



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

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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 financial-account statistics with the TIC data available to the public on the Treasury Department's [TIC website](#).

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, including currency, deposits, loans, and trade credit and advances.

### 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 other investment assets and liabilities. To impute balance-of-payments transactions from the reported holdings, BEA removes from the total quarterly change in holdings 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 due to (1) changes in prices, (2) changes in exchange rates, and (3) changes in volume and value not included elsewhere (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 direct investment surveys as direct investment equity. Changes in balances covered in BEA 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 & Clearing Corporation (table 2, line 5) 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 [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 [Purchases and Sales of Long-Term Securities by Foreign-Residents \(TIC S\)](#). BEA presents estimates of net U.S. acquisition of foreign stocks and bonds 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 principal repayments for U.S. asset-backed securities. The transactions statistics are based on the TIC S. To inform the public about the differences between BEA estimates and the estimates released by the TIC system, U.S. net acquisition 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 principal repayments 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.

# Tables

**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 (-)	2018 <sup>r</sup>	2019 <sup>r</sup>	2020 <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>	11,868,614	10,742,996	12,579,567
2	Total claims (foreign stocks and bonds held by U.S. residents) outstanding, end of year, TIC <sup>1</sup>	10,742,996	12,579,567	13,866,858
3	<b>Change in claims, TIC (line 2–line 1)</b>	<b>-1,125,618</b>	<b>1,836,571</b>	<b>1,287,291</b>
4	<i>Minus:</i> Changes in foreign stocks and bonds held as reserve assets	-2,503	-2,326	2,209
5	<i>Minus:</i> Changes in value caused by price changes	-1,072,815	1,915,061	267,897
6	<i>Minus:</i> Changes in value caused by exchange-rate changes	-429,188	86,096	620,699
7	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e.	60,594	-8,152	119,357
8	<b>Equals: Net U.S. acquisition of foreign stocks and bonds, ITAs</b>	<b>318,294</b>	<b>-154,108</b>	<b>277,129</b>
9	<i>Plus:</i> Net U.S. acquisition of foreign short-term securities and negotiable certificates of deposit of any maturity, ITAs	16,969	140,629	-57,103
10	<b>Equals: Net U.S. acquisition of portfolio investment assets, ITA table 1.1, line 21</b>	<b>335,263</b>	<b>-13,479</b>	<b>220,026</b>
11	Net U.S. acquisition of foreign stocks and bonds, TIC <sup>2</sup>	-442,406	-197,843	-362,218
12	Coverage difference for net U.S. acquisition of foreign stocks and bonds, ITAs less TIC (line 8 less line 11)	760,700	43,735	639,347
<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>	18,501,925	17,931,408	20,500,320
14	Total liabilities (U.S. stocks and bonds held by foreign residents) outstanding, end of year, TIC <sup>1</sup>	17,931,408	20,500,320	23,368,846
15	<b>Change in liabilities, TIC (line 14–line 13)</b>	<b>-570,517</b>	<b>2,568,912</b>	<b>2,868,526</b>
16	<i>Minus:</i> Changes in value caused by price changes	-890,364	2,440,151	2,200,347
17	<i>Minus:</i> Changes in value caused by exchange-rate changes	-34,413	8,967	49,278
18	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e.	82,049	-94,129	184,878
19	<b>Equals: Net U.S. incurrence of portfolio liabilities through U.S. stocks and bonds, ITAs</b>	<b>272,211</b>	<b>213,923</b>	<b>434,023</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	30,864	-36,766	276,128
21	<b>Equals: Net U.S. incurrence of portfolio investment liabilities, ITA table 1.1, line 26</b>	<b>303,075</b>	<b>177,157</b>	<b>710,151</b>
22	Net U.S. incurrence of portfolio liabilities through U.S. stocks and bonds, TIC <sup>2</sup>	18,198	-43,695	-291,568
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)	254,013	257,618	725,591
<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>	5,508,138	5,523,454	6,128,149
25	Total liabilities (U.S. Treasury bonds held by foreign residents) outstanding, end of year, TIC <sup>1</sup>	5,523,454	6,128,149	6,043,449
26	<b>Change in liabilities, TIC (line 25–line 24)</b>	<b>15,316</b>	<b>604,695</b>	<b>-84,700</b>
27	<i>Minus:</i> Changes in value caused by price changes	-61,466	196,896	302,707
28	<i>Minus:</i> Changes in value caused by exchange-rate changes	.....	.....	.....

Line	Net increase in assets or liabilities (+); net decrease in assets or liabilities (-)	2018 <sup>r</sup>	2019 <sup>r</sup>	2020 <sup>p</sup>
29	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e.	82	153,587	1,541
30	<b>Equals: Net U.S. incurrence of portfolio liabilities through U.S. Treasury bonds, ITAs</b>	<b>76,700</b>	<b>254,212</b>	<b>-388,948</b>
31	<i>Plus:</i> Net U.S. incurrence of portfolio liabilities through short-term U.S. Treasury securities, ITAs	43,535	-30,619	311,257
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>120,235</b>	<b>223,593</b>	<b>-77,691</b>
33	Net U.S. incurrence of portfolio liabilities through U.S. Treasury bonds, TIC <sup>2</sup>	5,236	-133,489	-540,042
34	Coverage difference for net U.S. incurrence of portfolio liabilities through U.S. Treasury bonds, ITAs less TIC (line 30 less line 33)	71,464	387,701	151,094

n.i.e. Not included elsewhere

p Preliminary

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1. 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.
2. 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.
3. 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 (-)	2018 <sup>r</sup>	2019 <sup>r</sup>	2020 <sup>p</sup>
<b>Net U.S. acquisition of other investment assets</b>				
1	Total claims outstanding, beginning of year, TIC <sup>1</sup>	3,890,673	4,046,806	4,312,486
2	Total claims outstanding, end of year, TIC <sup>1</sup>	4,046,806	4,312,486	4,501,054
3	<b>Change in claims, TIC (line 2–line 1)</b>	<b>156,133</b>	<b>265,680</b>	<b>188,568</b>
4	<i>Minus:</i> Direct investment	-29,048	12,008	3,427
5	<i>Plus:</i> Foreign commercial paper coverage adjustments	-46,600	130,935	-28,890
6	<i>Minus:</i> Net U.S. acquisition of foreign short-term securities and negotiable certificates of deposit of any maturity, ITAs	16,969	140,629	-57,103
7	<i>Minus:</i> Changes in value caused by exchange-rate changes	-19,214	3,982	38,842
8	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e.	60,100	1,100	19,200
9	<i>Plus:</i> Supplemental source data <sup>2</sup>	103,033	-33,988	98,610
10	<b>Equals: Net U.S. acquisition of other investment assets, excluding U.S. central bank and general government assets</b>	<b>183,759</b>	<b>204,908</b>	<b>253,922</b>
11	<i>Plus:</i> Net U.S. acquisition of other investment assets by the U.S. central bank and general government	-10,182	-1,262	14,711
12	<b>Equals: Net U.S. acquisition of other investment assets, ITA table 1.1, line 22</b>	<b>173,578</b>	<b>203,647</b>	<b>268,632</b>

Line	Net increase in assets or liabilities (+); net decrease in assets or liabilities (-)	2018 <sup>r</sup>	2019 <sup>r</sup>	2020 <sup>p</sup>
<b>Net U.S. incurrence of other investment liabilities</b>				
13	Total liabilities outstanding, beginning of year, TIC <sup>1</sup>	5,314,814	5,711,919	5,874,458
14	Total liabilities outstanding, end of year, TIC <sup>1</sup>	5,711,919	5,874,458	6,546,149
<b>15</b>	<b>Change in liabilities, TIC (line 14–line 13)</b>	<b>397,105</b>	<b>162,539</b>	<b>671,691</b>
16	<i>Minus:</i> Direct investment	-2,859	3,449	5,098
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	30,864	-36,766	276,128
18	<i>Minus:</i> Changes in value caused by exchange-rate changes	-11,122	807	18,421
19	<i>Minus:</i> Changes in value caused by changes in volume and value n.i.e.	406,660	12,200	21,350
20	<i>Plus:</i> Supplemental source data <sup>2</sup>	145,263	31,496	49,719
<b>21</b>	<b><i>Equals:</i> Net U.S. incurrence of other investment liabilities, excluding liabilities of general government and liabilities from U.S. currency held abroad</b>	<b>118,825</b>	<b>214,345</b>	<b>400,413</b>
22	<i>Plus:</i> Net U.S. incurrence of other investment liabilities by general government and liabilities from U.S. currency held abroad	75,562	62,023	134,665
<b>23</b>	<b><i>Equals:</i> Net U.S. incurrence of other investment liabilities, ITA table 1.1, line 27</b>	<b>194,387</b>	<b>276,368</b>	<b>535,079</b>

**n.i.e.** Not included elsewhere

**p** Preliminary

**r** Revised

1. 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.
2. Includes supplemental transactions from the Bank of England, the Deutsche Bundesbank, the Bank for International Settlements (BIS), and the Federal Reserve Board.