Annual Revision of the U.S. International Accounts, 1992–2002

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AS is customary each June, the estimates of U.S. international transactions and of the U.S. international investment position have been revised to incorporate definitional, statistical, methodological, and presentational revisions. This year, like last year, several improvements have been implemented as part of continuing efforts by the Bureau of Economic Analysis (BEA) to address gaps in coverage. In large part, the gaps have arisen because of the dynamic nature of international markets. In addition, a major definitional change has been made to the estimates of insurance services. Estimates of international transactions are revised for 1992–2002, and estimates of international investment positions are revised for 1998–2001.

This year, the major revisions are as follows:

- "Other" private service receipts and "other" private service payments are revised for 1992–2002 to incorporate a definitional change in the measurement of insurance services. The new measure is conceptually superior to the earlier measure, and it is less sensitive than the earlier measure to sharp swings in losses paid or recovered.
- U.S. transactions in foreign stocks and bonds and related dividend and interest receipts are revised for 1998–2002 to incorporate the results of the U.S. Treasury Department's Benchmark Survey of U.S. Portfolio Investment Abroad as of December 31, 2001. In addition, results from the survey led to revisions in U.S. holdings of foreign stocks and bonds for 1998–2001.
- U.S. direct investment abroad financial flows, income, affiliated royalties and license fees, and affiliated "other" private services are revised for 1999–2002 to incorporate the results of BEA's Benchmark Survey of U.S. Direct Investment Abroad for 1999. In addition, the financial flow and income data are now presented on the North American Industry Classification System basis. Finally, estimates of U.S. direct investment abroad positions are revised for 1999–2001.
- Bank and nonbank income receipts and payments, which are components of "other" private income receipts and "other" private income payments, respectively, are revised for 2001–2002. The revision is partly as a result of new details available from the U.S. Treasury Department's statistical collection system, which contains new information on banking and nonbanking transactions.
- New estimates of emigrants' transfers and more complete estimates of immigrants' transfers are introduced into the capital account for 1992–2002.
- New estimates of emigrants' remittances are introduced into the private remittances and other current transfers account for 1992–2002.
- New estimates of earnings and expenditures of U.S. residents temporarily working abroad are introduced into the compensation receipts account and the "other" private services payments account, respectively, for 1992–2002.
- Estimates of commissions received from foreign trading on U.S. futures exchanges, which are a component of "other" private services receipts, are based on an improved methodology for 2000–2002.
- Changes made to the Treasury Department's statistical collection system significantly expand coverage and provide new details of financial transactions for banks and nonbanks, beginning with data for the first quarter of 2003. This improvement has led to an updating and expansion of BEA's presentation of details of financial account transactions for banks, nonbanks, and securities.

The definitional change, newly available benchmark survey data, new methodologies, and improved coverage of the accounts are discussed in the remaining sections of this article. In addition to these major changes, revisions to the transactions accounts result from the incorporation of regularly available data from BEA's annual and quarterly surveys, from the U.S. Treasury Department's and Federal Reserve System's quarterly and monthly surveys, and from other U.S. Government agencies and private sources. These revisions affect the estimates for 1999–2002.

For 2002, as a result of all the changes, the current-account deficit is reduced $22.6 billion, to $480.9

billion (table 1). By account, $0.7 billion is removed from goods exports and $2.2 billion is removed from goods imports, resulting in a deficit that is $1.5 billion lower than previously estimated. For services, $3.0 billion is added to services exports and $13.0 billion is removed from services imports, resulting in a surplus that is $16.0 billion higher than previously estimated. For income, $10.9 billion is added to income receipts and $3.0 billion is added to income payments, resulting in a deficit that is $7.9 billion lower than previously estimated. For net current unilateral transfers, $2.8 billion in outflows is added, resulting in an increase to net outflows for transfers of the same amount. Net financial account inflows were revised up $53.8 billion, to $528.0 billion. Details on revisions to individual series are shown in table 2.

Table 1. Revisions to U.S. International Transactions

[Millions of dollars; quarters seasonally adjusted]

	Exports of goods and services and income receipts			Imports of goods and services and income payments			Unilateral current transfers, net			Balance on current account			Net financial flows		
	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision
1992	748,603	748,881	278	–762,105	–763,741	–1,636	–35,013	–33,154	1,859	–48,515	–48,013	502	96,253	96,253	....
1993	777,044	776,921	–123	–821,930	–821,797	133	–37,637	–37,113	524	–82,523	–81,989	534	81,488	81,488	....
1994	869,328	868,460	–868	–949,312	–948,555	757	–38,260	–37,583	677	–118,244	–117,678	566	129,933	129,933	....
1995	1,005,935	1,005,645	–290	–1,077,701	–1,075,674	2,027	–34,057	–35,188	–1,131	–105,823	–105,217	606	86,186	86,186	....
1996	1,077,966	1,077,148	–818	–1,155,706	–1,155,489	217	–40,081	–38,862	1,219	–117,821	–117,203	618	137,173	137,173	....
1997	1,195,538	1,194,899	–639	–1,283,116	–1,281,291	1,825	–40,794	–41,292	–498	–128,372	–127,684	688	219,210	219,210	....
1998	1,192,045	1,191,206	–839	–1,351,363	–1,347,462	3,901	–44,509	–48,435	–3,926	–203,827	–204,691	–864	63,809	75,740	11,931
1999	1,247,682	1,255,671	7,989	–1,491,781	–1,499,762	–7,981	–48,757	–46,755	2,002	–292,856	–290,846	2,010	264,910	236,570	–28,340
2000	1,417,236	1,416,915	–321	–1,774,135	–1,772,694	1,441	–53,442	–55,679	–2,237	–410,341	–411,458	–1,117	409,497	456,341	46,844
2001	1,281,793	1,284,942	3,149	–1,625,701	–1,632,072	–6,371	–49,463	–46,615	2,848	–393,371	–393,745	–374	381,844	415,592	33,748
2002	1,216,504	1,229,649	13,145	–1,663,908	–1,651,657	12,251	–56,023	–58,853	–2,830	–503,427	–480,861	22,566	474,195	527,998	53,803
1992: I	185,822	185,909	87	–183,681	–183,755	–74	–7,545	–6,847	698	–5,404	–4,693	711	19,651	19,651	....
II	186,302	186,380	78	–190,411	–190,447	–36	–8,418	–7,890	528	–12,527	–11,957	570	34,069	34,069	....
III	187,644	187,709	65	–191,986	–193,531	–1,545	–7,837	–7,457	380	–12,179	–13,279	–1,100	21,899	21,899	....
IV	188,834	188,880	46	–196,029	–196,005	24	–11,214	–10,960	254	–18,409	–18,085	324	20,632	20,632	....
1993: I	190,901	190,925	24	–196,141	–196,106	35	–7,905	–7,741	164	–13,145	–12,922	223	3,608	3,608	....
II	192,641	192,634	–7	–204,858	–204,825	33	–8,576	–8,451	125	–20,793	–20,642	151	13,195	13,195	....
III	193,687	193,639	–48	–205,631	–205,599	32	–9,339	–9,211	128	–21,283	–21,171	112	32,719	32,719	....
IV	199,813	199,716	–97	–215,303	–215,267	36	–11,816	–11,709	107	–27,306	–27,260	46	31,967	31,967	....
1994: I	203,793	203,607	–186	–219,175	–219,109	66	–7,971	–7,708	263	–23,353	–23,210	143	50,540	50,540	....
II	211,509	211,276	–233	–231,549	–231,424	125	–8,482	–8,277	205	–28,522	–28,425	97	13,770	13,770	....
III	222,795	222,554	–241	–244,408	–244,192	216	–9,610	–9,452	158	–31,223	–31,090	133	50,949	50,949	....
IV	231,233	231,025	–208	–254,181	–253,831	350	–12,194	–12,146	48	–35,142	–34,952	190	14,672	14,672	....
1995: I	241,599	241,511	–88	–261,741	–261,135	606	–8,577	–8,812	–235	–28,719	–28,436	283	32,965	32,965	....
II	249,063	249,001	–62	–271,787	–271,151	636	–8,080	–8,418	–338	–30,804	–30,568	236	4,190	4,190	....
III	255,633	255,574	–59	–272,735	–272,181	554	–8,460	–8,784	–324	–25,562	–25,391	171	69,607	69,607	....
IV	259,636	259,555	–81	–271,439	–271,208	231	–8,939	–9,174	–235	–20,742	–20,827	–85	–20,574	–20,574	....
1996: I	262,927	262,752	–175	–276,913	–276,829	84	–10,519	–10,212	307	–24,505	–24,289	216	4,319	4,319	....
II	266,859	266,662	–197	–286,958	–286,956	2	–8,744	–8,462	282	–28,843	–28,756	87	32,893	32,893	....
III	267,240	267,020	–220	–293,473	–293,453	20	–8,940	–8,653	287	–35,173	–35,086	87	52,434	52,434	....
IV	280,934	280,708	–226	–298,363	–298,252	111	–11,878	–11,535	343	–29,307	–29,079	228	47,529	47,529	....
1997: I	287,373	287,175	–198	–310,740	–310,602	138	–9,054	–8,899	155	–32,421	–32,326	95	20,792	20,792	....
II	300,459	300,275	–184	–317,828	–317,518	310	–9,280	–9,285	–5	–26,649	–26,528	121	47,103	47,103	....
III	305,114	304,962	–152	–325,650	–325,106	544	–9,561	–9,772	–211	–30,097	–29,916	181	47,940	47,940	....
IV	302,595	302,490	–105	–328,901	–328,068	833	–12,902	–13,336	–434	–39,208	–38,914	294	103,371	103,371	....
1998: I	301,808	301,310	–498	–332,743	–331,242	1,501	–9,900	–10,868	–968	–40,835	–40,800	35	3,281	6,232	2,951
II	298,310	297,869	–441	–337,467	–336,183	1,284	–10,134	–11,171	–1,037	–49,291	–49,485	–194	15,106	17,927	2,821
III	291,511	292,139	628	–338,013	–337,144	869	–10,775	–11,954	–1,179	–57,277	–56,959	318	15,665	18,943	3,278
IV	300,414	299,886	–528	–343,142	–342,895	247	–13,699	–14,441	–742	–56,427	–57,450	–1,023	29,755	32,636	2,881
1999: I	297,111	299,118	2,007	–345,676	–347,512	–1,836	–11,107	–10,899	208	–59,672	–59,293	379	35,328	24,993	–10,335
II	303,765	306,214	2,449	–362,299	–364,498	–2,199	–11,614	–11,316	298	–70,148	–69,600	548	72,003	67,218	–4,785
III	316,533	318,820	2,287	–385,035	–386,995	–1,960	–11,641	–11,092	549	–80,143	–79,267	876	39,590	31,632	–7,958
IV	330,273	331,524	1,251	–398,776	–400,756	–1,980	–14,393	–13,449	944	–82,896	–82,681	215	117,992	112,727	–5,265
2000: I	340,178	340,457	279	–422,527	–423,355	–828	–11,749	–12,123	–374	–94,098	–95,021	–923	11,835	29,845	18,010
II	355,468	354,103	–1,365	–441,206	–440,583	623	–12,349	–12,646	–297	–98,087	–99,126	–1,039	135,317	134,435	–882
III	360,827	359,157	–1,670	–455,079	–454,244	835	–12,925	–13,480	–555	–107,177	–108,567	–1,390	151,904	154,469	2,565
IV	360,765	363,198	2,433	–455,329	–454,517	812	–16,418	–17,435	–1,017	–110,982	–108,754	2,228	110,440	137,592	27,152
2001: I	349,040	348,355	–685	–445,154	–440,865	4,289	–11,608	–11,494	114	–107,722	–104,004	3,718	86,695	121,699	35,004
II	331,612	331,765	153	–418,930	–420,408	–1,478	–11,916	–11,321	595	–99,234	–99,964	–730	101,574	121,258	19,684
III	309,477	309,601	124	–388,448	–401,981	–13,533	–12,360	–11,256	1,104	–91,331	–103,636	–12,305	42,867	61,437	18,570
IV	291,667	295,222	3,555	–373,174	–368,820	4,354	–13,579	–12,542	1,037	–95,086	–86,140	8,946	150,709	111,198	–39,511
2002: I	291,005	297,074	6,069	–387,616	–387,864	–248	–15,931	–15,938	–7	–112,542	–106,728	5,814	87,416	111,586	24,170
II	304,923	307,616	2,693	–419,693	–416,962	2,731	–12,927	–13,481	–554	–127,697	–122,827	4,870	73,066	92,675	19,609
III	312,392	313,939	1,547	–425,656	–422,666	2,990	–13,073	–13,997	–924	–126,337	–122,724	3,613	169,591	171,190	1,599
IV	308,183	311,015	2,832	–430,949	–424,165	6,784	–14,088	–15,436	–1,348	–136,854	–128,586	8,268	144,115	152,546	8,431

Table 2. Major Sources of Revisions, International Transactions Accounts, 1992–2002

[Millions of dollars]

(Credits +; debits –)[1]	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Current account											
Royalties and license fees receipts (line 9):											
Revised	....	....	....	....	....	....	....	39,670	43,233	41,098	44,142
Changes due to 1999 U.S. direct investment benchmark survey	....	....	....	....	....	....	....	2,768	(2)	(2)	(2)
Revisions due to updated source data	....	....	....	....	....	....	....	(3)	3,626	2,430	1,183
Previously published	....	....	....	....	....	....	....	36,902	39,607	38,668	42,959
Other private services receipts (line 10):											
Revised	49,864	53,023	60,209	64,386	72,615	83,349	91,158	103,523	107,361	116,139	122,594
Changes due to 1999 U.S. direct investment benchmark survey	....	....	....	....	....	....	....	4,245	(2)	(2)	(2)
Changes due to insurance services	–92	–509	–1,268	–708	–1,243	–1,107	–160	1,072	437	2,552	–288
Changes due to futures trading commissions	....	....	....	....	....	....	....	....	–230	–192	–243
Revisions due to updated source data	....	....	....	....	....	....	....	48	2,447	5,670	5,785
Previously published	49,956	53,532	61,477	65,094	73,858	84,456	91,318	98,158	104,707	108,109	117,340
Direct investment income receipts (line 14):											
Revised	....	....	....	....	....	....	....	131,626	151,839	124,333	142,933
Changes due to 1999 U.S. direct investment benchmark survey	....	....	....	....	....	....	....	3,170	(2)	(2)	(2)
Revisions due to updated source data	....	....	....	....	....	....	....	(3)	2,162	–1,663	14,865
Previously published	....	....	....	....	....	....	....	128,456	149,677	125,996	128,068
Other private income receipts (line 15):											
Revised	....	....	....	....	....	....	148,647	152,627	188,243	146,378	106,143
Previously published	....	....	....	....	....	....	149,868	156,673	197,133	151,832	110,766
Interest on foreign bonds:											
Revised	....	....	....	....	....	....	34,986	36,026	35,708	29,302	24,552
Changes due to 2001 Treasury outward benchmark survey	....	....	....	....	....	....	–4,260	–4,295	–6,929	–10,603	–13,345
Revisions due to updated source data	....	....	....	....	....	....	....	....	....	1	11
Previously published	....	....	....	....	....	....	39,246	40,321	42,637	39,904	37,886
Dividends on foreign stocks:											
Revised	....	....	....	....	....	....	26,507	29,950	33,295	33,970	37,849
Changes due to 2001 Treasury outward benchmark survey	....	....	....	....	....	....	3,040	–655	–2,452	8,788	11,813
Revisions due to updated source data	....	....	....	....	....	....	....	....	–1	5	42
Previously published	....	....	....	....	....	....	23,467	30,605	35,748	25,177	25,994
Other:											
Revised	....	....	....	....	....	....	....	86,651	119,240	83,106	43,742
Changes due to improvements in bank income	....	....	....	....	....	....	....	....	....	–1,682	–1,604
Changes due to improvements in nonbank income	....	....	....	....	....	....	....	....	....	–1,905	–1,238
Revisions due to updated bank and nonbank source data	....	....	....	....	....	....	....	904	492	–58	–302
Previously published	....	....	....	....	....	....	....	85,747	118,748	86,751	46,886
Compensation of employees receipts (line 17):											
Revised	1,796	1,820	1,943	2,179	2,181	2,270	2,437	2,748	2,933	3,090	3,163
Changes due to earnings of U.S. residents temporarily working abroad	371	389	408	427	447	474	508	540	583	598	611
Revisions due to updated source data	....	–3	–8	–9	–22	–6	–5	–2	9	110	89
Previously published	1,425	1,434	1,543	1,761	1,756	1,802	1,934	2,210	2,341	2,382	2,463
Royalties and license fees payments (line 26):											
Revised	....	....	....	....	....	....	....	–13,107	–16,468	–16,713	–19,258
Changes due to 1999 U.S. direct investment benchmark survey	....	....	....	....	....	....	....	–498	(2)	(2)	(2)
Revisions due to updated source data	....	....	....	....	....	....	....	(3)	–353	–354	641
Previously published	....	....	....	....	....	....	....	–12,609	–16,115	–16,359	–19,899
Other private services payments (line 27):											
Revised	–23,931	–26,129	–29,629	–33,222	–37,758	–41,657	–45,513	–53,007	–57,793	–63,387	–69,436
Changes due to 1999 U.S. direct investment benchmark survey	....	....	....	....	....	....	....	–2,529	(2)	(2)	(2)
Changes due to insurance services	–1,561	209	824	2,088	285	1,890	3,942	–3,682	526	–7,287	727
Changes due to expenditures of U.S. residents temporarily working abroad	–148	–156	–163	–171	–179	–189	–203	–216	–233	–239	–244
Revisions due to updated source data	74	79	96	110	111	124	136	–267	–2,833	–1,273	9,460
Previously published	–22,296	–26,261	–30,386	–35,249	–37,975	–43,482	–49,388	–46,313	–55,253	–54,588	–79,379
Other private income payments (line 32):											
Revised	....	....	....	....	....	....	....	–137,149	–179,854	–160,042	–127,735
Changes due to improvements in bank income	....	....	....	....	....	....	....	....	....	–3,012	–2,846
Changes due to improvements in nonbank income	....	....	....	....	....	....	....	....	....	1,199	–518
Revisions due to updated source data	....	....	....	....	....	....	....	–694	–637	–1,445	171
Previously published	....	....	....	....	....	....	....	–136,455	–179,217	–156,784	–124,542
Private remittances and other transfers (line 38):											
Revised	–12,791	–15,973	–18,049	–20,547	–18,995	–24,629	–30,860	–28,575	–34,260	–29,300	–36,631
Changes due to emigrants' remittances	204	218	234	249	263	286	302	327	353	375	393
Changes due insurance transactions	1,655	306	443	–1,380	956	–784	–3,783	2,612	–961	4,736	–440
Revisions due to updated source data	....	....	....	....	....	....	–445	–936	–1,736	–2,373	–2,606
Previously published	–14,650	–16,497	–18,726	–19,416	–20,214	–24,131	–26,934	–30,577	–31,916	–32,037	–33,978
Capital account											
Capital account transactions, net (line 39):											
Revised	–557	–1,299	–1,723	–927	–654	–1,044	–740	–4,843	–799	–1,062	–1,285
Changes due to emigrants' transfers	–1,279	–1,323	–1,369	–1,416	–1,466	–1,516	–1,568	–1,627	–1,745	–2,006	–2,123
Changes due to immigrants' transfers	110	112	115	117	119	122	124	127	131	135	136
Revisions due to updated source data	....	....	....	....	....	....	....	–3	–22	–17	–6
Previously published	612	–88	–469	372	693	350	704	–3,340	837	826	708
Financial account											
U.S. direct investment abroad (line 51):											
Revised	....	....	....	....	....	....	....	–224,934	–159,212	–119,963	–137,836
Changes due to 1999 U.S. direct investment benchmark survey	....	....	....	....	....	....	....	–36,033	(2)	(2)	(2)
Revisions due to updated source data	....	....	....	....	....	....	....	(3)	19,082	7,877	–14,308
Previously published	....	....	....	....	....	....	....	–188,901	–178,294	–127,840	–123,528
Foreign Securities (line 52):											
Revised	....	....	....	....	....	....	–124,204	–116,236	–121,908	–84,637	15,801
Previously published	....	....	....	....	....	....	–136,135	–128,436	–127,502	–94,662	2,222
Foreign bonds:											
Revised	....	....	....	....	....	....	–22,842	–1,925	–15,194	24,465	33,478
Changes due to 2001 Treasury outward benchmark survey	....	....	....	....	....	....	12,200	12,200	8,650	12,200	12,200
Revisions due to updated source data	....	....	....	....	....	....	–191	....	14	117	453
Previously published	....	....	....	....	....	....	–34,851	–14,125	–23,858	12,148	20,825
Foreign stocks:											
Revised	....	....	....	....	....	....	–101,362	–114,311	–106,714	–109,102	–17,677
Changes due to 2001 Treasury outward benchmark survey	....	....	....	....	....	....	....	....	–3,150	....	....
Revisions due to updated source data	....	....	....	....	....	....	–78	....	80	–2,292	926
Previously published	....	....	....	....	....	....	–101,284	–114,311	–103,644	–106,810	–18,603

1. Credits +: An increase in U.S. receipts and U.S. liabilities, or a decrease in U.S. payments and U.S. claims. Debits –: An increase in U.S. payments and U.S. claims, or a decrease in U.S. receipts and U.S. liabilities.
2. Revisions due to the benchmark surveys are not separately identifiable for this period.
3. Revisions due to updated source data other than the benchmark survey are not separately identifiable for this period.
NOTE: Line numbers refer to table 1 of the article on U.S. international transactions in this issue of the SURVEY.

For 2001, as a result of all the changes, the net international investment position with direct investment at current cost is revised from a negative $1,948.1 billion to a negative $1,979.9 billion: U.S. assets abroad are revised from $6,196.1 billion to $6,187.4 billion, and foreign assets in the United States are revised from $8,144.3 billion to $8,167.3 billion. On an alternative valuation basis, the position with direct investment at market value is revised from a negative $2,309.1 billion to a negative $2,314.3 billion: U.S. assets abroad are revised from $6,862.9 billion to $6,891.3 billion, and foreign assets in the United States are revised from $9,172.1 billion to $9,205.5 billion. Details on revisions to individual series are shown in table 3.

Insurance

A definitional change in the measurement of insurance services is introduced. The new measure is conceptually superior to the earlier measure and it is less sensitive than the earlier measure to losses paid or recovered. This definitional change is consistent with that discussed in "Preview of the Comprehensive Revision of the National Income and Product Accounts" in the June 2003 issue of the SURVEY OF CURRENT BUSINESS unless otherwise noted.

Insurance services were previously measured as premiums less actual losses paid or recovered. The rationale for this treatment was that the portion of premiums remaining after provision had been made for losses could serve as a proxy for operating costs (and profits)—that is, output—associated with insurance activity. The view of the insurance company that justified this measure was that of a risk-pool administrator, and premiums less losses provided a rough proxy for the financial intermediation and administrative costs (and profits) associated with this activity. Under this view, only the portion of premiums not paid out in losses was treated as output of the insurance industry. The amount used for loss settlements simply reflected funds that, with the help of insurance companies, flowed from all policy holders to those policy holders who suffered losses.

A major shortcoming of the premiums less actual losses measure is that losses can fluctuate from period to period in a way that bears little relation to the services provided. The fact that unusually large claims may be paid in a particular period does not reduce the value of the services provided (or turn it negative), nor do unusually small claims raise the value of services provided. Hurricanes, floods, oil spills, and—most recently—terrorist attacks are perils whose presence or absence may cause large fluctuations in claims that do not appear to correspond to changes in the services provided or received.

In order to deal with fluctuating loss settlements, rather than measuring insurance services as premiums less actual losses, the new estimates are now measured as premiums less "normal" losses, where normal losses

Table 3. Major Sources of Revisions, International Investment Position at Yearend, 1998–2002

[Millions of dollars]

	1998	1999	2000	2001	2002
U.S. private assets:					
U.S. direct investment abroad (lines 17 and 18):					
Revised:					
At current cost	1,196,021	1,414,355	1,529,725	1,598,072	1,751,852
At market value	....	2,839,639	2,694,014	2,301,913	2,036,223
Changes due to 1999 U.S. direct investment benchmark survey:					
At current cost	....	37,092	(1)	(1)	(3)
At market value	....	34,420	(1)	(1)	(3)
Revisions due to updated source data:					
At current cost	–186	(2)	14,446	–25,050	(3)
At market value	....	(2)	19,807	11,987	(3)
Previously published:					
At current cost	1,196,207	1,377,263	1,515,279	1,623,122	(3)
At market value	....	2,805,219	2,674,207	2,289,926	(3)
Foreign Securities (lines 19):					
Revised	2,052,995	2,525,346	2,385,360	2,114,734	1,846,976
Previously published	2,052,929	2,583,326	2,389,427	2,110,520	(3)
Bonds (line 20):					
Revised	578,009	521,620	532,504	502,061	501,784
Changes due to 2001 Treasury outward benchmark survey	1,455	–35,070	–24,529	–43,839	(3)
Revisions due to updated source data	–191	2	14	118	(3)
Previously published	576,745	556,688	557,019	545,782	(3)
Corporate stocks (line 21):					
Revised	1,474,986	2,003,726	1,852,856	1,612,673	1,345,192
Changes due to 2001 Treasury outward benchmark survey	–1,120	–22,912	20,378	50,227	(3)
Revisions due to updated source data	–78	....	70	–2,292	(3)
Previously published	1,476,184	2,026,638	1,832,408	1,564,738	(3)

1. Revisions due to the benchmark surveys are not separately identifiable for this period.
2. Revisions due to updated source data other than the benchmark survey are not separately identifiable for this period.
3. Estimates were not previously published.

NOTE: Line numbers refer to table 1 of the article on the U.S. international investment position in this issue of the SURVEY.

are inferred from the relationship between actual losses and premiums averaged over several years. Normal, or anticipated, losses are a key factor in the determination of premiums: Insurance firms maximize expected profits by setting premiums that cover anticipated losses and other costs.[1] In a practical sense, because no information is available on what companies anticipate, an indicator of anticipations must be employed. A readily available indicator is the average of past actual losses in relation to premiums.

Regularly occurring losses and catastrophic losses. Normal losses are comprised of losses that occur regularly and a share of catastrophic losses that occur at infrequent intervals. Separate estimates are made for these two types of losses. For regularly occurring losses, the average of past actual losses in relation to premiums is calculated based on annual data that are averaged over a 6-year period using an arithmetic moving average. Because comprehensive source data for insurance begin in 1986, a 6-year average begins in 1992. Data for the current period are not included in the average in order to achieve an ex ante concept of regularly occurring losses.

Catastrophic losses occur with much lower frequency than regularly occurring losses. Insurance companies realize and expect that catastrophes will occur occasionally and allow for this in setting premiums. Because the possibility of catastrophes is a part of insurance company plans, catastrophes do affect premiums, expectations of losses, and the volume of services. However, because catastrophic losses occur much less frequently than regularly occurring losses, they are assumed to affect loss expectations over a much longer period. Under the new methodology, catastrophic losses are added in equal increments to the estimate of regularly occurring losses over the 20 years following their occurrence to derive an estimate of normal losses. Thus, only a small fraction of catastrophic losses are factored into each year's estimate of insurance services.

Primary insurance and reinsurance. Separate estimates of normal losses are calculated for primary insurance and for reinsurance. There is reason to think that the relationship between premiums and losses would vary systematically by type of insurance (primary insurance vs. reinsurance) because administrative and financial intermediation services likely vary by type of insurance. In contrast, normal losses expressed as a proportion of premiums are not allowed to vary by individual country or area because of the random nature of exposure by reinsurers located in different countries. For example, the United Kingdom had a large reinsurance exposure to the World Trade Center attacks, but this does not necessarily indicate that it will have a large exposure to the next catastrophic event, which may be reinsured differently. Because it is not known until after the fact which reinsurance policies will experience losses, it is best to calculate normal losses at the global level and then to develop subglobal estimates proportionally, based on premiums.

Moreover, the risk environment in a country has little impact on the amount of insurance services provided to or by that country (other than marginally higher administrative costs required to process more settlement requests) because higher premiums, reflecting the higher risk, will offset higher losses. The different loss experience by an individual country or area reflects different financial flows (or loss settlements) under the terms of a financial contract, not differences in the amount of insurance services rendered.

Investment income. Just as charges for the services associated with checking accounts would be imposed, or would be higher, if banks could not lend or invest the funds of their depositors, insurance premiums would be higher if insurance companies were unable to earn income on funds held in reserve against future claims. In recognition of this fact, the 1993 System of National Accounts (SNA) included income on technical reserves in its recommended measure of output for the insurance industry. The income is treated as accruing to the policyholders, who pay it back to insurers as supplements to premiums. However, the data necessary to make this estimate for the international transactions accounts are not currently available.[2]

Auxiliary insurance and insurance commissions. In addition to the above changes, services auxiliary to insurance are now incorporated into the insurance services estimates by combining them with services on primary insurance. Auxiliary services cover items such as agents' commissions, actuarial services, insurance brokering and agency services, and salvage administration services. BEA collected the full range of these services as a single distinct category on its surveys for the first time in 2001. Moreover, insurance commissions are now included in services auxiliary to insurance, rather than being subtracted from premiums, as was the case previously.

1. As discussed later, investment income earned on insurance companies' reserves would also be considered in setting premiums.

2. When results of the 2003 comprehensive revision of the national income and products accounts are released in December 2003, income on technical reserves is expected to be included in the estimates of insurance industry output. This methodology will be reviewed for possible use in the 2004 annual revision of the international transactions accounts.

Offsetting entries. Because adoption of the new methodology introduces a difference between actual and normal losses, an amount equal to the difference must be entered in the international accounts. At the present time, this difference is entered as a current unilateral transfer (on a net basis), according to guidance provided by the 1993 SNA and the International Monetary Fund's Balance of Payments Manual. However, this international guideline is being reexamined.

Comparison of new and previous estimates. Table A shows the differences between the new and previous estimates of insurance services for 1992–2002. Services payments are affected to a much greater extent than services receipts, reflecting the fact that much U.S. insurance is reinsured with companies abroad while a relatively small amount of foreign insurance is reinsured with companies in the United States. In addition, much of the impact in the new estimates is on reinsurance transactions because they are large relative to primary insurance.

In general, the new estimates of insurance services are lower in earlier years and higher in later years than the previous estimates. This pattern reflects the fact that the upward-trending loss settlements, as a proportion of premiums, are incorporated into the estimates with a considerable lag based on their computation as a 6-year moving average. The new estimates also reflect the new treatment of catastrophic losses, especially those related to the World Trade Center attacks in 2001; as a result, considerably larger imports of insurance services are recorded in 2001 than under the old method, which had included a large amount of losses recovered.

Table 3 of the standard presentation of the U.S. international transactions accounts, which presents detailed information on all services transactions, has been changed to incorporate the new estimates of insurance services. Insurance services receipts and payments are shown as single lines in the appropriate sections of the body of the table. Supplemental details on insurance transactions are presented in the memoranda section of the table, which shows premiums, the estimated share of premiums that is for (attributed to) insurance services, and the estimated share of premiums that is for (attributed to) loss settlements. Also shown are the actual losses paid and recovered for each year.

Table redesign, reclassification of broker-type transactions, and expanded coverage

BEA has completely redesigned its presentation of the financial account. This redesign was made possible by the adoption of the 1997 North American Industry Classification System (NAICS) for direct investment transactions and by a review of the comprehensiveness and completeness of coverage of the Treasury International Capital (TIC) Reporting System, which forms the basis for reporting banking, nonbanking, and securities transactions in the international accounts. This review was a joint undertaking by the U.S. Department of the Treasury, the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of New York, and the Bureau of Economic Analysis.

As a result of these changes, the presentation of the estimates in the tables previously numbered 5 through 9 in the quarterly articles on U.S. international transactions has changed in many ways. For the table on direct investment (previously table 5), estimates on the old and new basis are presented for 1997–1999 and on the new basis beginning in 1999. For the tables on banking, nonbanking, and securities transactions (previously tables 6–9), estimates on both the old and new

Table A. Insurance Services

[Millions of dollars]

	1992	1993	1994	1995	1996	1997	1998	1999	2000 [1]	2001 [1]	2002 [1]
						Receipts					
Revised:											
Premiums received	3,853	3,982	4,921	5,491	5,928	6,119	7,278	6,760	8,455	8,531	11,937
For services (table 3, line 21) [2]	588	506	408	588	926	1,367	2,065	2,083	2,486	2,399	2,839
For loss settlement	3,265	3,476	4,513	4,903	5,002	4,752	5,213	4,678	5,969	6,133	9,098
Actual losses paid	3,170	2,962	3,244	4,195	3,762	3,645	5,055	5,750	6,405	8,594	8,619
Previously published:											
Insurance, net [3]	682	1,020	1,676	1,296	2,168	2,473	2,224	1,011	2,050	18	1,120
Premiums	3,853	3,982	4,921	5,491	5,928	6,119	7,278	6,760	8,458	8,658	9,223
Losses	3,170	2,962	3,244	4,195	3,762	3,645	5,055	5,750	6,408	8,640	8,103
						Payments					
Revised:											
Premiums paid	11,739	12,094	14,076	15,284	14,522	15,212	20,399	20,857	26,888	40,382	47,156
For services (table 3, line 47) [2]	2,885	2,886	3,210	3,272	3,600	3,983	5,298	6,366	7,598	11,613	15,348
For loss settlement	8,854	9,208	10,867	12,012	10,922	11,229	15,101	14,491	19,290	28,769	31,808
Actual losses recovered	10,415	8,999	10,041	9,924	10,637	9,338	11,158	18,172	18,764	35,965	30,914
Previously published:											
Insurance, net [3]	1,324	3,095	4,034	5,360	3,885	5,873	9,240	2,684	8,175	4,906	27,496
Premiums	11,739	12,094	14,076	15,284	14,522	15,212	20,399	20,857	26,930	39,895	53,059
Losses	10,415	8,999	10,041	9,924	10,637	9,338	11,158	18,172	18,755	34,989	25,563

1. In addition to the definitional change, revised estimates for 2000, 2001, and 2002 incorporate new source data.
2. Currently published estimates of insurance services.
3. Previously published estimates of insurance services.
NOTE: Line numbers refer to table 3 of the article on U.S. international transactions in this issue of the SURVEY.

basis are presented for 1998–2002, and estimates on the new basis are presented beginning in the first quarter of 2003.

Direct investment. The new table 6 (previously table 5) includes a newly designed presentation of income and capital flows. The major building blocks for income—earnings, composed of distributed earnings and reinvested earnings, and interest—remain unchanged. However, the arrangement within the table has been altered to make the table easier to use. In addition, the presentation has been changed so that interest is shown before deduction of withholding taxes; this change also permits the industry-level detail for interest to be shown before deduction of withholding taxes. The most significant change is to the presentation of the industry composition of income and capital flows.

The industries shown in the new table 6 are now based on NAICS. (More information on NAICS is presented in the article “Direct Investment Positions for 2002: Country and Industry Detail” in this issue). The major industries shown are manufacturing; wholesale trade; finance (including depository institutions) and insurance; holding companies, except bank holding companies; and “other.” (Bank holding companies are included in finance). Each category consists of many subindustries, which are shown in full detail in various BEA releases of direct investment positions, capital flows, income, and financial and operating data. Holding companies are shown as a separate category for U.S. direct investment abroad because of their size relative to other categories. However, for foreign direct investment in the United States, holding companies are small compared with the other categories and therefore are not shown separately but are included in “other.”

In addition, various petroleum subindustries are no longer grouped in the major industry group “petroleum.” Instead, to improve the comparability of the direct investment data with other data sets, these subindustries are spread among the NAICS-based sectors; for example, oil and gas extraction is now included in mining, petroleum refining is in manufacturing, and gasoline stations are in retail trade.

With this annual revision, the industry presentation for both the U.S. direct investment abroad and foreign direct investment in the United States accounts has now been updated and brought into conformance with the classification system used for most other data on the U.S. economy.

Securities, banking, and nonbanking transactions. The major review of the TIC reporting system for comprehensiveness and completeness of coverage permits an updating and redesign of the presentation of the financial transactions of banks and nonbanks and transactions in securities. The new table 7 (previously table 6) on securities transactions includes four major changes. First, gross purchases and gross sales, from which the net purchases and net sales entered in the accounts are derived, are shown in the table. Second, detailed transactions in U.S. Treasury bonds are now included, whereas previously, detail was not provided, or was commingled with other U.S. liabilities. Third, the presentation of bonds has been updated to reflect the current importance of some instruments, especially agency issues, that were not previously shown separately. Fourth, the limited presentation of geography has been updated and made similar across all tables that present financial transactions of banks and nonbanks and transactions in securities.

The new tables 9 and 10 (previously tables 8 and 9), which cover bank claims and liabilities, respectively, reflect a redesign of the U.S. Treasury Department’s bank and nonbank statistical collection system. The new system makes it possible to present substantially more information on financial instruments throughout the tables. The geographic presentation has been updated, and parallel changes have been made in the nonbanking and securities tables. The previous distinction between U.S.-owned and foreign-owned banks is maintained (though the detail within each category has been reduced), as has the distinction between banks’ own accounts and banks’ customers’ accounts and the distinction between dollar-denominated transactions and foreign-currency-denominated transactions.

In addition, transactions of U.S. securities brokers and dealers with their affiliates, previously included in the nonbanking accounts, have been reclassified to the banking accounts so that all transactions of U.S. securities brokers and dealers may be presented in one place. Consequently, the estimates of positions and transactions in nonbanking accounts are reduced, while those in the banking accounts are increased. This change is effective with data for the first quarter of 2003; it is not possible to make this adjustment for earlier time periods, because of the lack of appropriate source data.

Moreover, adoption of the NAICS classification system for direct investment permitted more detail in the classification of financial-intermediary-type transactions, and it revealed more companies that should be classified as financial intermediaries than previously thought. This change is also effective with data for the first quarter of 2003.

The new table 8 (previously table 7) on nonbanking transactions has also been redesigned to make use of the additional instrument detail now provided by the TIC system. It also reflects the previously mentioned reclassification of broker-type transactions of nonbank financial intermediaries to the banking accounts presented in tables 9 and 10. This change considerably reduces the scope of coverage in table 8; only financial intermediaries that are neither banks nor securities dealers remain classified in the nonbanking accounts, beginning with the first quarter of 2003.

The more comprehensive reporting of banking and nonbanking transactions, combined with the reclassification of transactions by securities brokers, resulted in sizable changes in banks' and securities brokers' reported claims and liabilities positions in the first quarter of 2003. BEA estimates that coverage of claims denominated in dollars was $171 billion higher than previously published. Banks' own claims were $129 billion higher; claims on own foreign offices which were $97 billion higher, claims on foreign official institutions were $11 billion higher, and claims on unaffiliated banks and other foreigners were $21 billion higher. In addition, banks' customers' claims denominated in dollars were $42 billion higher, of which $25 billion was in foreign deposits. Claims denominated in foreign currencies were not significantly affected by the more comprehensive reporting.

BEA estimates that coverage of liabilities denominated in dollars was $146 billion higher than previously published. Liabilities to own foreign offices were $109 billion higher, and liabilities to unaffiliated banks and other foreigners were $37 billion higher. Liabilities to foreign official institutions, liabilities for customers' accounts, and liabilities denominated in foreign currencies were not significantly affected by the more comprehensive reporting.

The enhanced instrument details included in the redesigned TIC reporting show that about 65 percent of the additional claims and liabilities added to newly reported positions were repurchase agreements, reflecting the dominance of these instruments as a means used by securities brokers and dealers to borrow and lend money. Reporting by securities brokers and dealers indicate that 80–90 percent of their external claims on, and liabilities to, foreigners are in the form of repurchase agreements.

Included in the above position estimates are the results of a concerted effort to increase the coverage of brokerage balances. Part of the enhanced coverage of brokerage balances can be directly measured in U.S. brokers' liabilities to foreigners. As a result of new reporting, $14.2 billion in brokerage balances is added to broker-reported liabilities, mainly to foreign nonbanks, that previously had not been captured by the reporting system. Newly reported brokerage balances are also included indistinguishably in other reported claims and liabilities categories. It is believed that coverage of these balances has been improved significantly.

A new table 4 presents in one table official transactions of the U.S. Government and transactions of foreign official agencies. Previously, these transactions were in separate tables. The previous table 4 on Selected U.S. Government Transactions becomes table 5. The previous tables 10 and 10A, which present bilateral transactions, become tables 11 and 12.

Finally, a set of newly developed reconciliation tables, which will be published once a year at the time of the annual revision in the July SURVEY, traces the relationships between source data from the TIC reporting system and the estimates included in BEA's accounts. These tables identify BEA's adjustments to align the data to international transactions accounts concepts and to close gaps in coverage. Separate tables are shown for securities transactions, for nonbanking transactions, and for banking transactions. (See "How BEA Aligns and Augments Source Data from the U.S. Treasury Department for Inclusion in the International Transactions Accounts" on pages 46–48 in this issue.)

Benchmark survey of U.S. holdings of foreign stocks and bonds

BEA bases its estimates of transactions and positions in foreign securities for the international transactions accounts and the international investment position accounts on two sets of source data—monthly transactions data and data from once-every-5-year benchmark surveys. The monthly transactions data, collected by the Treasury International Capital (TIC) reporting system, provide aggregate (or summary) data on U.S. gross purchases and gross sales of foreign securities with an original maturity of more than 1 year by type of security (that is, stocks and bonds) that are reported by banks, brokers, dealers, and other financial intermediaries. The data provide timely information on financial flows that are published quarterly in the international transactions accounts. The once-every-5-year benchmark surveys of U.S. portfolio investment abroad, also conducted by the Department of the Treasury, provide a security-by-security enumeration of U.S. holdings of foreign securities that are reported by custodians, subcustodians, and issuers of securities. For the benchmark survey year, benchmark results are adjusted to reflect the yearend position and serve as the basis for successive annual estimates of the position until the next benchmark survey results are available. Both sets of source data have their strengths and weaknesses, but the benchmark surveys are considered more reliable than the transactions data.

The difference between results from the Treasury Department's Benchmark Survey of U.S. Portfolio Investment Abroad for December 2001 and BEA's previously estimated investment position for the same date are much smaller, both in absolute and percentage terms, than in previous benchmark years. Overall, U.S. holdings of foreign securities were $2,114.7 billion, which is $4.2 billion, or 0.2 percent, more than the BEA published estimate of $2,110.5 billion. BEA underestimated U.S. holdings of foreign stocks by $48.0 billion, or 3.0 percent, and overestimated U.S. holdings of foreign bonds by $43.7 billion, or 8.7 percent.

Stock transactions. BEA's estimate of foreign stocks held by U.S. residents of $1,564.7 billion in December 2001 underestimated the benchmark results of $1,612.7 billion by $48.0 billion, or 3.0 percent. BEA's adjustments for swap exchanges of stocks and for portfolio investment transactions that bypass the TIC reports because the transactions were not conducted through financial intermediaries were crucial to the closeness of the two estimates. Had BEA not made these adjustments, BEA would have underestimated the benchmark results by 17 percent. For 1998–2001, BEA added $3.2 billion each quarter to net U.S. purchases of foreign stocks to account for undercoverage of the TIC reports. BEA will continue to add this amount each quarter until the results of the next survey of holdings of foreign securities are available. The next survey is planned for yearend 2003. BEA also plans to continue monitoring large mergers and acquisitions financed through stock swaps and to adjust the source data for transactions not captured.

Stock positions. BEA is modifying its measure of stock price changes used to advance stock position estimates. Previously, several Morgan Stanley Capital International (MSCI) indexes of stock prices for individual countries were used to adjust positions for changes in prices. However, the addition of more indexes to capture activity in developing countries placed a disproportionate emphasis on stock prices in developing countries relative to those in advanced countries, which adversely affected the estimates of the stock position at a global level. Furthermore, application of a single country's index of price change to countries that serve as financial centers, such as the United Kingdom and certain Caribbean countries, incorrectly measures price changes for those countries.

The new methodology uses two weighted indexes of price changes, one from nine MSCI indexes for advanced countries and one from three MSCI area indexes for emerging markets. The price change for each of the nine advanced country indexes (the United Kingdom, France, Germany, Netherlands, Canada, Japan, Switzerland, other European countries, and other developed countries excluding the United States), stated in dollars, is assigned a weight based on the composition of stock holdings by country in the 2001 benchmark survey. The price change applied to the advanced countries is the weighted average of price changes computed for each of the nine MSCI advanced country indexes. A similar procedure is followed to compute the weighted average price change, stated in dollars, of the three emerging market MSCI indexes (Asia, Latin America, and Middle East/Eastern Europe). These weighted price changes for advanced countries and for emerging-market countries are applied to beginning positions by country and area and, along with the change in reported financial flows, are used to determine the ending positions. The weights will be updated when data from the yearend 2003 survey become available. The new methodology should more accurately gauge both global and individual country and area stock positions.

Dividends. BEA is adopting the use of the MSCI measures of dividend yields for estimating dividend receipts on foreign stock holdings. Weighted average dividend yields are computed for advanced countries and emerging-market countries using the same weights that are used to compute average price changes. The new methodology permits more accurate estimation of dividend income at the global level and by country and area. The new methodology also establishes a consistent and verifiable relationship between dividend and stock position estimates, which had the new procedures been in place, would have avoided large underestimates of dividend receipts in 2001–2002.

Bond transactions. BEA's estimate of foreign bonds held by U.S. residents of $545.8 billion in December 2001 overestimated the benchmark results of $502.1 billion by $43.7 billion, or 8.7 percent. This is a marked shift from past surveys, when BEA underestimated holdings by 17 percent for the 1997 benchmark and by 20 percent for the 1994 benchmark. The earlier discrepancies were attributed to incomplete coverage of portfolio investment transactions that bypassed the TIC reports because the transactions were not conducted through financial intermediaries. These earlier discrepancies prompted BEA to make quarterly adjustments to the accounts by adding $3.55 billion to the financial flows each quarter since 1998. From 1998 through 2001, BEA added $53.3 billion in outflows to the foreign bond account.

Had these adjustments not been made, BEA would have underestimated the 2001 position by only 2 percent instead of overestimating the position by 8.7 percent. Therefore, these adjustments are removed from financial flows for 1998–2002. The sharp downtrend in interest rates in 2000–2002 contrasted sharply with the strong uptrend in rates during much of the 1990s and may have had a significant influence on transactions and altered previous historical relationships upon which the adjustment had been based. A greatly reduced adjustment of $0.5 billion is added to net U.S. purchases of foreign bonds each quarter, beginning in the first quarter of 2002. The decision to make this adjustment will be reviewed when results of the yearend 2003 survey are available.

Bond positions. BEA is improving its measure of bond price changes used to advance the bond position estimates by introducing six bond price indexes from Merrill Lynch. Previously, BEA had estimated separate positions for foreign bonds denominated in dollars and for foreign bonds denominated in foreign currencies. However, given the limited data on prices for some countries or regions and the crucial assumptions that had to be made, there were often large overestimates of holdings of foreign-dollar bonds and large underestimates of holdings of foreign-currency bonds that, when summed, led to inaccurate global position estimates.

The new indexes include one index for dollar-denominated (Yankee) foreign bonds and five indexes for major bond markets abroad (euro, yen, sterling, Canadian dollar, and other countries excluding the United States). The indexes are currency based, not country based as in the previous methodology, and include both sovereign and corporate bonds. The price increase, stated in dollars, derived from the indexes is weighted by each currency's share in foreign bond investments indicated in the 2001 benchmark survey. The weighted average price increase, along with reported financial transactions, is then used to advance the bond position estimates by country and area. The weights will be reevaluated when results of the yearend 2003 survey become available. It is appropriate to weight the price change by the currency composition of bond holdings rather than by the country composition because basing the price change on country composition would incorrectly measure the price change for financial centers such as the United Kingdom.

Interest. BEA is adopting the use of Merrill Lynch measures of bond yields for estimating interest receipts on foreign bond holdings. Weighted average interest yields are computed for the six major bond markets using the same weights that are used to compute average price changes. The new methodology permits more accurate estimation of interest income at the global level and by country or area. The new methodology also establishes a consistent and verifiable relationship between interest and bond position estimates that, had the new procedures been in place, would have avoided much of the large overestimate of interest receipts in 2000–2002.

Bank and nonbank income receipts and payments

BEA has modified the bank and nonbank income methodologies in response to significant changes to the TIC data for bank and nonbank balances. Estimates of income are based on average outstanding balances multiplied by yields, which are weighted averages of market interest rates. These income yields have been changed to correspond to the new categories in the TIC data that begin in 2003. BEA has reviewed the yields for all categories of bank and nonbank balances, both those that have changed and those that have not, to arrive at a methodology that best reflects current financial practices.

In many cases, the new TIC data provide more instrument detail than in the past, while in other cases, categories that were available in the past have been consolidated. The instruments specified by the new TIC forms are deposits (including brokerage balances), negotiable CD's, commercial paper, other short-term negotiable securities, and repurchase agreements. In general, the new data allow BEA to assign yields that are more instrument specific. For example, market CD rates can now be applied to negotiable CD balances, commercial paper rates can be applied to holdings of commercial paper and other short-term negotiable securities, and eurodollar deposit rates can be applied to deposit balances. Yields chosen for receipts and payments are nearly symmetrical. The use of instrument-based pricing, made possible by the additional detail provided in the TIC data, results in improved accuracy of the income estimates.

Transactions that do not fit into the above categories fall into a category that is comprised mostly of loans. Within this category, transactions determined to be interbank loans are now priced using LIBOR rates, the relevant rates for interbank lending. Transactions that are determined to be loans to nonbanks are now priced with the aid of Federal Reserve Board (FRB) surveys of business lending. Use of FRB data from quarterly business lending surveys allows BEA to make more accurate and more current adjustments for the risk and maturity of loans in the income yields. This method is an improvement from BEA's previous method of applying constant adjustments to yields to account for risk and maturity.

The new TIC data also provide expanded instrument detail for foreign-currency-denominated balances. BEA will now use yields based mostly on foreign-currency-denominated LIBOR rates with maturities similar to dollar-denominated transactions, as well as some other foreign money-market rates.

Yields chosen for nonbank transactions are now very similar to bank yields, an improvement that was made possible by the substantially expanded detail available in the new TIC data for nonbank transactions. Extensive use of the prime rate and of lagged interest rates in the nonbank yields has been discontinued.

Although the new TIC data does not begin until the first quarter of 2003, BEA has implemented the new yield methodology (as closely as possible given that the categories have changed) for 2001 and 2002.

The changes to the bank and nonbank income methodology result in downward revisions to "other" private receipts (table 1, line 15) of $3.6 billion, or 2 percent, in 2001 and $2.8 billion, or 3 percent, in 2002. The revisions are about evenly split between bank and nonbank income. For "other" private payments (table 1, line 32), upward revisions total $1.8 billion, or 1 percent, in 2001 and $3.4 billion, or 3 percent, in 2002. Revisions to payments are mostly attributable to bank income.

Benchmark Survey of U.S. Direct Investment Abroad

Results of BEA's 1999 benchmark survey of U.S. direct investment abroad are incorporated into the accounts. For years after 1999, the estimates were revised by extrapolating forward the 1999 universe data using data collected in BEA's quarterly cutoff sample survey, which covers all U.S.-owned foreign businesses above a specified size-exemption level, and by incorporating new or adjusted data from the sample surveys for those years. Previously, the estimates for 1999 forward were extrapolated from the 1994 benchmark survey.

The 1999 benchmark survey covers the universe of foreign affiliates of U.S. direct investors. In nonbenchmark years, universe estimates of the direct investment position and related capital and income flows 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 carrying forward (extrapolating) data from the benchmark survey using matched sample data as the basis for extrapolation.

Direct investment financial flows. Net financial outflows for U.S. direct investment abroad are revised for 1999–2002 to incorporate the results of BEA's 1999 benchmark survey of U.S. direct investment abroad and to incorporate new or adjusted data from sample surveys from those years. The revisions also reflected 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. Net financial outflows are revised up $36.0 billion for 1999, down $19.1 billion for 2000, down $7.9 billion for 2001, and up $14.3 billion for 2002.

Direct investment income. Net receipts of income by U.S. parents from their foreign affiliates are revised for 1999–2002 to incorporate the results of BEA's 1999 benchmark survey of U.S. direct investment abroad and to incorporate new or adjusted data from sample surveys for those years. The revisions also reflected revised estimates of depreciation, depletion, and expensed exploration and development costs used to adjust the earnings component of direct investment income to a current-cost basis and related withholding tax adjustments. Net direct investment income receipts are revised up $3.2 billion for 1999, up $2.2 billion for 2000, down $1.7 billion for 2001, and up $14.9 billion for 2002.

Royalties and license fees receipts and payments, affiliated. Receipts and payments of royalties and license fees between U.S. parents and their foreign affiliates are revised for 1999–2002 to incorporate the results of BEA's 1999 benchmark survey of U.S. direct investment abroad and to incorporate new or adjusted data from sample surveys for those years. U.S. parents' receipts were revised up $2.8 billion for 1999, $3.7 billion for 2000, $3.5 billion for 2001, and $2.9 billion for 2002. U.S. parents' payments are revised up $0.5 billion in each year for 1999–2002.

"Other" private service receipts and payments, affiliated. Receipts and payments of other private services between U.S. parents and their foreign affiliates are revised for 1999–2002 to incorporate the results of BEA's 1999 benchmark survey of U.S. direct investment abroad and to incorporate new or adjusted data from sample surveys from those years. U.S. parents' receipts were revised up $4.2 billion for 1999, $3.3 billion for 2000, $3.5 billion for 2001, and $3.3 billion for 2002. U.S. parents' payments are revised up $2.5 billion for 1999, $2.8 billion for 2000, $3.3 billion for 2001, and $2.4 billion for 2002.

Migrants' transfers

Emigrants' transfers (payments). New estimates of the amount of wealth that emigrants take with them when they leave the United States are introduced for 1992–2002. Previously, the accounts did not cover these transactions. The estimates are based on the number of individuals emigrating from the United States each year and their median net worth.

Emigrants leaving the United States include both foreign-born and the native-born individuals. Foreign-born emigrants are individuals who previously immigrated to the United States and subsequently return to their countries of origin. Native-born emigrants are native U.S. citizens who leave the United States for permanent employment abroad or for retirement.

Foreign-born emigrants. The number of foreign-born emigrants is derived by applying an emigration rate to the number of immigrants. This emigration rate, which is derived from published U.S. Census Bureau research, depends on the number of years since arrival in the United States.[3] The emigration rate is applied first to the stock of the foreign-born in the United States and then to each subsequent year's immigration flow. Adding the number of emigrants from each year's immigration flow to the number of emigrants from the beginning stock of the foreign-born gives the total number of emigrants each year. The median net worth of these individuals is partly dependent on their ages. The immigration data provide the age of immigrants at the time of arrival in the United States, so it is necessary to age the immigrants over time to determine their age at departure.

Data on the stock of the foreign-born population in the United States by age and race are from U.S. Census Bureau and U.S. Bureau of Labor Statistics Current Population Reports.[4] Data on yearly immigration flows by age, sex, and country of origin are from the U.S. Bureau of Citizenship and Immigration Services (formerly the Immigration and Naturalization Service).[5]

Native-born emigrants. The number of native-born emigrants from the United States is derived from a published U.S. Census Bureau study.[6] The study counts the number of U.S.-born persons residing abroad at a given point in time and applies a 10-year survival rate to determine the expected population 10 years later. The difference between the expected population and actual counts of U.S.-born persons residing abroad 10 years later represents net migration from the United States over the period by age and country of destination.

Median net worth, by age and race, of foreign-born and native-born emigrants comes from surveys by the U.S. Census Bureau of U.S. household net worth and asset ownership.[7] The total number of foreign-born and native-born individuals is converted into the number of households using data from a U.S. Census Bureau study of household composition.[8] In order to arrive at estimates of emigrants' transfers, the number of foreign-born and native-born emigrating households is multiplied by net worth estimates that are based on the age of the head of the household and race-specific characteristics. This gives total wealth outflows that arise from emigration.

Emigrants' transfers are $2.2 billion in 2002, compared with immigrants' transfers of $1.1 billion in 2002 (table B). Although the yearly flow of immigrants exceeds the yearly flow of emigrants, the average immi-

3. Bashir Ahmed and J. Gregory Robinson, "Estimates of Emigration of the Foreign-Born Population: 1980–1990," Population Division Working Paper No. 9, (Washington DC: U.S. Census Bureau, December 1994), <www.census.gov/population/www/techpap.html).

4. *Current Population Survey,* (Washington DC: U.S. Bureau of Labor Statistics and U.S. Census Bureau, March 1996), <www.bls.census.gov/cps/cpsmain.htm>, tables 2.1 and 3.1.

5. *Statistical Yearbook of the Immigration and Naturalization Service,* (Washington DC: U.S. Department of Justice), <www.immigration.gov/graphics/shared/aboutus/statistics/index.htm>.

6. Edward J. Fernandez, "Estimation of the Annual Emigration of U.S. Born Persons by Using Foreign Censuses and Selected Administrative Data: Circa 1980," *Population Division Working Paper No. 10,* (Washington DC: U.S. Census Bureau, January 1995), www.census.gov/population/www/techpap.html>.

7. Michael E. Davern and Patricia J. Fisher, "Household Net Worth and Asset Ownership 1995," *Current Population Reports,* (Washington DC: U.S. Census Bureau, February 2001).

8. Steve W. Rawlings, "Households and Families," *Current Population Reports,* (Washington DC: U.S. Census Bureau, January 2001), <www.census.gov/population/www/pop-profile/hhfam.html>.

Table B. Migrants' Transfers in 2002

[Millions of dollars]

Migrants' transfers, net	–1,110
Receipts	
Immigrants' transfers	1,089
Foreign-born immigrants' transfers	953
Native-born immigrants' transfers (new)	136
Payments	
Emigrants' transfers	(1) 2,199
Foreign-born emigrants' transfers (new)	1,457
Native-born emigrants' transfers (new)	742

1. Estimates for Canada were previously included in the accounts.

grant to the United States is younger and less wealthy than the average emigrant from the United States; therefore, emigrants' transfers exceed immigrants' transfers. The wealth transfers of emigrants are included in the capital account (table 1, line 39).

Immigrants' transfers (receipts). New estimates of the wealth that native-born immigrants bring with them when they return to the United States are introduced for 1992–2002. Previously, the accounts did not cover these estimates. The estimates are based on the number of native-born individuals returning to the United States each year and their median net worth.

Just as foreign-born emigrants are individuals who previously immigrated to the United States and subsequently return to their countries of origin, some native-born emigrants from the United States subsequently return to the United States. These native-born immigrants are not captured in immigration source data because they are U.S. citizens.

In order to estimate native-born immigrants' transfers, data from U.S. Census Bureau studies on native-born emigration from the United States[9] and U.S. household composition[10] were multiplied by U.S. Census Bureau data on median household net worth and asset ownership.[11] Native-born immigrants' transfers are $0.1 billion in 2002 (table B). These new estimates of wealth transfers by native-born immigrants to the United States augment estimates of wealth transfers of foreign-born immigrants already included in the capital account (table 1, line 39).

Emigrants' remittances

Personal remittances received from U.S. emigrants living abroad. New estimates of personal remittances sent to the United States by U.S. emigrants living abroad are introduced for 1992–2002. Remittances include cash gifts sent to the United States by U.S. emigrants who have lived abroad for more than 1 year. Personal remittances received from U.S. emigrants living abroad are the inward counterpart to outward personal remittances of the foreign-born population living in the United States, which are already included in the accounts. The new estimates are based on data on the number of U.S. emigrants living abroad, their average incomes, and the proportion of their incomes that is remitted.

The number of U.S. emigrants living abroad is based on data from the Social Security Administration and the U.S. State Department, as well as Census Bureau estimates of the annual flow of U.S. emigrants. The Social Security Administration provides annual data on the number of emigrants over 65 (retirees) living abroad by country of residence.[12] The number of emigrants under 65 is based on the State Department's estimate of the number of U.S. emigrants living abroad in 1984.[13] From 1984 forward, this number is augmented by each year's emigrant outflow, as estimated by the Census Bureau; these flows are age and country specific.[14] The State Department and Census data are divided into age groups and each group is advanced in age over time.

Average income of the emigrant population comes from the Census Bureau, which provides data on mean incomes of U.S. households by age of the head of the household.[15] A proportion of average income is used to determine the dollar amount of remittances received from U.S. emigrants. This proportion is derived from data on dollar remittances of the foreign-born population living in the United States obtained from sample surveys of legalized aliens conducted by the Immigration and Naturalization Service (now the U.S. Bureau of Citizenship and Immigration Services) for 1987 and for 1992. It is assumed that the proportion of income remitted by U.S. emigrants living abroad is similar to the proportion of income remitted by immigrants living in the United States who are natives of the United Kingdom, Canada, and other developed countries because the economic profile of U.S.-born emigrants is similar in nature to that of immigrants from these advanced countries.

Total personal remittances received from U.S. emigrants living abroad are estimated by multiplying the number of U.S. emigrants by the average dollar amount of income that is remitted for each age group and income level. Personal remittances from abroad are $0.4 billion in 2002. These estimates are included in private remittances and other transfers (table 1, line 38).

U.S. Residents' Earnings Abroad

Coverage of compensation receipts of U.S. residents employed temporarily abroad is expanded for 1992–2002 to include earnings of U.S. residents employed temporarily in all countries. Previously, the accounts included only estimates of U.S. residents' earnings

9. Fernandez, 1995.
10. Rawlings, 2001.
11. Davern and Fisher, 2001.
12. *Social Security Bulletin: Annual Statistical Supplement*, (Washington DC: Social Security Administration).
13. Robert Warren and Ellen Percy Kraly, "The Elusive Exodus: Emigration from the United States," *Population Trends and Public Policy Paper No. 8*, (Washington DC: Population Reference Bureau, March 1985).
14. Fernandez, 1995.
15. Davern and Fisher, 2001.

from temporary employment in Canada, Germany, and the United Kingdom, based on estimates provided by those countries' statistical offices.

U.S. residents' earnings abroad are now estimated as a share of total foreign-earned income of U.S. taxpayers in each country. The estimates by country are based on data from the Internal Revenue Service (IRS).[16] Because the IRS data include earnings of U.S. taxpayers who are abroad both temporarily (for less than 1 year, and are therefore considered U.S. residents) and permanently (for 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. Receipts are gross of U.S. and foreign income taxes withheld. The estimates for Canada, Germany, and the United Kingdom continue to be those provided by those countries' statistical offices; these estimates are viewed as more reliable than those based on the IRS data. As a result of this expansion in coverage, estimates for compensation receipts are revised up $0.6 billion for 2002. These estimates are included in compensation of employees (table 1, line 17).

A percentage of U.S. workers' earnings from temporary employment abroad is assumed to be spent abroad; corresponding adjustments reflecting the increased coverage are made to the "other" private services payments account (table 1, line 27), where these expenditures are recorded. Estimates of workers' expenditures abroad are revised up $0.2 billion in 2002.

16. Jeff Curry, Maureen Keenan Kahr, and Sarah E. Nutter, "Individual Foreign-Earned Income and Foreign Tax Credit, 1996," (Washington DC: U.S. Internal Revenue Service, date unknown).

Commissions on U.S. futures trading

The methodology for estimating monthly and quarterly commissions received by U.S. companies from foreign trading on U.S. futures exchanges has been improved, beginning with the estimates for the first quarter of 2000. The previous methodology, based on monthend data supplied by the Commodity Futures Trading Commission (CFTC), applied commission rates to an indirect indicator of the number of contracts closed during a month. This procedure underestimated the volume of futures contracts closed and was based on outdated commission rates. The new methodology, based on new daily CFTC source data, uses more precise estimates of the number of closed futures contracts multiplied by actual average commission rates by type of futures contract that are charged institutional traders by the largest U.S. futures brokers. The new commission rates are from large U.S. futures brokers. The net result of this new methodology, which substantially increased the volume of closed contracts but also substantially lowered commission rates, is to reduce the total estimated dollar amount of commissions received from foreign trading on U.S. futures exchanges. For 2000, commissions receipts are revised down $230 million; for 2001, they are revised down $192 million; and for 2002, they are revised down $243 million. These receipts of futures commissions are included in exports of U.S. financial services in "other" private services receipts (table 1, line 10).

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