

Mid-Decade Strategic Review of BEA's Economic Accounts: An Update

In the February 1995 SURVEY OF CURRENT BUSINESS, BEA published, as part of its Mid-Decade Strategic Review, a draft plan for maintaining and improving the performance of its national, international, and regional accounts. Comments on the draft plan were invited to provide the basis for the preparation of the final version of the plan, which is the final step in the review process. This article summarizes the comments on BEA's draft plan that were expressed at a March conference of users of the accounts, presents a plan that reflects those and other comments, and outlines the first steps in implementing the plan.

The Users' Conference

ON MARCH 21, 1995, about 50 leading users of the economic accounts gathered to share their views on BEA's draft strategic plan. They were invited to comment on whether BEA had identified the issues correctly and had proposed the most effective steps to maintain and improve the accuracy, reliability, and relevance of the economic accounts over the coming decade.

After welcoming remarks by the president of the U.S. Chamber of Commerce, which hosted the meeting, and by the Secretary of Commerce, the Under Secretary of Commerce for Economic Affairs described the challenge of the statistical system as being similar to that of a tailor trying to measure a sprinting athlete for a suit of clothes: The statistical system must not only keep pace with a rapidly changing economy, but must also be twice as agile in order to measure it accurately. The Director of BEA then introduced the draft strategic plan, which was structured around three major issues: The need for new and improved output measures; the need for better measures of investment, saving, and wealth; and the need to fill gaps in the coverage of international transactions.

The first three sessions of the conference focused on the major issues BEA had identified. (The agenda for the conference is reproduced in the box on page 49.) Each of these ses-

sions started with an overview of the issues and proposed actions; after the overview, a panel presented views and reactions, and then the discussion was opened to all participants. A fourth session dealt with the challenge of improving statistics in the face of resource constraints.

Overall, the participants agreed with the issues BEA had identified and the actions that BEA had proposed for the next several years. Participants urged more emphasis on some elements than they thought BEA had placed on them, or they suggested a different priority; in a few areas, participants suggested additional actions. The rest of this section summarizes the views presented at the conference.

Session I: New and Improved Output Measures

Overall, participants endorsed BEA's plan to feature a measure of real GDP that avoids substitution bias. However, some participants were concerned about not having real GDP measures in which the components add to the totals, as is the case with the currently featured measure, which is based on fixed weights. Participants urged BEA to open a broader discussion with users on alternative measures of real GDP as the plan is implemented and to begin briefings, with attention to users' analytical and forecasting needs, on the new measure over the coming months.

BEA's quality-adjusted price indexes for computers, introduced in 1985, have caused problems for some users, particularly econometric modelers. However, most participants felt that BEA had made important progress when it introduced these hedonic indexes and that now it needs to develop improved price/output measures for other areas of the economy. There was some difference of opinion on the focus of these efforts. Among the views expressed were the following:

- BEA should move forward rapidly to develop improved price measures for high-technology products similar to those de-

National Conference on the Economic Accounts

U.S. Chamber of Commerce
1615 H Street NW
Washington, DC
March 21, 1995

Introductions (8:30–9:15)

- Welcoming Remarks, Richard L. Leshner, President, U.S. Chamber of Commerce
- Welcoming Remarks, The Honorable Ronald H. Brown, Secretary of Commerce
- Introduction, The Honorable Everett M. Ehrlich, Under Secretary of Commerce for Economic Affairs
- Overview of the Bureau of Economic Analysis Plan, Carol S. Carson, Director, BEA

Three pervasive issues that affect the economic accounts constitute priorities that our economic statistical system must address. They are: *the need to develop new and improved measures of output; the need to update measures of investment, saving, and wealth; and the need to measure better the international flow of goods, services, income, and capital.* The first three sessions of the program address in turn these three issues, focusing on the nature of the problem and commenting on the draft BEA plan (as presented in the February SURVEY OF CURRENT BUSINESS). The fourth session addresses how to “do more for less” by translating these issues into priorities for the statistical system.

I. The Need for New and Improved Output Measures (9:15–10:30)

Our economy's output is getting progressively harder to measure. This problem affects service sector outputs, technologically advanced products, and “products” such as financial derivatives. What steps should we take to address this problem and properly divide the nation's nominal expenditures between real output growth and price changes?

Overview: Joel Popkin, Joel Popkin and Associates

Panel Discussion

Chair: Allen Sinai, Lehman Brothers
Maurine Haver, Haver Analytics
Bruce Steinberg, Merrill Lynch

Group Discussion

II. Investment and the Capital Stock (10:45–12:00)

Good measures of the capital stock allow us to measure our wealth and the productivity with which we produce output. Measuring the capital stock requires methodological decisions regarding the role of intangible and public sector assets and the valuation of assets. What are the most pressing problems in this area and how should we address them?

Overview: Robert Eisner, Northwestern University

Panel Discussion

Chair: Michael Boskin, Stanford University
Barry Bosworth, Brookings Institution
Charles Hulten, University of Maryland

Group Discussion

Luncheon (12:15–1:30) Speaker: Alan Blinder, Federal Reserve Board

III. The U.S. Economy in Internationally Integrated Markets (1:45–3:00)

Increasing international economic integration creates issues for our measurements of goods, services, income, and capital flows. Trade in such relatively new areas as business services creates gaps in coverage in the national and international accounts. Thin coverage of capital flows leads to uncertainty about the economy's international position. What are the most important problems in these areas and what steps should we take to address them?

Overview: Edwin Truman, Federal Reserve Board

Panel Discussion

Chair: David Devlin, Citibank
John McLenaghan, International Monetary Fund
C. Fred Bergsten, Institute for International Economics

Group Discussion

IV. Improving Statistics in a Resource-Constrained World (3:15–4:15)

There's no such thing as a free lunch. In an era of stringent fiscal discipline, the statistical system must have a strong sense of priorities in order to maintain the effectiveness of its program spending. What are the most pressing priorities in the entire statistical system and in the BEA and Census programs that support the economic accounts? Which current programs may most merit reduced effort and, therefore, be a source of funding for other initiatives?

Panel Discussion

Chair: Joseph Duncan, Dun and Bradstreet
Janet Norwood, Urban Institute
Geoffrey Hewings, University of Illinois; Federal Reserve Bank of Chicago
Charles Waite, Consultant

Group Discussion

Summary and Closing (4:30–5:00)

BEA Reactions: Carol Carson

Closing Remarks: Everett Ehrlich

veloped for computers; telecommunications was specifically mentioned.

- BEA should undertake further definitional and conceptual work on output measures and the closely related price measures; health, finance, and insurance were the specific areas mentioned.

Other participants favored some combination of both courses. The consensus seemed to be that BEA should move forward, and several participants urged BEA to seek out partnerships with business and academia to draw on expertise and interest that would reinforce BEA's own efforts.

One of the clear themes at this session was the need to update and fill gaps in coverage, particularly those in services. (This same theme was echoed by the Vice Chairman of the Federal Reserve Board in his talk at lunch.) Although some suggested that partnerships with the private sector and use of existing private data might moderate the necessary increase in respondent burden, there was a recognition that new surveys of services would probably be required.

Several participants stressed the need for a frequently updated industrial classification and for more timely and better integrated industry accounts.

Among the other output-related steps in which participants expressed an interest were the following: Improving seasonal adjustments for volatile components and moving closer to international guidelines, especially the recently revised System of National Accounts (SNA). In addition, charging more for BEA's information to help fund the economic accounts and establishing a regularized process for internal and external review of the accounts were mentioned.

Session II: Better Measures of Investment, Saving, and Wealth

Despite general recognition of the empirical and conceptual difficulties involved, there was consensus on the need for more comprehensive measures of investment. Participants placed special emphasis on adopting measures within the context and discipline of the SNA. In addition, for investment estimates having a degree of uncertainty, or error, several orders of magnitude higher than that for estimates now in the accounts, participants thought satellite accounts would be the appropriate framework and that some indication of the degree of uncertainty associated with the estimates should be given.

More specifically, the following points were made:

- Purchases of structures and equipment by government, of computer software and selected other intangibles, and of consumer durables (even though the SNA does not treat them as investment) should be included as investment in the main accounts.
- Other kinds of investment—such as natural resources, research and development (R&D), and education—should be put in satellite accounts.

Some participants called upon BEA to go beyond the SNA: The SNA was seen as a good first step in expanding and updating the accounts, but the need for an expanded analytical framework dictates that BEA not stop there. For example, BEA should ultimately go beyond simply counting government investment and depreciation to the development of estimates of the service value of government capital.

Participants were in widespread agreement on the need for improved (more market-based) measures of depreciation and capital stocks, as well as for better integration of existing estimates: Estimates of investment, saving, and wealth in BEA's accounts and in the Federal Reserve Board's flow-of-funds accounts, as well as estimates by BEA of capital stocks and those by the Bureau of Labor Statistics of capital stocks and capital services. Such integration and improvement in the accounts was deemed especially important given the shift in attention from shorter term stabilization issues to longer term issues dealing with productivity, growth, and competitiveness.

In addition, several participants urged a review of BEA's treatment of government interest, and several expressed particular concern that issues dealing with private saving and the government deficit be addressed.

Session III: Filling Gaps in the Coverage of International Transactions

There was strong support for improving the measures of international transactions. The most widespread support was for better and more detailed estimates of trade in goods and services, especially when new products, new markets, or new transactors cause difficulties in making (nominal and real) estimates.

With respect to capital flows and positions, there was consensus on general priorities in cov-

erage, but some difference about the kinds of data that should be assembled by BEA.

- The first priority should be to fill gaps in the coverage of conventional financial instruments within portfolio investment. A lower priority should be put on covering derivatives and other new financial instruments. (There was more interest in measuring the services associated with these new instruments than in measuring the flows and positions themselves.)
- There was some sentiment for more detailed and more timely capital account data for use in analyzing capital flows and risk. However, several participants felt that assembling such data was better left to those concerned with monitoring the health of the financial system.

As mentioned, several of the suggestions were for additional detail or more frequent information. Among them were trade data on an establishment basis to supplement the residence-based data, detail on trade by State, quarterly (rather than only annual) estimates of the international investment position, and country detail on capital flows.

Session IV: Improving Statistics in a Resource-Constrained World

Most of the discussion focused on how BEA—and Federal statistical agencies in general—could operate more effectively. Several points echoed those made earlier in the day: Tapping into private-sector data, expanding use of electronic data collection and interchange, and charging more for Federal data. With respect to the relations among the Federal statistical agencies, some participants urged closer cooperation, including data sharing; others believed that consolidation of the agencies was the preferred option. Suggestions were made by several participants and by the Vice Chairman of the Federal Reserve Board about reducing resources from statistical programs in other agencies to support work in services and other high-priority areas.

Refined Plan and Next Steps

Table 1 summarizes the final version of BEA's Mid-Decade Strategic Plan. In view of the consensus among users regarding the elements in the draft strategic plan, the final version differs little from the draft. As noted above, participants at BEA's conference mainly suggested differences in

emphasis and priority to be placed on the various elements of the plan. In the area of output, for example, more prominence has been given to services; in investment, saving, and wealth, greater emphasis on expansion and improvement within the structure of the SNA; and in international transactions, higher priority to services and conventional financial transactions. However, given the general nature of the strategic plan, the priorities expressed by users are better seen in the steps laid out in the goals and milestones presented in **table 2** and the description that follows of the steps to be taken in the next year. These steps are divided among the major areas outlined in the strategic plan.

New and improved measures of output

Real GDP.—This year, in its comprehensive (benchmark) revision of the national income and product accounts (NIPA's), BEA will replace its fixed-weighted index as the featured measure of real GDP with an index based on the chain-type annual-weighted index that BEA introduced in 1989 and began publishing in 1992 as an alternative to the fixed-weighted index. (BEA will also replace its fixed-weighted price index with a chain-based price index.) BEA's schedule calls for release of the comprehensive revision by the end of 1995.

The chain-based index is superior to the fixed-weighted index in that it allows for changing relative prices and production patterns and thus provides unbiased comparisons of economic activity over long periods of time. Because it allows for regular updating of output and price weights, the chain-based index also has the advantage of eliminating a major source of the revisions in real GDP and price growth that occur as the fixed weights are updated at 5-year or longer intervals.

In order to understand users' analytical needs more completely and to brief users on the characteristics of the chain-based indexes, BEA will conduct a series of briefings on the tradeoffs among various alternative measures of real GDP for major user groups. In addition to these briefings, BEA will publish a series of articles in the SURVEY OF CURRENT BUSINESS, beginning this summer, that describe the new measure of real GDP and other aspects of the upcoming comprehensive NIPA revision. This summer, BEA will expedite the release of its existing chain-type annual-weighted index to include it in the regular GDP news release. Finally, immediately preceding the comprehensive revision, BEA will conduct

further news media briefings on the new featured measure.

Quality adjustment and definition of output.—BEA will seek to establish partnerships with users of the accounts, with the Bureau of Labor Statistics and other Federal agencies, and with international organizations to develop coordinated work plans for developing new methods and concepts for measuring changes in output

and prices in difficult-to-measure goods and services. For components of GDP that appear to be amenable to hedonic and other methods for separating price changes from quality changes and for which adequate commercial data are available, BEA will work with its private and public partners to develop new output and price indexes. For difficult-to-measure services—such as banking, insurance, financial and legal services, and management consulting services—BEA will work

Table 1.—Issues and Proposed Actions

Issues, problems, and uses affected	Quantitative indicators (e.g., potential size of gap, size of revision, size of component treated differently or added)	Statistical source(s) of the problem	Proposed actions
Need for new and improved output measures			
<p>Difficulties in measuring and defining certain components of real GDP. <i>Uses affected:</i> Analysis of economic growth, especially of economy's long-term, noninflationary growth potential; macroeconomic policy; forecasting; business, budget, and investment planning.</p>	<p>Possible understatement of growth, especially in fixed investment; potential for understatement in real GDP growth¹.</p> <p>No quantitative indicator of the difficulties of defining output.</p>	<p>Difficulties in measuring quality changes, especially in investment goods.</p> <p>Difficulties in defining output, especially in services.</p>	<p><i>Methodology and structure:</i> Extension of quality adjustment of prices used in real GDP, including hedonic work on goods amenable to such measurement: High-tech goods and nonresidential structures.</p> <p><i>Methodology and structure:</i> Further conceptual work on more difficult-to-measure services and goods.</p>
<p>Revisions to key components of GDP and national income. <i>Uses affected:</i> Macroeconomic policy; forecasting; business, budget, and investment planning.</p>	<p>1.4–9.4 percentage point (±) revisions to quarterly changes (SAAR) for key components of current-dollar GDP:² Change in business inventories, \$13 billion. Trade in goods and services, \$9 billion. Government purchases, \$8 billion. Consumer expenditures for services, \$6 billion. Consumer expenditures for goods, \$4–\$5 billion.</p> <p>1.4–8.5 percentage point (±) revisions to quarterly changes (SAAR) for key components of national income.</p>	<p>Inability of existing source data used in the quarterly estimates to capture change in the economy.</p> <p>Difficulties in seasonal adjustment</p> <p>Errors in projections for missing source data.</p>	<p><i>Data modification and extension:</i> More frequent updating of sample frames for existing surveys, including trade and manufacturing. <i>Data extension:</i> More frequent surveys for certain growing sectors such as international trade in services, medical care services, and State and local government purchases. <i>Data extension:</i> Extension of existing surveys—such as those for services, inventories, and employee compensation (including bonus payments)—to fill gaps in coverage.</p> <p><i>Methodology and structure:</i> Improvements in seasonal adjustment for volatile components such as inventories and trade in goods and services. <i>Methodology and structure:</i> Improvements in projections for components such as inventories, trade in goods and services, and bonus payments.</p>
<p>Overstatement of real GDP growth in recent years (and understatement in earlier years). <i>Uses affected:</i> Analysis of economic growth, especially of current growth relative to long-term, noninflationary growth; macroeconomic policy; forecasting; business, budget, and investment planning.</p>	<p>0–1.2 percentage point overstatement of quarterly rates of change in real GDP (average since 1991:I–1994:III, 0.4 percentage point)³.</p>	<p>Substitution bias, specifically the use of fixed weights (1987) inappropriate for the current period.</p>	<p><i>Methodology and structure:</i> Introduction of more current weights for real GDP for current estimates and more appropriate weights for historical estimates.</p>
<p>Outdated and inconsistent view of the structure and organization of production. <i>Uses affected:</i> Federal and State and local tax analysis and budget planning; business location and marketing studies; regional analysis; and industrial organization studies.</p>	<p>For industry classifications, inconsistencies across U.S. industries and incompatibilities among North American countries, with special attention needed for services, new and emerging industries, and high-tech industries¹.</p>	<p>Outdated and inconsistent industry classification system, source data, and industry accounts.</p>	<p><i>Methodology and structure:</i> Develop a new industrial classification system. <i>Data modification and extension:</i> Implement a new industrial classification system, starting with a restructuring of survey forms. <i>Methodology and structure:</i> Update and better integrate the input-output, industry, gross state product, and GDP estimates within the context of modernizing the accounts along the lines of the new international guidelines.</p>

See footnotes at end of table.

with its partners to develop new concepts and definitions.

Updating and filling gaps in services and other industries.—This year, the Census Bureau began releasing data from the 1992 Economic Censuses, including data from those service industries included for the first time. The expansion of the Censuses was the largest in over 40 years, adding over 90 new service industries. Incorporation

of these data will significantly improve services coverage for BEA's input-output tables, and data from the transportation, communication, and public utilities industries collected as part of the Censuses services expansion will be used this fall in constructing the "make" table for the 1992 benchmark input-output table. Although further detailed data from the Censuses on the new service industries will be required to utilize these new data directly in the comprehensive NIPA revision,

Table 1.—Issues and Proposed Actions—Continued

Issues, problems, and uses affected	Quantitative indicators (e.g., potential size of gap, size of revision, size of component treated differently or added)	Statistical source(s) of the problem	Proposed actions
Need for better measures of investment, savings, and wealth			
<p>Extend the concept and update the measurement of investment and wealth/capital stock. <i>Uses affected:</i> Analysis of sources of economic growth, productivity, returns to public and private investment; tax and expenditures policies.</p>	<p>Treating government spending on structures and equipment and government and business spending on computer software as fixed investment would raise investment and reproducible capital stock in national wealth by about 20 percent. Government capital, \$2,863 billion. Computer software, \$20–\$40 billion. Treating other candidates as investment in satellite accounts would raise wealth/capital stock, for example: R&D capital, \$1,050–\$1,380 billion. Natural resources, \$950–\$1,600 billion.</p>	<p>Exclusion of certain types of public and private expenditures that contribute to the nation's wealth and productive capacity.</p>	<p><i>Methodology and structure:</i> Expand the accounting for investment and wealth/capital stock by (1) inclusion of government spending on structures and equipment and government and business spending on computer software and other intangibles in investment in the national accounts and (2) inclusion of research and development and natural resources in satellite accounts, in line with the new international economic accounts guidelines.</p>
<p>Need for better integration and measurement of investment, saving, and wealth/capital stocks. <i>Uses affected:</i> Analysis of sources of economic growth, productivity, returns to public and private investment, and saving; tax and expenditure policies.</p>	<p>No quantitative indicator of the need to update measurement.</p> <p>3–9 percentage point differences—conceptual and statistical—between NIPA and flow of funds measures of personal saving rates⁴. Treating government "investment" in GDP consistently with international guidelines would eliminate more than half of the apparent 5.8 percentage point shortfall in U.S. versus European investment rates.⁵ For 1993, investment as a percent of GDP: U.S. rate is 13.7 percent; adding government "investment" raises the rate to 16.7 percent. Average rate for Europe is 19.5 percent.</p>	<p>Use of straight-line depreciation</p> <p>Lack of complete integration between financial and real accounts.</p>	<p><i>Methodology and structure:</i> Use of an improved theoretical basis for depreciation patterns and valuation methods.</p> <p><i>Methodology and structure:</i> Better integration of real and financial accounts in the context of modernizing the accounts in line with the new international economic accounting guidelines.</p>
Need to fill gaps in the coverage of international transactions			
<p>Gaps in the coverage of international trade in certain goods and services, income, and capital. <i>Uses affected:</i> Analysis of trade, monetary, and regulatory policy; forecasting; business and investment planning.</p>	<p>Gaps in key components: Trade in goods and services, as much as \$10–\$20 billion⁶. Capital flows and stocks, as much as \$100–\$200 billion⁶.</p>	<p>Inability of existing data collection methods to capture new markets and types of goods, services, and financial instruments and intermediaries.</p>	<p><i>Data modification and extension:</i> Extension of existing surveys to cover new products, services, and markets. <i>Methodology and structure:</i> Extension of data exchanges with other countries and central banks. <i>New data:</i> Development of new surveys such as for financial services and portfolio investment.</p>

1. For a discussion of quantitative indicators, see text.
2. Based on BEA revision studies; see text for details.
3. Based on BEA alternative output and price indexes; see text for details.
4. Based on historical difference between BEA's NIPA measures and the Federal Reserve Board's flow-of-funds estimates; most of the difference between the two series are conceptual, with statistical

differences ranging between 0 and 2.9 percentage points over the last 10 years.
5. Calculated from *Quarterly National Accounts*, compiled by the Organisation for Economic Co-operation and Development. "Europe" includes the 13 countries for which data were published.
6. Based on indicator series and past revisions for similar components.

Table 2.—Proposed Actions and Milestones in Implementation

Proposed actions	Milestones in implementation				
	1995	1996	1997	1998	1999
Need for new and improved output measures					
Extension of quality adjustment of prices used in real GDP.	Establish partnerships to expand work on quality adjustment.	Continue partnerships and begin to publish quality-adjusted measures for selected high-tech products.	Develop new estimates for nonresidential construction using model pricing or hedonic methods.	Continue work on extension of quality adjustments.	Publish new estimates for other difficult-to-measure services and goods.
Further conceptual work on difficult-to-measure goods and services.	Establish partnerships to expand conceptual work.	Continue work on new concepts and methods for measuring banking, insurance, and other financial services.	Publish new estimates for banking, insurance, and other financial services.	Identify and develop new concepts and methods for measuring other difficult-to-measure services and goods.	
More frequent updating of sample frames for existing surveys, more frequent surveys for services and other sectors, and extension of existing surveys to fill gaps in coverage.	Begin to utilize results from the services expansion of the Census. Begin work with other agencies to identify cost-effective actions.	Continue work, extending consultations to business community.	Conduct new and revised surveys using new sample frames and methods.	Incorporate data from new and revised surveys.	
Improvements in seasonal adjustments.	.....	Begin work with other agencies on improving seasonal adjustment. Begin work on revised seasonal adjustment as part of reengineering.	Incorporate revised seasonal adjustment methods for categories such as inventories and merchandise trade.	Incorporate revised seasonal adjustment methods for other key components.	
Improvements in projections for missing source data.	.....	Begin design work for built-in analytics and projections methods as part of reengineering.	Incorporate new methods into current quarter projections for categories such as inventories and merchandise trade.	Incorporate improved methods into current quarter projections for other key components.	
Introduction of new weighting schemes.	Introduce more current weights for real GDP.	.....	.....	.....
Develop a new industry classification system.	Present NAICS priority categories, including services, to industry groups and data users for comment and revision.	Continue work with industry groups and data users and finalize NAICS in time for 1997 Economic Censuses.	Work with Census to redesign forms on the basis of NAICS.	.....
Update and better integrate BEA's accounts within the context of new international guidelines.	.....	.....	Complete the 1992 benchmark input-output accounts 5 years after the reference year.	.....
Need for better measures of investment, saving, and wealth					
Expand the coverage of investment along the lines of new international guidelines.	Treat government spending on structures and equipment as investment.	Publish new estimates of computer software. Update and improve estimates of research and development in the satellite account. Extend integrated economic and environmental satellite accounts (IEESA's) to include selected renewable resource estimates and revise nonrenewable resource estimates.	Continue long-term improvements in computer software and work on other intangibles. Expand disaggregation of existing NIPA items in the IEESA's.		
Use of improved depreciation and valuation methods.	Introduce new depreciation and capital estimates.	Extend empirical work on used asset prices to other assets.	Extend empirical work on used asset prices to other assets.		
Integration of real and financial accounts.	Begin work with the Federal Reserve Board to develop multiyear plan for better integration.				

BEA will explore means of utilizing the data that are currently available.

Beginning this fall, the Economic Classification Policy Committee (which is composed of BEA, the Census Bureau, and the Bureau of Labor Statistics), working with Canada and Mexico, will finalize the proposed North American Industry Classification System (NAICS) and present the proposed structure to users for comments. NAICS will provide an updated and more consistent classification system, particularly in the areas of services, new and emerging industries, and high-technology industries.

Better measures of investment, saving, and wealth

As part of its comprehensive revision of the NIPA's, BEA will move toward a more com-

prehensive and consistent treatment of investment and capital by introducing the SNA treatment of government purchases of structures and equipment as investment and by introducing better theoretically based estimates of depreciation and capital stocks. These estimates will be the first steps in expanding and improving BEA's investment and capital stock estimates. The next steps will include further conceptual and empirical work on topics such as investment in computer software, better empirically based estimates of depreciation, the services of government capital, and consumers durables. BEA will also work on extending the concept of capital formation for investments such as R&D and natural resources within the structure of the SNA's system of satellite accounts.

Table 2.—Proposed Actions and Milestones in Implementation—Continued

Proposed actions	Milestones in implementation				
	1995	1996	1997	1998	1999
Need to fill gaps in the coverage of international transactions					
Extension and revision of existing surveys and forms to cover new services, products, and financial instruments.	Revise product code and data collection to include a separate category for computer software.	Develop initial estimates of the full market value of computer software based on revised methods and source data.	Update and improve estimates of the full market value of computer software.		
	.....	Work with the business community to develop revised and extended "selected services" survey to cover new, growing, and volatile services categories.	Conduct extended services surveys.	Process and incorporate results from extended surveys into national and international accounts.	
	Begin work with Treasury and the Federal Reserve on cost-effective means of collecting data on derivatives and new financial instruments.	Work with the business community to develop a revised survey to cover derivatives and new financial instruments.	Conduct revised survey to capture derivatives and new financial instruments.	Process and incorporate results from new derivatives survey into national and international accounts.	
Extension of data exchanges with other countries and central banks.	Continue work on internationally coordinated definitions for data exchanges.	Incorporate data, as appropriate, from countries adopting new standardized definitions.	Incorporate data, as appropriate, from countries adopting new standardized definitions.	Incorporate data, as appropriate, from countries adopting new standardized definitions.	Incorporate data, as appropriate, from countries adopting new standardized definitions.
Development of new surveys.	.....	Incorporate results from benchmark financial services survey and conduct annual financial services survey.	Incorporate results from annual financial services survey.		
	Process new benchmark survey of U.S. portfolio investment abroad.	Continue processing new benchmark survey of U.S. portfolio investment abroad.	Incorporate results from new benchmark survey of U.S. portfolio investment abroad.		
	Continue international coordination in development of international benchmark survey of portfolio investment.	Continue international coordination in development of international benchmark survey.	Finalize design and collection of internationally coordinated benchmark survey.	Collect and process data from internationally coordinated benchmark survey.	Continue processing results of internationally coordinated benchmark survey.

Filling gaps in the coverage of international transactions

Services and other trade flows.—BEA will complete tabulation of its new benchmark survey of international trade in financial services and will incorporate the results in the June 1996 annual revision of the balance of payments accounts. BEA will also continue its work with the Census Bureau to develop market-value estimates for exports and imports of computer software.

Capital flows and positions.—BEA will continue its coordinated work with other countries, international organizations, and the U.S. Treasury Department to improve estimates of capital flows and stocks, with special emphasis on Treasury's new benchmark survey of U.S. portfolio investment abroad, on extending existing data exchanges, and on developing measures and new and revised surveys for collecting data on new financial instruments. 