I

Introduction and Principal Findings

CONTENTS

1. ORIGINS OF STUDY

The Working Party on the Statistical Discrepancy in World Balance of Payments Accounts (hereinafter referred to as the Working Party) was organized to investigate the principal sources of a rapidly growing discrepancy in the global current account since the late 1970s and to make recommendations for improvements in the statistics. As shown in Table 1, the sum of current accounts, which in principle should be zero for the world as a whole and, in fact, was close to that for many years, began to show a large excess of recorded debits, reaching a peak of over $100 billion in 1982. Though it decreased somewhat thereafter, this discrepancy has remained very large and has shown considerable variation from year to year.

Discrepancies of this overall size impair the credibility of analyses and recommendations that depend on the statistical record of the current account balances of particular countries and regions. Indeed, the regional summations, as shown in Table 2, have tended to suggest an implausible general experience of current account deficits. Consequently, when it appeared that this large discrepancy was not accidental and remained sizable, responsible authorities at the OECD and the Fund determined that a concerted effort must be made to remedy the situation. It was felt that such a study should help, inter alia, in coping with the adverse implications of the discrepancy for the analysis of the economic conditions facing countries and regions. Pursuant to this determination, the Executive Board of the Fund, on August 1, 1984, adopted a recommendation to establish a Working Party, and Terms of Reference were drawn up. (See page xiii.) The membership of the Working Party (provided on page xv) was designed to combine expert knowledge of the subject matter of the inquiry with a broad representation of countries and institutions having a wide range of economic interests.

The first meeting of the Working Party was held in January 1985 in Washington, and subsequently the Working Party met at approximately three-month intervals. In addition, the small Technical Staff was organized, located in Washington, and attached to the Research Department of the Fund. The Technical Staff was assisted in its task by the staff of the Fund's Bureau of Statistics, as well as its Research Department. Moreover, the staff of the OECD contributed substantially to several aspects of the research; the

Table 1

SELECTED BALANCES OF WORLD[1] CURRENT ACCOUNT TRANSACTIONS, 1978–84

(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	−0.3	−1.9	−0.9	0.7	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	0.1	−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	0.4	−0.4	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
Memorandum item: Service balance as a percentage of service payments	5.8	5.4	7.1	10.4	12.8	10.9	12.7

Source: International Monetary Fund, *Balance of Payments Statistics Yearbook*, Vol. 36 (Washington, 1985), Part 2.

[1] Does not include estimates of certain current transactions of either the U.S.S.R. or other countries of Eastern Europe (which were not Fund members) that are reported in the Fund's *World Economic Outlook*. International organizations do not supply comparable data, and some economies are not included in the statistics on certain service transactions.

Statistical Office of the European Community supplied useful statistics on intra-Community transactions; and the Bank for International Settlements (BIS) also provided assistance, especially in the analysis of international banking matters.

As directed in the Terms of Reference, the Working Party concentrated its attention on the enormous discrepancy in the global accounts regarding international investment income and financial services in general. As explained later, the analysis of "direct investment income" and "other investment income" required quite different approaches. Part of the study involved a consideration of the role of offshore financial centers and of newly developed financial instruments in reducing the ability of individual creditor and debtor countries to account accurately for international flows of capital and the associated income streams. Also, the Technical Staff initiated studies of two other sectors of the current account that displayed large divergences: the international transportation account and the official unrequited transfers account. Taken together, the income, transportation, and official transfer sectors are responsible for most of the overall current account discrepancy, and for its growth, since 1979. However, as shown in Table 1, the shipping and official transfers discrepancies, which became large in the 1970s, have tended not to grow since then, unlike the income discrepancy, which rose rapidly. Among the other items in the table, the discrepancy on "other official transactions" has also been quite large in recent years. A limited review of this sector by the Technical Staff, however, has suggested the problem may be confined to a few countries and may be solved by further review of their accounts.

One of the major objectives of this study was to determine, as far as possible, whether the discrepancy—indicating an understatement of credits or an overstatement of debits—was concentrated in any particular country or set of countries. Clearly any such concentration could result in a serious misunderstanding of the actual economic situation and a corresponding error in the prescriptions for adjustments of economic policy. Concern about the potential

Table 2
REGIONAL CURRENT ACCOUNT BALANCES, 1978–84
(In billions of U.S. dollars)

	1978	1979	1980	1981	1982	1983	1984
Current account							
Total	−19.7	−19.4	−34.7	−69.0	−113.9	−75.1	−95.8
Industrial countries	15.2	−26.4	−62.1	−19.4	−21.2	−18.5	−60.5
Developing countries	−34.8	7.1	27.4	−49.6	−92.7	−56.6	−35.3
Offshore financial centers	−1.6	−1.8	−2.7	−2.3	−1.6	−0.9	1.0
Middle Eastern oil exporters	11.3	54.4	90.1	47.9	−3.0	−13.3	−16.7
Other developing countries	−44.5	−45.5	−59.9	−95.2	−88.0	−42.5	−19.6
Trade balance							
Total	18.1	20.3	28.2	24.9	−2.0	9.8	11.0
Industrial countries	9.3	−37.4	−66.8	−19.2	−14.4	−11.8	−37.7
Developing countries	8.8	57.7	95.0	44.0	12.4	21.6	48.7
Offshore financial centers	−5.4	−5.7	−7.7	−9.9	−10.0	−9.0	−6.0
Middle Eastern oil exporters	45.7	91.5	135.6	106.2	56.8	32.9	31.6
Other developing countries	−31.4	−28.1	−32.9	−52.3	−34.5	−2.3	23.1
Services balance							
Total	−24.7	−29.3	−49.2	−80.6	−100.9	−78.7	−96.4
Industrial countries	29.9	39.4	36.7	30.2	24.7	23.5	9.0
Developing countries	−54.6	−68.6	−85.8	−110.8	−125.6	−102.2	−105.3
Offshore financial centers	4.2	4.1	5.0	7.7	8.5	8.2	7.4
Middle Eastern oil exporters	−20.6	−22.9	−25.9	−37.1	−42.9	−31.9	−35.8
Other developing countries	−38.2	−49.8	−65.0	−81.4	−91.2	−78.5	−77.0
Private and official transfers							
Total	−13.0	−10.4	−13.8	−13.3	−11.0	−6.2	−10.4
Industrial countries	−24.0	−28.4	−32.0	−30.5	−31.5	−30.2	−31.8
Developing countries	10.9	18.0	18.2	17.2	20.6	24.0	21.4
Offshore financial centers	−0.3	−0.2	—	−0.1	−0.1	−0.1	−0.4
Middle Eastern oil exporters	−13.8	−14.3	−19.7	−21.2	−17.0	−14.2	−12.5
Other developing countries	25.0	32.4	37.9	38.5	37.6	38.3	34.3

Source: International Monetary Fund, *Balance of Payments Statistics* Yearbook, Vol. 36 (Washington, 1985), Part 2.

for such misjudgments was expressed with considerable urgency by some of the Fund's Executive Directors. Moreover, analyses of the world economic situation by the Fund staff, as well as those prepared by the OECD and other groups responsible for such analyses, began to lose credibility as the size of the discrepancy tended to exceed the magnitude of the surpluses or deficits of major world areas.

A point that will be reiterated at various stages in this report is that the Working Party has not attempted to trace the income that might be related to cross-border capital flows or stocks of cross-border assets that are recorded in neither the capital exporting nor the capital importing country. Although the problems raised by unrecorded, or incorrectly recorded, capital flows are important, they do not fall within the terms of reference of the Working Party, except as they affect the accuracy of reported income flows. (See Appendix VI.) Discrepancies in the income account reflect only the extent to which *reported* amounts differ. Therefore, the results given in this report do not purport to measure the "true" level of income accruing on cross-border assets, but are limited to deriving adjustments that should be made to eliminate discrepancies in the statistics as they are now published.

2. EFFECTS OF DISCREPANCIES ON ANALYSIS

The need for an intensive study of the large and volatile discrepancy between world current account receipts and payments stems from a recognition of the dangers of such instability for a broad range of analyses carried out on a regular basis by national authorities and international organizations. Examples of such analyses are those undertaken by the staff of the Fund in connection with Article IV consultations with individual member countries and those published in the *World Economic Outlook* and related Fund publications. As mentioned above, these implications would be particularly disturbing if a large part of the discrepancy were concentrated in any individual country or group of countries. However, even if the discrepancy is distributed over a large number of countries, it still distorts the statistical basis for assessments of countries' policies or of the interaction of policies among countries in the context of the Fund's multilateral surveillance activities. The discrepancy also complicates assessments of countries' actual or projected external indebtedness.

To the extent the statistical basis for balance of payments analyses is distorted, it also tends to impair the quality of any policy implications that may be drawn from such analyses. While the Executive Directors and the staff of the Fund are well aware of the need to make allowance for the discrepancy in formulating policy advice, the fact that current account deficits are systematically overstated—or surpluses understated—has led to concern that unduly restrictive policies might be adopted at the global level. In present circumstances, a particularly worrying possibility is that protectionist measures might be encouraged on the basis of mistaken perceptions of countries' balance of payments situations.

a. Surveillance

Analyses of countries' balance of payments performance play a crucial role in Fund surveillance activities, both in relation to the actual and projected position of any individual country and to the interaction of policies among countries. It is obvious that the existence of a large discrepancy significantly increases the margin of uncertainty that is associated with the projection of current accounts and, hence, with the assessment of the sustainability of a projected pattern of external balances. Moreover, since statistical discrepancies in external receipts or payments are reflected in national accounts estimates of income and output developments, the degree of confidence attached to projections of world economic growth is also affected. In the analysis of individual economies, the global discrepancy may blur perceptions of the external environment in which policy decisions are formulated.

Errors in the projection of the discrepancy are a significant potential source of error in assessments of global economic prospects, with respect not only to balance of payments variables but also to world output. In this context it should be noted that for most forecasting purposes, it is variations in the discrepancy, rather than its absolute level, that matter. Since 1979, the discrepancy has fluctuated by some $28 billion annually on average (Table 1), which corresponds to almost one fourth of 1 percent of world gross domestic product (GDP). Compared with a hypothetical situation where projections of world economic developments would have been based on an assumption of an unchanged discrepancy, and allowing for multiplier effects, fluctuations in the discrepancy of this magnitude represent a potential (and presumably unnecessary) margin of error in world growth projections, one year ahead, of perhaps one half of 1 percent of world GDP. In practice, the *World Economic Outlook* forecasting procedures typically have allowed the discrepancy to fluctuate somewhat over the forecast period. However, because of the importance attached to achieving globally consistent projections, projected changes in the discrepancy have been significantly smaller than the average annual variations in recent years. Since little is known about the sources of the discrepancy, attempts by other forecasters to project changes in the discrepancy do not appear to have been more successful than those of the Fund.

A further question concerns the distortions caused by the discrepancy in analyses of actual developments in world output. In this connection, it is interesting to note than the severe world recession in 1980–82 coincided with a particularly sharp widening of the discrepancy, from minus $19 billion in 1979 to minus $114 billion in 1982. This implies that about $95 billion of income growth over this period was not accounted for in countries' national accounts statistics, which suggests that the severity of that recession may have been somewhat overstated. An additional analytical implication of the discrepancy is that world savings are understated—a problem which impairs analyses of financial market behavior.

Surveillance over exchange rates is a particularly important aspect of Fund activities. In this respect, the discrepancy constitutes a significant impediment to analyses of fluctuations in exchange rates. For example, it is essential to any evaluation of recent exchange rate patterns to know whether the U.S. current account deficit really is as large as is suggested by the recorded data, or whether the deficits of developing countries are being exaggerated. Moreover, and perhaps more seriously, changes in the discrepancy may also affect actual exchange rate developments. Even though exchange rates are, in practice, influenced by a large number of factors, the extent of exchange rate or reserve pressure faced by a country cannot be regarded as independent of market views of the current account—actual or projected. Capital flows and exchange rates can be influenced by expectations about future balance of payments developments, and these expectations can be changed by perceived shifts in the current account—whether or not these shifts reflect actual developments or recording errors. Similarly, there may be occasions when the policy response to given exchange rate movements or reserve pressures would be different if they were thought to stem from a rising current account deficit rather than from capital outflows.

b. Foreign Debt Analysis

It is a key objective of both Article IV consultations with individual Fund member countries and the World Economic Outlook exercise to monitor and analyze developments in the debt situation of indebted countries, particularly those in the developing world, and appraise the sustainability of their external situations. One of the major findings of the Working Party is that both the assets and investment incomes of indebted countries are significantly underrecorded. These omissions from the record, while unlikely to be of serious consequence to assessments in crisis situations, are likely to prejudice assessments in longer time frames. In particular, the opportunity costs attaching to policies that engender capital flight tend to be underestimated; and the contrast in the recorded performances of countries following policies conducive to the retaining of domestic savings *and* investment is lessened relative to those of countries that do not.

In summary, from the point of view of those doing the analytical work of the Fund and other official or private organizations, there are compelling reasons to improve recorded balance of payments estimates. The main potential benefit would be improvement of the statistical and analytical basis for official policy formulation and private sector decision making.

3. PRINCIPAL FINDINGS

The main subject of this section is the international investment income account; briefer discussions of the shipping and official transfer accounts are given at the end of the section. For purposes of making its analysis clear and more accurate, the Working Party has found it helpful to use the term *discrepancy* to refer to only those cases where for a given transaction, the two countries involved assign different values, including those in which a transaction is omitted entirely by one of them. The term *asymmetry* refers to those cases where two countries identify the same transaction under different headings of their accounts—for example, an income debit may be entered under direct investments by one party, while the other party records the same amount as a receipt of "other" income. The latter type of case does not contribute to the global current account discrepancy, unless one of the countries concerned records the transaction in the capital account.

An important perspective on the overall income discrepancy can be gained by observing that, corresponding to the current account excess of debits for the world as a whole, a large cumulative net credit balance for recorded capital flows has developed, together with a smaller net overall credit in the sum of countries' errors and omissions, as shown in Table 3. This table illustrates the double-entry nature of the balance of payments accounts. In principle, the current and capital accounts should be mirror images, and for the world as a whole each should sum to zero. However, it can be seen that over the years the consistency of both sets of accounts has deteriorated, generating large cumulative debits and credits. It is also evident that the size of the positive and negative errors and omissions entries needed to balance the accounts of individual countries has increased. Although this study concentrates on imbalances in some elements of the recorded current accounts, it should be noted that the deterioration in the recording of the capital accounts indicates that a wider pattern of related statistical difficulties has been developing.

The Working Party has considered several possible specific causes of the statistical problems underlying the growth of the income discrepancy, such as the wider swings in exchange rate relationships or the effects of the sharp rise in petroleum prices after 1979, but could not find any systematic statistical bias related to these developments as such. However, these may be contributing elements to the central problem, which appears to have been the greatly enlarged flow of capital across national borders. A number of conditions prevalent after 1979 probably underlie this development: (1) financial markets have become more closely integrated, and restraints on the free movement of funds have been loosened; (2) the stock of cross-border assets and liabilities expanded enormously, and there is a built-in bias for such stocks to be more easily recognized by debtor rather than creditor countries; (3) political and economic tensions have encouraged the concealment of foreign assets from authorities in home countries; and (4) there has been an accentuation of deficit and surplus positions on current account, matched by financing on a large scale through channels that are often indirect and difficult to capture in the standard statistical network. The effect on the income discrepancy of this accumulation of cross-border assets was heightened by rising interest rates.

Table 3

MAIN SECTORS OF WORLD BALANCE OF PAYMENTS ACCOUNTS[1]

(In billions of U.S. dollars)

	Cumulated 1964–76	Cumulated 1977–83	Cumulated 1977–83 Adjusted[2]
Current account[3]	−38	−347	−407
Of which:			
Investment income[3]	. . .	−110	−170
Capital movements (including reserve transactions)[3]	34	237	297
Of which:			
Increase of liabilities	892	2,670	2,621
Increase of assets	−858	−2,433	−2,324
Errors and omissions	4	111	111
Of which:			
Credit entries	34	285	285
Debit entries	−30	−174	−174

Note: Calculations are based on data provided by the Fund's Bureau of Statistics.

[1] Negative signs denote debit figures.

[2] Adjusted to exclude reported reinvested earnings from the investment income accounts, because they are recorded asymmetrically and introduce a net credit entry that tends to conceal the extent of the actual discrepancy.

[3] Balances of reported transactions, which in principle should be zero for the world as a whole.

While examining this background helps one to understand the origins of the growing income discrepancies, it does not help one to come to grips with the more specific issues of locating the gaps and suggesting ways to reduce them. As the result of its work the Working Party has been able to identify the causes of most of the gap in portfolio investment income and to diagnose the nature of the problem of the discrepancy for direct investment income. Table 4 summarizes the results of this analysis, which is elaborated in Chapters IV and V.

It should be noted that while the table shows that most of the income discrepancy can be accounted for, this does not mean that remedial measures that can be easily or quickly applied are at hand. On the contrary, much work still needs to be done to deal with specific failings in the statistics or the compilation procedures, and improvement is likely to require an impetus from senior levels of government and the Fund itself.

Table 4

ADJUSTMENT OF REPORTED INVESTMENT INCOME DATA, 1979 AND 1983

(In billions of U.S. dollars)

	1979	1983
Direct investment income		
Reinvested earnings		
As reported by Fund	+11.8	+9.9
After adjustment	−1.6	−0.5
Other direct investment income		
As reported by Fund	+0.1	−11.5
After adjustment	0.0	−6.2
Other investment income		
As reported by Fund	−7.3	−32.0
After adjustment	+0.2	+0.7
Total investment income		
As reported by Fund	+4.6	−33.6
After adjustment	−1.4	−6.0

Source: Reported data as in the International Monetary Fund, *Balance of Payments Statistics* Yearbook, Vol. 36 (Washington, 1985); adjustments as compiled by the Working Party.

a. Direct Investment Income

Early in its studies the Working Party concluded that the problems of collecting adequate data on the earnings and other activities of multinational enterprises were entirely different from the problems of accounting for other investment income. Information on earnings, especially that part of earnings not distributed as dividends, could not be derived reliably from records of foreign exchange transactions, nor could a set of data on the accumulated stock or value of direct investments provide a reliable cross-check on estimates of income flows, even if the former were available. The only basis for detecting gaps or inconsistencies in direct investment income as reported by different countries was to use the extensive data, with considerable detail by country, available for a few of the major industrial countries. These data were exploited as far as was possible, within the limits of this study, by the Technical Staff. But, as discussed in Chapter IV, considerable progress remains to be made. For a satisfactory outcome much intensive and coordinated work by national compilers, and the adoption of more nearly uniform techniques for acquiring the basic data, will be necessary.

Measurement of *reinvested earnings* is not possible without the use of direct inquiries to the multinational enterprises themselves. As matters now stand there is a large excess of net credits reported to the Fund, because the countries that collect the data by means of such inquiries tend to be only a few large creditor countries. Therefore, debit entries tend to be much less complete than credit entries. Consequently, until such time as national compilers improve their statistical coverage, any summing-up of global direct investment income will contain an arbitrary excess of net credits. The Working Party suggests that unless the missing debits (as identified from the credit side) are supplied (as was done in preparing Table 4), the category of reinvested earnings should be dropped from global summations.

To detect inconsistencies in the reporting of *other direct investment income*, the Technical Staff carried out a country-by-country comparison of data whenever countries reported in sufficient detail. However, even after going as far as possible with the data available either at the Fund or supplied on special questionnaires, a considerable net debit balance remains unexplained, though it seems to be concentrated in relatively few countries. Because the operations of multinational enterprises are extremely complex, and in many cases the geographic allocation of their sources of income is somewhat arbitrary, the Working Party has concluded that only those persons in full control of the facts in each case are in a position to detect and eliminate inconsistencies. Progress in improving this information will require improved compilation methods in many countries, the participation of the multinational enterprises themselves in making available the necessary detailed records, much greater cooperation among compilers than now exists (although there are already some examples of successful joint consultations), and leadership by the Fund in encouraging such joint studies. Clearly such an effort would require persistence over a considerable period, but the results already achieved (reported in Chapter IV) demonstrate that progress can be made.

b. Portfolio Investment Income

This part of the investment income account covers interest received and paid by banks vis-à-vis each other and vis-à-vis nonbanks, and it also covers interest and dividends paid and received on holdings of securities and of other financial instruments, such as commercial paper, mortgages, or suppliers' credits. For convenience, in this report all these types of nondirect income are considered under the heading of "portfolio" income. Also, for convenience, most of the discussion does not distinguish between official and private income credits or debits, though these aspects are discussed separately, to some extent, in Chapter V.

As the Working Party studied the problem of eliminating the very large discrepancy in the amounts being reported to the Fund under this heading, a number of approaches seemed plausible. One possibility was to construct matrices of income flows based on (1) geographic data on flows available in the accounts of some countries and (2) the matrices of banks' assets and liabilities that underlie the banking data issued by the Fund and the BIS. Although some useful insights could be obtained by this means, it could not be carried very far because of the lack of sufficient geographic detail in countries' accounts and because there were problems of confidentiality in arriving at a sufficiently detailed matrix of the banking data. Eventually, however, a research procedure was developed that proved to be effective and that could readily be adopted by others for future use.

In keeping with the general proposition that income debits are likely to be more fully reported than the corresponding credits, it was decided that the first stage in analyzing the discrepancy would be to establish to what extent the debit side of the portfolio income account could, in fact, be regarded as reliable. The process for doing this is described in Chapter V. It could, in fact, be established that portfolio income debits reported to the Fund were fairly reliable. Nevertheless, it was necessary for the Technical Staff to make several revisions based on careful analysis of particular sets of countries, to create estimates for countries of Eastern Europe that were not Fund members and for international organizations (which have up to now been omitted from the Fund's aggregations), and to employ a special questionnaire to make further corrections and eliminate some asymmetries as between portfolio income and other current accounts. At the end of that process, the level of income debits deemed to be correct was somewhat higher than the amount that had been published by the Fund.

The main mechanism that could be used to establish the credibility of the debit entries for portfolio income was based on comparisons between the reported debits and various sources of data on the stock of liabilities of each country reporting debits. For this purpose, extensive use was made of the banking data published by the Fund, together with similar data issued by the BIS and—especially for developing countries—the data on debts assembled by the OECD and the World Bank. For the smaller amounts of interest and dividends related to marketable bonds and equities, the Technical Staff was able to create estimates by using flow data put together by the OECD. As noted above, it is much easier to identify the country of issue of these various kinds of liabilities or securities than it is to identify the location of the asset holders.

Once the validity of the debit entries for portfolio income had been established, it became clear that the main source of discrepancy in this account was inadequate reporting of the portfolio income credits that were accruing to the residents of various countries. A large part of the missing credits could be assigned to particular countries on the basis of the information on banking assets by country contained in the international banking data. Unfortunately, however, an increasing proportion of the banks' assets and liabilities vis-à-vis nonbanks is not allocated by country. The allocation of missing elements of income on portfolio securities is even more conjectural. Nevertheless, there is sufficient evidence to establish that the missing credits are not highly concentrated in particular countries or sets of countries, but are rather widely spread around the world. (See Chapter IX.) Almost half of the missing net credits on portfolio income can be assigned to industrial countries, about 20 percent to developing countries (other than major offshore banking centers), and the remainder—including an adjustment to allow for nonreporting of debits by Eastern European countries that were not members of the Fund—is unallocated or spread among other groups. At the risk of being repetitious, it should be pointed out that these adjustments do not measure the "true" level of unreported income, but only that amount necessary to match the debits reported on cross-border identifiable investments.

It is the view of the Working Party that the basic techniques employed by the Technical Staff to deal with the gaps in the reporting of portfolio income credits could be adopted at the country level by national compilers, with the guidance and assistance of the Fund staff. Most of the gaps could then be filled by rather straightforward estimating processes that would not require significant additional resources or effort by the compilers or burdens on the public. The adjustment process used to reduce the original discrepancy for 1983 ($32 billion) was also applied to the discrepancies for 1979–82 and 1984, and it was effective in reducing those discrepancies to minor amounts.

Certain of the deficiencies in the reported data occur because the economies concerned do not report to the Fund at all, and in such cases it falls to the Fund staff to estimate the missing amounts. Indeed, the whole process of ensuring that estimating techniques are consistent across countries and with the underlying data base of asset and liability stocks could only be carried out effectively at the level of the Fund. The central role of the Fund is further emphasized when it is observed that the Fund also publishes the banking data that underlie much of the estimation process.

It may seem unsatisfactory to come to the conclusion that such a large segment of the world current account must rely on estimation techniques, no matter how reliable, rather than on the direct reporting of transactions by the participants or by their financial agents. However, there are at least two considerations that justify such a recommendation. First, even countries that have the most extensive and detailed reporting systems for capturing data on individual international transactions (the Federal Republic of Germany and the Netherlands, for example) find it necessary to supplement such systems with surveys or with estimates to fill the almost inevitable gaps. Second, the creation of elaborate reporting systems to gather information on income from abroad which the owners wish to conceal would be not only extremely expensive and burdensome but also almost certainly condemned to fail.

Major conclusions of this report, therefore, are that it is possible to identify and establish estimates for a large part of the discrepancy in the portfolio income accounts; that the techniques employed to achieve this result need not be burdensome (in fact, there may be scope for dismantling existing procedures if they are demonstrably ineffective) and should be flexible; and that the Fund should have the responsibility for following through on the process of reducing discrepancies through all available channels.

c. Offshore Centers and Financial Innovation

As charged by the Executive Directors, the Working Party has devoted considerable attention to the role of the offshore financial centers in stimulating discrepancies in the reporting of international income and has also studied the influence of the recent spurt of innovation in financial instruments and techniques. Of course, the business of financial intermediation among countries and regions was the stock-in-trade of such financial centers as London, New York, Amsterdam, Zurich, and Paris well before there was any concern with a discrepancy in the world current account. The question is, therefore, whether the new generation of "offshore" financial centers has created a new situation, causing additional statistical problems that require special measures to solve. Similarly, the question is whether the newer financial instruments have introduced new problems or have merely exacerbated older problems that have always been somewhat intractable.

In general, the Working Party has reached the view that the newer offshore centers complicate the tracing of funds, thereby tending to encourage the kinds of capital flows that seek to escape detection. But since the actual tracing of funds through channels is not essential for the creation of income estimates, this does not add greatly to the statistical problems associated with financial intermediation in general. Nevertheless, the chances of accurately estimating the income accounts will be improved as the Fund is able to achieve better reporting of position data by the offshore centers. As to the innovative financial instruments, these add to the difficulties of the balance of payments compiler primarily when they have the effect of shifting the locus of the accounting from banks' balance sheets (which are readily accessible) to the balance sheets of nonbanks—and especially when the latter are in such form that the debtor has no way of knowing (and no reason to know) whether the creditor at any given time is a resident or a nonresident. That residence distinction is essential for balance of payments accounting, but appears to be increasingly vague in the available accounting records.

Some estimates can be given of the investment income adjustments required for 1983—the year on which the Working Party concentrated its work—to bring the major offshore centers into the standard accounting framework.

Since the Fund's *Balance of Payments Manual* was last prepared more than ten years ago, it gives scant consideration to these newer developments, and the Working Party is not convinced that the present version pays adequate attention to the alternatives that might be practicable for bringing transactions carried out through the offshore centers into the overall balance of payments accounting framework. Some of this could be done by Fund staff estimates, but participation by the economies themselves would be highly desirable. There are certain types of transactions, especially involving affiliates of nonbanking enterprises, for which collection of information by the local authorities is essential if sizable gaps in the available data are to be closed.

Since the accounts of the offshore centers should be coordinated with the data reported by other member countries, but with a minimum of additional statistical effort, the Working Party believes that a discussion of these issues should be high on the agenda of any meetings of national compilers that may be organized by the Fund in the period ahead. Similarly, where new instruments or methods for conducting international financial transactions are tending to escape existing national statistical systems, the Fund should attempt to enlist the assistance of organizations that are collecting information for their own purposes on such activities. Such information may not translate directly into balance of payments categories, but it may provide guidelines that would be helpful in overall analysis and evaluation of reported capital flows.

Table 5

MAJOR OFFSHORE BANKING CENTERS' NET INVESTMENT INCOME FLOWS

(In billions of U.S. dollars)

	Portfolio Investment Income	Direct Investment Income	Total
Reported in *BOPS* Yearbook[1]	+0.6	−0.1	+0.5
Adjustments	+6.0	−5.9	+0.1
Estimated actual flows	+6.6	−6.0	+0.6

[1] International Monetary Fund, *Balance of Payments Statistics Yearbook*, Vol. 36 (Washington, 1985).

d. Shipping and Transportation

Within the limits of the time and resources available, the Working Party undertook to find the causes of the large and persistent excess of debits in the world shipping and transportation accounts (Table 1) and to suggest procedures for reducing these discrepancies. The results of this study are presented in Chapter VII. A questionnaire survey was initiated in order to obtain details of these transactions that were not provided in the balance of payments accounts but were necessary for determining the sources of error.

With respect to the large excess of debits in the shipping account (which consists primarily of payments and receipts for the carriage of merchandise between countries), it could be established that the debit side of the account—the amounts paid to foreign-operated carriers to cover freight on imports—was generally fully reported, and might even have been somewhat overestimated in some cases. Consequently, the main problem that emerged is that the freight earnings of a large part of the world's merchant fleet are not reported as credits by any country. At a very generalized level of analysis, one can test whether the tonnage of this "missing" fleet is roughly consistent with the amount of unreported earnings, or whether other receipts are also unreported. Most of the shortfall in the reporting of ships' freight earnings appears to be associated with ship operators whose residences, for balance of payments reporting purposes, are countries or territories—especially Greece, Hong Kong, and countries of Eastern Europe that are not Fund members—that do not report such earnings to the Fund. Other possible sources of underreporting are incomplete coverage of resident operators by countries that do report to the Fund and the omission from shipping data of the operations of ships operated by foreign affiliates of multinational companies that are incorporated or registered in countries that do not report these operations in their balance of payments accounts.

With respect to the "other" transportation account, there appear to be somewhat offsetting deficiencies in the statistical record. This account reflects mainly the expenditures of vessels in foreign ports (with expenditures in home ports of resident-operated ships not entering the balance of payments of the home country), together with charter hire and passenger fares. The first missing element is the expenditures of the "missing" fleet that are the counterpart of the missing freight earnings. Based on general experience of the industry, such expenditures would be expected to reach well over half of the freight earnings. However, when these missing debits are added back to an existing net debit discrepancy in the "other" transportation account, it becomes evident that there is a considerable understatement by many countries of their receipts from the expenditures of foreign ships in their ports. A method has been provided in Chapter VII for locating the countries most likely to be understating receipts in this account.

While the Working Party has identified the main statistical problems, and can suggest procedures for closing the gaps, the difficult task of carrying out a practical statistical program for improving the data reported by individual countries and creating estimates where no national data are reported remains to be accomplished. In the view of the Working Party, this will require locating specific responsibility for work on these accounts within the Fund's Bureau of Statistics, a collaborative effort with the compilers in major maritime countries, and probably regular contacts with sources in the industry that produce some of the basic operating information.

e. Unrequited Transfers

The Working Party decided that some progress could be made in analyzing the causes of the sizable discrepancy in the official transfers account (Table 1) with the assistance of the Development Cooperation Directorate (DCD) of the OECD and by means of a questionnaire designed to produce more details of these transactions than are given in countries' balance of payments accounts. At the request of the Working Party the DCD conducted a special analysis of the data provided by donor countries in the framework of DCD reporting requirements. The Working Party collected information from a cross-section of major donors and recipients in the framework of their balance of payments accounting. Chapter VIII of the Report contains the results of these activities.

Several factors that caused large discrepancies can be identified; some can be dealt with quite directly by using information that is probably available, while others will require considerable further research. Of the total reported official transfers discrepancy in 1983 (minus $12.9 billion), about $1 billion could be eliminated by using corrected data reported in the questionnaire, and about half of the remainder seems to reflect the fact that transfers to international institutions as reported by donors greatly exceed the amounts reported by countries receiving transfers from these institutions. The difference reflects partly operating costs and additions to assets of the institutions themselves (which can be determined by analysis of the appropriate records of the institutions) and partly some underreporting by recipient countries (which will require further research). Much of the imbalance associated with international institutions involves operations of the European Economic Community (EEC). Some of the excess of debits generated in the transfer accounts by the absence of reporting by the international institutions is offset by service account credits in the countries where the institutions are located which are not now offset by debit entries for the institutions. To some extent, consequently, there is a problem of asymmetry rather than an overall current account discrepancy.

Other sectors of the official transfer accounts where corrections can be made are (1) pensions—where countries making payments are much more likely to report them than the countries in which the recipients reside; (2) withholding taxes, which are reported as credits by only a few countries, while the matching debit entries are even less frequently reported; and (3) specific country accounts that appear to have been entered incorrectly in the existing tabulations.

A somewhat different problem exists for *private* transfers, concerning which there seems to be considerable difficulty among countries in deciding whether workers' remittances should be recorded as unrequited transfers or as payments for factor services. The Fund shifts a considerable amount originally reported by countries as factor service credits to the transfer category, creating a net credit residual in that account but leaving the overall current account unaffected.

In general, it appears that the difficulties in the transfer accounts are amenable to a combination of corrections to reported data; inclusion of accounts for international organizations; and tracing of some categories of transfers on a bilateral basis, to the extent possible, to uncover specific cases of inconsistent reporting. It also appears, however, that some review of the *Balance of Payments Manual*'s treatment of workers' remittances and withholding taxes may be in order.

4. APPLICATION OF RESULTS

As a result of its work the Working Party believes that the nature of the adjustments necessary for reducing most of the major discrepancies in world current accounts has been identified, and that an overall plan of action, as well as specific procedures that could be used to reduce such discrepancies, has been set out in considerable detail. We have shown how national compilers can take steps to improve their data or estimates by making relatively straightforward adjustments; by using data prepared outside their own national statistical systems; and, where necessary, by drawing on a modicum of additional resources. Detailed recommendations for action by national authorities and by the Fund are given in the separate chapters of the Report and are brought together in Chapter X.

The Working Party stresses that most of its recommendations for improving national statistics could be implemented promptly and urges national authorities to give this effort a high priority. The Working Party believes that, on the whole, the net cost of dismantling outmoded procedures and replacing them with procedures better suited to modern conditions is likely to be small, and there may well be opportunities for cost reduction in some situations. The benefits, in terms of a more consistent set of world current accounts, would be very substantial.

The role of the Fund in following up on the work of the Working Party will be absolutely central, both in achieving improvements in compilation and estimating procedures in the year ahead and in establishing the framework for improved balance of payments accounts in later years. Activities by the national compilers need to be reinvigorated and brought together to create a mutual effort to solve some of these problems. In many ways the Fund can sponsor greater collaboration and can shape its own agenda so as to assign a higher priority to ensuring the consistency of balance of payments accounting at the global level. In this connection the Fund will need to consider how best to incorporate the adjustments suggested by the Working Party into its various publications in which global aggregations of current accounts are presented. Indeed, the Working Party recommends a thorough reconsideration of the presentations in Part 2 of the Fund's *Balance of Payments Statistics* Yearbook, which is the primary vehicle for bringing together national balance of payments accounts to create a systematic record of international developments in the world as a whole.

Of course, the ultimate purpose of this exercise is to provide additional useful information to those at the Fund and elsewhere who must rely on balance of payments statistics in forming judgments about progress made in the world economy. That responsibility is beyond the province of the Working Party. However, we might offer a few observations on the nature of some of the adjustments to the statistics that we believe are appropriate in the purely statistical sense.

It has been noted that a considerable amount of net credits on income account could be added to the current account balances of many countries and areas as they are now reported. However, there are great differences in the significance that might be attached to particular adjustments. For instance, large amounts of income credits that are now omitted from the accounts of some industrial countries may, in fact, be regularly paid over to the owners who reside in those countries and may be available to finance other current account items or to add to foreign portfolios at the discretion of the owners. In fact, depending on the statistical systems used to compile the accounts, the additions to foreign portfolios may be recorded even though the income is not. The essential point is that neither the investment nor the income is alienated from the home country by considerations of abnormal economic and political risk—ordinary relative rates of return and optimal portfolio formation are the prime considerations. In such cases, there could be little objection to simply adding back the missing income credits to the current account and basing evaluations of the situation on the corrected balance.

There might be a different interpretation, however, in cases where the owner of the assets has, at least for the time being, alienated such assets and the associated income from the home economy. It may be assumed in such cases that the income is not currently available to help finance the country's recorded external balance and that the counterpart of the missing income credit is either some unreported expenditure abroad of the owner or a further accumulation of external assets. It is no less true in this case that income is accruing to residents and is potentially available to finance the country's external balance, but the operative word here is *potentially*. The interpretation of the adjustment suggested by the Working Party is more likely to be that the amounts suggested by the adjustments (usually minimum amounts) would be available for remittance to the owner's country, at the option of the owner, once the owner was convinced that this was the best disposition of his income and assets. Thus, there is a measure, however partial, of some of the current account inflows that might be initiated by policy changes. The effect on capital inflows could be greater, of course.

Another kind of difficulty is important for the shipping account adjustments: the residence of record of a ship's operator is the basis for the geographic allocation of earnings and expenses, but while that identification of residence is technically correct, the actual flow of funds, and the resulting change in financial assets, may take place almost entirely outside the country of residence, with only minor net effects on the economy of the country in question. Thus, although the net earnings, if any, of a merchant fleet nominally associated with that economy should be represented by a net credit in the current account, an entry in the capital account would be needed to balance the situation. Even if this were done, however, the resulting accounts would be ambiguous and would require further interpretation.

In concluding its assignment, therefore, the Working Party would stress first of all the need for considerable judgment in applying corrections to the recorded statistics. Moreover, the suggested corrections remain incomplete in many respects, as is documented in the Report, so that the ultimate value of these findings will depend very much on persistent and well-focused follow-up actions by national compilers and the Fund staff.

5. ADDENDUM: REVISED WORLD CURRENT ACCOUNT BALANCES[1]

The 1986 edition of the Yearbook contains revised data for 1979–83, the period on which the Report is focused, and also shows revised 1984 data and a newly compiled set of data for 1985. When time permits, the Fund's Bureau of Statistics will presumably review the nature of the changes in the data published for 1983 and 1984, some of which may reflect reactions to the recommendations of the Working Party while others may be rather random changes in the assembled statistics. However, it may be instructive to consider at this stage the apparent reduction of the global discrepancy from 1984 to 1985—from minus $85.7 billion to minus $65.6 billion. (See Table 6.)

The reduction occurred in the services accounts ($24.5 billion) and, of this, the largest changes were in reinvested earnings ($11.0 billion), "other official transactions" ($7.6 billion), shipment plus other transportation ($8.4 billion), and "other investment income" (minus $7.7 billion). Other, smaller changes were predominantly in a positive direction. In the case of reinvested earnings, virtually the whole change is attributable to a jump in reinvested earnings credits reported by the United States, reflecting very largely a reversal of the unrealized foreign exchange translation included in the U.S. statistics—from negative amounts, as the U.S. dollar appreciated through 1984, to positive amounts, as the U.S. dollar depreciated in 1985. (See Chapter IV.) There is no counterpart shift in the reinvested earnings of partner countries, so that this reduction in the discrepancy does not represent any improvement in the underlying statistics.

The large drop in the net debits reported under the heading of "other official transactions" reflected primarily the data reported by a Middle Eastern oil exporting country. Apparently there was no corresponding decline in credits reported by partner countries, and further research would be required to determine whether there was any inconsistency in the year-to-year reported changes in these figures. Similarly, a considerable part of the reduction in the shipment discrepancy resulted from a reduction in debits reported by one country, but this might have been consistent with a reduction in imports. There was also a sizable jump, in the published totals, in other transportation credits for the Middle East, but this may turn out to have been arbitrary.

A noteworthy feature of the year-to-year change in the discrepancy was a further increase in the negative discrepancy in the portfolio income account—to a total of minus $46.6 billion. There are a few rather large increases in reported debits for countries in the Far East and Middle East, and these may turn out to be figures that should be corrected. In the main, however, the trend toward higher net debit discrepancies in this account seems to be in line with the analysis of its causes given in Chapter V. Also, Table 6 now includes Fund estimates of the net income credits of international organizations.

[1] As published in International Monetary Fund, *Balance of Payments Statistics* Yearbook, Vol. 37 (Washington, 1986), Part 2.

Table 6

SELECTED BALANCES OF WORLD CURRENT ACCOUNT TRANSACTIONS, REVISED AND UPDATED, 1979–85[1]

(In billions of U.S. dollars)

	1979	1980	1981	1982	1983	1984	1985
Trade balance	20.4	31.1	25.5	−0.9	3.0	9.7	7.8
Service balance	−25.9	−46.8	−75.7	−88.5	−73.4	−85.1	−60.6
Shipment	−27.7	−31.9	−35.3	−34.5	−33.2	−33.3	−27.4
Other transportation	−1.0	−2.9	−5.3	−3.8	−2.8	−2.3	0.2
Travel	−1.5	−0.5	0.8	1.6	4.1	4.7	5.3
Reinvested earnings on direct investments	14.1	13.0	11.0	2.0	8.4	10.0	21.0
Other direct investment income	1.5	−9.9	−13.1	−9.0	−11.6	−14.9	−12.5
Other investment income	−7.7	−7.9	−18.6	−31.1	−28.8	−38.9	−46.6
Other official transactions	−8.7	−11.6	−15.2	−12.2	−14.0	−12.1	−4.5
Other private transactions	5.1	4.9	0.1	−1.5	4.6	1.6	4.0
Private transfers	5.8	6.5	5.2	3.6	6.3	6.6	2.7
Current account (excluding official transfers)	0.3	−9.2	−45.0	−85.8	−64.1	−68.8	−50.1
Official transfers	−15.2	−19.6	−17.6	−17.5	−15.3	−16.9	−15.5
Current account (including official transfers)	−14.9	−28.8	−62.6	−103.4	−79.4	−85.7	−65.6
Memorandum item: Service balance as a percentage of service payments	4.5	6.4	9.0	10.5	9.4	10.5	7.5

Source: International Monetary Fund, *Balance of Payments Statistics* Yearbook, Vol. 37 (Washington, 1986), Part 2.

[1] Does not include estimates of certain current transactions of the U.S.S.R. and other countries of Eastern Europe that are not Fund members as reported in the Fund's *World Economic Outlook*. International organizations do not supply comparable data, and some economies are not included in the statistics on certain service transactions, but "other investment income" includes Fund staff estimates for international organizations.