

Addressing Selected Issues in U.S. Bureau of Economic Analysis Estimates of U.S. International Services: Improved Measures of Insurance, Wholesale and Retail Trade, and Financial Services

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Abstract: The U.S. Bureau of Economic Analysis (BEA) compiles the official U.S. government statistics on U.S. international services. These data cover the two major international channels of delivery—cross-border trade in services and sales of services through locally established direct investment enterprises, or affiliates. The inclusion of sales through affiliates recognizes that the delivery of many types of services requires a local commercial presence. In 2002, BEA identified and described several issues in the measurement of three major types of services: insurance, wholesale and retail trade, and financial services. To address these issues, it has made changes in data collection and has developed new methodologies for measuring some services within these groups. This paper will describe these changes and, where possible, quantify how they have affected or are likely to affect the estimates. The improved measure of insurance services adopted for both cross-border trade and sales through affiliates better measures the risk transfer, financial intermediation, and auxiliary insurance services that insurers provide. New supplemental estimates of the distributive services of wholesalers and retailers will quantify the important role that they play in facilitating international trade. Developing estimates of certain implicit services not already included in the cross-border trade data could lead to a more complete measure of financial services. The inclusion of banking services in the estimates of sales through affiliates will close a significant gap in the data on sales through affiliates.

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BEA compiles the official government statistics on U.S. international sales and purchases of private services. These estimates take a broad perspective by covering the two major channels of delivery—cross-border trade in services and sales of services through locally established direct investment enterprises, or affiliates. This broad perspective recognizes the key role played by affiliates that are located in—but are owned outside—the markets they serve in the delivery of services internationally. It is also consistent with the view many firms take of their world-wide operations.

BEA has undertaken a long-term improvement program for international services. For estimates of cross-border trade in private services, the estimates have been upgraded by building on existing data series; by initiating new surveys; by improving existing surveys; and by identifying outside information that could be used to develop new estimates. For sales of services through affiliates, estimates have been developed by adding questions to the existing surveys on the operations of multinational companies.

These ongoing efforts to improve its data on U.S. international sales and purchases of services are partly in response to the increasing importance of these transactions in the world economy. These transactions have been growing rapidly, making it increasingly important to have complete and economically meaningful measures of them. The improved measures of the nominal value of exports and imports of services, accompanied by improved price indexes for traded services being developed by the Bureau of Labor Statistics, are essential for analyzing the impact that this growing trade in services has had, and will likely have, on the U.S. economy. In addition, international guidelines covering these transactions have become more detailed and

specific in recent years.¹ These guidelines recommend the services to be identified and recommend measures that weigh the need for theoretically correct measures against the practical difficulties in developing such measures. Finally, the addition of services to the agenda in trade negotiations has required statistics to support the negotiations and assist in monitoring the resulting agreements, which, for services, cover sales through affiliates as well as cross-border trade.

The phase of the improvement program for international services discussed in this paper has focused on improving the measurement of three important services: insurance, wholesale and retail trade, and financial services. In a June 2002 article, BEA identified issues affecting the estimation of these services, including important data gaps and some estimates that were of limited usefulness to data users (Whichard and Borga, 2002). An example of a data gap is that the estimates of services sold through affiliates did not cover bank affiliates because these affiliates were not required to report data on their sales of services to BEA. An example of a measure with limited usefulness is insurance services—cross-border trade in insurance services was measured as the difference between premiums and claims, which in a given period may bear little or no relationship to the value of services provided and can even be negative.

Not only will the improved measures of insurance, wholesale and retail trade, and financial services provide more complete and accurate estimates of U.S. international sales and purchases of services, but the new measures also will be more comparable to the measures used in BEA's National Income and Product Accounts and industry accounts. This last point is

¹ Guidance for compiling statistics on trade in services for the international transactions accounts is provided in *Balance of Payments Manual*, 5th edition. More detailed guidance is provided in the *Manual on Statistics of International Trade in Services*, which provides guidance for compiling data on both cross-border trade in services and services delivered through affiliates. For cross-border trade, MSITS is consistent with BPM5 but more detailed. For sales through affiliates, MSITS' recommendations draw on the 1993 *System of National Accounts*.

important because it will allow for the share of total U.S. domestic output produced by foreign-owned U.S. affiliates and by U.S. parent companies to be estimated. In addition, for U.S. MNCs, it will allow their total output of these services to be estimated, as well as the shares accounted for by the U.S. parent and its foreign affiliates.

To address the issues identified in Whichard and Borga (2002), BEA has developed new methodologies, initiated new data collections, and drawn on additional data from outside sources. These actions have closed some data gaps and resulted in improved estimates of some services. Some of these changes have already been implemented; others are still being developed.²

This paper discusses changes to the measurements of three important types of services: insurance services, wholesale and retail trade services, and financial services. The paper begins with an overview of the data BEA provides on international services and a general discussion of the limitations of the different types of data. It then considers the issues relevant to the measurement of the three specific types of services identified above.

I. Overview of BEA's data on international services

BEA's data on international services cover the two distinct channels by which services are sold in international markets: cross-border trade and sales through affiliates. Cross-border exports and imports represent trade in the conventional sense and cover transactions between residents of the United States and residents of foreign countries. They include both transactions between unaffiliated parties and trade within multinational companies (intrafirm trade). These estimates

² Whichard and Borga (2002) discussed measurement issues concerning two other services not covered in this paper: utilities and construction.

are included in the International Transactions Accounts. Most of the data used to produce these estimates are derived from BEA surveys.

Sales of services through affiliates represent services sold through the channel of direct investment. The estimates include sales to foreign residents through the foreign affiliates of U.S. MNCs and sales to U.S. residents through the U.S. affiliates of foreign MNCs. These sales are not considered U.S. international transactions because, under the residency principle of balance-of-payments accounting, affiliates of multinational companies are regarded as residents of the countries where they are located rather than of the countries of their owners. Thus, sales abroad by the foreign affiliates of U.S. MNCs are transactions between foreign residents, and sales in the United States by the U.S. affiliates of foreign MNCs are transactions between U.S. residents.³ However, the direct investors' shares of the profits earned on these sales are recorded as U.S. international transactions.⁴ The data on sales of services through affiliates cover majority-owned affiliates and are derived from benchmark and annual surveys of direct investment that require affiliates' sales or gross operating revenues to be distributed among sales of goods, sales of services, and investment income

The two channels of delivery typically differ in their impacts on an economy. For example, U.S. cross-border exports will normally have a greater impact on the exporting economy than the equivalent sales through foreign affiliates because most, if not all, of the

³ Data are collected on affiliates' sales of services to all destinations, but the estimates of international services focus on sales abroad by foreign affiliates of U.S. companies and sales in the United States by U.S. affiliates of foreign companies—that is, on the sales that are not included in U.S. cross-border exports or imports.

⁴ BEA produces an annual, ownership-based supplement to the current account portion of the U.S. International Transactions Accounts that highlights the participation of MNCs in the international markets for goods and services through both cross-border trade and sales through affiliates. See, “An Ownership-Based Framework of the U.S. Current Account, 1993-2004,” *Survey of Current Business*, January, 2006, p. 43-45.

income generated by the production accrues to labor and capital supplied in the United States. In contrast, for sales through foreign affiliates, only the U.S. direct investors' share in profits accrues to the United States; the other income, including compensation of employees, typically accrues to foreigners. Furthermore, to provide a complete picture of the economic impact of affiliates' activities would require data on their purchases of services as well as their sales. However, information on company record-keeping practices suggests that it would be difficult to collect these data from the companies that report on BEA's surveys.

In 2005, U.S. exports of private services were \$360.3 billion, and U.S. imports of private services were \$287.6 billion, and in 2004, U.S. exports of private services were \$323.4 billion, and U.S. imports of private services were \$258.1 billion. In 2003 (the most recent year for which data are available), U.S. MNCs sold \$477.5 billion of services to foreigners through their nonbank majority-owned foreign affiliates (MOFAs), and foreign MNCs sold \$381.4 billion of services through their nonbank majority-owned U.S. affiliates (MOUSAs) (Nephew, Koncz, Borga, and Mann, 2005). Figure 1 shows U.S. international sales and purchases of services since 1987. As discussed elsewhere in this paper, there are differences in measurement and coverage between the two data series that make comparisons imprecise. Despite these differences, it is clear that sales through affiliates have been growing more rapidly than cross-border trade. In addition, the large gap between cross-border trade and sales through affiliates suggests that the latter is the larger channel of delivery. This could be due to the fact that selling through locally established affiliates is the only practical method of delivery for many types of services because of the need for proximity in both time and space between the consumer and producer. In addition to measurement and coverage differences, comparisons of the relative size of the two modes of delivery cannot be made for specific types of services because the data on cross-border

trade are classified by type of service, whereas the data on sales of services through affiliates are classified by the primary industry of the affiliates.

II. Insurance

Insurance companies' output consists of three components. First, insurers provide financial protection against the realization of specified risks faced by their policyholders. Second, they provide financial intermediation services; that is, insurers collect funds from policyholders, which are held as reserves, and invest these funds in financial or other assets. Third, insurers provide auxiliary insurance services, such as claims adjustment, actuarial services, and salvage services.

Economic models of the behavior of insurance companies assume that insurers maximize their profits by setting premiums given their expectations about future claims and investment income. The improved measure of insurance services will build on these models and will include all components of the services provided by insurers.

In the discussion that follows, the improved measure of insurance services will be discussed first for cross-border trade and then for sales through affiliates. Each section will begin with a description of the previous measures of insurance services, the shortcomings of these measures, and then a description of the changes that were, or are being considered, to the measure of insurance services.

A. Cross-border trade

Prior to 2003, trade in insurance services was measured as premiums less actual losses (claims). The rationale behind this measurement of insurance services was that the portion of premiums remaining after provision had been made for losses could serve as a proxy for the operating

expenses and profits—that is, the output—associated with this activity. The view of the insurance company that justified this measure was essentially that of a risk-pooling administrator, and premiums less losses provided a rough proxy for the financial intermediation and administrative costs (and profits) associated with this activity. Under this view, only the portion of premiums not paid out in losses was treated as output of the insurance industry. The amount used for loss settlements simply reflected funds that, with the help of insurance companies, flowed from all policy holders to those policyholders who suffered losses.

A major shortcoming of the premiums less actual losses measure is that losses can fluctuate from period to period in a way that bears little relation to the services provided. The fact that unusually large claims may be paid in a particular period does not reduce the value of services provided (or turn it negative), nor do unusually small claims raise the value of services provided. Hurricanes, floods, oil spills, and terrorist attacks are perils whose presence or absence may cause large fluctuations in claims that do not appear to correspond to changes in the services provided or received. This measure of output also missed two important components of insurance output: investment income earned on technical reserves and auxiliary insurance services.

In 2004, imports of insurance services were \$29.9 billion, and exports were \$6.1 billion. U.S. residents paid foreign insurers \$67.1 billion in premiums and recovered \$35.0 billion in losses; foreign residents paid U.S. insurers \$18.0 billion in premiums and recovered \$10.9 billion in losses.

One distinguishing feature of cross-border trade in insurance services is the important role played by reinsurance. Reinsurance is the ceding of a portion of a premium to another insurer who then assumes a corresponding portion of the risk. It provides insurers with a tool for

managing their risk exposure, including exposure to liability for events with such a high degree of risk or liability that a single insurer is unwilling or unable to underwrite insurance against their occurrence. In 2004, reinsurance premiums accounted for 95 percent of all U.S. payments of premiums and 83 percent of all U.S. receipts of premiums.

To measure the services provided by insurers more accurately and completely, three changes were made to BEA's estimate of U.S. trade in insurance. In the order they are discussed below, actual claims were replaced by a measure that captures the long-term relationship between premiums and claims, which will be termed 'normal' losses; a premium supplement, representing the investment income earned on reserves, was added to the measure; and the treatment of commissions and auxiliary insurance services was changed.

1. Premiums less normal losses

To improve the estimates of imports and exports of insurance services (which also reduces the large, random swings due solely to fluctuating losses), rather than measuring insurance services as premiums less actual losses, the new estimates are measured as premiums less 'normal' losses, where normal losses are inferred from the relationship between actual losses and premiums averaged over several years (Bach, 2003). One of the key factors for insurers when setting premiums is their expectations about the losses that will have to be paid. In a practical sense, a proxy for insurers' expectations must be used because no information is available on what companies expect losses to be. A readily available indicator is the average of past actual losses in relation to premiums.

Normal losses are comprised of losses that occur regularly and a share of catastrophic losses that occur at infrequent intervals. Separate estimates are made for these two types of losses. For regularly occurring losses, a 6-year arithmetic moving average of the ratio of actual

losses to premiums is used. Data for the current period are not included in the average, in order to achieve an *ex ante* concept of regularly occurring losses. Because comprehensive source data for insurance begin in 1986, estimates based on a 6-year average begin in 1992.

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

Separate estimates of normal losses are calculated for primary insurance and for reinsurance. There is reason to think that the relationship between premiums and losses varies systematically by type of insurance (primary insurance vs. reinsurance) because administrative and financial intermediation services likely differ for these two types of insurance. Primary insurance is more retail in nature, selling and writing a large number of individual policies to customers, and, thus, may be expected to have higher administrative and other costs than reinsurance, which involves fewer, larger transactions between insurance companies. As such, the ratio of losses to premiums is lower for primary insurance than for reinsurance because more of its premiums are devoted to administrative expenses and less to covering losses.

2. Premium supplements

Insurance premiums would be higher if insurance carriers were unable to earn income on funds held in reserves against future claims. In recognition of this fact, the 1993 *System of National*

Accounts (SNA) included the income earned on technical reserves in its recommended measure of the output of the insurance industry. Technical reserves consist of prepaid premiums and reserves against outstanding losses; they are regarded as assets of the policyholders and not of the insurance company. Thus, investment income earned on the insurers' own funds is excluded from income on technical reserves. Insurers invest technical reserves, and the investment income earned on them is used to defray the expenses of providing insurance. The income is treated as accruing to the policyholders, who pay it back to insurers as supplements to cover the full cost of the insurance.

Similar to the use of normal losses in the new measure of trade in insurance services, estimates of the expected investment income on the technical reserves of insurance companies is used as a measure of premium supplements. The use of expected, rather than actual, investment income to measure premium supplements is intended to capture the *ex ante* concept of premium supplements; it is this expectation that insurance companies use in setting premiums to cover their expected losses and other costs.

Estimates of premium supplements use the same data and similar methodology employed in the NIPAs (Chen and Fixler, 2003). Data on investment income are from *Best's Aggregates and Averages: Property-Casualty* by A.M. Best Company. A.M. Best provides data on investment gains that are attributable to insurance transactions, as opposed to investment gains attributable to the insurers' own funds. The estimate of premium supplements for a given year is the result of multiplying an expected investment gains to premiums ratio by the actual premiums observed for that year. The ratio is a weighted moving average of the previous five years of ratios of actual investment gains to premiums. In the cross-border trade data, the expected investment gains to premiums ratio is estimated separately for primary insurance and

reinsurance, in recognition of the fact that reinsurers may have different ratios of net gains to premiums than primary insurers.⁵ The different ratios may arise because reinsurers hold larger reserves than primary insurers or because they hold them for a longer time.

Once these ratios have been calculated, they are applied to the estimates of premiums receipts for primary insurance and reinsurance, which are obtained from BEA surveys of companies, to derive premium supplements receipts from foreigners. Because similar data on investment income of foreign insurance companies are not available for payments, the ratio used for receipts is applied to the estimates of premium payments to foreigners in order to estimate premium supplements payments to foreigners.⁶

3. Commissions and auxiliary insurance services

Auxiliary insurance services cover such items as agents' commissions, actuarial services, insurance brokering and agency services, and salvage administration services. Under the *Balance of Payments Manual*, 5th edition (BPM5), insurance services should include agent commissions, and under the *Manual on Statistics of International Trade in Services* (MSITS), auxiliary insurance services should be included in the measure of insurance services. Beginning in 2001, BEA's surveys collected a full range of auxiliary insurance services as a single distinct category. Previously, these services had been covered in a fragmentary way as parts of other services. For example, data on claims adjustment services were collected as a part of legal services, and data on actuarial services were collected as part of a residual ("other") category that

⁵ For details on the estimation of the expected investment gains to premiums ratios, see Bach, 2004, p. 60-62.

⁶ Because the balance of payments employs a double-entry accounting system, the value of the premium supplement transactions entered in the trade in services account must be offset elsewhere in the international transactions accounts. In this case, the offsetting entry is made by recording the value of supplements as income received by policyholders in the income accounts.

included other services as well. Also beginning in 2001, premiums were reported gross of commissions on BEA's surveys, and in the estimates, commissions were included in services auxiliary to insurance, rather than being subtracted from premiums, as was the case previously.

4. Comparison of the previous measure with the new measure

Figure 2 compares the previous measure—premiums less actual losses—to the new measure—the sum of (1) premiums less normal losses, (2) premium supplements, and (3) auxiliary insurance services—for U.S. exports of insurance services from 1992 to 2004, and figure 3 shows U.S. imports of insurance services from 1992 to 2004. They show that the new measure avoids the dramatic swings in the estimates of insurance services due to fluctuating losses.

While premiums supplements are a significant addition to the estimates of insurance services, the majority of insurance services are accounted for by the premiums-less-normal-losses component of the new measure.

B. Sales through affiliates

One of the largest services sold through affiliates is insurance. In 2003, the most recent year for which data are available, the MOUSAs of foreign MNCs classified in insurance sold \$83.3 billion in services to U.S. residents, and the MOFAs of U.S. MNCs classified in insurance sold \$80.4 billion of services to foreigners.

These estimates result from BEA's current methodology, which measures sales of insurance services through affiliates as services-related operating revenues. These revenues consist mostly of premium income, but they also include fees for auxiliary insurance services, such as claims adjustment or actuarial services. The current measure does not capture some important aspects of insurance services. First it does not include a deduction for the losses paid

out by insurers. In this regard, it differs from the measures of insurance output recommended for economic accounting purposes and those used to measure insurance services in the International Transactions Accounts (ITAs) and the National Income and Product Accounts (NIPAs). Second, it does not include premium supplements, which may be considered as an additional source of funding for the services insurers provide.

A more economically meaningful measure of the insurance services supplied through affiliates would include premiums less *normal* losses. This measure would also include an estimate of premium supplements. There is no need to change the current reporting to capture services auxiliary to insurance because revenues reported on BEA's surveys include receipts earned from providing auxiliary insurance services.

To allow construction of this type of measure of insurance services, BEA collected data on the premiums earned and losses paid by MOUSAs with operations in insurance on the 2002 benchmark survey of foreign direct investment in the United States (FDIUS). These data items were subsequently added to the follow-on annual surveys of FDIUS and the surveys of U.S. direct investment abroad (USDIA), beginning with the 2004 benchmark survey of USDIA. At the time of this writing, only the data from the 2002 and 2003 surveys of FDIUS are publicly available; the 2004 surveys are still being processed. These new data will be combined here with data on the domestic insurance industry from A.M. Best to estimate the new measure of insurance services sold through MOUSAs.

One significant difference from the cross-border trade data is that the data on sales through affiliates are classified by the primary industry of the affiliate. BEA's industry codes for affiliates divide insurance providers into two broad types of insurance: non-life and life insurance. Non-life insurance covers all risks except for death: damage from accidents, fire,

natural disasters, and so on. Sales of services by affiliates classified in insurance reflect sales of insurance services, but may also include sales of other types of services. Likewise, it is possible for affiliates in other industries to have secondary operations in insurance. The new measure of insurance services will apply to all affiliates with insurance operations regardless of their industry classification.

1. Premiums less normal losses

As for the estimates of cross-border trade in insurance, the estimates of sales of insurance services through affiliates will use a measure of normal losses as a proxy for insurers' expectations. Normal losses consist of two parts: regularly occurring losses and a share of catastrophic losses. Separate estimates are made for these two types of losses.

Regularly occurring losses are measured as the average of past actual losses in relation to premiums earned from annual data over a 6-year period using an arithmetic moving average. This is identical to the measure of regularly occurring losses used in the cross-border trade estimates. To avoid having to wait until 6 years of data have been collected from MOUSAs to produce the first estimates, and to improve correspondence with the NIPA measure of insurance services of which these are a subset, data on the entire domestic insurance industry are used to construct the estimates.

If it were determined that a catastrophe affected the insurance sold through MOUSAs in a particular year, the same procedures that are followed for cross-border trade could be followed for sales through affiliates. Namely, an estimate of catastrophic losses would be developed and would be removed from the actual losses used in calculating the normal losses in the year in which the catastrophic losses occur. The total of the catastrophic losses would then be spread over the next twenty years.

Because no catastrophic losses have been identified for 2002 or 2003, normal losses consist solely of regularly occurring losses. Table 1 shows the premiums earned and actual losses paid for the property and casualty and life and health insurance industries as reported by A.M. Best for the years 1996—2001. Beginning in 2002, the table also shows data reported by MOUSAs. The 6-year moving average of the ratio of losses to premiums, or the normal loss ratio, was 76.1 percent in 2002. The normal loss ratio is applied to the premiums earned by MOUSAs to derive the measure of normal losses. Applying the 76.1 percent normal loss ratio to the \$63.3 billion in premiums earned,⁷ yields normal losses of \$48.2 billion in 2002. The last column shows the calculation of premiums earned less normal losses; in 2002, premiums earned less normal losses were \$15.1 billion.

2. Premium supplements

Because BEA does not collect data on the investment income earned on technical reserves separately from other investment income, its data on total investment income earned by affiliates will have to be combined with information on the domestic insurance industry to estimate the premium supplements for MOUSAs.

Premium supplements will only be estimated for non-life insurance. Premium supplements are the investment income earned from insurers investing policyholders' assets on their behalf and, then, using that income to defray the insurers' expenses. While it is true that life insurers invest policyholders' assets on their behalf, much of the investment income earned

⁷ On the 2002 benchmark survey of FDIUS, only MOUSAs filing the long form—those with total assets, sales or gross operating revenues, or net income exceeding \$125 million for fiscal year 2002—were required to report the data on premiums earned and losses paid. For those MOUSAs that did not report the data on premiums earned, their premiums were estimated by assuming that premiums accounted for the same share of sales in insurance as they did for those MOUSAs that had reported these data.

on these assets is allocated to actuarial reserves to meet the capital sums guaranteed to individual policyholders under the life insurance policies and is, thus, unavailable for other uses (these sums will eventually be paid to the policyholders or their beneficiaries).⁸ Because no data were available to apportion life insurers' investment income between earnings on technical reserves versus their own funds, nor to further divide it into the investment income allocated to actuarial reserves and that used to defray their expenses, it was decided to omit the premium supplements from the measure of output for the life insurance operations of affiliates.⁹ Thus, the measure of life insurance services supplied through affiliates will consist only of premiums less normal losses and auxiliary insurance services.

The first step in estimating the premium supplements is to determine the amount of investment income earned by MOUSAs that is attributable to their non-life insurance activities. In BEA's data on direct investment, investment income consists of interest income and dividends. Overall, most investment income earned by affiliates is attributable to their operations in finance (except depository institutions) and insurance. So, for each MOUSA, the

⁸ In addition, some life insurance policies include an explicit element of savings in which policyholders make payments to insurance companies that are held in personal accounts. The investment income credited to these accounts is excluded because it is paid directly to the individual accountholders.

⁹ In the estimates of personal consumption expenditures (PCE) in the NIPAs, the output of life insurance companies is estimated as their "operating expenses for the package of services provided. These imputed fees, which include profits in the case of stock companies, appear as 'expense of handling life insurance' in PCE." U.S. Department of Commerce, Bureau of Economic Analysis, *Personal Consumption Expenditure*, 1990, p. 12.

The expenses of handling life insurance equal value added plus purchased materials and services. The measure of value added can be constructed from the data reported to BEA, and it would be possible to estimate purchased materials and services by affiliates with life insurance operations by subtracting premiums earned, interest received, and value-added from their gross operating revenues. However, these estimates would represent value added and purchased materials and services for the enterprise, and, for those affiliates with operations in multiple industries, it would be difficult to estimate the portion of their operating expenses attributable to their life insurance operations.

share of non-life insurance sales in its total sales in nonbank finance and insurance is calculated. This share is then multiplied by its reported investment income to derive an estimate of its investment income from its operations in non-life insurance. For both 2002 and 2003, investment income of \$11.8 billion was attributed to the non-life insurance activities of MOUSAs.

Now that investment income attributable to non-life insurance activities has been estimated, the next step is to estimate how much of that income was earned on technical reserves. Because none of the data collected on BEA's surveys of FDIUS could be used to estimate the share of investment income earned on technical reserves, it is assumed that MOUSAs earn the same share as the entire domestic insurance industry. This assumption ignores differences between MOUSAs and the entire industry that may arise, for example, if MOUSAs tended to be larger or were concentrated in particular lines of insurance. Using data in *Best's Aggregates and Averages-Property/Casualty Insurance, United States*, the ratio of investment income earned on technical reserves to total investment gains for the entire U.S. insurance industry is calculated. This share is then multiplied by MOUSAs' investment income attributable to non-life insurance to derive the estimate of premium supplements. In both years, just under half of all investment income earned in the U.S. non-life insurance industry appears attributable to earnings on technical reserves. Thus, in both years, just under half of the investment income attributable to the non-life insurance operations of MOUSAs is assumed to be earnings on their technical reserves. These earnings are the premium supplements.

The premium supplements described here differ from those in the NIPAs and ITAs, both of which use a methodology that computes *expected* investment income. Estimation of this expectation depends on developing a relationship between investment income on technical

reserves and premiums. That approach was not adopted here because the data for U.S. affiliates do not distinguish between premiums for non-life insurance and those for life insurance. Instead of expected investment income, the premium supplements for affiliates will be actual investment income.

3. Incorporating the changes into the estimates of sales of services through affiliates

This section explains how the new measure of insurance could be incorporated into the estimates of sales of services through affiliates; table 2 illustrates the steps. First, the premiums earned are subtracted from total sales of services by MOUSAs with operations in insurance. The remainder represents sales of services that are either auxiliary to insurance or are for other services.¹⁰ Then, the two new elements of the measure of insurance services—premiums less normal losses and the premium supplements for non-life insurance—are added to the remainder. In table 2, these calculations are done separately for worldwide sales of services and for sales to U.S. residents. In apportioning the new elements of the measure of insurance services between sales to U.S. residents and sales to the rest of the world, it is assumed that the share of these new elements provided to U.S. residents is the same as the share of sales to U.S. residents in total sales of services by these affiliates. For 2002, the current estimate of sales of services to U.S. residents for these MOUSAs is \$88.2 billion. Of this, \$27.9 billion were sales of auxiliary insurance services or of services other than insurance. Under the proposed methodology, the two new elements of the measure of insurance services sum to \$20.8 billion, of which \$19.8 billion are estimated to be sold to U.S. residents. Adding this figure to the sales of other services yields a

¹⁰ The auxiliary insurance services in the remainder represent services charged for explicitly by the affiliate; any auxiliary insurance services policy holders purchase implicitly by paying premiums for policies are excluded from the remainder and are included in the measure of insurance services.

new estimate of sales of services to U.S. residents for these MOUSAs of \$47.7 billion. The new estimate is \$40.4 billion less than the current estimate.

III. Wholesale and retail trade

The wholesale and retail trade industries provide distributive services—that is, selling, or arranging for the sale of, goods to intermediate and final users. Wholesalers sell goods, or arrange for the sales of goods, to retailers, intermediate users, and final users (other than persons). Distributive services provided by wholesalers include merchandise handling, stocking, selling, and billing. Retailers sell goods primarily to persons. In the SNA and the NIPAs, distributive services are measured as trade margins—wholesale or retail sales of goods less the cost of the goods resold. In estimating the gross output of wholesale and retail trade, the goods for resale are excluded from the value of intermediate inputs consumed in production by wholesalers and retailers because these goods are subject to only minimal processing, such as cleaning or packaging.

These industries are important service industries in the U.S. economy; in 2004, they accounted for almost 13 percent of GDP (Strassner and Howells, 2005). In contrast, the wholesale and retail trade industries are hardly noticeable in the published data on U.S. international sales and purchases of private services. However, this does not indicate a lack of importance of these industries. Rather, it reflects the fact that the value of the distributive services they provide is embedded in the value of goods they sell through international channels, either in the value of exports and imports of goods or in the value of sales of goods through affiliates.

A. Cross-border trade

While it is not identified as such for economic accounting purposes, cross-border trade in distributive services could be said to occur, for example, when a wholesaler exports a good. Although a significant portion of U.S. exports and imports may be arranged or otherwise facilitated by wholesalers and retailers, particularly the former, the estimates of cross-border trade in services do not include estimates of the distributive services provided by exporters because those services are included in the value of trade in goods. Exports are valued at the f.a.s. (free alongside ship) value of the merchandise at the U.S. port of exportation, including inland freight, insurance, and other charges incurred in placing the merchandise alongside the carrier at the U.S. port. Imports are valued at the price paid or payable for merchandise at the foreign port of exportation. Thus, any distributive services (as well as the value of other services that facilitate trade, such as transportation from the factory to the port), are included in the accounts for cross-border trade in goods and not those for cross-border trade in services.¹¹

The inclusion of these services in the value of merchandise trade follows the treatment recommended in BPM5 and reflects the fact that data on cross-border trade are collected by product. In this case, the product is an exported good, and its value includes the distributive services used to arrange for its export. BEA has no intention of changing the basis on which merchandise trade is valued in the international accounts. However, because there is interest in the importance of wholesalers and retailers in facilitating international trade, rough estimates of the distributive services associated with merchandise trade are constructed with data from the 2002 Economic Census.

¹¹ The transportation services involved in getting the good from the port of exportation to the importing country are included in cross-border trade in services.

According to the 2002 Economic Census (U.S. Census Bureau, 2002 Economic Census, Wholesale Trade, 2005), 3.3 percent of all sales by U.S. wholesalers were exports, or about \$152.9 billion. In that year, wholesalers provided an average of 22.3 cents of distributive services for every one dollar in sales. Applying this average to their exports yields \$34.1 billion in distributive services embodied in the value of goods exported by U.S. wholesalers. Not surprisingly, exports accounted for a smaller share of total sales of retailers, at 0.1 percent (U.S. Census Bureau, 2002 Economic Census, Retail Trade, 2005). This corresponds to about \$3.1 billion worth of exports. In 2002, retailers had an average of 28.7 cents of distributive services per dollar of sales, resulting in \$0.9 billion of distributive services embodied in the value of goods exported by retailers. Summing the two estimates yields \$35.0 billion in distributive services embodied in exports of goods, compared to total exports of private services published in the ITAs in 2002 of \$279.2 billion. BEA's annual Input-Output accounts estimate the wholesale trade margin on all exports. In 2002, this estimate was \$65.4 billion, indicating that the estimate derived above likely understates the value of distributive services embodied in exports of goods.

Data are not available on either the share of imports arranged by foreign wholesalers and retailers or on the margins earned by them. Therefore, it is assumed that foreign wholesalers accounted for the same share of U.S. imports as U.S. wholesalers did of U.S. exports. The \$152.9 billion in exports by U.S. wholesalers accounted for 22.4 percent of all U.S. exports in 2002. Assuming that foreign wholesalers accounted for the same share of U.S. imports yields an estimate of imports facilitated by foreign wholesalers of \$260.9 billion. Assuming that foreign wholesalers had the same average distributive services per dollar of sales as U.S. wholesalers (22.3 cents per dollar of sales) yields an estimate of distributive services embodied in imports from foreign wholesalers of \$58.2 billion. The same assumptions and calculations for retail trade

yield an estimate of distributive services embodied in imports from foreign retailers of \$1.5 billion. Summing the two estimates yields \$59.7 billion in distributive services embodied in imports of goods, compared to total imports of services in 2002 of \$209.2 billion. If foreign wholesalers and retailers accounted for a larger share of U.S. imports of goods, or if foreign wholesalers and retailers had higher margins, then the value of distributive services embodied in imports of goods would be higher. In addition, while BEA's annual Input-Output accounts do not estimate wholesale trade margins on imports, it is likely that the estimate derived here, \$59.7 billion, understates the value of distributive services embodied in imports of goods because it is based on the same data that likely understated the value of distributive services embodied in exports of goods.

B. Sales through affiliates

The estimates of sales of services through affiliates show that foreign-owned U.S. wholesalers and retailers accounted for less than 3 percent of all sales of services to U.S. residents in 2003, and U.S.-owned foreign wholesalers and retailers accounted for less than 6 percent of all sales of services to foreign persons. However, as with the data on trade in services in the ITAs, this result is more of a reflection of the statistical conventions employed than a true indication of the importance of these industries in the delivery of services to international markets through the channel of affiliates' sales. In BEA's estimates, the total values of sales associated with wholesale and retail trade are treated as sales of goods. Thus, the estimates of services provided by wholesalers and retailers cover only secondary activities of these affiliates and not the distributive services that they provide. For example, the repair services provided by a car dealer are included in the estimates of sales of services, but the distributive services the dealer provides in selling cars are not. Instead, the value of the distributive services is included in the estimates

of sales of goods. When the data collection system for sales of services through affiliates was established, BEA defined sales of services as those typical of a specified group of industries. BEA chose to treat sales in wholesale and retail trade as sales of goods because most of their value is attributable to the goods being sold and not to the distributive services. As a result, wholesale and retail trade affiliates are more important providers of services than the estimates suggest.

While the inclusion of distributive services in the value of goods sold is consistent with the treatment of cross-border trade, in which the value of distributive services is included in the value of trade in goods, an estimate of the distributive services supplied through affiliates would be valuable to data users. It would allow for comparisons of the output of foreign-owned U.S. wholesalers and retailers with all U.S. wholesalers and retailers.

To allow estimates of the distributive services supplied through affiliates to be constructed, BEA collected data on the goods for resale and the beginning- and end-of-year inventories of the goods for resale on the 2002 benchmark survey of FDIUS. These data items have been included on the follow-on annual surveys of FDIUS, and they were introduced on the surveys of USDIA, beginning with the 2004 benchmark survey. These data were supplied by all affiliates with operations in wholesale or retail trade and not just those classified in these industries.

Preliminary estimates using the new data collected indicate that MOUSAs supplied \$134.9 billion in distributive services to U.S. residents in 2002 and \$135.1 billion in 2003. Including these estimates of distributive services in sales of services through affiliates would raise the estimates of sales of services through affiliates substantially—by 36.7 percent in 2002 and 35.4 percent in 2003. However, because these amounts are currently included in the

estimates of their sales of goods to U.S. residents, they do not represent an addition to the data on sales through affiliates, but, instead, are a reclassification from goods to services. MOUSAs had sales of goods of \$1,561.6 billion in 2002 and of \$1,653.1 billion in 2003, which would fall by 8.6 percent in 2002 and 8.2 percent in 2003 if distributive services were reclassified from sales of goods to sales of services.

III. Financial services

In 2004, U.S. exports of financial services were \$27.4 billion, and U.S. imports of financial services were \$11.2 billion. In 2003, sales to U.S. residents by U.S. affiliates in finance were \$24.5 billion, and sales to foreigners through foreign affiliates in finance were \$41.7 billion. Despite the size of these flows, the coverage of financial services in BEA's data on international services is incomplete.

While the data cover those services for which explicit fees or commissions are charged, they only partly capture the value of services for which payment is implicit—that is, reflected in differences between rates charged to borrowers and rates paid to lenders or in differences between buying and selling rates for financial assets. In addition, the data on cross-border trade include services provided by banks, but the data on sales through affiliates do not.

A. Cross-border trade

BEA's data on trade in financial services include explicit commissions and fees for a wide variety of services, including funds management, credit card services and other credit-related activities, and transactions in securities. The estimates of cross-border trade also include the value of two services that are measured only indirectly: Implicit commissions and fees for bond trading and underwriting. For example, the services provided by an underwriter, who brings

securities to market by buying them from the issuer at an agreed price and reselling them to investors, are remunerated by the margin generated from these transactions.

Other implicitly charged financial services are not included in BEA's estimates of cross-border trade in financial services. For example, one of the ways in which financial institutions charge implicitly for services is by paying lower interest rates to those who lend them money (in the form of deposits and loans) than they charge to those who borrow from them. The resulting net receipts of interest are used to defray expenses and provide profits. Because financial institutions do not charge explicitly for those services, their values must be imputed. The guidance for compiling statistics on trade in services offered by the SNA, BPM5, and the MSITS differs on the treatment of these unpriced financial services.

The SNA, which refers to these unpriced financial services as “financial intermediation services indirectly measured” (FISIM), recommends that FISIM be measured as the total property income receivable by financial intermediaries minus their total interest payable. It excludes any property income earned from the investment of their own funds because this income does not arise from financial intermediation. In the SNA, production that is disposed of must be recorded in one or more of the following ways—as intermediate consumption by enterprises, as final consumption by households, or as exports to non-residents. The allocation to nonresidents would appear as exports of FISIM in the foreign transactions account of the SNA. The first step in this allocation is to determine the amount of FISIM purchased implicitly by borrowers, who pay a higher interest rate than if these services were charged for explicitly, and by depositors, who receive a lower interest rate than if these services were charged for explicitly. A reference rate, or risk-free rate, is used to apportion FISIM between borrowers and depositors. Borrowers' purchases of FISIM are the interest paid by borrowers in excess of what would be

paid if the reference rate applied; depositors' purchases of FISIM are the difference between interest that would have been paid if the reference rate applied and actual interest receipts.

In contrast to the SNA, BPM5 excludes the imputed value of financial intermediation services indirectly measured from exports and imports of financial services because of concerns that it would be impractical or difficult to collect the necessary data to impute a value for cross-border trade in these unpriced services. Instead, the values of these services are recorded indistinguishably under receipts and payments of interest.

MSITS provides memorandum items for "services provided without payment by financial intermediaries" and for financial services including these unpriced services. These memorandum items were included both to allow for a measure that reflects implicit as well as explicit charges for services and because of concerns that, over time, financial institutions may change how they charge for some services. For example, if financial institutions begin to charge explicitly for services that had previously been charged implicitly, financial services excluding FISIM would show growth greater than if there had been no change in charging policies. However, this greater growth would be attributable to the change in charging policies and not to an actual increase in services provided. In addition, the memorandum items would facilitate international comparisons because financial institutions in some countries may charge explicitly for services that are usually charged implicitly by financial institutions in other countries.

Exports of FISIM occur, for example, when foreign residents borrow from U.S. banks or lend to them in the form of deposits. Likewise, imports of FISIM occur when U.S. residents borrow from or lend money to foreign banks.

In compiling the NIPAs, BEA allocates a portion of the output of commercial banks to the rest of the world (Fixler, Reinsdorf, and Smith, 2003). This imputation appears under

exports of services, as “services furnished without payment by financial intermediaries except life insurance carriers and private noninsured pension plans,” in the Foreign Transactions Account of the NIPAs. In 2002, “services furnished without payment by financial intermediaries except life insurance carriers” to the rest of the world were \$9.1 billion, falling to \$7.6 billion in 2004. It is not necessary to estimate imports of FISIM when estimating GDP because imports of FISIM are not included in the source data for consumption. (Generally, when estimating GDP, it is necessary to remove the value of imports from the estimates of private and government consumption and investment because the source data of these components include purchases of imports.)

Consistent with BPM5 recommendations, BEA currently excludes “services provided without payment by financial intermediaries” in its recording of cross-border trade in financial services in the ITAs. However, it is expected that the revision to BPM5, which is currently being written, will recommend including FISIM in cross-border trade in financial services.¹² Also, BEA considers it important to include unpriced services in its estimates to accurately measure trade in financial services. Thus, BEA is examining the issues involved in estimating imports of “services provided without payment by financial intermediaries,” which would be required if estimates of imports of these unpriced financial services were to be included in the ITAs. Including imports and exports of unpriced financial services in the ITAs would raise the value of exports and imports of financial services and would result in offsetting entries in receipts and payments of interest.¹³ U.S. receipts of interest on bank claims were \$22.7 billion in 2002, rising

¹² See, *Revision of the Balance of Payments Manual, Fifth Edition (Annotated Outline)*, 2004, paragraph 9.51.

¹³ For purchases of these unpriced services by borrowers, some of the interest nonresident borrowers pay on their loans would be recharacterized as purchases of these unpriced financial services. For purchases of “services furnished without payment by financial intermediaries” by

to \$25.7 billion in 2004; U.S. payments of interest on bank liabilities were \$22.5 billion in 2002, rising to \$23.1 billion in 2004 (Bach, 2005, p. 38).

B. Sales through affiliates

The coverage of sales through affiliates is incomplete because these sales exclude data for bank affiliates. Because most of the information on bank affiliates that is needed for policymaking purposes is already reported to other U.S. Government agencies, BEA collected only limited data from bank affiliates. However, the absence of banks in the data caused a potentially large gap in the coverage of financial services sold through affiliates and an understatement in the total sales through affiliates. As a first step toward closing this gap, BEA collected data on the 2002 benchmark survey of FDIUS that can be used as the basis for estimating bank affiliates' explicit and implicit fees for services. These same data items were added to the 2004 benchmark survey of USDIA.

Currently, the estimates of sales of services through affiliates, like the data on cross-border trade, exclude FISIM. BEA collected data on the total interest paid and total interest received by U.S. bank affiliates on the 2002 benchmark survey of FDIUS to provide a basis for imputing the value of services provided without an explicit charge. Subsequently, these data were collected on the 2004 benchmark survey of USDIA.

For explicit charges for service, bank affiliates were asked to supply data on their total sales of services by destination, as nonbank affiliates are asked to do. Majority-owned bank

depositors, it would be assumed that depositors receive, as interest, an amount equal to their purchases of these unpriced services. The imputed values for interest paid to depositors and their purchases of these unpriced services would raise the estimates of both receipts of interest and payments for financial services (or payments of interest and receipts for financial services) by equal amounts.

affiliates reported total sales of services of \$17.0 billion. Of this total, \$14.1 billion, or 82.7 percent, was sold to U.S. residents.

To impute a value for services provided without an explicit charge, U.S. bank affiliates were asked to report their total interest income and interest expense. Majority-owned bank affiliates reported interest income of \$100.6 billion and interest expense of \$78.5 billion.

The interest income earned on bank affiliates' own funds must be deducted from total interest income to estimate FISIM. Fixler, Reinsdorf, and Smith (2003) define interest income on banks' own funds as the reference rate¹⁴—that is, the risk-free rate—multiplied by the banks' own funds, which are defined as the difference between the banks' interest-bearing assets and liabilities. Because bank affiliates report all assets and liabilities and not just interest-bearing assets and liabilities on BEA's direct investment surveys, the data reported by bank affiliates must be adjusted to derive an estimate of their own funds. The adjustments are made by applying the shares of interest-bearing assets and liabilities in total assets and liabilities for the domestic banking industry, calculated from the FDIC Historical Statistics on Banking to the data reported by bank affiliates. The estimate of bank affiliates' own funds is then multiplied by the reference rate, yielding an estimate of the interest earned on their own funds of \$2.3 billion in 2002. Deducting this from the difference between their reported interest income and interest expense of \$22.1 billion found above, yields a value of FISIM of \$19.8 billion. Then, assuming the share of FISIM supplied to U.S. residents is the same as the share of explicit commissions and fees yields an estimate of FISIM supplied to U.S. residents of \$16.4 billion. Total services supplied to U.S. residents by U.S. bank affiliates are estimated to be \$30.5 billion in 2002.

¹⁴ The reference rate is calculated by dividing the interest received from Treasury and Federal agency securities by the average book value of these securities over the period during which interest was received. In the 2005 annual NIPA revision, the calculation of the reference rate was changed to exclude mortgage backed securities.

IV. Conclusions

This paper has provided an update of BEA's efforts to improve its data on and measures of U.S. international sales and purchases of services. It has focused on changes in data collections and methodologies for three important services: insurance services, wholesale and retail trade services, and financial services. In some cases, the changes will improve the comparability of BEA's data on cross-border trade in services and sales through affiliates. In addition, some of the changes will improve the comparability of BEA's data on international services with the NIPAs. Table 3 summarizes the changes and the impacts that they have had, or would have, on the accounts; table 4 shows the impact on the estimates for 2002. Figure 4 shows the impact that incorporating the changes in the estimates of sales of services through U.S. affiliates of foreign MNCs would have on these estimates for 2002. Removing the premiums devoted to the settlement of normal losses results in a reduction in the estimates of sales of services through U.S. affiliates, only partly offset by the addition of premium supplements for non-life insurance. Including the two services not currently included in the estimates—wholesale and retail trade services and services provided by bank affiliates—raise the estimates above the current measure.

For cross-border trade in insurance services, a more meaningful measure of services was developed that avoids the large, random swings in the estimates due to fluctuations in losses by using a measure called normal losses, based on the long run relationship between premiums and claims, as a proxy for insurers' expectations. In addition, it is a more complete estimate because it includes premiums supplements, commissions, and services auxiliary to insurance. For sales through affiliates, the proposed measure is more meaningful because it deducts a measure of claims paid out by insurers and is more complete because it includes premium supplements.

For wholesale and retail trade, estimates of the services supplied by affiliates with wholesale and retail trade operations will provide measures of services output that are comparable to those in the NIPAs and the industry accounts.

For cross-border trade in financial services, research to identify data sources and to develop a methodology to estimate imports of “services provided without payment by financial intermediaries” continues. For sales through affiliates, an important data gap has been closed by including bank affiliates in the estimates of sales through affiliates in benchmark years. In addition, coverage of some services that banks only charge for implicitly has been improved by the inclusion of an estimate of FISIM in the estimates of sales of services through affiliates in benchmark years.

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Table 1: Data on premiums earned and claims paid for U.S. insurance industry and MOUSAs, 1996 to 2003

(Millions of dollars)

Year	U.S. insurance industry				MOUSAs that reported the data on premiums and losses		Ratio of actual claims to premiums (life and non-life insurance)	Normal loss ratios
	Property/casualty		Life/health		Life and non-life insurers			
	Premiums earned	Losses paid	Premiums earned	Losses paid	Premiums earned	Losses paid		
1996	263,351	172,346	377,362	311,249	...	...	75.5%	...
1997	271,502	163,775	405,612	343,061	...	...	74.9%	...
1998	299,690	175,319	454,454	369,887	...	...	72.3%	...
1999	282,791	184,609	494,285	430,351	...	...	79.1%	...
2000	294,024	200,943	548,434	455,474	...	...	77.9%	...
2001	311,529	234,518	472,730	369,801	...	...	77.1%	...
2002					59,525	49,129	83.0%	76.1%
2003					57,805	38,359	68.7%	77.4%

Source for U.S. insurance industry data: A.M. Best's Aggregates and Averages: Property and Casualty Insurance, 2001, p. 190 and A.M. Best's Aggregates and Averages: Life and Health, 2002, p. 60.

Table 2: Derivation of new estimate of sales of services for MOUSAs with operations in insurance, 2002 and 2003

(Millions of dollars)

		2002		2003	
		Worldwide sales of services	Sales to U.S. residents	Worldwide sales of services	Sales to U.S. residents
	Current estimates	92,665	88,162	93,715	91,501
LESS	Premiums earned*	63,321	60,244	70,693	69,024
	Auxiliary insurance services or services from other industries	29,344	27,918	23,022	22,478
PLUS	New measure of insurance services	20,838	19,825	21,864	21,347
	New estimates of sales of services	50,182	47,744	44,885	43,825
	Difference from current measure	-42,483	-40,418	-48,829	-47,676

* It is assumed that the share of premiums earned from U.S. residents is the same as the share of sales to U.S. residents in total sales of services.

Table 3: Summary of Changes in the Measurement of Insurance, Wholesale and Retail Trade, and Financial Services

Channel of Delivery	Issue	Action taken or proposed	Effect on the estimates
Insurance			
Cross-border trade	Unusually large or small claims caused fluctuations in the measure of services (premiums less claims) unrelated to changes in the levels of services	Adopted a measure of claims that reflected the long run relationship between claims and premiums, called normal losses	Reduced volatility in the measure of trade in services
	Omitted investment income earned on technical reserves	Developed estimates of premium supplements	Raised the estimates of trade in insurance services
	Data on premiums recorded net of commissions	Collect data on premiums gross of commissions	Raised exports and imports of services by equal amounts
	Estimates of insurance services excluded services auxiliary to insurance	Collected data in a new category for services auxiliary to insurance	Raised estimates of trade in insurance services, partly offset by reductions in other services
Sales through affiliates	No deduction for claims	Proposed adopting a measure that deducts normal losses from premiums earned	Would substantially reduce the estimates
	Omitted investment income earned on technical reserves	Proposed adding an estimate of premium supplements	Would raise the estimates
Wholesale and retail trade			
Cross-border trade	Distributive services provided in connection with trade in goods are included indistinguishably in the value of goods	Construct rough estimates using data from the 2002 Economic Census	Estimates would not be deducted from trade in goods but would be provided as supplementary information
Sales through affiliates	Distributive services are included indistinguishably in the value of goods sold through affiliates	Collect data on the costs and inventories of goods for resale	Would substantially raise the estimates, offset by reductions in estimates of sales of goods through affiliates
Financial Services			
Cross-border trade	Estimates exclude the value of some financial services provided without explicit charge	Conduct research into estimating imports of these services	Would raise the estimate of trade in services, offset by changes in receipts and payments of interest
Sales through affiliates	Estimates exclude services supplied by bank affiliates	Collect data from bank affiliates on explicit fees and commissions and interest paid and received	Would raise substantially the value of services sold through affiliates

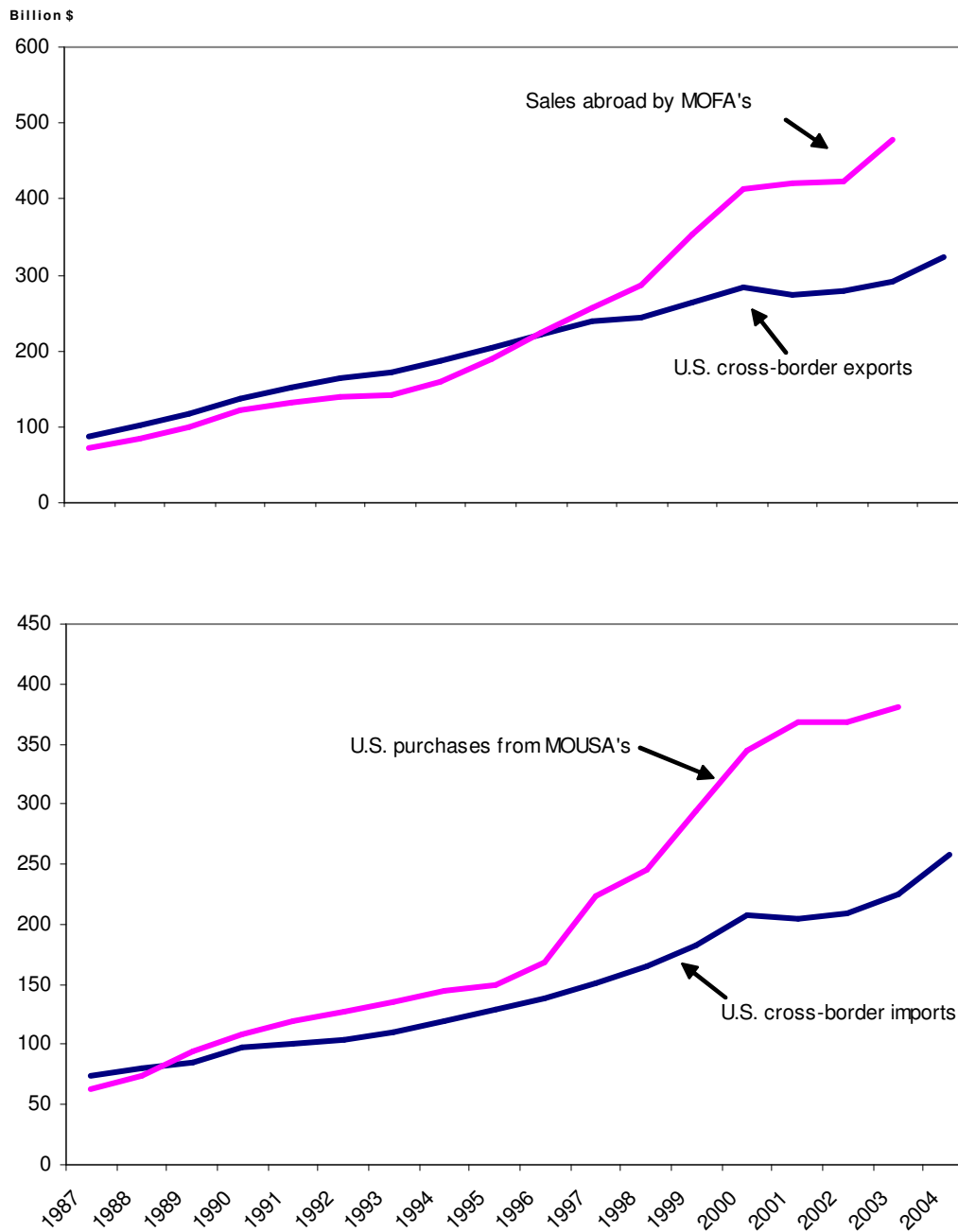
Table 4: Impacts of Changes in the Measurement of Insurance, Wholesale and Retail Trade, and Financial Services on the Estimates of Cross-border Trade and Sales through Affiliates, 2002
(Billions of dollars)

	Cross-border trade in services			
	Exports of services	Imports of services	Exports of goods	Imports of goods
Current measure	279.2	209.2	682.4	1,164.7
Effects of new measures:				
Insurance services	+0.9	+5.3	No change	No change
Distributive services	+35.0	+59.7	-35.0	-59.7
Financial services	+9.1	N.A.	No change	No change
	Sales through MOUSAs		Sales through MOFAs	
	Sales of services to U.S. residents	Sales of goods to U.S. residents*	Sales of services to foreign residents	Sales of goods to foreign residents
Current measure	367.6	1,421.1	423.5	1,738.2
Effects of new measures:				
Insurance services	-40.4	No change	N.A.	N.A.
Distributive services	+134.9	-134.9	N.A.	N.A.
Services of bank affiliates	+30.5	No change	N.A.	N.A.

N.A. No estimate is available.

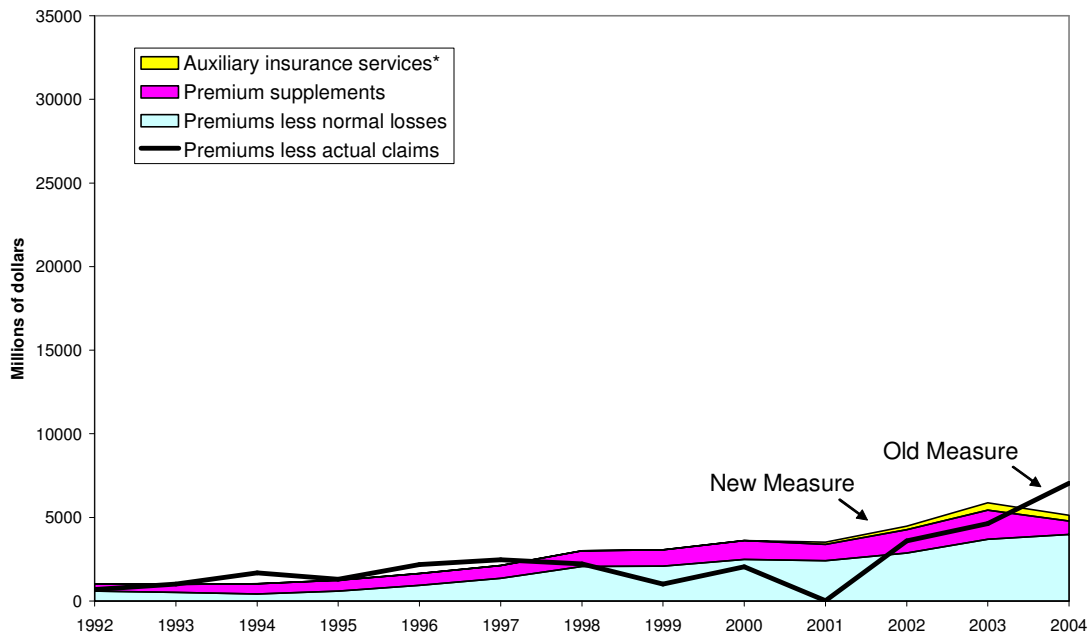
* The sales of goods to U.S. residents by MOUSAs have been estimated from data on exports of goods shipped by MOUSAs because the data on these sales are not disaggregated by destination.

Figure 1
U.S. International Sales and Purchases of Private Services, 1987-2004



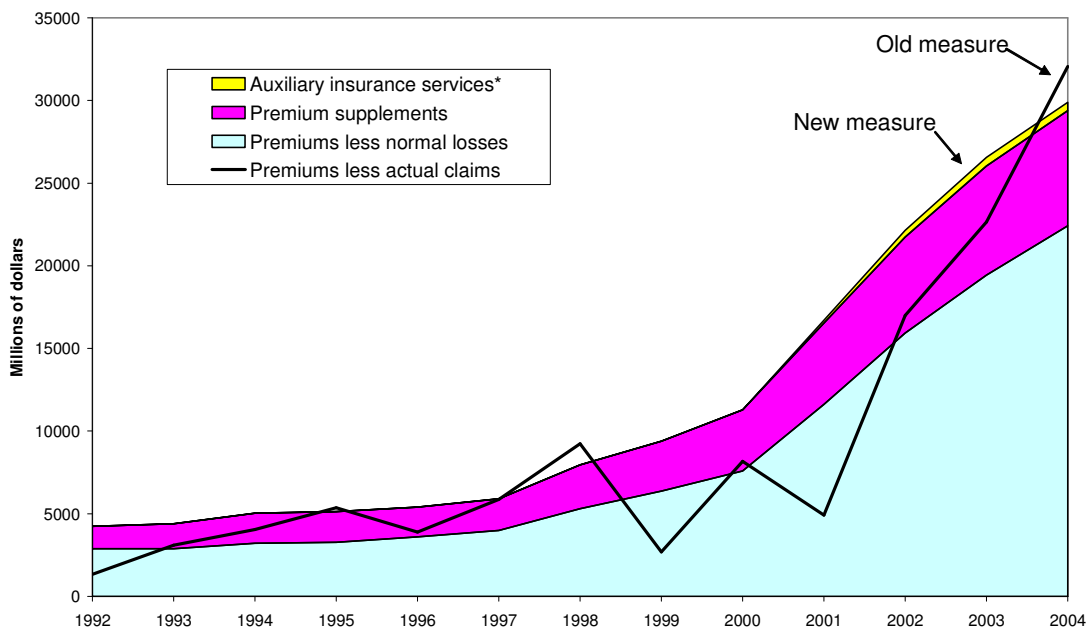
Sales and purchases through majority-owned affiliates are shown through 2003, the latest year for which data are available.

Figure 2: The Old and New Measures of Exports of Insurance Services



* Estimates of auxiliary insurance services are available only from 2001 forward.

Figure 3: The Old and New Measures of Imports of Insurance Services



* Estimates of auxiliary insurance services are available only from 2001 forward.

Figure 4: Estimates of sales of services to U.S. persons through the MOUSAs of Foreign MNCs, 2002

