Technical Notes

As is customary each June, estimates of U.S. international transactions are revised to incorporate new source data, improved methodologies, and changes in definitions. Major improvements introduced this year include new seasonal adjustment procedures for merchandise trade and incorporation of results from the benchmark survey of foreign direct investment in the United States for 1987.

Merchandise trade

Estimates for merchandise trade have been revised for 1989–90. For both exports and imports, the revisions reflect the inclusion of errata, the retabulation of data to incorporate timing adjustments, revisions of some balance of payments adjustments, and the application of new seasonal factors.

Quarterly seasonally adjusted series have been revised to reflect the application of seasonal factors developed jointly by BEA and the Census Bureau. Revised seasonally adjusted data for 1978–88 will be published with the introduction of the benchmarked national income and product accounts estimates in the autumn of 1991 and will be incorporated into the international transactions accounts in June 1992.

BEA and the Census Bureau now publish the same seasonally adjusted Census-basis data for the period beginning with the first quarter of 1990 except for six series—four in exports and two in imports—that show quarterly, but not monthly, seasonal patterns. BEA seasonally adjusts these series, but the Census Bureau does not.

Unadjusted historical Census-basis data for 1978–89 published by BEA will differ slightly from those published by the Census Bureau because BEA retabulates data to incorporate timing adjustments over a longer period than does the Census Bureau.

The effects of these revisions for 1989–90 are shown in table F.

Direct investment accounts

For 1987–90, estimates for the foreign direct investment in the United States accounts (part of lines 22 and 23 in tables 1 and 10, lines 26 and 57 in tables 1 and 10, and lines 44–86 in table 5) have been revised to incorporate the results of the 1987 benchmark survey of foreign direct investment in the United States. Previously, estimates were based on the 1980 benchmark survey.

The benchmark survey covered the universe of U.S. affiliates of foreign direct investors. In nonbenchmark years, universe estimates for income, royalties and fees, and other private services are derived from data reported quarterly by a sample of the affiliates

Table F.—Sources of Revision to Merchandise Trade Data
[Millions of dollars]

	1989	1989				1000	1990			
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Exports: Amount of revision	986 1,012	-1,060	498 252	793	755 590	264 -452	-849 224	503	486 24	124
Retabulation and errata	-26	-147 -1,072 159	252 252 -6	317 496 -20	324 -159	716	-1,225 152	-108 546 65	403 59	-592 276 440
Imports:				- 1			- 1			
Amount of revision	2,039 883 1,156	265 187 -65 143	976 132 548 296	178 158 -339 359	620 406 -144 358	-301 269 570	-121 234 -56 -299	1,368 970 638 -240	-539 -149 -348 -42	-1,009 -786 -234 11
Memorandum: Effect of using quarterly factors: Exports Imports		-85 -106	-302 -42	529 169	-142 -21		-138 -122	-410 -22	668 183	-120 -39

^{1.} Difference between seasonally adjusted data used by BEA and not seasonally adjusted data used by the Census Bureau. Positive values indicate that seasonally adjusted data exceed not seasonally adjusted data. Negative values indicate that not seasonally adjusted data exceed seasonally adjusted

that reported in the benchmark survey, as well as by affiliates that entered the direct investment universe since the benchmark survey and that met the reporting criteria for the quarterly sample survey. To obtain universe estimates in nonbenchmark years, data reported previously (usually in the benchmark survey) by affiliates that did not report in the quarterly sample survey are extrapolated forward based on the movement of data for a matched sample of affiliates that did report in the quarterly survey. For capital flows (excluding reinvested earnings) and for capital gains and losses, only data actually reported on the surveys are included in the estimates.

In table G, the revised estimates for 1987, which incorporate information from the 1987 benchmark survey, are compared with previously published estimates for 1987, which were based on the 1980 benchmark survey. On the revised basis, capital inflows were \$58.1 billion, \$11.2 billion higher than previously published. Income on the revised basis, at \$7.2 billion, was \$2.3 billion lower. Net payments for royalties and license fees were \$0.1 billion higher, and net receipts for other services were \$0.1 billion lower.

Much of the \$11.2 billion upward revision in capital inflows for 1987 was in intercompany debt and was accounted for by affiliates that did not report in the 1987 quarterly surveys or that reported inaccurately or too late for the

reported data to be included in the estimates. Much of the \$2.3 billion downward revision in income reflected the prior overestimation of reported earnings and, to a lesser extent, the removal of affiliates that the benchmark survey indicated had left the universe.

The revisions to the estimates for 1988 and 1989 reflect not only the incorporation of information from the 1987 benchmark survey, but also information obtained from BEA's survey of new foreign investments, its annual survey of foreign direct investment, and from late and revised quarterly reports.

The revisions in capital inflows for 1988 and 1989 were relatively small, reflecting partly offsetting revisions to its components: Capital inflows were revised up \$1.0 billion for 1988 and down \$1.7 billion for 1989. Sizable

upward revisions in equity capital inflows for both years largely reflected information from late reports. However, these upward revisions were largely offset by downward revisions in reinvested earnings for both years and a sizable downward revision in intercompany debt inflows for 1989.

Income was revised downward for both 1988 and 1989, by \$3.1 billion and \$2.5 billion, respectively. The revisions mainly reflected the prior overestimation of earnings and, to a lesser extent, the removal of affiliates that the benchmark survey indicated had left the universe.

For a more detailed explanation of the revisions made and the estimation procedures used, see the Technical Notes in "The International Investment Position of the United States in 1990" in this issue of the Survey.

Table G.—Foreign Direct Investment in the United States in 1987–89 (1980 and 1987 Bases)
[Millions of dollars]

(Credits +; debits -)	1987			1988			1989		
	1980 basis	1987 basis	Differ- ence	1980 basis	1987 basis	Differ- ence	1980 basis	1987 basis	Differ- ence
Capital (table 1, line 57) Equity capital Reinvested earnings Intercompany debt	46,894 30,621 1,481 14,792	58,119 34,319 -883 24,683	11,226 3,699 -2,364 9,892	58,435 40,362 6,560 11,513	59,424 45,046 2,816 11,562	988 4,684 -3,744 49	72,244 46,683 -88 25,649	70,551 51,884 -3,844 22,511	-1,693 5,201 -3,756 -3,138
Income (table 1, line 26)	-9,500 -9,871 371	-7,198 -8,659 1,462	2,302 1,212 1,091	-16,748 -15,882 -866	-13,626 -12,774 -852	3,122 3,108 13	-14,004 -11,437 -2,567	-11,512 -9,867 -1,646	2,492 1,570 921
Royalties and license fees (table 1, part of line 22)	-843	-896	-53	-968	-1,001	-33	-1,374	-1,318	55
Other private services (table 1, part of line 23)	616	530	-86	694	178	-516	581	332	-248