS), and the Federal Reserve Board.