Preview of the 2013 Comprehensive Revision of the National Income and Product Accounts

Statistical Changes

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IN JULY 2013, the Bureau of Economic Analysis (BEA) will release the results of the 14th comprehensive, or benchmark, revision of the national income and product accounts (NIPAs). The last such revision was released in July 2009.

This article, which describes statistical changes, is the third in a series of SURVEY OF CURRENT BUSINESS articles about the comprehensive revision. An article in the February 2013 issue of the SURVEY described new methods for measuring implicitly priced services produced by commercial banks.[1] An article in the March 2013 issue of the SURVEY covered changes in definitions and in the presentation of data, including a change in the reference year to 2009 for the chain-type quantity and price indexes and for the chained-dollar estimates; currently, the reference year is 2005.[2] Following the release of the comprehensive revision results in July, an article in the September 2013 SURVEY will describe the revised NIPA estimates and present and discuss the effects of the changes in definitions and statistical changes.

Statistical changes are changes in estimation procedures that are generally made to incorporate new data from sources or methodologies that address data gaps and other shortcomings. Major statistical changes in this comprehensive revision include the following:

- Incorporating the 2007 benchmark input-output (I-O) accounts, which provide the most thorough and detailed information on the structure of the U.S. economy. These accounts are used to benchmark most expenditure components of gross domestic product (GDP) as well as some of the income components.
- Improving estimates of employers' contributions to state and local government-sponsored defined contribution pension plans by incorporating new source data.
- Improving the estimates of proprietors' income by more accurately accounting for the capital gains and losses attributable to corporate partners.
- Improving estimates of proprietors' income by updating adjustments for the underreporting and nonreporting of income using updated data from the Internal Revenue Service (IRS).

The remainder of this article describes the newly available and revised source data and the major methodological changes that will be incorporated in this comprehensive revision.

Newly Available and Revised Source Data

With the upcoming comprehensive revision, estimates for all years, 1929–2012, are open for revision in order to incorporate changes in definitions and classifications as well as statistical changes. Source data that have become available since the 2009 comprehensive revision and that were not fully incorporated as part of the 2010, 2011, or 2012 annual NIPA revisions are referred to as "regular benchmark source data." These data are usually available with a long lag, but they generally go back no further than 10 years, which is typical, for example, of the data from the decennial and quinquennial censuses.

This comprehensive revision will also include the data that are regularly incorporated in annual NIPA revisions and cover 2010–2012; these source data are referred to as "regular source data for 2010–2012." An example is the 2011 *Statistics of Income (SOI)* data for business tax returns from the IRS.

Regular benchmark source data

The revised NIPA estimates will incorporate the following regular benchmark source data: data from

1. Kyle K. Hood, "Measuring the Services of Commercial Banks in the National Income and Product Accounts: Changes in Concepts and Methods in the 2013 Comprehensive Revision," SURVEY OF CURRENT BUSINESS 93 (February 2013): 8–19.

2. "Preview of the 2013 Comprehensive Revision of the National Income and Product Accounts: Changes in Definitions and Presentations," SURVEY 93 (March 2013): 13–39.

BEA's 2007 benchmark I-O accounts; selected data from the most recent quinquennial economic censuses; housing data from the 2010 decennial Census of Population and Housing; and annual source data that were not available in time for incorporation during previous annual NIPA revisions.

The 2007 benchmark I-O accounts. The benchmark I-O accounts are the most important data source for comprehensive revisions of the NIPAs. They are used as benchmarks because they are based on detailed industry and commodity data collected by the Census Bureau in the quinquennial economic censuses and because they are prepared within an internally consistent framework that tracks the flows of inputs and outputs in the economy.

These accounts are used to establish the level of GDP for the benchmark year; they also provide essential information for estimating GDP in periods following the benchmark year.[3] For NIPA benchmark year estimates, the I-O accounts provide information on the portion of gross output that is consumed as final uses, or final demand.[4] As a result, the estimate of GDP avoids double-counting (of, for example, the semiconductors that are used to produce computers or the flour that is used to produce bread).

The 2007 I-O accounts provide the benchmark for the estimates of personal consumption expenditures (PCE) and private fixed investment as well as several components of income. They also provide the commodity weights for the estimates of change in private inventories and for the product detail of state and local government consumption expenditures and gross investment.

The incorporation of the 2007 benchmark I-O accounts will result in revisions to NIPA estimates of selected components for 2003 forward.[5] This year's comprehensive revision of the NIPAs will be released in advance of BEA's benchmark I-O accounts, which are scheduled to be released in December 2013. In the past, the benchmark I-O accounts were released before the comprehensive NIPA revisions. The published I-O estimates were used to benchmark the level of GDP and related components in the NIPAs. However, the comprehensive NIPA revisions introduced changes in definitions and methodologies that had not been incorporated in the published I-O estimates, so the timing of this process resulted in inconsistencies between the benchmark I-O accounts and the NIPAs.

This new release schedule will improve the integration of the NIPAs and the benchmark I-O accounts as well as the annual industry accounts.[6] Specifically, the benchmark I-O accounts will include the changes in definitions and classifications, such as the capitalization of business and government research and development, that will be included in the revised NIPA estimates.[7] With the release of the benchmark I-O and annual industry accounts in December 2013, users will have access to the three accounts and will be able to easily move from one set of accounts to another to access various levels of information. For example, a user interested in a particular component of consumer spending in the NIPAs will be able to access more detailed and consistent information on that component in the benchmark I-O accounts.

Other regular benchmark source data. This comprehensive revision will incorporate data from the 2007 Economic Census, including data for the following categories: inventories; the receipts and expenses of business establishments and of governments; sales by detailed commodity and product line; final industry and product shipments; and trade margins from both the 2007 Economic Census and from the 2007 annual surveys of merchant wholesale and retail trade. In addition, revised monthly and annual Census Bureau industry data on manufacturing, wholesale trade, and retail trade will affect estimates of PCE for goods and food services, of private fixed investment in equipment, and of the change in private inventories for 2003 forward. The 2010 decennial Census of Population and Housing will be used for estimates of PCE housing services and for rental income of persons.

Annual series that were not available in time for the 2010–2012 annual NIPA revisions will also be incorporated. NIPA estimates that are based on BEA's international transactions accounts (ITAs)—primarily net exports of goods and services and rest-of-the-world income receipts and payments—will be revised to reflect improvements to the ITAs that have been introduced since the 2009 comprehensive NIPA revision and that affected years outside the periods open for revision

3. Benchmark years occur at 5-year intervals and end in a 2 and a 7, corresponding to quinquennial census years; benchmark estimates are prepared using data from these censuses.

4. Gross output is a measure of what is produced in the domestic economy. It reflects the value of intermediate inputs (energy, materials, and purchased services) and the value added created by an industry's labor and capital. Gross output includes both the value of what is produced and then used by others in their production processes as well as the value of what is produced and sold to final users. Gross output for the economy reflects double-counting and is therefore much higher than GDP.

5. The estimates from the 2002 benchmark I-O accounts were incorporated as part of the 2009 comprehensive revision of the NIPAs.

6. Brian C. Moyer, "BEA Briefing: Future Directions for the Industry Accounts," SURVEY 89 (March 2009): 29–32.

7. For more details, see "Changes in Definitions and Presentations," 13–39.

during the subsequent annual NIPA revisions.[8] In addition, revised Census Bureau government finances data on the expenditures and receipts of state and local governments for fiscal years 2006–2009 will be incorporated.

Regular source data for 2010–2012

The revised estimates for 2010–2012 will also reflect the incorporation of newly available and revised source data that became available after the last annual NIPA revision in July 2012. These data include the following Census Bureau annual surveys: of state and local governments finances for fiscal year 2010 (revised) and fiscal year 2011 (preliminary), of manufacturers for 2010 (revised) and 2011 (preliminary), of merchant wholesale trade and retail trade for 2010 (revised) and 2011 (preliminary), of services and of the value of construction put-in-place for 2010 and 2011 (revised) and 2012 (preliminary). The data also include the following: Office of Management and Budget's federal government budget data for fiscal years 2012 and 2013 (revised), BEA's ITAs for 2010–2012 (revised), Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages for 2010–2012 (revised), IRS tabulations of corporate tax returns for 2010 (revised) and 2011 (preliminary) and of sole proprietorship and partnership tax returns for 2011, and U.S. Department of Agriculture farm statistics for 2010–2012 (revised).[9]

Changes in Methodology

This section describes the new and improved methodologies that will be introduced in this comprehensive revision.[10] The discussion includes changes to product-side and income-side components and extensions of several methodologies that were incorporated in the 2010–2012 annual NIPA revisions (table 1).

Product-side changes

Measures of implicit services of commercial banks. Banks are compensated for some of the services that they provide to their customers with a portion of the interest that they charge on loans or by a reduction in the interest they pay on deposits rather than by charging explicit fees. BEA refers to these services as "financial services furnished without payment" or as "implicitly priced services." Beginning with 1985, BEA will improve the methods for computing implicitly priced services provided by commercial banks to establish a more realistic picture of bank output, particularly in light of the recent financial crisis. Three major changes in the methods for computing these implicit services will be introduced: (1) the boundaries of assets and liabilities included in the implicit services calculations will be modified; (2) a new treatment of losses from borrower defaults will be introduced; and (3) the computation of the reference rate will be refined to avoid unnecessary volatility in the measures of implicit services consumed by borrowers and depositors.[11]

The first of these changes reflects the recommendations of the 2008 *System of National Accounts (SNA 2008)*.[12] Based on these guidelines, the NIPAs will narrow the scope of assets and liabilities for which flows of implicit services are imputed to include only those assets and liabilities involving direct customer contact. Implicit services will be calculated using loans, deposits, and securities repurchase agreements; commercial banks' trading assets and liabilities will also be included because it is believed that in many cases, these are associated with direct customer contact. Securities and bank borrowings that do not involve customer contact will be excluded. On average, this change will have a minor impact on the level of bank output, because the interest rates on the excluded balance sheet items tend to be close to the reference rate.

The new treatment of losses due to borrower defaults addresses a conceptual concern relating to the interest charged to cover defaults, which is not a charge for services. A portion of the interest that banks charge on loans is used to cover losses of principal due to borrower defaults and is therefore not available to cover production costs. As a result, that portion should not be included in the calculation of output. Accordingly, the revised NIPA procedure for valuing implicit services provided to borrowers will subtract a measure of expected credit losses due to borrower defaults from the actual interest banks earn on loans.

8. The annual revisions of the ITAs are released each June; see Jeffrey R. Bogen and Jessica M. Hanson. "Annual Revision of the U.S. International Transactions Accounts" Survey 92 (July 2012): 35–46 for a discussion of the most recent update.

9. The 2013 annual ITA revision will be released in June 2013 and may include revisions for years before 2010. This year's comprehensive NIPA revision will incorporate currently published ITA data through 2009. Because of production constraints, the NIPAs will only incorporate estimates from the 2013 annual ITA revision for 2010–2012. For periods before 2010, differences between the ITAs and the NIPAs will be shown in the "statistical differences" lines of the NIPA table 4.3B.

10. These changes update the methodologies that are described in "Updated Summary NIPA Methodologies" Survey 92 (November 2012): 8–26 and in the *NIPA Handbook of Concepts and Methods* at www.bea.gov.

11. For a detailed description of the methodological changes for bank output, see Hood, "Measuring the Services of Commercial Banks."

12. The *SNA* provides widely followed international guidelines for national accounts on measuring implicitly priced services of financial intermediaries, including banks, and terms these services "financial intermediation services indirectly measured," or FISIM (*SNA 2008*, paragraph 6.163, 115).

The improved calculation of the reference rate, the third change, will reduce spurious fluctuations in the relative levels of borrower and depositor services that are caused by differences between the timing and the maturity of banks' loans and deposits and the assets used to compute the reference rate. Short-run shifts in borrower and depositor services due to swings in loan or deposit rates relative to the reference rate, such as those occurring at turning points in the interest-rate environment, may not be meaningful measures of actual price changes, because maturities of the loans and deposits may lock consumers into these instruments

Table 1. Major Methodological Changes

Changes	Components affected	Initial year of change
Product side		
Improve estimates of implicit services of commercial banks	Personal consumption expenditures, exports, and federal and state and local government consumption expenditures for services	1985
Improve estimates of employers' contributions to state and local government-sponsored defined contribution pension plans	State and local government consumption expenditures	1966
Improve classifications of wind and solar power structures	Private fixed investment for nonresidential structures	1993
Seasonally adjust estimates of petroleum and natural gas structures	Private fixed investment for nonresidential structures	2003
Improve measures of wages paid by Indian tribal governments	State and local government consumption expenditures	1990
Income side		
Improve estimates of implicit services of commercial banks	Net interest paid by business, personal interest payments, personal interest income, federal and state and local government interest payments and receipts, and interest received and paid by the rest of the world	1985
Improve estimates of employers' contributions to state and local government-sponsored defined contribution pension plans	Compensation of state and local government employees	1966
Improve methodology for estimating the corporate partners' adjustment made to nonfarm proprietors' income	Nonfarm proprietors' income	1993
Update measures of misreporting	Wages and salaries and nonfarm proprietors' income	2002
Improve methodology for distributing the income of regulated investment companies by type	Corporate profits, net interest paid by business, net dividends paid by business, personal dividend income, and personal interest income	1992
Improve measures of wages paid by Indian tribal governments	Compensation of state and local government employees	1990
Incorporate new data on supplemental unemployment insurance	Compensation of employees	1996
Expand coverage of federal government rents and royalties	Federal government miscellaneous receipts and interest and miscellaneous payments	1947
Reclassify interest paid to the rest of the world by government-sponsored enterprises	Federal interest paid and net interest paid by business	1970
Changes from previous annual revisions carried back		
Improve estimates of mortgage interest paid	Rental income of persons and net interest paid by business	1993
Improve estimates of medical and hospitalization insurance and income loss insurance	Personal consumption expenditures	1992
Improve deflation of fixed investment for new light trucks	Personal consumption expenditures	1987

for many quarters. The NIPAs will stabilize this spurious volatility by reducing the variation in the split between borrower and depositor services. The revised reference rate will yield a similar average level of borrower and depositor services, compared with the one used previously, but it will better match fluctuations in the rates that banks pay on liabilities and earn on assets. Based on this new reference rate, user costs and output will be computed in the usual way.

State and local government-sponsored defined contribution pension plans. For many years, state and local governments have offered defined contribution pension plans to their employees, either in place of defined benefit plans or as part of hybrid plans.[13] Currently, the NIPA measure of state and local government compensation only accounts for TIAA/CREF plans, which have long been available to teachers.

Beginning with 1996, compensation shares are available from the BLS Employer Costs for Employee Compensation (ECEC) survey. Using these data, state and local compensation will now include contributions to TIAA/CREF and to other defined contribution plans. For 1996 forward, the estimates of state and local employer contributions will be derived using the ECEC share of employer contributions to defined contribution plans and the ECEC share of wages relative to total compensation and NIPA wages. The estimate of other defined contributions will be measured as the difference between the derived measure of employer contributions to defined contribution plans and the existing estimate of employer contributions for TIAA/CREF. For 1966–1996, BEA will estimate contributions for other defined contribution plans using a declining ratio relative to TIAA/CREF contributions; for 1959–1966, all contributions are assumed to be to TIAA/CREF.

Because BEA prepares its estimates of state and local government purchases of intermediate goods and services residually by subtracting items that are not included in intermediate goods and services from current operating expenditures of state and local governments, which are based on Census Bureau data, the contributions to defined contribution plans other than TIAA/CREF are currently included in the NIPA estimates of intermediate goods and services. This methodological change will reallocate these contributions to compensation from intermediate goods and services, resulting in no effect on overall government consumption expenditures or current-dollar GDP. Total compensation and gross domestic income will increase as a result of the reallocation.

Classification of wind and solar power structures in private fixed investment. Beginning with 1993, investment in wind and solar power structures will be reclassified from “other” power structures to electric structures. Currently, wind and solar power structures are estimated residually by subtracting electric, gas, and oil power structures from total power structures, which are provided by the Census Bureau’s Value of Construction Put in Place survey. In 1999, the Census Bureau reclassified construction spending on wind and solar power structures from the “other power construction” category to the “electric power construction” category. BEA will also directly measure investment in wind and solar power structures using the Census Bureau construction spending data available for these types of structures rather than as a residual.

Seasonal adjustment of petroleum and natural gas structures. Quarterly estimates of real private fixed investment in petroleum and natural gas structures are based on a composite index of data on footage drilled and on monthly oil and natural gas rotary rig counts from a trade source. This index is currently not seasonally adjusted, but an examination of the data revealed strong seasonality. As a result, BEA will seasonally adjust the data. The seasonal adjustment will result in revisions to the quarterly estimates of private investment in petroleum and natural gas structures beginning with the first quarter of 2003.

Income-side changes

Adjustment to nonfarm proprietor’s income for corporate partners. The income attributable to corporate partners is included in the *SOI* tax-based source data on income of both corporations and partnerships.[14] To prevent double-counting, BEA removes corporate partner income from the NIPA measure of partnership income that is included in nonfarm proprietors’ income. The adjustment is included in line 3 of “Table 7.14. Relation of Nonfarm Proprietors’ Income in the National Income and Product Accounts to Corresponding Measures as Published by the Internal Revenue Service.” However, the tax-based partnership income attributable to corporate partners includes capital gains and losses. In order to be consistent with other NIPA income measures, the capital gains and

13. As part of the 2013 comprehensive revision of the NIPAs, BEA will also improve the transactions of defined benefit pension plans by moving to an accrual-based accounting approach and by recognizing the imputed costs related to unfunded liabilities. See “Changes in Definitions and Presentations,” 21–25.

14. This issue is discussed by Dylan Rassier, “The Role of Corporate Profits and Income in the Statistical Discrepancy,” Survey 92 (February 2012): 8–22.

losses must be removed from the corporate share of tax-based partnership income. Unfortunately, the *SOI* tabulations used by BEA do not provide information to directly measure the amount of corporate partners' capital gains and losses included in the partnership income.[15] BEA currently assumes that approximately 90 percent of all capital gains and losses earned by partnerships with at least one corporate partner is attributable to the corporate partners. This estimated value, along with estimates of other nonoperating income such as portfolio interest, is then subtracted from the *SOI* data on total corporate partners' income to derive an estimate of the corporate share of tax-based partnership income excluding capital gains and losses.

BEA conducted research using IRS 1065 K–1 forms that provide information on income by type and by type of partner within a partnership. The data from this sample suggests that the share of capital gains income and losses earned by partnerships with at least one corporate partner is closer to 50 percent than to the 90 percent currently assumed. As a result, BEA will revise up its estimate of the income attributable to corporate partners that it removes from the *SOI* data on total partnership operating income. This will have the effect of revising down the estimate of nonfarm proprietors' income in years that saw capital gains. The NIPAs will incorporate this new assumption beginning with 1998 and interpolate these estimates back to 1993 to transition the new methodology into the time series.

Misreporting adjustments. Estimates of nonfarm proprietors' income and of wages and salaries will incorporate updated underreporting adjustments. Currently, these estimates are based on the IRS National Research Program data for 2001 and judgmentally trended after 2001. Data for 2006 will be incorporated in the comprehensive revision, and the estimates for 2002–2005 will be interpolated based on the newly available data. The estimates for 2007 forward will continue to be based on judgmental trend.

Regulated investment companies (RICs) distributions. Beginning with 1992, BEA will introduce an improved method for allocating the distribution of the investment income of regulated investment companies by type of income. This method is designed to more accurately reflect differences between the timing of each type of income and its distribution to shareholders.

RICs (primarily mutual funds) receive investment income (in the forms of interest, dividends, and realized capital gains), which after deducting expenses, they are required to distribute to shareholders. In the NIPAs, BEA assumes that each type of income is distributed to shareholders separately. BEA relies on *SOI* data on the type of income received by these companies and the total distributions paid by RICs to estimate interest and dividend payments to persons recorded in the NIPAs. Currently, total distributions are allocated by type based on income shares derived from the *SOI* data on income receipts of these companies. This method results in volatility due to both the nature of the income and the timing differences between the recognition of income (losses) by the RICs and the distribution of that income to shareholders, much of which is capital gains (losses). Tax law does not allow regulated investment companies to "distribute" capital losses; instead, these companies are allowed to carry forward capital losses and use the losses to offset capital gains in future years. As a result, distributions of capital gains are often poorly aligned with reported capital gains receipts because of the volatility in the timing of reporting losses. Under BEA's current methodology, these timing issues contribute to volatility in the measures of interest and dividend payments.

The new methodology is intended to more accurately estimate the distributions of interest and dividend income, which are conceptually less volatile, by deriving the capital gains distribution residually after subtracting interest and dividend payments from total distributions. BEA will calculate a 2-year moving average of the shares of interest and dividend income to total income received by RICs (reflecting the lags applicable to these types of income) and apply these shares to total deductions instead of distributions. For interest and dividends, the estimated deductions will then be subtracted from the reported income received to derive interest and dividend payments; capital gains distributions will then be derived residually by subtracting these estimated interest and dividend payments from total reported distributions. This approach will reduce the spurious volatility in interest and dividend distributions that is currently caused by calculating them together with the more volatile capital gains.

Indian tribal government compensation. In the 2003 comprehensive NIPA revision, BEA began classifying Indian tribal governments as local governments, and Indian casinos were reclassified as government enterprises from private businesses. Since then, additional industry data on wages paid by tribal governments has become available from the BLS Quar-

15. BEA has information on total corporate partners income (including capital gains and other nonoperating income). BEA also has information on the type of income of partnerships that have at least one corporate partner, but it does not have information on how much a particular type of income, such as capital gains, is earned by the corporate partners.

terly Census of Employment and Wages that allows for an improved allocation of wages paid by tribal governments to general government and to casinos. As a result, beginning with the estimates for 1990, wages for state and local government-sponsored enterprises will be revised up, and general government wages will be revised down.

Supplemental unemployment insurance. Supplemental unemployment insurance is a component of employer contributions for pension and insurance funds. Currently, the estimates for 1997 forward have been based on a judgmental trend because of the discontinuation of the source data. The IRS has made available supplemental unemployment insurance data for the years 2001–2009, which will be incorporated. For 1996–2001, the estimates will be interpolated to complete the time series.

Rents and royalties. This comprehensive revision will expand the current NIPA definition of rents and royalties paid to the federal government to include conceptually similar transactions that are currently classified as current transfer receipts from business. The NIPA definition of rents and royalties follows the *SNA* classification of natural resource royalties, which are considered to be a form of property income.[16] Royalties are defined as payments made to the owners of land or subsoil assets in exchange for the right to lease such assets for various productive uses. The new classification will begin with the estimates for 1947 and will primarily use data from the *Combined Statement of Receipts and Expenditures* published annually by the Department of Treasury. The NIPAs will reclassify certain federal receipts generated from natural resource leasing programs as rents and royalties rather than as current transfers from business; in addition, other accounts will be reclassified to rents and royalties rather than being treated as reductions to current expenditures. Rents and royalties will include onshore and land lease royalties in addition to the receipts from the Outer Continental Shelf, which are offshore leases already included in the NIPAs. The majority of the new receipts in rents and royalties will be from onshore mineral leases for oil and gas extraction.

Federal interest paid by government-sponsored enterprises (GSEs). Government-sponsored enterprises are private companies that were established and chartered by the federal government. In the NIPAs, government-sponsored enterprises, such as Fannie Mae and Freddie Mac, are treated as financial corporations in the business sector.[17] Beginning with 1970, interest paid by GSEs to the rest of the world will be excluded from the estimates of government interest paid to the rest of the world and will be included in corporate business interest paid to the rest of the world.[18] Although interest paid by GSEs to the rest of the world is currently included in government interest paid to the rest of the world, the NIPA estimate of total interest paid by government is based on source data that do not include interest paid by these enterprises; thus, the new measure will improve the consistency of the accounts by making payments to the rest of the world consistent with total interest paid. The largest GSEs issue debt to fund business activities in the private sector and to guarantee asset-backed securities held by private banks. Accordingly, the debt issued to finance business activities of GSEs are considered private sector activities and are classified as corporate businesses in the NIPAs. This change will better align the measures of business net interest and government interest paid with the NIPA classification of GSEs in the corporate business sector. Total federal interest payments will not be revised as a result of this reclassification (because as noted above, the total is based on source data that do not include payments by these enterprises), but the distribution of interest paid between domestic entities and the rest of the world will be revised.

Changes from previous annual NIPA revisions carried back

Mortgage interest paid for nonfarm permanent-site housing. As part of the 2011 annual NIPA revision, BEA improved its methodology for calculating the effective rate of interest on mortgage debt outstanding, beginning with the estimates for the first quarter of 2008.[19] As part of this comprehensive revision, BEA will incorporate this improved methodology back to 2005. In addition, BEA will further improve its estimates of mortgage interest by incorporating source data from the IRS Information Returns Program on loan discount points for owner-occupied permanent-

16. See *System of National Accounts 2008*, paragraph 7.110, 160.

17. GSEs include the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), Federal Home Loan banks, Federal Farm Credit banks, and the Federal Agricultural Mortgage Corporation.

18. The value added of government-sponsored enterprises is recorded in the business sector, and their profits (or losses) are included in corporate profits.

19. For more information on the 2011 NIPA annual revision, see Eugene P. Seskin and Shelly Smith, "Annual Revision of the National Income and Product Accounts," Survey 91 (August 2011): 6–30.

site housing, beginning with 1993, and by phasing out home improvement loans for nonfarm owner-occupied permanent-site housing. The effective rate of interest is applied to the value of mortgage debt outstanding published in the Federal Reserve Board's flow of funds accounts to derive estimates of mortgage interest paid. BEA's improved methodology relies on monthly mortgage servicing data on detailed loan characteristics, including loan type, loan performance, current interest rate, and unpaid balance. BEA will use this data to construct an effective rate of mortgage interest, beginning with the first quarter of 2005. In order to avoid breaks in the historical time series, the revised mortgage rate will be interpolated between the fourth quarter of 2001 and the first quarter of 2005. As a result of incorporating this change, BEA's estimate of the effective rate of mortgage interest will be lower than the currently assumed rate, will lower the level of mortgage interest paid, and will increase the level of rental income of persons.

The 2013 comprehensive revision also provides an opportunity for BEA to replace its current methodology for calculating loan discounts for mortgage interest paid, which includes contract interest and mortgage loan discounts, or "points." Points represent the present discounted value of 1 percent of the total loan value over the life of the loan. Currently, BEA's estimates of points are trend extrapolations based on data on origination fees and total fees and charges from the Federal Housing Administration and on historical data from the Department of Housing and Urban Development (HUD).[20] BEA will use data on loan discount points from the IRS Information Returns Program, beginning with 1999; to avoid breaks in the time series of mortgage interest, these estimates will be interpolated for 1993–1999.

Finally, BEA will adjust the estimate of mortgage interest to remove a double-count of the interest paid on home improvement loans. The Federal Reserve Board's flow of funds data on mortgage debt outstanding includes home improvement loans. However, BEA currently estimates the interest paid on these loans, and as a result, these loans have been double counted in the estimates of mortgage interest paid. Beginning with 2000, BEA will modify its estimate of mortgage interest paid by removing this double-counting.

PCE insurance estimates. The estimates of medical and hospitalization insurance, income loss insurance, and property income insurance in PCE that were introduced in the 2011 annual revision of the NIPAs will be improved.[21] For medical and hospitalization insurance services, improvements were incorporated back to 2004 in the 2011 annual revision of the NIPAs. For the 2013 comprehensive revision, BEA will estimate premium-to-benefit ratios from annual data on private health insurance, Medicare Advantage plans, and Medicaid Managed Care programs from A.M. Best for 2002 forward; for the estimates before 2002, this ratio is unrevised and is based on available Economic Census data. Beginning with 1992, BEA will also add the value of the A.M. Best data on Medicare Advantage plans and on Medicaid Managed Care programs to its data from the Agency for Healthcare Research and Quality's Medical Expenditure Panel Survey on private health insurance plans and from the U.S. Office of Personnel Management on federal health insurance plans in order to estimate total medical and hospitalization insurance premiums.[22] BEA will then apply the premium-to-benefits ratio to its estimate of total medical and hospitalization insurance premiums to derive estimates of insurance benefits.

For income loss insurance, improvements were incorporated back to 2003 as part of the 2011 annual NIPA revision. As part of the 2013 comprehensive NIPA revision, data from JHA Market Survey for Group Disability Premiums from General Re Life Corporation will be carried back in the estimate of PCE for income loss insurance beginning with 1997.

Finally, improvements to the deflators used to derive real PCE insurance services were incorporated back to 2008 as part of the 2011 annual NIPA revision. As part of the 2013 comprehensive revision, BEA will extend the use of specific producer price indexes (PPIs) from BLS to deflate premiums and expected losses in household insurance, motor vehicle insurance, and workers' compensation insurance back to 2002 and in medical and hospitalization insurance back to 2003. Household insurance will replace a weighted average of multiple consumer price indexes (CPIs) for expected losses and the CPI for tenants' and household insurance for premiums with the PPI for homeowner multiple peril insurance to deflate both premiums and expected losses. Motor vehicle insurance will begin to use the PPI for private passenger auto insurance as the

20. The tabulations from HUD were discontinued in 1997.

21. See Seskin and Smith, "Annual Revision of the National Income and Product Accounts."

22. The A.M. Best data have been available since 2002 and were incorporated beginning with 2002 in the 2011 annual NIPA revision. National Health Expenditure Accounts data from the Centers for Medicare and Medicaid Services will be used to derive estimates for 1992–2001.

deflator for both premiums and expected losses, replacing the CPI for motor vehicle insurance as the deflator for premiums and an implicitly derived deflator for expected losses. For workers' compensation insurance, the PPI for workers' compensation will be used to deflate both premiums and expected losses. Finally, medical and hospitalization insurance premiums and benefits will now use a single deflator, the PPI for health insurance, beginning with 2003; this will replace a BEA composite index of PPIs and CPIs for medical care goods and services used to deflate benefits and an implicitly derived deflator for premiums based on benefits.

Improved deflation of fixed investment for new light trucks. As part of the 2007 annual NIPA revision, BEA replaced the use of PPIs with CPIs in its deflation of private fixed investment and government new light trucks. This improvement was then incorporated beginning with the estimates for the first quarter of 2004.[23] As part of the 2013 comprehensive revision, BEA will extend this improved methodology back to 1987. The CPI, unlike the PPI, includes retail and wholesale margins. In addition, the CPI treats special financing incentives as financial transactions that do not affect prices; whereas the PPI treats such incentives as a price change. Thus, the CPI provides a better measure of the actual transaction price, which is more closely aligned with BEA's measure of current-dollar investment and will therefore produce a more accurate estimate of real motor vehicle output.

23. See Eugene P. Seskin and Shelly Smith, "Annual Revision of the National Income and Product Accounts" SURVEY 87 (August 2007): 6–30.

Updated Depreciation Rate for Movie Originals

In the March 2013 SURVEY, an article described the major changes in definitions and presentations that will be implemented as part of the upcoming 2013 comprehensive revision of the national income and product accounts.[1] In that article, BEA stated that it would use an annual rate of 3.8 percent to depreciate the value of movie originals. Since then, additional analysis of the data of sales of film libraries has resulted in BEA's increasing the annual depreciation rate to 9.3 percent. The depreciation rates for the other types of entertainment, literary, and artistic originals have not been modified.

BEA also stated that the prices used to deflate theatrical movies and long-lived television programs would include an adjustment for productivity growth. However, after additional analysis, BEA has decided that the prices used for deflation of these components will not include a productivity adjustment.

1. "Preview of the 2013 Comprehensive Revision of the National Income and Product Accounts: Changes in Definitions and Presentations," SURVEY 93 (March 2013): 18–20.