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8 World Payments Imbalances and U.S. Statistics

Stephen Taylor

8.1 Introduction

Between 1978 and 1982, the world's balance of payments statistics went off balance in ways that received a good deal of publicity and that presented difficulties to analysts who tried to work with global views of economic activity. The problem showed itself most plainly in current-account balances, which for all the countries of the world together should always add to zero since each transaction receipt of one economy is also a transaction payment by another economy. Any non-zero balance in the world current account represents inconsistencies among the country statistics included and incomplete coverage for the world as a whole. After 1978, the current-account net balance for the world changed from a net debit of roughly \$10–20 billion, which prevailed through most of the 1970s, to a net debit of more than \$100 billion by 1982, a level that has been maintained more or less ever since. Starting around 1979, that is, the data began showing a bias toward current-account deficits that could be seen as a global system error without clues as to specific countries or regions that were the locus of such excess deficits. It was a condition that could produce policy biases possibly perverse and destabilizing, and it was unsettling to anyone concerned with such matters.

By 1984, the International Monetary Fund (hereafter referred to as the Fund) and other public bodies had concluded that the statistical problem was serious enough to justify an explicit and visible effort at finding causes and remedies for these imbalances. At the end of 1984, the Fund formed a working party to carry out the project and give a

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report to the managing director by the end of 1986 explaining what the group could discover by then. The working party included members from the Fund's Research Department and Bureau of Statistics and also from the Organization for Economic Cooperation and Development (OECD), the Bank for International Settlements (BIS), and several national statistical offices around the world. The group represented a well-structured set of viewpoints and information on the matter. A small professional staff was set up at the Fund for the project headed by Samuel Pizer, who had come to the Fund from the Federal Reserve Board for the purpose.

The final report of the working party was given to the managing director in December 1986.¹ As a member of the technical staff I am summarizing in this paper some of the major findings of the group on sources of the discrepancy, particularly in relation to the United States. The next section gives the sizes of the imbalances that the working party encountered, and the third section summarizes the principal findings of the group as to the sources of the problem and the nature of remedies proposed by the working party. The fourth section gives findings in the report about U.S. statistics in their relation to the world discrepancies.

The fifth and sixth sections go beyond the scope of the working party's report, which was limited entirely to statistical problems of current-account transactions. The fifth section describes briefly problems in the world's capital account statistics that are connected with current-account discrepancies. It then combines tentative suggestions for capital account revision with the proposed current-account revisions to suggest a new view of the world's balance of payments statement as a whole. The sixth section concludes the paper with some comments on the effects that revisions in balance of payments accounting would have on national income and product accounting. These comments raise some questions on defining geographic coverage of an economy that should be discussed in the ongoing U.N. project of revising the system of national accounts (SNA).

8.2 State of the World Balances

Table 8.1 gives the set of world balances that the working party put its attention to. These are world totals published by the Fund in part 2 of the 1985 edition of its *Balance of Payments Statistics Yearbook*. The categories of balance in the table conform to the Fund's *Balance of Payments Manual* (International Monetary Fund 1977) in definition, and country statistics that are combined into the table have been fitted into these categories by the Fund as closely as possible. The note to table 8.1 mentions some omissions from the coverage—mainly Eastern

Table 8.1 Selected Balances of World Current-Account Transactions (in billions of U.S. dollars)

	1978	1979	1980	1981	1982	1983	1984
Trade balance	18.1	20.3	28.2	24.9	-2.0	9.8	11.0
Service balance	-24.7	-29.3	-49.2	-80.6	-100.9	-78.7	-96.4
Shipment	-24.2	-27.4	-32.0	-34.6	-33.8	-31.8	-33.5
Other transportation	-1.7	-1.3	-3.4	-6.2	-4.4	-3.4	-1.1
Travel	-.3	-1.9	-.9	.7	1.5	3.2	4.5
Reinvested earnings on direct investments	6.7	11.8	11.2	10.4	7.5	9.9	5.8
Other direct-investment income	-4.6	.1	-7.6	-10.7	-11.3	-11.5	-11.7
Other investment income	-6.2	-7.3	-11.2	-22.3	-35.9	-32.0	-41.6
Other official transactions	-4.0	-9.6	-11.4	-18.3	-24.0	-18.2	-20.5
Other private transactions	9.6	6.4	6.2	.4	-.4	5.1	1.8
Private transfers	4.5	5.9	7.0	5.7	3.8	6.7	3.7
Current account (excluding official transfers)	-2.1	-3.0	-14.0	-50.1	-99.1	-62.2	-81.6
Official transfers	-17.5	-16.3	-20.8	-18.9	-14.8	-12.9	-14.2
Current account (including official transfers)	-19.7	-19.4	-34.7	-69.0	-113.9	-75.1	-95.8
Memo: Service balance as a percentage of service payments	5.8	5.4	7.1	10.4	12.8	10.9	12.7

Source: *Balance of Payments Statistics Yearbook*, pt. 2, (IMF 1985).

Note: Does not include estimates of certain current transactions of the Soviet Union and other nonmember countries of Eastern Europe as reported in the *World Economic Outlook*. International organizations do not supply comparable data, and some economies are not included in the statistics on certain transactions.

Europe and international organizations—and estimates for these groups are part of the explanation of the world balances that appear in the table.

Other presentations of world current-account balances are available from, for example, the OECD and the Fund's own Research Department, and these other versions have somewhat different figures for the world net balances. They all show about the same explosion in debit balance after 1978, however, and the Fund's *Yearbook* version has many advantages in underlying detail and staff study that made it the most useful form of the problem for the working party to examine. The report is hence a commentary on that specific form of world accounts, as produced by the Fund's Bureau of Statistics, a point that is worth making early here.

Most of the growth in discrepancy from 1978 to 1982 occurred in services—\$75 billion (table 8.1, row 2), of which \$36 billion was in the investment income components, and the working party was asked to pay particular attention to the problems of investment income that had suddenly come to light. "Other" transactions, both official and private, accounted for another \$30 billion of the \$75 billion increase, and shipping and other transportation showed a \$12 billion growth. The trade balance discrepancy has been surprisingly small in relation to the gross totals of world trade, and it has shown no particular trend recently that has contributed to the recent discrepancy rise.² Hanging over the trade balance, though, are some still-unanswered questions about shipping, other transportation, and "other" services that may reflect inconsistent classifications with counterparts in trade. If this turns out to be the case, corrections will affect the trade balance, and the question may become more important than it now is. Unrequited transfers had a sizable debit balance over the years in the table, but it did not grow enough to be part of the problem of current-balance increase over 1978–83.

8.3 Adjustments to the Balances

Table 8.2 summarizes in a comprehensive form the major findings of the working party, as presented in the final December 1986 report. It gives the amounts of adjustment that the group can propose now to improve matters and preliminary estimates of the regional distribution of those adjustments. The table is entirely for the year 1983, and, moving from top to bottom, it gives regional distributions of each of the published balances, the working party's adjustments spread regionally, and the adjusted results at the bottom of the table. The columns of the table cover all categories of current account except trade; the trade balance was not part of the working party's assignment and is omitted from the table. At the far right is a summary column with a

Table 8.2 Allocation of Services and Transfer Discrepancy, by Country Groups, 1983 (in billions of U.S. dollars)

	Income on Investments						Total Current Account, Excluding Merchandise	
	Reinvested Earnings	Other Direct-Investment Income	Non-Direct-Investment Income	Total	Shipment and Transport	Other Services		Transfers
Reported data: ^a								
Industrial countries	11.7	4.9	-6.6	10.0	-6.0	19.6	-30.3	-6.7
Middle East oil exporters	-.1	-6.3	24.8	18.4	-13.4	-37.0	-14.2	-46.2
Major offshore banking centers	.1	-.2	.6	.5	1.3	6.4	-.1	8.1
Other developing countries	-1.7	-9.9	-50.7	-62.3	-17.1	.9	38.3	-40.2
Eastern European countries	...	...	...	...	...	...	...	...
International organizations	...	...	...	...	...	...	...	...
Unallocated	...	...	...	...	...	...	...	...
Total	<u>9.9</u>	<u>-11.5</u>	<u>-32.0</u>	<u>-33.6</u>	<u>-35.2</u>	<u>-10.0</u>	<u>-6.2</u>	<u>-84.9</u>
Adjustments:								
Industrial countries	-5.3	4.4	13.9	13.0	1.0	...	...	14.0
Middle East oil exporters	-.1	4.0	2.0	5.9	7.6	...	-2.0	11.5
Major offshore banking centers	-1.9	-3.7	6.0	.4	2.5	...	...	2.9
Other developing countries	-3.1	.6	5.5	3.0	10.4	...	3.4	16.8
Eastern European countries	...	...	-3.7	-3.7	.8	...	...	-2.9
International organizations	...	...	3.1	3.1	...	-7.0	7.0	3.1
Unallocated	...	...	5.9	5.9	6.7	...	...	12.6
Total	<u>-10.4</u>	<u>5.3</u>	<u>32.8</u>	<u>27.7</u>	<u>29.0</u>	<u>-7.0</u>	<u>8.4</u>	<u>58.1</u>

(continued)

Table 8.2 (continued)

	Income on Investments						Transfers	Total Current Account, Excluding Merchandise
	Reinvested Earnings	Other Direct- Investment Income	Non-Direct- Investment Income	Total	Shipment and Transport	Other Services		
Adjusted data:								
Industrial countries	6.4	9.3	7.3	23.0	-5.0	19.6	-30.3	7.3
Middle East oil exporters	-.2	-2.3	26.8	24.3	-5.8	-37.0	-16.2	-34.7
Major offshore banking centers	-1.8	-3.9	6.6	.9	3.8	6.4	-.1	11.0
Other developing countries	-4.8	-9.3	-45.2	-59.3	-6.7	.9	41.7	-23.4
Eastern European countries	...	...	-3.7	-3.7	.8	...	...	-2.9
International organizations	...	...	3.1	3.1	...	-7.0	7.0	3.1
Unallocated	...	...	5.9	5.9	6.7	...	...	12.6
Total	-1.5	-6.2	.8	-5.9	-6.2	-17.0	2.2	-26.8

Note: Details may not add to totals because of rounding.

^aBalance of Payments Statistics Yearbook, pt. 2, (IMF 1985).

set of adjustments that reduces the 1983 debit balance from \$85 billion to \$27 billion remaining to be explained and eliminated. Most of the adjustments used for 1983 were also worked out for the period from 1979 to 1984, and results for the other years were similar to those in table 8.2 for 1983.

It is important to point out that not all the \$58 billion of adjustments in table 8.2 can be attributed to specific countries in ways that can be brought into country statistical procedures. There is an "unallocated" row in the table that contains particular debits and credits that are known to be missing from the system but for which there is no usable evidence on the countries involved. The regional totals also include some adjustments that can be allocated to specific regions but not to countries within the regions. The table thus overstates somewhat the steps that might be taken right now in statistical procedures to improve matters by either the country or the Fund, but there is nevertheless a sizable agenda for improvements to work out between the Fund and the countries, and the working party has several recommendations on proceeding to this next step.

Reinvested earnings, or reinvested direct-investment income, causes statistical trouble in several ways at the world level. Only a few countries estimate the item at all, and the important ones are net investor countries, notably the United States, the United Kingdom, Germany, and the Netherlands. The reinvested-earnings discrepancy is, as a result, a net credit balance—\$10 billion in 1983—rather than a debit, and reducing it only worsens the total current-account problem. Nevertheless, table 8.2 shows almost all the \$10 billion removed, using the following principal steps.

1. The United States includes in this item a revaluation element to reflect effects of exchange rate changes on dollar equivalents of overseas balance sheets stated in foreign currencies. In recent years this has been a large, changeable, and conspicuous source of discrepancy in the world current account. For 1983 it was a \$7 billion debit, and from 1984 to 1985 it changed by more than \$12 billion, from an \$8 billion debit to a \$4 billion credit, when the dollar turned around and started downward. No other country includes exchange rate effects in its balance of payments, and this U.S. procedure plainly produces a floater that goes directly to the current-account total balance. The working party recommends that the U.S. data exclude any such capital gains and losses—as they are excluded from the U.S. income and product accounts—and that at most they may be included as memo items on the U.S. country page of the *Yearbook*.

2. The United States includes in reinvested income an estimate for retained earnings of foreign branches that is also not matched by other

countries, which put branch earnings entirely in "other" direct-investment income. Part of the table 8.2 adjustments (\$3 billion) shifts the U.S. earnings as credits to the second column, improving both balances without affecting the current-account total balance.

3. Finally, geographic information from the four major investor countries mentioned above is used to insert contra entries on reinvested earnings into the accounts of partner countries that had reported nothing or obviously incomplete amounts for this item. This was a big adjustment—\$13 billion of net debits for 1983—and is plainly self-balancing since it uses one country's estimates for both sides of a transaction. At the same time it is an example of improving the system by using information for a country that comes from international or other-country sources, a practice the working party also uses in other adjustments and recommends for wider country consideration in national estimates.

Because of the great void in reporting reinvested earnings that was pointed out by the working party, the report strongly recommends that this item be omitted from the world tabulations that the Fund publishes in part 2 of the *Yearbook*—until a good many more countries can be persuaded to send in data. Omitting the item does not change the balance in the country's statement because for each country the reinvested-earnings part of current account is automatically matched by an equal and opposite item in direct-investment flows in capital account. There is no actual payment of funds, and omitting both entries has no effect on the country's error and omissions. Without better reporting, the item is more confusing than helpful in using the world data and should be removed for now.

Other direct-investment income, in the second column of table 8.2, has been a more intractable problem than reinvested income, and only about half the imbalance could be eliminated for reasons discovered in the project. The shift of U.S. branch office reinvested earnings to this column that was mentioned above gives a \$3 billion credit for 1983, and an adjustment for U.S. treatment of finance subsidiaries in the Netherlands Antilles adds almost another \$3 billion. These Antilles subsidiaries had until recently a special tax position that gives U.S. borrowers a lower-cost access to Eurobond markets than direct U.S. issues in those markets. The practice produced a sizable asymmetry in world figures for investment income, however. While countries that bought the Antilles Eurobonds reported the bond income as interest receipts (if they reported it at all), the payments that were made by U.S. borrowers were treated as negative direct-investment income of U.S. companies by balance of payments compilers at the Commerce Department. In the middle, the Antilles simply omitted the subsidiaries from their own balance of payments accounts, and the result was a

mismatch between form of payment and form of receipt within the world current account. The working party shifted the U.S. entries to the third column of table 8.2, "non-direct-investment income," to match income credits from lender countries.

The Fund's version of direct-investment income also includes a Saudi Arabia debit of \$4 billion that is labeled by the Saudis in their own balance of payments as "oil-sector-investment income." The nature of this \$4 billion is altogether obscure, but it is much larger than the corresponding net receipts of \$117 million that are reported by the United States, the United Kingdom, and Germany, so it appears that the \$4 billion does not belong in this category, whatever its nature. In table 8.2, it is removed in the second column and not reinserted elsewhere in the table, and it is thus an adjustment that carries over to the current-account total.

With some other adjustments that offset those for the United States and Saudi Arabia, the working party was not able to eliminate more than half the published discrepancy in this direct-investment income item. A good deal more needs to be done, and some of the remaining problems are already known through bilateral country comparisons that show large inconsistencies. To some extent, these inconsistencies come from differences in definition of direct-investment relations and in definition of foreign and domestic companies. Reconciling these differences can take a great deal of time even at the international level, and persuading countries to adopt consistent rules in their own work is a larger job since the changes that are needed can also affect national income and product accounts.

Non-direct-investment income, the third column of table 8.2, is the category that most conspicuously went off balance after 1978, rising from a net debit of \$6 billion in 1978 to one of \$36 billion in 1982 and \$42 billion in 1984 (all these amounts as shown in the 1985 *Yearbook*). On a comparable basis, the 1985 discrepancy was \$51 billion. The years 1979–83 saw a good deal of inflation—10 percent yearly in the Fund's world gross domestic product (GDP) deflator, and a sharp rise in financial claims across borders—a 13 percent yearly growth, and large swings in interest rates. It appeared that statistical procedures were not able to track interest and dividends well enough to cope with the new scale of international financial relations. What had been a minor defect in balance of payments measurement suddenly became a glaring problem and a source of uncertainty. As mentioned earlier, the working party was given particular instruction to look at this item, and it was a major subject of study by the group and its technical staff. Table 8.2 shows that as a result of that work the report was able to explain almost all the \$32 billion net debit for 1983, and the explanations proved to be equally effective for the other years of the 1979–84 period.

Two adjustments were straightforward—to include entries for interest transactions by Eastern European countries not covered in the Fund's world figures and for international organizations such as the World Bank and the Fund itself that were also omitted from the Fund's totals. These two adjustments roughly offset each other on a net basis, however, as table 8.2 shows. (In part 2 of the 1986 *Balance of Payments Statistics Yearbook*, international institutions are introduced to the world totals for the first time, although only for investment income receipts and expenses, with the offset in errors and omissions. As a result, the imbalance in this item is now considerably smaller than it was in the 1985 version, but it does not yet reflect the offsetting Eastern Europe position.)

The big adjustments against the \$32 billion discrepancy came not from better geographic coverage, however, but rather from independent tests of the quality of the data already in the system. These tests were made separately for income from international holdings of bonds and stocks and for income from the various forms of bank positions cross-border vis-à-vis other banks, central banks, and nonbanks. A starting point for the tests was a detailed questionnaire on investment income that the working party sent to about sixty countries asking for national information on types of investment income receipts and payments and also for whatever stock data the countries had on international financial positions. These questionnaires yielded some significant revisions of data in relation to the Fund's published version, and those revisions are included in the table 8.2 adjustments. From the detail in the questionnaires, though, specific comparisons could also be made between country figures on income and estimates based on independent information outside the country. It was this procedure that yielded most of the \$32 billion of adjustments in table 8.2.

For bonds and equities, the results were very approximate because useful information on the structure of international security markets is scarce and informal. There are no systematic tabulations by official or industry groups on the outstanding amounts of securities held internationally that generate the income flows, and the working party had to put together estimates of its own, primarily by cumulating gross new issues for several years in the form that the OECD publishes in its *Financial Statistics* publications. There are several steps too detailed to go into here in producing appropriate stock figures, but the final result in this exercise was an estimate for cross-border bond holdings not involving banks of \$340 billion for the end of 1983 and a corresponding equity total of \$250 billion. Comparisons of these market-based totals with the questionnaire totals of security stocks reported by countries implied that about 20 percent of securities are missing from country data as liabilities and that something over 40 percent are

missing as assets. This finding led to the conclusion that income debits and credits are understated in the same proportions and should be adjusted upward to balance the system. The total adjustment amounts to a \$9 billion net credit for 1983, almost one-third of the total imbalance in this column of table 8.2 for the year.

There is a problem here in geographic distribution because, although the OECD data on gross issues give a clear enough country identification of debtors, we have no statistical basis whatever from market data for locating holders of securities. The securities industry believes widely that most cross-border securities are held in industrial countries, and that belief is used in the adjustments that were made for underreporting of income on securities. This is a case, however, in which the report, in table 8.2, attributes missing flows to a region—industrial countries—but has no basis for going farther in country identification.

The other source of independent data that were used to assess the investment income discrepancy is the collection of cross-border banking information that is compiled by the BIS and the Fund.³ The core of these data is a great body of detail reported by banks in about thirty industrial countries and offshore financial centers on the geographic location of borrowers from and depositors in these banks. The banks reporting in the system account for a large part of the world totals of international banking claims that the Fund reports. As a result, the cumulated positions in the tables vis-à-vis a particular country such as the United States give a measure of that country's international banking position that is independent of the country's own statistical system and that can be compared with national estimates of the amounts.

The BIS-Fund data divide the reported bank positions between interbank claims on the one hand and nonbank borrowings and "deposits" (actually, all forms of claim) on the other. The interbank positions from the data are in general closely consistent with national data, with the exception of offshore financial centers, which do not always include in national totals all the foreign banking business that appears in BIS-Fund figures.⁴ Most of the \$6 billion adjustment for "major offshore banking centers" entered in the third column of table 8.2 introduces the foreign branch earnings to offshore center balance of payments, but most of that is also offset in the second-column entry as a direct investment debit for those branches vis-à-vis their parents.

On nonbank positions, however, the BIS-Fund geographic detail that appears in "International Banking Statistics" (IBS) indicates strongly that country figures tend to understate both claims on foreign banks and income from those claims on banks. Although liabilities to foreign banks are also understated in country figures, the bias is generally weaker than in assets. The net effect of substituting IBS-based income credits and debits for country versions produces a total net credit

adjustment for all countries of over \$20 billion for 1983 to be included in the third column of table 8.2. This amount, together with the \$9 billion net credit adjustment for bonds and equities, accounts for most of the total \$33 billion adjustment in the table.⁵

The nonbank position data underlying these bank-derived adjustments come, to repeat, from the geographic detail reported by banks in about thirty countries that accounted for most of the international banking industry at the time. Most, but not all, of the “unallocated” adjustment of \$5.9 billion in table 8.2 arises from the difference between the total of nonbank geographic detail reported and the total of nonbank positions vis-à-vis all banks of all countries in the IBS totals. That difference appears as “unallocated” in IBS tables, and the \$5.9 billion adjustment is a rough estimate of income not reported on those unallocated positions. The unallocated positions have been rising fairly fast in IBS, primarily because IBS is expanding its coverage of financial institutions beyond the conventional group of banks that report geographic detail. The positions of these added institutions—for example, thrifts and development banks—must be put into the unallocated item even for industrial countries that have reported to the BIS for many years. The unallocated adjustments can be used in explaining the world discrepancy, but, plainly, to get better country figures that will reduce the discrepancy requires a greater extent of geographic detail in the IBS body of financial institutions. The usefulness of the IBS figures even in their present form is a persuasive basis for asking countries to widen their reporting scope.

The growth of the discrepancy in investment income after 1977 raised suspicions widely that the discrepancy was related to the growth of offshore banking and also perhaps to capital flight from Latin American and Asian countries. The Fund gave the working party explicit instruction to look into the offshore centers as a source of statistical problems, and a section of the report is concerned with the centers and with innovations in financial instruments as a source of the troubles.

The use of IBS-type data took care of a major portion of this question, however, insofar as IBS measures offshore centers adequately and insofar as capital flight tends ultimately to take the form of claims on banks. IBS coverage of offshore centers was vital for this purpose.⁶ Another important part of the IBS tabulation for this question is the special treatment of Swiss data in the Fund’s version of IBS data: a good deal of money (about \$100 billion in 1983) is held in trust accounts of Swiss banks for owners outside Switzerland and reinvested in deposits in other banking centers, and in IBS tabulations these “other” centers report such deposits as interbank liabilities to Swiss banks. Switzerland, meanwhile, omits them entirely from reports it sends to the BIS as either assets or liabilities, a practice that results in a dis-

crepancy of that amount in BIS totals of interbank claims as assets and as liabilities. In order to balance the figures and to show a little better what is going on, the Fund's form of IBS adjusts the Swiss numbers to include the interbank claims as assets and also to show Swiss bank liabilities to foreign nonbanks for the amounts deposited in the trust accounts. The Swiss National Bank publishes a geographic distribution of the holders of those accounts.

The geography for offshore centers and for Swiss trust accounts seems to go far toward covering capital flight flows that come into organized financial markets, and, in the table 8.2 adjustments, nothing further is included to reflect capital flight. Several analysts have estimated capital flight residually for important developing countries, using a residual method that is based on cumulations of reported international flows for each country over a run of years. In the procedure, the cumulation of capital inflows is treated as a measure of external debt, and cumulated current-account deficits and recorded capital outflows are viewed as known uses of funds from that debt. The excess of debt over deficits and recorded outflows is treated as unrecorded capital outflows, often called "capital flight" (see, e.g., Dooley 1986). For individual countries, these cumulated residuals have been a good deal larger than assets measured by the working party from IBS and security market data. However, when the working party tried this procedure for all developing countries as a group using twenty-year cumulations, the resulting total of private assets was not far from the amounts shown in IBS, and most of the difference can be explained.

The inconsistency here between the results on a country basis and the aggregate form has not been explained, and there is more to investigate on capital flight measurements. For the working party's purposes, though, the larger totals could not be fitted into global statistics on financial markets and, more operationally, were not needed to balance the investment income accounts. It is possible and perhaps even likely that cross-border financial positions are a good deal larger than the IBS-based and security market-based amounts used by the working party, through claims that are nominally "resident" in the country in which they are invested and through holding-company and other relations that never enter statistical systems. The working party was not able to look into such possibilities on a basis that produces usable data. Instead, the group focused on those procedures that could bring published balance of payments data into consistency with one another and with existing statistics on cross-border claims.

The adjustments in table 8.2 for the last three columns are more tentative and sketchy than are those for investment income, which was the principal subject for the working party's program. In *shipment and transport*, the world discrepancies were in the range of a \$30 billion

debit but had not changed much over the years from 1978. The report concludes that the principal reason for this imbalance is a combination of missing shipping revenues and missing port receipts. These two gaps arise for separate reasons, but they are both plainly present, and they seem to be of about the right size to take care of most of the problem. The missing shipping revenues are mainly for three merchant fleets—those of the Soviet Union, Greece, and Hong Kong—that are excluded from the Fund's world totals for various reasons. The gap here seems to be related to operators of the fleets rather than registry under flags of convenience such as Liberia. Foreign registry of a country's fleet does not appear to cause problems for countries that include shipping in their balance of payments figures. None of these conclusions can be very firm, though, because the world statistics on shipping that might be the outside test of balance of payments figures have no standardized concepts of ownership and operator identity that can be related to the Fund's concepts. Shipping statistics need much more development before they provide the kind of data base that this problem needs.

Missing fleet revenues are matched by missing costs of operating those fleets, which should be in transport credits of countries selling fuel and services to the fleets. It is clear from the Fund's figures, however, that many countries are understating port receipts by large amounts. Table 8.2 includes some tentative and putative adjustments for missing fleets and missing port receipts in the fifth column, but they are not yet the basis for reshaping country figures that the subject needs.

The column for *other services* has only a single adjustment to reflect debits by international organizations that belong in the world totals but have not been included in Fund publications. This category has a large imbalance that is only made larger by the adjustment. Much the largest entry in the Fund's world table for this item is an official debit for Saudi Arabia—\$25 billion for 1983—that is roughly the size of the world imbalance in official services. The content of this item is not known, and without explanation no adjustment is possible. The credit entries against this Saudi debit may be in other current-account categories, or there may in fact be none in this system.

The *transfers* adjustments consists mainly of the receipts by international organizations of contributions from supporting governments that are already in transfers debits. With this and some smaller adjustments for specific countries, the world imbalance in transfers can be made small.

8.4 Effects of the Findings on U.S. Statistics

The United States is a large economy with long borders and long coastlines, and, over the recent years when the world discrepancies

have been growing, the United States has been running a very large discrepancy in its own balance of payments—about \$25 billion net credit annually. One can easily expect that U.S. statistical problems and procedures are in some way related to the world imbalances, and the earlier section on direct-investment income mentions explicitly some effects of the U.S. numbers. When the U.S. components of the table 8.2 adjustments are sorted out, however, the total effect of U.S. figures is no more than in line with the U.S. share of world trade and could from some viewpoints be judged to be less than that.

Table 8.3 displays the main U.S. components of the adjustments from the “industrial countries” row of table 8.2. All are in the investment income categories, but not all of them affect the total current-account balance. Moreover, items 6–8 have an ambiguous position in the table because they are amounts that the United States reports that

Table 8.3 Adjustment Proposed for U.S. Investment Income (1983 flows in billions of dollars)

	Direct-investment Income		Other Investment Income	Effect on Current Account
	Reinvested Earnings	Other		
1. Remove capital gains	7.0			7.0
2. Reestimate bank income:				
Credits			7.7	
Debits			-3.7	
Net effect			4.0	4.0
3. Reestimate security income:				
Credits			2.5	
Debits			-2.1	
Net			.4	.4
4. Shift reinvested branch earnings	-3.1	3.1		...
5. Shift Antilles earnings		2.8	-2.8	...
First total of adjustments	3.9	5.9	1.6	11.4
6. Reinvested earnings not reported by other country	-7.9			-7.9
7. Other income not reported separately by other country		-1.8	1.8	...
8. U.S. transactions with nonreporting countries		-1.9		-1.9
Second total of adjustments	-4.0	2.2	3.4	1.6

Source: Final report of working party and unpublished tables underlying the report.

are omitted as contraentries by other countries. Those three items are included to show the full relation of U.S. reporting to the world balances without regard to the source of the inconsistency.

The first item in the table is the adjustment mentioned earlier to eliminate U.S. capital gains components that are evidently unique in the world figures. This adjustment alone reduces the 1983 world imbalance on investment income from \$34 to \$27 billion, but it is a volatile item, and after the dollar exchange rate started downward in 1985 its effect on discrepancies had an opposite sign.

The second item results from replacing Treasury-Commerce data for cross-border positions of U.S. nonbanks with foreign banks with the corresponding amounts reported by foreign banks in IBS. The IBS figures are much larger for both assets and liabilities, as table 8.4 shows, and the income adjustments in table 8.3 are the differences that result from applying 1983 interest rates to year-average levels of the IBS positions.⁷ The revision in asset and income credit is larger than the liability revision, and there is a net contribution of \$4 billion to reduce the income and current-account discrepancies. The third item is a similar but much smaller adjustment for portfolio security assets and liabilities.

Items 4 and 5 are explicitly mentioned earlier as shifts between categories that do not affect the current-account total, and these plus items 1–3 reflect the total of the report's specific recommendations about U.S. data. These items remove \$11 billion, one-third of the world debit balance in investment income. Most of that is from the capital gains adjustment, however, which changes sign in later years and results in very different relations.

The other items in table 8.3—lines 6–8—are problems not with U.S. reporting but rather with the lack of corresponding figures in other countries' reporting in the world tables. About \$7.9 billion of U.S. net reinvested earnings in 1983 were not reported by the countries listed in U.S. geographic detail. If the Fund were to accept the working party's recommendation to remove reinvested earnings, at least tem-

Table 8.4 U.S. Nonbank Positions with Foreign Banks (1983 year end in billions of dollars)

	Assets	Liabilities	Net Assets
Reported by United States to working party on investment income questionnaire	52.8	20.6	32.2
Reported by foreign banks in IBS	<u>167.9</u>	<u>58.0</u>	<u>109.9</u>
Excess of IBS over U.S. data	125.1	37.4	77.7

Note: IBS = "International Banking Statistics" published by the Fund in *International Financial Statistics*.

porarily, from the standard world tables in part 2 of the *Balance of Payments Yearbook*, the U.S. credit would disappear from world current balances, along with \$4 billion of net credits reported by the few other countries that show this category. Item 6 in table 8.3 reflects such a change, while item 7 shifts across categories to match credits and debits, and item 8 reflects the absence of some British colonies in the Fund's world numbers. These changes make U.S. figures more "symmetrical" with reporting by other countries, and with them the total U.S. effect on the discrepancy almost vanishes for 1983. This is not the case in later years, however.

From this work so far, then, the only substantial finding about U.S. figures that could affect statistical practices in this country is that U.S. claims on foreign banks, net of liabilities to banks, are considerably larger than reported by the United States—almost \$80 billion in 1983. Although the effect of this on the world current account is plain enough, as in table 8.3, it is by no means clear how a shift to that larger number would change U.S. national accounts since the effect depends partly on whether the income is repatriated. Whatever use is made of the income, the revision would raise U.S. gross national product (GNP), personal income, and personal saving. To the extent that the income is left abroad for reinvestment, however, offsets to the income revision appear in increased capital outflows in balance of payments and larger financial investments by households in flow-of-funds accounts; there is no effect on statistical discrepancies in either balance of payments or household-sector statements.⁸ Only repatriated income would carry through to affect those discrepancies.

No one need actually judge statistically as to the disposition of this U.S. income from foreign sources, however, and that is just as well since the question is inherently moot. The shift to an IBS-based measure of income, rather, would be part of a broader revision that also inserts IBS measures of U.S. nonbank positions into the calculation of U.S. capital account flows in place of the Treasury data that are now used. The effect is a joint revision for current and capital accounts together producing a discrepancy revision that implicitly "answers" the income disposition question. A shift to IBS sources for U.S. balance of payments raises questions for the United States that go well beyond the working party's concern, such as how to deal with the short history in IBS nonbank positions and the extent to which IBS figures overlap securities data covered by other Treasury reports. It remains to be seen what the full effect of the shift would be.

For U.S. statistics, the question remains of how it could happen that cross-border nonbank positions vis-à-vis banks could be so much larger—\$80–\$100 billion, net—than the \$32 billion reported by the United States for 1983. How, that is, did the money get out there, in light of

the reasonably well-behaved set of international statistics for the United States before the problems that began in the late 1970s? We do not know the answer, and there is a wide set of possibilities that ranges from underreported current-account balances to capital gains on earlier investments abroad. A few simple assumptions can explain a large part of the difference, however, without going far from the published statistics, and, although such an explanation has no more validity than others, it illustrates what might have happened.

The procedure consists of no more than applying to the U.S. statistics the same capital flight calculations that have been used so often for developing countries. We start from the premise that the current-account balance is measured “correctly”—in a particular sense that hinges on the use of the answer—and take the statistical discrepancy to be a net measure of unrecorded capital flows either outward or inward. From the 1950s to 1974, the United States tended to have negative discrepancies that averaged \$400 million annually for 1950–59 and \$850 million annually for 1960–74, except for the infamous 1971, when it was almost \$10 billion of unrecorded outflow. The simple cumulated sum of these discrepancies from 1950 to 1974 is a \$26 billion net debit in the U.S. accounts. If we treat these as capital flows, in the limited sense that they come out of the recorded transactions as shown, and if we assume further that that money is invested and reinvested abroad at roughly reasonable interest rates, then the \$26 billion easily compounds to a total of about \$90 billion by the end of 1983, which is not far from the \$78 billion net excess in table 8.4. The \$90 billion result assumes that the positive discrepancies after 1974, which cumulate to \$145 billion from 1975 to 1983, are not a return to the United States of these earlier outflows. These later amounts can be some combination of unrecorded foreign capital inflows and understated current-account balances, but the earlier outflows remain abroad in the calculation and constitute part of U.S. positions in the Fund’s IBS tables. Arithmetic like this is not the basis for actually revising any statistics, even when it is ringed by considerations of detail that might look realistic. It illustrates only that, on this particular question, there can be ways to reconcile the U.S. accounts as they exist with international statistics unrelated to U.S. sources.

8.5 The Capital Account Problem

The last few paragraphs are the first mention in this paper of the relation of current-account statistical problems to capital account flows. If there is a world discrepancy of \$100 billion in current-account flows in a year, however, then there is also an offsetting \$100 billion of other

discrepancy divided between world net totals of capital account flows and errors and omissions. For the one problem there is the other, but the Fund's working party concentrated its work and its recommendations almost entirely on current account, as requested by the Fund in establishing the project. Table 8.5 is the principal reference in the working party report to the offsets to current account. It shows plainly the abrupt expansion after 1976 in both capital account discrepancies and the errors and omissions total, with capital account offsetting about two-thirds of the growth in current-account imbalances.

The capital account discrepancy fits well with the investment income debit balance in current account: along with understatement of income credits, the accounts have an understatement of investment capital outflows. Finding the categories of flow that are biased, however, is more difficult in capital account than in current because the Fund's standard structure of balance of payments categories is much less suited for matching credits and debits in capital account than in current. The categories include, for example, separate items for bank and nonbank asset and liability flows. However, both bank and nonbank transactions are partly with foreign banks and partly with foreign nonbanks, and neither category is a consistent set of debits and credits that can add to zero across countries.⁹ This is very different from current-account

Table 8.5 Main Sectors of World Balance of Payments Accounts (in billions of U.S. dollars)

	Cumulated 1964-76	Cumulated 1977-83	Cumulated 1977-83 Adjusted ^a
Current account ^b	- 38	- 347	- 407
Of which: Investment income ^b	. . .	- 110	- 170
Capital movements (including reserve transactions) ^b	34	237	297
Of which: Increase of liabilities	892	2,670	2,621
Of which: Increase of assets	- 858	- 2,433	- 2,324
Errors and omissions	4	111	111
Of which: Credit entries	34	285	285
Of which: Debit entries	- 30	- 174	- 174

Source: Unpublished tabulations by the Fund's Bureau of Statistics.

Note: Negative signs indicate debits.

^aAdjusted to exclude reported reinvested earnings from the investment income account because they are recorded asymmetrically and introduce a net credit entry that tends to conceal the extent of the actual discrepancy.

^bBalances of reported transactions, which in principle should be zero for the world as a whole.

structure, under which, for example, shipping payments to foreign carriers fall reasonably into the same category as shipping receipts from foreign customers.

Even so, some conclusions about capital account come out of the Fund group's work on investment income, which has a direct link to capital account measurement. Tables 8.6 and 8.7 sketch some adjustments to capital account that illustrate what might be done, and table 8.8 is then a final statement about the condition of world balance of payments measurements, at least for 1983. These three tables were put together at the end of the project by Dietrich Hartenstein of the Bundesbank, who was a member of the working party's technical staff. They are not included in the report to the Fund, but they constitute a useful agenda for future work on both current and capital account.

Table 8.6 is based on the assumption that shortfalls in measuring investment income imply similar shortfalls in measuring capital flows. The

Table 8.6 Derivation of Nonreported Capital Flows (in billions of dollars, 1983)

	Total	Industrial Countries	Other Countries ^a
Actual flows:			
Nonbanks' bank deposits ^b	-49.9	-20.1	-29.8
Nonbanks' bank borrowings ^b	25.5	4.0	21.5
Security assets ^c	-85	-68	-17
Security liabilities ^c	85	76.5	8.5
Nonreporting in percent: ^d			
Nonbanks' bank deposits	. . .	60	85
Nonbanks' bank borrowings	. . .	20	20
Security assets	55	55	55
Security liabilities	20	20	20
Nonreporting in U.S. dollars:			
Nonbanks' bank deposits	-38	-12	-26
Nonbanks' bank borrowings	5	1	4
Security assets	-47	-37	-10
Security liabilities	17	14	3

^aIncluding unallocated positions but excluding major offshore banking centers.

^bDerived from IBS data. However, now allowance could be made for valuation changes.

^cData and regional distribution according to chap. 4 of the final report.

^dPercentages according to chap. 4 of the final report, taking into account that reporting of new flows (increase of deposits, purchases of bonds) is even worse than reporting on amounts outstanding.

Table 8.7 Adjustments to World Balance of Payments Accounts with Respect to Investment Income (in billions of dollars, 1983)

	Total	Industrial Countries	Other Countries ^a
Investment income (current account): ^b			
Reinvested earnings	- 10	- 5	- 5
Other direct-investment income	5	4	1
Nondirect-investment income	33	14	19
Total	28	13	15
Capital flows:			
Reinvested earnings	10	4	6
Nonbanks' bank deposits ^c	-38	-12	-26
Nonbanks' bank borrowings ^c	5	1	4
Securities (net)	-30	-22	-8
Major offshore banking centers	-5	. . .	-5
Eastern Europe	-5	. . .	-5
Total	-63	-29	-34

^aIncluding international organizations and Eastern Europe.

^bFor derivation, see chaps. 3 and 4 of the final report.

^cIncluding unallocated accounts but excluding major offshore banking centers, Eastern Europe, and international organizations.

same information used for income adjustments in table 8.2 for deposits, loans, and portfolio securities is then the basis for estimating missing amounts of capital flows in these instruments, at the bottom of table 8.6. As mentioned earlier, these adjustments cannot be fitted to specific row items in Fund publications, but the totals are there to work with. Table 8.7 combines those adjustments with others related to investment income to produce a total identified revision to capital account for 1983 of \$63 billion. The revision in reinvested earnings in current account is automatically offset in capital account, and the other changes shown in the table are mentioned in the description of table 8.2.

Table 8.8, then, is the final summary of adjustments that combines the current-account changes in table 8.2 (and in the report to the Fund) with Hartenstein's estimates for capital account revisions. The \$63 billion of capital flow adjustments from table 8.7 virtually eliminates the 1983 imbalance in capital account and appears in "adjustments 1" along with current-account changes from table 8.2 (and along with a residual \$3 billion unidentified in capital account). These changes produce a revised set of world accounts, in the center panel of table 8.8, that consists only of current-account discrepancies matched in errors and omissions for the world totals and with balanced capital flows for the two country groups. "Adjustments 2," the next panel, premises that at that point the regional capital account balances are correct and

Table 8.8 Overall Results of World Balance of Payments Adjustments (in billions of dollars, 1983)

	Total	Industrial Countries	Other Countries ^a
Reported flows:^b			
Current account	-75	-18	-57
Capital flows ^c	66	-5	71
Errors and omissions	9	23	-14
Adjustments 1:			
Current account (table 8.1)	58	14	44
Capital flows (table 8.7) ^c	-66	-29	-37 ^d
Adjusted flows:			
Current account	-17	-4	-13
Capital flows ^c	0	-34	34
Errors and omissions	17	38	-21
Adjustments 2:			
Current account	17	38	-21
Errors and omissions	-17	-38	21
Final flows:			
Current account	0	34	-34
Capital flows ^c	0	-34	34
Errors and omissions	0	0	0

^aIncluding international organizations and Eastern Europe.

^b*Balance of Payments Statistics Yearbook* (IMF 1985).

^cIncluding changes in official reserves.

^dIncludes \$3 billion of nonidentified capital outflows.

on that basis states that further corrections of current account, not yet known or specified, will eliminate not only remaining imbalances but remaining errors and omissions as well.

The table proceeds from there to a bottom panel that says that correcting those remaining problems will result in a world statement for 1983 that consists of a \$34 billion current-account surplus for industrial countries against the rest of the world and a matching capital flow to the rest of the world. This is an upward revision in current-account balance of \$52 billion for industrial countries and \$23 billion for the rest of the world relative to the amounts published in the 1985 *Yearbook*.

As mentioned, table 8.8 is a statement of work still to be done. "Adjustments 2" are both large and unknown, and "Adjustments 1" are still lacking a usable identification of countries for some items, even as between the United States and other industrial countries. Shipping, other services, and transfers can be adjusted only in a sketchy way

with the information available and need a much closer look than has been possible so far.

The matter now lies, most appropriately, in the hands of the Fund, which has received the working party's report and its recommendations. These recommendations range widely, from improving relations with country statistical offices to reorganizing the Fund's *Balance of Payments Manual*, and as a set they are a reasonably explicit statement of work to be done. At the head of the Fund's agenda, however, should be a detailed look by its own staff at the broad quantities of table 8.8 across countries and across time. There is a good deal of work to be done here in spreading out world balances, testing assumptions, establishing a history for the table, and reconciling the flows of the table with existing bodies of stock data such as IBS that are separate from the flow data.

All this should be done before discussion of country data problems with individual statistical offices. There is a close interlock between current- and capital account data problems for most countries, and the two sides need to be worked out jointly. At least as important is a detailed Fund statement of the condition of the statistics at a world level that will show which problems matter most for analysis and policy and will be the basis for establishing priorities in the work.

The Fund has the statistical base, country knowledge, and operating incentive to be in a most favored position globally for stating the problem and working through it. Up to now, the Fund has published its world figures on balance of payments as something of a footnote—part 2—to its annual *Balance of Payments Statistics Yearbook* and has taken the totals and balances largely as they come from country reports and staff estimates of missing items. The last eight years show that that is no longer an adequate procedure. The world figures now need a more specifically active role by Fund staff than they have had so far, most specifically with procedures for a substantial review of country data that can result in replacing country figures by better information when it exists. This is never done at present, and the proposal to do so is a major recommendation to the Fund.

As mentioned earlier, the capital account counterparts to world current-account imbalances are much less plain in the present form of the Fund's tables than are the current-account balances because of the accounting structure imposed on them. Capital account categories in the Fund's *Balance of Payments Manual* are defined mainly in terms of sectors—official, banks, nonbanks—rather than markets and cannot be used in international financial market analysis or even for consistency checking in statistics. The *Manual's* chapters on capital account are a small part of the publication and are far too simplified for today's financial practices. A part of the Fund's agenda for modernizing its

balance of payments program is surely to put attention to capital account on a scale that the subject now deserves. Imminent SNA revisions make such a review all the more urgent.

8.6 Relation to National Accounting Systems

It seems appropriate, in an Income and Wealth Conference volume, to mention, at least, the connection and possible effect the working party's report might have on national accounts around the world and in total. Current accounts are, after all, part of national income and product accounts, and the full balance of payments statement is part of flow-of-funds accounting. More broadly, these changes are proposed in a world that is at least quadruple entry in its bookkeeping within one or another form of SNA. The connection is simple in principle, but it is also complicated enough in its detail to make a thorough description far too tedious to work through here.

The accounts that we are dealing with here can be laid out as a matrix with country balance of payments statements as columns and the Fund's categories—both current account and a reorganized or homogenized or summarized form of capital account—as rows. The rows add horizontally to a final column, variously called “all countries” or “world,” depending on context, that carries the full collection of world imbalances that the working party has been looking into. The net vertical sum in this last column is world-total errors and omissions, which is also the horizontal sum across countries of errors and omissions. The structure here is exactly that of a flow-of-funds matrix, and each column is in fact a flow-of-funds accounting for a country in which all domestic relations have been consolidated out.

Every change proposed in the report for the current-account section of the matrix affects at least four cells and perhaps subtotals and groupings of rows such as GNP and national saving and investment. Shifts of a country's flows from one row to another within current account typically have little or no effect, while a statement that a country has the wrong number for an income flow alters a good many domestic figures and discrepancies as well as the imbalances in the Fund's world totals. The working party proposed a set of current-account changes that altogether come to \$50 billion of net credits affecting the GNP of various countries—much less for GDP—and another \$8 billion for transfers. Capital account changes associated with these and separate from them have not been worked out except in the suggestions of table 8.7, and the effects on country errors and omissions and on national income and product account discrepancies are also still to be calculated.

Although the full results are not known yet, this is a useful context for mentioning one policy-related aspect of the working party's exercise, namely, the scope of a country's transactions for balance of pay-

ments analysis. Some of the adjustments in table 8.2 are for international organizations, and these are plainly a column in the world matrix that was missing from the Fund's totals in 1985 and that belongs there parallel with geographic countries. Other economic groups were also missing, however, including holders—or holdings—of at least \$300 billion of international claims and the owners—or operations—of the Greek merchant shipping fleet. In both cases, these amounts were not known to and not included by any reporting country. It is possible, as illustrated in the report, to use information from Switzerland and other investor havens to get the addresses on the accounts of such claims and to allocate international assets to the countries named in the account addresses. Such a procedure affects the national accounts of the named countries accordingly, but there is an important question whether any knowledge is added by the practice of attributing to countries assets or activities that have effectively moved into international markets separate from all conventional country connections. In such cases the urge to balance the accounts as presently constructed seems to have obscured rather than clarified matters.

The report raises this question and suggests that the money or income can appropriately be identified with a country if it is somehow available for the country's international financing, either through domestic investment conditions that can attract it home or by some form of commandeering. The problem here is that, if commandeering is any kind of a possibility, the expatriate money surely goes underground as tightly as it can to avoid being available. On the other hand, domestic conditions that are attractive enough for a reflow of national capital will also attract fully foreign funds, perhaps at least as well, and the meaning of availability then broadens to embrace an entire world financial market. In either condition, the meaning of a country's funds held abroad is ambiguous, and the report concludes that there is a gray area here that calls for judgment.

The problem here may be in attaching concepts based on nation-state traditions to a world where there are many states but only poorly delineated nations and where in fact much economic activity is truly international and without significant national connections. Major international banks seem to be in this condition, along with more mature multinational corporations. Statisticians tend to insert data for these banks and businesses rather arbitrarily into one or another national total without regard for the operating relations among the parts of these firms or with their host countries. There is at the same time a great deal of individuals' wealth that is as international as the business activity but much less well known and largely ignored in country statistics.

For neither business nor individuals is the present treatment helpful analytically. It may be time now, when SNA structure is being reconsidered, to set up such internationalized activity in the accounts in a

more realistic form, namely, as separate columns in the world matrix parallel to international agencies and to geographic states. Such columns need their own balance of payments statements vis-à-vis all other columns, and they need GNP, GDP, and saving and investment measurements of their own. Defining the group statistically needs thoughtful consideration from several viewpoints, but one starts from the concept that it consists of all the money in international markets that conventional national statistics do not claim for one or another geographic state. Working this out is another natural function for the staff of the Fund, using the statistical base they have and can develop in relation to table 8.8. One role such a synthetic sector group can serve for the Fund is to act as intermediary between the country-reported statistics that the Fund much prefers to use and the alternative global views that are inflicted on the Fund by independent information and imbalances.

Appendix A

Terms of Reference of the Working Party on the Statistical Discrepancy in World Balance of Payments Accounts

The Working Party will investigate the principal sources of discrepancy in global balance of payments statistics, consider various ways in which statistical practices might be amended, and make recommendations.

It is understood that the principal focus of the group's activities will be the Investment Income and Financial Services accounts, and that particular attention will be given to the role of the offshore centers. In carrying forward its work in this area the group will be assisted by a technical staff, of up to five professionals, that will be provided by the Fund and will be based in Washington.

The Working Party may also consider other sources of discrepancy in balance of payments accounts, if these appear to be of significant importance and amenable to investigation. In undertaking work in these areas, the Working Party may call on the assistance of the Fund staff, the OECD secretariat or other agencies, within the limits of the resources available.

The Chairman of the Working Party will determine, in consultation with other members, the program of work and the timing of meetings. The final report of the Working Party will be presented to the Managing Director no later than December 1986, and an interim report will be presented no later than December 1985.

Appendix B

Members of the Working Party on the Statistical Discrepancy in World Balance of Payments Accounts

Chairman:

Mr. Pierre Esteva, Ministry of Finance, Paris, France

Members:

Dr. Gunter Baer, Bank for International Settlements, Basle, Switzerland

Mr. Max Baltensperger, Swiss National Bank, Zurich, Switzerland

Mr. Andrew Crockett, International Monetary Fund, Washington, D.C.

Mr. Werner Dannemann, International Monetary Fund, Washington, D.C.

Mr. Piero Erba, Statistical Office, Eurostat, Luxembourg

Mr. Michael Feiner, Organisation for Economic Cooperation and Development, Paris, France

Dr. Mohammed Haider Ghuloum, Central Bank of Kuwait, Safat, Kuwait

Dr. Lin See-Yan, Bank Negara Malaysia (Central Bank Malaysia), Kuala Lumpur, Malaysia

Mr. Marius van Nieuwkerk, De Nederlandsche Bank N.V., Amsterdam, Netherlands

Mr. Samuel Pizer (director, Technical Staff), International Monetary Fund, Washington, D.C.

Dr. Kurt Senff, Deutsche Bundesbank, Frankfurt, West Germany

Mr. Jack Wells, Central Statistical Office, London, England

Mr. Yoneyoshi Yasugi,¹⁰ Bank of Japan, Tokyo, Japan

Mr. Ernesto Zedillo, Director General de Ficorca, Mexico, D.F., Mexico

Rapporteur:

Mr. D. Keith McAlister, International Monetary Fund, Washington, D.C.

Members of the Technical Staff:

Chester L. Callander

Edna E. Ehrlich (Federal Reserve Bank of New York)

Dietrich Hartenstein (Deutsche Bundesbank)

Samuel Pizer (director)

Robert L. Sammons

Stephen P. Taylor

Keith McAlister (liaison with Bureau of Statistics, International Monetary Fund)

Secretarial Staff:
Martha J. Haldeman
Alice McPhillips

Notes

1. For the final published report, see International Monetary Fund (1987).
2. Some of the discrepancy in trade arises from a timing float between recording of shipments as exports and as imports, and the Fund's Research Department includes estimates of the float component of the discrepancy in their *World Economic Outlook* publications (e.g., International Monetary Fund 1986c, 70, table A30). The timing asymmetry and the residual asymmetry are both more volatile than the total trade balance discrepancy and are negatively correlated with each other, but the components are as small as the total and also without trend relative to the volume of trade. Trade is not part of the direct problem whether or not the timing adjustment is accurate.
3. The BIS maintains its banking data on a quarterly basis and publishes them quarterly in *International Banking and Financial Market Developments*, along with a commentary (e.g., Bank for International Settlements 1986). The Fund incorporates BIS geographic detail into a broader coverage and somewhat different definition of banking, and the results appear in the Fund's monthly *International Financial Statistics*, in the world tables at the front as "International Banking Statistics" (IBS). The relation between the two forms of statistics and between them and other types of banking statistics is described in several publications (e.g., International Monetary Fund 1986b). The working party's report includes an appendix that describes the data in detail.
4. Comparing BIS-Fund data with national banking statistics can require a good deal of specific knowledge for any country on the nature of banking data and the structure of financial institutions. This is true even in comparing IBS pages with country pages within *International Financial Statistics*.
5. The \$33 billion total is, to be sure, a net sum of credits less debits, and giving proportions of such a net sum, as in the text, is not proper. Credit adjustments, however, far outweigh debits in the sum in this case.
6. It is important to mention that offshore reporting of geographic detail for nonbanks was thin before December 1983 and only at that date became substantial enough to contribute significant information to the problem. The BIS shows a major break in series at December 1983, one that the user should cross only with much caution. The Fund made a different choice by estimating nonbank geography back to 1981 on a basis consistent with the new series and showing nothing before 1981 on nonbank geography. Both treatments show plainly the lack of history that could put present conditions into perspective.
7. The asset difference in table 8.4 appears to be a minimum. The IBS figure probably omits most amounts invested abroad by banks on behalf of customers, about \$34 billion at 1983 year end, and the difference could be that much larger than table 8.4 shows.
8. If the income is spent abroad on consumption, we can hope that the spending is picked up in the foreign travel component of personal consumption already, and the revision will have the same effect as repatriated income.

9. The working party's income questionnaire shows that a closer match is possible for many countries by bringing more capital account detail into the standard structure.

10. Succeeded Mr. Kozo Tsukagoshi, Bank of Japan, in July 1985.

References

- Bank for International Settlements. 1986. *International banking and financial markets developments*. Basle: Bank for International Settlements, May.
- Dooley, Michael P. 1986. *Capital flight: A response to differences in financial risks*. Washington, D.C.: International Monetary Fund, Research Department. Typescript.
- International Monetary Fund. 1977. *Balance of payments manual*. 4th ed. Washington, D.C.: IMF.
- _____. 1985. *Balance of payments statistics yearbook*. Washington, D.C.: IMF.
- _____. 1986a. *Balance of payments statistics yearbook*. Washington, D.C.: IMF.
- _____. 1986b. *The Fund's international banking statistics*. Washington, D.C.: IMF.
- _____. 1986c. *World economic outlook*. Washington, D.C.: IMF, October.
- _____. 1987. *Report on the world current account discrepancy*. Washington, D.C.: IMF, September.

Comment Michael P. Dooley

The emergence of a statistical discrepancy in the adding up property of current accounts in international payments statistics has been an important problem for analysis of international economic conditions. Analysis of economic development, exchange rate determination, and international debt problems all require information concerning net flows of goods and services among countries and groups of countries. As Mr. Taylor clearly shows, the attempts to reconcile recorded payments for purchases of goods and services with recorded receipts in recent years have consistently shown that some countries have on balance received but not recorded receipts. Thus, some countries' current-account deficits have been smaller (or their surpluses larger) than national statistics suggest. Moreover, these discrepancies have been so large that they call into doubt even broad analyses of net resource transfers among groups of countries.

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The report of the task force of which Taylor was a member provides a very detailed report on the major sources of the statistical discrepancy. Roughly speaking, this report identifies the types of transactions that account for most of the discrepancy, although the report provides only limited geographic breakdown as to which countries' or groups of countries' current accounts were most affected. Taylor supplements this material by providing educated guesses concerning the regional breakdowns for the unrecorded receipts.

Perhaps the most interesting aspect of the exercise is the evidence that financial transactions account for a substantial part of the difficulty. It is well known that the scale of gross capital flows among countries is many times greater today than it was only a few years ago. What is less appreciated is the fact that interest and dividend payments on such positions have become an important part of "service" payments appearing in the current account. In particular, Taylor shows that creditors seem to report income receipts that are substantially less than payments reported by debtors. Moreover, if the natural assumption is made that unreported receipts in turn become unreported financial claims that in time will generate even more unreported income, we have the seeds of destruction for the usability of the data on international transactions. As Taylor suggests, damage could be limited by utilizing data for cross-border stocks appearing on the books of financial institutions to benchmark the investment income and capital flow data.

The unwillingness of investors to report income on their foreign investments may not be difficult to understand. Indeed, one of the attractions of foreign financial positions may be that income is relatively easily concealed. Procedures set out in the task force report for adjusting data for countries that are known to be creditors, perhaps on the basis of debtors' data on stocks of debt or payments flows, would seem necessary in order to restore greater confidence in the data on international transactions.