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To: Members of the Executive Board

From: The Secretary

Subject: Interim Report of the Working Party on the Statistical Discrepancy in World Balance of Payments Accounts

The attached interim report of the working party on the statistical discrepancy in world balance of payments accounts is circulated for the information of the Executive Directors. It is not proposed to bring the report to the agenda for discussion unless an Executive Director so requests.

The Working Party's office (Mr. Pizer, ext. 8979) is available if there are observations or questions relating to this interim report.

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International Monetary Fund

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

INTERIM REPORT

January 1986

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

Interim Report

I. Introduction and Summary

This interim report, as called for in the Terms of Reference of the Working Party, is intended to inform the Executive Directors of the analytical approaches and statistical researches conducted by the Working Party and the Technical Staff, and to give an indication of progress to date. Although some preliminary findings are presented, these are to be viewed as illustrative and selective suggestions of the results the Executive Directors might expect to find when the Working Party has completed its task. It should be emphasized that the Working Party and the Technical Staff are concerned not merely to suggest some generalized hypotheses about the causes of these discrepancies, but to produce carefully documented and detailed analyses of the main statistical gaps and methodological problems that produce asymmetries in some of the major elements of the world current account. In this way, the Working Party hopes to build a basis for permanent improvement of the statistics in this area. Much of this Interim Report is devoted to describing the approaches followed by the Working Party and identifying some of the major problems encountered.

Though definitive results will not be available before the end of 1986, certain observations seem justified on the basis of the analysis that has been accomplished.

-- With respect to the asymmetry in the world investment income accounts--the primary focus of our assignment--it appears that it will be possible to identify the sources of the asymmetry in the direct investment category. We will also suggest procedures that could eventually reduce the shortfall of reported income receipts on banking and portfolio investments. These corrections appear likely to be distributed over a wide range of countries. It will be seen that different statistical approaches are required for each of the major types of international investment income.

The Working Party would emphasize that the rapid evolution of new types of financial instruments, and the accelerating growth of the use of offshore and other financial centers, are making it increasingly difficult for national compilers to record international capital flows, and the related income flows, both in the aggregate and especially in terms of bilateral relationships.

-- With respect to the asymmetry in the world shipping account, which is quite large, the Working Party is initiating a survey to establish the specific gaps resulting in the discrepancy and as a basis for determining the extent to which the shipping discrepancy is contributing, on balance, to the overall current account discrepancy.

-- Similarly, the Working Party is preparing a study that should expose the origins of the large discrepancy in the official transfers account, and could lead to a procedure for reconciling the data reported by donors and recipients of official transfers.

-- The Working Party believes that correction of some of the major current-account asymmetries could be effected largely with appropriate redeployment of existing resources, but that such improvements are likely to require greater adaptability and versatility of statistical practices. However, more resources may be required in some cases.

In the concluding sections of this Report the Working Party provides a succinct listing of its present views on the main causes of the income and other discrepancies, together with an indication of the types of results that may be expected in the Final Report.

II. Background

The impetus for the creation of the Working Party on the Statistical Discrepancy in World Balance of Payments Accounts (hereafter referred to as the Working Party) was the emergence of a rapidly growing discrepancy in the global current account in the early 1980s. As shown in Table 1, the sum of current accounts, which in principle should be zero for the world as a whole, began to show a large excess of recorded debits, reaching a peak of over $100 billion in 1982. Moreover, current data and projections strongly suggest that the discrepancy in absolute terms, or even as a proportion of total payments, is likely to grow, or at least remain large. In fact, the data for 1984 show an enlarged income account discrepancy.

Discrepancies of this overall size impair the credibility of analyses and recommendations that are based on the statistical record of the current account balances of particular countries and regions. Indeed, the regional summations as reported in the World Economic Outlook, for instance, tended to suggest a widespread experience of current account deficits. Consequently, when it appeared that the discrepancy was not accidental and remained sizable, responsible authorities at the OECD and the IMF determined that a concerted effort should be made to discover the nature and causes of the discrepancy, and to recommend measures that would remedy any inadequacies in countries' statistical procedures. 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 IMF, on August 1, 1984, adopted a recommendation to establish a Working Party, and Terms of Reference were drawn up (Addendum 1). The membership of the Working Party was designed to combine expert knowledge of the subject matter of the inquiry with a broad representation of countries and institutions with a wide range of economic interests.

The first meeting of the Working Party was held in January 1985 in Washington, and since then the Working Party has met at approximately three-month intervals. In addition, a small Technical Staff was organized, located in Washington and attached to the Research Department of the IMF. The Technical Staff has been assisted in its task by the staff of the Bureau of Statistics (STA) of the IMF, as well as the Research Department.

Table 1. Selected Balances of World 1/ 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	-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
Memo: Service balance as a percent of service payments	5.8	5.4	7.1	10.4	12.8	10.9	12.7

Source: IMF Balance of Payments Yearbook, Part 2, 1985.

1/ Does not include estimates of certain current transactions of the U.S.S.R. and other nonmember countries of Eastern Europe as reported in the World Economic Outlook. International organizations do not supply comparable data.

Moreover, the staff of the OECD has contributed substantially to several aspects of the research, the statistical office of the EEC has provided useful statistics on intra-EEC transactions, and the Bank for International Settlements (BIS) has also provided assistance with banking data.

As directed in the Terms of Reference, the Working Party has concentrated its attention on the enormous discrepancy in the global accounts regarding international investment income and the servicing of capital in general. Part of the study has 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. In this connection, studies of innovations in capital markets now being done under the auspices of the BIS may be useful. Also, with the cooperation of the OECD, the Technical Staff has been studying two other sectors of the current account that display large divergences: the international shipment account and the official transfers account.

Taken together, the income, shipping, and official transfer sectors are responsible for most of the overall current account discrepancy and for its growth since 1979. This does not mean that there are not difficulties in other sectors, because there may be offsetting errors within any type of transaction as reported, and quite often a transaction reported in a certain category by one country is reported in a different category, perhaps even moving into the capital accounts, by a partner country. For this reason, it may be that correction of discrepancies in any given account may sometimes result in enlarging the statistical gap elsewhere.

An important perspective on the overall discrepancy problem can be gained by observing that corresponding to the current account excess of debits for the world as a whole, there has been a large cumulative net credit balance for recorded capital flows, together with a smaller net overall credit in the sum of countries' errors and omissions, as shown in Table 2. 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 would be expected to sum to zero. However, it can be seen that over the years the internal 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 also increased. Although this study concentrates on imbalances in some elements of the recorded current accounts, it should be noted that the recording of the capital accounts has also deteriorated, indicating a wider pattern of related statistical asymmetries.

Table 2. Main Sectors of World Balance of Payments Accounts

(In billions of U.S. dollars; debits (-))

	Cumulated 1964-76	Cumulated 1977-83	Cumulated 1977-83 Adjusted 2/
Current account 1/	-38	-347	-407
of which: investment income 1/	...	(-110)	(-170)
Capital movements (including reserve transactions) 1/	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)

Calculations are based on IMF Bureau of Statistics data.

1/ Balances of reported transactions, which in principle should be zero for the world as a whole.

2/ Adjusted to exclude reported reinvested earnings, which are recorded asymmetrically and introduce a net credit entry that tends to conceal the extent of the actual discrepancy.

III. Plan of Discrepancy Study

When the Working Party reviewed the history of the current account discrepancies and the explanations that had been offered, it became evident that this would be a complex project, requiring the coordination of many lines of research that might produce fruitful results. Accordingly, the Working Party developed, in close collaboration with the Technical Staff, a basic framework for the discrepancy study, and has maintained close contact with the Technical Staff at regular meetings and via exchanges of memoranda and commentaries. Members of the Working Party have undertaken studies of particular aspects of the discrepancy which are of special interest for their countries or institutions. These studies have been integrated with the work of the Technical Staff.

a. Organization of research on investment income

After surveying the situation in the income accounts, the Technical Staff, with the guidance of the Working Party, has adopted a research strategy that follows several basic approaches covering rather completely the potential sources of error. The first of these approaches is the analysis in depth of individual countries and certain geographic groupings that have relatively common characteristics. Comparisons of bilateral data are potentially very useful in this approach, but are hampered by the limited number of countries that attempt to produce geographic breakdowns of their accounts, by the confidentiality of some data, by the lack of a consistent basis for creating such country distributions, and by the increased use of international financial centers that blur the identities of the transactors.

A second approach being followed cuts across the different types of investment income: direct investment income, both remitted and reinvested; income on assets and liabilities of banks; income on portfolio securities; and income received or paid by official agencies. Each of these categories of income has special problems of compilation, and distinctly different methodologies are employed in many countries for each variety of income. Thus, the study of the methodologies themselves, as applied by each country to particular kinds of income, becomes a central part of the identification of the origin of specific discrepancies that combine to form the large global discrepancy.

A third approach exploits the fact that the discrepancy in the investment income flows can be linked in many cases to independent data that are available on stocks of cross-border investments. Thus, there is in a sense an exogenous check on the reasonableness of reported income flows, and a major effort of the Technical Staff has been to assemble all the available data on such cross-border investments, and to develop a basis for improved estimates.

Also in connection with the income discrepancy, the Working Party has been pursuing the various accounting and analytical problems that are raised by the expansion and intensification of the use of international

financial markets, and by the rapidly changing forms of international financial transactions and instruments. The focus of the Working Party is mainly on the way these developments hamper the ability of conscientious national compilers to continue to construct meaningful international capital and income accounts.

b. Organization of research on other sectors

Work has also gone forward on two other important current account sectors, shipping and official transfers, where large world debit balances are reported. In these areas the Technical Staff has been able to draw on the resources of the OECD, and to build on some exploratory work conducted by the STA. Some members of the Working Party have also contributed intensively to the study of these sectors. At this time the Working Party has prepared the framework for studies that should identify the factors causing discrepancies in these accounts and produce data necessary for reconciling the conflicts in these statistics. Explanatory notes on these subjects are included as Addenda to this Report.

c. Cooperation with other researchers

In carrying out this research, the Technical Staff has consulted with a wide variety of experts who have been concerned with the emerging discrepancies in the measurement of international accounts, and several members of the Working Party have conducted extensive discussions on this subject. In the United States, such organizations as the Brookings Institution, the Institute for International Economics, and the Institute of International Finance have been consulted. In addition, there have been extensive contacts in several countries with persons located in international financial institutions who have first-hand knowledge of the practices and strategies of participants in international financial markets, as well as familiarity with the problems of establishing a statistical framework for capturing the essential information.

Much of the statistical work of the Technical Staff has depended on close support from the STA and the Research Department of the IMF. This encompasses the collection of data on the balances of payments of Fund members, the collation of such data into aggregates by type and area (including estimation of missing or non-reported data), and the increasingly comprehensive coverage of international banking statistics. Also useful are the debt data organized by the IBRD, whose staff has provided helpful advice and information. Support has also been received from the BIS, the Statistical Office of the EEC, and CEPII. Valuable assistance has also been provided by the OECD, as noted above, and further collaboration with the OECD and other agencies should be of great benefit.

The Working Party would also acknowledge the help provided by national compilers, who have contributed new detailed data and practical advice on this project.

IV. Organization of Basic Data and Information

a. Data availability

It should be noted at the outset that the balance of payments accounts of a country are a composite of data obtained from a myriad of sources that do not have the same imposed rigor, homogeneity, and internal consistency that is characteristic of the normal double-entry bookkeeping of an enterprise. Thus, data on merchandise trade may come from customs data, while the existence of any export credit connected with trade would have to come independently from an exporter or a bank. That is, the sources of data on capital flows are quite separate from the sources used for current transactions, except when banking sources are used for both. Similarly, many compilers of the balance of payments may be able to obtain information about their residents' balances with foreign banks only by consulting data on such balances collected from the foreign banks by such agencies as the BIS and the IMF, but they have no direct source for information on the income received on such accounts and must make their own estimates. In many countries there is very little information on the magnitude of resident holdings of foreign securities or participations in direct investments.

This complexity and lack of internal consistency not only leads to errors and omissions in the accounts of individual countries, but creates even greater difficulties when accounts of many countries are added together to arrive at the global amounts being received or paid under particular headings of the international accounts.

At the initiation of the study the Working Party found a number of primary data bases that could be brought to bear. First of all, there are the data collected and published by the STA. These consist very largely of data reported to the STA by the member countries and published annually in Balance of Payments Statistics. Published annually by the STA is Part II of the annual edition of Balance of Payments Statistics, which incorporates estimates of gaps or missing elements in the country-reported data, supplied in part by country experts at the IMF and in part by extrapolations or interpolations by the STA staff. These composite statistics as published in Part II are taken as the indicators of the discrepancies that are to be studied, but it should be noted that the underlying data already contain an element of estimation. A second and closely related set of data on the global current account is prepared by the Research Department for use in the World Economic Outlook. This set is primarily focussed on projections for the period ahead, and differs in some cases from the STA totals because of time lags and the incorporation of different estimates for some data cells or non-reporting countries.

Another basic data source available at the IMF is the International Banking Statistics (IBS) which are collected from national authorities on a quarterly basis in collaboration with the Bank for International Settlements (BIS) and published monthly in the Fund's International Financial Statistics. These data, as published, provide much vital information, but

do not give a breakdown by country of the type that would permit bilateral country matching of reported assets and liabilities. Of course, there are many other compilations and occasional papers prepared at the IMF and elsewhere that contain valuable information.

As the analysis of the discrepancy has proceeded it has become clear that a basic tool for locating and evaluating discrepancies in the reporting of portfolio investment income received and paid is the availability of data on the cross-border assets and liabilities of the respective countries. A number of sources exist for one part of this complex of assets and liabilities--the debts of the indebted developing countries have been compiled by many interested parties, as well as by the countries themselves. In this connection the Working Party has been assisted in particular by the data on these debts assembled at the OECD, as well as by compilations made at the IMF and the IBRD. However, data on cross-border assets and liabilities are clearly incomplete, especially where there is an incentive for concealment.

It is fair to say that a sizable portion of the research effort to the present has been devoted to reconciling conflicting data sets, reorganizing existing data sets into useable forms, discovering or creating necessary data sets, and organizing the data into a computer-based and accessible format.

b. Use of Special Questionnaire

At an early stage in the organization of the study the tie-in between data on stocks of assets and liabilities and the investment income data as reported in balance of payments accounts was recognized as a key element. Moreover, it was seen that the income data regularly reported to the STA were not sufficiently detailed, either by type or along geographic lines, to permit the close comparisons that would be required in testing the adequacy of the income data. Consequently, a Special Questionnaire was designed (copy attached) to elicit the necessary data for 1979 and 1983, and was mailed to 61 countries that either reported substantial amounts of income credits or debits, or were believed to have substantial international cross-border asset or liability positions. Responses have been received from 47 countries covering over 85 percent of world income credits and debits (see attached Table 3). These reports supply in many cases a range of new or revised data not previously available in any organized fashion. The questionnaire replies not only provided a more adequate data base but also gave new insights into comparative methodologies and the nature of the underlying data. References to the questionnaire have been an important part of the channel of communications between the Technical Staff and national compilers.

c. Consultations with compilers and other experts

A high priority is assigned by the Working Party to the objective of improving and standardizing as much as possible the data collection and reporting procedures of the national compilers. To that end, the members

Table 3. Measures of Coverage of Special Income Questionnaire

(In millions of U.S. dollars)

	1979		1983		Net Credit	
	Credit	Debit	Credit	Debit	1979	1983
All questionnaire respondents						
Questionnaire replies						
Total investment income	189,874	178,762	268,679	297,961	11,112	-29,282
Direct investment income	58,445	35,466	41,234	33,082	22,979	8,152
Reinvested earnings	24,549	13,536	14,772	6,537	11,013	8,235
Distributed earnings	27,802	19,249	23,094	23,356	8,553	-262
Other investment income	131,429	143,296	227,445	264,879	-11,867	-37,434
As included in STA 1/ data file						
Total investment income	164,546	154,681	223,470	255,332	9,865	-31,862
Direct investment income	50,839	30,779	36,016	27,828	20,060	8,188
Reinvested earnings	23,346	10,319	13,921	3,431	13,027	10,490
Distributed earnings	27,493	20,460	22,095	24,398	7,032	-2,302
Other investment income	113,707	123,902	187,453	227,503	-10,195	-40,050
Differences						
Total investment income	25,328	24,081	45,209	42,629	1,247	2,580
Direct investment income	7,606	4,687	5,218	5,254	2,919	-36
Reinvested earnings	1,203	3,217	851	3,106	-2,014	-2,255
Distributed earnings	309	-1,211	999	-1,042	1,521	2,040
Other investment income	17,722	19,394	39,992	37,376	-1,672	2,616
All countries included in STA data file						
Total investment income	177,505	172,973	250,625	284,172	4,532	-33,547
Direct investment income	50,950	39,075	36,200	37,793	11,875	-1,593
Other investment income	126,555	133,898	214,425	246,379	-7,343	-31,954
Percent covered 2/						
Total investment income	93	89	89	90		
Direct investment income	100	79	99	74		
Other investment income	90	93	87	92		

1/ Bureau of Statistics of the IMF.

2/ Ratio of amounts included in STA data file for Questionnaire respondents to amounts for all countries in the data file as of October 1985.

of the Technical Staff have begun a series of visits covering a cross-section of the countries whose international income transactions are significant in the world picture. In addition, members of the Technical Staff and the Working Party are in the process of consulting with experts in many financial centers to obtain information and informed judgements on developments in international financial markets that are related to the difficulties in obtaining data on investment income.

The first round of these consultations has covered several major countries in Europe, Canada, Mexico, and (in progress) financial centers in the Far East. Results of these consultations have been rather encouraging:

1. In many cases questions about balance of payments entries have been settled, and data or estimates have been adjusted and should be better in the future.

2. There have been frank exchanges on the gaps or other shortcomings in compilation procedures, possible changes have been suggested, and the process of improvement has been given some impetus.

3. Discussions with experts in financial markets have helped to verify staff work in the field of portfolio investments, and to identify the participants in these markets and the practices that are evolving.

Further consultations are planned over the period ahead in Latin America, the Middle East, and some offshore financial centers. While this consultation process does not in itself result in immediate significant changes in reported statistics, it encourages initiatives that, over time, should show results.

V. Research Methods and Analytical Approaches

Research into the origins and significance of the investment income account discrepancy tends to proceed on two general levels. On one level there is a need to study the ways in which changes in the economic and political environment over time may be affecting trends in real and financial international transactions, and possibly causing difficulties for statistical measurement. At a second level, the concentration is on the details of the data available for particular transactions at particular times. The Working Party has from the beginning wished to place the emergence of the discrepancy in the context of changes in the overall economic environment. Presumably it is no accident that such large discrepancies should occur after a long period when the world discrepancy was not significant.

At this stage the Working Party has not resolved the broader questions to its satisfaction, but on the basis of the work done so far a few comments may be offered.

a. Macroeconomic considerations

First, a global view of balance-of-payments accounting for the 1977-83 period shows, in addition to a cumulative reported deficit on current account, a cumulative surplus of recorded capital inflows over recorded capital outflows (Table 2). Such a discrepancy did not exist for the 1964-77 period, when the global current account discrepancies were small. This examination of the broad sweep of the international accounts would lend support to the view that countries are better able to record capital inflows than capital outflows. This tendency alone would generate a greater reported level of income payments than of income received, and this phenomenon seems to have become important at a time when the circumstances suggest a heightened international flow of capital might be expected to occur.

Second, this tendency is reinforced by the proliferation of offshore and other financial centers and the increased use of such intermediaries, together with the introduction of financial instruments that are more difficult to encompass in the existing statistical frameworks. As the rapidity, complexity, and magnitude of capital flows through these channels increases the compilation of international financial and income flows obviously becomes more difficult. However, the countries that receive cross-border financing via these financial intermediaries are often able to collect information on these capital inflows, while they are concealed from authorities in the countries in which the capital exporters reside. One reason for this difference is that interest payments, when identified, are not taxable to the payor, whereas receipts are taxed.

Third, any such bias toward more complete recording of income debits was magnified after the mid-1970s by a vast increase in the stream of cross-border capital flows and, until recently, by rising interest rates.

Finally, the Technical Staff has analyzed the manner in which income data are compiled to check on the possibility that either increased volatility of exchange rates, or the sharp appreciation of the U.S. dollar over the period, could result in the type of asymmetry that has appeared in the accounts. It appears that these were not important factors (except possibly for reinvested earnings), but as exchange rates change radically there is an increased problem of separating income credits or debits from capital flows when assets are bought or sold.

b. Microeconomic analysis

As the available information on income debits and credits is examined in detail the first result tends to be the identification of (i) a long list of situations in which the existing data are either missing or clearly misspecified, (ii) statistical practices that are out of step with the IMF Manual, and (iii) deficiencies in the aggregation of data. Some of these are minor, but quite a few have a significant impact on measurement of either the global current account discrepancy or on the investment income component. The Technical Staff has been able to clarify some of these

situations with the help of the STA and the countries concerned, but a number of cases of importance will require further exploration. An example of a data gap is the omission from the STA tabulations of reports by the international and regional organizations of their income received and paid.

Some of the larger anomalies are revealed by attempts to make bilateral comparisons, or, where necessary, comparisons with regional geographic data, where countries publish such data or make it available via the special questionnaire. Unfortunately only a few countries publish geographic detail of their international transactions, and even when they do the principles for making such breakdowns are so disparate that comparisons are far from exact. A case in point would be the difficulty experienced by the EEC in resolving differences in data for its member countries. Nevertheless, such comparisons can be quite helpful if used with discretion. In fact, a great deal of the work by the Technical Staff on direct investment income flows, and some of the preliminary findings in that sector, are based on the inferences that can reasonably be drawn from the geographic detail that is available. The encouragement of joint estimation of bilateral flows may help to improve the quality of income estimates in the future.

c. Relating stocks to flows

The most powerful research technique for exposing inconsistencies in income accounting is the association of data on income flows with data on stocks of cross-border assets and liabilities. Such comparisons have occupied much of the research effort of the Technical Staff. The most important body of data on international asset and liability stocks is the data collected from banks by national authorities and assembled by the BIS and the IMF, as well as by national authorities. The income paid or received on these accounts has become by far the largest of the portfolio income flows. The data for these banking positions are available in considerable detail and relatively quickly (see Table 4).

Data for stocks of other portfolio assets are difficult to establish from the side of the asset holders, so that income credits tend to be understated. The Technical Staff is in the process of establishing which countries are the major issuers of such securities, and also in the much more difficult process of trying to determine where the owners of these securities are located. Stocks of official reserve assets or official obligations, and the related income, are relatively well established.

Finally, among non-direct investments there is a range of suppliers' or export credits, and holdings of such assets as commercial real estate or mortgages, where data are very thin indeed. In the case of suppliers' credits, there may be no separable income element.

The basic analytic process involved here is to determine the stocks of portfolio and banking assets and liabilities, to apply rates of return, and then compare those results with the income data provided by individual countries. It is usually not possible to match such flows directly as

Table 4. International Banking Statistics 1/

(In billions of U.S. dollars)

	1979	1980	1981	1982	1983	1984
1. World						
a. Claims of banks	1,692	2,028	2,380	2,529	2,606	2,702
On foreign banks	1,245	1,490	1,738	1,826	1,881	1,965
On foreign nonbanks	447	538	643	702	725	737
Liabilities of banks	1,629	1,955	2,297	2,427	2,842	2,646
To foreign banks	1,291	1,542	1,773	1,850	1,911	2,002
To foreign nonbanks	338	413	524	577	631	644
b. Claims of nonbanks on foreign banks	338	413	524	577	631	644
Liabilities of nonbanks to foreign banks	447	538	643	702	725	737
2. Industrial countries						
a. Claims of banks	1,151	1,377	1,616	1,743	1,791	1,849
On foreign banks	807	971	1,138	1,221	1,251	1,315
On foreign nonbanks	344	406	478	522	540	534
Liabilities of banks	1,116	1,334	1,536	1,625	1,697	1,776
To foreign banks	866	1,033	1,159	1,209	1,250	1,312
To foreign nonbanks	250	301	377	416	447	464
b. Claims of nonbanks on foreign banks	n.a.	n.a.	249	281	301	298
Liabilities of nonbanks to foreign banks	n.a.	n.a.	244	282	286	280

Table 4. International Banking Statistics 1/ (concluded)

(In billions of U.S. dollars)

	1979	1980	1981	1982	1983	1984
3. Developing countries except major offshore financial centers						
a. Claims of banks	205	237	246	237	242	255
On foreign banks	198	228	236	224	225	239
On foreign nonbanks	7	9	10	13	17	16
Liabilities of banks	156	195	228	246	263	271
To foreign banks	136	170	199	214	229	236
To foreign nonbanks	20	25	29	32	34	35
b. Claims of nonbanks on foreign banks	n.a.	n.a.	145	150	164	160
Liabilities of nonbanks to foreign banks	n.a.	n.a.	283	311	333	330
4. Major offshore financial centers 2/						
a. Claims of banks	299	370	479	506	526	551
On foreign banks	200	247	324	339	358	364
On foreign nonbanks	99	123	155	167	168	187
Liabilities of banks	284	356	464	492	515	533
To foreign banks	218	269	346	363	366	388
To foreign nonbanks	66	87	118	129	149	145
b. Claims of nonbanks on foreign banks	n.a.	n.a.	38	47	54	59
Liabilities of nonbanks to foreign banks	n.a.	n.a.	25	31	32	33

1/ Source: International Banking Statistics, as published in the IMF's International Financial Statistics, Yearbook, 1985, pp. 64-75.

2/ Bahamas, Bahrain, Netherlands Antilles, Cayman Islands, Panama, Hong Kong, Singapore.

Note: Data as reported by banks; nonbank data are derived from banks' balance sheets. All claims and liabilities are cross-border accounts insofar as banks can identify them by the addresses given. Increases in outstanding positions over time reflect improvements in coverage; year-to-year changes also reflect changing exchange rates. Area breakdowns may not add to world totals in all cases because of incomplete reporting of geographic detail.

between particular borrowers and lenders, but it is possible, within a rather wide margin for error, to determine whether regional or global data on income flows bear the indicated relationship to the underlying stocks. Work along those lines has made considerable progress, though much remains to be done. There is one broad result that seems likely to hold up under further examination: by and large the debit income entries seem to be credible, when compared with stocks of liabilities. This suggests that the excess of debits in the world income account is probably not the result of the reporting of excess debits, but is more likely the result of underreporting of credits.

It is important to bear in mind that the available data on the stocks of cross-border accounts and liabilities, used as a base in these calculations, cannot identify the full extent of cross-border investing since the early 1980s. Even if the differences in the reporting of income of these known stocks can be reconciled, there will remain a large hidden element of international assets and income. The observed discrepancies in reported income accounts occur because partner countries report inconsistently; indeed, if neither country reported that a given transaction had occurred, no discrepancy would appear in the data.

One technique employed by the Technical Staff, and by other researchers, to attempt to establish the potential extent of foreign assets held by residents of a country when the stock of external assets is not reported, is based on an examination of that country's balance of payments. Over a period of years, the cumulated current account balance, net reported flows of capital, and cumulated errors and ommissions are compared. The resulting stock estimates may not be reliable taken alone but can be useful when taken in conjunction with data from other sources.

d. Direct investment income

In the case of direct investments the research techniques have to be somewhat different. The relation of earnings to the stock of investments is difficult to establish because stock data are scarce and present many valuation problems, while the profits on direct investments are highly variable across industries and from year to year. It is not practical, therefore, for the Technical Staff to attempt to estimate what a given country's direct investment debits or credits should be, but it is possible to check on whether the amounts actually reported by host countries are consistent with the amounts reported by the countries of the parent companies.

Work on the discrepancies in the reporting of direct investment income is relatively well advanced and is described in some detail in Addendum 3. Although many adjustments to the reported data are necessary, it appears that when they are made the remaining differences in the reporting of this income can be identified and could be reduced in the future. The largest element in the imbalance in reporting direct investment earnings is the omission of reinvested earnings from the accounts of most countries. Lesser factors are differences in classification and, in

a few cases, the reporting of transactions by host countries that appears to differ greatly from the information reported by the partner countries. Some direct investment earnings are derived from subsidiaries in offshore centers where they are omitted from the balance of payments accounts.

It should be noted that quite often there will be a blurring of the lines between portfolio and direct-investment income, or between investment income and other sectors of the services accounts or even the capital accounts. The use of offshore financial centers tends to magnify this confusion.

e. Allocation of income discrepancy

One of the main objectives of the research into the income discrepancy is to provide some basis for allocating the shortfall in net receipts among several groups of countries. The Technical Staff has examined in detail the experience of various groups of countries that might be expected to share similar experiences with respect to capital flows and the recording of income credits and debits. Such groupings include, inter alia, the major financial centers, other industrial countries, the offshore financial centers, developing countries with large accumulated debts, and oil-exporting countries with accumulated current account surpluses. With a few exceptions, countries in all of these groups seem to be including in their international accounts an amount of income debits that is not inconsistent with what can be learned about their debts. On the other hand, a broad spectrum of countries in each of these groups seems to have difficulty in estimating or reporting an amount of income receipts commensurate with the explicit or implicit foreign asset positions of their residents. The Working Party expects to be able to indicate the location of these gaps, subject to obvious limitations, as part of the final report (see Table 5).

f. Shipping and official transfers

In addition to work on the income accounts, the Technical Staff, the STA, and the OECD staff have also devoted considerable attention to the discrepancies in the shipping and official transfer accounts. In both cases preliminary studies have been completed, and the Working Party has reviewed and recommended a proposal to carry this analysis further with the use of special surveys to selected countries. Some further discussion of these topics, and the analytical approaches, is given in Addenda to this Report.

g. Variations in methodology

Variations in methodologies as they are practiced across countries have an important influence on asymmetries in reported data. Although the IMF's Balance of Payments Manual prescribes the nature of the data to be entered under various categories, it does not prescribe the type of methodology to be used in obtaining the basic data bits from which the entries are to be constructed. Moreover, given the variety of experience

Table 5. International Investment Income 1/

(In billions of U.S. dollars)

	1978	1979	1980	1981	1982	1983	1984
			Total Income, by Type				
Credits:							
Total income	118.7	177.5	233.7	282.1	282.6	250.6	266.8
Resident official	25.9	37.4	51.4	63.0	59.7	54.2	53.2
Reinvested earnings	14.9	23.4	21.5	17.4	9.2	13.9	14.9
Other direct investment	20.5	27.6	30.5	29.9	26.2	22.3	23.1
Other private income	57.3	89.1	130.3	171.8	187.4	160.2	175.7
Debits:							
Total income	122.8	173.0	241.3	304.8	322.4	284.2	314.4
Resident official	22.4	29.6	37.3	49.0	55.1	56.3	64.2
Reinvested earnings	8.3	11.6	10.3	7.0	1.8	4.0	9.1
Other direct investment	25.1	27.5	38.2	40.7	37.6	33.8	34.8
Other private income	66.9	104.3	155.6	208.1	227.9	190.1	206.3
Net:							
Total income	-4.1	4.5	-7.6	-22.7	-39.8	-33.6	-47.5
Resident official	3.5	7.8	14.1	14.0	4.7	-2.1	-11.0
Reinvested earnings	6.7	11.8	11.2	10.4	7.5	9.9	5.8
Other direct investment	-4.6	0.1	-7.6	-10.7	-11.3	-11.5	-11.7
Other private income	-9.6	-15.1	-25.3	-36.4	-40.6	-29.9	-30.6
			Total Income, by Region				
Credits:							
All countries	118.7	177.5	233.7	282.1	282.6	250.6	266.8
Industrial countries	98.6	148.8	186.3	221.2	225.2	201.1	217.4
Developing countries	20.1	28.7	47.5	60.9	57.4	49.5	49.[illegible]
Oil exporters	11.8	15.3	25.9	34.9	32.6	29.1	26[illegible]
Other	8.3	13.4	21.6	26.0	24.8	20.4	23.2
Debits:							
All countries	122.8	173.0	241.3	304.8	322.4	284.2	314.4
Industrial countries	83.0	121.7	164.9	205.6	216.1	191.2	216.0
Developing countries	39.8	51.2	76.4	99.2	106.3	93.0	98.4
Oil exporters	12.5	12.0	20.6	25.2	22.4	19.1	18.4
Other	27.3	39.3	55.9	74.0	84.0	73.8	80.0
Net:							
All countries	-4.1	4.5	-7.6	-22.7	-39.8	-33.6	-47.5
Industrial countries	15.6	27.1	21.3	15.6	9.2	9.9	1.4
Developing countries	-19.7	-22.5	-29.0	-38.3	-49.0	-43.5	-48.9
Oil exporters	-0.7	3.4	5.3	9.7	10.2	9.9	7.9
Other	-19.0	-25.9	-34.3	-48.0	-59.2	-53.4	-56.8

Table 5. International Investment Income 1/ (continued)

(In billions of U.S. dollars)

	1978	1979	1980	1981	1982	1983	1984
			Resident Official Income, by Region				
Credits:							
All countries	25.9	37.4	51.4	63.0	59.7	54.2	53.2
Industrial countries	11.7	16.7	18.1	22.1	20.7	18.8	20.1
Developing countries	14.2	20.7	33.3	40.9	39.0	35.4	33.1
Oil exporters	9.8	12.5	21.5	28.2	27.1	25.1	21.3
Other	4.4	8.2	11.8	12.7	11.9	10.4	11.8
Debits:							
All countries	22.4	29.6	37.3	49.0	55.1	56.3	64.2
Industrial countries	14.7	17.8	21.1	27.1	30.0	31.5	34.2
Developing countries	7.8	11.8	16.3	21.9	25.1	24.8	30.0
Oil exporters	1.3	1.9	2.4	3.1	3.3	2.9	4.0
Other	6.5	9.9	13.9	18.8	21.8	21.9	26.0
Net:							
All countries	3.5	7.8	14.1	14.0	4.7	-2.1	-11.0
Industrial countries	-2.9	-1.1	-3.0	-5.0	-9.3	-12.7	-14.1
Developing countries	6.4	8.9	17.1	19.0	13.9	10.6	3.1
Oil exporters	8.6	10.6	19.2	25.1	23.8	22.2	17.3
Other	-2.1	-1.8	-2.1	-6.0	-9.9	-11.6	-14.2
			Reinvested Direct Investment Income, by Region				
Credits:							
All countries	14.9	23.4	21.5	17.4	9.2	13.9	14.9
Industrial countries	14.9	23.3	21.5	17.3	9.2	13.9	14.9
Developing countries	-	-	-	-	-	-	-
Oil exporters	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Debits:							
All countries	8.3	11.6	10.3	7.0	1.8	4.0	9.1
Industrial countries	5.8	8.7	7.3	3.7	-1.5	2.2	7.3
Developing countries	2.4	2.9	3.0	3.4	3.3	1.8	1.8
Oil exporters	0.1	0.1	0.1	0.1	0.1	0.1	-
Other	2.3	2.8	2.8	3.2	3.2	1.6	1.8
Net:							
All countries	6.7	11.8	11.2	10.4	7.5	9.9	5.8
Industrial countries	9.1	14.6	14.2	13.7	10.7	11.7	7.6
Developing countries	-2.4	-2.9	-2.9	-3.3	-3.3	-1.8	-1.8
Oil exporters	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-
Other	-2.3	-2.8	-2.8	-3.2	-3.2	-1.6	-1.8

Table 5. International Investment Income 1/ (concluded)

(In billions of U.S. dollars)

	1978	1979	1980	1981	1982	1983	1984
	Remitted Direct Investment Income, by Region						
Credits:							
All countries	20.5	27.6	30.5	29.9	26.2	22.3	23.1
Industrial countries	20.1	26.9	29.7	28.2	24.8	21.3	21.4
Developing countries	0.4	0.7	0.9	1.7	1.5	1.0	1.7
Oil exporters	-	-	-	0.7	0.5	0.3	0.5
Other	0.4	0.7	0.9	1.0	0.9	0.7	1.2
Debits:							
All countries	25.1	27.5	38.2	40.7	37.6	33.8	34.8
Industrial countries	10.8	13.6	16.6	16.1	17.6	16.4	18.0
Developing countries	14.3	13.9	21.6	24.6	19.9	17.4	16.7
Oil exporters	9.9	7.9	15.0	17.8	13.9	11.4	10.2
Other	4.4	6.0	6.6	6.7	6.0	6.0	6.5
Net:							
All countries	-4.6	0.1	-7.6	-10.7	-11.3	-11.5	-11.7
Industrial countries	9.2	13.3	13.1	12.1	7.2	4.9	3.3
Developing countries	-13.8	-13.2	-20.7	-22.9	-18.5	-16.4	-15.0
Oil exporters	-9.9	-7.9	-15.0	-17.1	-13.4	-11.1	-9.7
Other	-3.9	-5.3	-5.7	-5.8	-5.1	-5.3	-5.3
	Private Investment Income Except Direct Investment						
Credits:							
All countries	57.3	89.1	130.3	171.8	187.4	160.2	175.7
Industrial countries	51.8	81.8	117.0	153.5	170.4	147.2	161.0
Developing countries	5.5	7.3	13.2	18.2	16.9	13.0	14.7
Oil exporters	2.0	2.8	4.3	6.0	5.0	3.7	4.4
Other	3.5	4.5	8.9	12.3	11.9	9.3	10.3
Debits:							
All countries	66.9	104.3	155.6	208.1	227.9	190.1	206.3
Industrial countries	51.6	81.6	120.0	158.7	169.9	141.1	156.5
Developing countries	15.3	22.7	35.6	49.4	58.0	49.0	49.8
Oil exporters	1.2	2.1	3.1	4.1	5.0	4.7	4.1
Other	14.1	20.6	32.5	45.3	53.0	44.2	45.7
Net:							
All countries	-9.6	-15.1	-25.3	-36.4	-40.6	-29.9	-30.6
Industrial countries	0.2	0.2	-2.9	-5.2	0.5	6.1	4.5
Developing countries	-9.9	-15.4	-22.4	-31.1	-41.1	-35.9	-35.1
Oil exporters	0.7	0.7	1.2	1.9	-	-1.0	0.3
Other	-10.6	-16.1	-23.6	-33.0	-41.1	-34.9	-35.5

1/ As included in IMF Balance of Payments Yearbook, Part 2, 1985.

among countries the prescriptions in the Manual cannot be applied rigidly. The final report of the Working Party will discuss the types of methodology used and their effects in considerable detail, together with recommendations for improvements. At this stage perhaps the main point to be made is that methodologies that depend primarily on reports from financial institutions covering foreign exchange transactions, and that are not adequately supplemented from other sources, will tend to omit the income that may be accruing to residents on their foreign assets but which is being retained abroad. On the other hand, methodologies that are based on obtaining reports from the beneficial holders of international assets and liabilities are extremely difficult and expensive to operate, and would probably be ineffective in many countries.

VI. Main Causes of Income Account Discrepancies

When this study began there were already a number of hypotheses about the causes of the discrepancies in various sectors of the world current account, and substantial analyses had been done by the OECD and others. However, these efforts had not yielded a firm basis for identifying specific statistical deficiencies, or prescribing procedures that might reduce these deficiencies in the future. Some of the causes of the income discrepancy listed below are therefore relatively well known, while some may not be so obvious. What this study can contribute is a more careful examination of the facts than has been possible up to now, with the result that the main causes can be enumerated with greater confidence.

The preceding discussion will have indicated the main factors that our studies suggest are behind the growing discrepancies. These may be summarized briefly as follows:

a. A rapid acceleration of certain kinds of capital flows in recent years, characterized by an excess of recorded capital inflows over recorded capital outflows.

b. Generally higher interest rates, which tended until recently to magnify any differences in the income derived from the underlying asset and liability stocks.

c. The proliferation of international financial centers and new financial instruments and practices, which tends to create another barrier between identifiable asset stocks and the related income flows.

d. Increased possibilities for concealing assets and income (including the intensified use of offshore centers) coupled with incentives to exploit these possibilities because of high differential tax rates, taken together with higher nominal interest rates making for higher taxable income, increased opportunities to make profits in exchange markets given the greater volatility of exchange rates, and heightened perceptions of political risk.

e. Imbalances in the methodological approaches of various countries according to which some countries tend to be flexible and to reach out to all the available data and sources in compiling their accounts, while others tend to rely on a narrow range of procedures, sometimes outdated and ineffective.

f. Increasing difficulties encountered by statistical offices from the need to adjust their traditional reporting procedures to the progressive liberalization of channels for capital flows (and the associated income flows). There is an urgent need to create procedures to keep up with the increasing use of non-banking channels for international capital flows. This increase in the speed, volume, and complexity of the underlying transactions has come at a time when budget constraints tend to limit the support for statistical work at the national level. Moreover, there seems to be inceasing resistance from the public to supplying the data necessary for compiling these accounts.

VII. Objectives for Final Report

As this interim report suggests, much of the groundwork for reaching conclusions on the global income discrepancy has been accomplished. Some of the major causes of discrepancy have been identified, and the statistical work done so far has enabled the Working Party to identify the main features of the discrepancy. In the concluding phase of this study, the Working Party looks forward to presenting a number of more concrete results and recommendations. These objectives can be reasonably well defined:

a. To quantify precisely and in detail the extent of the income discrepancy, to point to the specific situations in which the discrepancies are occurring, and, as far as possible, indicate how the discrepancy is distributed among regions or country groups.

b. To present results that will contribute to the diagnoses by responsible authorities of the international economic and financial situation. The existing ambiguities in the reported current account situations, which hamper the surveillance responsibilities of the IMF, should be alleviated by the results of this study.

c. To establish the reasons why the discrepancies are appearing in the reported data, and to recommend procedures for reducing them. In this connection, there will be recommendations on the effectiveness of different methodological approaches, and on some general principles.

d. To suggest approaches for dealing with emerging statistical problems in the longer run, including an enhanced role for the STA in assuring consistency of reporting across countries and in relation to each major type of transaction. Anticipating reporting difficulties as the economic environment changes is also an activity that should be encouraged.

e. To provide the results of analyses of the discrepancies in the shipping and official transfer accounts. These results should supply a basis for further work on these topics by interested agencies.

f. To provide a useful and innovative set of basic data on various aspects of international investment and income flows that can serve as a benchmark for the continuing work to reduce these discrepancies that will surely be necessary.

g. The final report will extend the analysis beyond 1983 to the extent possible.

Addendum No. 1 to Interim Report

Terms of Reference of 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.

Addendum No. 1 to Interim Report (continued)

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, BIS, Basle, Switzerland
Mr. Max Baltensperger, Swiss National Bank, Zurich, Switzerland
Mr. Andrew Crockett, IMF, Washington, D.C.
Mr. Werner Dannemann, IMF, Washington, D.C.
Mr. Piero Erba, Eurostat, Luxembourg
Mr. Michael Feiner, OECD, Paris, France
Dr. Mohammed Haider Ghuloum, Central Bank of Kuwait, Safat, Kuwait
Dr. Lin See-Yan, Bank Negara Malaysia (Central Bank of Malaysia) Kuala Lumpur, Malaysia
Mr. Marius van Nieuwkerk, De Nederlandsche Bank N.V., Amsterdam, Netherlands
Mr. Samuel Pizer (Director, Technical Staff), IMF, Washington, D.C.
Dr. Kurt Senff, Deutsche Bundesbank, Frankfurt, Germany
Mr. J.D. Wells, Central Statistical Office, London, England
Mr. Yoneyoshi Yasugi,* The Bank of Japan, Tokyo, Japan
Mr. Ernesto Zedillo, Director General de Ficorca, Mexico, D.F., Mexico

Rapporteur: Mr. D. Keith McAlister, IMF, Washington, D.C.

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

Addendum No. 2 to Interim Report on
the Statistical Discrepancy in World Balance of Payments Accounts

International Shipping and Transportation Services

Transactions involving the international carriage of merchandise and passengers are recorded in either of two categories in the IMF classification of balance of payments statistics: "shipment", or "other transportation". "Shipment" reflects the cost of freight, insurance, and other distributive services; under the conventions adopted for balance of payments reporting, these services are deemed to be provided to (and compensated by) the importer, regardless of the actual channels of payments. Thus they become international transactions, to be included in the balance of payments, only if they are provided by a resident of a country other than that of the importer.

The term "other transportation" includes international passenger fares, expenditures by international carriers (for bunker fuel, port charges, etc.) in countries other than that of the operator of the carrier, and other transportation services when provided internationally.

The first of these two accounts has consistently shown an excess of debits in recent years, with no discernible trend from 1979 to 1983. The asymmetry on "other transportation" has been small (see Table 1).

Table 1. Transportation Items

(In billions of dollars)

		1979	1980	1981	1982	1983
Shipment:	Credit	45.4	55.0	55.3	50.4	46.9
	Debit	72.8	87.0	89.9	84.2	78.7
	Net	-27.4	-32.0	-34.6	-33.8	-31.8
Other transportation:						
	Credit	64.0	79.5	80.9	75.4	70.2
	Debit	65.3	82.9	87.0	79.8	73.6
	Net	-1.3	-3.4	-6.1	-4.4	-3.4

Source: International Monetary Fund, Balance of Payments Statistics, Yearbook, Part 2, 1985.

There is general agreement that the large discrepancy on "shipment" reflects mainly the omission of the revenues of a large portion of the world shipping fleet from recorded balance of payments data. A major omission consists of the fleets operated by Hong Kong, Eastern Europe, and Greek enterprises. Hong Kong and Eastern Europe are not included in the IMF balance of payments statistics, so far as transportation accounts are concerned. The Greek balance of payments data exclude the operations of the Greek fleet, the largest in the world.

The Greek and Hong Kong fleets include large amounts of "flag-of-convenience" tonnage--vessels registered mainly in Liberia and Panama. The remainder of such tonnage is apparently operated by other maritime countries that do include shipping transactions in their balance of payments reports to the IMF. However, the extent to which these countries include in their reports transactions related to foreign-flag shipping under domestic operation is not clear. So some flag-of-convenience shipping additional to that under Hong Kong and Greek operation may be omitted from the recorded data.

The existing data have been examined by the Technical Staff and, extensively, by Mr. Erwin Veil, of the OECD staff, and by Mr. Kurt Senff of the Bundesbank (and a member of the Working Party). The following are the most important problem areas that need further investigation in order to identify and quantify the various factors accounting for the asymmetry.

1. The revenues and expenditures of the "missing" fleets (Hong Kong, Greece, and certain Eastern European countries) need to be calculated. Since this calculation will probably involve comparisons with shipment data reported by other countries, it will be necessary to eliminate from the latter the revenues of non-ocean carriers: air, rail, truck, and pipeline. This information is, in general, not available in the IMF records, although it may be reflected in some national publications.

2. The extent to which the transactions of shipping registered under "flags of convenience" (mainly Liberia and Panama) are included in the data reported to the IMF needs to be ascertained. It is possible that much of that shipping (except for vessels operated by Hong Kong and Greece) is, in fact, covered by the recorded data.

3. The validity of the debit entries (for freight carried on ships operated by carriers foreign to the importing country) must also be established. There is some evidence that such debits are overstated, and the corresponding f.o.b. value of imports understated. This possibility needs careful investigation, especially in the case of those countries showing relatively high "shipment" debits in relation to the value of imports.

4. In addition to ascertaining whether or not recorded "shipment" credits accurately reflect the revenues of nationally operated foreign flag vessels, some effort should be made to see whether the total shipping revenues of the major maritime nations bear a reasonable relationship to the amount of tonnage operated.

5. Although world debits and credits on "other transportation" are roughly in balance, there is some reason to believe that reported credits on "port expenditures" are understated, and it is known that some countries include passenger fare debits under "travel" instead of "other transportation". In any event, if the port expenditures of the "missing" fleets are added to the debits, the present asymmetry in "other transportation" will be enlarged, unless other offsetting transportation credits are discovered. In order to evaluate the true asymmetry in this account, a breakdown of the three major components--passenger fares, port expenditures, and other (mainly charter fees)--will be required.

It will be particularly useful to check on the accuracy of the entries for port expenditure, both debits and credits. In principle, these should be reported as occurring between the countries operating the ships and the countries supplying the services; the largest item is probably bunker fuel. Since settlement for these items is often not made locally, or is made in local currency, there may be a tendency to underestimate them, particularly in the statements of the countries supplying the services (credits).

6. It would also be useful to investigate the possibility of asymmetrical reporting of transactions related to trade employing carriers other than ocean shipping--civil aviation, rail, truck, inland waterways, pipeline, etc. This would require a more detailed breakdown of the data than is presently available.

In order to address these issues, the Working Party proposes two lines of investigation. The first is a questionnaire to the major maritime countries, which should help to resolve the questions raised in paragraphs 1, 2, 4, and 6. The second would be an inquiry, probably not as a formal questionnaire, to the remaining larger trading nations regarding the problems mentioned in paragraphs 3 and 5. In both cases, a rather detailed explanation of the methods used in arriving at the estimates would be requested, in order to see to what extent the methods themselves might tend to produce asymmetrical balance of payments entries.

It will be clear from the foregoing that correcting the asymmetries in the shipping and transportation accounts will to some extent require counter entries, either in those accounts or elsewhere in the current account. To the extent this occurs, the overall asymmetry on current account will not be reduced. Nevertheless, the Working Party believes that confidence in the data can be enhanced by reducing, or at least explaining, asymmetrical reporting in specific sectors of the current account, and in the sub-sectors of the transportation accounts. Also, improved knowledge of the content of these accounts should help to avoid errors in the future.

Addendum No. 3 to Interim Report on
the Statistical Discrepancy in World Balance of Payments Accounts

Direct Investment Income

Note: This note is based on Bureau of Statistics balance of payments data as it existed prior to the preparation of Balance of Payments Yearbook, 1985, Part 2. Also, it does not yet fully integrate the information supplied in response to the Working Party's questionnaire on investment income. However, it is not expected that the revisions to be incorporated in the final report will significantly affect the analysis here presented. Some preliminary conclusions are given at the end of this addendum.

Income on direct investment includes the parent company share (after foreign taxes) in the net profits of foreign subsidiaries and other affiliates, the earnings of unincorporated branches in foreign countries, and interest received from (or paid to, as a negative item) foreign affiliates and branches. It does not include royalties for the use of patents, trademarks, and the like, nor fees for administrative and other services--these are classified elsewhere in the balance of payments accounts, as miscellaneous services.

There are various possible causes of asymmetrical reporting of direct investment income, other than simple differences in measurement of the same transaction by the two sides. For one thing, the definition of direct investment is difficult to reduce to a simple quantitative measure of degree of control; 1/ it is not certain that a particular entity would be considered a direct investment by both countries involved. However, in practice this problem is not quantitatively very important because the bulk of direct investment is in the form of branches or majority-owned subsidiaries, which are virtually certain to be defined as direct investment by both the investing country and the host country. But there is sometimes a problem, especially in large and complex economies, in identifying those enterprises that are effectively controlled from abroad or that have foreign affiliates.

Moreover, the proper geographic allocation of direct investment income is often elusive, especially when there are intermediary affiliates in third countries. Exchange rate fluctuations may also affect the way in which direct investment earnings (particularly, as will be noted below, retained earnings) are converted from the host currency to the investor currency, or to a third currency.

1/ In the International Monetary Fund's Balance of Payments Manual, 1977, Fourth Edition, direct investment is defined as "investment that is made to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor's purpose being to have an effective voice in the management of the enterprise."

Direct investment income, as defined above, can be separated into two parts: reinvested earnings (RE) and other direct investment income (ODI). The former includes the investor's share of that portion of the net profits of subsidiaries and other affiliates not paid out as dividends 1/ plus, where identifiable, that portion of the earnings of branches not remitted to the home office. The latter (ODI), then, consists of dividends, interest and branch profits--the last either in whole or in part. The extent to which branch earnings are divided between RE and ODI in the statistics is not clear. From a legal point of view, as soon as branch profits are determined they accrue to the home office and may be taxable (as in the United States) in the country of the investor. Among major creditor countries it appears that only the United States makes this accounting division; 2/ virtually all other countries seem to consider total branch profits as income debits or credits, with any unremitted portion being reflected as part of the capital flow vis-a-vis the parent organization. The net effect on the international accounts is the same in either case; only the rather arbitrary distinction between RE and ODI is affected.

So far as can be determined, most countries do not include undistributed profits in their balance of payments accounts. However, since at least four countries that are major investors (United States, United Kingdom, Australia and Germany) do include them, 3/ while a large number of the host countries do not, it is to be expected that reported RE receipts greatly exceed reported payments. In the first part of this paper it is shown that the reported asymmetry on RE is virtually all explained by this difference in coverage or methodology. The data on ODI are examined in the second part. In this case, too, it does not appear that inconsistent reporting of the same transactions by partner countries is a major source of asymmetry, but rather that discrepancies arise mainly because the coverage of this kind of income in the statistical reporting systems varies from nearly complete (for major investors) to rather sketchy, and because some countries do not separate investment income between "direct" and "other" in their balance of payments reports.

1/ A more accurate nomenclature would be "undistributed" rather than "reinvested" earnings. Dividends themselves may be "reinvested" if they are merely credited to an intercompany account instead of being remitted across the exchanges. In the latter case, the increase in the accounts payable to the parent would be accounted for as a capital inflow to the host country. This ambiguity is one reason for including all direct investment earnings, whether declared as dividends or not, in the current account.

2/ As called for in the IMF Manual.

3/ In the revised data the Netherlands will be included in this group.

Reinvested Earnings

It appears that virtually the entire asymmetry on this account can, on balance, be attributed to the single factor already mentioned--the failure of most host countries to include this item in their balance of payments accounts, while the major creditors, notably the United States and the United Kingdom, do include it. Since the asymmetry almost entirely disappears when allowance is made for non-reporting countries, the remaining inconsistencies in the reported data are evidently offsetting. However, this does not mean that the data from countries that do report RE are fully accurate or consistent one with the other; differences in the bilateral data from the United States, the United Kingdom, and Germany demonstrate that such is not the case.

The balance of payments data for 1983 reported to the IMF Bureau of Statistics (STA), show an excess of credits of $7,622 million on RE account (see Table 1, line 1). However, various adjustments in the reported figures are necessary to make the data comparable.

First, RE credits as reported by the United States (included in the $13,312 million shown on line 1 of the table) were $9,090 million. But in arriving at this amount, the United States compilers deducted $7,078 million from foreign earnings, representing the unrealized capital loss resulting from converting the assets and liabilities of the foreign enterprises from host country or other foreign currencies to U.S. dollars at a lower rate (for most foreign currencies) at the end of the accounting year than that which prevailed at the beginning of the year. No such adjustment would be relevant to the host countries, which generally base their accounts on books maintained in their home currencies. Any conversions of reported local currency earnings to, say, U.S. dollars or SDRs, would simply be made at the average exchange rate for the period. An adjustment to eliminate this anomaly is shown in Table 1, line 2.

Secondly, as already noted, the U.S. data divide branch profits between remitted and reinvested earnings. While this is in accord with the IMF manual, it appears that most countries do not make that distinction, but rather treat all branch profits as remitted. Thus "reinvested" branch profits as reported by the United States must be deducted from RE to make the U.S. data comparable with those of other countries. This deduction of $3,384 million is made in Table 1, line 3.

The total adjusted credits of $17,006 million include the following amounts for four creditors that report some geographic breakdown: 1/

(In millions of dollars)

United States (excluding branches)	13,383
United Kingdom	3,213
Germany	175
Australia	248
	17,019

The excess of credits of $11,316 million (line 4) could result from some combination of: (1) credits reported by some countries against partner countries that do not report any debits in this account, and (2) credit entries by some countries that exceed the debit entries of partner countries. The second possibility cannot be quantified on the basis of available data; a geographic breakdown of RE debits is shown by only a few countries. However, by using the geographic detail on credits supplied by the United States and United Kingdom, it can be calculated that these two countries reported RE receipts of $11,800 million from countries or areas not reporting RE. 2/ If we further reconstruct the reported data to enter these omitted debits, the asymmetry virtually disappears. (See Table 1, lines 5 and 6.) In short, the RE discrepancy reflects almost entirely a methodological difference, rather than conflicting sets of data; i.e., only a few countries report substantial reinvested earnings, and they report large credits.

Other Direct Investment Income (ODI)

Other direct investment income includes dividends, that portion of branch profits considered to be remitted (for most reporters total branch profits), and interest. The last is measured net, i.e., any interest paid to a foreign affiliate is treated as negative ODI receipts, and not as income payments by the investor country. The asymmetry in this account for 1983 was -$10,788 million. (See Table 1, line 7.)

1/ Nearly all the remainder is reported by Switzerland and New Zealand.

2/ Or not included in the IMF data at all, as in the cases of Bermuda, Hong Kong, and the Cayman Islands. See below, p. 34. While Germany and Australia supplied similar data, the amounts involved were small and were not included in this calculation.

Table 1. Reconciliation of Statistical Discrepancy on Direct Investment Income, 1983

(In millions of dollars)

	Credits	Debits	Net
Reinvested Earnings			
1. Data Reported to IMF	13,312	5,690	+7,622
2. U.S. translation losses	+7,078		
3. U.S. branch earnings adjustment	-3,384		
4. Data as adjusted	17,006	5,690	+11,316
5. Credits not offset by debits 1/	--	+11,800	
6. Adjusted asymmetry	17,006	17,490	-484
Other Direct Investment Income			
7. Data as reported to IMF	21,457	32,245	-10,788
8. Interest: Netherlands Antilles affiliates	+3,000		
9. U.S. branch earnings adjustment	+3,384		
10. Adjustment for U.K./U.S. transactions with countries not reporting ODI	+1,200	+2,600	
11. U.S./U.K. receipts from Bermuda, Cayman Islands and Hong Kong		+1,100	
12. Saudi Arabian adjustment (tentative)		-4,000	
13. Indonesian adjustment (tentative)		-2,200	
14. Adjusted asymmetry	29,041	29,745	-704

1/ Amount reported as credits by investor countries from countries or areas not reporting payments (debits).

Here again the U.S. credits, reported at $11,716 million, must be adjusted to make them compatible with the data reported by partner countries. First, the U.S. balance of payments data reflect as negative ODI receipts $4,246 million of interest paid to subsidiaries incorporated in the Netherlands Antilles. These companies issued bonds in the Euro-markets and, in the main, reloaned the proceeds to their U.S. parent companies. The interest paid by the latter is used by the subsidiaries to pay interest on their outstanding bonds, to cover non-interest expenses and to generate net earnings, which are attributed in the U.S. data to the Netherlands Antilles. (The earnings were $1,328 million in 1983.) The balance of payments reports of the Netherlands Antilles apparently omit these transactions entirely. Presumably, the interest received by the bondholders is recorded, if at all, as portfolio investment income in the countries where the bonds are owned or held. It appears that about $3,000 million of the interest paid to the Netherlands Antilles subsidiaries was used to pay interest to the bondholders. Shifting this item from direct to portfolio investment income increases U.S. and world credits on direct investment income and increases U.S. and world debits on other private (portfolio) investment income by the same amount. 1/ (See Table 1, line 8).

Second, we must add back to ODI receipts for the United States the amount of branch profits considered as reinvested, but which were subtracted from RE. The amount, $3,384 million, is entered in Table 1, line 9.

There are quite a few countries, some of them major, that do not report direct investment income separately, but presumably include it with other private income. Some but not all of these countries are shown separately in the U.S. and U.K. data. Those two countries combined reported receipts of $2.6 billion from, and payments of $1.2 billion to, countries included in this group. It would be appropriate to adjust the data by these amounts, that is by adding U.S./U.K. receipts to world debits and U.S./U.K. payments to world credits. This is done in Table 1, line 10. Again, an offsetting adjustment will be required in "other" income.

There are three locations for which the United States and United Kingdom report direct investment transactions (Bermuda, the Cayman Islands and Hong Kong) that are not national states and do not provide balance of payments statements for inclusion in the BOS tabulation. The United States and United Kingdom combined reported $1.1 billion of ODI receipts (and negligible payments) to these areas. Adjustment for this factor is made in Table 1, line 11.

1/ Of course, only to the extent the bonds are held outside the United States.

Another identifiable discrepancy involves the official balance of payments accounts of Saudi Arabia, which show a debit of $4.4 billion for ODI, though only small amounts are reported as direct investment income receipts in the geographic data supplied by four major investing countries. It is possible that the Saudi Arabian debit entry represents payments that are picked up as credits by other countries in some other category, but in the absence of clear evidence that the income is being reported somewhere in the world as a credit, it seems appropriate to tentatively adjust ODI payments downward by, say, $4.0 billion (Table 1, line 12).

Finally, some adjustment to the reported Indonesian debit of $3,985 million appears to be in order. On investigation it seems that both debt interest and income on direct investment are included in this total. According to estimates based on the outstanding debt of Indonesia, interest on that debt was almost $2.2 billion in 1983. Reported ODI debits are accordingly reduced by that amount. (Table 1, line 13.) The interest will then have to be added to the reported "other" income payments.

As in the case of reinvested earnings, the foregoing adjustments virtually eliminate the aggregate asymmetry on this item, but as noted below many questions remain. An examination of bilateral data between several major pairs of countries provides evidence that the miniscule remaining discrepancy on direct investment income account may well hide a significant amount of offsetting errors and omissions.

Direct Investment Income in 1979

The data for 1979 indicate virtually no discrepancy on ODI: total credits as reported were $27.6 billion and total debits $27.1 billion. The adjustments to the U.S. figures that were necessary for 1983 were not applicable in 1979.

For reinvested earnings, the same situation prevailed in 1979 as in 1983; the Untied States and United Kingdom reported receipts (credits) for reinvested earnings from countries not reporting this item (or not included in the IMF totals) of $13,922 million. If this amount is added to total debits, as was done for 1983 in Table 1, line 5, the results are as follows:

(In millions of dollars)

	Credits	Debits	Net
As reported to IMF	23,352	11,562	+11,790
Adjustment for omitted debits		13,922	
Adjusted	23,352	25,484	-2,132

While the remaining discrepancy is not negligible it must be noted that the adjustment for omitted debits can only be roughly approximated. The estimating process (which also was used for the 1983 adjustment) was as follows:

1. RE credits as reported by the United States and United Kingdom were matched, as far as geographic detail would permit, with the RE debits as reported by countries with more than $10 million of such debits. Some estimating was necessary.

2. The result of the matching exercise was to derive the amount of U.S./U.K. credits not matched by a corresponding debit. Since the estimating procedure probably yielded a minimum amount of debits that could be matched with U.S./U.K. credits, the remaining surplus of credits ($13,922 million) may be too large. If so, when that remainder is added to reported debits (as in the tabulation above) the resulting adjusted net debit asymmetry is overstated.

Conclusions

Although the final report of the Working Party will be more specific, certain major conclusions emerge from the analysis already completed.

First, so far as the discrepancy on reinvested earnings is concerned, various alternatives suggest themselves. One would be to omit RE entirely from balance of payments reporting. This is unsatisfactory on general principles; both the IMF Manual and the United Nations System of National Accounts require all direct investment earnings, remitted or not, to be included in the national income, and hence the balance of payments, of the investing country. However, since inclusion of RE in summations of the world current account results in a major imbalance, it might be better to omit RE from such summations, or to prepare analytical summations which omit RE.

Another alternative would be to convince the countries not presently reporting RE to change their methods, if necessary by relying on data published by, or otherwise obtainable from, the principal investing (creditor) countries. This might not be acceptable to the host countries, although many compilers do rely on information obtained from outside their own countries in preparing balance of payments estimates.

Part of the asymmetry in reinvested earnings will persist so long as the United States includes an adjustment for unrealized exchange gains or losses in its statistics. Since there is no reason for the host countries to make a corresponding adjustment, the only way to eliminate the asymmetry would be for the United States to change its procedure.

As to remitted earnings, there seems to be no major methodological reason for asymmetry, other than: the U.S. treatment of interest paid to Netherlands Antilles financing subsidiaries; the definition of what constitutes a direct investment; and the practice in some countries of not providing a separation between income on direct and other investments.

Of these, the first could only be eliminated by a change in U.S. procedures; the second only by agreement on the coverage of direct investments on a case-by-case basis (probably impossible to achieve); and the third by changes in procedures by those countries not making the separation.

However, there clearly remain many inconsistencies in bilateral data not obviously caused by any of the factors just mentioned. These inconsistencies might be substantially reduced--though probably never eliminated--by intensive bilateral consultation among the compilers.

Addendum No. 4 to Interim Report on
the Statistical Discrepancy in World Current Account Balances

Official Unrequited Transfers

Unrequited transfers are defined in the Balance of Payments Manual as being the offsetting entries for the provision of real or financial resources by one economy to another without a quid-pro-quo. When an economy transfers goods, services, or funds to another economy as a gift, i.e., without any expectation of payment, the value of the transfer is entered into the accounts of the donor as a debit under unrequited transfers, and into the accounts of the recipient as a credit under unrequited transfers. These are counterparts to the entries that have been made, in principle, in the goods and services or capital accounts of the two economies.

Official unrequited transfers refers to transactions between two parties if one or both of the parties to a transaction belongs to the official sector of an economy (essentially the government and central bank, excluding government enterprises). Interofficial unrequited transfers, in which both parties belong to the official sector, include various forms of bilateral development aid (subsidies to current budgets, voluntary cancellation of debt, grants of technical assistance, food aid, and project assistance), emergency relief, indemnities imposed under peace treaties (reparations), and government contributions to the administrative budgets of international organizations. In addition, there are official unrequited transfers in which only one party is the official sector, the other being the private sector. These transfers cover mainly grants of technical assistance, taxes, fines, fees for carrier registration, tickets sold by and prizes won from government-sponsored lotteries, scholarships, grants to nongovernmental entities, and noncontractual pensions and other employee benefits.

As shown in Table 1, there has been a persistent but reasonably stable net debit in the global balance on official unrequited transfers for many years. To some extent this probably reflects the stability of the gross credit and debit flows which have not expanded, in U.S. dollar terms, at the same rate as many other current account transactions.

Table 1. Official Unrequited Transfers

(In billions of dollars)

	1979	1980	1981	1982	1983	1984
Credit	32.8	37.1	35.6	35.0	36.0	35.3
Debit	49.0	57.8	54.4	49.7	48.8	49.4
Net	-16.2	-20.7	-18.8	-14.7	-12.8	-14.1

From a preliminary review of the data, augmented by a study undertaken for the Development Cooperation Directorate of the Organization for Economic Cooperation and Development, it would appear that specific problem areas in the recording of the data are:

(1) The reporting of expenditures by donor countries for technical cooperation, which appear to be largely unreported by the recipient country when the funds are not spent directly in that country.

(2) The non-reporting by the recipient countries of other (non-technical cooperation) transactions which involve the shipment of goods rather than the transfer of funds;

(3) The virtual failure of some recipient countries to report any official unrequited transfer credits in their international accounts;

(4) Grant outflows from donors which cannot be identified as going to a particular developing country, e.g., the administrative costs of an aid agency;

(5) The lack of balance of payments statements for international institutions in the global totals, which produces asymmetries because there is no counterpart to the contributions reported by their members to cover their administrative costs, and also results in timing problems for development assistance flows; and

(6) The disagreement in classification of some official/private sector transactions between donors and recipients which results in some official unrequited transfers being reported as private by one party or the other.

To quantify the importance and incidence of these problem areas it would seem necessary to survey the major donor and recipient countries, asking them to provide details of their official unrequited transfers by type of transfer, and, for each type of transfer, by major bilateral partner. Such a data base would be essential for any attempt to match partner country data to indicate which types of transfers cause the principal recording problems between donors and recipients. Such a survey, which would be an elaboration of a study initiated by the Bureau of Statistics in 1983, is being designed. If agreement can be reached and responses can be provided promptly, the Working Party may be able to report some results during 1986, but the principal purpose will be to improve reporting of this category over the longer run.

The major types of transfers which will be identified in the survey will be those for:

(a) Development programs and projects;
(b) Technical cooperation;
(c) Food aid;
(d) Debt forgiveness; and
(e) Other.

Countries will be asked to specify those amounts paid (received) in cash or kind.

Table 2 shows the degree of concentration of transactions in official unrequited transfers. As would be expected, this concentration is particularly evident for the debit side of the account, although it is also quite strong for the credit side. Because of the institutional structure of the European Economic Community many European countries appear as both donors and recipients, so that the total number of countries involved as either major donors or recipients is 19. In order to raise the level of coverage of recipient countries to that for donor countries it would be necessary to add a further 28 countries.

Table 2. Official Unrequited Transfers - Concentration of Transactions

(In billions of U.S. dollars)

	1979	1983	1984
Credit	32.8	36.0	35.3
Of which:			
14 largest transactors	22.7	23.1	22.6
Percentage for largest transactors	69%	64%	64%
Debit	49.0	48.8	49.4
Of which:			
14 largest transactors	38.9	45.1	46.3
Percentage for largest transactors	79%	92%	94%

In addition to quantifying areas of discrepancy, the identification of specific problem areas in the recording of unrequited transfer transactions will enable recommendations to be made for their improvement.

It should be noted that the reconcilation of differences in classification between official and private transfers will not have any impact on the current account discrepancy. However, where credit entries for bilateral transfers are completely missing or incorrectly valued, the identification and correction of these cases would reduce the discrepancy in the overall current account balance.