## U.S. International Transactions, Revised Estimates for 1983–92

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As is customary each June, the estimates of U.S. international transactions have been revised to incorporate definitional, conceptual, and statistical changes. This year, as last year, a number of improvements have been implemented as part of a multiyear effort by the Bureau of Economic Analysis (BEA) to address gaps in the coverage of international transactions arising from the rapid growth, innovation, and change in the international trade and financial markets.

As a result of this year's revision, the deficit in the balance on current account is larger than previously published for all years; for 1992, the deficit was \$4.0 billion larger (table 1). For 1988-92, upward revisions in imports of goods, services, and income exceeded upward revisions in exports of goods, services, and income; for 1983-87, upward revisions in imports (beginning with 1984) were reinforced by downward revisions in exports. Net unilateral transfers are larger beginning with 1988. The largest revisions were in portfolio investment income, in which upward revisions to payments exceeded upward revisions to receipts. Revisions in both service receipts and service payments were largely offsetting. In the capital account, U.S. bank claims and U.S. nonbanking concerns' claims are revised to show more outflows.

Major statistical changes introduced this year include the expanded use of source data pro-

vided by other countries. This year, counterparty data for the Netherlands, Germany, France, and Italy have been incorporated in order to improve the recording of certain nonbanking capital flows; last year, counterparty data for the United Kingdom, Canada, and U.S-owned banks in the Caribbean basin were incorporated. In addition, Mexico continues to provide data, particularly for travel, and Canada continues to provide data for a wide range of current-account transactions. The expanded use of partner-country data has been a primary means by which U.S. compilers have responded to suggestions from the International Monetary Fund and the United Nations on ways to improve the quality of measurement and to harmonize statistical standards around the world.

Among the major source data incorporated into the U.S. international transactions accounts this year were the results of two benchmark surveys—one of U.S. direct investment abroad for 1989, conducted by BEA, and the other of foreign portfolio investment in the United States for 1989, conducted by the U.S. Treasury Department and supplemented by BEA's own research.

Table 2 shows the sources of revisions and the beginning dates for the revisions by account. Most of the revisions were carried back to 1988; a few were carried back as far back as 1983, ei-

Table 1.—Revisions in the Current-Account Estimates

	Exports of goods, services, and income			Imports of goods, services, and income			Unilateral transfers			Balance on current account		
	Previous	Revised	Amount of revision	Previous	Revised	Amount of revision	Previous	Revised	Amount of revision	Previous	Revised	Amount of revision
1983	351,613	350,776	-837	-377,945	-377,945		-17,741	-17,741		-43,623	-44,460	-83
1984	391,435	389.942	-1,493	-469,647	-469,658	-11	-20,612	-20,612		-98.824	-100.328	-1.50
1985	380,051	378,301	-1,750	-478,821	-479,221	-400	-22,950	-22,950		-121,721	-123,870	-2.14
1986	398,583	396.976	-1,607	-521,937	-523.004	-1,067	-24,176	-24,176		-147,529	-150,203	-2.67
1987	445,216	443,152	-2,064	-585,637	-587,408	-1,771	-23.052	-23,052		-163,474	-167.308	-3.83
1988	550,323	552,491	2,168	-652,109	-654,694	-2,585	-24,869	-24,965	-96	-126.656	-127.168	-51
1989	629,468	633.859	4,391	-705.005	-709.391	-4,386	-25.606	-26.092	-486	-101,143	-101.624	-48
1990	680,890	688,806	7,916	-738,401	-746,839	-8,438	-32,916	-33.827	-911	-90.428	-91.861	-1.43
1991	704,914	708,489	3,575	-716,624	-723,388	-6.764	8,028	6,575	-1,453	-3.682	-8.324	-4.64
1992	726,948	730,460	3,512	-758.036	-763,965	-5,929	-31,360	-32,895	-1,535	-62,448	-66,400	-3.95

ther to link new and old benchmark series or to incorporate new source data.

Two changes have been made to the presentation of the international transactions accounts, which are shown in tables 1 through 10a in "U.S. International Transactions, First Quarter 1993" in this issue. First, an entry, "balance on goods and services," has been added to the memoranda in table 1 in order to provide a more comprehensive view of transactions than can be obtained from a focus on goods alone; the view is still, however, less comprehensive than that provided by the balance on current account. The new balance recognizes the increasing role played by services in U.S. international transactions. Second, a memorandum item has been added to table 3 to show a balance on goods and private services. (In addition, the title of the table has been changed to clarify that the table covers only private services and excludes government services.) This new balance sharpens the focus on the role of private services in U.S. international transactions. The balance on goods and private services closely parallels the balance on total goods and services.

## Major sources of revisions

The major sources of revisions to the U.S. international transactions accounts are as follows:

- Merchandise trade.—New seasonal adjustment factors, jointly developed by BEA and the Bureau of the Census, are incorporated into the quarterly estimates of merchandise trade. In addition to improving the quarterly estimates, use of these factors eliminates discrepancies that have arisen in the seasonal adjustment of Census-based monthly data and BEA-based quarterly data.
- Services.—New estimates are introduced for travel, passenger fares, other transportation, royalties and license fees, and other private services.
- Direct investment income.—Results of BEA's benchmark survey of U.S. direct investment abroad for 1989 are introduced.

Table 2.—Sources of Revisions, 1992, and Beginning Dates for Revisions [Millions of dollars]

(Credits +; debits -) 1		Imports, unilateral transfers, and changes in foreign assets	Beginning dates for revisions		
Travel, Mexico  Passenger fares, Mexico Other transportation Royalites and license fees, affiliated Other private services, unaffiliated Other private services, affiliated Statistical changes 2 Services, revised	178,503 -246 159 -1,899 505 372 1,137 1,179 179,710	-123,378 156 -319 242 -123,299	1984 1984 1989 1989 1990, 1992 1999		
Orect investment income, previous U.S. direct investment abroad benchmark survey Statistical changes <sup>2</sup> Orect investment income, revised	49,606 1,330 -1,048 49,888	-404 -1,226 -1,630	1989		
Portfolio investment income, previous  Dividend payments on foreign holdings of U.S. stocks  Interest payments on foreign holdings of U.S. corporate bonds  Interest payments on foreign holdings of U.S. Treasury securities  Other private interest receipts:		-98,707 -161 -1,541 -2,319	1985 1985 1985		
Foreign commercial paper Centificates of deposit Nonbank claims Statistical changes 2 Portiolio investment income, revised	7,500 -707 365 60,725	-33 -102,761	1988 1988 1963, 1984, 1987, 1989, and 1990		
Orect investment capital, previous U.S. direct investment abroad benchmark survey Statistical changes <sup>2</sup> Orect investment capital, revised	-35,311 -838 1,358 -34,791	-3,948 6,326 2,378	1989		
J.S. banks' claims, previous Foreign commercial paper Certificates of deposit Statistical changes <sup>2</sup> J.S. banks' claims, revised			1988 1988		
U.S. nonbanking concerns' claims, previous U.S. nonbanking concerns' claims on banks Statistical changes <sup>2</sup> U.S. nonbanking concerns' claims, revised			1984, 1987, 1989, and 1990		

Credits (\*): Exports of goods, services, and income; unilateral transfers to the United States;
 Debits (-): Imports of goods, services, and income; unilateral transfers to foreigners; capital

outflows (decrease in foreign assets (U.S. liabilities) or increase in U.S. assets).

2. Statistical changes reflect newly available data from regularly used annual and quarterly sources.

- Portfolio investment income.—New estimates for income payments are introduced, reflecting results from the U.S. Treasury's benchmark survey of foreign portfolio investment in the United States for 1989; the results are supplemented by BEA's own research and interpolated backward to 1984, the last benchmark year. In addition, new estimates of income receipts are introduced in order to parallel changes made in the capital account to improve the coverage of U.S. banks' holdings of foreign commercial paper placed in the United States, of U.S. banks' holdings of certificates of deposit, and of U.S. nonbanking concerns' claims on foreign banks.
- Direct investment capital.—Results of BEA's benchmark survey of U.S. direct investment abroad for 1989 are introduced. In addition, new estimates of equity capital flows for both U.S. direct investment abroad and foreign direct investment in the United States are introduced for 1990–92 in order to account for the equity capital flows of exempt affiliates.
- U.S. banks' claims.—New estimates of foreign commercial paper placed in the United States are introduced; this paper is held in custody for U.S. investors by U.S. banks. In addition, more complete estimates of U.S. banks' holdings of foreign certificates of deposit in the United Kingdom are introduced.
- U.S. nonbanks' claims.—New estimates are introduced to more completely record changes in U.S. nonbanking concerns' claims on foreign banks.

## Merchandise trade

Estimates of merchandise trade have been revised for 1989–92. For both exports and imports, quarterly seasonally adjusted series have been revised to reflect new seasonal and trading-day factors developed jointly by BEA and the Bureau of the Census. As a result, BEA and the Census Bureau now publish the same seasonally adjusted Census-based data for the most recent 15 months. Historical Census-based data published by BEA will differ from that published by the Census Bureau because BEA retabulates the data to make adjustments for timing and errata over a longer period than the Census Bureau does.

#### Services

Travel receipts, Mexico.—Travel receipts from Mexico are revised for 1984–92 to reflect more precise measures of these transactions than were available last year, when extensive revisions were made. The source of the data is the Bank of Mexico. For 1992, receipts were revised down \$246 million.

Passenger fare receipts and payments, Mexico.—Passenger fare receipts from, and payments to, Mexico are revised for 1984–92 to incorporate additional geographic detail from the in-flight survey conducted by the U.S. Travel and Tourism Administration. For 1992, receipts were revised up \$159 million, and payments were revised down \$156 million.

Other transportation receipts.—Other transportation receipts are revised for 1989–92 to include improved estimates of foreign air carriers' expenses incurred in the United States, which are developed from BEA's annual survey "Foreign Airline Operators' Revenues and Expenses in the United States." The revised estimates reflect an improvement in the "expansion factors" used to account for small carriers that are exempt from reporting.

The improved factors, which were developed from several statistical series on transportation activity, are based on a weighted ratio of exempt carriers' estimated passenger, freight, and fuel ex-

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penses to their total expenses. Previously, these factors were based solely on the ratio of freight expenses to total expenses, which resulted in an overstatement of receipts. For 1992, receipts were revised down \$2.0 billion.

Royalties and license fees receipts, affiliated.—Net receipts of royalties and license fees by U.S. parents from their foreign affiliates are revised for 1989–92 to incorporate results of BEA's benchmark survey of U.S. direct investment abroad for 1989. For 1989, net receipts were revised up \$856 million, reflecting a prior underreporting of U.S. parents' receipts; for 1992, net receipts were revised up \$505 million.

Other private service receipts and payments, unaffiliated.—Fees and commissions earned and paid on security transactions are revised for 1990-92 to incorporate new estimates of underwriting fees on new stock issues. For new U.S. stock issues abroad, an average underwriting fee is derived from financial data on securities and brokerage transactions and applied to the amount of new issues; for 1992, other private payments were revised up \$293 million. A similar approach is used for new foreign stock issues in the United States; for 1992, other private receipts were revised up \$372 million. In addition, the methodology used to estimate fees and commissions on securities transactions was refined to eliminate various taxes no longer charged by foreign countries.

Payments for financial services provided by foreigners to U.S. nonfinancial firms are introduced for 1992 to supplement BEA estimates of payments by financial firms. The payments by nonfinancial firms are for credit-related fees, fees on securities transactions, and fees for other financial services that were purchased directly from foreigners rather than through U.S. financial intermediaries; they amounted to \$26 million in 1992. The estimates of these fees were obtained from information collected for the first time as part of an expansion of BEA's annual survey of selected services; BEA plans to monitor the results of this survey with a view to making adjustments to further improve the estimates.

Other private service receipts, affiliated.—Net other private service receipts by U.S. parents from their foreign affiliates are revised for 1989–92 to incorporate results of BEA's benchmark survey of U.S. direct investment abroad for 1989. Net receipts were unrevised for 1989; for 1992, they were revised up \$1.1 billion, largely because of the inclusion of late reporters.

## Direct investment income

Net receipts of income by U.S. parents from their foreign affiliates are revised for 1989–92 to incorporate results of BEA's benchmark survey of U.S. direct investment abroad for 1989. Revisions were also made to the associated current-cost and withholding tax adjustments. The net upward revision in direct investment income was \$878 million for 1989 and \$282 million for 1992.

## Portfolio investment income

Other private dividend and interest payments.—Dividend and interest payments on foreign holdings of U.S. stocks and corporate bonds for 1989 were revised to incorporate results of the U.S. Treasury Department's benchmark survey of foreign portfolio investment in the United States for 1989; these results were supplemented by BEA's own research. For both dividend and interest payments, the differences between the revised estimates for 1989 and the previously published estimates were interpolated backward to 1984, the last benchmark year.

Dividend payments on U.S. stocks were revised down \$108 million for 1989, reflecting a lower position reported in the survey (\$276.1 billion) than was previously estimated by BEA (\$278.9 billion). For 1989-92, dividend payments were recomputed to reflect the lower outstanding position and the slightly lower dividend yield suggested by the survey. Differences in country and area totals are also adjusted to the new position estimates. An additional adjustment for 1990 incorporates an upward revision in the Standard and Poor's composite index of 500 stocks; this one-time change more than offsets the effect of the downward revision based on the survey. For 1992, the effect of both changes was to raise receipts \$161 million.

Interest payments on U.S. corporate bonds were revised up \$1.5 billion for 1989 because of a higher position reported in the survey (\$191.0 billion) than was previously estimated by BEA (\$183.5 billion). The survey data included information on individual issues, market price, and yields; from this information, BEA developed estimates of interest payments for 1989. BEA adjusted the geographical distribution of the positions reported in the survey by placing bearer bonds in the United Kingdom rather than in the unallocated category reported in the survey; such bond issues are initially placed with lead underwriters in the Eurobond market in London, and ownership after the original issue is not readily known.

For 1992, as a result of the rebenchmarking and the geographical adjustment, interest payments were revised up \$1.5 billion; similar-sized revisions were made for 1990–91.

U.S. Government interest payments.—Interest payments on foreign holdings of U.S. Government securities were revised up, as foreign holdings of U.S. Government issues were revised up to reflect the U.S. Treasury's benchmark survey for 1989 and BEA's research. The difference between the revised estimate for 1989 and the previously published estimate was interpolated backward to 1984, the last benchmark year.

For 1989, interest payments on U.S. Treasury bonds and notes were revised up \$2.8 billion, reflecting an upward revision in holdings of \$37.4 billion, to \$331.5 billion. Interest payments on U.S. federally-sponsored agency bonds and notes were revised down \$0.3 billion, reflecting a downward revision in holdings of \$3.2 billion, to \$47.8 billion. Starting from \$2.5 billion for 1989, the total revision increased to \$2.9 billion for 1990 and then dropped to \$2.7 billion for 1991 and to \$2.3 billion for 1992, reflecting the peaking of interest rates in 1990 and their subsequent sharp decline.

As a result of the rebenchmarking, significant amounts of income payments were reallocated from Western Europe to Japan, reflecting the substantial undercount of securities that are held directly by the Japanese but that were previously presumed to be held in custody in the United Kingdom for unidentified owners. This adjustment was possible because these bonds are registered, whereas a similar adjustment to corporate bonds, which are in bearer form, is not possible. For 1992, payments to Western Europe were revised down \$1.9 billion, and those to Japan were revised up \$3.5 billion.

Other private interest receipts.—Other private interest receipts were revised for 1988–92 to parallel changes in the capital account that incorporated new coverage of commercial paper transactions and improved coverage of certificates of deposit (CD's) held by banks in the United Kingdom and of U.S. nonbanking concerns' claims on foreign banks.

New estimates of income receipts from foreign new issues of commercial paper in the United States for 1988–92 are based on amounts of paper outstanding and on rates on commercial paper. New estimates of income on co's held by banks in the United Kingdom in custody for U.S. banks are based on amounts outstanding for 1988–92 and on average co rates. For 1992, the result of both the commercial paper and CD revisions was to raise income receipts \$1.5 billion.

Income on U.S. nonbanking concerns' claims on foreign banks were revised by incorporating data on U.S. claims on banks in Germany beginning with 1984, claims on banks in the Netherlands beginning with 1987, claims on banks in Italy beginning with 1989, and claims on banks in France beginning with 1990.

Although outstanding claims were revised up, the effects of this revision are more than offset by a lower interest rate applied to outstanding claims than was applied in the previous methodology. The new source data suggest the selection of significantly shorter maturity interest rates. such as those typical in the Eurodollar deposit market and deposit rates on foreign-currencydenominated deposits abroad, rather than the longer maturity rates used previously. These lower rates are applied to the outstanding claims of the four countries mentioned above, as well as to the claims of the three countries for which similar data substitutions were made last year. As a result, interest receipts are substantially reduced, beginning with 1983. For 1992, the net effect of the reduced rate and the increased claims was to lower interest receipts \$0.7 billion.

### Direct investment capital

U.S. direct investment abroad.—Results of BEA's benchmark survey of U.S. direct investment abroad are introduced for 1989. Previous estimates were based on the 1982 benchmark survey.

The 1989 benchmark survey covers the universe of foreign affiliates of U.S. direct investors. In nonbenchmark years, universe estimates are derived from data reported quarterly by a sample of affiliates and from estimates for affiliates not in the sample. The estimates for affiliates not in the sample are derived by extrapolating data for a matched sample of reporting affiliates. Data for equity capital are further adjusted to account for delinquent reporters (a procedure that was introduced last year) and for exempt reporters (a procedure that is introduced this year). No adjustments for delinquent and exempt reporters are made for intercompany debt flows, because no systematic pattern of revisions is discernable.

For 1989, net capital flows were revised up \$7.4 billion on a historical-cost basis; the revision was more than accounted for by a shift from equity capital inflows to outflows. For 1990, a \$6.4 billion downward revision corrected an overestimation of intercompany debt outflows. For 1991,

a \$3.9 billion upward revision was more than accounted for by an upward revision in equity capital outflows. For 1992, a \$0.8 billion upward revision resulted from upward revisions in equity capital and intercompany debt that partly offset a downward revision in reinvested earnings.

The revisions to the estimates reflected not only results of the benchmark survey, but also revised estimates of depreciation, depletion, and expensed exploration and development costs used to adjust the reinvested earnings component of capital to a current-cost basis. When these revisions are taken into account, net capital flows were revised up \$7.8 billion for 1989, down \$5.6 billion for 1990, up \$2.0 billion for 1991, and down \$520 million for 1992.

A more complete explanation of revisions will accompany the presentation of the detailed U.S. direct investment abroad estimates scheduled to be published in the July 1993 SURVEY OF CURRENT BUSINESS. The new procedure that is used to account for exempt reporters is summarized in the next paragraph.

The new procedure for exempt reporters creates a ratio of the current quarter's reported equity capital flows (including reported births of new affiliates and information from several BEA surveys) to the prior quarter's equity positions of all affiliates who reported in the current period. This ratio is multiplied by the equity position of the prior quarter of affiliates that did not report in the current quarter. The result is added to the current quarter's reported flows to derive total equity capital increases and decreases. This procedure is performed only on aggregate data. The estimated equity capital flows are then allocated to the largest country and industry cells-that is, those accounting for about 75 percent of the total equity position at the end of the previous year.

### U.S. banks' claims

Foreign commercial paper placed in the United States.—New estimates of foreign commercial paper issued in the U.S. market are introduced for 1988–92 to enhance the coverage of transactions in short-term financial instruments. Research conducted by BEA, the Board of Governors of the Federal Reserve System, the International Monetary Fund, and the National Academy of Sciences has identified coverage of short-term financial instruments, particularly commercial paper, as a problem area in U.S. international statistics. BEA has completed an extensive research project that has led to the development of a data series on foreign commercial paper on a balance

of payments basis. This series represents a significant improvement in coverage of these capital transactions and associated income receipts in the accounts.

The estimates of foreign commercial paper outstanding are based on global issuance data from Moody's Investors Service, adjusted to reflect only placements in the U.S. market.1 In this adjustment, each commercial paper program is examined to determine the residency of the issuer, and then the issues are sorted by the country of issuer. The database contains data for over 300 foreign issuers and is updated quarterly to reflect new entrants into the market. The estimates of commercial paper transactions were compared with currently reported transactions in all short-term financial instruments, and where undercoverage in commercial paper was evident, a substitution was made. The undercoverage was greatest for Western Europe. Related changes were made to the portfolio income estimates.

Commercial paper is classified as part of bankreported transactions because this paper is held in custody for U.S. investors by U.S. banks. A line showing the commercial paper transactions has been added to table 8 ("Claims on Foreigners Reported by U.S. Banks") in the international transactions presentation.

The estimates exclude foreign paper placed through direct investment finance affiliates in the United States, which are covered, though incompletely, in the foreign direct investment in the United States reporting system.

U.S. banks' custody holdings of foreign certificates of deposit.—U.S. banks' claims for 1988–92 were also adjusted to reflect the substitution of data from the Bank of England on British banks' custody holdings of certificates of deposit for U.S. banks. These data are believed to be more complete than the previously used data from the U.S. statistical reporting system.

The combined effect of the substitution of the Bank of England data and the introduction of estimates of foreign commercial paper transactions resulted in significant upward revisions in claims outstanding of negotiable and readily transferable instruments; for 1992, these claims were revised up to \$73.9 billion from \$31.4 billion. Related changes were made to the portfolio income estimates.

Foreign commercial paper outstanding in the United States amounted to \$30.4 billion in December 1987 and increased to \$55.4 billion by December 1992.

# U.S. nonbanking concerns' claims on unaffiliated foreigners

BEA continues to expand its use of data collected by key financial partners abroad on liabilities owed by their banks to U.S. nonbanking concerns. The purpose of this use is to remove severe deficiencies in the coverage of this class of transactions in the U.S. statistical reporting system. Last year, data from Canada and the United Kingdom and supplemental data from the Federal Reserve Board were substituted into the accounts.

This year, BEA is also substituting data on liabilities to U.S. nonbanks of banks in the Netherlands, Germany, Italy, and France. BEA and foreign statistical officials determined that double-counting is not a problem, because transactions in securities and in short-term financial instruments, such as certificates of deposit, are not intermingled with these bank-reported transactions.

The substitution of the foreign data begins with 1984 for Germany, 1987 for the Netherlands, 1989 for Italy, and 1990 for France. Over 1990–92, the change in claims was revised up \$7.7 billion for Germany, down \$1.7 billion for the Netherlands, down \$1.6 billion for France, and down \$273 million for Italy. At the end of 1992, the substitution of data from these four countries increased outstanding U.S. nonbank claims on foreigners by \$12.8 billion.

Related income receipts on U.S. nonbanking concerns' claims on foreigners are revised not only to reflect the enhanced coverage, but also to incorporate a change in methodology made possible by the new foreign source data. The components of the new source data substituted both this year and last year indicate that a greater weight should be given to Eurodollar deposit rates and deposit rates on foreign-currency-denominated deposits abroad than in the previous methodology. This change is discussed in the section on portfolio income.

Because of the greater difficulty in establishing comparability between U.S.-reported non-banking concerns' liabilities to foreigners and counterparty claims of foreigners on the United States, it is not currently possible to substitute foreign source data on the liabilities side of the U.S. nonbanking concerns' account. The intermingling of securities transactions with banking transactions is the major problem preventing comparability.

Although substitution of foreign source data eliminates one source of undercoverage of capital flows in the U.S. accounts, capital flows in general remain underreported, and the proportion of the total problem that has been corrected is unknown. In addition, because the foreign data is substituted only on the claims side of the accounts, but not on the liabilities side, the true impact of the change on the statistical discrepancy is unknown.