# Chapter 10

# International Transactions Accounts

10.1. This chapter presents the methodology for statistics published in the International Transactions Accounts (ITAs). It includes major sections for the current account, the capital account, the financial account, and the statistical discrepancy. Each account and its published components are discussed in the order they are presented in **ITA table 1.2,** U.S. International Transactions, Expanded Detail, shown below. More detailed statistics are published in other tables that are referenced in this publication and that can also be found on the **BEA Web site**.

**ITA Table 1.2. U.S. International Transactions, Expanded Detail**—Continues

| Line | Current account |
|---|---|
| 1 | **Exports of goods and services and income receipts (credits)** |
| 2 | Exports of goods and services |
| 3 | Goods |
| 4 | General merchandise |
| 5 | Foods, feeds, and beverages |
| 6 | Industrial supplies and materials |
| 7 | Capital goods except automotive |
| 8 | Automotive vehicles, parts, and engines |
| 9 | Consumer goods except food and automotive |
| 10 | Other general merchandise |
| 11 | Net exports of goods under merchanting |
| 12 | Nonmonetary gold |
| 13 | Services |
| 14 | Maintenance and repair services n.i.e. |
| 15 | Transport |
| 16 | Travel (for all purposes including education) |
| 17 | Insurance services |
| 18 | Financial services |
| 19 | Charges for the use of intellectual property n.i.e. |
| 20 | Telecommunications, computer, and information services |
| 21 | Other business services |
| 22 | Government goods and services n.i.e. |

**ITA Table 1.2. U.S. International Transactions, Expanded Detail**—Continues

| Line | Current account |
|---|---|
| 23 | Primary income receipts |
| 24 |   Investment income |
| 25 |     Direct investment income |
| 26 |     Portfolio investment income |
| 27 |     Other investment income |
| 28 |     Reserve asset income |
| 29 |   Compensation of employees |
| 30 | Secondary income (current transfer) receipts |
| 31 | **Imports of goods and services and income payments (debits)** |
| 32 | Imports of goods and services |
| 33 |   Goods |
| 34 |     General merchandise |
| 35 |       Foods, feeds, and beverages |
| 36 |       Industrial supplies and materials |
| 37 |       Capital goods except automotive |
| 38 |       Automotive vehicles, parts, and engines |
| 39 |       Consumer goods except food and automotive |
| 40 |       Other general merchandise |
| 41 |     Nonmonetary gold |
| 42 |   Services |
| 43 |     Maintenance and repair services n.i.e. |
| 44 |     Transport |
| 45 |     Travel (for all purposes including education) |
| 46 |     Insurance services |
| 47 |     Financial services |
| 48 |     Charges for the use of intellectual property n.i.e. |
| 49 |     Telecommunications, computer, and information services |
| 50 |     Other business services |
| 51 |     Government goods and services n.i.e. |
| 52 | Primary income payments |
| 53 |   Investment income |
| 54 |     Direct investment income |
| 55 |     Portfolio investment income |
| 56 |     Other investment income |
| 57 |   Compensation of employees |
| 58 | Secondary income (current transfer) payments |

**ITA Table 1.2. U.S. International Transactions, Expanded Detail**—Continues

| Line | Capital account |
|---|---|
| 59 | **Capital transfer receipts and other credits** |
| 60 | **Capital transfer payments and other debits** |
| | **Financial account** |
| 61 | **Net U.S. acquisition of financial assets excluding financial derivatives (net increase in assets / financial outflow (+))** |
| 62 | Direct investment assets |
| 63 | Equity |
| 64 | Debt instruments |
| 65 | Portfolio investment assets |
| 66 | Equity and investment fund shares |
| 67 | Debt securities |
| 68 | Short term |
| 69 | Long term |
| 70 | Other investment assets |
| 71 | Currency and deposits |
| 72 | Loans |
| 73 | Insurance technical reserves |
| 74 | Trade credit and advances |
| 75 | Reserve assets |
| 76 | Monetary gold |
| 77 | Special drawing rights |
| 78 | Reserve position in the International Monetary Fund |
| 79 | Other reserve assets |
| 80 | Currency and deposits |
| 81 | Securities |
| 82 | Financial derivatives |
| 83 | Other claims |
| 84 | **Net U.S. incurrence of liabilities excluding financial derivatives (net increase in liabilities / financial inflow (+))** |
| 85 | Direct investment liabilities |
| 86 | Equity |
| 87 | Debt instruments |
| 88 | Portfolio investment liabilities |
| 89 | Equity and investment fund shares |
| 90 | Debt securities |
| 91 | Short term |
| 92 | Long term |

**ITA Table 1.2. U.S. International Transactions, Expanded Detail**—Table Ends

| Line | Financial account |
|---|---|
| 93 | Other investment liabilities |
| 94 | Currency and deposits |
| 95 | Loans |
| 96 | Insurance technical reserves |
| 97 | Trade credit and advances |
| 98 | Special drawing rights allocations |
| 99 | **Financial derivatives other than reserves, net transactions** |
| | **Statistical discrepancy** |
| 100 | **Statistical discrepancy** |

## ITA Current Account

10.2. The current account consists of transactions between U.S. residents and nonresidents in goods, services, primary income, and secondary income. Sources and methods for each of these major components of the current account are provided below. Included are descriptions of concepts and coverage, including departures from *BPM6,* key data sources, and estimation methods for each of the published components.

## Goods

### Concepts and coverage

10.3. **Goods** are physical items with ownership rights that can be exchanged among institutional units through transactions. The production of a good can be separated from its subsequent sale or resale. Resident-nonresident transactions in goods include all goods sold, exchanged, donated, or otherwise transferred from U.S. to foreign ownership and vice versa. The major published components are *general merchandise*, *net exports of goods under merchanting*, and *nonmonetary gold*.

10.4. The ITAs include goods that were produced in previous periods (used goods and inventories), U.S. exports that were produced in other countries (reexports), and U.S. imports that were produced in the United States (reimports). The ITAs do not identify how the goods were used, such as for personal consumption, intermediate consumption, inventories, or gross fixed capital formation.

## *Departures from BPM6*

10.5. The coverage and presentation of goods closely follow *BPM6* recommendations. The most important departure stems from BEA not implementing the new treatment of manufacturing services on physical inputs owned by others ("goods for processing"). As explained in Appendix B, lack of adequate source data prevents BEA from introducing the new treatment at this time.

10.6. Under BEA's current treatment, a change in ownership is imputed when goods enter or leave the United States and the value of the goods is included in goods exports and imports. Under the *BPM6* treatment, goods that are sent abroad for processing without a change in ownership and that are returned to the United States should be excluded from statistics on trade in goods, and the processing fee charged by the foreign manufacturing service provider should be recorded as U.S. imports of services. Similarly, goods that enter the United States for processing without a change in ownership and that are returned to the country of ownership should be excluded from statistics on trade in goods, and the processing fee charged by the U.S. manufacturing service provider should be recorded as U.S. exports of services.

10.7. In addition, goods sent abroad for processing and subsequently sold abroad should be recorded as U.S. exports of goods when they are sold, and any inputs purchased abroad by the U.S. firm and processed abroad should be recorded as U.S. imports of goods; the processing fee should be recorded as U.S. imports of services. Similarly, goods entering the United States for processing and subsequently sold in the United States should be recorded as U.S. imports of goods when they are sold, and any inputs purchased in the United States by the foreign firm and processed in the United States should be recorded as U.S. exports of goods; the processing fee should be recorded as U.S. exports of services.

10.8. Currently, detailed information on the processing fees received and paid by U.S. firms for manufacturing services and on the underlying goods transactions either are not available in the U.S. statistical system or are not identifiable in any of the source data. Despite these challenges, BEA continues to conduct research to determine feasible approaches for implementing this treatment.

10.9. In addition, under *net exports of goods under merchanting*, *BPM6* recommends presenting separately merchandise gross flows for *goods acquired under merchanting* as negative exports in the period the merchant acquires the goods and merchandise gross flows for *goods sold under merchanting* as positive exports in the period the merchant sells the goods. However, source data are not available for implementing this recommendation. BEA's source data on merchanting transactions reflect the net value of goods that are purchased and subsequently resold abroad and thus assume that the purchase and sale occur in the same quarter.

## Key data sources

10.10. *U.S. Census Bureau.* U.S. exports to all countries, except Canada, are compiled primarily from data submitted through the Automated Export System, as required by law to be filed by exporters or their agents with the U.S. Census

Bureau. U.S. imports from all countries are compiled primarily from data submitted through the Automated Commercial System, as required by law to be filed by importers or their agents with U.S. Customs and Border Protection (CBP).

10.11. *United States-Canada Data Exchange.* For exports to Canada, the United States substitutes Canadian imports from the United States for U.S. exports to Canada in accordance with a 1987 Memorandum of Understanding signed by the U.S. Census Bureau, CBP, Canada Border Services Agency, and Statistics Canada. Similarly, under this Memorandum of Understanding, Canada substitutes U.S. imports from Canada for Canadian exports to the United States.

10.12. *BEA Survey Data.* Statistics for fuel procured in ports by nonresident ocean and air carriers, which are not included in the Census Bureau data described above, are based on data collected on BEA's surveys of international transactions in transportation services. Statistics for *net exports of goods under merchanting* are based on data collected on BEA's quarterly and benchmark surveys of international transactions in selected services and intellectual property.

10.13. *U.S. Department of Defense.* Statistics for transfers of goods under the Foreign Military Sales program and for goods purchased abroad by U.S. military agencies are reported quarterly to BEA by the U.S. Department of Defense (DOD), as required under Office of Management and Budget (OMB) Statistical Directive No. 19.

## Estimation methods

10.14. Statistics for trade in goods in the ITAs are based on monthly trade data compiled by the U.S. Census Bureau (Census basis data), which are further described below. BEA makes adjustments to the Census basis data in order to align them with the coverage, valuation, definitions, and concepts used for the international and national economic accounts. These adjustments, which are applied separately to exports and imports, are necessary to supplement coverage of the Census basis data, to eliminate duplication of transactions recorded elsewhere in the ITAs, to value transactions at market prices, and to include certain changes in ownership that occur without the goods crossing the U.S. customs boundary.

10.15. Exports of goods consist of *general merchandise*, *net exports of goods under merchanting*, and *nonmonetary gold*. Imports of goods consist of *general merchandise* and *nonmonetary gold*. Each of these published components is described below.

10.16. ***General merchandise.*** General merchandise covers goods exchanged between a resident and a nonresident and excludes goods under merchanting and nonmonetary gold. While transactions in goods that have not changed ownership should be excluded from the ITAs according to international guidelines, BEA is not currently able to identify these transactions to remove them from the source data it receives from the Census Bureau. (See *Departures from BPM6* above for more information.)

10.17. General merchandise is presented as a single item in the *BPM6* standard components with no proposed standards for classification of goods. However, *BPM6* encourages presentations according to the priorities of the compiling economy. In the ITAs, exports and imports of general merchandise are classified and presented by six broad end-use categories in ITA table 1.2 and by more detailed end-use categories in ITA table 2.1. The end-use categories are based on the detailed Harmonized Commodity Description and Coding System. (See "Goods, Census basis" section on *Classification*.)

10.18. ***Net exports of goods under merchanting.*** Merchanting is defined as the purchase of goods by a resident of the compiling economy from a nonresident combined with the subsequent resale of the same goods to another nonresident without the goods entering the compiling economy. Merchanting arrangements are often used for international wholesale and retail trade operations, but they may also be used in commodity dealing and for managing global manufacturing processes. In principle, for goods shipped under merchanting arrangements, purchases and resales are recorded at the time economic ownership of the goods changes.

10.19. BEA currently measures merchanting as the margin between proceeds from the sale of the goods and the cost of acquiring the goods sold. Data on this margin are collected as "net merchanting receipts" on BEA's surveys of selected international services transactions and presented as net exports of goods under merchanting. The Census basis data do not include goods under merchanting because these goods do not cross the U.S. customs boundary.

10.20. ***Nonmonetary gold.*** Nonmonetary gold covers all gold other than monetary gold. (Monetary gold is owned by monetary authorities and is held as a reserve asset.) Nonmonetary gold can be in the form of bullion, gold powder, noncommemorative gold coins, and gold in other unwrought or semi-manufactured forms. Nonmonetary gold is shown separately from other goods partly because of its special role in financial markets and partly because most gold transactions have little to do with current production, consumption, or income.

10.21. In the ITAs, nonmonetary gold reflects the sum of cross-border trade in nonmonetary gold that is recorded in the Census basis data and transactions between foreign official agencies and private U.S. residents in foreign official reserves of gold that are held in the custody of the Federal Reserve Bank of New York (FRBNY). These latter transactions are not captured in Census basis data but are added to goods exports and imports through a balance of payments adjustment. Gold that is purchased by foreign official agencies, such as a foreign central bank, from private entities in the United States and is shipped to the FRBNY for storage is recorded as an export. Similarly, gold that is purchased by private entities in the United States from foreign official agencies out of stock held at the FRBNY is recorded as an import.

### Goods, Census basis

10.22. Exports consist of shipments of domestic and foreign goods by U.S. residents to foreign residents, involving both commercial and noncommercial transactions. Domestic exports consist of commodities grown, produced, or manufactured in the United States and commodities of foreign origin that have been changed in form or enhanced in value in the United States. Foreign exports consist of commodities of foreign origin that are substantially in the same condition when exported as when initially imported into the United States. Exports of foreign goods are often referred to as reexports.

10.23. Imports consist of shipments of foreign goods and goods of U.S. origin by foreign residents to U.S. residents, involving both commercial and noncommercial transactions. Goods of U.S. origin include U.S. goods returned and reimports. U.S. goods returned consist of commodities that are not accepted by the foreign purchaser because of problems such as damage, defects, and incorrect shipments. Reimports consist of commodities of U.S. origin that are substantially in the same condition when imported as when initially exported from the United States.

10.24. ***Valuation.*** Exports are valued on a **free alongside ship (f.a.s.)** basis at the U.S. port of export. The value of exports at the U.S. port of export is based on the transaction price, including inland freight, insurance, and other charges incurred in placing the goods alongside the carrier at the U.S. port of export. The value, as defined, excludes the cost of loading the goods aboard the exporting carrier and also excludes freight, insurance, and charges or transportation costs beyond the U.S. port of export. Freight, insurance, and charges beyond the U.S. port of export are assumed to be incurred by the foreign importer.

10.25. Imports are valued on a customs value basis at the foreign port of export. The **customs value** is the value of imports as appraised by U.S. Customs and Border Protection in accordance with the legal requirements of the Tariff Act of 1930, as amended. The value is generally defined as the price actually paid or payable for goods at the foreign port of export, excluding U.S. import duties, freight, insurance, and other charges incurred in bringing the goods to the United States. Freight, insurance, and charges beyond the foreign port of export are assumed to be incurred by the U.S. importer.

10.26. ***Classification.*** Exports and imports are organized under several different commodity classification systems, including the international **Harmonized Commodity Description and Coding System** (Harmonized System) and the end-use system. BEA primarily uses the **end-use classification system**, which was created by the Balance of Payments Division of the former Office of Business Economics (BEA's predecessor) to make it easier to relate changes in goods trade to changes in production and in consumption.

10.27. The end-use commodity classification system is based on the Harmonized System of commodity classification, which is an internationally accepted standard for the commodity classification of internationally traded goods developed under the auspices of the World Customs Organization. The Harmonized System organizes transactions by the physical nature of commodities and their stage of processing rather than their end-use. The current U.S. Harmonized System consists of approximately 9,000 export commodity categories and 18,000 import commodity categories.

10.28. The broad end-use categories used by BEA and the Census Bureau are foods, feeds, and beverages; industrial supplies and materials; capital goods except automotive; automotive vehicles, parts, and engines; consumer goods except food and automotive; and “other” goods. Currently, the end-use classification system includes about 200 subcategories of exports and 200 subcategories of imports.

## Balance of payments adjustments to Census basis data

10.29. As described above, BEA makes adjustments to the Census basis data in order to align them with the coverage, valuation, definitions, and concepts used for the international and national economic accounts. These adjustments are discussed below and are also presented in ITA table 2.4, which presents the reconciliation between Census basis data and balance of payments basis data. For both exports and imports, the largest adjustments are additions for goods procured in ports by nonresident ocean and air carriers.

### Export adjustments

10.30. An addition is made for the value of goods transferred under U.S. Foreign Military Sales contracts. The addition reflects the replacement of data identified as exports under the Foreign Military Sales program in the Census basis data with data reported to BEA by DOD. The data reported to BEA are more comprehensive than the data reported to the Census Bureau. Negative values may sometimes occur as a result of timing differences for transactions recorded in the two data sets.

10.31. An addition is made for goods procured in U.S. ports by foreign ocean and air carriers. At this time, these purchases are limited to fuel, which are not included in the Census basis data described above. Estimates are based on a supplemental report provided by the Census Bureau and on BEA’s surveys of international transactions in transportation services.

10.32. An addition is made for the net value of goods under merchanting. This value reflects the net value of goods that are purchased and subsequently sold abroad without the goods entering the United States. Because these goods do not cross the U.S. customs boundary, their value is not recorded in the Census basis data. This adjustment is based on BEA’s surveys of international services transactions.

10.33. An addition is made for nonmonetary gold not included in the Census basis data. This involves gold that is purchased by foreign official agencies and is shipped to the FRBNY where it is held in custody for foreign official accounts. No export documents are filed for this gold transaction. The adjustment is based on the monthly average of daily fixings of London gold prices and on data provided by the FRBNY.

10.34. An addition is made for personal parcels shipped via the U.S. Postal Service because Census basis data do not cover these items. The adjustment is based on a survey of postal operations and estimates by BEA. The counterpart entry to this item is included as part of personal transfers in secondary income. An addition is also made for U.S. mail order shipments to Canada based on data provided by Statistics Canada.

10.35. A deduction is made for the value of nonwarranty repairs and alterations of foreign-owned equipment repaired or altered in the United States and subsequently exported. The value of these repairs is combined with data on equipment repairs from BEA's surveys of international services transactions and included in services exports in *maintenance and repair services n.i.e*. The adjustment is based on Census basis data.

10.36. An addition is made to low-value transactions (estimates below the reporting threshold) included in Census basis data to phase in a revised low-value estimation methodology that was implemented by the Census Bureau beginning with estimates for 2010. This adjustment is applied to statistics prior to 2010.

10.37. An addition is made for electric energy supplied to Mexico. The adjustment is based on data from Global Trade Information Services, a private data source.

10.38. An addition is made to raise the value of recorded smart cards to their full market value from the value of the media—that is, the value of the blank or unrecorded smart cards. The adjustment is based on Census basis data and is applied beginning with statistics for 2009.

10.39. A deduction is made for exposed motion picture film for sale or rent. These exports are already included in services exports in *charges for the use of intellectual property n.i.e.* The adjustment is based on Census basis data.

10.40. A deduction is made for U.S.-owned grain shipped for storage in Canada and an addition is made for subsequent delivery of U.S.-owned grain from Canadian warehouses to third countries. The net effect of these adjustments to total goods exports is zero. These adjustments are based on Census basis data.

### Import adjustments

10.41. An addition is made for goods procured in foreign ports by U.S. ocean and air carriers. At this time, these purchases are limited to fuel, which are not covered in the Census basis data described above. Data are based on a supplemental report provided by the Census Bureau and on BEA's surveys of international transactions in transportation services.

10.42. An addition is made for the value of goods purchased abroad by U.S. military agencies, which is reported to BEA by DOD. The Census basis data only include imports of goods by U.S. military agencies that enter the U.S. customs territory.

10.43. An addition is made for inland freight charges to transport goods from their point of origin in Canada and in Mexico to the U.S. customs boundary. Imports of goods from all countries should be valued at the customs value—that is, the value at the foreign port of export including inland freight charges. For imports from Canada and Mexico, this should be the cost of the goods at the U.S. border. However, the customs value for imports for certain Canadian and Mexican goods is at the point of origin in Canada or Mexico. BEA makes an addition for the inland freight charges of transporting these goods to the U.S. border to make the value comparable to the customs value reported for imports from other countries. The adjustment is based on Census basis data.

10.44. An addition is made for locomotives and railcars imported from Canada and Mexico, which are not reported on CBP import declarations. The adjustment is based on data from Statistics Canada and from Global Trade Information Services, a private data source.

10.45. An addition is made for nonmonetary gold not included in Census basis data. This involves gold that is sold by foreign official agencies to private purchasers out of stock held at the FRBNY. No import documents are filed for this gold. The adjustment is based on the average of daily fixings of London gold prices and data provided by the FRBNY.

10.46. A deduction is made for the value of nonwarranty repairs and alterations of U.S.-owned equipment repaired or altered abroad and subsequently imported into the United States. The value of these repairs is combined with data on equipment repairs from BEA's surveys of international services transactions and included in services imports in *maintenance and repair services n.i.e.* The adjustment is based on Census basis data.

10.47. An addition is made to raise the value of selected non-customized computer software to its full market value from the value of the medium (such as CDs, DVDs, and smart cards) on which it is placed, which is the value reported on U.S. CBP import declarations.

10.48. An addition is made to low-value transactions (estimates below the reporting threshold) included in Census basis data to phase in a revised low-value estimation methodology that was implemented by the Census Bureau beginning with estimates for 2010. This adjustment is applied to statistics prior to 2010.

10.49. An addition is made for the value of electric energy imported from Mexico. The adjustment is based on data from Global Trade Information Services, a private data source.

10.50. A deduction is made for imports of exposed movie film for sale or rent included in Census basis data. These transactions are already included in services imports in *charges for the use of intellectual property n.i.e.* The adjustment is based on Census basis data.

10.51. A deduction is made for the value of repairs performed abroad on U.S.-owned vessels included in Census basis data. These transactions are already included in services imports in *transport*. The adjustment is based on Census basis data.

# Services

## Concepts and coverage

10.52. **Services** consists of transactions arising from productive activities that change the condition of the consumer or that facilitate the exchange of products and financial assets. In general, ownership rights cannot be established for services and their consumption or use cannot be separated from their production.

10.53. Services can be provided to international markets by one of four **modes of supply** identified in the World Trade Organization's General Agreement on Trade in Services. Modes of supply are discussed in chapter 14. This chapter covers services provided by the modes of cross-border supply, consumption abroad, and the presence of natural persons, specifically services suppliers. Excluded from this chapter is the supply of services via commercial presence, such as by the affiliates of multinational enterprises. This mode is described in chapter 14.

10.54. Services are classified into nine broad categories that correspond to standard components in the *BPM6* classification scheme. Monthly, quarterly, and annual statistics are provided for these nine categories. Exports and imports of services are further classified into subcategories in ITA table 3.1. Detail by type of service and by **partner country** in the annual statistics exceeds that in the quarterly statistics, and the detail in the quarterly statistics exceeds that in the monthly statistics. (No partner country detail is available for the monthly statistics.)

10.55. In some cases, BEA provides detail beyond the *BPM6* standard components that corresponds with the Extended Balance of Payments (EBOPS) classification system published in the *Manual on Statistics of International Trade in Services (MSITS) 2010*. Both the *BPM6* and EBOPS classification systems are mainly product-based, which means that they are based on the type of service rather than the industry or entity that provides the service. However, classifications are transactor-based for *travel,* for the construction component of *other business services,* and for *government goods and services n.i.e. (not included elsewhere).*

### *Departures from BPM6*

10.56. The coverage and presentation of services differ in some ways from *BPM6* recommendations. One major departure stems from not implementing the new treatment of manufacturing services on physical inputs owned by others. Under BEA's current treatment, a change in ownership is imputed when goods enter or leave the United States and the value of the goods is included in goods exports and imports. Under the *BPM6* treatment, goods that are sent abroad for processing without a change in ownership and that are returned should be excluded from trade in goods and the processing fee charged by the manufacturing services provider should be recorded as trade in services. As explained in appendix B, lack of adequate source data prevents BEA from introducing the new treatment at this time. Despite this source data limitation, services associated with contract manufacturing are partly included in the U.S. international economic accounts because a portion of these services is included in the value of goods exports and imports; however, the services portion cannot be separately identified.

10.57. Another major departure arises from not implementing the new treatment of implicitly priced financial services. Financial services may involve explicit charges, margins on buying and selling transactions, asset management fees, or implicit charges such as financial intermediation services indirectly measured (FISIM), which represents the margin between interest payable and the reference rate on loans and deposits. At this time, financial services in the U.S. international economic accounts exclude FISIM and dealers' and market-makers' margins on buying and selling transactions on financial assets other than bonds. As explained in appendix B, implementation requires coordinating this new treatment with that in the national economic accounts and determining how the measurement of FISIM relates to cross-border monetary interest flows in the international economic accounts. As a result, the services category *financial services* covers only financial services with explicit charges, with the exception of implicit fees on bond transactions measured as the difference between bid and ask prices.

10.58. BEA's new presentation does not separately include the BPM6 standard components *construction* and *personal, cultural, and recreational (PCR) services*. However, construction and most components of PCR services are included in the BEA category *other business services.* Some components of PCR services are included in *charges for the use of intellectual property n.i.e.* These components include mass-produced recordings and manuscripts that are purchased or sold outright or for perpetual use if downloaded, similar products obtained through a license to use (other than when conveying perpetual use), and the use of other online content related to audio and visual media. In addition, BEA's *insurance services* category differs from the *BPM6* standard component *insurance and pension services* due to a lack of source data for pension services.

## Key data sources

10.59. *BEA Survey Data.* Statistics for several of the ITA services categories are based largely on data collected on BEA's quarterly and benchmark services surveys. These services categories include *transport*; *insurance services*; *financial services*; *charges for the use of intellectual property n.i.e.*; *telecommunications, computer, and information services*; and *other business services*. These BEA surveys are described in chapter 13.

10.60. *U.S. Department of Homeland Security (DHS).* Statistics for *travel* between the United States and countries other than Canada and Mexico rely on counts of foreign visitors to the United States from the DHS Office of Immigration Statistics and U.S. visitors to foreign countries from CBP. Passenger counts are also used to prepare statistics for parts of *transport.*

10.61. *U.S. Department of Commerce, International Trade Administration, National Travel and Tourism Office (NTTO)*. Estimates for *travel* rely partly on estimates of average expenditure per traveler based on the Survey of International

Air Travelers (SIAT) conducted by NTTO. This survey is conducted at U.S. international airports for both departures and arrivals.

10.62. *U.S. Treasury Department.* Estimates for components of *financial services* are based partly on cross-border transactions collected on selected Treasury International Capital (TIC) forms.

## Estimation methods

10.63. Estimation methods vary depending on the services component and the estimation period. As described above, for many of the services components, statistics are based on BEA survey data with adjustments for coverage and concepts. *Travel* statistics are prepared as the product of the number of travelers and the average expenditure per traveler. Other components are based on government administrative data and other sources.

10.64. Definitions and estimation methods for each of the nine broad services categories published quarterly by BEA are provided below. These categories closely follow but do not always exactly match the *BPM6* standard components for services. Specific departures from *BPM6* are also described below. Services categories are presented in the same order as in ITA table 3.1. Unless otherwise noted, descriptions of methods apply to both exports and imports.

10.65. ***Maintenance and repair services n.i.e.*** Maintenance and repair services n.i.e (not included elsewhere) covers maintenance and repair services by residents of one country on goods that are owned by residents of another country. The repairs may be performed at the site of the repair facility or elsewhere. Maintenance and repair of ships, aircraft, and other transport equipment are currently included in *transport* because these transactions cannot be separately identified in BEA's source data for *transport* services. Construction maintenance and repairs, including renovation, repair, or extension of fixed assets in the form of buildings, and repairs of railway facilities, harbors, and airfield facilities are included in the construction component of *other business services*. Computer maintenance and repairs are included in the computer services component of *telecommunications, computer, and information services*.

10.66. Statistics for maintenance and installation are based primarily on BEA survey data and are supplemented by Census Bureau data on the cross-border movement of equipment and other goods for repair. The BEA surveys include the Quarterly Survey of Transactions in Selected Services and Intellectual Property With Foreign Persons (BE–125) and the Benchmark Survey of Transactions in Selected Services and Intellectual Property With Foreign Persons (BE–120). The value recorded for maintenance and repair services is the value of the work performed, not the gross value of the goods before or after repair. Service values include parts or materials supplied by the service provider.

10.67. ***Transport.*** Transport consists of transactions associated with moving people and property from one location to another and includes related supporting and auxiliary services. Transport is classified by mode of transport—sea, air, or other mode—and by what is transported (passengers or freight). Under sea transport and air transport, BEA presents port services, which include cargo handling, storage and warehousing, and other related transport services. BEA does not separately present the *BPM6* standard component of postal and courier services.

10.68. The primary sources of information are four mandatory BEA surveys of U.S. and foreign air and ocean carriers; Census Bureau data on U.S. exports and imports by air; and U.S. Army Corps of Engineers (ACE) data on U.S. exports and imports by water. Three of the BEA surveys are quarterly (U.S. ocean and air carriers and foreign air carriers) and one is annual (foreign ocean carriers). The Census Bureau data and the ACE data are monthly.

10.69. A variety of methods are used to estimate the transactions covered by the components of transport. For some components, the transactions are available from a primary data source, such as a BEA survey. For most components, however, transactions are estimated using multistep methods that include, for example, multiplying the volume of goods transported, based on information from the Census Bureau or ACE, by estimates of freight rates derived from BEA surveys.

10.70. Freight services are recorded in the U.S. international economic accounts when shipping services are performed by the residents of one country for residents of other countries. A key convention in estimating freight services is the assumption that shipping services performed on a country's goods exports beyond its borders are paid for by the importing country. Thus, freight charges for transporting U.S. exports of goods are included in the U.S. international accounts as transport exports if the carriers are U.S. residents; if the carriers are foreign residents, the charges are excluded because the transactions are deemed to be between foreign residents. Similarly, freight charges for transporting U.S. imports of goods are included in the U.S. international accounts as transport imports if the carriers are foreign residents; if the carriers are U.S. residents, the charges are excluded because the transactions are deemed to be between U.S. residents.

10.71. *Sea transport* consists of *freight* services and *port* services. Freight services exports include receipts of U.S. vessel operators for transporting U.S. goods exports to foreign ports and transporting goods between foreign ports. Imports include U.S. payments to foreign vessel operators for transporting U.S. goods imports from foreign ports to U.S. ports. Port services exports include the value of goods and services procured by foreign carriers in U.S. ports. Imports include the value of non-fuel goods and services procured by U.S. carriers in foreign ports. Purchases of fuel in ports are excluded from transport and included in exports and imports of goods.

10.72. Sea freight services statistics are primarily based on ACE data on waterborne exports and imports and on BEA's quarterly survey Ocean Freight Revenues and Foreign Expenses of U.S. Ocean Carriers (BE–30). The ACE waterborne data provides tonnage and value of goods transported, freight and insurance charges on imports, and the residency of the vessel operator. ACE data cover both U.S.-flag and foreign-flag vessels providing liner, tanker, and tramp services to and from the United States, including transport on the U.S. Great Lakes. The BE–30 survey covers U.S. ocean carriers' revenues and tonnage for transporting U.S. exports to foreign points and revenues for transporting freight between foreign points.

10.73. Sea freight exports are estimated by multiplying ACE data on export tonnages carried by U.S.-operated vessels for each type of service (liner, tanker, and tramp) by corresponding freight rates. Freight rates for liner services are derived from data reported on the BE–30 survey. Freight rates for tanker and tramp services are based on global rate indexes covering the tanker and dry bulk shipping market provided by the Baltic Exchange. Also included in sea freight exports are receipts of U.S.-operated vessels from foreign residents for carrying goods between foreign ports and for operating leases of transportation equipment with crew for limited periods of time (such as a single voyage) for the carriage of freight and passengers. These receipts are reported on the BE–30 survey.

10.74. Sea freight imports are estimated by summing ACE data on import freight and insurance charges received by foreign-operated vessels. An estimate of insurance payments is removed from the ACE imports data. These data are captured in BEA's source data for *insurance services.* Also included in sea freight imports are payments of U.S.-operated vessels to foreign residents for operating leases of transportation equipment with crew for limited periods of time (such as a single voyage) for the carriage of freight and passengers. These payments are reported on the BE–30 survey.

10.75. Sea port services statistics are based on BEA's annual survey Foreign Ocean Carriers' Expenses in the United States (BE–29), the BE–30 survey, and ACE data on U.S. waterborne exports and imports. The BE–29 survey covers the expenses incurred by foreign ocean carriers in U.S. ports. These carriers include foreign affiliates of U.S. companies that operate vessels for their own accounts. The BE–30 survey covers the expenses incurred by U.S. ocean carriers in foreign ports. The ACE waterborne data provides U.S. export and import tonnage by residency of the vessel operator and by type of service (liner, tanker, and tramp) transported to and from the United States, including transport on the U.S. Great Lakes.

10.76. Sea port exports are estimated by multiplying ACE data on export and import tonnages carried by foreign-operated vessels for each type of service by corresponding per ton port expense rates derived from the BE–29 survey. Sea port imports are estimated by multiplying ACE data on export and import tonnages carried by U.S.-operated vessels for each type of service by corresponding per ton port expense rates derived from the BE–30 survey. Sea port exports and imports exclude purchases of fuel. Foreign-operated vessels' purchases of fuel in U.S. ports are included in exports of industrial supplies and materials and U.S.-operated vessels' purchases of fuel in foreign ports are included in imports of industrial supplies and materials.

10.77. *Air transport* consists of *passenger* services, *freight* services, and *port* services. Air passenger services cover the transport of nonresidents by U.S. air carriers between the United States and foreign countries and between two foreign points (exports), and the transport of U.S. residents by foreign air carriers between the United States and foreign countries and between two foreign points (imports). Air freight services exports cover U.S. air carriers transporting U.S. goods exports from the United States to foreign points and transporting goods between two foreign points. Imports cover foreign air carriers transporting U.S. goods imports from foreign countries to U.S. points. Port services exports include the value of goods and services procured by foreign air carriers in U.S. ports, and port services imports include the value of goods and services procured by U.S. air carriers in foreign ports. Purchases of fuel in ports, however, are excluded from transport and included in goods exports and imports.

10.78. Air passenger services statistics are compiled separately for Canada and for all other countries. For countries and areas other than Canada, BEA multiplies data on the number of travelers by estimates of average air fares. Numbers of travelers are from the DHS Office of Immigration Statistics and CBP. Average fares are from surveys of travelers conducted by the U.S. Department of Commerce, NTTO. For travel to and from Canada, BEA uses data provided by Statistics Canada.

10.79. Also included in air passenger services are receipts of U.S. air carriers for transporting passengers between two foreign points and receipts and payments from interline settlements. Interline settlement receipts occur when foreign residents purchase tickets on foreign air carriers and transfer to U.S. air carriers to reach their final destinations. Interline settlement payments occur when U.S. residents purchase tickets on U.S. air carriers and transfer to foreign air carriers to reach their final destinations. Estimates for both of these items are based on data obtained from BEA's quarterly survey U.S. Airline Operators' Foreign Revenues and Expenses (BE–37).

10.80. Air freight statistics are based primarily on the BE–37 survey and the Census Bureau's monthly air export and import data. The BE–37 survey covers U.S. air carriers' revenues for transporting U.S. exports to foreign points and for transporting freight between foreign points. The Census Bureau air freight data provide export tonnage and import freight and insurance charges by residence of operator.

10.81. Air freight exports are estimated based on the revenue data reported on the BE–37 survey. BEA uses ratios derived from transport tonnage information in the Census Bureau's air export data to distribute total U.S. air carriers' revenues to each of the ITA geographic areas. Air freight imports are estimated by summing Census Bureau data on import freight and insurance charges received by foreign air carriers. An estimate of insurance payments based on the ACE data on import tonnage is removed. These transactions are captured in BEA's source data for *insurance services*. U.S. Postal Service receipts from foreign residents for the transportation of foreign mail, and payments to foreign residents by the U.S. Postal Service for the transportation of U.S. mail, are included in air freight.

10.82. Air port services statistics are based on BEA's quarterly survey Foreign Airline Operators' Revenues and Expenses in the United States (BE–9) and the quarterly BE–37 survey. Air port exports are estimated based on reported data from the BE–9 survey, which covers the expenses incurred by foreign air carriers in the United States. Air port imports are estimated based on reported data from the BE–37 survey, which covers the expenses of U.S. air carriers in foreign countries. Air port exports and imports exclude purchases of fuel. Foreign air carrier's purchases of fuel in U.S. ports are included in exports of industrial supplies and materials and U.S. air carriers' purchases of fuel in foreign ports are included in imports of industrial supplies and materials in the goods account.

10.83. *Other modes of transport* includes freight services performed by truck, rail, and pipeline, and in space, and port services for rail and water transport. Statistics for each of these modes are derived using a variety of sources and methods.

10.84. Truck freight services exports consist of U.S. truck carriers transporting U.S. exports from the U.S.-Canadian border to points in Canada and for transporting U.S. imports from points in Canada to the U.S.-Canadian border. Imports consist of Canadian truck carriers transporting U.S. exports from points inside the United States to the U.S.-Canadian border and for transporting U.S. imports from the U.S.-Canadian border to points inside the United States. Small adjustments are made to account for U.S. and Canadian carriers' receipts for cabotage and landbridge-type activities. Sources consist primarily of data from the U.S. Department of Transportation's Bureau of Transportation Statistics and private sources.

10.85. Rail freight services exports represent revenues of U.S. rail carriers for transporting (1) Canadian exports to, and imports from, third countries through the United States, (2) U.S. exports from the U.S. customs frontier to interior destinations or to other rail connections in Canada, (3) goods within Canada transported on the U.S. rail carriers' leased trackage in Canada, and (4) foreign-owned goods through the United States en route to another foreign country. Imports represent revenues of Canadian rail carriers for transporting U.S. imports from third countries through Canada and U.S. goods through Canada en route from one U.S. point to another. Rail port services represent the expenditures by Canadian rail carriers in the United States (exports) and by U.S. rail carriers in Canada (imports). Sources include the U.S. Department of Transportation's Surface Transportation Board and Statistics Canada.

10.86. Space transport exports represent revenues of U.S. launch service providers for launching foreign-owned satellites into space. Space transport imports represent revenues of foreign launch service providers for launching U.S.-owned satellites into space. The primary data source is the U.S. Department of Transportation's Federal Aviation Administration.

10.87. Pipeline freight exports represent revenues of U.S.-incorporated affiliates of Canadian pipeline companies for transporting oil and gas, unloaded from tankers in Portland, Maine, to destinations in Canada. Transportation of oil en route from one Canadian point to another through pipelines across the northeast region of the United States is also included. Data are obtained each quarter from the U.S. affiliates of Canadian companies that provide such services.

10.88. ***Travel (for all purposes including education).*** Travel consists of transactions involving goods and services acquired by nonresidents while visiting another country. A traveler is defined as a person who stays, or intends to stay, for less than one year in a country of which he or she is not a resident or a nonresident whose purpose is to obtain education or medical treatment, no matter how long the stay. Purchases can be either for own use or for transfer to others. Travel is a transactor-based component that covers a variety of goods and services, primarily lodging, meals, transportation in the country of travel, amusement, entertainment, and gifts. Travel excludes goods for resale, which are included in goods under *general merchandise.* Air passenger service for travel between the United States and other countries is included in *transport.*

10.89. Travel is further classified between *business travel* and *personal travel.* Business travel covers goods and services acquired by persons whose primary purpose for travel is for business. It includes goods and services for which business travelers are reimbursed by their employers. BEA breaks down business travel into (1) expenditures by border, seasonal, and other short-term workers and (2) other business travel. Personal travel covers travel for all non-business purposes. BEA breaks down personal travel into (1) health-related, (2) education-related, and (3) other personal travel.

10.90. Because of limits on source data for other business travel and other personal travel, statistics for exports to and imports from Canada and Mexico are prepared differently than for all other countries. Statistics for Canada and Mexico are based on data provided by Statistics Canada and the Bank of Mexico.

#### *Business travel*

10.91. *Expenditures by border, seasonal, and other short-term workers* covers the expenditures on goods and services by foreign residents who commute to work in the United States, other foreign workers temporarily employed in the United States, and U.S. residents employed temporarily abroad. Statistics are based on the earnings of these workers, which are included in *compensation of employees,* and on information from the Department of Labor, Bureau of Labor Statistics (BLS) Consumer Expenditure Survey that BEA uses to estimate the portion of earnings spent.

10.92. *Other business travel* is estimated as a share of a sub-aggregate measure of travel that excludes travel by cruise, expenditures by travelers whose primary purpose for travel is education or health, and expenditures by border, seasonal, and other short-term workers. This sub-aggregate measure of travel is derived by multiplying the number of travelers by a measure of their average expenditures. Numbers of travelers are obtained from the DHS Office of Immigration Statistics and CBP. Baseline average expenditures are obtained from the SIAT, conducted by the U.S. Department of Commerce, NTTO. Baseline average expenditures are adjusted using supplemental information to account for particular limitations often faced by expenditure surveys, including underreported spending. The number of travelers and SIAT data include the country of residency for foreign travelers to the United States and countries of destination for U.S. travelers abroad. The shares used to distribute the sub-aggregate measure of travel into other business travel and other personal travel are estimated using information from the SIAT.

### *Personal travel*

10.93. *Health-related travel* is based on periodic updates of a BEA study on foreign resident medical treatment in the United States and BEA estimates of payments by U.S. residents who travel abroad to selected countries for medical purposes, such as cosmetic surgery and dental procedures.

10.94. *Education-related travel* is based on data on the number of U.S. students abroad and foreign students in the United States from the Institute for International Education. Average student expenditures for tuition, room and board, and living expenses are from the National Center for Education Statistics and BLS.

10.95. *Other personal travel* is estimated as the sum of cruise fares and a share of the sub-aggregate measure of travel that excludes travel by cruise, expenditures by travelers whose primary purpose for travel is education or health, and expenditures by border, seasonal, and other short-term workers. See *other business travel* above for the method used to estimate this sub-aggregate and to distribute it between other personal travel and other business travel. Source data from DHS and from several private sources are used to estimate cruise fares.

10.96. ***Insurance services.*** Insurance services include the *direct insurance* services of providing life insurance (including annuities) and nonlife (property and casualty) insurance, *reinsurance,* and *auxiliary insurance services.* Direct insurance and reinsurance are measured as gross premiums earned plus premium supplements less claims payable, with an adjustment for claims volatility. Premium supplements represent investment income from insurance reserves attributed to policyholders who are treated as paying the income back to the insurer. Auxiliary insurance is measured separately and includes agents' commissions, brokerage services, insurance consulting services, actuarial services, and other insurance services. BEA does not include the *BPM6* component pension services due to a lack of source data.

10.97. While premiums and premium supplements are relatively stable, claims payable, which are subtracted from premiums, can be quite volatile from quarter to quarter. The resulting measure of insurance services could thus be erratic, or even negative, in periods of catastrophic events. To deal with fluctuating loss settlements, insurance services are measured as premiums less claims payable adjusted for claims volatility, a concept called "expected losses." Expected losses are inferred from the relationship between actual losses and premiums averaged over six years. An additional adjustment is made for losses related to certain catastrophic events, which are averaged over 20 years. This treatment removes much of the volatility in insurance services that can be caused by large swings in actual losses.

10.98. Expected losses are considered transfers from the policyholders to the insurance company and are recorded in *secondary income* as a current transfer. Claims payable are transfers from the insurance company back to the policyholder and are also recorded in *secondary income.* An exception to this treatment is for catastrophic losses, which BEA defines as events where the total impact, insured and uninsured, is greater than one percent of gross domestic product. For catastrophic losses, the full amount of the insured loss is entered as a transfer in the *capital account* in the quarter in which the event occurs. This treatment considers the recovery of losses as an increase in financial assets, rather than an increase in current economic activity that would have been implied if it were combined with regular losses in current transfers. The treatment also removes a significant source of volatility in the current-account balance.

10.99. Statistics for *insurance services* are based on BEA survey data and company reports. The BEA surveys include the Quarterly Survey of Insurance Transactions by U.S. Insurance Companies With Foreign Persons (BE–45) and the Benchmark Survey of Insurance Transactions by U.S. Insurance Companies With Foreign Persons (BE–140). Direct insurance and reinsurance are estimated separately. An amount collected on BEA surveys is added for auxiliary services such as agents' commissions and insurance brokerage and agency services. Most cross-border activity occurs in reinsurance where U.S. purchases from foreign reinsurance companies greatly exceed foreign purchases of reinsurance from companies in the United States.

10.100. ***Financial services.*** Financial services include financial intermediary and auxiliary services, except insurance services. These services include those normally provided by banks and other financial institutions. Services primarily include those for which an explicit commission or fee is charged; implicit fees for bond transactions are also included. While *BPM6* recommends inclusion of FISIM and dealers' and market-makers' margins on financial instruments, BEA does not include these components at this time.

10.101. BEA classifies and presents financial services according to the four components described below:

10.102. *Securities brokerage, underwriting, and related services* cover commission or fee-based financial services including (1) brokerage services related to equity services, such as commissions and fees for executing orders to purchase or sell equities; (2) brokerage services for executing orders to purchase or sell forwards, futures, options, and swaps and other financial instruments, including brokerage of foreign currencies, whether conducted on organized exchanges, in over-the-counter markets, or over Internet and electronic communications networks; (3) brokerage services related to debt securities, estimated as implicit fees for executing orders to purchase and sell bonds; and (4) underwriting and private placement services for both equities and bonds.

10.103. *Financial management, financial advisory, and custody services* cover (1) fees for administering portfolios of cash, securities, financial derivatives, and other financial instruments; (2) fees for advisory services on mergers and acquisitions, commodity trading services, investment newsletters or investment advice, and proxy voting advisory services; and (3) custody services (including payments and settlements services such as mortgage servicing services) and other custody services.

10.104. *Credit card and other credit-related services* cover (1) credit card services, such as transaction and service fees, interchange fees, and currency-conversion fees and (2) credit-related services, such as for establishing and maintaining standby letters of credit, arranging mortgages, performing factoring services, issuing financial guarantees and loan commitments, and arranging or entering into financial lease contracts.

10.105. *Securities lending, electronic funds transfer, and other services* cover (1) amounts received or paid for lending or borrowing securities, arranging loan terms and conditions, monitoring the value of collateral, providing guarantees against default, and providing other securities lending services; (2) fees for the electronic funds transfers of money or financial assets received directly from, or paid directly to, foreign persons; and (3) other financial services, such as asset pricing services, check processing fees, and securities or futures clearing and settling services.

10.106. Due to disclosure issues, not all of the individual components described above can be shown separately in the more detailed annual presentation of services trade. The combined categories, which prevent disclosure of individual company information, are brokerage services, underwriting services, credit card and other credit-related services, management services, advisory services, and other financial services, including securities lending and electronic funds transfer.

10.107. Statistics for financial services are based primarily on BEA survey data. The BEA surveys include the Quarterly Survey of Financial Services Transactions Between U.S. Financial Services Providers and Foreign Persons (BE–185) and the Benchmark Survey of Financial Services Transactions by U.S. Financial Services Providers With Foreign Persons (BE–180). These surveys collect data on cross-border receipts and payments for the categories of financial services transactions identified above. Because bonds are generally not traded on a commission or fee basis, bond transactions are measured by the difference between bid and ask prices, based on market data from industry sources, multiplied by transactions volume.

10.108. ***Charges for the use of intellectual property n.i.e.*** Charges for the use of intellectual property n.i.e. include (1) charges for the use of proprietary rights (such as patents, trademarks, copyrights, industrial processes and designs including trade secrets, and franchises) that can arise from research and development as well as from marketing and (2) charges for licenses to reproduce or distribute (or both) intellectual property embodied in produced originals or prototypes (such as copyrights on books and manuscripts, computer software, cinematographic works, and sound recordings) and related rights (such as for live performances and television, cable, or satellite broadcast).

10.109. For computer software products, licenses to use, excluding reproduction and distribution, are included in *computer services*.

10.110. Under *BPM6*, licenses to use audio-visual and related products, such as books, movies, and sound recordings, excluding reproduction and distribution, are included in a *BPM6* standard services category called personal, cultural, and recreational services. However, BEA currently lacks the source data needed to present this standard category or to distinguish between licenses to use, reproduce, or distribute audio-visual and related products. As a result, all of these transactions are currently included under charges for the use of intellectual property n.i.e.

10.111. Under *BPM6,* outright sales of the outcomes of research and development such as patents, copyrights, and industrial processes and designs are included under *research and development services*, a component of *other business services*, and outright sales of marketing assets such as franchises and trademarks are included in the *capital account*. At this time, however, BEA lacks the source data needed to distinguish outright sales from licenses to use, reproduce, or distribute. As a result, all of these transactions are currently included under charges for the use of intellectual property n.i.e.

10.112. BEA classifies and presents charges for the use of intellectual property n.i.e. according to the five components described below:

10.113. Rights related to *industrial processes* and products include license fees, royalties, and other fees received or paid for the sale or purchase, right to use, or right to reproduce or distribute intellectual property, including patents, trade secrets, and other proprietary rights, that are used in connection with, or related to, the production of goods.

10.114. Rights to *computer software* include receipts and payments for rights to distribute general use software and rights to reproduce or use general use computer software that was made from a master copy. This item includes licensing fees for reproducing copies of general use software for local area network computer systems.

10.115. *Trademarks and franchise fees* include receipts and payments for the rights to sell products under a particular trademark, brand name, or signature and fees received and paid under business format franchising agreements with foreign persons.

10.116. Rights to *audio-visual and related products* include receipts and payments for the rights to display, reproduce, or distribute performances and events pre-recorded on motion picture film and TV tape (including digital recordings); to record and/or broadcast "live" artistic performances, sporting events, and other live performances or events; and to perform, broadcast, reproduce, and sell as CDs, digital music, books (including books and magazines downloaded from the Internet), etc. or otherwise use copyrighted material and other intellectual property.

10.117. Payments (or receipts) for the acquisition (or sale) of rights to broadcast a major live performance or event, such as the Olympics, often extend over several years prior to the event. The cumulative amount of payments over all the years is recorded in the period in which the event is held.

10.118. *Other intellectual property* includes intellectual property not classified in one of the preceding categories such as receipts or payments by communications carriers to secure capacity by indefeasible right of user (IRUs).

10.119. More detailed definitions for these components can be found on BEA's surveys of transactions in selected services and intellectual property described in chapter 13.

10.120. Statistics for charges for the use of intellectual property n.i.e. are based primarily on BEA survey data. The BEA surveys include the Quarterly Survey of Transactions in Selected Services and Intellectual Property With Foreign Persons (BE–125) and the Benchmark Survey of Transactions in Selected Services and Intellectual Property With Foreign Persons (BE–120). Quarterly and benchmark survey data are collected by type of affiliation as well as by type of service. Exports are the sum of receipts from unaffiliated persons and receipts by U.S. parents from their foreign affiliates and by U.S. affiliates from their foreign parent groups. Imports are the sum of payments to unaffiliated persons and payments by U.S. parents to their foreign affiliates and by U.S. affiliates to their foreign parent groups.

10.121. ***Telecommunications, computer, and information services.*** This *BPM6* standard component consists of *telecommunications services, computer services*, and *information services*. BEA publishes each component separately.

10.122. Telecommunications services include the broadcast or transmission of sound, images, data, or other information by electronic means. These services do not include the value of the information transmitted.

10.123. Computer services consists of hardware- and software-related services and data processing services. It includes sales of customized software and related use licenses as well as licenses to use non-customized software with a periodic license fee. This item also includes software downloaded on the Internet, fees and subscriptions for online gaming, and licensing agreements and end-user fees associated with downloading applications. Cross-border transactions in non-customized packaged software with a license for perpetual use are included in goods.

10.124. Information services includes news agency services, database services, and Web search portals.

10.125. Statistics for telecommunications, computer, and information services are based primarily on BEA survey data. The BEA surveys include the Quarterly Survey of Transactions in Selected Services and Intellectual Property With Foreign Persons (BE–125) and the Benchmark Survey of Transactions in Selected Services and Intellectual Property With Foreign Persons (BE–120). Specific definitions for the survey data items can be found in the BEA surveys described in chapter 13. Adjustments are made to survey results for computer services transactions between the United States and Canada to incorporate counterpart data from Statistics Canada.

10.126. ***Other business services.*** This category, which is a combination of several *BPM6* standard components, consists of *research and development services, professional and management consulting services*, and *technical, trade-related, and other business services.* BEA publishes each component separately.

10.127. Research and development services consist of services associated with basic and applied research and experimental development of new products and processes.

10.128. Professional and management consulting services include legal services, accounting, management consulting, managerial services, public relations services, advertising, and market research. Included are amounts received by a parent company from its affiliates for general overhead expenses related to these services.

10.129. Technical, trade-related, and other business services include architectural and engineering services, waste treatment, operational leasing services, trade-related, and other business services.

10.130. In the U.S. international economic accounts, the definition of other business services is expanded to include the *BPM6* standard component of *construction* and selected components of the *BPM6* standard component of *personal, cultural, and recreational services*. These items are included as part of other business services due to source data limitations for quarterly statistics. *Construction* covers the creation, renovation, repair, or extension of structures. It also includes management of construction projects. The components of *personal, cultural, and recreational services* that BEA includes in other business services include fees to performers, athletes, directors, and producers involved with concerts, theatrical and musical productions, sporting events, and similar events for performing arts, sports, etc., remotely-provided telemedicine services, and online non-travel education.

10.131. Statistics for research and development services, professional and management consulting services, and technical, trade-related, and other business services are based primarily on BEA survey data. The BEA surveys include the quarterly BE–125 and the benchmark BE–120. Specific definitions for the survey data items can be found in the BEA surveys described in chapter 13.

10.132. ***Government goods and services n.i.e.*** This *BPM6* standard component covers goods and services supplied by and to enclaves, such as embassies, military bases, and international organizations; goods and services acquired from the host economy by diplomats, consular staff, and military personnel located abroad and their dependents; and services supplied by and to governments that are not included in other services categories. Services supplied by and to governments are classified to specific services categories when source data permit. Statistics for government goods and services n.i.e. are based largely on data provided to BEA by other U.S. government agencies.

# Primary Income

## Concepts and coverage

10.133. **Primary income** represents the return that accrues to institutional units for their contribution to the production process or for the provision of financial assets and renting natural resources to other institutional units. The first-level published components are **investment income** and **compensation of employees**. Investment income is the return on holdings of financial assets and includes direct investment income, portfolio investment income, other investment income, and income on reserve assets. Unlike other functional categories, no primary income accrues to financial derivatives; any amounts that accrue under the contract are classified as revaluations. Compensation of employees is income for the contribution of labor inputs to the production process. Cross-border primary income flows provide a link between gross domestic product (GDP) and gross national income (GNI) as GNI equals GDP plus the primary income balance.

10.134. The presentation structure of investment income in the current account is consistent with that for the corresponding financial flows in the financial account and positions in the International Investment Position (IIP) Accounts. Investment income receipts and payments are classified and presented by functional category. ITA table 4.1 presents investment income by functional category and by instrument type. ITA table 4.2 presents direct investment income by type and by industry. ITA tables 4.3 and 4.4 present portfolio investment income and other investment income by sector and by type of instrument.

## *Departures from BPM6*

10.135. The coverage and presentation of primary income closely follow *BPM6* recommendations, particularly in the more detailed ITA tables 4.1–4.4. One departure is the absence of statistics for *other primary income*, which consists of rent for the use of natural resources and taxes less subsidies on products and production. Source data are not available that allow the separation of rental income from investment income. Cross-border taxes and subsidies on products and production are rare. In addition, statistics are not provided for investment income attributable to standardized guarantees and pension funds as these financial instruments are not captured in BEA's source data for international transactions and positions.

## Key data sources

10.136. *BEA Survey Data.* Statistics for direct investment income receipts and payments are based largely on data collected on BEA's quarterly, annual, and benchmark direct investment surveys. The quarterly surveys collect only information needed for the ITAs and the IIP accounts—specifically, information on income flows between parents and their affiliates as well as related financial transactions and positions between parents and their affiliates.

10.137. The Quarterly Survey of U.S. Direct Investment Abroad (BE–577) collects quarterly data on U.S. direct investment abroad. The Quarterly Survey of Foreign Direct Investment in the United States (BE–605) collects quarterly data on foreign direct investment in the United States. Each year, the data from the quarterly surveys are reconciled to the Annual Survey of U.S. Direct Investment Abroad (BE–11) and to the Annual Survey of Foreign Direct Investment in the United States (BE–15). Once every five years, the data from the quarterly surveys are reconciled to the Benchmark Survey of U.S. Direct Investment Abroad (BE–10) and to the Benchmark Survey of Foreign Direct Investment in the United States (BE–12).[1]

10.138. *U.S. Treasury Department.* Statistics for portfolio investment income and for other investment income presented in ITA tables 1.1–1.3 and in ITA tables 4.3–4.4 are based partly on resident-nonresident transactions and positions collected monthly on the Treasury International Capital (TIC) S, SLT, C, and B forms and on the related SHC(A) and SHL(A) annual and benchmark surveys.

10.139. Interest yields on U.S. corporate, federally-sponsored agency, and Treasury long-term debt securities are the current yields derived from the SHL(A) survey data and interest yields on long-term foreign debt securities are the current yields derived from the SHC(A) survey data.

10.140. *Federal Reserve Bank of New York.* Interest earned on U.S. reserves and central bank liquidity swaps are provided to BEA.

10.141. *International Monetary Fund (IMF).* The IMF provides month-end position data and daily increases and decreases during each month, including interest flows, for the U.S. accounts at the IMF. The data include positions and transactions between the United States and the IMF for the Special Drawing Rights account and the General Resources (tranche) account and its subaccounts covering securities, valuation adjustments, and IMF borrowing from the United States.

10.142. *Foreign counterparty.* TIC and BEA survey coverage of claims and liabilities of U.S.-resident nonbanking enterprises with foreign-resident banks are supplemented by reports from the Federal Reserve Board (FRB), the Bank for International Settlements, and bilateral statistics from partner country central banks. These sources provide quarterly data on loans and deposits from the point of view of the foreign bank counterparties.

10.143. *Morgan Stanley Capital International (MSCI), Standard & Poor's (S&P),* and *Merril Lynch Price Indexes.* For U.S. equity shares, BEA uses the dividend yield from the S&P 500, which is a proxy for the composition of foreign holdings of U.S. equity shares. For dividends on foreign equity shares, BEA uses MSCI national and regional dividend yields for developed and emerging markets matched to the composition of the foreign stocks held by U.S. residents. Dividend

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1. Reconciliation of the quarterly and benchmark survey data is described in the SURVEY OF CURRENT BUSINESS. Reconciliation of data on U.S. direct investment abroad is described in Marilyn Ibarra-Caton, "Direct Investment for 2009–2012: Detailed Historical-Cost Positions and Related Financial and Income Flows." SURVEY 93 (September 2013): 200–206. Reconciliation of data on foreign direct investment in the United States is described in Jeffrey H. Lowe, "Direct Investment for 2007–2010: Detailed Historical-Cost Positions and Related Financial and Income Flows." SURVEY 91 (September 2011): 50–56.

yields and equity share price indexes are closely related. Merril Lynch equity price indexes are used to advance holdings of U.S. and foreign bonds.

10.144. *Federal Reserve Board (FRB) and British Bankers Association (BBA).* For representative interest yields on loans and deposits, BEA uses U.S. money market, Eurodollar market, and foreign money market rates from the FRB and the BBA. BEA also uses lending rates from the FRB's "Survey of Terms of Business Lending" for U.S. dollar-denominated loans, deposits, and trade credit and advances.

## Estimation methods

10.145. Estimation methods vary significantly for the components of investment income and for compensation of employees. Direct investment income statistics are based largely on data reported on BEA's direct investment surveys. Portfolio investment income, other investment income, and reserve asset income statistics are primarily derived by type of asset and liability as the product of positions from the IIP accounts and effective yields. Compensation of employees statistics are based on a wide variety of sources and methods, including direct reporting by foreign central banks, counterpart statistical organizations, and international organizations, supplemented by estimates from various sources on numbers of employees and average compensation. These sources and methods are described below. Unless otherwise noted, descriptions of methods for primary income apply to both receipts and payments.

### Direct investment income

10.146. **Direct investment** income receipts and payments consists of income received by U.S. and foreign parent companies and affiliates who own assets classified in the direct investment functional category. Income measures the return that parents and affiliates receive on their equity and debt investments abroad or in the United States. It consists of the parents' shares of the earnings and losses from current operations of affiliates plus interest received and paid on intercompany debt. Income on equity includes both earnings distributed to **parent companies** and earnings reinvested in **affiliates**. The inclusion of reinvested earnings in direct investment income recognizes that the earnings of affiliates are income to parents, whether or not a portion is reinvested. Interest is income received or paid on intercompany loans, trade credit, and other forms of debt between related parties.

10.147. Direct investment income is recorded on an **asset/liability basis** in the aggregate statistics. Recording direct investment income on an asset/liability basis is consistent with the recording of income for the other functional categories in the international economic accounts. It also facilitates balance sheet analysis and is consistent with other macroeconomic statistics. On an asset/liability basis, direct investment income statistics are organized according to whether the income is earned on an asset or paid on a liability.

10.148. Direct investment income statistics presented by country or by industry, however, are presented on a **directional basis** because that basis is better suited for analyzing certain aspects of direct investment, such as identifying the foreign countries in which U.S. **multinational enterprises** (MNEs) invest or the U.S. industries in which foreign direct investors invest. On the directional basis, direct investment statistics in the current account are organized according to whether the direct investment is outward or inward (that is, whether the investor is a domestic resident or a foreign resident).

10.149. ITA table 1.2 presents direct investment income transactions on an asset/liability basis, while ITA table 1.3, which presents bilateral statistics, presents direct investment income transactions on a directional basis. ITA table 4.2 presents the translation from the asset/liability basis to the directional basis and also presents detail on direct investment income by industry of the affiliate.

10.150. On an asset/liability basis, U.S. receipts of direct investment income measure receipts on direct investment assets, whether those assets are held by U.S. parents or U.S. affiliates. Similarly, U.S. payments measure payments of direct investment income on liabilities, whether those liabilities are incurred by U.S. parents or U.S. affiliates. Thus, direct investment income receipts measure the return on U.S. direct investment assets. In contrast, on a directional basis, direct investment income receipts measure the return on U.S. direct investment abroad—that is, the U.S. parents' return on their equity and debt investments in their foreign affiliates. On a directional basis, U.S. payments of direct investment income measure the return on foreign direct investment in the United States—that is, the foreign parents' return on their equity and debt investments in their U.S. affiliates, plus the return of other members of the foreign parent group on their debt investments in their U.S. affiliates.

10.151. The published statistics represent the aggregation of income-related data items reported on BEA direct investment surveys by U.S. MNEs for U.S. direct investment abroad and by the U.S. affiliates of foreign MNEs for foreign direct investment in the United States. The following sections describe the methods used for each of the direct investment income statistics presented in ITA tables 1.1, 1.2, 1.3, and 4.1, and for each of the components and classifications presented in ITA table 4.2.

### *Income on equity*

10.152. Direct investment income on equity represents parents' shares in the net income of their affiliates, after provision for income taxes. A parent's share in net income is based on its directly held equity interest in the affiliate; a parent's directly held debt in the affiliate is not considered in determining the parent's share because debt is not an indication of ownership. Debt instruments are, however, a major component of direct investment. Direct investment income on equity is recorded as it accrues, in accordance with the accrual principles of accounting. Income on equity is recorded before deduction of withholding taxes on dividends. These taxes are treated as payable by the recipients of such income, even though as an administrative convenience, they may be withheld at the source.

10.153. Direct investment income on equity measures earnings from productive activities during the current period. This concept of income on equity is sometimes referred to as net operating earnings or net operating surplus. Because income on equity is related to current production, it excludes several items that may be included in the financial accounting statements of the enterprise. Examples of such exclusions are (1) parents' shares of capital gains and losses of affiliates, such as realized or unrealized gains and losses that result from the sale or other disposition of affiliates' assets and liabilities; (2) realized gains or losses on plant and equipment that result from the closures of part or all of a business; (3) realized gains and losses on the sale or disposition of financial assets including investment securities, except in cases where the affiliate is a market maker; (4) goodwill impairment; (5) restructuring costs that reflect write-downs or write-offs of assets; and (6) gains and losses from changes in the dollar value of foreign-currency-denominated assets and liabilities, or from the translation of affiliates' financial statements from local currencies into dollars due to changes in exchange rates. These capital gains and losses are, however, included as valuation adjustments to outstanding assets and liabilities in the IIP accounts.

10.154. A **current cost adjustment** is made to measure direct investment income on equity at current (replacement) cost in the international economic accounts. The current cost adjustment includes adjustments to the depreciation, depletion, and exploration and development costs reported in the financial statements of enterprises. These adjustments are made primarily to ensure that these charges reflect current-period prices and to more closely align income earned in a given period with charges against income in the same period, as required by economic accounting principles. The current cost adjustment converts depreciation charges valued for financial accounting purposes at historical cost to a current (replacement) cost valuation. The adjustment also adds charges for depletion of natural resources back to the reinvested earnings component of income because these charges are not treated as production costs in the U.S. national economic accounts. In addition, the adjustment reallocates expenses for mineral exploration and development across periods so that they are written off over their economic lives rather than all at once. Estimates for the adjustments are available only on a global basis; estimates by country or by industry are not available due to a lack of appropriate source data.

10.155. The two major components of direct investment income on equity are *dividends and withdrawals* and *reinvested earnings.*

10.156. *Dividends and withdrawals* are distributed earnings allocated to the owners of a business for placing funds at the disposal of the business. For corporations, they represent the payment of dividends to the owners of equity. They are the returns to the shareholders or owners. Although dividends are notionally paid out of the current period's earnings, corporations often smooth the payment of dividends, sometimes paying out more than current operating earnings by using the surplus earned in earlier periods, other times paying out less than current operating earnings.

10.157. In addition to dividends from corporations, withdrawals from unincorporated affiliates, subsidiaries, and branches are included in income on equity. These entities usually engage in the same type of economic and financial activities and maintain separate financial statements as do corporations, but they are not legally incorporated. Legally, they cannot distribute income as dividends.

Nevertheless, the owner, or owners, may choose to withdraw some or all of the income earned by the enterprise. Some are entities formally organized as trusts, partnerships, or other institutions that may formally distribute some or all of their earnings. From an economic point of view, the withdrawal of such income is equivalent to the distribution of corporate income through dividends and is treated the same way in the ITAs.

10.158. Exceptional payments by corporations and unincorporated entities to their shareholders or owners that are made out of accumulated reserves, or from sales of assets, are not treated as dividends and withdrawals. Such exceptional payments, sometimes called super-dividends, are treated as withdrawals of equity, and are therefore recorded in the financial account. Stock dividends are also excluded from dividends because they are not considered as a remittance of earnings, but rather a capitalization of retained earnings and thus a substitution of one type of equity (capital stock) for another (retained earnings). Liquidating dividends are also excluded from dividends because they are a return of capital, rather than a remittance of earnings.

10.159. Dividends are recorded at the time they are either received from or entered into, intercompany accounts with the affiliate, whichever occurs first. Withdrawals of income from unincorporated entities are recorded when they are withdrawn by their owners. Dividends and withdrawals of income are recorded before the deduction of withholding taxes. These taxes are treated as payable by recipients of such income.

10.160. *Reinvested earnings* are the earnings that remain after distributions have been made to owners of the enterprise. They represent the net savings of the enterprise in the period. Because reinvested earnings, or net savings, represent an addition to owners' capital, an offsetting entry of equal magnitude is made in the direct investment component of the financial account. The offsetting entry is presented as *reinvestment of earnings,* and it is listed separately along with other equity and intercompany debt as components of owners' investment in the enterprise.

10.161. Reinvested earnings are recorded in the period in which they accrue and are measured after deduction of income taxes charged on the income earned by the enterprise. Such taxes are payable by the enterprise and not by its owners. In the aggregate statistics, reinvested earnings are measured after the depreciation of fixed assets has been restated at current (replacement) cost and after the adjustments to depletion charges and exploration and development costs described above have been made.

10.162. Reinvested earnings can be negative when a direct investment enterprise has a loss on its operations or the dividends declared in a period are larger than net earnings in that period. If direct investment generates negative earnings, the entry is shown as negative income receipts by the direct investor.

### *Interest*

10.163. On an asset/liability basis, interest receipts and payments are recorded on a gross basis. Interest income that accrues to U.S. parents or U.S. affiliates from affiliated foreign persons is a receipt and interest income that is paid by

U.S. parents or U.S. affiliates to affiliated foreign persons is a payment. U.S. direct investment interest receipts consist of U.S. parents' receipts of interest from their foreign affiliates and U.S. affiliates' receipts of interest from their foreign parent group, both before the deduction of withholding taxes. Likewise, U.S. interest payments on direct investment consist of U.S. parents' interest payments to their foreign affiliates and U.S. affiliates' interest payments to their foreign parent groups.

10.164. On a directional basis, interest receipts and payments are recorded on a net basis. Interest is income received by, or credited to, parents on intercompany debt owed to them by their affiliates, less interest paid or credited by parents on intercompany debt owed by them to their affiliates, both before the deduction of withholding taxes. Interest includes net interest on capitalized leases between parents and affiliates.

10.165. The following table presents an example of the conversion of direct investment income defined on the asset/liability basis recommended by *BPM6* to the directional basis recommended for classifying direct investment income by partner country and by industry.

10.166. Interest is recorded on an accrual basis—that is, interest is recorded as accruing continuously over time to the creditor on the amount of debt outstanding, in accordance with the principles of accrual accounting. Under the accrual basis, as interest accrues, the amount of debt outstanding increases; accrued interest not yet paid becomes part of the amount of debt owed to the creditor. What are commonly referred to as interest payments, therefore, are financial account transactions that reduce the debtor's existing liability.

10.167. Interest received and paid on debt instruments excludes receivables and payables on intercompany debt between parents in the finance industry and affiliated financial institutions. This exclusion derives from the treatment in the financial accounts of intercompany debt transactions among certain nonbank financial institutions. Under this treatment, the transactions are classified as portfolio investment claims and liabilities rather than direct investment claims and liabilities because the nature of the transactions is related to the underlying activity of financial intermediation rather than to activity typical of a direct investment relationship. Therefore, the related interest received and paid on the debt is excluded from direct investment interest and included in portfolio investment interest. The financial intermediary accounts consist of transactions between firms in a direct investment relationship where both the U.S. and foreign firms are classified in the finance industry (excluding insurance) but the firms are not banks.

10.168. Interest received and paid between affiliated depository institutions—banks, bank holding companies, and financial holding companies—are also excluded from direct investment and combined with these institutions' receipts and payments with unaffiliated entities as other investment. The combination groups together transactions related to the underlying activity of financial intermediation, regardless of the affiliation of the enterprises. BEA began reclassifying interest income from positions in permanent debt—debt that is deemed to represent a lasting interest in the institution receiving the funds, such as funding used for working capital or to finance plant and equipment—between affiliated banks, bank holding companies, and financial holding companies from direct investment to other investment starting with 2007. For earlier years, interest income from permanent debt positions remains in direct investment.

**Direct Investment Income on the Asset/Liability Basis and on the Directional Basis**

| Receipts | Millions of dollars |
|---|---|
| Primary income on direct investment, asset/liability basis | 130 |
| Income on equity | 100 |
| Dividends and withdrawals | 75 |
| Reinvested earnings | 25 |
| Interest | 30 |
| U.S. parents' receipts | 20 |
| U.S. affiliates' receipts | 10 |
| *Less:* Adjustments to convert to directional basis | 25 |
| U.S. parents' interest payments | 15 |
| U.S. affiliates' interest receipts | 10 |
| *Equals:* Primary income for outward direct investment (U.S. direct investment abroad), directional basis | 105 |
| Income on equity | 100 |
| Dividends and withdrawals | 75 |
| Reinvested earnings | 25 |
| Interest, net receipts | 5 |
| U.S. parents' receipts | 20 |
| U.S. parents' payments | 15 |
| **Payments** | **Millions of dollars** |
| Primary income on direct investment, asset/liability basis | 90 |
| Income on equity | 50 |
| Dividends and withdrawals | 30 |
| Reinvested earnings | 20 |
| Interest | 40 |
| U.S. affiliates' payments | 25 |
| U.S. parents' payments | 15 |
| *Less:* Adjustments to convert to directional basis | 25 |
| U.S. parents' interest payments | 15 |
| U.S. affiliates' interest receipts | 10 |
| *Equals:* Primary income for inward direct investment (Foreign direct investment in the United States), directional basis | 65 |
| Income on equity | 50 |
| Dividends and withdrawals | 30 |
| Reinvested earnings | 20 |
| Interest, net payments | 15 |
| U.S. affiliates' payments | 25 |
| U.S. affiliates' receipts | 10 |

## Portfolio investment income

10.169. **Portfolio investment** income consists of income received by U.S. and foreign investors who own **equity and investment fund shares** and **debt securities** that are included in the portfolio investment functional category. The published components are income on *equity and investment fund shares* and *interest* on debt securities. U.S. portfolio income receipts are income received by U.S. residents who own equity or debt securities issued by foreign governments or business enterprises. U.S. portfolio income payments are income paid to foreign residents who own equity or debt securities issued by the U.S. government, U.S. federally-sponsored agencies, or U.S. business enterprises.

10.170. Receipts and payments of income on holdings of equity and debt securities are estimated by multiplying average positions owned by investors by representative dividend or current interest yields. The methods for average positions and representative yields are described below.

### *Average positions*

10.171. Average positions for U.S. and foreign short-term debt securities and for negotiable certificates of deposit are based on the positions reported in the monthly and quarterly TIC B and C forms. Average positions for U.S. and foreign equity and long-term debt securities are based on data from the monthly SLT. Prior to December 2011, when the SLT was first used by BEA for income estimates, average positions for U.S. and foreign long-term debt securities were based on annual and benchmark survey positions from the SHC(A) and SHL(A), advanced by monthly transactions summed to quarters plus valuation adjustments from indexes of market prices. BEA continues to use these annual and benchmark surveys to review, and if necessary revise, the average positions that are based on the SLT.

### *Interest yields*

10.172. For interest on short-term debt securities and on negotiable certificates of deposit, BEA uses representative U.S. money market and Eurodollar rates for U.S. dollar-denominated securities. BEA uses foreign money market rates for foreign-currency-denominated securities. Rates are matched to average positions estimated for U.S.- and foreign-issued securities and negotiable certificates of deposit based on the currency of denomination and the type of instrument.

10.173. For interest on long-term debt securities, BEA uses representative current yields that reflect coupon interest flows. This current yield is the same measure used for the U.S. national income and product accounts and it meets IMF guidelines, which recommend estimating interest on debt securities on a debtor basis, or the actual coupon payments made by debtors. Current yields are derived based on the annual and benchmark surveys of U.S. and foreign holdings of long-term debt securities by dividing the reported annual coupon interest by the market value of the securities to obtain the current yield for the long-term debt securities reported in the surveys. In order to estimate a quarterly current yield between annual surveys when income data are not available, the most recent annual current yield is advanced by holding interest income constant and revaluing the market value of bond holdings by weighted average price indexes.

10.174. For U.S. holdings of foreign bonds, Merrill Lynch price indexes, stated in dollar terms for six major currencies, are used to advance the market value of bonds and implicitly the current yields each quarter for both foreign-currency-denominated and dollar-denominated bonds. The indexes are weighted by the distribution of currencies on the latest annual or benchmark survey. For foreign holdings of U.S. bonds, Merrill Lynch price indexes for U.S. long-term corporate debt and for Eurobonds (denominated in both U.S. dollars and foreign currencies) are used to advance the market value of bonds and implicitly the current yields each quarter.

#### *Dividend yields*

10.175. For U.S. holdings of foreign equities, BEA uses market dividend yields by major country and area. The dividend yields are MSCI index dividend yields stated in dollar terms. Seven country and two regional indexes are used for developed markets abroad, and one regional index and two indexes derived from several country indexes are used for emerging markets. The nine developed market yields are combined to create a weighted average yield for the developed markets. The weighted yield is applied to holdings of foreign equities, averaged over two quarter-end positions, for all developed countries to estimate dividend receipts. The three emerging market yields are combined to create a weighted average yield for emerging markets. The weighted yield is applied to holdings of foreign equities, averaged over two quarter-end positions, for all emerging market countries to estimate dividend receipts. The weights are based on the country distribution of holdings in the latest annual or benchmark survey.

10.176. For foreign holdings of U.S. equities, the dividend yield is the yield on the S&P 500 index. It is multiplied by an average of two quarter-end positions, advanced by monthly holdings and valuation adjustments in U.S. equities, to estimate dividend payments. Only a single index is necessary because the composition of holdings in the annual and benchmark TIC surveys is very similar to the composition of equities included in the S&P 500 index.

### Other investment income

10.177. Other investment income consists of income received by U.S. and foreign residents who own financial assets such as **loans**, **deposits**, **insurance technical reserves**, and **trade credit and advances** that are included in the other investment functional category. The published components are *interest* and *income attributable to insurance policyholders.* U.S. other investment income receipts include income received by U.S. residents on loans to foreign residents, extensions of trade credit and advances to foreign residents, deposits in foreign banks, and claims on insurance technical reserves of foreign-resident insurance companies. U.S. other investment income payments include income paid to foreign residents on loans to U.S. residents, extensions of trade credit and advances to U.S. residents, deposits in U.S. banks, and claims on insurance technical reserves of U.S.-resident insurance companies.

10.178. Other investment income is a broad category with statistics based on several sources and methods. Some components are reported on BEA direct investment surveys or on reports provided by the FRB and by U.S. government operating agencies under OMB Statistical Directive No. 19. Other components are derived by multiplying average positions by representative yields.

10.179. Income receipts and payments associated with loans, deposits, and trade credit and advances for which the U.S. party to the transaction is a business enterprise are mostly estimated by multiplying average positions held by investors by representative interest yields. U.S. financial and nonfinancial business enterprises report their claims and liabilities for these types of assets on the TIC B and C forms. Loans and deposits are reported on both the B and C forms. Trade credit and advances are separately identified in the TIC system only on the C forms (form CQ–2).

10.180. Estimation methods are described separately below by type of business entity or by type of income. Income yields that are used for several components were described above under major data sources.

### *U.S. financial enterprises and their U.S. and foreign customers*

10.181. Beginning in December 2013, all U.S. financial enterprises reported positions vis-à-vis affiliated and unaffiliated foreign residents on the B forms with the exception of pension funds and insurance companies because their positions with affiliates are defined as direct investment. Thus, the positions reported on the B forms completely cover other investment positions for financial enterprises and their U.S. and foreign customers for whose accounts the financial enterprises also report. Average positions reported on the B forms for U.S. financial enterprises and their customers are multiplied by income yields to obtain the statistics for other investment income.

10.182. Prior to December 2013 and beginning in February 2003, U.S. banks, bank and financial holding companies, and securities brokers reported vis-à-vis affiliated and unaffiliated foreign residents on the B forms, but other financial enterprises reported on the C forms vis-à-vis only unaffiliated foreign residents. As a result, the other investment income statistics for this period consist of (1) average positions from the B and C forms for financial enterprises that reported on these forms multiplied by income yields and (2) income data collected on BEA direct investment surveys for U.S. financial enterprises that were not banks, bank and financial holding companies, or securities brokers.

10.183. Prior to February 2003, U.S. banks and bank and financial holding companies reported vis-à-vis affiliated and unaffiliated foreign residents on the B forms, U.S. securities brokers reported vis-à-vis only unaffiliated foreign residents on the B forms, and other U.S. financial enterprises reported vis-à-vis only unaffiliated foreign residents on the C forms. As a result, the other investment income statistics for this period consist of (1) average positions from the B and C forms for financial enterprises that reported on these forms multiplied by income yields and (2) income data collected on BEA direct investment surveys for U.S. financial enterprises that were neither banks nor bank and financial holding companies.

### *U.S. nonfinancial enterprises*

10.184. U.S. nonfinancial enterprises report their other investment claims and liabilities vis-à-vis unaffiliated foreign residents on the C forms. Average positions from the C forms are multiplied by representative income yields to obtain statistics for other investment income receipts and payments for U.S. nonfinancial enterprises.

### *Foreign bank counterparty claims and liabilities on U.S. nonbank firms*

10.185. BEA supplements other investment position data for deposits and loans reported by U.S. nonbank firms on the TIC B and C forms, and for nonbank financial intermediaries on surveys of direct investment, with counterparty claims and liabilities from foreign banks. For other investment claims, the supplemental foreign data are assumed to represent U.S. deposits placed abroad. Average positions for these supplemental deposits are multiplied by the deposit income yield to obtain statistics for other investment income receipts attributable to the supplemental deposits. For other investment liabilities, the supplemental foreign data are assumed to represent U.S. loans from foreign banks. Average positions for these supplemental loans are multiplied by the loan income yield to obtain statistics for other investment income payments attributable to the supplemental loans.

### *Insurance premium supplements*

10.186. Other investment income from insurance premium supplements is interest that accrues to the owners of insurance policies from insurance company reserves that are accumulated from premiums paid by insurance policy owners. Insurance policy owners benefit from the interest on the reserves through lower premiums due to the interest insurance companies receive from holding reserves. These implicitly charged services are included in the *insurance services* component of *services*, and an offsetting entry is made in other investment income receipts or payments. Statistics for interest paid to foreign policy owners by U.S. insurance companies and for interest received by U.S. policy owners from foreign insurance companies are based on BEA's insurance surveys and industry data.

### *U.S. government and central bank assets and liabilities*

10.187. U.S. government income receipts earned on outstanding U.S. government credits extended to foreign residents are reported quarterly to BEA by U.S. government operating agencies under OMB Statistical Directive No. 19. Receipts include capitalized interest, which is reported as having been realized through the recording of an additional credit utilization, which, in turn, increases principal indebtedness outstanding. Except for capitalized interest, receipts are recorded on a cash collection basis or when the debtor delivers goods or services to U.S. operating agencies. Collections of commitment fees for credits extended by U.S. government operating agencies are included indistinguishably with these interest receipts.

10.188. U.S. government debt is mainly in the form of debt securities, so it does not pay interest to foreign residents on loans, deposits, or trade credit and advances. The U.S. government does pay interest to the IMF on allocations of special drawing rights (SDRs), which are reserve-related liabilities on the books of the Exchange Stabilization Fund of the U.S. Treasury Department. Monthly reports of interest payments are made available to BEA through the IMF accounting department.

10.189. Beginning in December 2007, the Federal Reserve Board (FRB) provided dollar funding to foreign central banks through temporary central bank liquidity swaps, which do not meet the definition of a reserve asset. Under these arrangements, foreign central banks sold their currencies to the FRB in exchange for dollars. The foreign currency received by the FRB remained on deposit at the foreign central bank until the swap was reversed, creating a U.S. asset that earned interest. The FRB reports these interest receipts monthly to BEA on a cash-received basis.

### Reserve assets income

10.190. U.S. monetary authorities invest U.S. foreign currency reserves in a variety of instruments that yield market rates of return and that have a high degree of liquidity and credit quality. To the greatest extent practicable, the investments are split evenly between the System Open Market Account of the FRB and the U.S. Treasury Department's Exchange Stabilization Fund.

10.191. A significant portion of the U.S. monetary authorities' foreign exchange reserves is usually invested on an outright basis in German, French, and Japanese government securities. A smaller portion of the reserves is usually invested in euro-denominated repurchase agreements, under which the U.S. monetary authorities may accept sovereign debt backed by the full faith and credit of the following governments: Belgium, France, Germany, Italy, the Netherlands, and Spain. Foreign currency reserves are also invested at the Bank for International Settlements and in facilities at other official institutions. The FRB reports these interest receipts monthly to BEA on a cash-received basis.

10.192. U.S. reserve assets also include the U.S. reserve position at the IMF and SDRs held in the U.S. SDR account at the IMF. The IMF pays interest on these U.S. assets. Monthly reports of interest receipts are made available to BEA through the IMF accounting department.

### Compensation of employees

10.193. Compensation of employees receipts covers (1) earnings of U.S. residents employed temporarily abroad, (2) earnings of U.S. residents employed by foreign governments in the United States, and (3) earnings of U.S. residents employed by international organizations in the United States.

10.194. Compensation of employees payments covers (1) Canadian and Mexican workers who commute to work in the United States, (2) foreign students studying at colleges and universities in the United States, (3) foreign professionals temporarily residing in the United States, (4) foreign temporary agricultural workers in the United States, (5) foreign temporary nonagricultural workers in the United States, and (6) foreign nationals working for U.S. diplomatic missions abroad.

10.195. Compensation receipts and payments, which are recorded before the deduction of U.S. and foreign income taxes, are based on a variety of methods and on source data from foreign statistical authorities, the U.S. Internal Revenue Service (IRS), and various demographic and labor market data from the U.S. Department of Agriculture, the U.S. State Department, the U.S. DHS, and the U.S. Department of Labor.

### *Compensation receipts*

10.196. *Earnings of U.S. residents employed temporarily abroad.* This item measures the earnings of U.S. residents employed temporarily abroad. Estimates for Germany, Canada, and the United Kingdom are based on data from the Deutsche Bundesbank, Statistics Canada, and United Kingdom Office of National Statistics, respectively. Estimates of U.S. residents' earnings abroad for countries other than Germany, Canada, and the United Kingdom are derived as a share of total foreign-earned income paid to foreign residents of U.S. taxpayers in each country. The estimates by country are based on data from the IRS.

10.197. Because the IRS data commingle earnings of U.S. taxpayers who own equity or debt securities issued by the U.S. government, U.S. federally-sponsored agencies, or U.S. business enterprises abroad both temporarily (for less than 1 year and are therefore considered U.S. residents) and permanently (with the intent to stay 1 year or more and are therefore not considered U.S. residents), data from selected countries are used to construct an average proportion of U.S. residents' earnings from temporary employment to total foreign-earned income of U.S. taxpayers from both temporary and permanent employment. This average proportion is applied to the IRS data by country to estimate U.S. residents' earnings from temporary employment abroad and then summed to a worldwide total for countries other than Canada, Germany, and the United Kingdom.

10.198. *Earnings of U.S. residents employed by foreign governments in the United States.* This item measures earnings of U.S. residents employed by foreign governments in the United States. Earnings are estimated by multiplying the number of U.S. residents employed by average compensation, with the exception of Canada, for which Statistics Canada provides an estimate of earnings of U.S. residents employed by the Canadian government installations in the United States. Estimates for countries other than Canada are based on various studies and on data on the number of foreign diplomats in the United States from the U.S. State Department and estimates of their average compensation.

10.199. *Earnings of U.S. residents employed by international organizations in the United States.* This item measures earnings of U.S. residents, including foreign nationals, employed by international organizations in the United States. Earnings are estimated by multiplying the number of U.S. residents employed by average compensation. Estimates are based on direct reporting from international organizations in some cases and from their annual reports in other cases. Foreign nationals employed by international organizations in the United States are considered U.S. residents.

### *Compensation payments*

10.200. *Canadian and Mexican workers who commute to work in the United States.* This item measures the compensation of Mexican and Canadian residents who commute to jobs in the United States. Employment of Mexican workers is generally limited to the United States-Mexican border area; employment of Canadian workers is mostly along the United States-Canadian border. The proximity of the households to the places of employment permits daily trips to and from work across the border. Compensation of Mexican workers is based on academic and other studies and is extrapolated forward each year. Estimates of compensation of Canadian residents working in the United States are based on estimates provided to BEA by Statistics Canada that are extrapolated forward each year.

10.201. *Foreign students studying at colleges and universities in the United States.* This item measures wages earned by foreign students studying in the United States. Estimates are based on data from an annual survey of about 2,700 accredited U.S. institutions conducted by the Institute for International Education (IIE). Foreign students are defined as individuals enrolled in institutions of higher education in the United States who are not U.S. citizens, immigrants, or refugees. Characteristics of the population used in the estimates include the geographic area of the college or university, type of institution (public or private), enrollment status (part-time or full-time), and academic level of the institution. The survey covers students enrolled in undergraduate programs, graduate programs, and other programs, which consist of intensive English language programs and non-degree programs.

10.202. *Foreign professionals temporarily residing in the United States.* This item measures the compensation of foreign professionals temporarily residing in the United States, including artists, athletes, consultants, and teachers. Estimates are based on data from the U.S. State Department on visas issued to foreign professionals and average wage rates reported by employers to the U.S. Department of Labor's Office of Foreign Labor Certification, supplemented by data on earnings of foreign artists and athletes from the IRS.

10.203. *Foreign temporary agricultural workers in the United States.* This item measures the compensation of foreign temporary agricultural workers in the United States. Estimates cover both documented and undocumented workers (that is, workers who are in the United States with no work authorization) who are employed temporarily in the United States to assist in the growing and harvesting of crops. The primary residence of these workers is usually Mexico and other Latin American countries.

10.204. The estimates are based on biennial data from the U.S. Department of Labor's National Agricultural Workers Survey (NAWS), H–2A visa counts from the U.S. State Department visa statistics, and data from the U.S. Department of Agriculture's Quarterly Agricultural Labor Survey (QALS). The NAWS, which is based on interviews with agricultural workers, covers crop workers such as cash grains, fruits and vegetables, and exclude livestock, poultry, and animal fodder workers. The QALS is a telephone survey of farm employers conducted four times per year.

10.205. *Foreign temporary nonagricultural workers.* This item measures the compensation of foreign temporary nonagricultural workers in the United States. Estimates cover both documented and undocumented workers (that is, workers who are in the United States with no work authorization). The primary residence of these workers is usually Mexico and other Latin American countries. Compensation is calculated by multiplying the number of foreign temporary nonagricultural workers by their annual employment in hours and their average hourly wage.

10.206. The number of documented temporary nonagricultural workers is obtained from H–2B visa counts from U.S. State Department visa statistics. The number of undocumented temporary nonagricultural workers is calculated by combining an estimate of the undocumented immigrant population in the U.S. civilian labor force based on data from the DHS Office of Immigration Statistics and the Pew Hispanic Center, with an estimate of the share of those who are temporary workers based on information from the NAWS.

10.207. Annual employment is estimated at approximately 1,000 hours. The average wage rate for undocumented workers is based on wage rates for occupations commonly filled by this group and various studies about undocumented workers. The wage rate for documented workers is based on information on the occupational distribution of H–2B visa holders from the Office of Foreign Labor Certification and wage rates from the U.S. Bureau of Labor Statistics for occupations filled by H–2B visa holders.

10.208. *Foreign nationals working for U.S. diplomatic missions abroad.* This item measures the compensation of foreign nationals employed directly by U.S. diplomatic missions abroad. Estimates are based on data reported to BEA quarterly by the U.S. State Department.

## Secondary Income

### Concepts and coverage

10.209. **Secondary income** presents **current transfers** between residents and nonresidents. **Capital transfers** are presented in the capital account. Unlike an exchange, a transfer is a transaction in which a good, service, or asset is provided without a corresponding return of economic value. Current transfers directly affect the level of disposable income and savings and influence the consumption of goods or services in both the donor and recipient countries. Entries for current transfers in the ITAs offset transactions with nonresidents that involve real resources or financial assets recorded in the goods, services, income, or financial accounts.

10.210. Secondary income receipts and payments are further classified and presented in ITA table 5.1. Both receipts and payments are distinguished between U.S. government transfers and private transfers. For payments, U.S. government transfers are classified between U.S. government grants and U.S. government pensions and other transfers, and private transfers are classified between personal transfers and other current transfers. U.S. government grants include both military and nonmilitary assistance. Personal transfers, often referred to as remittances, consists of amounts sent by U.S. resident individuals to households abroad. Other current transfers include institutional remittances, withholding taxes, and an adjustment to insurance services for insurance claims volatility.

### *Departures from BPM6*

10.211. The coverage and presentation of secondary income closely follows *BPM6* recommendations, although the presentation of detailed components in ITA table 5.1 differs somewhat from that proposed by *BPM6* due to the detail in the source data used for the U.S. statistics.

## Key data sources

10.212. *BEA Survey Data.* Estimates for the adjustments for insurance claims volatility are largely based on data collected on BEA's quarterly and benchmark surveys of insurance transactions (BE–45, BE–140) and on BEA's quarterly and benchmark services surveys (BE–125, BE–120). BEA's direct investment surveys provide data for withholding taxes on dividends.

10.213. Statistics for institutional remittances are obtained partly from BEA's voluntary survey of U.S. religious, charitable, educational, scientific, and similar nonprofit and philanthropic foundations and organizations on cash transfers abroad by country (BE–40).

10.214. *U.S. Census Bureau.* The American Community Survey (ACS) is conducted annually by the U.S. Census Bureau to collect data on the income and characteristics of the U.S. population, including the U.S. resident immigrant population. Data from the ACS are used to develop model-based estimates of personal transfers to foreign residents.

10.215. *U.S. Government Agencies.* U.S. government grants are estimated on the basis of data submitted quarterly by U.S. government agencies under OMB Statistical Directive No. 19. Fines received by the U.S. government are compiled by BEA using publicly available data from the agency that issues the fine.[2]

## Estimation methods

10.216. Estimation methods vary for the different components of secondary income. Statistics for some components are based directly on source data while statistics for other components reflect a combination of source data and models. Methods for the components presented in ITA table 5.1 are described below.

10.217. ***U.S. government transfers (receipts).*** This component includes withholding taxes, fines and penalties, and transfers received by the U.S. government from foreign residents.

10.218. *Withholding taxes received by the U.S. government.* This component represents taxes collected by the U.S. government on nonresidents' interest and dividend income and the distribution of earnings on foreign direct investment in the United States. Taxes on various services transactions and on compensation

2. Fines related to antitrust violations are corroborated by data on private international cartels collected by John M. Connor, professor emeritus, Purdue University, Indiana (2013).

earned by nonresidents temporarily employed are also included. These taxes are included in services imports and primary income payments. The offsets to these taxes are included in this item. For securities, withholding taxes for both dividends and interest are based on IRS data and BEA research. For direct investment, withholding taxes are reported on BEA surveys for dividends and are estimated for interest. For services and compensation, estimates are based on BEA research, BEA surveys, and IRS data.

10.219. *Fines and penalties received by the U.S. government.* This component represents monetary fines and penalties paid by foreign corporations to the U.S. government for violations of U.S. laws including antitrust and environmental laws, the U.S. Foreign Corrupt Practices Act, banking regulations, and others. Statistics are compiled by BEA using data from U.S. government agencies, U.S. courts, and other public documents.

10.220. *Grants received by the U.S. government.* This component represents cash settlements for grants previously provided to foreign residents, for returns of equipment previously transferred, for foreign currencies provided to offset U.S. expenditures under foreign assistance programs, and for goods and services provided under mutual assistance programs that require the receiver to extend assistance to the United States or other countries to achieve a common objective. Statistics are based on data submitted quarterly by U.S. government operating agencies under OMB Statistical Directive No. 19.

10.221. ***Private transfers (receipts).*** This component consists primarily of pension, inheritance, and other benefits received by U.S. residents from residents and governments in Canada, Germany, and the United Kingdom, personal transfers paid to U.S. residents by nonresidents, and the counterpart entry to the adjustment for insurance claims volatility made to insurance services. (This adjustment is described below as a component of secondary income payments.)

10.222. For pension, inheritance, and other benefits, statistics are based on information from Statistics Canada, the Deutsche Bundesbank, and the Office for National Statistics of the United Kingdom. Data from other countries are not available. Indemnification transfers from Germany associated with World War II indemnification claims of U.S. residents are also included.

10.223. ***U.S. government transfers (payments).*** This component includes U.S. government grants and U.S. government pensions and other transfers.

10.224. ***U.S. government grants (payments).*** This component covers the use of U.S. government financing to transfer real resources or financial assets to foreigners under programs enacted by the U.S. Congress for the provision of nonmilitary and military foreign assistance (grants) for which no repayment is expected. Also included are transfers under assistance programs for which repayment terms are indeterminate at the time of the transfer and subject to future settlement. These types of assistance are recorded as grants in the period rendered. Subsequently, when settlement for the assistance is agreed upon, the terms may call for a cash settlement, which are included as U.S. government transfers receipts.

10.225. U.S. government nonmilitary grants payments measure the financing of goods delivered, services rendered, or cash disbursed by U.S. nonmilitary agencies to foreign countries under programs enacted by the U.S. Congress to authorize the provision of nonmilitary assistance for which no repayment is expected or for which repayment terms are indeterminate.

10.226. U.S. government nonmilitary grants payments include (1) funds advanced to finance sales to foreign governments and to release foreign governments from their contractual liabilities to pay for defense articles and services purchased under the Arms Export Control Act; (2) funds advanced by the U.S. Agency for International Development (AID); and (3) contributions and special grants to international agencies carrying out humanitarian activities. Also included are (4) assistance for economic reconstruction and humanitarian relief abroad; (5) donations of food and other relief supplies, and their transportation; (6) expenditures for international refugee assistance; (7) expenditures for the Peace Corps; and (8) contributions to the economic development and subsidies for the Pacific Ocean islands that the United States holds in trusteeship for the United Nations.

10.227. The offsetting entries to the expenditures by the Peace Corps and AID are included in exports of *government goods and services n.i.e.* where they represent the "export" of U.S. government goods and services to the aid-receiving countries. When services are obtained and paid for abroad, an entry is also recorded in payments under *government goods and services n.i.e.* If the specific type of service provided or obtained can be identified, the entries are recorded in *other business services* exports or imports, respectively.

10.228. U.S. government military grants payments measure the financing of goods delivered, services rendered, or cash disbursed by U.S. military services to foreign countries under programs enacted by the U.S. Congress to authorize the provision of military assistance for which no repayment is expected or for which repayment terms are indeterminate.

10.229. For recent time periods, military grants payments include primarily transfers of equipment, materials, supplies, and services for Iraq, Afghanistan, and Pakistan military security forces (valued on the basis of the U.S. government financial records reflecting the expenditure of authorized funds). For earlier time periods, similar transfers made under various military assistance programs are also included here.

10.230. Military grants payments include transfers of goods and services purchased with dollar funds appropriated or with foreign currencies owned by the U.S. government and authorized by legislation for that use (valued on the basis of the U.S. government financial records reflecting the expenditure of authorized funds). Military grants payments also include transfers of goods under authorizations to deliver to foreign nations the equipment and material deemed excess to U.S. requirements and military drawdowns (valued according to the legislative authorization under which the transfer is made).

10.231. Military grants payments also include transfers for programs such a DOD narcotics in-country support, cooperative threat reduction, and humanitarian assistance for which DOD has been designated as the executive agent.

10.232. The value of goods and services financed by U.S. military grant programs offsets identical credit entries for goods and for services in the current account, which reflect the military goods delivered and services rendered.

10.233. U.S. government grants statistics are based on data submitted quarterly by U.S. government operating agencies under OMB Statistical Directive No. 19. Where necessary, the reported data are adjusted for timing. The adjustments are based on supplementary information, including published statements, congressional submissions, and the financial and operating records of government agencies. For transactions that are reported only partially or not at all by the operating agencies, BEA uses supplementary information.

10.234. ***U.S. government pensions and other transfers (payments).*** This component covers (1) payments of social security, railroad retirement, and other social insurance benefits to eligible persons residing abroad; (2) payments under retirement and compensation programs for former U.S. government civilian employees, military personnel, and veterans residing abroad, including the cost of providing medical services abroad under Veterans' Administration programs; (3) membership contributions (dues) to international nonfinancial organizations; (4) payments under U.S. educational, cultural exchange, and research programs; and (5) damage claims paid by the U.S. armed services in countries where they have installations. Statistics for this component are estimated based on data submitted quarterly by U.S. government operating agencies under OMB Statistical Directive No. 19.

10.235. ***Private transfers.*** This component consists of personal transfers and other current transfers.

10.236. ***Personal transfers (payments).*** Personal transfers, often called "remittances," consist of all current transfers in cash or in kind sent by the foreign-born population resident in the United States to households abroad. The foreign-born population resident in the United States is defined as that part of the total foreign-born population that has resided, or intends to reside, in the United States for more than one year. These transfers are estimated using a model that incorporates demographic and economic characteristics of the foreign-born population, including size of the foreign-born population, the income of the foreign-born population, and the percentage of income remitted by the foreign-born population. The percentage of income remitted varies based on the demographic characteristics of the foreign-born population.

10.237. The size of the foreign-born population, their demographic characteristics, and their income are based on source data from the U.S. Census Bureau's annual American Community Survey. The percentage of income remitted is a BEA estimate based on the Census Bureau's 2008 migration supplement to the Current Population Survey and various research and academic studies. The demographic characteristics in the model include duration of stay in the United States, family type (that is, presence or absence of the spouse and the presence or absence of roommates), and country of origin—all of which have been shown to have a clear impact on remitting behavior.

10.238. ***Other current transfers (payments).*** These payments are primarily charitable donations by U.S. entities such as nonprofit institutions and corporations, withholding taxes paid to foreign governments, and the counterpart of adjustments for insurance claims volatility made to insurance services. Other current transfer payments also includes fines and penalties paid by U.S. corporations to foreign entities, largely as a result of violations of foreign antitrust laws for participation in illegal international cartels.

10.239. Donations by U.S. entities are based on several sources. One source is data reported by U.S. religious, charitable, educational, scientific, and similar nonprofit and philanthropic foundations and organizations on BEA's survey Institutional Remittances to Foreign Countries (BE–40). Data are reported by country and consist entirely of funds (cash) transferred. Funds transferred to foreign residents include outright grants, payments abroad for procurement of goods to be used abroad, payments for contract services abroad, and salaries and other administrative expenses abroad. The BE–40 does not currently request reporting of goods donations. Goods shipped abroad as donations are based on Census Bureau export data identified as donated goods.

10.240. These data are supplemented by grants data from The Foundation Center, a leading authority on philanthropy that connects nonprofit institutions and grant-makers, and by data reported annually to the U.S. AID by private voluntary organizations. Business and financial statistics are also used to identify potential corporate charitable donations not distributed through foundations.

10.241. *Withholding taxes paid to foreign governments.* This component represents taxes collected by foreign governments primarily on U.S. residents' interest and dividend receipts and the distribution of earnings on U.S. direct investment abroad. Payments of taxes on various services transactions and on compensation earned by U.S. residents employed temporarily abroad are also included. These taxes are included, but not separately identified, in services exports and primary income receipts; the offsets to these taxes are included here as outward current transfers. For securities, withholding taxes for both dividends and interest are based on IRS data and BEA research. For direct investment, withholding taxes are reported on BEA surveys for dividends and are estimated for interest. For services and compensation, estimates are based on BEA research, BEA surveys, and IRS data.

10.242. *Insurance claims volatility adjustment.* Insurance services are measured as premiums less expected losses. Expected losses consist of losses that occur regularly and a share of certain major catastrophic losses that occur at infrequent intervals. For regularly occurring losses, expected losses are measured as a 6-year moving average of the ratio of premiums to actual losses. Certain catastrophic losses are added in equal increments to the estimate of regularly occurring losses over the 20 years following the event to derive an estimate of total expected losses. The determination of which catastrophic losses are subject to 20-year spreading is made on a case-by-case evaluation of each major event or loss.

10.243. Expected losses are considered transfers from the policyholders to the insurance company. This transfer offsets the portion of premiums that is not accounted for in insurance services. Claims payable (actual losses) are transfers from the insurance company to the policyholder. Payments for the insurance claims volatility adjustment consist of expected losses associated with insurance services payments and actual losses associated with insurance services receipts. Receipts for the insurance claims volatility adjustment consist of expected losses associated with insurance receipts and actual losses associated with insurance payments.

10.244. An exception to this treatment is for catastrophic losses, which BEA defines as events where the total impact, insured and uninsured, is greater than one percent of gross domestic product. For catastrophic losses, the full amount of the insured loss is entered as a transfer in the capital account in the quarter in which the event occurs. This treatment considers the recovery of losses as an increase in financial assets, rather than an increase in current economic activities that would have been implied if it were combined with regular losses in current transfers. The treatment also removes a significant source of volatility in the current-account balance.

10.245. *Fines and penalties paid by U.S. corporations to foreign entities.* This component represents item measures monetary fines and penalties paid by U.S. corporations to foreign governments, including the European Commission, for violations of foreign antitrust laws for participation in illegal international cartels. Estimates are from administrative records of foreign government agencies and foreign courts.

## L¢! Capital Account

### Concepts and coverage

10.246. The **capital account** presents **capital transfers** between residents and nonresidents and the cross-border acquisition and disposal of **nonproduced nonfinancial assets**. Current transfers are presented in the current account. Capital transfers include debt forgiveness and nonlife insurance claims. Nonproduced nonfinancial assets include natural resources and contracts, leases, and licenses.

10.247. Capital account transactions are distinguished from current account transactions in that capital account transactions result in a change in the assets of one or both parties to the transaction without affecting the income or savings of either party. Thus, transactions in the components of the capital account do not affect measures of production, income, and savings of an economy, whereas transactions in the components of the current account do affect these measures.

### *Departures from BPM6*

10.248. The coverage and presentation of the capital account largely follows *BPM6* recommendations, including the separate presentation of credits (receipts) and debits (payments). Transactions related to debt assumption, investment grants, and marketing assets, including goodwill, are not included in the ITAs due to the lack of adequate source data. BEA combines capital transfers with other capital account transactions in its presentation.

## Key data sources

10.249. *U.S. Treasury Department.* Data for forgiveness of U.S. government loans are obtained from the U.S. Treasury Department.

10.250. *Publicly available information.* Data for significant one-time or intermittent capital-account transactions are obtained from publicly available sources. Data for disaster-related claims are mostly based on press releases issued by insurance companies.

## Estimation methods

10.251. Estimation methods differ between capital transfers and the acquisition and disposal of nonproduced nonfinancial assets. Each component is described below.

10.252. *Capital transfers.* The two most important components are insured disaster-related losses and debt forgiveness. Insured disaster-related losses are based on information obtained from insurance company financial reports. A single entry for the entire amount of the loss recovered from foreign reinsurance and primary insurance companies is made in the quarter in which the disaster occurs. These transfers are separated from other insurance transactions to assure that insured disaster-related losses do not affect measures of income and savings in the national income and product accounts.

10.253. Debt forgiveness is the voluntary cancellation of all or part of a debt obligation within a contractual agreement between a creditor and debtor. With debt forgiveness, the contractual arrangement cancels or forgives all or part of the principal amount outstanding, including interest unpaid past the due date (arrears) and other interest costs that have accrued. Currently, source data are available only for forgiveness of debt owed to the U.S. government.

10.254. *Acquisition and disposal of nonproduced nonfinancial assets.* Acquisitions and disposals of nonproduced nonfinancial assets include purchases and sales of rights to tangible assets, such as mineral rights, electromagnetic spectrum, and offshore drilling rights, and purchases and sales of certain intangible assets, such as trademarks and franchises. Source data are not available to separately identify and completely measure most of these transactions. Transactions are intermittent and recorded in the ITAs when large transactions are identified. In some cases, capital account transactions may be covered but are commingled with transactions recorded elsewhere in the accounts; for example, U.S government investment grants are commingled with U.S. government current transfers in secondary income payments.

10.255. Examples of intermittent transactions in nonproduced nonfinancial assets currently included in the capital account are receipts of U.S.-based sports leagues for the establishment of franchises in Canada, receipts of the U.S. State Department for the sale of land in London, and payments by U.S. sports franchises for the purchase of rights to negotiate with athletes under contract to foreign sports franchises. Although no source data are regularly available, transactions in nonproduced nonfinancial assets are included in the capital account when BEA can identify them.

# ITA Financial Account

The financial account consists of transactions between U.S. residents and nonresidents for direct investment, portfolio investment, other investment, reserves, and financial derivatives other than reserves. Sources and methods for each of these major components are described below. Each major component includes descriptions of concepts and coverage, including departures from *BPM6,* key data sources, and estimation methods for each of the individual components.

# Direct Investment

## Concepts and coverage

10.256. **Direct investment** is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise resident in another economy. The major published components are **equity** and **debt instruments.** Generally, direct investment indicates a long-term relationship with the management of a foreign enterprise. Ownership or control of 10 percent or more of the nonresident entity's voting securities is the threshold for separating direct investment from other types of investment.

10.257. ITA table 6.1 presents direct investment financial transactions first on the **asset/liability basis** recommended by *BPM6* for aggregate direct investment statistics and then on the **directional basis**—outward and inward, depending on whether the direct investor is a U.S. resident or a foreign resident—recommended for classifying direct investment by partner country and by industry. Table 6.1 also presents the conversion of direct investment on the asset/liability basis to the directional basis. ITA table 1.3 presents financial transactions for outward and inward direct investment by country.

10.258. Like other financial account components, direct investment is measured and presented on a net basis. Net acquisition of direct investment assets represents net purchases (gross purchases less gross sales) of foreign assets by U.S. residents, and net incurrence of direct investment liabilities represents net purchases of U.S. assets by foreign residents.

### *Departures from BPM6*

10.259. The coverage and presentation of direct investment closely follow *BPM6* recommendations with the exception of classifications for **reverse investment** and **fellow enterprises** due to limitations in BEA's source data. Although BEA's direct investment surveys capture reverse debt investment, they are not designed to fully capture reverse equity investment.[3] The surveys capture investment between majority-owned fellow enterprises but not with those fellow enterprises that are minority-owned as called for in *BPM6* and *BD4.*

3. BEA has included questions to gauge the magnitude of reverse equity investment on its direct investment benchmark surveys. Results from the 2009 benchmark survey of U.S. direct investment abroad indicate that reverse equity investment was immaterial; data from the 2012 benchmark survey of foreign direct investment are under review.

## Key data sources

10.260. *BEA Survey Data.* Statistics for direct investment financial transactions (assets and liabilities) presented in ITA tables 1.1–1.3 and in ITA table 6.1 are based largely on data collected on BEA's quarterly, annual, and benchmark direct investment surveys. The quarterly surveys collect only information needed for the ITAs and the IIP accounts—specifically, financial transactions and positions between parents and their affiliates and income flows between parents and their affiliates.

10.261. The Quarterly Survey of U.S. Direct Investment Abroad (BE–577) collects quarterly data on U.S. direct investment abroad. The Quarterly Survey of Foreign Direct Investment in the United States (BE–605) collects quarterly data on foreign direct investment in the United States. Each year, the data from the quarterly surveys are reconciled to the Annual Survey of U.S. Direct Investment Abroad (BE–11) and to the Annual Survey of Foreign Direct Investment in the United States (BE–15). Once every five years, the data from the quarterly surveys are reconciled to the Benchmark Survey of U.S. Direct Investment Abroad (BE–10) and to the Benchmark Survey of Foreign Direct Investment in the United States (BE–12).[4]

## Estimation methods

10.262. Direct investment financial transactions represent the aggregation of data items reported on BEA's direct investment surveys by U.S. **multinational enterprises** (MNEs) for U.S. direct investment abroad, and by the U.S. affiliates of foreign MNEs for foreign direct investment in the United States. The following sections describe the methods used for each of the direct investment components and classifications presented in ITA table 6.1.

### Equity other than reinvestment of earnings

10.263. Parents' equity in incorporated affiliates consists of the parents' holdings of capital stock in, and other capital contributions to, their affiliates. Capital stock consists of all stock of affiliates, whether common or preferred, voting or nonvoting. Other capital contributions by parents, also referred to as the "equity in additional paid-in capital," consist of (1) capital, invested or contributed, that is not included in capital stock (such as amounts paid for stock in excess of its par or stated value), and (2) capitalizations of intercompany accounts (conversions of debt to equity) that do not result in the issuance of capital stock. Direct investment equity does not include investment fund shares. Parents' equity in unincorporated affiliates consists of the parents' share of the affiliates' total owners' equity.

10.264. Equity investment other than reinvestment of earnings is the net of parents' equity increases and decreases in their affiliates. It excludes changes in

4. Reconciliation of the quarterly and benchmark survey data is described in the Survey of Current Business. Reconciliation of data on U.S. direct investment abroad is described in Marilyn Ibarra-Caton, "Direct Investment for 2009–2012: Detailed Historical-Cost Positions and Related Financial and Income Flows." Survey 93 (September 2013): 200–206. Reconciliation of data on foreign direct investment in the United States is described in Jeffrey H. Lowe, "Direct Investment for 2007–2010: Detailed Historical-Cost Positions and Related Financial and Income Flows." Survey 91 (September 2011): 50–56.

equity that result from the reinvestment of earnings, which are recorded as a separate component of direct investment financial transactions. Increases in equity other than reinvestment of earnings result from the parents' establishment of new affiliates (i.e., greenfield investment), from initial acquisitions of a 10-percent-or-more ownership interest in existing businesses, from acquisitions of additional ownership interests in existing affiliates, and from capital contributions to affiliates. Decreases in equity other than reinvestment of earnings result from liquidations of affiliates, from partial or total sales of ownership interests in affiliates, and from the return of capital contributions. Decreases also include liquidating dividends, which are a return of capital to parents. Decreases in equity investment other than reinvestment of earnings are netted against increases to derive net flows of equity other than reinvestment of earnings.

### Reinvestment of earnings

10.265. Reinvestment of earnings of affiliates equals total earnings less dividends and withdrawals. Earnings are the parents' shares in the net income of their affiliates after provision for host country income taxes. Earnings are from the books of the affiliate. A parent's share in net income is based on its directly held equity interest in the affiliate.

10.266. Reinvestment of earnings is shown as a separate component of direct investment financial transactions, in recognition of the fact that the earnings of an affiliate are income to the parent, whether they are reinvested or remitted to the parent. However, because reinvested earnings are not actually transferred to the parent but increase the parent's investment in its affiliate, an entry of equal magnitude, but opposite direction, is made in the direct investment financial account, offsetting the entry made in direct investment income receipts or payments.

10.267. Reinvestment of earnings, as well as total earnings and total income in the current account, is measured at current cost (or replacement cost) rather than at historical cost to assure that fixed assets are valued at current-period prices and to assure that reported measures of earnings and income earned in a given period are properly aligned with charges against income in the same period. The adjustment is made at the global level because source data are not available to apply at either the country level or industry level; reinvestment of earnings at country and industry levels remain based on historical-cost assets. The total amount of the current-cost adjustment is entered in the "international organizations and unallocated" area to assure that the sum of the geographic areas adds to the global total for reinvestment of earnings.

### Debt instruments

10.268. Debt instrument transactions can involve transactions between a parent and its affiliates or between enterprises that are under the control or influence of the same immediate or indirect investor, but where neither enterprise controls or influences the other enterprise ("fellow enterprises"). For example, debt instrument transactions for foreign direct investment in the United States cover transactions between U.S. affiliates and members of their foreign parent group other than their immediate foreign parent.

10.269. When a parent lends funds to its affiliate, the balance of the parent's receivables (amounts due) from the affiliate increases; subsequently, when the affiliate repays the principal owed to its parent, the balance of the parent's receivables from the affiliate is reduced. Similarly, when a parent borrows funds from its affiliate, the balance of the parent's payables (amounts owed) to the affiliate increases; subsequently, when the parent repays the principal owed to its affiliate, the balance of the parent's payables to the affiliate is reduced. Quarterly transactions in debt instruments are derived by subtracting the outstanding intercompany receivables and payables balances at the end of the previous quarter from the corresponding balances at the end of the current quarter.

10.270. Debt investment transactions are recorded on an asset/liability basis in the aggregate statistics. However, statistics presented by country or by industry are presented on a directional basis because the directional basis is better for analyzing certain aspects of direct investment, such as identifying the foreign countries in which U.S. MNEs are investing or the U.S. industries in which foreign direct investors are investing. On an asset/liability basis, direct investment statistics are organized according to whether the investment relates to an asset or a liability. On the directional basis, direct investment statistics in the financial account are organized according to whether the direct investment is outward or inward (that is, whether the investor is a domestic resident or a foreign resident).

10.271. On the asset/liability basis, debt instrument transactions that increase or decrease U.S. parents' receivables (claims) from their foreign affiliates and transactions that increase or decrease U.S. affiliates' receivables (claims) from their foreign parent groups are recorded under net U.S. acquisition of direct investment assets. Likewise, transactions that increase or decrease U.S. parents' payables (liabilities) to their foreign affiliates and transactions that increase or decrease U.S. affiliates' payables (liabilities) to their foreign parent groups are recorded under U.S. net incurrence of direct investment liabilities. On the directional basis, debt instrument transactions are recorded on a net basis. They consist of the change in parents' net intercompany debt due from their affiliates during the quarter. The net balance at the end of a quarter or year is calculated as parents' receivables less parents' payables.

10.272. On the directional basis, increases in U.S. parents' receivables from their foreign affiliates or reductions in U.S. parents' payables to their foreign affiliates result in increases in U.S. parents' net assets and give rise to outflows in debt instruments under outward direct investment. Reductions in U.S. parents' receivables from their foreign affiliates or increases in U.S. parents' payables to their foreign affiliates result in decreases in U.S. parents' net assets and give rise to inflows in debt instruments under outward direct investment.

10.273. On the directional basis, increases in U.S. affiliates' payables to their foreign parents or reductions in U.S. affiliates' receivables from their foreign parents result in increases in U.S. affiliates' net liabilities and give rise to inflows in debt instruments under inward direct investment. Reductions in U.S. affiliates' payables to their foreign parents or increases in U.S. affiliates' receivables from their foreign parents result in decreases in U.S. affiliates' net liabilities and give rise to outflows in debt instruments under inward direct investment.

10.274. The table below presents an example of the conversion of direct investment financial account transactions defined on the asset/liability basis recommended by *BPM6* to the directional basis recommended for classifying direct investment transactions by partner country and by industry.

10.275. Not all debt instrument transactions reflect actual flows of funds. For example, when distributed earnings or interest accrue to a parent from an affiliate, the full amount is included as a receipt or payment of direct investment income. If all or part of that amount is not actually transferred to the parent, the amount not

**Direct Investment Financial Transactions on the Asset/Liability Basis and on the Directional Basis**

| Net U.S. acquisition of assets/transactions for outward investment | Millions of dollars |
|---|---|
| Net U.S. acquisition of direct investment assets, asset/liability basis | 460 |
| Equity | 400 |
| Equity other than reinvestment of earnings | 50 |
| Reinvestment of earnings | 350 |
| Debt instruments | 60 |
| U.S. parents' claims | 20 |
| U.S. affiliates' claims | 40 |
| *Less:* Adjustments to convert to directional basis | 50 |
| U.S. parents' liabilities | 10 |
| U.S. affiliates' claims | 40 |
| *Equals:* Financial transactions for outward direct investment, directional basis | 410 |
| Equity | 400 |
| Equity other than reinvestment of earnings | 50 |
| Reinvestment of earnings | 350 |
| Debt instruments | 10 |
| U.S. parents' claims | 20 |
| U.S. parents' liabilities | 10 |
| **Net U.S. incurrence of liabilities/transactions for inward investment** | **Millions of dollars** |
| Net U.S. incurrence of direct investment liabilities, asset/liability basis | 255 |
| Equity | 200 |
| Equity other than reinvestment of earnings | 90 |
| Reinvestment of earnings | 110 |
| Debt instruments | 55 |
| U.S. affiliates' liabilities | 45 |
| U.S. parents' liabilities | 10 |
| *Less:* Adjustments to convert to directional basis | 50 |
| U.S. parents' liabilities | 10 |
| U.S. affiliates' claims | 40 |
| *Equals:* Financial transactions for inward direct investment, directional basis | 205 |
| Equity | 200 |
| Equity other than reinvestment of earnings | 90 |
| Reinvestment of earnings | 110 |
| Debt | 5 |
| U.S. affiliates' liabilities | 45 |
| U.S. affiliates' claims | 40 |

transferred is entered into debt instruments as an increase in the parent's receivables from its affiliate.

10.276. The following sections discuss special issues in the measurement of direct investment transactions. These special issues include financial intermediaries, capital and operating leases, direct investment and portfolio investment, and reverse investment and investment in fellow enterprises.

### *Financial intermediaries*

10.277. Complexities arise in the classification of intercompany debt transactions involving parents and/or affiliates in financial industries. For example, if a U.S. manufacturer borrows funds from its affiliate or its parent in a financial industry, the acquisition of those funds is generally recorded as an increase in debt instrument payables (a debt inflow) and the repayment of those funds as a decrease in debt instrument payables (a debt outflow) and both are included in direct investment financial transactions. However, if a U.S. financial firm acquires funds from or repays funds to a financial affiliate or parent in the Cayman Islands, those financial transactions are generally classified as other investment claims and liabilities because the nature of the transactions is more closely related to the underlying activity of financial intermediation than to activity typical of a direct investment relationship.

10.278. For U.S. direct investment abroad, intercompany debt transactions and associated interest transactions between U.S. parents and the following three groups of nonbank foreign financial affiliates are reclassified to other investment from direct investment: (1) financial affiliates located in the Netherlands Antilles, (2) financial affiliates whose U.S. parents are banks, and (3) financial affiliates whose U.S. parents are securities dealers. For foreign direct investment in the United States, intercompany debt transactions and associated interest transactions between foreign parents (and foreign affiliates of foreign parents) are reclassified for U.S. nonbank financial affiliates whose foreign parent company is in a finance industry, including banking. If the foreign parent is a holding company, the data are reclassified if the ultimate beneficial owner is in a finance industry, including banking.

10.279. These financial intermediaries' accounts are defined as transactions between firms in a direct investment relationship (that is, between U.S. parents and their foreign affiliates or between U.S. affiliates and their foreign parent groups), where both the U.S. and foreign firms are classified in a finance industry (excluding insurance), but the firms are not banks. (By the same reasoning, related interest flows are also classified as other investment income rather than as direct investment interest.)

10.280. Debt transactions between affiliated depository institutions—banks, bank holding companies, and financial holding companies—are also excluded from direct investment and are combined with these institutions' transactions with unaffiliated entities and classified as other investment in the ITAs. The combination groups together transactions related to the underlying activity of financial intermediation, regardless of the affiliation of the enterprises. BEA began reclassifying transactions in permanent debt—debt that is deemed to represent a lasting interest in the institution receiving the funds, such as funding used for working capital or to finance plant and equipment—between affiliated banks, bank holding companies, and financial holding companies from direct investment to other investment with data for year 2007. For earlier years, permanent debt transactions remain in direct investment.

### *Capital and operating leases*

10.281. Transactions in debt instruments includes changes in the value of capital—or financial—leases and operating leases of more than 1 year between parents and their affiliates. When property is leased by a foreign affiliate from its U.S. parent, or leased by a foreign parent from its U.S. affiliate, the value of the leased property is recorded as an asset of the U.S. parent or U.S. affiliate because it increases its receivables (a debt instruments outflow). The subsequent payment of principal on a capital lease, or the component of payments on an operating lease that reflects depreciation, is a return of capital and is recorded as a reduction in the U.S. parent's or U.S. affiliate's assets because it reduces its receivables (a debt inflow).

10.282. Similarly, when property is leased to a U.S. parent by its foreign affiliate, or to a U.S. affiliate by its foreign parent, the value of the leased property is recorded as a liability of the U.S. parent or U.S. affiliate because it increases its payables (a debt instruments inflow). The subsequent payment of principal on a capital lease, or the component of payments on an operating lease that reflects depreciation, is a return of capital and is recorded as a reduction in the U.S. parent's or U.S. affiliate's liabilities because it reduces its payables (a debt outflow).

### *Direct investment and portfolio investment*

10.283. Some transactions require a shift in classification between direct investment and portfolio investment. If a U.S. parent's equity interest in a foreign business enterprise, or a foreign parent's equity interest in a U.S. business enterprise, is originally less than 10 percent, and if additional purchases result in a greater than 10 percent equity interest, a direct investment financial transaction equal to the value of the additional interest is recorded. In addition, offsetting valuation adjustments are made to the direct investment position and the portfolio investment position to bring the original interest into the direct investment position. If a U.S. parent's equity interest in a foreign affiliate or a foreign parent's equity interest in a U.S. affiliate falls below 10 percent, a direct investment financial transaction equal to the value of the reduction in interest is recorded, and offsetting valuation adjustments are made to the direct investment position and the portfolio investment position to extinguish the remaining direct investment position. Related income flows are also reclassified.

### *Reverse investment and investment in fellow enterprises*

10.284. A U.S. parent may have investment in a foreign affiliate that, in turn, has investment in the U.S. parent as a result of the affiliate's lending funds to, or acquiring voting securities or other equity interest in, the U.S. parent. Likewise, a foreign parent may have investment in a U.S. affiliate that, in turn, has investment in the foreign parent as a result of the affiliate's lending funds to, or acquiring voting securities or other equity interest in, the foreign parent. For cases in which affiliates have no voting power or less than 10 percent voting power in their parents, equity and debt investment by affiliates in their parent companies is known as "reverse investment." For cases in which affiliates have 10 percent or more voting power in their parent companies, investment by affiliates in parents is treated as separate direct investment in its own right.

10.285. International guidelines call for reverse equity investment to be separately identified in cases where it is significant. The results from the 2009 benchmark survey of U.S. direct investment abroad suggest that reverse equity investment is currently not significant for U.S. outward investment, so BEA has decided to not show this category in its accounts at this time.[5]

10.286. An affiliate may have debt investment in a fellow enterprise, another enterprise that is under the control or influence of the same immediate or indirect investor, but where neither enterprise controls or influences the other enterprise. International guidelines call for such investment to be separately identified in the ITAs and labeled as "direct investment between fellow enterprises," in cases where it is significant. Because of the high level of consolidation of data collected for U.S. parent companies, BEA is not able to separately identify fellow enterprise transactions on outward investment. For this reason, these transactions are treated as direct transactions between the U.S. parent company and its foreign affiliates on outward investment. For consistency, these transactions are treated as direct transactions between U.S. affiliates and their foreign parent group on inward investment as well. On an asset/liability basis, the direction of equity ownership does not matter; an inflow of direct-investment-related debt funds represents an increase in U.S. debt liabilities and an outflow of direct-investment-related debt funds represents an increase in U.S. debt assets.

## Portfolio Investment

### Concepts and coverage

10.287. **Portfolio investment** consists of cross-border transactions involving debt or equity **securities**, excluding those included in direct investment or reserve assets. The major published components are **equity and investment fund shares** and **debt securities**. In ITA table 7.1, portfolio investment is presented by maturity and by type of instrument for debt securities, by sector of U.S. holder for assets, and by sector of U.S. issuer for liabilities. Transactions in portfolio investment liabilities to **foreign official agencies** are presented in ITA table 9.1.

10.288. Like other financial account components, portfolio investment is measured and presented on a net basis. Net acquisition of portfolio investment assets represents net purchases (gross purchases less gross sales) of foreign securities by U.S. residents, and net incurrence of portfolio investment liabilities represents net purchases of U.S. securities by foreign residents.

### *Departures from BPM6*

10.289. The coverage and presentation of portfolio investment closely follows *BPM6* recommendations. BEA uses slightly different terminology and slightly different sector detail in some cases.

5. The results of the 2012 benchmark survey of foreign direct investment in the United States, which are currently under review, will address this question from the perspective of inward investment.

## Key data sources

10.290. *U.S. Treasury Department.* U.S. residents' net purchases of foreign-issued equity and long-term debt securities and foreign residents' net purchases of U.S.-issued equity and long-term debt securities are based on data collected monthly on the Treasury International Capital (TIC) SLT form. The related annual and benchmark surveys cover equity and long- and short-term debt, including negotiable certificates of deposit, and are used to supplement the other TIC data sources. The SHL(A) covers foreign holding of U.S. securities and the SHC(A) covers U.S. holdings of foreign securities. Values on these surveys reflect the secondary market prices of the equity and long-term debt securities.

10.291. Estimates of U.S. short-term debt securities and negotiable certificates of deposit are based on the TIC B and C forms: BC, BL–2, BQ–1, BQ–2, and CQ–1. Values on the TIC B and C forms are reported at their original contractual values (face value).

10.292. Changes in reported values caused by the addition of new reporters, corrected reports, or other changes to the reporting panels of these TIC surveys are reported to BEA. As a result, changes in quarterly balances not due to transactions, price changes, or exchange rate changes can be removed when estimating transactions.

10.293. The values of securities denominated in foreign currencies, including most foreign-issued securities and some U.S.-issued securities, are converted to U.S. dollars at exchange rates prevailing on the reporting date and are reported in U.S. dollars on the TIC surveys.

10.294. *Morgan Stanley Capital International (MSCI), Standard & Poor's (S&P),* and *Merrill Lynch Price Indexes.* For U.S. equity shares, BEA uses the S&P 500 stock index, which is a proxy for the composition of foreign holdings of U.S. equity shares. For U.S. corporate, federally-sponsored agency, and Treasury long-term debt securities, BEA uses various Merrill Lynch indexes matched to these market segments and to the maturity, investment quality, and currency of denomination of U.S. long-term debt securities held by foreign residents.

10.295. For foreign equity shares, BEA uses MSCI national and regional indexes for developed and emerging markets matched to the composition of the foreign stocks held by U.S. residents. For foreign bonds, BEA uses various Merrill Lynch indexes representing investment quality long-term debt securities issued abroad in the U.S. dollar, the euro, the Japanese yen, the Canadian dollar, and the British pound, as well as a global broad market index excluding U.S. dollar debt, to match the composition of foreign-issued long-term debt held by U.S. residents.

10.296. *Depository Trust and Clearing Corporation (DTCC).* BEA receives reports of commercial paper issued in the United States from DTCC. The data provided by DTCC are combined with databases of company reports to determine whether commercial paper issuers are U.S. residents or foreign residents, providing estimates that supplement U.S. holdings of foreign commercial paper reported on TIC form BQ–1 and the SHC(A).

## Estimation methods

10.297. Estimation methods for portfolio investment statistics, including classifications by maturity and sector, are summarized below in tables A, B, and C. Table A summarizes transactions in short-term debt securities and negotiable certificates of deposit (NCDs) of any maturity. Table B summarizes transactions in equity and long-term securities, excluding long-term NCDs. Table C summarizes methods used to derive detailed components by sector from aggregate components.

**Table A. Transactions in Short-Term Debt Securities and Negotiable Certificates of Deposit in Tables 7.1 and 9.1, Directly Estimated From TIC B & C and DTCC Reported Holdings**

| Line | Item description |
|---|---|
| | **Table 7.1. U.S. International Financial Transactions for Portfolio Investment** |
| | **Net U.S. acquisition of portfolio investment assets** |
| 7+13 | Negotiable certificates of deposit, any maturity |
| 8 | Commercial paper |
| 9 | Other short-term securities |
| | **Assets by sector of U.S. holder** |
| 34 | Short-term debt securities held by deposit-taking institutions except central bank [1] |
| 39 | Short-term debt securities held by other financial institutions [1] |
| 44 | Short-term debt securities held by nonfinancial institutions except general government [1] |
| | **Net U.S. incurrence of portfolio investment liabilities** |
| 22+29 | Negotiable certificates of deposit, any maturity |
| 20 | Treasury bills and certificates |
| 21 | Federally sponsored agency securities, short term |
| 23 | Commercial paper and other short-term securities |
| | **Liabilities by sector of U.S. issuer** |
| 50 | Short-term debt securities issued by deposit-taking institutions except central bank [2] |
| 56 | Federally sponsored agency securities, short term (equals line 21) |
| 59 | Short-term debt securities issued by other financial institutions |
| 64 | Short-term debt securities issued by nonfinancial institutions except general government |
| 69 | U.S. Treasury securities, short term (equals line 20) |
| | **Table 9.1. U.S. International Financial Transactions for Liabilities to Foreign Official Agencies** |
| | **Net U.S. incurrence of portfolio investment liabilities** |
| 10+17 | Negotiable certificates of deposit, any maturity |
| 8 | Treasury bills and certificates |
| 9+11 | Short-term federally sponsored agency securities plus commercial paper and other short-term securities |

1. Transactions in negotiable certificates of deposit directly estimated for this sector are allocated between short- and long-term maturities based on annual data from the SHC(A).
2. All transactions in U.S. negotiable certificates of deposit are allocated to deposit-taking institutions except central bank. Transactions are allocated between short- and long-term maturities based on annual data from the SHL(A).

### Short-term debt securities and NCDs of any maturity

10.298. Estimates of U.S. residents' net purchases of foreign short-term debt securities and NCDs of any maturity and of foreign residents' net purchases of U.S. short-term debt securities and NCDs of any maturity are based on changes in quarterly holdings of these securities reported on the TIC B and C forms. U.S. residents' holdings of foreign commercial paper reported on the BQ–1 are supplemented by holdings estimated from DTCC data. Transactions in short-term instruments and NCDs are equal to holdings reported at the end of the current quarter, less holdings reported at the end of the preceding quarter, less changes in holdings not due to transactions.

10.299. Changes not due to transactions include changes in holdings caused by changes to reporting panels and changes in foreign currency denominated instruments caused by changes in exchange rates. (See paragraph 11.50 for information on the estimation of exchange-rate changes.) Because holdings are reported at face value, reported values are not much affected by price changes in secondary markets, so no adjustment is made for changes in secondary market prices. Table A below indicates the components published in ITA tables 7.1 and 9.1 derived by this method.

10.300. The TIC B and C forms provide outstanding amounts for NCDs but do not provide long-term and short-term holdings for these instruments. BEA uses annual data from the SHC(A) and SHL(A) annual and benchmark surveys of portfolio investment on long- and short-term holdings of NCDs to allocate flows computed for NCDs to long-term and short-term flows for ITA table 7.1, lines 7, 13, 22, 29, 34, 35, 39, 40, 44, 45, 50, and 51, and for ITA table 9.1, lines 10 and 17.

10.301. The SHL(A) annual and benchmark surveys of foreign portfolio investment in the United States provide complete holdings by foreign official agencies of all types of U.S.-issued short-term securities and short- and long-term negotiable certificates of deposit. The TIC form BL–2 provides monthly holdings by foreign official agencies of short-term U.S. Treasury securities and the aggregate holdings of all other U.S. short-term securities plus NCDs of any maturity.

10.302. Quarterly aggregate holdings by foreign official agencies from the BL–2 are combined with the detailed annual holdings by security type from the SHL(A) to estimate quarterly holdings by foreign official agencies of short-term U.S. federally-sponsored agency securities, U.S. commercial paper and other U.S. short-term securities, and U.S. short- and long-term NCDs. Also included are holdings by foreign official agencies of U.S. Treasury bills and certificates, which are available quarterly on the BL–2. The statistics in ITA table 9.1, lines 8–11 and 17, are based on the quarterly changes in these estimated holdings by foreign official agencies.

### Equity and long-term debt securities, excluding long-term NCDs

10.303. Statistics for U.S. residents' net purchases of foreign equity and long-term debt securities and for foreign residents' net purchases of U.S equity and long-term debt securities are based on (1) changes in quarterly holdings of these securities reported in the TIC SLT form, (2) changes in the value of the holdings based on broad market price indexes, and (3) other changes in reported holdings not due to transactions, such as changes in reporting panels. Price indexes denominated in U.S. dollars are used to measure changes in prices. For foreign currency-denominated equity and debt securities, changes in value caused by changes in exchange rates are included in the price changes computed from the U.S. dollar-denominated price indexes. (See paragraph 11.59 for information on the estimation of exchange-rate changes.) Transactions equal holdings reported at the end of the current quarter, less holdings reported at the end of the preceding quarter, less the sum of changes in the value of the holdings caused by changes in prices and exchange rates and other changes in holdings not due to transactions. Table B indicates the components published in ITA tables 7.1 and 9.1 derived by this method.

**Table B. Transactions in Equity and Long-Term Debt Securities in Tables 7.1 and 9.1, Directly Estimated From Valuation-Adjusted SLT Holdings**

| Line | Item description |
|---|---|
| | **Table 7.1. U.S. International Financial Transactions for Portfolio Investment** |
| | **Net U.S. acquisition of portfolio investment assets** |
| 2 | Equity and investment fund shares |
| | Debt securities |
| 11+12 | Long-term government securities plus corporate bonds and notes |
| | **Net U.S. incurrence of portfolio investment liabilities** |
| 15 | Equity and investment fund shares |
| | Debt securities |
| | Long term |
| 25 | Treasury bonds and notes |
| 27 | Federally sponsored agency securities |
| 26+28 | Corporate bonds and notes plus state and local government securities |
| | **Liabilities by sector of U.S. issuer** |
| | Debt securities |
| 57 | Federally sponsored agency securities, long term (equals line 27) |
| 70 | U.S. Treasury securities, long term (equals line 25) |
| | **Table 9.1. U.S. International Financial Transactions for Liabilities to Foreign Official Agencies** |
| | **Net U.S. incurrence of portfolio investment liabilities** |
| 3 | Equity and investment fund shares |
| | Debt securities |
| | Long term |
| 13 | Treasury bonds and notes |
| 15 | Federally sponsored agency securities |
| 14+16 | Corporate bonds and notes plus state and local government securities |

10.304. Annually, BEA uses corresponding annual or benchmark survey data for cross-border securities holdings to reconcile positions and transactions by comparing the annual or benchmark survey results to the TIC Form SLT data for the same reporting date.

10.305. Table C presents the lines in ITA tables 7.1 and 9.1 that are estimated by allocating estimates of transactions in equity and long-term securities from the lines listed in table B according to U.S. holdings of foreign assets at the end of the current quarter or according to foreign holdings of U.S. liabilities at the end of the current quarter. In table C, the derived estimate described in column A is equal to the source estimate in column B multiplied by the ratio of column C holdings to column D holdings, at the end of the current quarter. Transactions in long-term NCDs, estimated as described in the previous section, are added to selected lines listed in table C covering long-term debt securities.

**Table C. Transactions in Equity and Long-Term Debt Securities From Valuation-Adjusted SLT Holdings and Ratios From SLT Holdings Detail** *[Cont.]*

| Derived transactions | | | Source transactions | | | Allocation ratio components from SLT holdings | |
|---|---|---|---|---|---|---|---|
| Table | Line | Item description | Table | Line | Item description | Numerator | Denominator |
| [A] | | | [B] | | | [C] | [D] |
| **Net U.S. acquisition of portfolio investment assets** | | | | | | | |
| **Assets by type of foreign security** | | | | | | | |
| **Equity and investment fund shares** | | | | | | | |
| 7.1 | 3 | Equity other than investment fund shares | 7.1 | 2 | Equity and investment fund shares | Equity other than investment fund shares | Equity and investment fund shares |
| 7.1 | 4 | Investment fund shares | 7.1 | 2 | Equity and investment fund shares | Investment fund shares | Equity and investment fund shares |
| **Long-term debt securities** | | | | | | | |
| 7.1 | 11 | Government securities | 7.1 | 11+12 | Long-term government securities ***plus*** corporate bonds and notes | Government securities | Long-term government securities ***plus*** corporate bonds and notes |
| 7.1 | 12 | Corporate bonds and notes | 7.1 | 11+12 | Long-term government securities ***plus*** corporate bonds and notes | Corporate bonds and notes | Long-term government securities ***plus*** corporate bonds and notes |

1. Transactions in negotiable certificates of deposit directly estimated for this sector are allocated between short- and long-term maturities based on annual data from the SHC(A).

**Table C. Transactions in Equity and Long-Term Debt Securities From Valuation-Adjusted SLT Holdings and Ratios From SLT Holdings Detail** *[Cont.]*

| Derived transactions | | | Source transactions | | | Allocation ratio components from SLT holdings | |
|---|---|---|---|---|---|---|---|
| Table | Line | Item description | Table | Line | Item description | Numerator | Denominator |
| [A] | | | [B] | | | [C] | [D] |
| **Assets by sector of U.S. holder** | | | | | | | |
| **Deposit-taking institutions except central bank** | | | | | | | |
| 7.1 | 32 | ***Equity and investment fund shares*** held by deposit-taking institutions except central bank | 7.1 | 2 | ***Equity and investment fund shares*** held by all sectors | ***Equity and investment fund shares*** held by deposit-taking institutions except central bank | ***Equity and investment fund shares*** held by all sectors |
| 7.1 | 35 | ***Long-term debt securities*** held by deposit-taking institutions except central bank [1] | 7.1 | 10 | ***Long-term debt securities*** held by all sectors | ***Long-term debt securities*** held by deposit-taking institutions except central bank | ***Long-term debt securities*** held by all sectors |
| **Other financial institutions** | | | | | | | |
| 7.1 | 37 | ***Equity and investment fund shares*** held by other financial institutions | 7.1 | 2 | ***Equity and investment fund shares*** held by all sectors | ***Equity and investment fund shares*** held by other financial institutions | ***Equity and investment fund shares*** held by all sectors |
| 7.1 | 40 | ***Long-term debt securities*** held by other financial institutions [1] | 7.1 | 10 | ***Long-term debt securities*** held by all sectors | ***Long-term debt securities*** held by other financial institutions | ***Long-term debt securities*** held by all sectors |
| **Nonfinancial institutions except general government** | | | | | | | |
| 7.1 | 42 | ***Equity and investment fund shares*** held by nonfinancial institutions except general government | 7.1 | 2 | ***Equity and investment fund shares*** held by all sectors | ***Equity and investment fund shares*** held by nonfinancial institutions except general government | ***Equity and investment fund shares*** held by all sectors |
| 7.1 | 45 | ***Long-term debt securities*** held by nonfinancial institutions except general government [1] | 7.1 | 10 | ***Long-term debt securities*** held by all sectors | ***Long-term debt securities*** held by nonfinancial institutions except general government | ***Long-term debt securities*** held by all sectors |

1. Transactions in negotiable certificates of deposit directly estimated for this sector are allocated between short- and long-term maturities based on annual data from the SHC(A).

**Table C. Transactions in Equity and Long-Term Debt Securities From Valuation-Adjusted SLT Holdings and Ratios From SLT Holdings Detail** *[Cont.]*

| Derived transactions | | | Source transactions | | | Allocation ratio components from SLT holdings | |
|---|---|---|---|---|---|---|---|
| Table | Line | Item description | Table | Line | Item description | Numerator | Denominator |
| [A] | | | [B] | | | [C] | [D] |
| **Net U.S. incurrence of portfolio investment liabilities** | | | | | | | |
| **Liabilities by type of U.S. security acquired by foreign residents** | | | | | | | |
| **Equity and investment fund shares acquired by all foreign residents** | | | | | | | |
| 7.1 | 16 | Equity other than investment fund shares | 7.1 | 15 | Equity and investment fund shares | Equity other than investment fund shares | Equity and investment fund shares |
| 7.1 | 17 | Investment fund shares | 7.1 | 15 | Equity and investment fund shares | Investment fund shares | Equity and investment fund shares |
| **Equity and investment fund shares acquired by foreign official agencies** | | | | | | | |
| 9.1 | 4 | Equity other than investment fund shares | 9.1 | 3 | Equity and investment fund shares | Equity other than investment fund shares | Equity and investment fund shares |
| 9.1 | 5 | Investment fund shares | 9.1 | 3 | Equity and investment fund shares | Investment fund shares | Equity and investment fund shares |
| **Long-term debt securities acquired by all foreign residents** | | | | | | | |
| 7.1 | 26 | State and local government securities | 7.1 | 26+28 | Corporate bonds and notes ***plus*** state and local government securities | State and local government securities | Corporate bonds and notes ***plus*** state and local government securities |
| 7.1 | 71 | State and local government long-term securities (equals line 26) | 7.1 | 26+28 | Corporate bonds and notes ***plus*** state and local government securities | State and local government securities | Corporate bonds and notes ***plus*** state and local government securities |
| 7.1 | 28 | Corporate bonds and notes | 7.1 | 26+28 | Corporate bonds and notes ***plus*** state and local government securities | Corporate bonds and notes | Corporate bonds and notes ***plus*** state and local government securities |

**Table C. Transactions in Equity and Long-Term Debt Securities From Valuation-Adjusted SLT Holdings and Ratios From SLT Holdings Detail** *[Cont.]*

| Derived transactions | | | Source transactions | | | Allocation ratio components from SLT holdings | |
|---|---|---|---|---|---|---|---|
| Table | Line | Item description | Table | Line | Item description | Numerator | Denominator |
| [A] | | | [B] | | | [C] | [D] |
| **Long-term debt securities acquired by foreign official agencies** | | | | | | | |
| 9.1 | 14 | State and local government securities | 9.1 | 14+16 | Corporate bonds and notes ***plus*** state and local government securities | State and local government securities | Corporate bonds and notes ***plus*** state and local government securities |
| 9.1 | 16 | Corporate bonds and notes | 9.1 | 14+16 | Corporate bonds and notes ***plus*** state and local government securities | Corporate bonds and notes | Corporate bonds and notes ***plus*** state and local government securities |
| **Liabilities by sector of U.S. issuer** | | | | | | | |
| **Deposit-taking institutions except central bank** | | | | | | | |
| 7.1 | 48 | ***Equity and investment fund shares*** issued by deposit-taking institutions except central bank | 7.1 | 15 | ***Equity and investment fund shares*** issued by all sectors | ***Equity and investment fund shares*** issued by deposit-taking institutions except central bank | ***Equity and investment fund shares*** issued by all sectors |
| 7.1 | 51 | ***Long-term debt securities*** issued by deposit-taking institutions except central bank [2] | 7.1 | 26+28 | Corporate bonds and notes ***plus*** state and local government securities | ***Long-term debt securities*** issued by deposit-taking institutions except central bank | Corporate bonds and notes ***plus*** state and local government securities |

2. All transactions in U.S. negotiable certificates of deposit are allocated to deposit-taking institutions except central bank. Transactions are allocated between short- and long-term maturities based on annual data from the SHL(A).

**Table C. Transactions in Equity and Long-Term Debt Securities From Valuation-Adjusted SLT Holdings and Ratios From SLT Holdings Detail** *[End]*

| Derived transactions | | | Source transactions | | | Allocation ratio components from SLT holdings | |
|---|---|---|---|---|---|---|---|
| Table | Line | Item description | Table | Line | Item description | Numerator | Denominator |
| [A] | | | [B] | | | [C] | [D] |
| **Other financial institutions** | | | | | | | |
| 7.1 | 53 | ***Equity and investment fund shares*** issued by other financial institutions | 7.1 | 15 | ***Equity and investment fund shares*** issued by all sectors | ***Equity and investment fund shares*** issued by other financial institutions | ***Equity and investment fund shares*** issued by all sectors |
| 7.1 | 60 | ***Long-term debt securities*** issued by other financial institutions | 7.1 | 26+28 | Corporate bonds and notes ***plus*** state and local government securities | ***Long-term debt securities*** issued by other financial institutions | Corporate bonds and notes ***plus*** state and local government securities |
| **Nonfinancial institutions except general government** | | | | | | | |
| 7.1 | 62 | ***Equity and investment fund shares*** issued by nonfinancial institutions except general government | 7.1 | 15 | ***Equity and investment fund shares*** issued by all sectors | ***Equity and investment fund shares*** issued by nonfinancial institutions except general government | ***Equity and investment fund shares*** issued by all sectors |
| 7.1 | 65 | ***Long-term debt securities*** issued by nonfinancial institutions except general government | 7.1 | 26+28 | Corporate bonds and notes ***plus*** state and local government securities | ***Long-term debt securities*** issued by nonfinancial institutions except general government | Corporate bonds and notes ***plus*** state and local government securities |

2. All transactions in U.S. negotiable certificates of deposit are allocated to deposit-taking institutions except central bank. Transactions are allocated between short- and long-term maturities based on annual data from the SHL(A).

# Other Investment

## Concepts and coverage

10.306. **Other investment** is a residual category that includes financial account transactions other than those included in direct investment, portfolio investment, financial derivatives, and reserve assets. Other investment consists of a wide variety of financial instruments that are usually, but not always, issued and held by financial institutions. The major published components are **currency and deposits**, **loans**, **insurance technical reserves**, and **trade credit and advances**. Other investment liabilities also include allocations of **special drawing rights (SDRs)** by the IMF.

10.307. In ITA table 8.1, other investment is classified and presented by type of instrument and by **maturity** for both assets and liabilities. In addition, assets and liabilities are classified and presented by the sector of the U.S. holder for assets and by the sector of the U.S. issuer for liabilities. For each sector, classification by type of instrument is also presented. Transactions in other investment liabilities to **foreign official agencies** are presented in line 18 of ITA table 9.1.

10.308. Like other financial account components, other investment is measured and presented on a net basis. Net acquisition of other investment assets represents gross acquisitions less gross disposals of foreign financial instruments by U.S. residents, and net incurrence of other investment liabilities represents gross acquisitions less gross disposals of U.S. financial instruments by foreign residents.

## *Departures from BPM6*

10.309. *BPM6* introduces a new class of financial instruments—*insurance, pension, and standardized guarantee schemes*—which includes insurance technical reserves (prepayments of premiums and reserves against outstanding insurance claims), pension entitlements (the claims of pensioners on their employers or pension funds), and provisions for calls under standardized guarantees (prepayments of net fees and provisions to meet outstanding calls under standardized loan guarantees). BEA is working with the U.S. Treasury Department to improve the existing source data for cross-border transactions in insurance technical reserves. Currently, the insurance-related transactions cannot be distinguished from other changes in claims and liabilities reported on Treasury International Capital (TIC) reporting system surveys.

10.310. While source data for transactions related to pension entitlements and standardized guarantee schemes are not sufficient for preparing statistics, cross-border transactions in pension entitlements and standardized guarantees are believed to be negligible. Also, in some cases BEA uses slightly different terminology and slightly different sector detail. For example, BEA uses the term *trade credit and advances* because it is the only item for which source data are available under the component *other accounts receivable/payable.*

10.311. Currently, BEA is not able to provide separate estimates of other equity, which is equity that is not in the form of securities. It can include equity in institutions such as branches, trusts, limited liability and other partnerships, unincorporated funds, and notional units for ownership of real estate and other natural resources. The ownership of many international organizations is not in the form of shares and is thus classified as other equity. Other equity is commingled with equity reported in the TIC system and is included in *portfolio investment*. Other equity of the U.S. government in international organizations may also be included in U.S. government reporting of U.S. claims on foreign residents that is classified as loans in other investment.

10.312. In BEA's presentation, the sectors "other financial institutions" and "nonfinancial institutions excluding general government" are combined, mainly because partner country data used to supplement TIC survey data do not distinguish between U.S. financial institutions and nonfinancial nonbank institutions.

## Key data sources

10.313. *U.S. Treasury Department.* Claims and liabilities for deposits, loans, and insurance technical reserves are reported by financial institutions on the TIC B forms. Deposits, loans, and trade credit and advances are reported by nonfinancial institutions on the TIC C forms beginning in December 2013. Prior to December 2013, U.S. banks, bank holding companies, financial holding companies, and securities brokers and dealers reported deposits and loans on the TIC B forms, and other types of financial intermediaries, nonfinancial institutions, and nonprofit institutions reported deposits, loans, insurance technical reserves, and trade credit and advances on the TIC C form.

10.314. Values on the TIC B and C forms are reported at their original contractual values (face value). Changes in prices in the secondary markets for assets and liabilities reported on the TIC B and C forms are assumed to have little or no impact on the reported positions. Write-offs of assets are reported on the TIC B forms and, if write-offs are significant, estimates of transactions are adjusted to exclude the impact of write-offs. Other known inconsistencies between reported quarterly balances, caused by the addition of new reporters or corrected reporting, are also reported to BEA so that the changes in quarterly balances caused by these inconsistencies can be removed from total changes in balances when estimating transactions.

10.315. *BEA Survey Data.* BEA makes two types of adjustments to the TIC source data based on surveys it conducts. One type of adjustment adds transactions in loan claims and loan liabilities not covered in the TIC source data to estimates from the TIC B and C forms. The second type of adjustment removes transactions in owner's equity between financial institutions and unincorporated branches, which are covered in *direct investment*, from transactions in loan claims and loan liabilities computed from the TIC B forms. The loan transactions removed are covered in the TIC B forms because positions in owner's equity in unincorporated branches cannot be separated from other intercompany positions in the TIC B reporting. These adjustments are based on data reported on BEA's BE–577 and BE–605 direct investment surveys.

10.316. *U.S. Department of Defense*. Advance payments for sales of military goods to foreign governments are reported to BEA. U.S. government liabilities to foreign governments for these advance payments are classified as payments for *trade credit and advances* in the general government sector.

10.317. *U.S. government administrative data*. U.S. government agencies that engage in international transactions report these transactions quarterly to BEA. Loans by the U.S. government to foreign residents are mostly made under programs enacted by the U.S. Congress for the provision of foreign assistance, requiring repayment over a period of years, usually with interest.

10.318. *Federal Reserve Board (FRB)*. Net shipments of U.S. currency into and out of the United States are provided by the FRB to BEA to measure increases and decreases in foreign holdings of U.S. currency. These transactions are not captured elsewhere in statistical reporting systems.

10.319. *Federal Reserve Bank of New York (FRBNY).* "The Treasury and Federal Reserve Foreign Exchange Operations Report" from the FRBNY provides data for transactions in central bank liquidity swaps. The report of foreign central bank account balances at the FRBNY provides key data for central bank sector deposit transactions.

10.320. *International Monetary Fund (IMF)*. The IMF issues press releases and posts information on its Web site when it implements significant decisions such as allocating new special drawing rights to members or increasing member quotas. Recommendations by the IMF Executive Board for such actions must be ratified by member countries before they can be implemented.

10.321. *Depository Trust and Clearing Corporation (DTCC).* Claims of U.S. nonbank firms include loans associated with the issuance of asset-backed commercial paper (ABCP) that are not captured in other source data. Estimates of loan transactions between U.S. affiliates located in Delaware and their offshore parents are estimated from DTCC records for selected ABCP program.

10.322. *Supplemental counterparty data.* Bilateral comparisons between U.S. statistics and comparable statistics from foreign banks for loans and deposits show that U.S. statistics, collected directly from U.S. nonbank firms, understate the external claims and liabilities of U.S. nonbank firms vis-à-vis foreign banks. The foreign banking data are from the central banks of the United Kingdom and Germany, from the Bank for International Settlements for the Netherlands, and from FRB reports for banks in the Bahamas and the Cayman Islands.

## Estimation methods

10.323. Estimation methods are described below for each of the major published components. These components include currency, deposits, loans, insurance technical reserves, trade credit and advances, and SDRs. Unless otherwise noted, methods are the same for U.S. asset transactions and U.S. liability transactions.

### Currency

10.324. Transactions in U.S. currency liabilities are equal to net shipments of U.S. currency into and out of the United States. Net disbursements of $100 notes from FRB cash offices to foreign wholesale banks serve as the measure of currency flows. In a typical transaction, foreign wholesale banks purchase notes from the FRB for distribution to customers abroad. Foreign wholesale banks also sell back to the FRB notes unfit for further circulation or excess balances of notes.

10.325. U.S. currency liabilities are liabilities of the U.S. central bank sector. Transactions in these liabilities are presented in ITA table 8.1 but are excluded from ITA table 9.1 because they are not liabilities to foreign official agencies.

### Deposits

10.326. U.S. deposit claims and liabilities with foreign residents include those reported by U.S. financial and nonfinancial institutions both for their own account and for their customers on the TIC B and C forms. Also included are the deposit claims and liabilities of the FRB with foreign central banks reported in administrative data.

10.327. Statistics for transactions in deposit claims and liabilities of U.S. financial and nonfinancial institutions are based on changes in quarterly holdings as reported on the TIC B and C forms, which are supplemented by changes in quarterly holdings of deposits placed in foreign banks by U.S. nonbank firms estimated from supplementary counterparty data from foreign banks. The computed changes in holdings are adjusted to remove the impact of any changes in holdings not caused by transactions, such as changes in exchange rates or reporting panels for the TIC surveys. (See paragraph 11.95 for information about the estimation of exchange-rate changes.)

10.328. Assets held abroad by the FRB as the result of central bank liquidity swaps with foreign central banks are classified in other investment as deposits of the U.S. central bank in foreign central banks. Transactions in these deposits are equal to changes in quarterly swap balances reported by the Federal Reserve. These deposits are excluded from U.S. reserve assets because they are held until the swap is reversed and are not available for other purposes. The FRB also reports to BEA its deposit liabilities and its liabilities from repurchase agreements with foreign central banks. The liabilities from repurchase agreements are classified as deposits following *BPM6* guidelines. Transactions are equal to changes in the liability balances reported by the FRB.

10.329. Transactions in U.S. deposit liabilities for all U.S. sectors with foreign official agencies are estimated from changes in deposit liabilities to foreign official agencies available separately on the TIC form BL–1. These liabilities include those of the FRB. These transactions are presented in ITA table 9.1.

10.330. U.S. deposit claims and liabilities by sector are presented in ITA table 8.1. Central bank deposit claims received by the FRB in central bank liquidity swaps are short-term and the deposits are denominated in foreign currencies. Deposits placed in foreign banks by U.S. deposit-taking institutions except central bank are estimated from separate reports by deposit-taking institutions on the TIC B forms.

10.331. U.S. central bank deposit liabilities to foreign central banks include liabilities from repurchase agreements. Repurchase agreements are short-term and the other deposit liabilities are available to foreign central banks on short notice, so these are classified as short-term liabilities. Deposit liabilities of U.S. deposit-taking institutions except central bank with foreign residents are estimated from separate reports by deposit-taking institutions on the TIC B forms.

10.332. Securities brokers, classified in the other financial institutions sector, hold brokerage balances in brokerage accounts for their customers that are very similar to deposits. Many investors use their brokerage balances like deposit accounts and many brokers pay interest on the accounts and offer limited or unlimited check writing on the accounts. Because of the similarity of brokerage balances to deposits, BEA records transactions in brokerage balances in the deposit liability category. Transactions of U.S. securities brokers with foreign residents in brokerage balances are estimated from separate reports by securities brokers on the TIC B forms.

### Loans

10.333. U.S. loan claims and liabilities with foreign residents include those reported by U.S. financial and nonfinancial institutions both for their own account and for their customers on the TIC B and C forms. Also included are loan claims on foreign residents reported by U.S. government agencies, mainly under foreign assistance programs, in administrative data.

10.334. Statistics for loan transactions between U.S. financial and nonfinancial institutions and foreign residents are based on changes in quarterly holdings as reported on the TIC B and C forms. TIC data are supplemented by loan claims data from DTCC and loan claims and loan liabilities of U.S. nonbank firms with foreign banks based on supplementary counterparty data from foreign banks. Prior to the first quarter of 2014, loan transactions also include intercompany debt of selected financial intermediaries reported on BEA surveys of direct investment. Beginning with the first quarter of 2014, all financial firms with reportable other investment claims and liabilities reported those positions on the TIC B forms, eliminating the need to include the intercompany debt of the selected financial intermediaries. The computed changes in holdings from the TIC data are adjusted to remove the impact of any changes in holdings not caused by transactions, such as changes in exchange rates or TIC survey reporting panels. (See paragraph 11.106 for information about the estimation of exchange-rate changes.)

10.335. Quarterly statistics for transactions in U.S. government loan claims are based on data submitted by U.S. government operating agencies under OMB Statistical Directive No. 19; data are summarized by country and by agency. BEA supplements these data with information from quarterly statements of receipts, expenditures, and balances of foreign currency holdings, provided by the U.S. Treasury Department, published financial statements, annual reports and other submissions to the U.S. Congress, and the financial and operating records of other U.S. government agencies.

10.336. U.S. loan claims and liabilities by sector are presented in ITA table 8.1. U.S. loan liabilities of all U.S. sectors with foreign official agencies are estimated from changes in deposit liabilities to foreign official agencies available separately on the TIC forms BL–1 and BL–2. These transactions are presented in ITA table 9.1. Transactions in loans to foreign residents by U.S. deposit-taking institutions except central bank are estimated from separate reports by deposit-taking institutions on the TIC B forms.

10.337. Transactions in loans to foreign residents by other U.S. financial institutions and nonfinancial institutions excluding general government comprise the remaining loans estimated from the TIC B and C forms, supplemented by counterparty data from foreign banks. Prior to 2014, this sector includes intercompany debt reported on BEA surveys of direct investment by selected financial intermediaries.

10.338. Loan liabilities of U.S. deposit-taking institutions except central bank with foreign residents are estimated from separate reports by deposit-taking institutions on the TIC B forms. Transactions in loans from foreign residents to other U.S. financial institutions and nonfinancial institutions excluding general government comprise the remaining loans estimated from the TIC B and C forms, supplemented by counterparty data from foreign banks. Prior to 2014, this sector includes intercompany debt reported on BEA surveys of direct investment by selected financial intermediaries.

### Insurance technical reserves

10.339. Transactions in insurance technical reserves are based on changes in quarterly holdings as reported on the TIC B forms. The computed changes in holdings are adjusted to remove the impact of any changes in holdings not caused by transactions. Transactions in insurance technical reserves are not separately available at this time. Collection of data for insurance technical reserves as a separate item began in December 2013. Separate transactions will be published in ITA table 8.1 pending evaluation of the new source data for reliability and confidentiality.

10.340. Insurance technical reserves are not liabilities to foreign official agencies and are therefore not relevant for inclusion in ITA table 9.1.

### Trade credit and advances

10.341. Transactions in claims and liabilities with foreign residents from trade credit and advances include those reported by U.S. financial and nonfinancial institutions on the TIC form CQ–2. Also included are transactions in the liabilities of the U.S. government to foreign governments from funds advanced mainly for the purchase of military goods and services reported to BEA in U.S. government administrative data.

10.342. Trade credit and advances of other U.S. financial institutions and nonfinancial institutions are estimated from changes in quarterly holdings as reported on the TIC CQ–2 form. The computed changes in holdings are adjusted to remove the impact of any changes in holdings not caused by transactions. (See paragraph 11.118 for information about the estimation of exchange-rate changes.) Claims and liabilities are reported in ITA table 8.1. The liabilities are not liabilities to foreign official agencies and are therefore not relevant for inclusion in ITA table 9.1.

10.343. U.S. government transactions in liabilities from advance payments for foreign purchases of goods and services that are mainly for military use are the sum of (1) U.S. government cash receipts from foreign governments for purchases of military goods and services and (2) the financing of military sales by U.S. government credits and grants. Netted against this gross total are (3) the part of the receipts from foreign governments that represents principal repayments on credits financing military agency sales contracts, (4) issues of special U.S. Treasury securities that are subject to redemption prior to maturity for the purpose of prepaying for military purchases in the United States, and (5) the counterpart to the value of deliveries of military goods and services recorded in the goods and services accounts. These liabilities are classified as long-term liabilities because contracts for the foreign purchases of goods and services are generally long-term arrangements. Estimates of these U.S. liabilities are presented in ITA tables 8.1 and 9.1.

#### Special drawing rights (SDR) allocations

10.344. SDR allocations to the United States and other countries through a collective decision of IMF-member governments are rare. The most recent allocations occurred in the third quarter of 2009 and were widely publicized in IMF and other publications. Data on future SDR allocations will continue to be obtained from IMF publications and databases.

10.345. By sector, SDR allocations are liabilities of the U.S. Treasury Department to other governments that participate in the SDR program and are classified in the general government sector. Transactions are presented in ITA tables 8.1 and 9.1.

## Reserve Assets

### Concepts and coverage

10.346. **Reserve assets** are those external assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes such as maintaining confidence in the currency and the economy and serving as a basis for foreign borrowing. The major published components are **monetary gold**, International Monetary Fund (IMF) **special drawing rights (SDRs)**, **reserve position in the IMF**, and **other reserve assets**.

10.347. Other reserve assets enable the United States to hold foreign currency balances that are highly liquid and that are available for intervention sales. U.S. foreign currency balances include deposits, debt securities, and repurchase agreements that are classified as “other.” The United States does not have financial derivatives in its reserve assets.

10.348. Excluded from transactions are changes in the value of reserve assets attributable to holding gains and losses, which are not considered to be international transactions. Thus, changes in the value of assets that arise from fluctuations in the market price of gold and from fluctuations in the exchange market value of the dollar vis-à-vis foreign currencies and SDRs are excluded. Also excluded are reclassifications arising from monetizations and demonetizations of monetary gold by monetary authorities. These exclusions are, however, included in the International Investment Position Accounts as valuation adjustments.

10.349. Transactions in nonmonetary gold—gold exported or imported in forms such as ore, scrap and base bullion, refined bullion, and coins and medallions—are not included with transactions in monetary gold; they are included in goods exports and goods imports.

### *Departures from BPM6*

10.350. The coverage and presentation of reserve assets closely follows *BPM6* recommendations.

### Key data sources

10.351. *U.S. government administrative data.* Data on U.S. reserve assets are published by the U.S. Treasury Department in terms of holdings (outstanding amounts). BEA also uses U.S. Treasury Department source data on the gold stock.

10.352. *Federal Reserve Bank of New York (FRBNY).* "The Treasury and Federal Reserve Foreign Exchange Operations Report" from the FRBNY provides data for transactions in central bank liquidity swaps. Other data for interest earned on reserves and swaps and on claims and liabilities with foreign central banks are provided to BEA for estimates of reserve assets and central bank sector transactions.

10.353. *International Monetary Fund (IMF).* The IMF provides month-end position data and daily increases and decreases during each month for the U.S. accounts at the IMF. The data include positions and transactions between the United States and the IMF for the SDR account and the General Resources (tranche) account and its subaccounts covering securities, valuation adjustments, and IMF borrowing from the United States.

### Estimation methods

10.354. Descriptions are provided below for each component and classification published in ITA table 1.2.

#### Monetary gold

10.355. Transactions in monetary gold are rare. Such transactions can only take place with another monetary authority or with an international institution such as the IMF that is authorized to hold monetary gold. If transactions were to take place, BEA would obtain from the U.S. Treasury Department data for the quantity of gold transferred out or received from the counterparty, either in ounces or in dollars at a known price. If daily data were available, BEA would value the daily gold transactions using the afternoon (PM) fix in the London market for each day. If transactions occurred over a period of time and daily data were not available, the transactions over the period would be valued at an average price of gold over that period. Transactions valued using the PM fix for the gold price in London would be aggregated and reported quarterly.

### Special drawing rights (SDRs)

10.356. The SDR is an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves. Its value is based on a basket of four key international currencies, and SDRs can be exchanged for freely usable currencies. The SDR is neither a currency nor a claim on the IMF. Rather, it is a potential claim on the freely usable currencies of IMF members. In addition to its role as a supplementary reserve asset, the SDR serves as the unit of account of the IMF and some other international organizations. The value of the SDR in terms of the U.S. dollar is determined daily and posted on the IMF's Web site. It is calculated as the sum of specific amounts of the four basket currencies valued in U.S. dollars on the basis of exchange rates quoted at noon each day in the London market.

10.357. Transactions in SDRs can take place with the IMF, which uses the SDR as a common unit of account for transactions with member countries, or with other countries and institutions that subscribe to the SDR. Generally, all U.S. transactions in SDRs are conducted through the U.S. SDR account at the IMF with the IMF as the immediate foreign counterparty.

10.358. BEA converts daily increases or decreases caused by transactions in the U.S. SDR account from SDRs to U.S. dollars at the conversion rate in effect on that date. These daily transactions are aggregated into quarterly financial flows for the ITAs.

### Reserve position in the IMF

10.359. The U.S. reserve position in the IMF is comprised of the U.S. general resources, or tranche, account plus any borrowing by the IMF from the United States through the General Arrangements to Borrow (GAB), the New Arrangements to Borrow (NAB), or other borrowing facilities. The U.S. general resources account is equal to the U.S. quota in the IMF less IMF holdings of dollars, excluding dollar holdings in IMF administrative and subsidiary accounts. Thus, the reserve position is affected by changes in the U.S. quota, changes in IMF holdings of U.S. dollars, and changes in balances borrowed from the United States by the IMF. Transactions in the reserve position in the IMF are equal to transactions in the general resources account plus transactions from IMF borrowings or repayments.

10.360. Transactions from IMF borrowings or repayments are provided for each day of the reporting month to BEA by the IMF. BEA converts daily increases or decreases from SDRs to U.S. dollars at the conversion rate in effect on that date. These daily transactions are aggregated into quarterly financial flows for the ITAs.

10.361. Transactions in the general resources account are computed by deducting valuation changes from the total change in balance of the account, which is equal to the U.S. holdings at the end of the current quarter converted to U.S. dollars, less the U.S. holdings at the end of the previous quarter converted to U.S. dollars. The valuation changes are computed from the change in the SDR/U.S. dollar conversion rate and valuation adjustments to IMF holdings of U.S. dollars. The SDR/U.S. dollar conversion rate and valuation adjustments to IMF holdings of U.S. dollars are provided to BEA by the IMF.

### Other reserve assets

10.362. Other reserve assets can include currency and deposits, securities, financial derivatives, and other claims, such as repurchase agreements that are readily redeemable in foreign currencies to enable the monetary authorities to carry out timely interventions in the foreign exchange market or to facilitate balance of payments financing. The United States does not have financial derivatives in its reserve assets.

10.363. The U.S. monetary authorities invest their foreign currency reserves in a variety of instruments that yield market rates of return and have a high degree of liquidity and credit quality. To the greatest extent practicable, the investments are split evenly between the System Open Market Account at the FRB and the Exchange Stabilization Fund at the U.S. Treasury Department.

10.364. A significant portion of the U.S. monetary authorities' foreign exchange reserves is invested on an outright basis in German, French, and Japanese government securities. Euro- and yen-denominated reserves are also held on deposit at official institutions. Reserves are also invested in euro-denominated repurchase agreements, under which the U.S. monetary authorities may accept sovereign debt backed by the full faith and credit of the following governments: Belgium, France, Germany, Italy, the Netherlands, and Spain. Foreign currency reserves are also invested at the Bank for International Settlements and in facilities at other official institutions.

10.365. Intervention in the foreign exchange market by U.S. monetary authorities is relatively rare. It is much more common for transactions in other reserve assets to reflect income earned on the deposits, securities, and repurchase agreements. The interest collected on these investments is reported by the FRBNY to BEA. This interest is entered by type of investment into the U.S. reserve assets as an increase in assets and into investment income on U.S. reserve assets.

10.366. Intervention purchases and sales of assets are also reported to BEA by type of investment by the FRB, so that the appropriate increase or decrease in deposits, securities, or repurchase agreements can be recorded in the accounts. Purchases or sales of foreign currency would be recorded in nominal U.S. dollar amounts at the exchange rates in effect at the time of the transactions. The impact of changes in exchange rates on the value of reserve assets is excluded from transactions and is reflected in price and exchange rate changes recorded in the IIP accounts.

## Financial Derivatives Other Than Reserves

### Concepts and coverage

10.367. **Financial derivatives other than reserves** consist of cross-border transactions arising from financial contracts that are linked to underlying financial instruments, commodities, or indicators. Transactions in financial derivatives consist of U.S. cash receipts and payments arising from the sale, purchase, periodic settlement, or final settlement of financial derivatives contracts. *Financial derivatives* are a type of financial instrument and *financial derivatives other than reserves* is a functional category. Transactions in financial derivatives were introduced into the ITAs beginning with statistics for the first quarter of 2006.

10.368. Transactions are reported in the source data on a net settlements basis as U.S. cash receipts less payments on individual contracts grouped into reporting categories. Because of the difficulty in characterizing transactions as arising from assets (contracts with positive fair values) or from liabilities (contracts with negative fair values), transactions for assets and liabilities are not separately reported. Thus, net settlements are presented in ITA table 1.2 on a single line, separate from net U.S. acquisition of assets and net U.S. incurrence of liabilities.

### *Departures from BPM6*

10.369. The coverage of financial derivatives other than reserves follows *BPM6* recommendations for the net reporting of transactions when gross reporting is not feasible. However, *BPM6* also recommends that (1) employee stock options be included with financial derivatives other than reserves and (2) when financial derivatives are reported net they should be reported as a component of assets. BEA does not follow the first recommendation because source data are not available for employee stock options. For the second recommendation, BEA prefers to present transactions in U.S. assets and U.S. liabilities excluding financial derivatives for analytical purposes. The functional category, *financial derivatives other than reserves, net transactions*, is presented as a component of the financial account separately from transactions in U.S. assets and U.S. liabilities.

### Key data sources

10.370. *U.S. Treasury Department.* Comprehensive data on financial derivatives are collected on Treasury International Capital (TIC) Form D, "Report of Holdings of, and Transactions in, Financial Derivatives Contracts." Data are collected quarterly from U.S. banks, bank holding companies, financial holding companies, securities dealers, and all other firms with worldwide holdings of financial derivatives, for their own and their customers' accounts combined, in excess of $400 billion in notional value. Trading in financial derivatives is highly concentrated among a small number of large firms.

10.371. Survey respondents provide net settlements data following specific steps. Receipts of cash by U.S. residents from foreign residents are treated as positive amounts, and payments of cash by U.S. residents to foreign residents are treated as negative amounts. The receipts and payments for all contracts are summed for each reporting category. A net settlement cash receipt or payment occurs only when cash is received or paid for the purchase or sale of a derivative, or a settlement payment (such as the periodic settlement under a swap agreement or the daily settlement of an exchange-traded contract) is received or paid.

### Estimation methods

10.372. Published statistics are equal to net settlements from the TIC Form D with the sign reversed. The sign is reversed because net settlements from TIC Form D have a positive sign when U.S. receipts of cash from foreign residents exceed U.S. payments of cash to foreign residents, and these net U.S. receipts, which represent net U.S. borrowing from financial-account transactions, are recorded with a negative sign in the ITAs. Similarly, net U.S. payments have a negative sign in the TIC source data, and net U.S. payments, which represent net U.S. lending from financial-account transactions, are recorded with a positive sign in the ITAs. Geographic detail for net settlements is presented in ITA table 1.3.

## Statistical Discrepancy

10.373. The statistical discrepancy is the amount that balances the sum of the recorded credits and debits underlying the ITAs.

10.374. The statistical discrepancy is the difference between total debits and total credits recorded in the current, capital, and financial accounts. A positive value indicates that recorded debits (inflows) exceed recorded credits (outflows), and a negative value indicates that recorded credits exceed recorded debits. The statistical discrepancy can be calculated as the difference between net lending/borrowing as measured by transactions recorded in the current and capital accounts and as measured by transactions recorded in the financial account.

10.375. Errors and omissions in recorded transactions may exist in any account or component and may arise for many reasons. Statistical reporting systems may be inaccurate in their measurement or may be incomplete in their coverage. Such systems may overlap in their coverage of transactions or completely miss transactions that do not fall clearly under one reporting system or the other. Statistical reporting systems, which are often independent of each other, must capture opposite sides of the same transaction identically for net errors and omissions to be zero. For example, the total value for U.S. purchases of goods measured in one reporting system must be the same as the total value for the payments for those goods measured in another system. Finally, some ITA components do not lend themselves to direct measurement and must be estimated indirectly from economic data series; these statistics depend critically on the adequacy of source data and estimation methods.

10.376. The greatest challenges for statistical reporting systems often result from rapid changes in economic and financial markets. During the economic cycle of 1997–2002, numerous and large mergers and acquisitions were difficult to track and measure accurately. Throughout the 1990s and 2000s, the evolution and development of complex financial derivatives were incompletely recorded in the accounts for nearly the entire period. The rapid expansion in 2003–2008 of hedge funds, many of which operated from offshore locations, proved especially difficult to track because of the inability to locate officials responsible for reporting transactions. The securitization of assets in 2003–2008 and the establishment of special investment vehicles abroad to borrow funds in the United States for distribution abroad escaped tracking by traditional reporting systems. Difficulties in recording the process of securitization were compounded by the rapid run up in leveraging and then deleveraging of these activities.

10.377. It is not unreasonable to expect that the size and volatility of fluctuations in the statistical discrepancy might increase in times of heightened uncertainty and increased activity in the financial markets. In fact, such a tendency has been demonstrated in the past. The statistical discrepancy increased sharply in absolute value about the time of the 1997–98 financial crisis that started in East Asia and also during the 2008 global financial crisis. However, the relationship is not strong, and the discrepancy may also be large in periods of relative stability in financial markets. If both sides of a transaction are absent from the statistical reporting systems, the statistical discrepancy is unaffected, but the accounts will still contain errors, inaccuracies, or gaps in coverage.

10.378. Analysis of the statistical discrepancy could identify data problems, such as gaps in coverage or misreporting. A consistently positive or negative sign may indicate a bias in one or more of the underlying components. For example, a positive statistical discrepancy indicates that credit entries, such as exports or income receipts, are understated or omitted, or that debit entries, such as imports or income payments, are overstated. However, the ability to use analysis of the statistical discrepancy to identify data problems is limited by the fact that measurement errors in opposite directions offset each other.

10.379. At the global level, the statistical discrepancy represents net errors and omissions in recorded transactions. For individual partner countries and regions, in addition to errors and omissions, it also reflects discrepancies that arise when transactions with one country or region are settled through transactions with another country or region. These transfers of funds between foreign areas often occur because the dollar is used extensively in settling international transactions and forms a large part of the foreign currency reserves of many countries. Therefore, changes in dollar balances held by one country often cannot be accounted for by U.S. transactions with that country. Consequently, the statistical discrepancies included in the country and area statistics of the international economic accounts cannot be interpreted as a measure of the area distribution of global errors and omissions. Instead, they reflect a combination of errors and omissions and third-country settlements.