Summary of Major Revisions to the U.S. International Accounts, 1976-2008

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The following paragraphs present a list of the major revisions to BEA's international accounts over the past thirty years. These revisions are the most significant of the statistical and methodological revisions that were introduced at the time of the annual revision of the accounts each June. The revisions are organized by major components of the accounts.

The statistical revisions usually resulted from incorporation of results from benchmark surveys, from the development of new surveys, or from the improvement of existing surveys. The methodological revisions usually resulted from new methods of estimation that were suggested by the availability of new survey-based source data, by the use of data prepared by official statistical agencies in foreign countries, or by the use of indirect estimation methods applied to industry and private sector data.

The objective of all the revisions was to address gaps in coverage of the accounts, particularly those arising from the rapid growth, innovation, and changes in international trade, services, and financial markets.

Significant revisions have occurred in all major components of the accounts.

- For goods, the most significant revisions occurred relatively early in the period, in 1988 and 1989, but the adoption of the Harmonized System commodity classification system and incorporation into BEA's end-use commodity classification system provided a much improved structure upon which to base incremental changes over the following two decades.

- For services, the most significant revisions were concentrated in two periods--one in 1984-1996 when BEA's current collection system for business services was developed and expanded, and the other in 2004-2008 when the collection system was modernized and molded into a much more effective and efficient collection system. In addition, a new set of monthly services estimates was introduced in 1994 in response to requests from policy makers for more timely estimates of services transactions.

- For the financial accounts, the reorganization of the U.S. Treasury Department's and the Federal Reserve's statistical collection system for international capital flows in 2000-2002 led to major improvements and revisions in the coverage of financial transactions in 2002-2004, which benefitted not only the financial accounts but also the income accounts. In addition, a comprehensive survey of financial derivatives was introduced in 2007.

- For the income accounts, the most significant revisions occurred in the late 1990s and early 2000s and were related to improvements in the choice of representative average yields to apply to average amounts outstanding for use in the estimation of portfolio, banking, and nonbank income. Changes in financial markets and financial practices and improved coverage of surveys required frequent evaluation to assure that the choice of yields appropriately reflected returns to investors or costs of funds to lenders. The choice of yields was reviewed on several occasions, but the most complete review and most significant of the revisions were in 2003 and 2004. U.S. Government interest paid on U.S. Treasury securities underwent significant revisions in 2004 and 2007. Also in 2007, the choice of yields was changed to a current yield from a yield to maturity in order to remove the impact of unrealized capital gains from the portfolio income estimates.

- For the nonbank financial accounts, data from foreign statistical authorities and the Bank for International Settlements was substituted for U.S. source data in 1992-1994 in order to significantly expand the coverage of U.S. nonbank transactions with foreign banks. Market and private sector data were used to supplement regular survey-based data in order to adequately capture. U.S. nonbank transactions in asset-backed securities in 2005-2008.

- Major methodological advances to BEA's direct investment accounts occurred in 1978 with the introduction of reinvested earnings into measures of income and financial flows, and in 1999 with the introduction of current-cost measures of income.

- The geographic detail available for the accounts was expanded significantly in 2006 and 2007.

The presentation in the following pages includes only the most significant of the revisions. Many other revisions of lesser significance are provided in the attached catalogue, where a complete list of revisions is presented. The select list and the complete list provide brief descriptions of the revisions. Each revision is keyed to a more detailed discussion that was presented in the *Survey of Current Business* at the time the revision was introduced.

It is hoped that the listing of these revisions in one location, with annotations, will provide a reference tool for the location of detailed discussions that were presented over many issues of the *Survey*. It is also hoped that the brief descriptions of the revisions will enable users to view the extensive and significant advances in coverage and accuracy of the accounts that have occurred over 30 years.

Goods

Until 1978, the Census Bureau used the United Nations Standard Industrial Trade Classification system to present its commodity composition of goods exports and imports, whereas BEA used an end-use system for its commodity composition statistics. Beginning in 1978, the Census Bureau shifted to the end-use system, enabling both agencies to present the same commodity classification of goods exports and imports. BEA has maintained the end-use system since its development in the mid-1950s and it has served as a core commodity classification system for BEA, BLS, and Census since then. The end-use system focuses on the classification of commodities by principal end uses rather than their physical nature.

The Harmonized System of commodity classification (HS) was developed under the auspices of the Customs Cooperation Council to establish an internationally accepted standard for the classification of international traded goods. Many countries adopted the system at the time of its introduction in the late 1980s, and in 1989 the Census Bureau and BEA adopted it as the basic building block for the U.S. trade data. BEA developed a concordance of the HS codes to its end-use commodity classification system and introduced statistics on the new classification basis in 1989. Commodity trade flows on the new end-use basis were carried back to 1978 to maintain historical continuity.

In 1990, U.S.-compiled exports to Canada were replaced with the counterpart Canadian import statistics, and Canadian-compiled exports to the United States were replaced with the counterpart U.S. import statistics. This exchange of statistics between the Census Bureau and Statistics Canada eliminated the need for the two countries to run duplicate statistical reporting systems and eliminated the need for many of the U.S. balance of payments adjustments for timing, coverage, and valuation previously made to the Census-basis data.

Services

In 1984, legislation under which data on direct investment had been collected--the International Investment Survey Act of 1976--was broadened to include trade in services and redesignated as the International Investment and Trade in Services Survey Act of 1984. The Act established mandatory reporting of services transactions; for the most part, previous reporting had been voluntary.

As a result of these efforts, results of the first benchmark survey of services (mainly business, professional, and technical services) were incorporated into the accounts in 1989, along with the results of the newly developed annual surveys for 1987 and 1988 that were based on the benchmark survey. A regular cycle of benchmark and annual surveys was put in place where none previously existed. Carefully directed efforts were made over the following decade to expand significantly the coverage and accuracy of services transactions; much work was focused on business, professional, and technical services.

Efforts to improve the coverage and accuracy of survey-based data were supplemented by an independent effort to use other source data to estimate services that were not amenable to survey-based measurement. The most significant of these were the development of estimates of commissions on securities transactions, introduced in 1987, and the development of education services estimates, introduced in 1989. Neither had been previously included the accounts. Also in 1989, the separation of income from services and the re-positioning of services in the presentation of the accounts created the four basic building blocks of the current account—goods, services, income, and unilateral transfers.

In the mid-1990s, there were two important additions to the services accounts. The first was the estimation of freight charges for the transportation of goods by truck between the United States and Canada in 1995. The addition of these charges recognized the growing volume of truck transportation between the two nations, spurred in part by deregulation and the NAFTA agreement. The second was the incorporation of results from the first benchmark survey of financial services transactions in 1996; the survey greatly increased the coverage of financial services beyond just the coverage of brokerage transactions, which had been included in the accounts since 1987, to include activities such as financial management services, financial advisory services, securities lending services, and electronic funds transfer services. This expansion in coverage responded to changes in the financial environment that had occurred in the late 1980s and early 1990s.

Separate from all of the activity to expand the coverage and accuracy of services either by surveys or indirect methods of estimation, a major effort was devoted to development of a set of monthly services estimates to supplement the quarterly and annual estimates. The monthly estimates responded to the increased emphasis placed on services by economic analysts and policymakers and the need for more timely measures of services activity. The monthly estimates, based on indicators, were designed to be completely consistent with the quarterly and annual estimates, which were based on more complete source data. The monthly estimates were introduced in 1994 and begin with estimates for 1992.

In 2003, in coordination with work on the national income and product accounts (NIPAs), new estimates of insurance services were introduced. These estimates removed from the international transactions accounts and NIPAs large spikes in the estimates of insurance activity caused by catastrophic events and that were unrelated to the provision of non-catastrophic insurance services.

In 2004 and 2006, BEA conducted extensive reviews of its surveys of business services. The reviews led to creation of a newly designed and modernized data collection system that consolidated reporting of affiliated and unaffiliated parties into a single reporting system, required quarterly reporting rather than annual reporting, and required the same detail of reporting for affiliated transactions as for unaffiliated transactions. The new estimates provided a complete picture of services trade by detailed type of services which was not previously possible. As a result of a new benchmark survey for 2006 and a redesigned set of quarterly follow-on surveys for 2006-2007, major revisions were made to the estimates; results were introduced in 2008.

Income—Portfolio and other investment

Securities income--In the mid-1990s, a new approach for estimating securities income was introduced which multiplied an average market yield on the current portfolio by the average position estimate for the current portfolio. The calculation was made separately for stocks and for bonds, and for each major country or area. The approach was introduced in 1992 for U.S. transactions in foreign securities and in 1996 for foreign transactions in U.S. securities. Initially, indexes of yields and prices were available for only the few major countries in which transactions were concentrated. Outside of those major countries, only broad indexes by region were available. Over the years, with the expansion of transactions to many countries and easy availability of yields and price data for individual countries, the number of yields, prices, and countries was expanded considerably. The most recent round of major revisions was in 2003 and 2004. In 2007, BEA introduced even more detailed measures of current yields for debt securities drawn directly from the U.S. Treasury Department's annual and benchmark surveys; previously, yields were based on broad market baskets of securities. Estimates were revised for 2001-2006.

Bank and nonbank income--The choice of representative average yields to apply to numerous classes of reported bank and nonbank assets and liabilities to estimate income receipts and payments was reviewed on several occasions during the 1990s to assure that the yields appropriately reflected changing financial practices and conditions in financial markets, especially the movement away from the pricing of loans based on the U.S. prime rate, which was the prevailing practice in the early 1980s. The most recent comprehensive review of yields occurred in 2001, when newly expanded details by type of bank and nonbank instruments became available. The revisions in 2001 recognized the reduction in the percentage of outstanding balances that were noninterest earning; the widespread use of London interbank offered rates to determine the pricing of most loans; and the prevailing market practice of banks to engage primarily in shorter term transactions, with short-term loans renewed frequently.

U.S. government income--A major new approach which relied on a previously unused set of source data was adopted in 2004. The new approach used source data from the Treasury Department's Monthly Statement of Public Debt to estimate interest payments to foreigners. However, critical assumptions were necessary in this approach, and with the availability of newly developed data from the Treasury Department's international capital reports, which yielded superior and more precise estimates than those based on data from the Monthly Statement of Public Debt, the estimates were revised again in 2007.

Current yield vs. yield to maturity--A major change to securities income and to U.S. Government income, also introduced in 2007, was a shift to an interest rate based on current yield from a rate based on yield to maturity for foreign bonds, U.S. corporate bonds, U.S. agency bonds, and U.S. Treasury bonds. The intent of the change was to remove the impact of unrealized capital gains from the income estimates.

Income—Direct investment

Reinvested earnings--Reinvested earnings of direct investment enterprises were introduced into the direct investment income and the reinvested earnings component of direct investment financial accounts in 1978. The inclusion in the income account and inclusion as an offset in financial account recognized direct investors' participation in the total earnings of the enterprise, regardless of whether earnings were distributed to the investor as dividends or reinvested in the enterprise.

Current-cost income--Direct investment income and the reinvested earnings component of direct investment financial flows were shifted to a current-cost (replacement-cost) basis from an historical-cost basis in order to meet the requirements of economic accounting rather than financial accounting. The shift was made primarily to ensure that the charges to reported measures of depreciation, depletion, and expensed exploration and development costs reflected current-period prices, as well as to more closely align income earned in a given period with charges against income in the same period, as required by economic accounting principles. The changes were consistent with the measures and methodologies used in the NIPAs. The estimates were introduced in 1992, with major updates in both 1999 and 2000.

Unilateral current transfers

In 1992, new estimates of personal remittances of the foreign-born population of the United States sent to households abroad (immigrants' remittances) were introduced into the private remittances and other transfers account. The estimates were based on data on the foreign-born population extracted from the 1980 Census of Population and a 1987 sample survey of legalized aliens conducted by the Immigration and Naturalization Service. Major updates were introduced in 1996 and 2005. In 2003, new estimates of personal remittances by U.S. emigrants living abroad sent to households in the United States (emigrants' remittances) were introduced into the private remittances account.

Securities, bank, and nonbank investment

Securities investment--In 2000-2002, Treasury, Federal Reserve, and BEA staff conducted a thorough review of the Treasury Department's statistical surveys for securities, bank, and nonbank transactions. Numerous changes were suggested and implementation plans were developed, especially for the securities surveys where coverage was suspect. Also, the cycle of benchmark surveys of about once every five years for both inward and outward portfolio investment was viewed as too infrequent given the pace of change in the financial markets. Out of these discussions came the development of annual surveys of securities claims and liabilities and a concerted effort to improve the coverage of the monthly securities surveys. The results of these efforts were first reflected in the accounts in the years 2002, 2003, and 2004. The combination of annual surveys of custodians, which contained a security-by-security enumeration of holdings, and monthly surveys of transactors had the beneficial effect of substantially improving both the financial accounts and the portfolio income accounts.

Bank investment--In 2003, also as a result of work in 2000-2002 by Treasury, Federal Reserve, and BEA staff, a significant amount of expanded detail by type of banking instrument was incorporated into the accounts. The most significant of these changes was in the coverage of brokers' balances, mostly in the form of repurchase agreements, which was improved considerably. Also in 2003, transactions of brokers were moved from the nonbank to the bank accounts in order to combine all broker transactions in a single account.

Nonbank investment--In the early 1990s, BEA began to use the national statistics of major trading partners to supplement U.S. source data in order to remedy shortcomings in coverage on U.S. nonbank transactions with banks abroad. The foreign source data were judged to capture more completely the activities of foreign banks with U.S. nonbanking concerns than did the U.S. compiled data. Source data from national statistical agencies abroad was first incorporated into the claims side of the U.S. nonbank accounts in 1992 and 1993 with the use of data from Canada, the United Kingdom, Germany, Netherlands, Italy, and France. In 1994, more comprehensive data from the Bank for International Settlements (BIS) for an additional 10 European countries plus the Caribbean and Asian financial centers were incorporated. It was not possible to integrate the BIS data on the liabilities side of the U.S. nonbank accounts until 2001 because of the inability to resolve coverage problems with U.S. source data.

Claims on foreigners reported by U.S. nonbanking concerns were revised for 2005-2007 to expand significantly the coverage of financial intermediaries' claims associated with the issuance of asset-backed commercial paper. During this period many offshore structured investment vehicles and asset backed commercial paper (ABCP) conduits set up 100-percent-owned affiliates in Delaware for the sole purpose of issuing ABCP in the U.S. market. The ABCP proceeds were then lent to the offshore special purpose vehicles, which used the funds to purchase other assets. The intercompany debt transactions between Delaware affiliates and their offshore parents took the form of increases and decreases in U.S. nonbank claims on financial intermediaries' accounts. BEA made estimates of these transactions based on data from industry sources and clearing houses.

Currency flows--Currency flows from U.S. banks to foreign banks for use as a medium of exchange and store of value were introduced into the accounts in 1997 and revised in 2008.

Financial derivatives

Early in the 1980s BEA introduced partial measures of derivatives transactions by entering capital gains and losses on foreigners' transactions on U.S. futures exchanges in the financial account and commissions on foreigners' transactions in the current account. At the time, it was recognized that these entries were only a partial measure of derivatives transactions. Key source data that would have provided more comprehensive measures were not available. Refinements were made to the estimates in 2001 and 2003 but the estimates remained very incomplete and derivatives activity had grown strongly.

Comprehensive estimates of transactions in financial derivatives were introduced in 2007 for 2006. The estimates were based on a newly developed quarterly survey administered by the U.S. Treasury Department, which had been developed over many years of collaborative efforts among the U.S. Treasury Department, the Federal Reserve Board, the Federal Reserve Bank of New York, BEA, and private sector financial market participants. The survey was comprehensive, covering both exchange-traded and OTC transactions, with considerable detail by type of derivative and by country.

Geography

Numerous incremental changes were made to the geographic details available in the accounts in the 1980s and 1990s. Small changes were made when the European Union was formed and later expanded and when the Euro area was formed. Other incremental changes were made to the individual tables on goods, direct investment, and services, or were published in tables separate from the complete set of accounts. A comprehensive review of the geography and inclusion of newly identified major trading partners was completed in 2006 when the number of countries and areas for the complete set of accounts was expanded from 17 to 37. A complete set of estimates for each of the 37 countries and areas was prepared for each account and subaccount. The initial introduction in 2006 was for 2005-2006; the newly developed accounts were extended back to 1999 in 2007.