FOR AGENDA

SM/87/13

January 12, 1987

To: Members of the Executive Board

From: The Secretary

Subject: Final Report of the Working Party on the Statistical Discrepancy in World Current Account Balances

Further to the interim report circulated as SM/86/7 on January 13, 1986, there is attached for consideration by the Executive Directors the final report of the Working Party on the statistical discrepancy in world current account balances, which was transmitted to the Managing Director by the Chairman of the Working Party.

This report has been scheduled for discussion by the Executive Board on Monday, February 9, 1987. The staff intends to issue shortly a note that would identify key aspects of the report on which comments by the Executive Directors would be welcomed. This note would also outline a number of proposed steps to follow up on the recommendations of the report.

Mr. Dannemann (ext. 7900) or Mr. Crockett (ext. 8982) is available to answer technical or factual questions relating to this paper prior to the Board discussion.

Att: (1)

Other Distribution:
Department Heads

INTERNATIONAL MONETARY FUND
WASHINGTON, D.C. 20431

CABLE ADDRESS
INTERFUND

December 18, 1986

Dear Mr. de Larosière,

The Working Party established in accordance with the recommendation adopted on August 1, 1984 by the Executive Board has now concluded its task. It was invited to investigate the principal sources of discrepancy in global balance of payments statistics, to consider various ways in which statistical practices might be amended and to make recommendations.

You have already received in January its Interim Report, which described the main causes for the statistical discrepancy and outlined the research strategy adopted by the Working Party and the Technical Staff.

Please find herewith the Final Report which analyzes the origins of the discrepancy in major current transactions and presents the conclusions and recommendations of the Working Party.

The view expressed in this Report is that improving the world's data on current account transactions will be a difficult task, in an environment of rapid technical change and budgetary constraints. But this can be successfully achieved if the Fund and other international institutions give a high priority to improving these data, and if national statistical offices carry forward the improvements recommended in the Report.

The Working Party has attempted to include in its recommendations a comprehensive set of proposals that should, if consistently enforced, reduce the discrepancies in the reported international accounts and ensure that deterioration does not recur in the future. We believe the adjustments we have been able to make will help to sustain the credibility of the Fund's analysis of developments in the global and regional payments situation.

Sincerely yours,

Pierre Esteva

Pierre Esteva
Chairman
Working Party on the Statistical Discrepancy
in World Current Account Balances

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Working Party on the Statistical Discrepancy
in World Current Account Balances

Attachment

Final Report of the
Working Party on the Statistical Discrepancy
in World Current Account Balances

International Monetary Fund

December 1986

Contents

List of Tables

Prefatory Note

The analysis and views expressed in this Report are the responsibility of the Working Party as a whole, but there are some specific contributions by members of the Technical Staff and others that deserve mention. Over-all direction of the research program and the preparation of the Report was assigned to Samuel Pizer. Other members of the Technical Staff participated jointly in many aspects of the study, but most members concentrated on particular topics, as follows:

Robert L. Sammons	Direct investment income, shipping and transportation
Dietrich Hartenstein	Portfolio income
Chester L. Callander	Compilation systems and practices
Edna E. Ehrlich	Offshore financial centers and financial innovation
Stephen P. Taylor	International banking data and computer applications to questionnaire and other data
Keith McAlister	Unrequited transfers, international organizations, and liaison with the Bureau of Statistics

In addition we would like to acknowledge the assistance of the OECD staff, in particular Dr. Erwin Veil, many specialists in the Bureau of Statistics and the Research Department of the Fund who provided essential data and contributed to the analysis in the Report, and a number of persons in financial institutions, the shipping and insurance industries, and in private economic research groups, who provided very helpful insights into many topics covered by the Report.

We would especially like to express our sincere appreciation to many economists and researchers in statistical offices around the world who generously cooperated in this project by completing special questionnaires and responded to specific inquiries of all kinds. We hope this study will prove helpful to the persons who are directly responsible for producing the basic data in this field.

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.

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

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

Members: Dr. Gunter Baer, Bank for International Settlements, Basle, Switzerland
Mr. Max Baltensperger, Swiss National Bank, Zurich, Switzerland
Mr. Andrew Crockett, IMF, Washington, D.C.
Mr. Werner Dannemann, IMF, Washington, D.C.
Mr. Piero Erba, Statistical Office, Eurostat, Luxembourg
Mr. Michael Feiner, Organisation for Economic Cooperation & Development, 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. Jack 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.

Members of the Technical Staff

Chester L. Callander
Edna E. Ehrlich (Federal Reserve Bank of New York)
Dietrich Hartenstein (Deutsche Bundesbank)
Samuel Pizer (Director)
Robert L. Sammons
Stephen P. Taylor
Keith McAlister (Liaison with Bureau of Statistics, IMF)

Secretarial Staff

Martha J. Haldeman
Alice McPhillips

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

Report of the Working Party on the Statistical Discrepancy
in World Current Account Balances

EXECUTIVE SUMMARY AND MAJOR RECOMMENDATIONS

Executive Summary

1. Origins of study

In the period after 1979 the available statistics on the world current account began to show a large negative discrepancy, indicating that either the deficits of some countries and areas were being overstated, or that surpluses were being understated. Concern that such discrepancies could lead to inappropriate policy reactions was heightened when the excess of reported debits exceeded $100 billion in 1982--a very large amount when scaled against the recorded deficits of major world areas in that year. Responding to this concern, the Executive Directors of the Fund determined in 1984 to establish a Working Party to investigate and recommend procedures to improve statistical practices. The terms of reference directed the Working Party to focus principally on the investment income accounts and the role of offshore centers.

This Report contains the results of the study by the Working Party that was organized early in 1985, assisted by a small Technical Staff and supported by contributions from the staffs of the Fund and the Organisation for Economic Cooperation and Development (OECD). The Working Party has been able to identify the sources of most of the discrepancy in the investment income accounts, and to suggest procedures for reducing it. The Working Party also initiated analyses of the other large discrepancies in the current account--shipping, other transportation, and official and private unrequited transfers--and laid the groundwork for reduction of these discrepancies in the future. In addition the Working Party examined the role of offshore financial centers and financial innovations in the widening of the discrepancy after 1979 and has suggested some measures to limit the erosion of international financial statistics.

Conduct of these analyses required more detailed information than is usually available in national balance of payments accounts as supplied to the Fund. Consequently, the Working Party carried out three comprehensive questionnaire surveys, and also engaged in intensive discussions with national compilers. The results of these surveys are included in this Report and should be valuable for future research.

The Working Party emphasizes that improving the world's data on current account transactions will be a formidable task, especially in an environment where the capacity for statistical measurement is challenged by rapid changes in the technology and forms of international transactions and by budgetary constraints. If the findings of the Working Party are to have a lasting influence the Fund and other international institutions, as well as the governments of member countries, must assign a high priority to improving these data and ensuring that deterioration does not recur.

2. Major conclusions

The Working Party explored a fairly wide range of explanations of the growth of the discrepancy in the global investment income account, but reached the conclusion that the overriding factor was the emergence of a large body of cross-border assets recognized by the debtor countries but not by the creditors, coupled with a higher level of interest rates after 1979. Examination of the reported data on capital flows for the 1977-83 period (Annex Table V) shows an excess of reported net inflows of nearly $300 billion (apart from reinvested earnings). Explanations of the discrepancies in the shipping and unrequited transfer sectors of the current account generally refer to relatively specific and persistent statistical deficiencies that can be corrected with patient effort.

Even though all of the statistical problems cannot be fully overcome, considerable gains can be achieved reasonably soon by applying the estimating techniques and other suggestions contained in this Report. This conclusion applies especially to the investment income accounts, where improved techniques can reduce the discrepancy to minor amounts from the -\$33.6 billion recorded in 1983 and the even larger -\$47.5 billion recorded in 1984. The solution for the persistent excess of debits in the shipping and transportation accounts (averaging over \$35 billion annually) depends mainly on improved national accounting and partly on efforts by the Fund to generate data for the large unreported sector of the world fleet. In the case of the persistent excess of reported debits under the heading of official unrequited transfers (averaging about -\$16 billion since 1979) the Working Party has shown where certain large gaps exist, and where further research should be directed. These transaction categories accounted for over 85 percent of the negative balance reported for the current account, excluding merchandise trade, in 1983-84.

A further major conclusion of this study is that the indicated adjustments will tend to add net credits to the current accounts as now recorded for most world areas, but the additions are not so concentrated in any single country or group of countries as to invalidate the basic thrust of analyses drawn from the uncorrected figures.

a. Investment income

The statistical record of the current account discrepancies (see Table I of the Annex to this Summary) shows the widening of the overall discrepancy from about -$20 billion in 1978-79 to a peak of -$114 billion in 1982. According to the Fund tabulations, the overall discrepancy remains at high levels, but below the peak. By far the largest and persistently rising discrepancy appears in the investment income accounts. The Working Party was able to identify the sources of this discrepancy and to establish the basis for adjustments that nearly eliminate it, as shown in summary form in Table II of the Annex.

With respect to direct investment income, the Working Party found that detailed geographic data compiled by the major creditor countries was the primary basis for locating the discrepancies and reducing them over time. In the case of reinvested earnings, the excess of reported credits mainly reflects the fact that most debtor countries do not compile this information. In worldwide compilations, therefore, it will be necessary either to insert an adjustment for the missing debits (computed from the creditor side) or omit the reinvested earnings entirely from such summations. However, efforts should be maintained to encourage all countries to compile this essential information.

With respect to other direct investment income (dividends, interest, and branch profits), the Working Party was able by matching the data for individual countries to identify several sources of inconsistency that could be corrected, but did not account for the entire discrepancy. However, the remaining excess of reported debits, about $6 billion, can be traced to relatively few countries and probably can be cut back by further research and consultations. In general, the experience of the Working Party indicates that the discrepancies in the direct investment income accounts can be substantially reduced by exploiting the detailed data compiled by some major creditor countries, and by encouraging national compilers to share their information in this area directly or via the Fund.

By far the largest discrepancy shows up in income flows related to portfolio investments, including interest on positions held with or by banks, as well as returns on cross-border holdings of securities, trade credits, and miscellaneous assets. Income flows related to official reserves are included under this heading because they cannot be segregated consistently in the records of the creditor and debtor countries. After considerable experimentation with estimation methods, the Working Party determined that the key to the problem was to establish an independent basis for estimation. The principal basis capable of providing consistent figures across countries and between creditors and debtors is information on the stocks of the main types of cross-border assets and liabilities. Fortunately, a large part of that basis already exists in the International Banking Statistics (IBS) compiled by the Bank for International Settlements (BIS) and the Fund, and the Working Party was able to create consistent estimates of the income associated with banking positions using that base. Of course, much additional work was done to effect country-by-country corrections (including revisions supplied by national compilers on the questionnaire issued by the Working Party), and further adjustments were made to deal with special cases--such as the international institutions themselves--and to incorporate the income related to portfolio holdings of securities. Carrying through the same types of adjustments applied to 1983, the Working Party was able to reduce the discrepancy on world portfolio income to minor amounts for each year since 1979. The detailed description of these procedures, and the results obtained, presented in this Report, should provide adequate guidance hereafter to national compilers, and to the Fund, for the preparation of improved estimates of this type of income.

b. Shipping and transportation

The negative discrepancy in the shipping and transportation accounts is quite large, but, unlike the income discrepancy, it shows no tendency to increase over time (see Annex Table I). The Working Party has been able to develop a body of information on these transactions, and believes its analysis points to the main sources of error and has established a basis for more comprehensive work on this topic. In the case of the shipping account, which primarily relates to expenditures and earnings associated with the carriage of international trade, the large excess of reported debits results mainly from the fact that whereas all countries are able to compile fairly readily the amount paid to foreign-operated carriers to cover the freight on imports, several countries or economies with large maritime interests (notably Greece, Hong Kong, and Eastern Europe) do not report the corresponding freight earnings of their fleets. There are a number of complicating factors, but the discussion in Chapter VII of this Report indicates that progress can be made by a combination of improved reporting by maritime countries and estimates, where necessary, by the Fund staff.

A smaller discrepancy in the "other transportation" account reflects offsetting factors: the lack of data on the port expenditures of the "missing" fleet (debits) and underestimates by some countries of their receipts from the port expenditures of foreign ships (credits). Here also, the analysis by the Working Party indicates where the gaps are largest, and suggests a procedure for correcting the data as now reported. As with other suggestions, this will require coordination between national compilers and the Fund staff, including the development of estimating techniques that would be consistent across countries.

c. Unrequited transfers

Finally, the Working Party has undertaken a detailed analysis of the reasons why there is a large negative discrepancy in official unrequited transfers, offset in part by an opposite discrepancy for private transfers. This work has been aided by the cooperation of the Development Assistance Committee (DAC) of the OECD. As noted above, the findings of the Working Party show where some immediate sizeable corrections can be made, and will also help to guide the additional research leading to basic improvements in the data.

d. Geographic allocations

An important object of this study was to determine whether the discrepancies were associated disproportionately with particular countries or areas, resulting in serious errors in the appraisal of their external positions. Therefore, the Working Party has attempted, as far as possible at this time, to allocate its suggested adjustments to geographic areas. This can be carried out fairly well for the investment income accounts (see Annex Table III), but since there are large stocks of assets that cannot be allocated geographically (not to mention cross-border assets that are hidden and do not appear in <u>any</u> available statistics) it cannot be assumed that the result for any country or area represents a full tally of assets or income. Nevertheless, it seems reasonably firm that most of the missing income credits can be assigned to industrial countries, and lesser amounts to most other country groups. These modifications of the reported income data seem to imply only a moderate revision of the broad picture of the experience of the major country groupings--the industrial countries are shown to have considerably larger net investment incomes; the Middle East oil exporters also emerge with larger net incomes; and the other developing countries are shown as large net payors of income, though on a somewhat reduced scale.

Geographic allocations of the adjustments needed for the shipping accounts are less well established at this time. One element that seems clear is that there are sizeable missing net credits attributable to ship operators associated with Greece, Hong Kong, and Eastern Europe, and there may be a generalized understatement of receipts from ships' expenditures in port. There may also be a widespread overstatement of shipping costs, but this would be matched in principle by an understatement of merchandise imports on an f.o.b. basis in the over-all current account.

In the case of the excess of debits in the official transfer accounts, about one third can be traced to the lack of reporting by international institutions themselves, and to a few specific situations. However, it will require further analysis by the Fund, together with the OECD, to establish a firm basis for alocating the remaining discrepancy between donor and recipient countries. A tentative and illustrative set of allocations is shown in Annex Table IV and is discussed in Chapter IX.

e. Future prospects

The main causes that have contributed to the emergence and growth of a global discrepancy of current account balances of payments will still exist in the future. It is not likely that the enlarged flow of capital across national borders will be reduced, or that the trend toward integration of financial markets will not continue. Nor will the shipping or transfer account discrepancies decline if present statistical practices are unchanged. Therefore, national compilers and the Fund will continue to be confronted with the challenge to reconcile differences in reported balance of payments figures, even though there will be improvements as countries and the Fund effect the changes we recommend.

The chapters of this Report devoted to direct investment, portfolio investment, shipping and transportation, and official and private unrequited transfers include specific suggestions designed to fill some of the gaps that have been detected at the various stages of the study. Some of these recommendations are also intended to encourage a diversification of compiling and estimating methods with a view to achieving a more consistent and comprehensive coverage of cross-border flows. But in addition, the Report presents some suggestions which are wider in their scope and should contribute in the future to more effective analysis of international economic developments.

Major Recommendations

The Working Party believes that considerable progress could and should be made in reducing the discrepancies both at the level of global aggregation and at the level of the statistics prepared in individual countries.

It is also convinced that lasting improvements can only be accomplished if close cooperation and effective interchange of views and information are developed between the Fund and the national authorities responsible for preparation of the international accounts. Moreoever, senior policy makers must express their interest and their strong support for these recommendations if they are to have their intended effect.

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a. National statistical agencies, with the assistance of the Fund staff, should implement the specific suggestions for adjustments given in this Report, modifying them when necessary to meet individual circumstances, but aiming at overall international consistency.

b. The Fund should give a high priority to the furtherance of the improvements suggested in this Report. The Bureau of Statistics should prepare a plan of action to implement these recommendations in the period immediately ahead. Over the longer run consideration should be given to establishing a core of experts in the Bureau of Statistics providing for close attention to each of the types of international transactions that is important and for which the quality of the data shows a tendency to deteriorate. The Working Party recommends enlisting the support of experienced national compilers, including either general meetings of experts or more limited consultations with specialists in such fields as shipping or financial innovation, as a continuing reference point for questions that arise in the field of balance of payments accounting.

c. With respect to direct investment income, the Working Party urges countries with inadequate data on either reinvested or distributed earnings to initiate direct inquiries to the parent companies and their affiliates. Countries should coordinate their work in this area, including the publication (or exchange) of as much country detail as possible to facilitate bilateral comparisons. The Fund should support such collaborative efforts by assisting in the exchange of data and the design of statistical inquiries.

d. With respect to portfolio income, national compilers should take advantage of all the information available on the cross-border assets and liabilities of their residents, especially the comprehensive International Banking Statistics compiled by the BIS and the Fund and published regularly by the Fund. Those institutions should continue to improve and broaden these statistics, including further efforts to obtain more complete geographical allocations of banking positions. Efforts should continue to obtain better information on cross-border holdings of securities, and to compile statements of international investment positions to complement the flow data in the balance of payments accounts.

e. With respect to the shipping and other transportation accounts, the Fund should actively pursue the suggestions for closing the gaps given in this Report, including the collection of relevant statistics for that industry and intensive consultations with countries whose shipping accounts are either missing entirely or appear to be inadequate.

f. National compilers should be encouraged by their authorities and by the Fund to use flexible statistical estimating processes where it is shown that the results of present data gathering and reporting techniques are not credible. This applies particularly to data collection limited to officially authorized external transactions. Where necessary, statistical offices should be provided with explicit official support to impress on transactors the importance of providing essential information.

g. Preparation of the balance of payments accounts should be done in close coordination with all the national agencies, including central banks, that can contribute either relevant data or analytical support. Data collection and analytical work should be done in a mutually supportive manner.

h. The Balance of Payments Manual of the Fund is the cornerstone of the established accounting principles in this field. In the view of the Working Party it is now time to review and update the current 1977 edition, having in mind the need to simplify wherever possible and to give greater priority to the practical application of the principles. Also, the Fund should examine critically the process by which national statistics are supplied to the Fund and recast into global aggregates. Many changes have occurred since these data flows were started, and many countries still provide inadequate data that nevertheless enter into the published record.

i. The OECD and the Fund should seek to coordinate their work on official unrequited transfers and should draw on the survey by the Working Party to help reduce inconsistencies and discrepancies. Countries should also be asked to achieve greater consistency in reporting on these transactions to these institutions.

j. The Research Department of the Fund, in collaboration with the OECD, should evaluate the results of the Working Party, and consider how best to use these results in revised statistical summations and analyses of world international transactions.

Table I. Selected Balances of World 1/ Current Account Transactions

(In billions of 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 Statistics 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.

Table II. Adjustment of Reported Investment Income Data, 1983

(In billions of U.S. dollars)

	Total	Reinvested Earnings	Other Direct Investment Income	Portfolio Investment Income
As reported by IMF 1/	-33.6	+9.9	-11.5	-32.0
Adjustments as compiled by the Working Party	30.9	-10.4	5.4	32.7
Income, after adjustment	-2.7	-0.5	-6.2	0.7

1/ As reported in the Balance of Payments Statistics Yearbook for 1985.

Table III. Geographic Adjustment of Investment Income, 1/ 1983

(In billions of U.S. dollars)

	As Reported	Adjustments	Adjusted Data
Industrial countries	-1.7	+18.3	16.6
Middle Eastern oil exporters	18.5	+6.0	24.5
MOB 2/ centers	0.4	+2.3	2.7
Other developing countries	-60.6	+6.2	-54.4
Eastern European countries	--	-3.7	-3.7
International organizations	--	+3.1	3.1
Unallocable by country	--	+5.9	5.9
Total	-43.5	+38.1	-5.4

1/ Includes "other" direct investment income and portfolio income, but excludes an allocation of the adjustment for omitted direct investment reinvested earnings. The latter adjustment, for any given country or area, would also automatically require an equal offsetting entry in the capital account, with no net effect on the over-all balance of payments.

2/ Major offshore banking centers (Hong Kong, Singapore, Bahrain, The Bahamas, the Cayman Islands, the Netherlands Antilles, and Panama).

Table IV. Adjusted Current Account Balances, by Country Groups, 1983

(In billions of U.S. dollars)

	Current Account Balance as Reported 1/	Indicated Adjust-ments 2/	Adjusted Balances
Industrial countries	-18.5	+14.0	-4.5
Developing countries	-56.6	+31.2	-25.4
Major offshore financial centers	-0.9	+2.9	2.0
Middle East oil exporters	-13.3	+11.5	-1.8
Other developing countries	-42.5	+16.8	-25.7
Eastern Europe	(3)	-2.9	-2.9
International organizations	(3)	+3.1	3.1
Unallocated	--	+12.6	12.6
Total	-75.1	+58.1	-17.0

1/ IMF Balance of Payments Statistics Yearbook, Part 2, 1985.
2/ See Table 78, Chapter IX. Adjustments cover only selected current account sectors.
3/ Not included in Yearbook data; adjusted balances reflect only indicated adjustments.

Table V. Main Sectors of World Balance of Payments Accounts

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

	Cumulated 1964-76	Cumulated 1977-83 2/
Current account 1/	-38	-407
of which: investment income 1/	...	(-170)
Capital movements (including reserve transactions) 1/	34	297
Errors and omissions	4	111

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 because they are recorded only partially and introduce an arbitrary net credit entry in the income accounts (with an

Chapter I. Introduction and Principal Findings

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1. Origins of study

The Working Party on the Statistical Discrepancy in World Balance of Payments Accounts (hereafter 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 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 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 somewhat lower 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, 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 IMF 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 IMF, on August 1, 1984, adopted a recommendation to establish a Working Party, and Terms of Reference were drawn up (Annex 1). The membership of the Working Party (Annex 2) 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, a small Technical Staff was organized, located in Washington and attached to the Research Department of the IMF. The Technical Staff was assisted in its task by the staff of the Bureau of Statistics (STA) of the IMF, as well as the Research Department. Moreover, the staff of the OECD contributed substantially to several aspects of the research, the Statistical Office of the European Communities supplied useful statistics on intra-EEC 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 has 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 has involved a consideration of the role of offshore financial centers and of newly-developed financial instruments in reducing the

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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 Statistics 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, and some economies are not included in the statistics on certain service transactions.

Table 2. Current Account Regional Balances

(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: IMF, Balance of Payments Statistics Yearbook, Part 2, 1985.

ability of individual creditor and debtor countries to account accurately for international flows of capital and the associated income streams. Also, the Technical Staff has initiated studies of two other sectors of the current account that display 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 not tended to grow since then, unlike the rapid rise of the income discrepancy. Of the other items in the table the discrepancy on "other official transactions" has also been quite large in recent years, but a limited review of this sector by the Technical Staff suggests the problem may be localized to a few countries and might 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 for such misjudgements 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 analysis, began to suffer some loss of 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 recur 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 or 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 F). 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 publications. As mentioned above, these implications would be particularly disturbing if a large part of the discrepancy was 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 with respect 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, not only with respect to balance of payments variables, but also with respect 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 matters. Since 1979, the discrepancy has fluctuated on average by some $28 billion annually (Table 1), which corresponds to almost one fourth of 1 percent of world 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 year-ahead world growth projections 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. Reflecting the limited knowledge of 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 develoments in world output. In this connection, it is interesting to note that the severe world recession in 1980-82 coincided with a particularly sharp widening of the discrepancy, from -$19 billion in 1979 to -$114 billion in 1982. This implies that about $95 billion of income growth had not been accounted for over this period in countries' national accounts statistics, suggesting that the severity of that recession may have been somewhat overstated according to the statistical evidence available. 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 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 in practice are 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 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 situaitons. One of the major findings of the Working Party is that both the assets and investment income of indebted countries are significantly under-recorded. These omissions from the record, while unlikely to be of serious consequence to assessments in crisis situations, are likely to prejudice assessments in a longer time frame. In particular, the opportunity costs attaching to policies that engender capital flight tend to become underestimated; and the contrast in the recorded performance of countries following policies conducive to retaining domestic saving and investment becomes muted relative to those that do not.

In summary, from the point of view of 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 to improve 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 only to those cases where for a given transaction the two countries involved assign different values, including the omission of the transaction 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, e.g., 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 case does not contribute to the global current account discrepancy, unless one of the countries concerned identifies the transaction as belonging 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

Table 3. 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 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.

systematic statistical bias related to these developments as such. However, they 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: (a) financial markets have become more closely integrated and restraints on the free movement of funds have been loosened; (b) the stock of cross-border assets and liabilities has expanded enormously, and there is a built-in bias for such stocks to be more easily recognized by the debtor rather than the creditor countries; (c) political and economic tensions have encouraged the concealment of foreign assets from authorities in home countries; and (d) 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.

While this background helps to understand the origins of the growing income discrepancies, it does not 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.

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 would 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 it was 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 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.

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 IMF	+11.8	+9.9
After adjustment	-1.6	-0.5
Other direct investment income		
As reported by IMF	0.1	-11.5
After adjustment	0.0	-6.2
Other investment income		
As reported by IMF	-7.3	-32.0
After adjustment	+0.2	+0.7
Total investment income		
As reported by IMF	+4.6	-33.6
After adjustment	-1.4	-6.0

Source: Reported data as in the Balance of Payments Statistical Yearbook for 1985; adjustments as compiled by the Working Party.

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 the 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 and 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 non-direct 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 geographic data on flows available in the accounts of some countries, and based on the matrices of banks' assets and liabilities that underly the banking data issued by the

Fund and the Bank for International Settlements (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 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 as 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, and for the international organizations themselves (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 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 has been made of the banking data published by the Fund, together with similar data issued by the BIS, and, especially for developing countries, of the data on debts assembled by the OECD and the IBRD. 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 non-reporting of debits by Eastern European countries--is unallocated or spread among other groups. At the risk of being repetitious, it must be kept in mind 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 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 at all to the Fund, and in such cases it would fall 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. In the first place, even countries that have the most extensive and detailed reporting systems for capturing data on individual international transactions (Germany and the Netherlands would be examples) find it necessary to supplement such systems with surveys or with estimates to fill the almost inevitable gaps in reporting systems. The second consideration is that the creation of elaborate reporting systems to gather information on income from abroad which the owners wish to conceal would not only be extremely expensive and burdensome--but would also be condemned to fail almost by definition.

It is a major conclusion of this report, therefore, 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 of 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 has been 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 so-called "offshore" financial centers creates a new situation causing additional statistical problems requiring special measures. Similarly, the question is whether the newer financial instruments introduce new problems or merely exacerbate 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 they 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 non-resident. 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 in 1983--the year on which the Working Party concentrated its work--to bring the major offshore centers into the standard accounting framework.

Table 5. MOB Centers' Investment Income Flows (Net)

(In billions of U.S. dollars)

	Portfolio Investment Income	Direct Investment Income	Total
Reported in BOP Yearbook	+0.6	-0.1	+0.5
Adjustments	+6.0	-5.9	+0.1
Estimated actual flows	+6.6	-6.0	+0.6

Since the Fund's Balance of Payments Manual was last prepared over 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 non-banking enterprises, where collection of information by the local authorities is essential to close a sizable gap in the available data.

As 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 activity involving these instruments. Such information may not translate directly into balance of payments categories, but it may provide guidelines helpful in overall analysis and evaluation of reported capital flows.

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 (see 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 not provided in the balance of payments accounts, but 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 may even have been somewhat over-estimated 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 short-fall in the reporting of ships' freight earnings appears to be associated with ship operators whose residence, for balance of payments reporting, would be countries that do not report such earnings to the Fund--especially Greece, Hong Kong, and countries of Eastern Europe. Other possible sources of under-reporting 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 (expenditures in home ports of resident-operated ships do not enter 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 already 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 Bureau of Statistics, a collaborative effort with the compilers in major maritime countries, and probably regular contact 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 sizeable discrepancy in the official transfers account (see 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 this Report contains the results of these activities.

Several factors could be identified that caused large discrepancies; 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 (-$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 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, where 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 not affecting the overall current account.

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 Manual 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 over-all 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 with relatively straightforward adjustments, the use of data prepared outside their own national statistical systems, and, where necessary, a modicum of additional resources. Detailed recommendations for action by national authorities, and by the Fund, are given in the separate chapters of this Report and are brought together in Chapter X.

The Working Party would stress that most of its recommendations for improving national statistics could be implemented promptly, and urges national authorities to give this effort a high priority. On the whole, the Working Party believes that 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 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 re-invigorated and brought together in 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 the 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 annual Balance of Payments Statistics, which is the primary vehicle for bringing together national balance of payments accounts into a systematic record of international developments in the world as a whole. This change of focus will call for better coordination among several departments of the Fund, and will certainly require greater flexibility in producing composite statistics.

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 the balance of payments statistics in forming judgements about progress in the world economy. That responsiblility 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 balance 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 addition to foreign portfolios may be recorded even though the income is not. The essential point is that the investment, and the income, are not 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 is potentially. Here, 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 the operators of ships is the basis for the geographical 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 judgement 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-focussed follow-up actions by national compilers and the Fund staff.

Addendum to Chapter I

Revised World Current Account Balances as Published in the 1986 Edition of the Balance of Payments Statistics Yearbook, Part 2

The 1986 edition of the Yearbook contains revised data for the years 1979-83, the period on which this Report is focussed, and also shows revised 1984 data and a newly-compiled set of data for 1985. When time permits the STA will presumably review the nature of the changes in the data published for 1983 and 1984, some of which may reflect reactions to the results 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 between 1984 and 1985--from -$85.7 billion to -$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" (-$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 East 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 is any inconsistency in the year-to-year reported changes in these figures. Similarly, a considerable part of the reduction in the shipment discrepancy results from a reduction in debits reported by one country, but this may be consistent with a reduction in imports. There is also a sizable jump in other transportation credits for the Middle East in the published totals that may turn out to be arbitrary.

A noteworthy feature of the year-to-year change in the discrepancy was further increase in the negative discrepancy in the portfolio income account--to a total of -$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.

Table 6. Selected Balances of World Current Account Transactions, Revised and Updated

(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
Memo: Service balance as a percent of service payments	4.5	6.4	9.0	10.5	9.4	10.5	7.5

Source: Balance of Payments Statistics Yearbook, Part 2, 1986.

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, and some economies are not included in the statistics on certain service transactions.

Chapter II. Balance of Payments Compilation Systems and Methods

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1. Principles and problems of statistical compilation

To a considerable degree the existence of large discrepancies in world aggregates of current account transactions, and in many national balance of payments statements, is the result of the great and growing diversity and complexity of international economic relationships. Essentially a country's balance of payments account should be a detailed record of all the transactions in a given period between residents of that country and non-residents. The broad principles and definitions to be employed by all members of the Fund are set forth in the Fund's Balance of Payments Manual, and the Fund staff regularly collects and publishes national statements, and aggregations of national statements, based on those principles (see Statistical Appendix A). Of course, strict conformity with these principles and definitions is not always possible, and interpretations differ, leading to some differences in the way countries report the same transaction. However, practical obstacles and difficulties in compiling the comprehensive information needed to produce the accounts, and the lack of adequate reports from some countries on some types of transactions, are far more important sources of actual gaps and discrepancies in the accounts--the main focus of the Working Party.

Compilers of the international accounts are not in command of a unified and internally consistent set of accounting data--as is the case for any business concern. Instead, compilers use a variety of unrelated sources (for instance, merchandise trade from customs documents, freight charges from reports by shipping organizations, and resulting changes in international bank accounts either from banks' balance sheets or from transactions records compiled by banks or others). The main types of data collection systems are discussed below. They rely on reports based on individual exchange transactions from banks or the transactors themselves, on reports from transactors that give results over a period rather than attempting to identify and measure each transaction, or from some combination of those methods. Such methods must be supplemented in nearly all cases by estimates for missing elements. It is clear from this study that there is no one method that is best for all purposes, and even the most comprehensive statistical systems must be supplemented by the imaginative use of estimates and collateral data from many sources.

Some of the adjustments to the reported data shown in detail in other chapters are intended to correct asymmetries. They simply involve transpositions between different components of the current account (e.g., between direct investment income and "other" income), and do not affect the over-all world current account discrepancy. It will be seen, however, that the larger part of the significant adjustments, which are aimed at eliminating discrepancies as such, reflect failures of the compilation procedures used. Among these the most important are:

(a) The complete omission by many countries of transactions that are not caught in a system based on currency exchange or payment records, especially income earned abroad by direct investments that is not remitted as dividends to the country of the investor. Virtually the only possibility of obtaining data on the undistributed profits of direct investments is to get it directly from the firms involved.

(b) Similarly, the exchange or payment record does not capture unremitted income on cross-border bank accounts or securities, and reliance on other types of reports submitted by the asset holders themselves is likely to be ineffective. In this case the compilers' principal recourse is to make use of all available data on the stocks of such cross-border assets (or liabilities) to create estimates of income credits or debits. There are many other types of transactions between residents and others that are not settled by a payment or an exchange transaction recorded in the country of the compiler. This is certainly the case, for instance, when a country's ship owners or operators conduct most of their business abroad. In such cases, any exchange records must be supplemented by information supplied by the resident ship operators, or by shipping agents.

(c) From the point of view of world aggregations, there is also a gap when some countries or economies do not prepare or publish balance of payments accounts, or compile inadequate accounts. This gap is only partly filled by estimates by the Fund staff, so that the potential for omissions or errors is considerable.

In the course of conducting this study the Working Party has had to deal with each of these major deficiencies in compilation procedures. It turned out to be possible to adopt methods that could be used either to close the gaps, or to point the way for further work that has a reasonable chance of reducing future gaps. These methods can also be adopted by national compilers, but they are not substitutes for improvements in basic statistical programs where existing statistics are clearly deficient.

2. Residuals in national and global balance of payments accounts

The assignment of the Working Party to examine the discrepancies in the global current account should be sharply differentiated from the problem of the residual or "errors and omissions" item in national balance of payments statements. Residuals in national statements reflect the compilation difficulties mentioned above; the national compilers are either omitting some transaction by residents, or are not obtaining matching data for the two sides of each transaction, as is implicit in the double-entry bookkeeping system. Consequently, when the totals of a country's international credits and debits do not net out to zero, as they should, it is not possible to determine with any certainty whether the error is in the compilation of the current or capital transactions, or whether the residual, which is a net result, reflects a set of large or small gross errors or omissions. In practice it is extremely difficult to trace the sources or nature of the residual in national statements simply by an analysis of the data as given, though sometimes the surrounding circumstances give some clues as to the most likely type of omission or error.

In a sense the task of the Working Party is more straightforward. Each payment for goods and services by one country should have a counterpart in the receipts of another country, so that when aggregated over all countries the individual components of the current account, as well as the total, should balance out to zero. There is always some possibility that what appears in one country to be a current transaction will appear to the partner country or countries to be a capital account transaction, but the scope for such transpositions is not large relative to the size of the over-all current account discrepancy. Thus, the Working Party was able to concentrate on the causes for particular kinds of current account transactions to be out of balance, or to be recorded in different current account categories. Even when concentrating on the current account, however, it is not possible to escape from the problems of obtaining accurate data on international capital flows or stocks of assets. Filling the gaps in the international income accounts depends crucially on being able to establish reasonable levels of cross-border assets and liabilities, and this, in turn, depends in large part on being able to measure resident-nonresident capital transactions. As noted in Chapter I, however, this procedure is less useful for direct investments.

To some extent, therefore, the problems of national and global residuals are intertwined, and further study of the nature and causes of the global current account discrepancy may also help to identify the character of national residuals, at least in broad terms, and vice versa. However, the distinguishing characteristic of the global discrepancies is that they result from inconsistencies in the amounts actually reported by different countries for the same transaction--either party or both parties reporting incorrectly, or one not reporting at all. Consequently, the problem of establishing consistency in reporting across countries is different from, but related to, the problem of compiling consistent accounts for a single country.

3. Principal types of compilation systems

Each country has evolved over time a method of collecting and aggregating data on its international transactions that reflects its institutions, capabilities, and interests. In nearly all cases, the basic statistical framework which organizes these data is compatible with the list of standard components recommended by the Fund, though with many variations. However, compilation methods and the quality of the results vary considerably from country to country.

Two main types of data collection methods can be distinguished, on the basis of the sources of the data. One type is based on the reporting of the data by intermediaries; the most important example is the use of the exchange transactions data typically compiled from the records maintained by commercial banks. The second type is based on the reporting of the data by the transactors themselves, in the form of either reports of individual transactions or reports summarizing groups of transactions over time.

In almost all cases, the collection of raw data is only part of the process through which entries are finally made into the international accounts. In many cases estimation procedures must be developed, drawing on statistics collected for the balance of payments, statistics collected for other purposes, or statistics compiled in other countries or by international institutions. The results of the compilations and of the estimating procedures have to be verified wherever possible by checking with other information available within the country, or sometimes with information available in partner countries.

An important consideration in all these systems is the extent to which the office responsible for preparation of the accounts has authority to obtain essential information from residents carrying out transactions with non-residents. Such authority can range from an absolute requirement for reporting transactions under an exchange control regime to a purely voluntary system of questionnaire surveys. Closely related to the question of authority is the question of the burden and expense of obtaining this information, involving both the statistical offices using the data and the public that supplies the information.

While some countries rely on a single source for basic data on investment income, such as the records derived from an exchange control system, most countries find it necessary to use a variety of methods to cover this increasingly elusive international sector of their economies. Indeed, the hallmark of an effective data gathering system is flexibility and adaptability to the types of transactions involved and to changing circumstances. In this section we are mainly concerned with the procedures used to collect data and to prepare estimates related to international investment income. To a considerable extent these procedures are linked to those used in obtaining information on international capital flows. We do not consider the problems connected with sectors of the international accounts, especially merchandise trade, which were outside the terms of reference of the Working Party. However, problems of the statistics used in the transportation and unrequited transfer accounts are discussed in Chapters VII and VIII.

a. Data systems based on reports from intermediaries

In these systems the data are provided to the balance of payments compilers by intermediaries rather than by the transactors. The most widely used example is the exchange record system, in which the intermediary is most often the resident banking system, which administers the exchange control. In some countries other forms of reporting by intermediaries exist: for example, in the United States, there is reporting by banks of foreign assets and liabilities held on behalf of their domestic customers, and reporting by securities firms of transactions in long-term securities with non-residents which they undertake on behalf of their domestic and foreign customers. Data systems based on reports by intermediaries utilize the unique position of the intermediary as the possessor of comprehensive information on the relevant international transactions or positions, which under existing conditions could not be obtained or would be very difficult to obtain in any other way--e.g., because the transactors are widely dispersed, are very numerous, or would have difficulty in providing the data. Under some conditions the use of intermediary reporting has considerable advantages. The importance and widespread use of exchange record systems makes it useful to discuss these systems in some detail.

The exchange record system of compiling balance of payments data is widely used by countries which have, or have had, some form of exchange control. During all or part of the period since the establishment of the Fund, many countries have maintained systems of exchange controls with varying degrees of comprehensiveness and severity. Such systems have been viewed as a ready source of presumably consistent data for the balance of payments accounts, and are usually based on sufficiently strong authority to assure a substantial degree of compliance. For some countries and under some conditions the exchange record may be the most effective means of obtaining the necessary data. In principle, such records should contain information on virtually all of a country's international transactions that are required to be settled through the control mechanism. However, even the more comprehensive exchange control systems do not purport to cover all of the international transactions of a country, and in some cases the information collected is based on permits granted, which may not correspond, either in timing or amount, to actual transactions.

There are substantial difficulties with reliance on bank-reported exchange transactions. The major problem is the amount of international business conducted without the use of exchange conversions through resident banks. For example, multinational corporations can easily retain earnings abroad and can readily finance their operations by borrowing abroad via foreign subsidiaries and moving funds through the network of intercompany accounts. Similarly, individuals who have accumulated investments abroad can retain or spend the earnings abroad thereafter, without any exchange transaction being recorded. The exchange record system puts a heavy reporting burden on the banks, which must record and tabulate a very large volume of foreign exchange transactions. The burden is considerably increased for banks with many resident branches. There is also a substantial difficulty for banks in creating records consistent with balance of payments criteria; for example, the basis of residence for balance of payments purposes may differ from the address records required for the bank's own purposes, and distinctions required between loans and securities and between short-term and long-term items may require breakdowns in records beyond what is needed for banking purposes. Moreover, where exchange controls are being liberalized or dismantled, it is very likely that the statistics based on these systems will deteriorate in quality and coverage. Finally, wherever there are systems of this kind they may create incentives for transactors to conceal their operations, and this too can lead to large gaps in the statistical record. Concealment, whether deliberate or not, is now widespread because of the use of offshore financial centers and innovative financial instruments.

Data derived from the exchange record are still a part of the balance of payments reporting systems of a number of industrial countries, but some of these countries are adapting their systems to decrease or eliminate their reliance on the exchange record, in line with the elimination of all or part of the exchange controls themselves. The exchange record remains a significant source of data in many developing countries. About 30 percent of the total private portfolio investment income credits and 45 percent of the debits reported on the Investment Income Questionnaire are related to exchange record systems.

b. <u>Data systems based on reports from transactors</u>

Data collection systems based on reports from the individuals, business enterprises or other economic entities involved in transactions with non-residents, rather than on reports from intermediaries, take a variety of forms. In some cases--Germany is the most prominent example--the reports cover mainly separate transactions, which are coded and tabulated by the balance of payments compilers. In other cases the transactors report periodically the summary results of their transactions with nonresidents on prescribed statistical forms.

In transactor reporting systems, the reports can cover transactions that do not require bank settlements, such as reinvested earnings and intercompany account transactions of direct investment enterprises, as well as financial or other transactions effected through non-resident intermediaries. These systems can therefore provide much more complete coverage of some types of external transactions than are captured by exchange record systems, but the problem is to locate and obtain reports from the relevant transactors.

Systems based on individual transaction reports typically evolve from exchange record systems, in cases where exchange controls have been eliminated. However, reports from individual transactors may also be used, on a sampling basis, to obtain data (such as average daily expenditures by tourists) that can be used in conjunction with other data to produce estimates of some elements in the international accounts.

In one common type of system the business enterprises or other transactors report periodically the results of their transactions with nonresidents on statistical forms prescribed by the balance of payments compilers. These forms can include (as in the United States system) annual or quarterly surveys of direct investment enterprises, providing balance sheet and income statement information; monthly or quarterly statements of bank and nonbank asset and liability positions vis-à-vis nonresidents; and monthly statements (by financial intermediaries) of transactions with nonresidents in portfolio securities. In this type of system the enterprises conducting the transactions are asked to summarize and tabulate the results of individual transactions with nonresidents, so that the balance of payments compilers deal only with the summary statistical reports. In general, the statistical reports are designed to conform with the normal accounting statements of business enterprises, or with the records normally maintained by banks for their own purposes. However, there often are major difficulties in conforming to balance of payments definitions and in obtaining consistency between the reports of different types of enterprises. The accounts of business enterprises may use different definitions than the balance of payments accounts, and business accounting years may differ from the calendar years preferred for the balance of payments. Similarly, some types of enterprises may account for their transactions in unique ways--an example would be the insurance industry.

As noted in the following section, questionnaire surveys on a regular schedule are employed by many industrial and by some developing countries to obtain information from multinational corporations on their direct investments. In addition, they are widely used to obtain data on other international service transactions, such as shipping and transportation, fees and royalties, institutional remittances, engineering and construction fees, etc. An advantage of surveys is that they can be limited to samples, or to the relatively small number of major participants in a particular type of international transaction, and can be tailored to specific types of transactions. To supplement sample surveys there may be occasional more complete surveys, or recourse to other sources, to develop universe estimates.

While the use of periodic questionnaires to collect data on international investment income seems to be superior for covering direct investment income, it is not likely to be effective for other interest or dividend credits or debits. This is partly because the number of potential reporters is very large and they are difficult to locate, and partly because, even if they were all identified, it would be very difficult to obtain accurate and timely reporting. Under the best of circumstances the collection of data on such income is unlikely to be fully comprehensive, and the collection systems usually have to be supplemented with an estimating technique of some kind.

National compilers also draw on administrative records, such as tax records, the accounts of official agencies, or records obtained by regulatory bodies for other purposes. The difficulty often encountered is that the important definitional concepts of the balance of payments accounts, especially the question of residence, do not fit easily into many of these administrative records.

c. Estimation procedures

As noted above, many or perhaps all countries find it necessary to estimate some of their balance of payments figures, as well as to collect basic data through various forms of reporting arrangements. Estimation procedures have a place in virtually all segments of the balance of payments accounts. They are employed whenever the results of data collection systems are considered to fall seriously short of providing reasonably complete figures for a given category of data, or where no feasible basis exists for direct reporting of the data required. Often, the data collected may be from a sample which provides the basis for estimates of the universe being measured; the travel accounts are typically based on such an estimating process. Another example would be the situation covered in Chapter V where data on asset stocks may be available but no comparable data for income is available except by an estimation process using information on rates of return. As a practical matter, many countries which have advanced data collection systems rely on estimation for some parts of their balance of payments data; and some countries of necessity make very substantial use of estimating techniques.

Estimates are used for a wide range of items in both the current and capital accounts, including travel and tourist expenditure and portfolio investment income. It is more difficult to rely on estimates to derive capital flows, since they are much more volatile, but where figures on asset and liability stocks are available, as in the case of banking positions, they can be used to derive both income and capital flows. Valid estimating techniques are often based on data generated by a country's own data collection systems and other internal information. However, where such domestic information is unavailable or inadequate, data from external sources, such as data provided by partner countries in direct investment situations, and data generated by international organizations, can sometimes be very helpful. The international banking data published by the BIS and the Fund, and the external debt data published by the OECD, are important examples of the latter.

It is important that balance of payments compilers exercise ingenuity in their use of estimating techniques, and that they utilize external sources of relevant information as well as information produced by their own data collection systems. Often reference to external sources can serve as a check on national data.

4. Compilation systems in use

The systems actually used by countries in the compilation of their balance of payments statistics have been shaped by each country's particular circumstances. It is beyond the scope of this report to discuss entire balance of payments systems, but a number of systems are described in detail in documents published by the countries, and the systems of several European countries are described in publications of Eurostat. However, a rather comprehensive picture of data systems used for the compilation of the investment income accounts can be presented on the basis of the Special Investment Income Questionnaire employed by the Working Party for the present study. (A copy of the questionnaire is in Appendix B.)

The Special Investment Income Questionnaire contained a check-list of the types of data sources used by the respondent countries for their data on direct investment income and private portfolio investment income in 1983, and also asked for a detailed description of the origins of each of the income items reported on the questionnaire. The range of sources used is indicated in Table 7, which is based on the responses to the questionnaire, though the results can not be precise because many systems are composites. Most countries still depend heavily on reporting by resident banks, though it is not clear in some cases whether the banks report only for their own account or for both themselves and their customers. It is also shown that data on direct investment income is often obtained by questionnaires, but that this method is used less widely to obtain information on portfolio investment income.

The relative quantitative importance of the sources of the data reported by the countries which provided data on the questionnaire is shown in Table 8. Data for the 17 countries which indicated more than one source for data reported on the Special Questionnaire are shown in the first four columns of the table as derived from "multiple sources." The last four columns contain an estimated distribution of the "multiple source" totals to the basic sources of the data for 9 of the 17 countries, based on additional information provided by several of the countries and on staff estimates for others where a basis for estimation could be found.

It should be noted that the Special Investment Income Questionnaire was directed toward countries which provide the overwhelming bulk of the balance of payments data reported to the Fund. The coverage of that questionnaire is shown in Appendix B. The total amount of all forms of 1983 investment income, official and private, reported by questionnaire respondents constituted 90 percent of the credits and 91 percent of the debits for all countries in the Fund's Balance of Payments Statistics Yearbook for 1985.

The check-list on data systems used in the questionnaire was not structured in terms of the distinction between exchange record systems and transactions systems; the information provided is based on the means of calculating the investment income accounts rather than on the basis of the principles of the data collection. In Table 8, the category "Reports from (resident) banks" probably comes closest to representing the systems based on exchange transaction types of recording, but there are cases where the bank is merely providing information on its own operations. As shown in the table, countries relying on reporting by resident banks accounted for only a very small part of direct investment income (4 percent of credits and 7 percent of debits, including an estimate for the share of bank reporting in composite systems). However, reporting via resident banks was the most important source for data on other private investment income. Including an estimate for the share of bank reporting in composite systems, information obtained via resident banks accounted for over half of both credits and debits.

Information on direct investment income was obtained primarily by the use of questionnaires--86 percent of credits and 60 percent of debits, including an estimate for questionnaire reporting in composite systems.

Table 7. Basic Data Sources of Private Investment Income Reported, by Country and Type of Income, 1983

	Direct Investment Income			Other Private Investment Income			
	Question-naires to Enterprises	Reports from Banks	Other Sources	Reports from Nonbank Holders	Reports from Banks	Estimates based on Stocks and Yields	Other Sources
Argentina		X	X 1/	X 1/	X		
Australia	X			X 1/		X 2/	
Austria		X			X		
Belgium/Lux.		X			X		
Brazil			X				X
Canada	X	X 2/		X	X	X	
Chile		X			X		
Colombia			X				X
Denmark	X				X		
Egypt		X			X		
Finland		X			X		
France		X			X		
Germany	X		X	X	X	X 2/	
Hungary		X			X		
India		X			X		
Indonesia			X		X		X
Iran					X		
Israel	X 1/	X	X 1/	X 1/	X		
Italy		X			X		
Japan			X				X
Korea		X			X		
Kuwait	X	X			X	X	
Malaysia	X						
Mexico	X			X	X	X	
Netherlands	X	X	X	X	X		
New Zealand	X			X	X		
Nigeria	X	X 1/			X 1/		
Norway	X			X			
Panama	X		X 2/		X		
Peru	X 1/		X 1/			X	
Philippines		X			X 2/		X 1/
Portugal		X	X 1/		X		
Singapore	X	X		X	X		
South Africa	X	X		X	X		X
Spain		X			X		
Sweden			X				X
Switzerland	X					X	
Thailand		X		X	X		
Turkey		X			X		
United Kingdom	X			X 2/	X	X	X 1/
United States	X					X	
Venezuela			X 1/			X 2/	
No. of countries reporting data sources (total 42)	19	23	13	13	31	10	8

Source: Special Questionnaire on International Investment Income.

1/ Debits only.
2/ Credits only.
3/ Six countries which responded to the questionnaire did not provide information on data sources, and reported negligible amounts of investment income for 1983.

Table 8. Amounts of Investment Income Reported, by Source of Data, 1983

(In billions of U.S. dollars)

Data Sources Utilized	As Reported on Questionnaire				After Distribution of Multiple Sources Data 1/			
	Credits		Debits		Credits		Debits	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Direct investment income:								
Questionnaire to enterprises involved	32.4	78	20.6	58	35.7	86	21.2	60
Reports from banks	0.9	2	1.4	4	1.6	4	2.4	7
Other sources	2.4	6	5.5	16	4.1	10	8.4	24
Multiple sources	5.9	14	7.7	22	0.2	1	3.2	9
Total 2/	41.7	100	35.2	100	41.7	100	35.2	100
Other private investment income:								
Reports from nonbank holders of assets or liabilities	0.7	--	4.3	2	7.9	4	15.4	8
Reports from banks	44.7	23	55.0	27	102.7	52	114.8	56
Estimates based on stocks and yields	61.6	31	33.8	16	74.4	37	45.6	22
Other sources	10.4	5	21.3	10	10.7	5	23.4	11
Multiple sources	79.0	40	88.6	43	0.5	—	3.8	2
Unspecified	2.5	1	2.8	1	2.5	1	2.8	1
Total	198.8	100	205.8	100	198.8	100	205.8	100

Source: Special Questionnaire on International Investment Income, and estimates provided by selected participating countries.

1/ Incorporates estimated distribution to individual data sources of amounts initially reported by nine countries as derived from multiple sources.
2/ Includes unspecified credits of less than $50 million.

The technique of using data on asset stocks and yields as the basis for estimates is unique to the investment income accounts, and was quite important but somewhat one-sided, covering about 37 percent of the credits but only 22 percent of the debits (including an estimate for this data source in composite data systems). Of course, these figures reflect only the amounts reported on the Special Questionnaire--in Chapter V it is made clear that a major deficiency of balance of payments compilation practices is the failure to account adequately for income earned by resident nonbanks on cross-border deposits.

5. The role of the IMF in balance of payments statistics

The Fund has a central role in the compilation and analysis of world balance of payments statistics. Article VIII of the Articles of Agreement requires Fund members to furnish balance of payments information to the Fund, and requires the Fund, in requesting data, to take into account the varying ability of members to provide the data. Article VIII also requires the Fund to act as a center for the collection and exchange of information on monetary and financial problems. 1/ In agreement with the United Nations, the Fund assumed responsibility for carrying forward the compilation of balance of payments statistics in standardized form (continuing the earlier work in this field by the League of Nations). In formulating its requests to members for balance of payments data, the Fund takes into account the needs of the United Nations and the international organizations associated with it. 2/ The Fund therefore has unique responsibilities in the development of adequate and consistent balance of payments statistics for the world community.

a. Conceptual framework

In its work in this field since 1948, the Fund has made substantial progress in developing a set of balance of payments concepts and in securing their adoption to a large degree by its member countries. A considerable effort has been made to train balance of payments compilers in the application of the concepts to the situations of their countries, and, to a lesser extent, to aid in applying certain techniques of data collection. New problems in these areas continue to emerge, however, and, continuous attention to changes in the economic environment is necessary for adequate implementation of the concepts and for the production of accurate balance of payments data consistent across countries.

The Fund's Balance of Payments *Manual* has been an important means of developing and promoting uniform balance of payments concepts. The first and second editions of the *Manual*, published in 1948 and 1950, were essentially basic guides for the reporting of balance of payments data to

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1/ International Monetary Fund, *Articles of Agreement*, Article VIII, Section 5.

2/ International Monetary Fund, *Balance of Payments Manual*, First Edition, January, 1948, p.1.

the Fund, presenting a set of tables for the classification and accumulation of the data. The third edition, published in 1961, went beyond definitions and descriptions of the categories to explain their rationale, and described the basic concepts and accounting principles underlying the balance of payments accounts; this edition became "as much an introduction to the principles of balance of payments accounting as a guide to reporting". 1/ The fourth edition of the Manual, published in 1977, continued the evolution and development of the document; it presented a more comprehensive discussion of balance of payments concepts and included for the first time a chapter on "analytic presentation" of the balance of payments, and a recommended list of standard components. However, this version tended to de-emphasize the need for a uniform structure of reporting essential data, while enlarging on issues of definitional consistency with the United Nations System of National Accounts (SNA).

To implement the requirements of the Manual the Fund's Bureau of Statistics (STA) carries on technical training activities in the field of balance of payments statistics through courses given in the Fund Institute, sends technical assistance missions to member countries, and conducts in-house training of country personnel assigned to STA. STA staff may also participate in the annual consultations or in other missions to member countries, and may meet with country representatives during the Annual Meetings of the Fund, when general statistical questions are important.

b. Publication and analysis of data

The Fund's work in developing the basis for consistent recording of international transactions has several important applications. First of all, each country can produce a set of accounts that is internally consistent and also tends to be consistent with the accounts maintained by other countries, at least in principle. This provides an important part of the macroeconomic information needed by each country to appraise the performance of its economy, and to conduct a meaningful dialogue with partner countries. Within the Fund itself, the international accounts of a country are an important tool in carrying out the round of country consultations that is an important part of the Fund's responsibilities.

A second major application of the Fund's work is to provide statistics on the balance of payments that can be aggregated across countries to provide a global and regional view of trends in the international economy. For this purpose, the uniformity of classification and procedure presented by the Manual is essential. The results of such aggregations are published regularly in detail by the Fund (see Appendix A for details). Other organizations prepare aggregations of international transactions that depend on the same basic accounting framework.

1/ IMF, Balance of Payments Manual, Third Edition, 1961, p. iii.

A third application, derived from the second, is the undertaking by the Research Department of studies on the world economy, leading to the publication by the Fund of regular analytical reports on the state of the world economy and its prospects--including an analysis of developments in world current account positions and in financial flows among countries. It is in this application--especially in the World Economic Outlook--that the emergence of a world discrepancy on current account became an important issue.

c. Problems of implementation

Although the Fund's efforts over the years to achieve comprehensiveness and accuracy in the production of data on international transactions have achieved considerable success, some of the problems remain unsolved. Without doubt the Fund has made great progress in designing and promoting uniform balance of payments concepts to be adopted by its members, despite some continuing important differences in country practices. The Manual and the educational efforts of the Fund have been important tools in producing this result. Nevertheless, the emergence and persistence of large discrepancies in the world accounts show that it has not always been possible to adjust to changing circumstances, and that there is still a great deal of work to be done in improving the accuracy and consistency of the underlying compilation processes employed by the member countries.

The recommendations in the concluding chapter of this Report reflect the urgency attached by the Working Party to the actions that must be initiated by the Fund if the compilation of balance of payments statistics is to be improved. These range from a review of the present version of the Fund's Manual and Statistics Yearbooks, to the production of statistics now omitted from the global aggregations and, most importantly, to an intensification of efforts to strengthen the statistical base at the country level. Over the longer run, the Fund must take the lead in keeping up with changes in the ways international trade and finance are conducted and modifying definitions and statistical practices accordingly. Moreover, this activity should continue to be done consistently with developments in the System of National Accounts.

The Working Party believes that a practical plan can be devised to deal with these problems, comprising a mix of actions on the part of national authorities and actions on the part of the Fund.

Chapter III. Research Strategy of Discrepancy Study

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1. General considerations

Since the most immediate assignment of the Working Party was to study the discrepancy in the investment income accounts, nearly all of the initial planning of the study was concerned with this category. Research into the origins and significance of the investment income account discrepancy proceeded on two general levels. On one level there was a need to study the ways in which changes in the economic and political environment over time might be affecting trends in real and financial international transactions, and possibly causing increasing difficulties for statistical measurement. At a second level, the concentration was on the details of the data available for specific transactions at particular times. The Working Party from the beginning wished to place the emergence of the discrepancy in the context of changes in the overall economic environment. Explanations were sought for the growth in the discrepancy in the reporting of international investment income.

As described in Chapter I, a global view of balance-of-payments accounting for the 1977-83 period showed, in addition to a cumulative reported deficit on current account, a cumulative surplus of recorded capital inflows over recorded capital outflows. Such a discrepancy did not exist for the 1964-76 period, when the global current account discrepancies were small. This broad perspective on the international accounts lends support to the view that countries are better able to record capital inflows than capital outflows, especially when capital flows become larger and more complicated. This tendency alone would generate a greater reported level of income paid than of income received, and this phenomenon seems to have become important at a time when a heightened international flow of capital occurred. This tendency for under-reporting of capital outflows has been reinforced since 1979 by the proliferation of offshore and other financial centers and the introduction of financial instruments that are more difficult to encompass in the existing statistical frameworks. Under these conditions, the compilation of international financial and income flows obviously becomes more difficult. However, the countries that receive cross-border financing via financial intermediaries most often remain able to collect information on these capital inflows, while the capital outflows are more erratically recorded by the authorities of the countries in which the capital exporters reside. One reason for this difference is that income payments, when identified, are generally not taxable to the payor, whereas receipts are subject to tax, so that owners of these assets have a greater stake in concealing their existence from the home country than from the host country. Moreover, capital exporters may extensively use free or illegal exchange markets, while the balance of payments accounts are frequently based mainly on transactions in the official market. Probably the bias toward more complete recording of income debits was also magnified after the mid-1970s by rising interest rates and expectations of growing tax burdens.

It has been suggested that some systematic biases in the accounting process might lead to discrepancies. For instance, 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 discrepancy that has appeared in the accounts. On examination, it could be shown that these were not important factors (except possibly for discrepancies in accounting for reinvested earnings). However, as exchange rates change radically it becomes increasingly difficult to separate income credits or debits from capital flows when assets are bought or sold, since the value often includes accrued interest. An important problem of this type is associated with the growing use of discounted or zero-coupon bonds.

Several analysts had also approached the over-all discrepancy from the point of view that some systematic tendency existed and might be overcome by applying a rule of thumb; for instance, that omissions of credits might be estimated as proportional to the amounts of credits that were in fact reported by different countries or areas. Such arbitrary procedures give results that eliminate discrepancies, by definition, but they contribute nothing to understanding the reasons for discrepancies or the steps that might be taken in the future to improve the underlying data. After reviewing such procedures and hypotheses it was determined they could not aid in the basic task of the Working Party--which was to establish credible adjustments that could be made to specific country or area accounts. Thus, the essential foundation of the task of the Working Party was to deal with the detailed data bases available at the Fund and elsewhere, and to examine critically the quality of the raw data and the process by which the data were tabulated and aggregated across countries.

2. Organization of data base and analysis

An obvious first step in the conduct of this project was a close examination by the Technical Staff of all the existing data and related material. This was done initially for the international income accounts, and subsequently for the shipping and official transfer accounts. For the income accounts the main tasks were to organize the Fund's data base into formats most useful for this project, and, as a closely related effort, to organize a parallel data base for stocks of cross-border assets and liabilities. The results of these efforts, in a highly condensed form, appear in Statistical Appendix E.

One of the troublesome aspects of the organization of the data base was that there are frequently two or more versions of the same statistic. This applied not only to the data at the country level, but also to the aggregated data that yielded the measure of the global discrepancy or current account. There are different measures of that discrepancy published by the Fund itself (in Part 2 of the Balance of Payments Statistics Yearbook, and in the periodic World Economic Outlook) and by the OECD (see Statistical Appendix A). Indeed, the Fund data are in a constant state of revision as country submissions accumulate and Fund estimating procedures are applied. Similar problems arise in dealing with the International Banking Statistics (IBS) published monthly by the Fund in International Financial Statistics (IFS). As described in the Statistical Appendix, it was decided to stabilize the basis of the statistical work of the Technical Staff by adopting the published balance of payments data for 1983 as appearing in the 1985 edition of the Yearbook, and the IBS data for 1983 primarily as appearing in the June 1986 edition of IFS. In later chapters it is noted that substantial revisions reported after that date have been incorporated in the work of the Technical Staff but have not been carried back into the original data base.

When the available information on income debits and credits was examined in detail the first result was the identification of (i) a long list of situations in which the data were 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 were minor, but quite a few have a significant impact on measurement of the global current account discrepancy and the investment income component. The Technical Staff was able to clarify many of these situations with the help of the Bureau of Statistics (STA) and the countries concerned, but a number of cases of importance still require further exploration. In fact, one of the important results of this project is that it will provide a better basis for continued dialogue between the STA and reporting countries.

Some of the larger anomalies were revealed by attempts to make bilateral comparisons, or, where necessary, comparisons with regional geographic data, where countries publish such data or made it available via the special questionnaire described below. Unfortunately only a few countries provide 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. Among the problems are the intervention of financial intermediary centers, and the attribution of transactions to the country of the currency used for payment or to denominate the asset. 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 results in other areas, are based on the inferences that can reasonably be drawn from the geographic detail that is available.

The most powerful research technique for exposing inconsistencies in the reporting of portfolio income 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 Fund, 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 (Statistical Appendix C).

Data for stocks of other portfolio assets are difficult to establish, and the Technical staff has used a variety of sources and methods to establish reasonable benchmarks. These efforts are described in Chapter V. In general, the data could be estimated more easily from the side of the debtors. Stocks of official reserve assets or official obligations, and the related income, are relatively well established.

The basic analytic process involved for portfolio income was to determine the stocks of securities and banking assets and liabilities, to apply rates of return, and then compare those results with the income data provided by individual countries. It was usually not possible to match such flows directly as between particular borrowers and lenders, but it was possible, within a reasonable margin for error, to determine whether regional or global data on income flows bear the indicated relationship to the underlying stocks. By and large the debit income entries seemed to be credible when compared with independent data on stocks of liabilities, requiring only relatively small upward adjustment, but there was widespread underreporting of credit entries.

With respect to the shipping account discrepancy, there are several tests that can be applied to determine whether entries are reasonable, but the detailed data needed to conduct those tests effectively are only partially available. On the debit side it is possible to relate the total freight paid on imports to the value of imports, and to judge whether the ratio fits the norms for all countries. However, the debit entry in the international accounts applies only to imports carried in foreign vessels--a breakdown not available in many cases from the data ordinarily reported--so that additional data must be obtained, as in the questionnaire issued by the Working Party. Checking the credit side of the shipping account for any country may be more difficult because the vessels or other transportation facilities operated by residents not only have earnings related to the exports of that country but they also have earnings from cross-trades among foreign countries. In this case one basic reference point would be an accurate measure of the capacity of the carriers operated by each country, so that the share of that country in total freight earnings can be estimated. Such data is not currently available in a form consistent with balance of payments definitions, but the Working Party has explored the possibility of developing them from existing industry records. In the absence of precise data of that type, the analysis of the Working Party was aimed at indicating the relationship of the understatement of shipping credits to the apparent capacity of the carriers operated by countries not reporting this item to the Fund--the "missing" fleet. Such results are rather judgemental but they lay the groundwork for more detailed studies.

A similar problem exists in attempting to identify the sources of the smaller net discrepancy in the "other" transportation account. Under this heading countries should report as debits the expenditures of their carriers in foreign ports, and as credits the expenditures in their ports by foreign carriers. Examination of the reported data indicates that many countries seem to understate their receipts of this type. The Working

Party has developed an estimating process that points to the most likely cases of under-reporting, but actual corrections will require much more detailed country-by-country analysis. On the other hand, such port expenditures by the "missing" fleet are also absent from the record and a basis for estimating them must be developed.

The research strategy for dealing with the discrepancy in the unrequited transfer accounts involved rather different approaches, but one common element was the use of a questionnaire to elicit as much detail as possible on the types of transfers that were taking place (see Statistical Appendix H). Moreover, at an early stage in the program of the Working Party the Development Assistance Committee (DAC) of the OECD conducted a survey to assist in locating the most likely targets for research into the discrepancy. Of course, the DAC operates primarily with data supplied by donor countries, and uses somewhat different definitions and coverages, so that direct comparisons with balance of payments reports were not attempted. Nevertheless, on the basis of these two surveys it should be possible to improve the comparability of DAC data and balance of payments data in the period ahead. The questionnaire exposed some large specific discrepancies, especially those involving several international institutions, which can be remedied once the necessary accounts are assembled. In addition, there are some types of transfers (pensions, withholding taxes, remittances of alien workers) that characteristically result in one-sided reporting, and where the Fund should be able to devise methods for reducing the reporting discrepancies. For the longer run, the Fund, together with the DAC, will need to develop a program for matching the data on transfers as compiled from the sides of the donors and recipients. Such a comparison could not be done in the time available to the Working Party, but it will be essential for an explanation of the remaining discrepancy.

3. Use of questionnaires and consultations

One of the early decisions of the Working Party was that the available data base was not sufficiently detailed or well-defined to provide a firm foundation for the close analysis that would be required. Consequently, as noted above, it was determined to amplify the available data by means of questionnaires explicitly designed to expose gaps or inconsistencies in reporting by national compilers, to encourage corrections or modifications of faulty reporting to the STA, and to relate the balance of payments data to other data that could serve as a check on internal consistency. The first and most elaborate questionnaire covered the investment income accounts, and at a later stage questionnaires were issued to cover the transportation and unrequited transfer accounts. In addition to rather detailed breakdowns of the available data, the questionnaires were intended to encourage estimation of data not previously reported, and to collect descriptions of the sources and methods currently in use. Copies of the questionnaires and some tables based on them appear in Statistical Appendices B, G and H. The questionnaires were sent to countries whose income or other transactions seemed likely to have a significant effect on the global discrepancy.

Returns on the special income questionnaire received from many countries were quite complete and provided a very useful basis for improving the data base and tying together the income flows and the underlying stock data. The collection of data on stocks as identified by national compilers provided data or estimates not otherwise available, and also facilitated the evaluation of the compilation procedures employed in each country. Moreover, the questionnaires served as a reference point for consultations between the Technical Staff and national compilers, and should continue to serve that purpose as the STA and compilers pursue further adjustments of reported data. Sizable corrections to the reported income data were based on the questionnaire responses, as shown in Chapters IV and V. The other questionnaires also received very satisfactory responses, and may serve as models for future work on these accounts.

In addition to the use of questionnaires to elicit new data and explanations of data, the Working Party found that discussions with the national compilers focussing on the particular discrepancies under study are very useful for clearing up misunderstandings and encouraging modifications in procedures. During the project the members of the Technical Staff, sometimes together with members of the Working Party, visited a broad cross-section of the countries under study, though concentrating mainly on those countries whose transactions were large enough to have a significant effect on the global accounts. These visits were quite brief--usually one or two days--and were sometimes supplemented by correspondence or follow-up visits. Where possible this activity was coordinated with the regular missions of the staff of the Fund. An effort was made to meet whenever possible with responsible officials in each country visited in order to encourage familiarity with the work and responsibilities of the compilers and to stimulate support where greater effort was needed.

In light of the experience of the Working Party with the use of special questionnaires, and with brief visits to countries where there might be statistical problems, the Working Party believes the Fund should consider the advisability of using similar concentrated inquiries across countries as part of its regular statistical procedures when it becomes apparent that some improvement in one of the balance of payments accounts may be required. A very considerable file of detailed information on each country studied in connection with this project has been collected by the Working Party, and should also be of value to the STA as further work on reducing the discrepancies continues.

4. <u>Data on asset and liability stocks</u>

The derivation of estimates of cross-border income payments, or the verification of data pertaining to such payments or receipts, depends to a considerable degree on the availability of reliable information on the underlying stocks of cross-border assets and liabilities. The largest component of such stocks in recent times has been the amounts placed with non-resident banks or borrowed from non-resident banks, and it is fortunate that the statistics on these positions have been steadily improved through the efforts of national authorities, the BIS, and the Fund. However, data on other types of cross-border assets and liabilities are of variable quality, and have not been subjected to the same degree of analysis and cross-checking. Perhaps the most effort has been devoted to establishing the outstanding debts of some of the heavily-indebted developing countries, and several compilations of such debts have been prepared (see Statistical Appendix D).

For its purposes the Working Party found it necessary to compile as much information on international assets and liabilities as possible, both from published sources and as part of its special questionnaire on income. The data assembled by the Working Party on this subject are brought together in Statistical Appendices B and E. Although there are obvious gaps and inconsistencies (in the sense that a complete matrix of all cross-border assets and liabilities is unattainable with the information at hand) these data are perhaps the most comprehensive now available, though not the most detailed for particular types of assets and liabilities.

The Working Party understands that the Bureau of Statistics has intensified its work in this area, and that the next edition of the Balance of Payments Statistics Yearbook will contain position data for a large number of countries. This is a welcome development and promises to provide an improved basis for evaluating flow data in both the current and capital accounts. In addition, individual countries should be encouraged to construct reconciliation tables showing the changes in assets or liabilities that tie in to the balance of payments accounts, as well as changes, such as valuation or coverage adjustments, that should not enter the balance of payments accounts.

Chapter IV. Income on Direct Investment

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1. Introduction

Income on direct investment comprises the parent company share (after corporate taxes--including withholding taxes--in the host country) in (a) the earnings of foreign subsidiaries and other incorporated affiliates, (b) the earnings of unincorporated branches in foreign countries, and (c) interest received from (or paid to, as a negative item) foreign-incorporated 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 as miscellaneous services in the balance of payments acounts.

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. 2/ Nevertheless, there may sometimes be a problem, 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.

In the IMF statistics, direct investment income, as defined above, is 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

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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."

2/ In 1982, of total U.S. direct investment abroad (excluding banking) of $198 billion, $185 billion, or 93 percent, was invested in majority-owned affiliates, including both incorporated and unincorporated entities. U.S. Department of Commerce, U.S. Direct Investment Abroad: 1982 Benchmark Survey Data, pp. 161, 341.

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 (to the extent they are not included in RE). The extent to which branch earnings are in practice divided between RE and ODI in the statistics is not clear. Among major creditor countries only the United States, Germany, and the Netherlands are known to make this accounting division; 2/ most other countries seem to enter total branch profits as income debits or credits, 3/ with any unremitted portion being reflected (without separate identification) as part of the capital flow from the parent organization. The separation of reinvested branch profits does not affect the international accounts; only the division between RE and ODI is involved.

The net overall discrepancy on direct investment income in 1983 (the year on which the study is focused) was only -$1,594 million, but this consists of an excess of credits on reinvested earnings of $9,935 million and an excess of debits on other direct investment income of $11,529 million. As will be explained in more detail below, the large excess of credits on RE is more than accounted for by the failure of most countries, in their balance of payments reports to the IMF, to include undistributed profits in either their current or capital accounts. However, since several investor countries that are major creditors in this respect (the United States, the United Kingdom, Australia, Germany and, in its response to a special income questionnaire, the Netherlands) do include them, it is not surprising that reported RE receipts greatly exceed reported payments. Other specific adjustments to RE, which, on balance, added to the excess of reported credits, are shown in Table 10, and are described in detail in the immediately following section. In the section after that, the adjustments to ODI (Table 12) are discussed; some of the factors involved are common to both sets of data, such as the inconsistent treatment of branch profits and the entire omission of certain economies from the IMF data.

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 that case, the increase in 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. But another reason for doing so is the fairly widely accepted principle that net income on foreign direct investment, whether distributed or not, should be regarded as part of the net income and product of the investing rather than the host country. This principle, however, has not been incorporated into the United Nations' System of National Accounts.

2/ Which is in accord with the IMF Manual.

3/ Countries relying solely on exchange records would presumably record only remitted branch profits.

Many of the gaps or asymmetries, especially on ODI, do not affect the overall balance on current account or the total balance on account of investment income, since offsetting adjustments are required in "other investment income" (see Chapter V). Nevertheless, for present and future analytical purposes, it is important to identify inconsistencies in individual types of transactions, even though they do not affect the investment income accounts or the current account as a whole.

For the convenience of the reader, the various adjustments to the data, shown in detail in Tables 10 and 12, are summarized in Table 9.

Table 9. Recapitulation of Adjustments to Direct Investment Income, 1983

(In billions of U.S. dollars)

	Credit	Debit	Balance
Reinvested earnings			
As reported to IMF	13.9	4.0	+9.9
Corrections to reported data	+7.4	+4.5	+2.9
Adjustment for countries not reporting RE	-0.5	+12.8	-13.3
Adjusted total	20.8	21.3	-0.5
Other direct investment income			
As reported to IMF	22.3	33.8	-11.5
Corrections to reported data	+7.6	+2.2	+5.4
Allowance for incomplete reporting	+0.5	+0.5	-0.0
Adjusted total	30.4	36.5	-6.2

As can be seen, much of the initial discrepancies can be explained by identifiable inconsistencies or omissions in the reported data, but a considerable gap is left to be explained. The remaining ODI discrepancy may well include large but offsetting inconsistencies in the reported data. However, the Working Party has identified several countries (Table 16) that reported larger debits on ODI than are accounted for by the major creditor countries that provide geographic breakdowns of their credits on this account. Consequently, the Working Party believes that further progress in reducing the excess of reported debits can be made on the basis of such comparisons. To effect the necessary corrections will require collaboration among national compilers, assisted by the Fund, to locate the reporting discrepancies and to agree on the appropriate changes necessary to produce consistent statistics.

2. Reinvested earnings

The balance of payments data for 1983 reported to the IMF's Bureau of Statistics show an excess of credits of $9,935 million on RE account (see Table 10, line 1). However, various adjustments to the reported figures are necessary to pick up some revisions by the compilers and to eliminate certain large inconsistencies among reporters.

First, the responses to the Working Party's questionnaire included certain information, some of which was supplied on a confidential basis, which was not reflected in the IMF data. The (net) additions were somewhat larger for debits than for credits (line 2). Presumably, some or all of these revisions and additions will be reflected in subsequent editions of the Balance of Payments Statistics Yearbook.

Secondly, the data reported by the United States (credits $9,602 million; debits $96 million) require two adjustments to make them comparable with the amounts likely to have been reported by the partner countries. In the first place, in calculating reinvested earnings, the U.S. compilers deducted from foreign subsidiary and branch earnings an amount of $6,542 million for net capital losses. This amount reflects both realized and unrealized capital gains and losses, the latter resulting primarily from converting the financial 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 1983 than that which prevailed at the beginning of that year. No such adjustment would be relevant to the host countries, which generally maintain the accounts in their home currencies. (Any conversions of reported balance of payments data to, say, U.S. dollars or SDRs, are usually made at the average exchange rate for the period.) An adjustment to eliminate this anomaly is shown in line 4.

Realized gains and losses constitute a small part of the total of $6,542 million, according to information supplied by the U.S. authorities. There is a possibility that at least part of the realized losses may also have been recognized by the partner countries, and therefore would not have caused any discrepancy. But the individual country data supplied by the U.S. authorities, which were used in calculating the adjustment shown in line 4, were exclusive of all capital gains and losses.

The comparable entry on the debit side probably does not include any significant amount for exchange fluctuations, but does include changes in market values of investment portfolios, particularly in the insurance industry. The adjustment is -$429 million (line 4, second column); i.e., the recorded figure included capital gains of that amount. Again, it is possible but not likely that such capital gains would be reflected in partner country statistics.

A second adjustment is made in the U.S. data to transfer "reinvested" branch profits from RE to ODI in order to make the U.S. data more comparable with those of most other countries, which, as stated above,

Table 10. Reconciliation of Statistical Discrepancy on Direct Investment Income: Reinvested Earnings, 1983

(In millions of U.S. dollars)

	Credit	Debit	Balance
1. As reported to IMF	13,932	3,997	+9,935
2. Additions from questionnaires	3,623	4,638	-1,015
3. IMF data adjusted	17,555	8,635	+8,920
4. Adjustment for U.S. capital gains and losses 1/	+6,542	-429	+6,971
5. Adjustment for reinvested branch earnings, U.S. 2/	-2,762	-(-320)	-3,082
6. Adjustment for credits not matched by debits 3/		+12,789	-12,789
7. Adjustment for debits not matched by credits 4/	+(-463)		-463
8. Adjusted total	20,872	21,315	-443

1/ Total capital gains and losses, realized and unrealized.
2/ To treat all branch earnings as remitted
3/ Amounts received by the United States, United Kingdom, Germany, and the Netherlands from countries not reporting RE. Includes excess of credits reported by those countries vis-à-vis the Netherlands Antilles, Panama, and Switzerland over total debits reported by the latter three.
4/ Amounts debited by the countries mentioned in footnote 3 against countries not reporting RE credits.

seem generally to include total branch profits in ODI. This adjustment is shown in Table 10, line 5, on both the credit and debit sides of the account. (Reinvested earnings of U.S. branches of foreign enterprises were negative in 1983.)

In addition to these adjustments in reported figures, there is another adjustment required (line 6) to recognize a large gap in the reporting of reinvested earnings. As noted above, credits are reported by four major investing countries 1/ (the United States, the United Kingdom, Germany, and the Netherlands) as having been received from countries not reporting RE, or that are not included in the IMF data (Bermuda, the Cayman Islands, Hong Kong). In addition there is an excess of identifiable receipts reported by these countries from two major offshore areas (Panama and the Netherlands Antilles) and Switzerland over the total amounts of debits shown by those three reporters.

The first of these adjustments was obtained essentially by subtraction. The receipts of the creditor countries from all countries reporting RE debits were calculated. Some estimating was required, notably in the cases of countries included in somewhat broader groupings in the creditor countries' reports or where RE and ODI were not shown separately. The receipts thus calculated were deducted from total RE credits reported by the four investing countries, and the difference, amounting to $10,167 million, is part of line 6 of the table.

As to the adjustment for Panama, the Netherlands Antilles, and Switzerland, it seems clear that these countries (among possibly several others) do not consider as residents for balance of payments purposes certain local subsidiaries and branches of foreign enterprises which engage only in international transactions and do little or no business with other local residents. The excess of identifiable RE receipts by the four creditors over total RE debits (to all countries) by these three host countries was $2,622 million, the remaining part of the total in line 6.

An analogous adjustment (line 7) was made for RE debits reported by the same four countries against countries not reporting RE credits. Again, the amount, -$463 million, was estimated by deduction, i.e., the amounts reported by these countries as RE debits against each other 2/ were deducted from their total RE debits. The remainder was assumed to represent debits against (a) countries included in the IMF reports but not reporting RE credits, and (b) areas not included in the IMF data.

A geographic allocation of the net adjustments to RE is shown in Chapter IX. About half of the total adjustment of $10.4 billion was applicable to industrial countries.

1/ The Australian data were on a fiscal year basis, and were not employed in this calculation.
2/ The geographic detail available was not sufficient to include debits to countries reporting RE, other than among the four themselves.

After making the foregoing adjustments there remains a negligible statistical discrepancy (excess of debits) of $443 million on this account. But it may be useful to observe at this point that the failure of debtor (host) countries to include RE in their balance of payments tends to understate both (a) the income accruing to non-resident investors, thus understating their current account deficits, and (b) the corresponding net inflow of foreign capital.

Moreover, it is virtually certain that the small remaining discrepancy conceals inconsistent reporting among those countries that include RE in their statements. As a partial test of this possibility, the bilateral data for four countries were compared for consistency; the results are shown in Table 11. Among the four, reported credits exceeded reported debits in 8 out of 12 cases; the total (net) excess was $1.8 billion. However, the omission of data on the petroleum industry from the United Kingdom data, and the presence of known inconsistencies between countries in their methods of allocating the data geographically, make it inappropriate to use these results to further adjust the world totals.

3. Other direct investment income (ODI)

Other direct investment income includes dividends, that portion of branch profits considered to be remitted, and interest, all net of withholding taxes. Interest is measured net, i.e., any interest paid by a parent company or by a domestic affiliate thereof to a foreign affiliate is treated as negative ODI receipts, and not as income payments by the investor country. 1/

The asymmetry in this account for 1983, according to IMF data, was -$11,529 million (see Table 12, line 1). Revisions reported in the questionnaires and other data submitted to the Working Party but not yet incorporated in the IMF data add $2,039 million to credits and $2,540 million to debits.

1/ Interest on balances between banks and their foreign branches and affiliates is, in general, treated as "other", not "direct", investment income.

Table 11. Reinvested Earnings in 1983:
Bilateral Comparisons

(In millions of U.S. dollars)

	Creditor data	Debtor data	Discrepancy
U.S. investment in			
United Kingdom	1,279	964 1/	315
Germany	764	-9	773
Netherlands	741	459	282
Total	2,784	1,414	1,370
U.K. investment in			
United States	577	927	-350
Germany	128	-186	314
Netherlands	196	71	125
Total	901	812	89
German investment in			
United States	55	-31	86
United Kingdom	1	40	-39
Netherlands	8	94	-86
Total	64	103	-39
Netherlands investment in			
United States	724	442	282
United Kingdom	309	132	177
Germany	-133	-8	-125
Total	900	566	334
Total, four countries	4,649	2,895	1,754

Note: The U.K. data exclude the petroleum industry (see Appendix B).

1/ Estimated from combined total for United States and Canada.

Table 12. Reconciliation of Statistical Discrepancy on Other Direct Investment Income, 1983

(In millions of U.S. dollars)

	Credit	Debit	Net
Other Direct Investment Income			
1. Data as reported to IMF	22,265	33,794	-11,529
2. Additions from questionnaires	2,039	2,540	-501
3. IMF data adjusted	24,304	36,334	-12,030
4. Interest: Netherlands Antilles affiliates of U.S. enterprises	+2,760		+2,760
5. U.S. branch earnings adjustment	+2,762	+(-320)	+3,082
6. Adjustment for transactions of four major countries 1/ with countries not reporting ODI separately from income on other investments	+501	+2,643	-2,142
7. U.S./U.K. transactions with Bermuda, the Cayman Islands, Hong Kong, etc.	+30	+1,903	-1,873
8. Saudi Arabian adjustment		-4,000	+4,000
9. Adjusted total	30,357	36,560	-6,203

1/ The United States, United Kingdom, Netherlands, and Germany.

Again the U.S. data must be adjusted to make them compatible with the data reported by partner countries. First, the U.S. balance of payments data reflect $4,246 million of interest paid to financial affiliates incorporated in the Netherlands Antilles as negative ODI receipts. These companies issued bonds in the Euro-markets and, in the main, loaned 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; the latter are included in the U.S. data as earnings on direct investment in the Netherlands Antilles. 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 received from the United States by the countries where the bonds are owned or held. Information supplied by the U.S. Department of Commerce indicates that $2,760 million of the interest paid to the Netherlands Antilles subsidiaries was in effect used to pay interest to nonresidents of the United States, presumably to the bondholders. Shifting this amount from (negative) direct investment income credits to portfolio investment income debits (see Chapter V) increases U.S. and world credits on direct investment income by the same amount (see Table 12, line 4).

Second, we must add back to ODI receipts and payments for the United States the amounts of branch profits considered as reinvested, but which were eliminated from reinvested earnings. The amounts were $2,762 million credits, and -$320 million debits (see Table 12, line 5).

There are quite a few countries, some of them major, that do not report direct investment income separately but include it with other private income, although one cannot be absolutely certain that it is always so included. 1/ Some, but not all, of these countries are shown separately in the data for the United States, the United Kingdom, the Netherlands, and Germany. 1/ These four countries combined reported receipts of $2,643 million from and payments of $501 million to countries that have not yet made this breakdown. It is appropriate to adjust the world data by these amounts, that is, by adding the receipts reported by the four investor countries to world debits and the payments reported by the same four countries to world credits. This is done in Table 12, line 6. Again, offsetting adjustments will be required in portfolio income.

There are three economies with which the United States and the 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 IMF tabulation. 2/ In addition, the United States reports income under the area category "international" (mainly from the operation of merchant ships and oil drilling rigs) that may not be reported by any partner countries. The United States and the United Kingdom together reported $1,903 million of ODI receipts from, and $30 million of payments to, these areas. Adjustment for this factor is made in Table 12, line 7.

1/ Switzerland, for the first time in 1983, reported reinvested earnings separately, but remitted earnings on direct investment were still combined with other investment income. Some of the countries concerned made the separation in their questionnaire responses, so they no longer need be included in this adjustment. However, their future reports to the IMF will have to be reviewed for this factor.

2/ Geographic data for other investor countries were either nonexistent or negligible.

3/ Data for Germany and the Netherlands on transactions with these areas were either nonexistent or inconsequential.

Another identifiable discrepancy involves the balance of payments accounts of Saudi Arabia, which show $4.3 billion of "oil sector investment income", classified as "other direct investment income" debit in the Fund's balance of payments statistics. However, very little is reported as direct investment income receipts from Saudi Arabia in the geographic data supplied by countries that were the major investors. The United States, the United Kingdom, and Germany report specifically on Saudi Arabia--total receipts of $117 million. In the absence of any evidence that the income is being reported somewhere else in the world as an income credit, it seems appropriate to adjust ODI payments downward by, say, $4.0 billion (Table 12, line 8).

The foregoing adjustments reduce the aggregate asymmetry on this item by about half, but many questions remain. Bilateral data between several major pairs of countries (see Table 15), as well as other apparent inconsistencies (see Table 16), provide evidence that the remaining discrepancy on direct investment income account may well reflect significant bilateral differences. These bilateral discrepancies will require further study, and, as suggested in the last section of this chapter, the data could undoubtedly be improved through collaboration among the compilers in the countries concerned.

4. Direct investment income in earlier years

For reinvested earnings, the same situation prevailed in 1979 as in 1983; the United States and the United Kingdom reported receipts (credits) for reinvested earnings from countries not reporting this item (or not included in the IMF totals) of $13,401 million. This amount was added to total debits, as was done for 1983 in Table 10, line 6; the results are shown in Table 13.

Table 13. Direct Investment Income: Reinvested Earnings, 1979

(In millions of U.S. dollars)

	Credits	Debits	Net
As reported to IMF	23,355	11,561	+11,794
Adjustment for omitted debits		13,401	-13,401
Adjusted	23,355	24,962	-1,607

While the remaining discrepancy is $1.6 billion, it must be noted that, as in the case of the 1983 data, the adjustment for omitted debits can only be approximated. Similar calculations were not made for the intervening years; nevertheless, it seems reasonable to assume that the bulk of the asymmetry on RE in every year results from this factor.

The capital gains/losses included in the United States data were: 1980, loss, $1,624 million; 1981, gain, $426 million; 1982, loss $2,146 million. Adjustment for this factor would enlarge the excess of credits in 1980 and 1982 and reduce it in 1981.

With respect to other direct investment income, it appears that inconsistent treatment of income on direct investments in Saudi Arabia was the major factor in producing the excess of debits in most recent years, as shown in Table 14.

Table 14. Asymmetry on Other Direct Investment Income, 1980-1982

(In millions of U.S. dollars)

	1980	1981	1982
1. Global asymmetry	-7,609	-10,746	-11,320
2. Saudi Arabia, ODI debit	-6,917	-9,599	-6,210
3. Of which: reflected in U.S. and U.K. credits	-361	941	308
4. Asymmetry not attributable to Saudi Arabia data (Line 1 minus line 2 minus line 3	-331	-2,088	-5,418
5. Adjustments for U.S. interest payments to Netherlands Antilles affiliates	214	704	1,944
6. Remaining asymmetry (Line 4 plus line 5)	-117	-1,384	-3,474

Note: The overall discrepancy in 1979 was only $77 million. The United States did not report separately on Saudi Arabia in that year but it appears that the amount included in the U.S. totals was close to the debit reflected in the Saudi Arabian data.

5. Bilateral comparisons

Within the time and resources available to the Working Party and the Technical Staff, it was not possible to reduce the remaining ODI discrepancy of -$6.2 billion in 1983 by quantifiable measures. However, with the extensive bilateral data available from four major countries, two further avenues of partial investigation were possible. The first was to compare the bilateral data among the four themselves (and, in part, with Canada); the second was to compare ODI receipts of the four countries from a number of host countries with total ODI debits reported by these host countries. The results are presented in Tables 15 and 16, and analyzed in the remainder of this section.

Except for the United States, the figures in Table 15 are those furnished in reply to the special income questionnaire. For the United States, they are taken from articles in the Survey of Current Business and from tabulations received from the U.S. Department of Commerce, with capital gains and losses removed and after the other adjustments delineated above.

Not much can be gleaned from the data in Table 15; the overall discrepancy is small, but that is probably coincidental. There are several possible explanations for bilateral differences, including the following:

1. The U.S. definition of direct investment is broader than that generally employed elsewhere, in that it includes cases where as little as 10 percent of the equity is owned by the investing company. This is probably a minor factor; in 1982, 94 percent of all direct investment income (except of banks) was received from majority-owned affiliates, including branches.

2. The U.K. geographic data do not reflect oil industry transactions. Such transactions (as revised herein) accounted for 34 percent of total direct investment income credits (including reinvested earnings) and 55 percent of debits. If these same ratios were applied to U.K. transactions with the four other countries in Table 15, total U.K. credits would be $1,773 million (instead of $1,172 million) and debits $2,854 million (instead of $1,290 million). For all four countries total credits would be $9,768 million and total debits $10,478 million. The discrepancy would be -$710 million instead of the present +$253 million.

3. But the major differences are likely to lie in the geographic allocations. That is, partner countries may assign transactions to different areas, or even to different transaction categories. This is especially likely when there are intermediary subsidiaries in third countries, and even more so if such intermediary subsidiaries are jointly owned.

Thus, it is by no means certain that these apparent discrepancies are real. For instance, it is quite possible that some of the transactions recorded by the United States vis-à-vis the United Kingdom are reported by the latter as having occurred vis-à-vis a third country, in whole or in part. In such a case, there would not necessarily be a world discrepancy, even if the third country had omitted the transaction on both sides of its accounts.

Table 15. Other Direct Investment Income in 1983:
Bilateral Comparisons

(In millions of U.S. dollars)

	Creditor Data (A)	Debtor Data (B)	Discrepancy (A) - (B)
U.S. investment in			
United Kingdom	2,909	1,081	1,828
Germany	760	643	117
Netherlands	878	773	105
Canada	1,824	1,882	-58
Total	6,371	4,379	1,992
U. K. investment in			
United States	685	1,327 1/	-642
Germany	133	116	17
Netherlands	40	52	-12
Canada	314	122	192
Total	1,172	1,617	-445
German investment in			
United States	-19	166 1/	-185
United Kingdom	139	-6	145
Netherlands	58	106	-48
Canada	-9	nss	nss
Total	178	266	-88
Netherlands investment in			
United States	426	1,600 1/ 2/	-1,174
United Kingdom	238	81	157
Germany	172	110	62
Canada	nss	nss	nss
Total	836	1,791	-955
Canadian investment in			
United States	420	727	-307
United Kingdom	190	134	56
Germany	nss	42	nss
Netherlands	nss	nss	nss
Total	610	861	-251
Total, five countries	9,167	8,914	253

Note: Totals exclude pairs where data from only one side are available. The U.K. data exclude the petroleum industry (see Appendix B).

1/ Excludes that portion of branch earnings classified as "reinvested" in U.S. data.

2/ For an analysis of the difference between the U.S. figure and that of the Netherlands, see van Nieuwkerk, Marius, and Sparling, Robert P., The Netherlands International Direct Investment Position, Appendix C, pp. 101 ff.

Nevertheless, taken by themselves, transactions with the United States as host country reflect an excess of debits of $2.3 billion. This discrepancy may well be due to (a) the omission of the petroleum industry from the United Kingdom data or (b) different country classifications, especially for investments of large European multinationals. But it is possible that, for some reason, part at least of the U.S. debits are not being reflected in credit entries elsewhere.

The second avenue of investigation, illustrated in Table 16, can only be imprecise, in part because detailed geographic breakdowns are unavailable for several countries known to have significant direct investments abroad, e.g., France, Belgium, and Japan, among others. Even so, the debits reported by the six developing countries included in the table significantly exceed the credits reported by three major investing countries, suggesting an overstatement of debits under this heading, though there may be some creditors not reporting country detail that could account for part of the remainder. In some cases, debits under "other investment income" seem small compared to debt outstanding, which may indicate some misclassification; that is, perhaps part of the income debits reported under direct investment should have been considered as income on portfolio investments. However, the evidence is not clear enough to justify any adjustment on our part. Some possible explanations for the differences are noted below, but in each case a more thorough investigation would be needed to establish whether, in fact, any of these countries have overstated their debits (and if so by how much), whether the creditor totals are understated, or whether the difference has some other explanation. It seems reasonable to conclude that, unless the credits are being reported by some countries other than the three major investing countries, the bulk of the remaining discrepancy shown in Table 12 can be accounted for by the differences in the reports of these pairs of countries. 1/

1/ Only countries with total debits in excess of $500 million were examined.

Table 16. Selected Countries: Comparison of ODI Debits with Reported Credits of Three Major Investing Countries, 1/ 1983

(In millions of U.S. dollars)

Host Country	Debits Reported by Host Country	Credits Reported by Investor Countries	Excess of Debits
Ireland	818	233	585
Algeria	569	0 2/	569
South Africa	1,110	504	606
Indonesia	2,944	1,646	1,298
Malaysia	1,183	350	833
Libya	1,296	192 2/	1,104
Total	7,920	2,925	4,995

1/ United States, United Kingdom, and Germany.
2/ United States and Germany only. United Kingdom figure for Algeria and Libya combined not in excess of $59 million.

Ireland. No apparent reason for the discrepancy. It seems logical to suppose that the United States and the United Kingdom would be major investors. Ireland does not report RE; perhaps some of what others record as RE is included in ODI by Ireland.

Algeria. Almost 90 percent of the total reported by Algeria is attributed to the construction industry. It seems likely that the figure includes more than just direct investment income, that is, it may reflect payments for construction services performed in Algeria.

South Africa. The difference here might well reflect payments to other creditors, or a different classification of portfolio vs. direct investment.

Indonesia. The arrangements for operating the Indonesian petroleum industry are complicated. It may be that some payments classified as income by the Indonesians are reported under some other category by the countries receiving the funds. However, the Indonesian questionnaire reports $2,944 million as dividends, which should be easy to measure accurately. It might be that investments of overseas Chinese, especially those residing in Hong Kong, are important. The absence of information on Japanese income from Indonesia might be an important factor.

Malaysia. The absence of creditor data from Japan, Hong Kong, the Netherlands, and, probably, Chinese investors residing elsewhere than in Hong Kong could be part of the explanation.

Libya. French, Italian, or Netherlands investments may be part of the explanation. Or Libya might have a different measure of income than the foreign investor companies employ.

6. Summary

As we have shown, most of the world discrepancy on direct investment income account is attributable to omissions: the omission of reinvested earnings by a large number of countries; the omission of certain "international" companies' activities, especially in offshore financial centers; and the omission of certain countries and areas from the IMF Yearbook tabulations. Another major factor in the discrepancy is the treatment of branch earnings and capital gains and losses by the U.S. compilers. Finally, but unmeasurably, there may be significant differences in recording the same transactions--differences in amount, in classification, and in geographic allocation. Our recommendations for dealing with these issues are both immediate and long run in nature.

7. Recommendations

a. In the immediate future, the IMF could considerably reduce the reported discrepancies by applying the same adjustment procedures used in this chapter. The Working Party realizes that many of the adjustments could not appropriately be applied to present tables in the Yearbook itself, either Part 1 or Part 2. But in other publications, such as the World Economic Outlook, most if not all of the adjustments we have made seem feasible, and the Yearbook could contain adjusted summary tables showing revised totals. In this connection:

i. With respect to reinvested earnings, the Working Party of course encourages the Fund to continue working with countries that do not compile data on these earnings, or whose data do not agree with those of partner countries. However, pending significant results of this action, the Working Party recommends that global summations of the current account, and the investment income account, omit reinvested earnings entirely. (Of course, the data as reported would be available in other tables.)

ii. World aggregations of balance-of-payments data on direct investment income could include an "adjustment" column for those transactions only one side of which is presumably included in the reported data. This could include all, or virtually all, of the adjustments made in this chapter, although some countries, notably the United States, would need to be called upon for unpublished, though not confidential, details. Conceivably, this "adjustment" column could also include an allowance for apparent discrepancies in bilateral reporting not reflected in other adjustments.

b. Bilateral comparisons. Data on direct investment income must, in general, be built on reports by individual companies. Because reporters could be requested, at least by the host countries, to produce country-by-country figures, such data are particularly susceptible to analysis by comparing partner country compilations. Four creditor countries, which account for 76 percent of total ODI receipts reported to the IMF (the United States, the United Kingdom, Germany, and the Netherlands), have virtually complete country breakdowns in their data or at least extensive country detail. Thus extensive bilateral comparisons would be possible if these countries would make available the data they have in the greatest detail that confidentiality restrictions would permit, either in published form, or to principal partner countries, or to the Fund, which could coordinate such comparisons--either through correspondence or, if the discrepancies remained large, through face-to-face discussions. As part of this process other creditor countries may obtain some geographic detail from resident multinationals, or could arrange to do so.

c. As noted above, discrepancies can arise from the inclusion in balance of payments income data of unrealized exchange gains or losses resulting from the conversion of financial assets and liabilities into the currency of another country. Removing these potential discrepancies would enable closer bilateral comparisons, and would be consistent with the principles of the national accounts. Therefore, the Working Party recommends that such gains or losses not be included in balance of payments data. However, the total amounts of capital gains or losses could be given in a footnote, or as a reconciliation to position tables.

d. In order to present direct investment income in a consistent manner across countries, and in accordance with the IMF Manual, we recommend that direct investment income be divided into the following components:

Total direct investment income

Branch profits (Countries that want to divide these between remitted and reinvested could do so.)

Income of incorporated affiliates

Dividends

Undistributed profits of incorporated affiliates

Interest.

e. The Working Party recommends that the U.S. compilers change their treatment of interest paid to Netherlands Antilles affiliates (and to other areas where similar transactions may occur) in the manner done in this chapter; reconciliations with other countries would be much simpler, and closer to the real economic significance of the transactions, if the United States would change its method of accounting to reflect the fact that the bonds essentially represent borrowing by the parent companies and would be viewed as such by the investors. 1/ The same issue exists, on a smaller scale, for other countries.

f. The Working Party takes note of and commends the action by the authorities in the United Kingdom to include income related to the petroleum industry under direct investment rather than other investment income, and to separate retained from distributed earnings. We also note that there may be some inconsistencies between the treatment of the jointly owned petroleum enterprises in the U.K. statistics and in the statistics of the Netherlands and of the countries in which this organization has investments. We recommend that efforts already begun, bilateral and multilateral, to arrive at consistent treatment of these and other similar situations, wherever they may exist, be expanded and intensified.

1/ It is recognized that the U.S. authorities publish data regarding transactions with Netherlands Antilles financing affiliates that enable the user to make an approximate adjustment of the data.

Addendum: A Note on Captive Insurance Companies

International insurance transactions, apart from insurance related to merchandise trade, usually take one of three forms:

a. Direct writing. The insured deals directly, or more usually through insurance brokers, with an insurance company located in another country.

b. Branches and subsidiaries. A foreign insurance company is licensed to do a domestic insurance business, either directly (as a branch) or through a domestically incorporated subsidiary. In principle, such activities are direct investments, and are so treated in this Report.

c. Reinsurance. By definition, such transactions occur between insurance and reinsurance companies.

So-called captive insurance companies may be considered a special example of the second case just mentioned. These companies originated in the desire of large manufacturing companies to minimize taxes (since in the United States premiums on self-insurance are not deductible) and to reduce other insurance costs wherever possible through the ownership of insurance firms favorably located. Even though some of the initial advantages have been reduced as tax and other regulations have changed, many of the companies have developed into viable entities in their own right and have become especially useful in the light of the recent difficulties of obtaining liability coverage in the normal way. In part, the exposure of the captive companies is covered by reinsurance with old established insurance organizations.

Certain features of the operations of captive companies have special implications for balance of payments reporting:

1. They are not, typically, subsidiaries of insurance companies, but of industrial companies or even of groups of individuals or companies. There are instances, however, where the ownership is not sufficiently concentrated to qualify as a direct investment.

2. Their transactions, both with their parents and with their clients, are not usually reflected in the IMF balance of payments data. This is because they may be operating in countries that do not report to the IMF, e.g., Bermuda; or they may be omitted from reported balance of payments data, e.g., The Bahamas and elsewhere, because they deal only with nonresidents.

3. On the other hand, transactions with the captives are likely to be reflected in the balance of payments reports of the partner countries and therefore, at least to some extent, are reflected in the adjustments made in Chapters IV and V of this Report. This applies, in particular, to the dividends and profits accruing to the parent companies (Tables 10

and 12) and the earnings of the captives on their investments in international financial markets (Chapter V).

But clearly the premium receipts of and claims payments by the captives are not included either in the IMF data on insurance or in the adjustments proposed in this report. The possibility of asymmetric reporting exists to the extent that the partner countries do report these insurance transactions as such or because the flows of funds appear as capital flows to the financial markets where reserves are held. Total assets of Bermuda insurance companies alone (not all of which are captives) were reported to amount to $22 billion in 1984.

Chapter V. Income on Portfolio Investments

Chapter V. Income on Portfolio Investments

1. Introduction and summary

Reported "portfolio investment income" is the fastest growing and now the largest of all individual current account discrepancies. The term as used in this chapter is defined to include all types of investment income, other than income related to direct investments, which is covered in Chapter IV. The two main categories of portfolio investment are bank positions, and investments in bonds and equities. While the official-private breakdown might be useful for some purposes, it will be seen that it is necessary to combine these categories for this study since, for instance, credits on official accounts of one country may appear as debits on private account in the debtor country. However, a discussion of resident official income is given in a later section of this chapter.

a. Discrepancies in reported income data

As a starting point for our analysis we use the numbers published in the IMF Balance of Payments Statistics Yearbook, Part 2, 1985, particularly Table C-8, "Other Investment Income" (for many countries, a more detailed breakdown is published in Part 1 of the Yearbook). According to that table (summarized in Table 17), reported portfolio investment income debits exceeded the corresponding credits by $32 billion in 1983, and $42 billion in 1984, compared to excess debits of only $7 billion in 1979. Not only have the missing amounts increased, but the quality of reporting has also worsened as measured by the relative size of the gaps. In 1979, reported credits were only 5.5 percent below reported debits. This gap widened to 9 percent in 1981, 13 percent in 1983, and more than 15 percent in 1984. In addition, the quality of information also became worse relative to the reporting of other services. While the portfolio investment income gap accounted for 25 percent of the world services gap in 1979, this share increased to 40 percent in 1983, and to 43 percent in 1984.

Table 17. World Summary of "Portfolio Investment Income"

(In billions of U.S. dollars)

	1979	1980	1981	1982	1983	1984
Portfolio Income						
Credits 1/	126.6	181.7	234.8	247.1	214.4	228.9
Debits 1/	133.9	192.9	257.1	283.0	246.4	270.5
Net amount	-7.3	-11.2	-22.3	-35.9	-32.0	-41.6
Net amount in percent of debits	5.5%	5.8%	8.7%	12.7%	13.0%	15.4%
Memo items:						
Total services account 2/	-29.3	-49.2	-80.6	-100.9	-78.7	-96.4
Total current account 1/	-19.4	-34.7	-69.0	-113.9	-75.1	-95.8

1/ Source: IMF Balance of Payments Statistics Yearbook, Part 2, 1985.
2/ Calculated from Yearbook data.

b. Methods of adjusting reported data

As noted in Chapter I, the bias in the reporting of portfolio income that results in a rising excess of debits over credits is consistent with the bias in the reporting of capital flows. In the years 1977-83, reported net capital flows showed a cumulative net inflow of nearly $300 million, indicating that the countries receiving capital were in a better position to measure the flows than the countries where the creditors resided, and were thus better able to record the related investment income flows.

The cumulative discrepancy in recorded capital flows described above indicates the likely sign and magnitude of the world investment income discrepancy. But it is still necessary to identify specific gaps according to the different types of investment, and to allocate them geographically to the extent possible. For instance, even if the reporting of credits is less complete than the reporting of debits, it does not necessarily follow that the debits were not overstated. Moreover, the stocks of assets and the income received on them (and the outstanding liabilities and the income paid) may fit together reasonably well as reported by a given country, but both statistics may be wrong. Also, while comparing debits and credits as reported by pairs of countries might seem a promising way of identifying discrepancies, few countries have such bilateral information, and its validity is limited by the growing tendency to invest via intermediary financial centers. Even if bilateral data exist, it is impossible to decide which amount is correct unless there is some exogenous indication that it is one or the other.

Thus the Working Party felt that the only credible basis for checking reported income credits and debits would be to rely on independent information on outstanding stocks of cross-border assets and liabilities, and to use available information on appropriate yields to judge the reasonableness of reported credits and debits. Fortunately, there now exists a comprehensive and detailed body of data on the cross-border assets and liabilities of banks that is published in the Fund's monthly International Financial Statistics. These data give extensive figures, by country, for interbank positions, and for assets and liabilities of nonbanks vis-à-vis banks, based on the records of the banks.

Unfortunately, data for outstanding stocks of other types of assets held by foreign investors are not well organized and estimates must be based on heterogeneous sources. The results of these estimates, and the sources used are shown in Table 18. In addition to using published sources, the Technical Staff prepared its own estimates of outstanding cross-border holdings of bonds and equities, and information on other types of assets (such as trade credits) was derived largely from the replies to the special income questionnaire circulated by the Working Party. A description of the estimating procedure for bonds and equities is given in Section 2c of this chapter; a copy of the questionnaire is in Appendix B.

Another important source of information was the data on the debts of developing countries assembled by the Development Assistance Committee of the OECD. This is described in an appendix in which data on investment positions and debt are assembled and evaluated (see Appendix D).

It is important to note that the estimates of outstanding amounts of cross-border positions cover only those positions recorded by either the debtor or creditor country, and often, but not always, both. In particular, the estimates of outstanding amounts are not analogous to the numerous estimates of the amounts of flight capital that may have escaped statistical recording. That may, for instance, be the case if cross-border funds are directly invested in real estate, or if the foreign investor or his intermediary is regarded as a resident. Also funds that are spent rather than invested, do not add to external assets. The Working Party has taken note of the various estimates of "flight capital", but has not found them useful in calculating income adjustments (see discussion in Appendix F).

In addition to the revisions based on the general procedures described above, a number of revisions were based on specialized analyses or other sources. These adjustments are described in Section 2 of this chapter.

c. <u>Summary of results</u>

On the basis of the various types of adjustments made to the reported data, the discrepancy in world portfolio investment income can be reduced to a minor amount (see Table 19).

Table 18. Estimate of World Cross-Border Financial Positions, 1/ 1983

(In billions of U.S. dollars)

Positions	Outstanding Amounts (end of year)	Rate of Return (percent)	Investment Income 2/
Bank-related accounts			
Interbank accounts 3/	1,882	9.9	181
Bank claims on nonbanks	760	10.9	80
Nonbank deposits in banks	673	8.4	52
Securities			
Bonds 4/	340	9.5	30
Equities	250	4.0	8
Official reserves (n.i.e.) 5/	296	8.5	24
Official loans 6/	200	4.5	9
Trade credits 7/	110	n.a.	n.a.
Total	4,510	8.9	382 8/

For sources and more details see Appendix E.

1/ Excluding direct investment.

2/ Based on outstanding amounts at beginning of year (totaling roughly $4,250 billion) and cross-border interest rates.

3/ Includes positions between deposit banks ($1,582 billion), claims of deposit banks on monetary authorities ($98 billion), and claims of monetary authorities on deposit banks ($198 billion).

4/ Excluding $110 billion of bonds that are held or issued by banks and included in bank-related accounts, and excluding securities that represent official reserves.

5/ Excluding claims on banks, but including securities, SDR holdings and reserve position in the Fund.

6/ Mostly World Bank and government loans, but also including Fund credits.

7/ Roughly 6 percent of world trade, presumably at no or very low interest.

8/ Reported flows plus adjustments derived in this chapter (see also Table 19).

Table 19. Portfolio Investment Income:
Summary of 1983 Adjustments

(In billions of U.S. dollars)

	Credits	Debits	Net
Reported in *Balance of Payments Statistics Yearbook*	214.4	246.4	-32.0
Adjustments	168.0	135.2	+32.8
of which:			
1. Revisions and reclassifications			
1.1 Questionnaire revisions 1/	44.9	41.6	+3.3
1.2 Reclassification of direct investment income	-0.5	0.2	-0.7
2. Adjustments based on banking data			
2.1 Industrial countries	13.1	6.5	+6.6
2.2 Swiss trustee accounts	8.5	8.5	0.0
2.3 Middle East oil exporters	1.5	1.5	+0.0
2.4 Other developing countries 2/	8.6	2.5	+6.1
2.5 Major offshore banking centers	51.6	48.7	+2.9
2.6 Unallocated positions	8.9	3.0	+5.9
3. Income on securities			
3.1 Bonds	13.3	5.9	+7.4
3.2 Equities	3.4	1.5	+1.9
4. Certain transactors not incorporated in *Yearbook*			
4.1 Eastern European non-IMF members	1.3	5.0	-3.7
4.2 International organizations	13.4	10.3	+3.1
Adjusted flows	382.4	381.6	+0.8

1/ Mainly a U.K. adjustment due to gross reporting which was not yet incorporated into the Fund's 1985 *Balance of Payments Statistics Yearbook*.
2/ Excluding major offshore banking centers.

In the adjustment procedure gross income credits and debits were both raised substantially above the reported amounts, mainly because data for interest received and paid by banks in certain international financial centers were obtained or estimated on a gross rather than net basis. However, that change in itself had little effect on the net result. Most of the total net adjustment of +$32.8 billion was accounted for by additional net credits attributable to claims on banks by nonbanks in a wide range of countries. Another sizable addition to net credits reflects the return on cross-border investments in bonds and equities. A considerable net credit was also determined to be appropriate for the international institutions themselves, since their accounts have not yet been integrated into the Fund's Balance of Payments Statistics Yearbook.

The Working Party has also attempted to establish the geographic distribution of the adjustments (see Table 20). However, the allocation by country grouping is inherently more conjectural than the over-all adjustments, as discussed in Section 2g of this chapter. The main impression that results from this exercise is that the addition of net credits is spread among many country groupings, with the exception of Eastern Europe. Moreover, a substantial amount of the 1983 adjustments cannot be allocated by area because the basic data (in this case the country distribution of banks' liabilities to foreign nonbanks) contain large unallocated elements. Finally, the adjustment procedures adopted for 1983 were applied to the entire 1979-84 period. As shown in Table 54, the discrepancies for those years could be reduced to minor amounts, except for 1980, where a sizeable net credit residual remains. Further analysis also indicates that these results would not be greatly affected by the adoption of a somewhat different range of yields to generate income flows.

Table 20. Allocation of Portfolio Investment Income Discrepancy by Areas 1/

(In billions of U.S. dollars; net amounts)

	Reported Data		Adjustments		Adjusted Data	
	1979	1983	1979	1983	1979	1983
Industrial countries	-0.9	-6.6	+3.8	+13.9	+2.9	+7.3
Middle East oil exporters	+12.0	+24.8	+1.1	+2.0	+13.1	+26.8
Major offshore banking centers	+0.1	+0.6	+2.5	+6.0	+2.6	+6.6
Other developing countries	-18.6	-50.7	+0.3	+5.5	-18.3	-45.2
Eastern European countries	--	--	-3.8	-3.7	-3.8	-3.7
International organizations	--	--	+2.3	+3.1	+2.3	+3.1
Unallocable	--	--	+1.3	+5.9	+1.3	+5.9
Total	7.3	-32.0	+7.5	+32.8	+0.2	+0.8

1/ For gross amounts (credits and debits separately) see Table 56.

2. Derivation of adjustments

The analytical process used in determining the adjustments derived in this chapter is a mixture of the application of the general principles outlined above and the working out of corrections for a variety of special situations. In practice this required approaching the problem from a number of directions, sometimes overlapping. For instance, one focus was on different groups of countries with distinctive reporting problems: industrial countries, oil-exporters, other developing countries (especially major debtors), and international financial intermediaries. Another focus was on the separation between direct-investment income and other income, and a third focus was on the two broad types of portfolio assets: banking positions and holdings of securities. The results of these various avenues of study are presented below in a somewhat simplified way, in order to describe the main lines of research rather than the details of each stage. Nevertheless, the underlying complexities should be borne in mind.

The first stage of research was to establish a credible base for either the debit or credit side of the income accounts--and for reasons already mentioned the debit side was chosen. Thus the Technical Staff began by analyzing the income debits on a country-by-country basis, using all the available information on the liabilities of each country and on the yields appropriate to each kind of debt. The results of that study are not given separately in the following material, but they are implicit in the adjustments shown for the income debits of various country groups and special situations. On balance, the re-estimation of bank-related and other portfolio income debits (excluding some grossing up) added about 15 percent to the debit amounts included in the Fund's world income tables. Having established an acceptable total for debits, the main task was to locate the gaps in the income credits as reported, by type and by geographic location to the extent possible.

a. Revisions and reclassifications

i. Revisions based on questionnaire

The data regularly reported to the Fund and published in the IMF Balance of Payments Statistics Yearbook, which are used as a starting point, are not always sufficiently detailed to permit adequate comparisons with other related data. Consequently, at the beginning of the study, a special questionnaire on investment income was sent to 61 countries that either already reported substantial amounts of investment income, or were assumed to have substantial cross-border assets or liabilities (see Appendix B). Responses to the questionnaire in many cases supplied new or revised data on investment flows and outstanding amounts of cross-border assets and liabilities. On balance, they increased income credits more than debits, as shown in Table 21. Among the larger revisions, the United Kingdom reported interest income related to the eurocurrency business gross on the questionnaire rather than net as in their balance of payments reports. While the grossing-up is now recognized in all U.K. balance of payments publications it had not yet been incorporated in the

Table 21. Revisions Indicated by Special Investment Income Questionnaire 1/

(In millions of U.S. dollars)

	1979			1983		
	Credits	Debits	Net	Credits	Debits	Net
Industrial countries						
Australia	0	0	0	-29	-162	+133
Austria	-28	-244	+216	-28	-202	+174
Belgium/Luxembourg	379	154	+255	264	132	+132
Canada	1,847	945	+902	3,225	2,319	+906
Denmark	158	282	-134	-222	-325	+103
France	-2	-4	+2	28	24	+4
Germany	2	-11	+13	-40	-46	+6
Italy	0	0	0	-59	-103	+44
Japan	-3	4	-7	-9	-1	-8
New Zealand	0	-40	+40	-11	-170	+160
Spain	-110	295	-405	6	13	-7
Sweden	196	-63	+259	3	5	-2
Switzerland	2,865	2,393	+472	-415	12	-427
United Kingdom	13,771	15,810	-2,039	40,452	39,208	+1,244
United States	19	20	-1	-21	-53	+32
Total	19,094	19,551	-457	43,144	40,651	+2,494
Developing countries						
Major offshore banking centers						
Bahamas	585	680	-95	1,547	1,625	-78
Singapore 2/	0	-740	+740	0	-1,540	+1,540
Middle East oil exporters	-227	-234	+7	-106	-416	+310
Other developing countries						
Egypt	2	0	2	177	3	174
Indonesia	172	523	-351	242	1,066	-824
Malaysia	0	0	0	0	-14	+14
Mexico	183	294	-111	75	144	-69
Nigeria	-5	308	-313	0	-1	+1
Peru	-14	71	-85	-12	-3	-9
Thailand	0	0	0	0	-114	+114
Venezuela	0	174	-174	0	0	0
Other	-24	-77	53	-157	199	-356
Total	672	999	-329	1,766	929	+837

1/ Differences between responses to special investment income questionnaire and the IMF Balance of Payments Statistics Yearbook data as published in 1985. Small differences also arise from the conversion of Yearbook data stated in SDRs into U.S. dollars.

2/ Representing a shift from non-direct to direct investment income debits, based on Fund staff estimates.

Fund's 1985 Balance of Payments Statistics Yearbook. The United Kingdom also revised the data on other private investment income, thereby contributing $1.2 billion of net credits. In addition, adjustments to Canadian data generate a net credit of $0.9 billion, reflecting the elimination of withholding tax from the debits and to a minor extent a more precise breakdown between direct/non-direct investment income. The gross transactions were also affected by the inclusion of foreign currency interest transactions of Canadian banks on a gross rather than a net basis. Other questionnaire responses indicated some reclassifications of data, e.g., for Singapore the Fund staff estimates a shift of $1.5 billion from non-direct investment income to direct investment income debits (for country details see Table 21). Unfortunately, it cannot always be determined to what extent revisions reported in the questionnaire represent reclassifications rather than new data.

Table 22. Summary of Questionnaire Revisions, 1983

(In billions of U.S. dollars)

	Credits	Debits	Net
United Kingdom	40.5	39.2	+1.2
Other industrial countries	2.6	1.4	+1.2
Developing countries	1.8	0.9	+0.8
Total	44.9	41.6	+3.3

ii. Reclassification of direct investment income data

Certain adjustments to the non-direct investment account reflect the reclassifications set forth in Chapter IV. Correction for misclassifications generates $0.7 billion of net non-direct investment income debits in 1983, and $2.3 billion net credits in 1979 (Table 23). These shifts do not affect the overall investment income, or the global current account. While it is likely that the "other investment income" still includes some "direct investment income" that cannot be identified, such flows are thought to be negligible on a net basis.

Table 23. Reclassification of Direct/Non-Direct Investment Income Data 1/

(In billions of U.S. dollars)

Adjustments	1979 Credits	1979 Debits	1979 Net	1983 Credits	1983 Debits	1983 Net
(1) Interest payments of the United States to Netherlands Antilles, reported as negative direct investment receipt in the U.S. balance of payments						
Direct investment income		negligible		+2.8	--	+2.8
Other investment income		negligible		—	+2.8	-2.8
(2) Direct investment income receipts, and payments, misallocated to other investment income 2/						
Direct investment income	+0.6	+2.9	-2.3	+0.5	+2.6 2/	-2.1
Other investment income	-0.6	-2.9	+2.3	-0.5	-2.6 2/	+2.1
Total: Direct investment income	+0.6	+2.9	-2.3	+3.3	+2.6	+0.7
Other investment income	-0.6	-2.9	+2.3	-0.5	+0.2	-0.7

1/ For further details see Chapter IV.
2/ Excluding the revisions in response to the questionnaire, which are already recognized in Table 22.

b. Adjustments based on banking data

i. Data sources

(a) IBS data on outstanding amounts

The largest net adjustments to reported portfolio income are based on the data for cross-border bank deposits of nonbanks as reported in international banking statistics (IBS), published by the Fund in its monthly International Financial Statistics. The IBS data cover more than 70 percent of the known world cross-border financial positions (excluding direct investment). The statistics on international (cross-border) banking positions have been developed by the BIS and the Fund. The BIS statistics, published quarterly in International Banking Developments, are based mainly on reports from banks in industrial countries and in offshore financial centers. In addition to that information, the Fund includes information on the cross-border bank accounts of almost all IMF member countries (as a part of the regular money and banking data supplied to the Fund). Moreover, the Fund supplements the data by using information on trustee accounts that are established by nonbanks and channeled through Swiss banks. The comprehensive results are published monthly in the Fund's International Financial Statistics (IFS); see Table 24.

The two main sectors of the banking data are (1) interbank positions and (2) nonbanks' deposits with and borrowing from banks. It appears that reporting by the banks themselves is usually comprehensive, and detailed analysis indicates that interest credits and debits of the banks themselves are fully incorporated into national balances of payments, either gross or net. The only major exceptions are the major offshore banking (MOB) centers, for which adjustments are required (Section 2b.vi of this chapter). That reporting by banks other than those of MOB centers is essentially accurate can be verified on the basis of the responses to the investment income questionnaire. Cross-border assets of banks in industrial countries reported in the Questionnaire totaled $1,583 billion at end-1983, and bank liabilities amounted to $1,554 billion. These amounts are consistent with data from other sources (mainly deposit banks' "total assets" and "total liabilities" as reported in IBS). Banks' reported interest income ($146 billion credits, and $136 billion debits) implies overall rates of return of 9.6 percent on the assets side, and 9.1 percent for the liabilities, leaving a spread of 0.5 percent (Table 25). Since these are plausible rates that are based on verifiable amounts outstanding, banks' interest income and expenditure as reported in the special questionnaires and presumably as reported in national balance of payments accounts appear to be acceptable.

Table 24. Summary of International Banking Statistics as Published by the IMF, end-1983

(In billions of U.S. dollars)

	IFS Tables on Cross-Border Bank Assets	IFS Tables on Cross-Border Bank Liabilities
(A) Deposit banks	2,445	2,461
(B) Interbank accounts	1,882	1,918
(C) Bank credit to nonbanks	760	—
(D) Bank deposits of nonbanks	--	673

Source: IFS, June 1986.

Coverage:

(A) Total cross-border assets and liabilities as reported by deposit banks of individual countries (including deposit banks' positions vis-à-vis monetary authorities). These tables exclude, however, cross-border positions as reported by monetary authorities. This series is used here primarily to check the interest income flows of developing countries.

(B) The "interbank accounts" refer to all cross-border positions between deposit banks, and also include all positions between deposit banks and monetary authorities. The tables exclude the positions between monetary authorities, however. Assets should equal liabilities, and to the extent they do not data are not yet quite consistent.

(C) Cross-border bank credits to nonbanks as reported by the lending banks. Data are shown separately by residence of lending banks (bank assets), and by residence of the borrowing nonbanks (nonbanks' liabilities derived from the reports of lending banks).

(D) Cross-border bank deposits of nonbanks as reported by the banks receiving the deposits. Data are shown separately by residence of borrowing banks (bank liabilities), and by residence of depositing nonbanks (nonbanks' deposits derived from the reports of borrowing banks).

Table 25. Cross-Border Positions and Interest Income of Banks of Industrial Countries, 1/ 1983

(In billions of U.S. dollars)

	Assets/ Credits	Liabilities/ Debits
Cross-border positions, end of year 2/	1,583	1,554
Interest income 2/	146	136
Implied rates of return (in percent) 3/	9.6%	9.1%

1/ Limited to questionnaire respondents; they account for 90 percent of the total cross-border bank positions of industrial countries.
2/ Source: Questionnaire responses.
3/ Interest income related to amounts outstanding at the beginning of the year.

While little correction is required for interbank interest flows, a major adjustment is required for interest paid to and received from banks by nonbanks. In the IBS tabulations, liabilities of banks vis-à-vis non-resident nonbanks totaled $673 billion at end-1983, including trustee accounts channeled through Switzerland and deposits held in MOB centers. Corresponding interest payments amount to approximately $52 billion (Table 26). Using country detail available in IBS tables and rates of return as indicated by market rates (see below), it is possible to check the income of nonbanks reported in balance of payments statements country by country. Since deposits in the banking data are allocated according to the residence principle, their definition is consistent with balance of payments procedures. However, since the banking statistics leave substantial amounts of nonbank accounts unallocated, it is likely that deposits allocated to individual countries and the derived interest attributed to the deposits are minimum amounts.

Table 26. Cross-Border Bank Deposits of Nonbanks, 1983

(In billions of U.S. dollars)

By residence of borrowing banks		By residence of depositors	
Switzerland 1/	108	Industrial countries	301
Other industrial countries	355	MOB centers	54
MOB centers	159	Other developing countries	164
Other developing countries	51	Eastern Europe	1
		International organizations	6
		Unallocated positions	147
Total	673	Total	673
Memorandum items:			
Interest rate (in percent) 2/	8.4%	Interest rate (in percent) 2/	8.4%
Interest payments of banks	52	Interest receipts of nonbanks	52

Source of amounts outstanding: IFS world tables.

1/ Including $83 billion in trustee accounts.
2/ See Table 27.

It is convenient, using the same data source, to check simultaneously the interest paid by nonbanks on their borrowing from banks. Nonbanks' interest payments to nonresident banks seem to be relatively well recorded in national balances of payments, but some adjustments are necessary. As a basis for estimating interest paid to banks by nonbanks, the IFS tables showing $760 billion of bank lending to nonbanks at the end of 1983 were used (Table 24).

(b) Derivation of interest rates

To check the reported interest income against estimated actual flows requires not only a solid record of outstanding amounts, but also some assumptions on the level and structure of interest rates. Obviously most of the interest flows are determined by market rates, allowing for a certain lag of rate adjustments and of actual payments, and taking into account the currency mix and the special characteristics of some areas (MOB centers). Interest rates related to bank positions are derived from the interbank rates (U.S. dollar, London). A six-month lag is applied since the actual rates on current positions with borrowers and depositors are only changed at agreed intervals and actual interest payments are usually due at the end of these periods. A further adjustment is made to allow for the currencies. Most of the cross-border positions

Table 27. Structure of Cross-Border Interest rates, 1979-85

(In percent per annum)

	1979	1980	1981	1982	1983	1984	1985
Derivation of bank interest rates							
Interbank rate, U.S. dollars 1/	12.1	14.0	16.7	13.6	9.9	11.3	8.6
Effective rate (6-month lag) 2/	10.4	14.0	15.5	16.0	10.3	10.5	9.8
Adjusted for currency mix 3/	9.8	13.4	14.9	15.4	9.9	10.0	9.3
Bank rates applied for estimates							
Interbank accounts	9.8	13.4	14.9	15.4	9.9	10.0	9.3
Claims on nonbanks	10.8	14.4	15.9	16.4	10.9	11.0	10.3
Liabilities to nonbanks	8.3	11.9	13.4	13.9	8.4	8.5	7.8
Special rates applied for MOB centers 4/							
Bank assets	10.7	14.3	15.8	16.3	10.6	10.8	10.1
Bank liabilities	10.1	13.7	15.2	15.7	10.0	10.2	9.5
Rates of return on securities 5/							
Bonds	7.7	7.9	8.3	8.9	9.5	9.7	10.0
Equities	4.8	4.8	4.7	5.0	4.0	4.0	n.a.

1/ London interbank offer rates on U.S. dollar deposits (six months).

2/ Taking into account that rates vis-à-vis nonbanks are adjusted with a lag and interest payments are due at the end of each basis period.

3/ Roughly 10 percent of cross-border bank accounts is denominated in deutsche mark, Swiss francs, yen, and pound sterling.

4/ Positions are almost exclusively in U.S. dollars and spreads are assumed to be smaller.

5/ For more details see Tables 42 and 46.

are denominated in U.S. dollars, but 10 to 12 percent is in currencies that usually bear lower interest rates (deutsche mark, Swiss francs, Japanese yen). Therefore, on average, a downward adjustment of roughly 0.5 percent is necessary (see Table 27).

The resulting rate is taken as a basis for calculating the actual bank rates. Vis-à-vis nonbank borrowers a positive spread of 1 percent is assumed, vis-à-vis depositors a negative spread of 1.5 percent. Related to the positions of MOB center banks it is assumed that the spreads are smaller and all positions are in U.S. dollars.

Derived rates used for estimates are slightly above the rates of return implied in the questionnaire responses (see Table 25). Questionnaire rates may be distorted by some net reporting and banks of the responding countries (including Germany, Japan, and Switzerland) have presumably an above-average share of low-interest currencies in their cross-border positions.

ii. Industrial countries

While analyzing the interest related to banking positions it is useful to deal separately with industrial countries and developing countries, which are here divided into Middle East oil exporters, major offshore banking centers, and other developing countries. The over-view for the estimated income of industrial countries is given in Table 28; country details are given in Table 29, and similar information on the debit side is shown in Table 30.

Table 28. Industrial Countries:
Summary of Nonbanks' Cross-Border Bank
Deposits and Related Income Credits, 1983

(In millions of U.S. dollars)

Nonbanks' bank deposits (end of year)	
Reported in Questionnaire	n.a.
Reported in IFS world table	301.0
Interest income	
Reported to the Fund 1/	10.2
Alternative estimate	23.3
Adjustment	+13.1

1/ Calculated on the basis of details given in questionnaire responses.

Cross-border bank deposits of industrial countries' nonbanks totaled $301 billion at end-1983, generating interest income credits of at least $23 billion (calculated on the basis of average outstanding amounts and cross-border interest rates; Table 28). Questionnaire responses indicate that at most $10 billion is reported in national balances of payments. Wherever detailed figures for interest from banks were not shown separately in the questionnaire an estimate was made of the amount included, assuming for this purpose a questionnaire coverage of bank-related income as broad as possible. Consequently, the partly estimated $10 billion of credits shown for the Questionnaire responses tends to over-state the actual reported amount of interest receipts on bank deposits, because it may in fact include some other portfolio income. Therefore, the indicated adjustment of $13.1 billion is likely to represent a minimum.

The greatest absolute difference occurs for the United States. According to national data reported in the Questionnaire, U.S. nonbanks' cross-border bank deposits totaled $52.8 billion at end-1983, generating $5.3 billion of interest credits. However, international banking statistics show $168 billion of U.S. nonbank deposits, which would yield about $13 billion of interest income (Table 29). The indicated credit adjustment of $7.7 billion is partly offset by about $4 billion of underreporting on the debit side (Table 30). Most other countries also understate interest receipts of nonbanks, although to a lesser extent and in most cases by not more than $1 billion. For instance, missing income for Belgium/Luxembourg, France, Germany, Italy, the Netherlands, Spain, and the United Kingdom may be estimated at between $0.4 and $0.8 billion each (Table 29), and the adjustment for Switzerland is $1.6 billion. Swiss nonbanks' deposits with foreign banks (excluding trustee accounts which are channeled through Swiss banks) totaled $23.8 billion at end-1983, but corresponding interest receipts are not yet included in the Swiss balance of payments.

In many cases, nonbanks' interest income is omitted by national authorities because the receipts are not recorded by the exchange control system. In other cases under-reporting occurs because income estimates are based on domestically reported assets only; the United States, for instance, uses a reporting system that mainly covers large multinational companies that can easily be identified. Still other countries (Germany, the Netherlands, and Japan) rely on individual income reports from nonbanks, but even these extensive systems leave gaps.

The under-reporting of credits is partly offset by under-reporting of interest payments on nonbanks' borrowing from non-resident banks. Unfortunately, verifying these debits is much more difficult than checking the credits. Questionnaire responses were less detailed on the debit side and data reported by national authorities systematically differ from information derived from the international banking statistics. Banks' reported cross-border claims on nonbanks include claims on official agencies, and also include some bonds, so that there may be some overlapping in the estimates. With these limitations in mind, it appears that interest payments of industrial countries' nonbanks to foreign banks

Table 29. Industrial Countries: Nonbanks' Cross-Border Bank Deposits and Related Income Credits, 1983

(In billions of U.S. dollars)

	Nonbanks' Deposits		Interest Income Credits	
	Reported in questionnaire	IFS world table 1/	Reported in questionnaire	Staff estimate 6/
Austria	n.a.	1.3	0.10 5/	0.12
Belgium/Luxembourg	4.2	10.5	0.35 5/	0.98
Denmark	n.a.	0.4	0.04 5/	0.04
Finland	n.a.	0.3	n.a.	0.02
France	n.a.	11.8	0.60 5/	1.03
Germany	2.3	10.5	0.20 5/	0.80 7/
Ireland	n.a.	1.4	0.11 5/	0.11
Italy	n.a.	10.6	0.22	0.90
Netherlands	n.a.	10.2 2/	0.40	0.65
Norway	1.1	1.3	0.12	0.12
Spain	n.a.	5.2	--	0.40
Sweden	n.a.	0.8	0.08 5/	0.08
Switzerland	-- 3/	23.8 4/	-- 3/	1.60 7/
United Kingdom	19.8	20.5	1.37	1.40
Australia	n.a.	0.9	0.09 5/	0.09
Canada	n.a.	11.4	0.94	0.94
Japan	n.a.	2.0	0.18 5/	0.18
United States	52.8	167.9	5.30	13.00 8/
Not specified	n.a.	10.0	0.10 5/	0.80
Total	n.a.	300.7	10.2	23.3

1/ Restricted to geographically allocated deposits which represent minima because a considerable part of total deposits cannot be allocated.

2/ Includes deposits of Dutch special financial institutions.

3/ Amounts as given in the questionnaire response solely represent the cross-border trustee accounts established by Swiss residents through Swiss banks. These accounts are excluded from the table to make data comparable to IFS numbers (see also footnote 4).

4/ Excluding $11 billion trustee accounts established by Swiss residents. For interest flows related to trustee accounts see Table 14.

5/ The response to the questionnaire does not give this breakdown, but a maximum allocation to interest received from banks has been made.

6/ Based on outstanding amounts (beginning of year) and cross-border interest rates.

7/ Assuming a relatively high share of low-interest-bearing domestic currency.

8/ Assuming that almost all deposits are denominated in U.S. dollars.

Table 30. Industrial Countries: Nonbanks' Cross-Border Liabilities vis-à-vis Banks and Related Income Debits, 1983

(In billions of U.S. dollars)

	Nonbanks' Liabilities			Interest Income Debits		
	Reported in questionnaire 1/		IFS	Reported in questionnaire 2/		Alternative
	Official	Private	world table	Official	Private	estimate 3/
Austria	(5.3)	4.1	3.6	(0.42)	(0.33)	...
Belgium/Luxembourg	(20.2)	1.0	12.0	(1.81)	(2.39)	...
Denmark	(15.1)	10.3	12.4	(1.31)	(0.84)	...
Finland	4.2	4.7	4.4	0.37	0.50	...
France	(12.3)	18.8	16.4	(0.55)	(2.03)	...
Germany	(34.9)	27.2	40.7	(2.62)	(2.04)	...
Ireland	n.a.	n.a.	5.5	n.a.	0.60 4/	...
Italy	(1.2)	40.5	22.7	(1.02)	(2.27)	...
Netherlands	(5.2)	1.6	6.8	(0.01)	(1.24)	...
Norway	(2.8)	n.a.	7.3	(0.27)	(1.43)	...
Spain	(3.6)	20.1	16.4	0.89	(0.07)	...
Sweden	(16.4)	n.a.	10.6	(1.50)	(0.88)	...
Switzerland	0.0	n.a.	7.7	0.00	(0.00)	0.60
United Kingdom	(27.7)	15.6	16.0	1.41	1.84	...
Australia	(7.3)	1.0	17.5	(0.58)	(1.77)	...
Canada	1.5	5.9	10.6	0.25	0.78	...
Japan	(32.1)	n.a.	11.3	(1.30)	(2.00) 5/	...
United States	10.2	10.4	58.0	0.68	1.79	6.20
Not specified 6/	--	--	6.4	0.10	0.60	...
Total	(195.0)	(150.4)	286.2	(15.1)	(23.4)	45.0

1/ Line 57 (if not available, in parentheses: line 56), and line 66. See copy of questionnaire in Appendix B.

2/ Line 26 (if not available, in parentheses: line 23), and line 14 (if not available, in parentheses: line 13), i.e., responses to the questionnaire are not sufficiently detailed, and data may include interest payments other than those to non-resident banks.

3/ For Switzerland and the United States, based on amounts outstanding at beginning of period (IFS) and cross-border interest rates. For all other countries, missing debits in total are roughly estimated at 10 percent of reported debits.

4/ Amount presumably included in Yearbook data.

5/ Fund staff estimate.

6/ Mainly representing New Zealand.

are understated by $6-7 billion (Table 30). Again, the largest missing amount is allocated to the United States ($3.7 billion). U.S. nonbanks' liabilities vis-à-vis foreign banks are reported at $20 billion at end-1983 in the national statistics, but the international banking statistics show $58 billion. Moreover, Switzerland seems to omit the interest payments of nonbanks to non-resident banks. For all other countries the upward adjustment is estimated at $2.2 billion (i.e., roughly 10 percent of the actual payments) but Questionnaire responses do not give a sufficient basis for allocations by country. Part of the debit adjustments may compensate for over-adjusted receipts if countries partly report on a net basis, e.g., as in the case of the Netherlands. Under-reporting on the debit side is clearly on a smaller scale, but here too there is probably some evasion of exchange control records, and methods that rely on reports by individuals probably have gaps, especially where there are exemption limits.

iii. Swiss trustee accounts

Trustee accounts channeled through Switzerland are mainly established by non-Swiss nonbanks, and the funds are held by Swiss banks as deposits in non-resident banks. While interest rate and exchange rate risks fall entirely on the depositing nonbanks, interest income is free of withholding tax, which is normally 35 percent if deposits are held directly in Swiss banks. The volume of such accounts totaled $94 billion at end-1983, of which 12 percent was held by Swiss residents, and 88 percent ($83 billion) by non-resident nonbanks (see Table 31). The Swiss trustee accounts are fully integrated into the international banking statistics that are published by the Fund and that serves as a basis for estimating missing income credits. However, the net adjustment of the world investment income is zero insofar as Switzerland is concerned.

Switzerland publishes information on trustee accounts (including a regional breakdown), but since these accounts are not in their balance sheets Swiss banks do not include them in their regular reports on cross-border positions. On the other hand, banks of other countries fully include Swiss trustee accounts in their reports under "liabilities vis-à-vis Swiss banks", because they are unable to separately identify those liabilities which are related to the Swiss trustee business. As a result, non-adjusted interbank accounts imply a certain asymmetry, with interbank liabilities vis-à-vis Switzerland approximately $100 billion higher than interbank assets of Swiss banks. However, in the Fund's international banking statistics, the trustee accounts are treated as if they were balance sheet items of Swiss banks. They are added to the interbank assets reported by Swiss banks and thereby equate these positions with other reporters' interbank liabilities vis-à-vis Switzerland. Moreover, Swiss banks' liabilities vis-à-vis non-resident nonbanks are raised by $83 billion to $108 billion. Correspondingly, these amounts are also reflected in the derived IFS world table on "cross-border bank deposits of nonbanks by residence of depositor".

Table 31. Swiss Trustee Accounts, Stocks and Related Interest Flows

(In billions of U.S. dollars)

	1979	1983
Outstanding Amounts (end of year)		
Swiss banks' trustee assets constituting balance sheet liabilities of non-resident banks	53.3	94.0
of which:		
Established by Swiss residents	9.1	11.0
Established by non-residents	44.2	83.0
Interest flows		
Swiss banks' interest receipts from non-resident banks	5.2	9.0
of which:		
Passed on to Swiss residents 1/	0.4	0.5
Passed on to non-residents	4.8	8.5

1/ Net receipts entered into the Swiss balance of payments. Liechtenstein is considered resident.

Swiss banks' interest receipts on trustee accounts held with non-resident banks totaled \$9 billion in 1983, of which \$8.5 billion was passed on to non-residents, and \$0.5 billion to Swiss residents (Liechtenstein is considered resident). The amount of \$0.5 billion is entered into the Swiss balance of payments under "investment income" (and commission fees are included under "other services"). As far as Switzerland is concerned, no further (net) adjustment is necessary. The gross amount of interest income which is channeled through Switzerland (\$8.5 billion in 1983) may be regarded as a "memorandum item" that is useful when using the international banking statistics since those statistics as published in IFS fully integrate the trustee accounts.

The real problem is to adjust for the non-reported interest income of the beneficial owners of the trustee accounts. This, however, does not affect the Swiss balance of payments, but only the creditor countries to which these accounts have to be allocated. This is taken into account in the corresponding discussion of nonbanks' receipts on deposits with banks.

iv. Middle East oil exporters

For this discussion, this grouping includes Iran, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. It is an analytical grouping used in the Fund's World Economic Outlook, and consists of those Middle East countries that, over a relatively long period, had sustained current account surpluses from oil and thereby accumulated a considerable amount of foreign assets. End-1983 total gross assets of this group, emerging from current account surpluses and borrowing from non-residents, are estimated at \$350 billion (Table 32). Reported investment income of Middle East oil exporters (roughly \$26 billion) is rather difficult to verify, since these countries do not give much information on outstanding amounts or on the methods of estimating income. However, some data are published in the IFS world tables on foreign exchange and international banking assets of residents of these countries, and valuable estimates have been made by the Bank of England (published, for instance, in its Quarterly Bulletin, March 1985). Moreover, discussions with authorities indicate that most of the Middle East oil exporters do not include in their balance of payments the cross-border investment income of private nonbanks.

Table 32. Middle East Oil Exporters: Foreign Assets and Related Income Estimates, 1983

(In billions of U.S. dollars)

Total foreign assets 1/	350
Official foreign exchange	34
Reserve position in the Fund	11
Bank assets	45
Nonbanks' bank deposits	48
Securities held by SAMA	90
Unidentified foreign assets 2/	121
Reported interest income	26.5
Estimated interest income	30.0
Adjustment	+3.5
of which:	
related to bank accounts	+1.5
related to security holdings	+1.3
related to other investment	+0.7

1/ Estimate based on cumulated current account balances (1972 through 1983) and borrowing from non-residents.

2/ Unidentified securities, property, real estate and lending to developing countries.

One third of the estimated $350 billion gross assets can be precisely identified with some confidence: according to IFS data, $34 billion is held in official foreign exchange, $45 billion represents assets of banks, and there are $48 billion of nonbanks' bank deposits. An additional $90 billion is held in securities, according to data for Saudi Arabia, as published by the Saudi Arabian Monetary Agency (SAMA). Roughly $120 billion is by implication held in other assets, i.e., securities other than official Saudi holdings, real property, and direct investment, or credits to developing countries (see Table 32).

Middle East oil exporters report $26.5 billion of non-direct investment income. Taking into account that Libya, Qatar and Saudi Arabia report their investment income on a net basis, an appropriate amount has to be added to compensate for the subtracted debits (roughly $1 billion). Resulting receipts ($27.5 billion) related to outstanding assets imply a rate of return of some 8 percent. This is not too low compared to prevailing market rates and taking into account that lending to developing countries bears interest at concessional terms. Moreover, a country-by-country analysis does not reveal larger inconsistencies (Table 33). However, it is known that interest receipts of private nonbanks are not recorded and that particularly the interest income of the United Arab Emirates seems to be clearly understated ($2.2 billion receipts, while assets derived from current account surpluses and outstanding liabilities may be estimated at $65 billion). The U.A.E. balance of payments appears to cover neither private capital outflows nor private interest receipts. For the latter roughly $2 billion has to be added. The over-all adjustment for oil exporters' unrecorded interest receipts (on bank accounts, securities, and other investment) is tentatively estimated at $3.5 billion. However, these adjustments do not attempt to account for the external assets and income that may not be shown in these countries' reported international accounts.

According to OECD data, Middle East oil exporters' liabilities total $54 billion, of which $40 billion is bank-related (Table 34). The adjustment of $1.5 billion is the result of estimating reasonable payments in relation to outstanding liabilities. Presumably most of the adjustment represents payments of private nonbanks that are omitted from balance of payments recording.

v. Other developing countries 1/

Balance of payments reporting of nonbanks' interest receipts is also incomplete in the developing countries, and there is a smaller shortfall in reported debits. While estimates for individual countries as implicit in Tables 35 and 36 are based on geographically allocated positions, considerably more assets may be included in unallocated bank positions or are implicit in receipts on securities. Taking this into account, the asset base implicit in these calculations may not be very far below some of the estimates of accumulated capital outflows (see Appendix F).

1/ Excluding MOB centers and Middle East oil exporters.

Table 33. Middle East Oil Exporters: 1/
Cross-Border Assets and Related Non-Direct Investment Income Credits, 1983

(In billions of U.S. dollars)

	Reserves and Bank-Related Assets 2/					Estimated Total Gross Assets 4/	Non-Direct Investment Income	
	Foreign Exchange	Reserve Position in Fund 3/	Banks	Nonbanks' Deposits	Total		Reported to IMF 5/	Staff estimate 6/
Iran	4.4	0.1	2.3	2.4	9.2	11	n.a.	1.0
Iraq	n.a.	—	n.a.	0.6	n.a.	6	n.a.	0.5
Kuwait	4.4	0.7	12.4	4.7	22.2	85	5.69	6.0
Libya	4.9	0.3	0.7	0.7	6.3	14	0.68 8/	0.7
Oman	0.7	--	0.8	0.6	2.1	6	0.31	0.4
Qatar	0.3	--	1.1	1.1	2.5	12	n.a.	0.8
Saudi Arabia	17.5 7/	9.6	17.9	22.5	67.5	150	15.87 8/	15.9
U.A.E.	1.8	0.2	10.1	6.9	19.0	65	n.a.	4.0
Not specified	--		--	8.7	8.7	--	--	0.7
Total	34.0	11.1	45.3	48.2	138.1	350	26.5	30.0 9/

1/ Country grouping according to the Fund's World Economic Outlook.
2/ IFS world tables on reserves and international banking.
3/ Includes purchased SDRs.
4/ Based on cumulated current accounts and borrowing from non-residents. Includes all kinds of cross-border assets, i.e., reserves, bank-related assets, lending to developing countries, portfolio investment, direct investment, and real estate.
5/ According to IMF Balance of Payments Statistics Yearbook, Part 2, and questionnaire revisions.
6/ Based on average outstanding amounts and cross-border interest rates.
7/ Does not include foreign securities held by SAMA that amount to roughly $90 billion.
8/ Credits are reported on a net basis.
9/ Total adjustment is $3.5 billion, of which an estimated $1.5 billion may be related to nonbanks' bank deposits, $1.6 billion to holdings of securities, and $0.4 billion to other investments.

Table 34. Middle East Oil Exporters: 1/
Cross-Border Liabilities and Related Non-Direct Investment Income Debits, 1983

(In billions of U.S. dollars)

	Total Cross-Border Liabilities 2/	Bank-Related Liabilities 3/		Interest Income Debits	
		Liabilities of banks	Liabilities of nonbanks 4/	Reported to IMF 5/	Staff estimate 7/
Iran	7.6	2.0	0.9	n.a.	0.30
Iraq	6.6	n.a.	1.4	n.a.	0.15
Kuwait	10.3	8.8	3.7	0.68	1.20
Libya	2.9	0.2	0.4	-- 6/	--
Oman	1.5	0.6	0.7	0.06	0.15
Qatar	0.8	0.3	0.3	n.a.	--
Saudia Arabia	14.1	1.9	7.6	-- 6/	--
U.A.E.	10.4	7.2	2.4	n.a.	1.00
Not specified	--	--	1.8	--	0.20
Total	54.2	21.0	19.2	1.5	3.0

1/ Country grouping according to the Fund's World Economic Outlook.
2/ OECD estimates, including trade credits.
3/ IFS world tables on international banking.
4/ Vis-à-vis non-resident banks.
5/ According to IMF Balance of Payments Statistics Yearbook, Part 2, and questionnaire revisions.
6/ Netted against credits (Table 33).
7/ Based on average outstanding amounts and cross-border interest rates.

Table 35. Other Developing Countries: Outstanding Assets and Adjustment of Income Credits, 1983

(In billions of U.S. dollars)

Foreign assets (end of year)	
Official foreign exchange	92
Reserve position in the Fund	3
Bank assets	70
Nonbanks' bank deposits	116
Total	281
Estimated interest income	23.8
Reported interest income	15.2
Adjustment	8.6

To estimate missing interest income of developing countries (excluding MOB centers and Middle East oil exporters) the procedure is somewhat different from the case of industrial countries. In the balances of payments as well as in the questionnaire responses, the income is usually not reported in detail. Therefore, total other investment income of individual countries is compared with the income estimated on the basis of total foreign assets, i.e., official foreign exchange, plus bank assets, plus nonbanks' bank deposits (Table 36). It is not likely that developing countries have large assets in forms other than bank claims for which the host countries might record an income debit. Some additional assets, however, are implied in the calculations for missing income receipts on cross-border security assets (sections 2c and 2g of this Chapter).

Few countries report amounts close to the estimated figures. Mexico employs the IFS world table as a basis for its income estimates, and no sizable adjustment is necessary. Nevertheless, the largest differences occur in Latin America ($3.4 billion). Some unreported receipts can only be allocated by area, not by individual country, e.g., "other Asia" (more than $1 billion). Some countries seem to ignore nonbanks' assets entirely, e.g., Liberia and Greece, while Lebanon does not report at all. Estimates for Lebanon are incorporated in the IMF Balance of Payments Statistics Yearbook, Part 2, but these do not cover income on nonbanks' deposits in foreign banks. No income data at all are reported for Bermuda, but Bermuda contributes at least $0.9 billion of income credits to the adjustments; banks' and nonbanks' foreign assets total $11 billion and seem to be related to offshore businesses (see Chapter VI). (In IFS, Bermuda is not classified as a "major offshore banking center".)

Table 36. Developing Countries: 1/
Cross-Border Assets and Related Other Investment Income Credits, 1983

(In billions of U.S. dollars)

	Reserves and Bank-related Assets 2/					Interest Income Credits	
	Foreign Exchange	Reserve Position in the Fund 3/	Banks	Nonbanks' deposits	Total	Reported to IMF 4/	Staff estimate 5/
Algeria	1.6	—	0.4	0.5	2.5	0.18	0.25
Liberia	0.0	—	0.0	3.7	3.7	0.00	0.30
Nigeria	1.0	—	0.6	1.4	3.0	0.07	0.30
South Africa	0.7	—	0.6	2.9	4.2	0.23	0.30
Other Africa	3.0	0.2	2.2	6.6	12.0	0.47	1.00
China	14.3	0.2	—	0.4	14.9	1.42	1.42
Indonesia	3.6	0.1	4.6	0.5	8.8	0.60	0.60
Korea	2.2	0.1	4.8	0.2	7.3	0.54	0.65
Malaysia	3.5	0.2	2.3	1.2	7.2	0.54	0.54
Other Asia	22.6	0.8	11.4	11.2	46.0	2.77	3.88
Greece	0.8	0.1	1.4	5.0	7.3	0.08	0.60
Portugal	0.4	—	1.7	2.6	4.7	0.13	0.40
Yugoslavia	0.9	0.1	1.9	0.3	3.2	0.18	0.27
Other Europe	4.7	0.1	1.5	3.8	10.1	0.43	0.90
Egypt	0.7	—	9.1	2.1	11.9	0.50	1.00
Israel	3.6	—	6.9	2.9	13.4	1.41	1.41
Lebanon	1.9	—	3.3	5.0	10.2	0.38	0.90
Other Middle East	1.5	—	3.5	1.9	6.9	0.29	0.60
Argentina	1.2	—	1.2	7.9	10.3	0.44	0.75
Bermuda	—	—	3.6	7.5	11.1	—	0.90
Brazil	4.4	—	2.3	8.1	14.8	0.71	1.00
Chile	2.0	—	0.8	2.1	4.9	0.19	0.40
Colombia	1.4	0.3	0.4	2.6	4.7	0.27	0.40
Mexico	3.8	0.1	0.9	12.7	17.5	1.36	1.57
Peru	1.4	—	0.3	1.2	2.9	0.12	0.25
Venezuela	6.4	0.9	1.3	10.9	19.5	1.50	1.60
Other Western Hemisphere	4.7	0.2	2.5	11.2	18.6	0.40	1.60
Total	92.3	3.3	69.5	116.2	281.3	15.20	23.80

1/ Excluding Middle East oil exporters and major offshore banking centers.
2/ IFS world tables on international banking.
3/ Includes purchased SDRs.
4/ According to IMF Balance of Payments Statistics Yearbook, Part 2, and questionnaire revisions.
5/ Based on outstanding amounts (beginning of period) and cross-border interest rates.

As a result, total interest income of developing countries (excluding MOB centers and Middle East oil exporters) may be estimated at $23.8 billion, compared to a reported income of $15.2 billion. The adjustment of $8.6 billion is almost entirely related to nonbanks' deposits in foreign banks; a series of case studies established that interest income on official exchange and bank assets is reported rather comprehensively.

Developing countries' missing income credits are only partly offset by missing income debits. Reported debits generally appear to be accurate; reporting has improved, as attention in recent years has been focused on debt problems, rescheduling procedures, and the interest burden. Outstanding debt of developing countries totaled more than $800 billion at end-1983 (Table 37). Interest payments reported to the Fund amounted to $66.9 billion. However, in some individual cases, reporting seems inadequate. For instance, Liberia omits interest paid by nonbanks on their $8 billion liabilities vis-à-vis foreign banks that is probably used to finance shipping investments. Thus, in the case of Liberia, $0.7 billion is added for non-reported interest debits. In addition, and partly for similar reasons, debits have to be supplemented for Bermuda, Greece, Portugal, Nigeria, and Lebanon (Table 37). As a result, total interest debits of developing countries are increased by $2.6 billion to $69.5 billion. The implied rate (roughly 9 percent) is below the lending rate of banks, but consistent with other information according to which a substantial part of loans is given at concessional terms.

vi. Major offshore banking centers

Major offshore banking (MOB) centers are financial centers characterized by extensive external activities of banks that are not really integrated into the domestic economies, and whose external business is usually disregarded for balance of payments reporting (see Chapter VI). According to the IFS definition, there are seven MOB centers: Hong Kong, Singapore, Bahrain, the Bahamas, the Cayman Islands, the Netherlands Antilles, and Panama. The balance of payments reporting of the MOB centers is usually either incomplete or, as in the case of Hong Kong and the Cayman Islands, nonexistent. Even if non-reported amounts are small in net terms, adjustments of individual categories of income are useful, since the offshore centers transform the character of many transactions and global non-reporting creates discrepancies at least in various income categories. In addition to the banks there are nonbank offshore companies that receive income on investments and for insurance and shipping services, and, on the debit side, pay interest on borrowings and transfer direct investment income to their head offices.

Some estimates of investment income can be made on the basis of available banking statistics. Cross-border positions of banks in MOB centers, i.e., assets as well as liabilities, amounted to well over $500 billion at end-1983 (Table 38). On the basis of average amounts outstanding and prevailing cross-border market rates (see Table 27), interest credits of banks in these centers may be estimated at $55 billion in 1983, and interest debits at $51 billion, generating $4 billion of net

Table 37. Developing Countries: 1/
Cross-Border Liabilities and Related Other Investment Income Debits, 1983

(In billions of U.S. dollars)

	Total Cross-Border Liabilities 2/	Use of Fund Credit 4/	Bank-related Liabilities 5/		Interest Income Debits	
			Liabilities of banks	Liabilities of nonbanks 6/	Reported to IMF 7/	Alternative estimate 8/
Algeria	17.9	—	2.1	6.7	1.41	...
Liberia	0.9 3/	0.2	0.0	8.4	0.10	0.84
Nigeria	13.2	0.1	0.4	7.6	0.60	0.80
South Africa	22.4	1.0	1.6	11.5	1.53	...
Other Africa	74.4	6.6	3.3	16.5	3.70	...
China	9.6	—	n.a.	0.8	0.30	...
Indonesia	30.6	0.6	1.0	13.0	1.34	...
Korea	42.8	1.4	18.5	11.8	3.33	...
Malaysia	16.5	0.3	3.0	8.5	0.93	...
Other Asia	101.8	9.0	19.6	19.9	6.29	...
Greece	14.9	0.1	6.6	5.3	0.84	1.20
Portugal	14.7 3/	0.4	6.6	9.3	1.18	1.60
Yugoslavia	19.9	2.3	7.9	3.3	1.71	...
Other Europe	38.0	3.2	9.9	6.4	3.20	...
Egypt	26.5	0.1	6.7	2.8	1.00	...
Israel	20.4	0.1	10.9	2.7	2.50	...
Lebanon	1.0 3/	—	1.6	1.0	0.05	0.30
Other Middle East	10.0	—	2.6	1.1	0.32	0.50
Argentina	41.0	1.5	7.8	19.1	5.42	...
Bermuda	0.5 3/	—	1.0	3.1	—	0.40
Brazil	98.3	3.0	24.0	49.1	10.26	...
Chile	19.5	0.7	6.3	6.5	1.81	...
Colombia	11.7	—	2.1	5.4	1.01	...
Mexico	93.2	1.6	33.2	56.7	10.43	...
Peru	12.9	0.8	0.4	3.8	1.11	...
Venezuela	30.0	—	2.9	22.7	3.43	...
Other Western Hemisphere	37.4	2.8	3.6	12.3	3.10	...
Total	820	35.8	184.0	315.2	66.90	69.50

1/ Excluding Middle East oil exporters and major offshore banking centers.
2/ Including trade credits (roughly 11 percent). Source: OECD.
3/ OECD data cover only part of the liabilities.
4/ Also includes the amounts by which SDR holdings are below SDR allocations.
5/ IFS world tables on international banking.
6/ Vis-à-vis non-resident banks.
7/ According to IMF Balance of Payments Statistics Yearbook, Part 2, and questionnaire revisions.
8/ Based on outstanding amounts (beginning of period) and cross-border interest rates.

Table 38. Major Offshore Banking Centers: 1/
Cross-Border Bank Positions and Related Interest Income

(In billions of U.S. dollars)

	1979	1980	1981	1982	1983	1984	1985
Cross-border positions 2/							
Official Foreign Exchange	6.6	7.7	9.3	10.2	11.0	12.0	14.7
Bank assets	293	375	482	519	546	564	596
Bank liabilities 3/	283	367	473	509	539	553	578
Nonbanks' deposits 4/	23	30	38	47	54	59	65
Nonbanks' liabilities 4/	16	20	25	31	32	33	44
Estimated interest flows 5/							
Official Foreign Exchange	0.7	0.9	1.4	1.3	1.0	1.2	1.1
Bank assets	25.8	41.9	59.3	78.6	55.1	59.0	57.0
Bank liabilities	24.2	38.8	55.8	74.3	50.9	54.9	50.6
Nonbanks' assets	1.5	2.7	4.0	5.3	3.9	4.6	4.6
Nonbanks' liabilities	1.4	2.3	3.2	4.1	3.4	3.5	3.4
Total credits	28.0	45.5	64.7	85.2	60.0	64.8	62.7
debits	25.6	41.1	59.0	78.4	54.3	58.4	54.0
net	2.4	4.4	5.7	6.8	5.7	6.4	8.7
Reported interest flows 6/							
Credits	3.6	6.4	8.7	8.6	8.4	7.2	n.a.
Debits	2.0	6.3	8.1	8.2	5.6	6.5	n.a.
Net	1.6	0.1	0.6	0.4	2.8	0.7	n.a.
Adjustments							
Credits	24.4	39.1	56.0	76.6	51.6	57.6	--
Debits	23.6	34.8	50.9	70.2	48.7	51.9	--
Net	0.8	4.3	5.1	6.4	2.9	5.7	--

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

2/ Source: International Financial Statistics (IMF), June 1986.

3/ Liabilities of Hong Kong banks vis-à-vis non-resident nonbanks are not reported and therefore not included.

4/ Vis-à-vis non-resident banks.

5/ Based on outstanding amounts (beginning of year) and cross-border interest rates (see Table 27).

6/ Balance of payments transactions according to the IMF Balance of Payments Statistics Yearbook, Part 2, 1985, plus, for 1979 and 1983, questionnaire revisions and reclassifications.

credits. Probably there is not much net return from the pure interbank accounts, or only to the extent that money is borrowed from, and lent to, smaller banks. On the other hand, business with non-resident nonbanks, roughly one third of the total, is certainly more profitable. Much of the business may be the channeling of funds from the non-resident head offices of banks to non-resident nonbanks, and vice versa.

There is probably also some net interest income of nonbanks located in the MOB center economies, as well is interest payments for those that are shipping centers. Cross-border bank deposits of offshore nonbanks (mainly in Hong Kong and Panama) totaled $54 billion at end-1983, and offshore nonbanks' liabilities to non-resident banks amounted to $32 billion. Taking into account that nonbanks' deposits bear a lower interest rate than nonbanks have to pay for their borrowings, net interest credits of private offshore nonbanks may be estimated at $0.5 billion ($3.9 billion credits and $3.4 billion debits). In addition to the interest receipts of nonbanks there is some interest income on official foreign exchange reserves generating $1.0 billion of receipts.

The net total of private non-direct investment income of the seven MOB centers is estimated at $5.6 billion ($4.2 billion for banks, and $1.4 billion for private nonbanks, including $0.9 billion income on securities). That amount seems plausible if compared to available information on direct investment income. The United States, the United Kingdom, the Netherlands, and Germany include a total of $5.0 billion of direct investment income credits received from MOB centers in 1983. Assuming that these four countries account for a direct investment proportion in the MOB centers that is similar to their world proportion (roughly 80 percent), another $1 billion for corresponding income not reported by other recipients can be added, resulting in $6 billion of direct investment income flowing from MOB centers to head offices somewhere else (Table 39). Information made available for the U.S. investments indicates that roughly 40 percent of this income stems from banks, and 60 percent from nonbanks. If this proportion is applied to the total, $2.5 billion of direct investment income debits can be allocated to banks, and $3.5 billion debits to nonbanks. As a result, net interest income credits of MOB center banks ($4.2 billion) exceed what is credited to head offices ($2.5 billion direct investment income) by $1.7 billion. This amount would represent local expenses plus the net earnings of those MOB center banks which are not owned by foreigners (20 percent of the total with a balance sheet sum of roughly $100 billion, according to data on individual centers as published in the IFS). On the other hand, net interest income receipts of MOB center nonbanks, estimated at $1.4 billion, are considerably below their direct investment income debits ($3.5 billion). This is consistent with the fact that a large part of nonbanks' earnings in MOB centers stems from economic activities that are not primarily related to interest income, e.g., shipping receipts and insurance premiums. Also, the nonbank "residents" include personal holding companies and other interests of nonresidents (see also Chapter IV on direct investment income).

Table 39. MOB Centers' Estimated Net Investment Income Flows

(In billions of U.S. dollars; 1983)

	Non-direct Investment Income	Direct Investment Income 1/	Total
Estimated actual flows			
Foreign reserves	+1.0	--	+1.0
Banks	+4.2	-2.5	+1.7
Nonbanks	+1.4 2/	-3.5	-2.1
Total	6.6	-6.0	+0.6
Flows reported in BOP *Yearbook*	0.6	-0.1	+0.5
Flows not reported in *Yearbook*	6.0 3/	-5.9	+0.1

1/ Including reinvested earnings.
2/ Including income on securities ($0.9 billion).
3/ Adjustments according to questionnaire revisions: $1.4 billion; reclassifications: $0.8 billion; bank-related income: $2.9 billion; income on securities: $0.9 billion.

Balance of payments reporting by MOB centers is rather limited, depending on what is regarded as "nonresident" by national authorities and whether they report at all. No data are reported by the Cayman Islands and Hong Kong, while reporting by the Netherlands Antilles is limited. Non-reporting is only partly compensated for by some estimates included in the IMF Balance of Payments Statistics Yearbook, Part 2, which serves as a starting point for these adjustments. Of the $5.7 billion estimated net non-direct investment income credits related to reserves and bank positions (excluding receipts on securities) only $0.6 billion is entered into the Yearbook, $1.4 billion is captured by questionnaire revisions, and $0.8 billion by reclassifications (see Section 2a of this chapter). The remaining $2.9 billion of missing net credits have to be added ($51.6 billion credits, and $48.7 billion debits).

vii. Unallocated banking positions

The adjustments based on banking statistics given above only cover positions that (in the banking statistics) are allocated to individual countries. Bank reports to the BIS and the Fund do not always give a regional breakdown; considerable and, unfortunately, increasing amounts are not allocated to countries or to country groups. Cross-border bank deposits of nonbanks, unallocated by residence of depositors, totaled $147 billion at end-1983, while cross-border claims of banks on nonbanks, unallocated by residence of borrowers, amounted to $92 billion. These positions would yield about $11 billion of interest credits, and $10 billion of interest debits (see Table 40).

It is not possible to determine to what extent the income on unallocated positions is included in reported credits or debits. However, the reported credits and debits are not large enough to cover much more than the interest flows related to the allocated bank positions. Therefore, it seems reasonable to assume that the coverage of the unallocated credits and debits is less complete than the coverage of the allocated flows. Based on the proportion of non-reporting where country data are available (64 percent on the credit side), it is assumed that 80 percent of the credits ($8.9 billion of $11.1 billion) are not reported and should be added on the credit side. On the debit side, roughly 16 percent of the interest payments related to allocated positions is not reported, and it is estimated that 30 percent of the debits related to unallocated borrowings ($3.0 billion of $10.0 billion) is not reported and should be added (see Table 40).

c. Income on securities

This section covers the estimating procedures for interest on bonds and dividends on equities. While available information is much less complete than for bank-related positions, estimates have been constructed for outstanding amounts of these securities. These estimates are used first to establish the debit side, and then to determine how much of the credits may be missing. Analysis is likely to be even more difficult in the future, because expansion of bond markets accelerated considerably in

Table 40. Unallocated Cross-Border Bank Positions and Related Other Investment Income of Nonbanks, 1983

(In billions of U.S. dollars)

	Nonbanks' Bank Deposits	Nonbanks' Bank Borrowing
Outstanding amounts 1/	147	92
Interest rates (percent)	8.4%	10.9%
Estimated interest flows 2/	11.1	10.1
of which: Reported	2.2	7.1
Not reported	8.9	3.0
(in percent)	80%	30%
Memorandum item:		
Interest flows related to allocated positions 3/		
Estimated total flows	36.1	64.1
Recorded flows	12.9	53.6
Adjustments	23.2	10.5
(in percent of total)	64%	16%

1/ Source: IFS world tables.
2/ Based on outstanding amounts (beginning of year) and cross-border interest rates.
3/ According to the results for industrial and developing countries (excluding MOB centers).

1984 and 1985, and the forms of debt are changing in ways that obscure the identification of residence that is necessary for balance of payments accounting.

i. Cross-border bonds

A considerable part of the missing world investment income is related to the rapidly expanding international bond markets and the substitution of cross-border bond holdings for syndicated bank lending. Outstanding cross-border bond holdings are estimated at $450 billion at end-1983 and almost $700 billion at end-1985 (Table 41). New issues of international bonds, or Eurobonds (placed in more than one country), totaled $204 billion in the years 1977-83. That is the amount outstanding at the end of 1983, if an average maturity of seven years is assumed. Similarly, the outstanding amount of so-called foreign bonds (issued in a single foreign country) is estimated at $150 billion. In addition, a considerable amount of domestically issued bonds is held by non-residents. Responses to the investment income questionnaire indicate that such holdings may be in the range of another $100 billion. The total of about $450 billion outstanding "cross-border bonds" conforms well with estimates made by commercial banks.

To avoid double counting it is necessary to subtract the bonds which are included in reported cross-border positions of banks (IBS). Based on data given by the BIS, 1/ bonds held in bank portfolios may be estimated at $90 billion (of which $30 billion may be interbank positions), and bonds issued by banks and held by nonbanks may total $20 billion. This results in $340 billion of bonds at end-1983 which are neither held nor issued by banks.

To calculate the corresponding income flows, appropriate rates of return must be determined. Information on market shares and market yields by individual currencies at the time of issue is readily available. On that basis average yields for any given year can be calculated (Table 42, last column). Applying the average rate of return to the bonds not held or issued by banks produces an income estimate of about $30 billion in 1983.

Reporting of debits appears to be relatively good. About three quarters of outstanding bonds are issued by industrial countries, 15 percent by international organizations, and the remainder by developing countries (Table 43, first two columns). Since large banks and other well-known market participants arrange to sell the bonds and to distribute the interest payments, the records of these entities are available and provide a good basis for preparing statistics on interest debits. However, there are some possibilities for errors, especially because it may not always be possible to determine the amount of domestically issued bonds purchased by non-residents, or of bonds issued abroad purchased by residents. While firm information does not exist, non-reporting of

1/ BIS report, Recent Innovations in International Banking, (April 1986).

Table 41. New Issues and Outstanding Amounts of Cross-Border Bonds

(In billions of U.S. dollars)

	New Issues 1/		Amounts Outstanding 2/			
	International Bonds	Foreign Bonds	International Bonds	Foreign Bonds	Domestic Bonds 3/	Total
1976	14.7	18.4	...	...	...	...
1977	18.7	16.3	...	...	...	...
1978	15.0	20.7	72	80	...	...
1979	18.7	20.3	83	96	...	...
1980	20.4	17.9	100	110	...	...
1981	31.3	20.5	128	125	...	...
1982	50.3	25.2	169	139	...	...
1983	50.1	27.0	204	148	100	450
1984	81.7	27.8	267	160	115	540
1985	135.4	31.0	387	170	130	685

1/ Source: OECD Financial Market Trends, March 1984.
2/ International and foreign bonds: estimated on the basis of average maturity of seven years. Cross-border domestic bonds: estimated on the basis of the investment income questionnaire.
3/ Excluding U.S. government bonds constituting foreign authorities' reserves.

Table 42. Interest Rates of Cross-Border Bonds

(In percent per annum)

	Bond Yields by Individual Currencies 1/					
	U.S. dollar	Deutsche mark	Swiss franc	Yen	Average Yield	Average Return on Outstanding Amounts 2/
1978	8.9	6.1	5.0	6.1	6.5	--
1979	10.1	7.2	5.3	7.7	8.2	7.7
1980	12.5	9.0	5.9	9.2	10.2	7.9
1981	14.4	10.8	6.5	8.7	11.7	8.3
1982	14.5	9.6	6.6	8.1	11.4	8.9
1983	12.4	8.3	6.1	7.4	9.9	9.5
1984	12.8	7.9	5.9	6.8	10.0	9.7

1/ Sources: Bundesbank (Statistical Supplement to the Monthly Report, Series 2), Swiss National Bank, and IFS.

2/ Average new issue yields of preceding years weighted with the amounts that are issued in those years and that are still in the market.

Table 43. Countries Participating in Bond Markets

(In billions of U.S. dollars)

	Bond issues/Liabilities		Markets and Holdings	
	Cross-border issues, 1/ cumulated 1977-83	Cross-border bond liabilities, 2/ end-1983	Countries of issue, 3/ cumulated 1977-83	Cross-border bond holdings, 4/ end-1983
Industrial countries				
Belgium/Luxembourg	6	0	2	7
France	26	24	1	2
Germany	6	13	16	20
Switzerland	2	1	63	33
United Kingdom	11	3	3	23
Australia	7	20	--	0
Canada	47	42	--	n.a.
Japan	40	24 5/	19	56 6/
United States	42	20	40	58
Other industrial countries	78	19	4	9
Subtotal	265	166	148	208
Developing countries	28	10	0	1
International organizations	59	--	--	--
Total	352	176	148	209

1/ Breakdown by issuing country, covering "foreign" and "international" bonds. Source: OECD Financial Market Trends.
2/ Outstanding bond liabilities according to investment income questionnaire. Includes domestic issues that are held by non-residents, but excludes bonds included in "official debt".
3/ Breakdown by markets. Source: OECD Financial Market Trends. Geographic breakdown of markets is limited to "foreign issues".
4/ Outstanding bond assets according to questionnaire. Includes bonds that are domestically issued in other countries, but excludes bonds held by monetary authorities.
5/ Published in Balance of Payments Statistics Yearbook, Part 1.
6/ May include equities.

interest debits is likely to be similar to the proportion of non-recorded outstanding bond liabilities i.e., based on the questionnaire responses, roughly 20 percent (for derivation and details see Table 44). This would suggest that debits might be adjusted upward by $5.9 billion (Table 45).

Reporting on the credit side appears to be much less complete. It can probably be assumed that interest receipts are at best recorded to the extent that the bond holdings are known to the statistical authorities. Responses to the investment income questionnaire indicate that about 40 percent of all holdings may not be known (for derivation see Table 44) and are not used in compiling interest credits. Moreover, there are indications that the proportion of interest receipts that are missing is even slightly higher than that, suggesting that the non-reporting may be around 45 percent. Accordingly, 1983 credits would have to be adjusted upward by $13.3 billion (see Table 45).

Geographical allocation of missing bond income is not possible on a country-by-country basis, and can only roughly be estimated for country groups. All available information points in the same direction: Most of the bonds are held by creditors in industrial countries (Table 43, last two columns). For instance, 93 percent of all outstanding foreign issues have been sold in the United States, Japan, Germany, and Switzerland. In addition, information given in the investment income questionnaire and available balance-of-payments data indicate that most of the Eurobonds, and also domestic issues, are sold in industrial countries. Of course, in many cases, these bonds are only held in custody in these countries, and the ultimate beneficial owners may reside elsewhere. At end-1983, Swiss banks alone managed several hundred billion dollars of custody accounts (estimates vary with definitions that may include equities, Swiss-owned securities, and some items which may not necessarily be regarded as securities). However, discussions with many bankers and also with the European clearing houses (Euroclear in Brussels, and Cedel in Luxembourg) indicate that most of the securities held in such custody accounts belong to residents of industrial countries, a very few to oil exporters, and even fewer to non-oil developing countries. Bond holdings of major offshore banking centers, to the extent known, are also often held in custody for third countries, or are associated with insurance and other companies using offshore centers as a base.

The net result of the bond estimates is summarized in Table 45.

Table 44. Cross-Border Bonds
and Estimate of Non-Reported Amounts, 1983

(In billions of U.S. dollars)

	Bond Liabilities	Bond Holdings
Estimated outstanding amounts 1/		
As derived in Table 41	450	450
Minus: Bonds already captured in IBS 2/		
Issued by banks, held by banks	-30	-30 3/
Issued by banks, held by nonbanks	-20 4/	-20
Issued by nonbanks, held by banks	-60	-60
Non-bank-related amounts	340	340
Reported outstanding amounts		
Questionnaire responses 5/	176	209
Minus: Bank-related bonds 6/	-50	-50
Plus: Issues included in "official debt"	85	--
Issues of int. organizations 7/	60	--
Bonds included in "reserves" 8/	--	40
Non-bank-related amounts	270	200
Non-reported outstanding amounts	70	140
In percent of estimated outstanding amounts	20%	41%

1/ Excluding U.S. bonds constituting foreign authorities' reserves.

2/ Calculated on basis of the numbers given in the BIS report on "Recent innovations in international banking" (April 1986).

3/ Recorded in IBS under "nonbanks' bank deposits".

4/ Recorded in IBS under "nonbanks' bank borrowings".

5/ See also Table 43.

6/ Correction for bank-related bonds which, in the questionnaire responses, are presumably reported under "bonds", but are already captured in the IBS numbers. Amounts reported under "bonds" are estimated at half of the total of bank-related bonds.

7/ Included in the actual outstanding amount of $450 billion. Interest payments are recognized in the adjustments for "international organizations".

8/ Mainly securities held by SAMA (other than U.S. Government bonds and equities).

Table 45. Income on Cross-Border Bonds, 1983

(In billions of U.S. dollars)

Outstanding amounts 1/	
Total	450
Excluding bank-related bonds	340
Average rate of return (percent) 2/	9.5%
Interest income 3/	
Total	36.3
Excluding bank-related bonds	29.5
of which: not reported as credit (45%)	13.3
not reported as debit (20%)	5.9
Missing net credits (= adjustment)	+7.4

1/ See Tables 41 and 44.
2/ See Table 42.
3/ Calculated on the basis of outstanding amount (beginning of period) and average rate of return.

ii. Cross-border equities

While procedures to estimate missing dividend income may be similar to those applied to bond interest, the amounts involved are much smaller. Outstanding publicly-issued equities held internationally are estimated at $250 billion at end-1983, of which (according to questionnaire responses) $110 billion are U.S. equities, $47 billion Japanese, $20 billion Swiss, $11 billion United Kingdom, and $9 billion German issues.

The average rate of return on these holdings is far below that on bonds. On the basis of rates of return of U.S., German, and Japanese equities, average earnings may be estimated at 4 percent per annum in 1983. The resulting dividend income flow is in the range of $7 to $8 billion (calculations for 1979 generate an income of $4 billion; see Table 46). Reporting seems to be about as deficient as reporting for bonds (45 percent non-reported credits, and 20 percent non-reported debits), yielding an estimated $1.9 billion of missing net receipts that have to be added.

Table 46. Income on Cross-Border Equities

(In billions of U.S. dollars)

	1979	1983
Outstanding amount (end of year)	100	250
Average rate of return (percent per annum) 1/	4.8%	4.0%
Dividend income flows	4.1	7.6
of which:		
Not reported as credits (30/45%)	1.2	3.4
Not reported as debits (16/20%)	0.6	1.5
Missing net credits	0.6	1.9

1/ Based on rates of return of U.S., German, and Japanese equities.

d. Official and private investment income

The preceding sections give estimates of missing income credits and debits by type of asset, without separating official and private holdings. However, most reporters supply a breakdown between official and private investment income, which provides an opportunity for additional cross-checking. While approximately one quarter of total non-direct investment income reported in the IMF Balance of Payments Statistics Yearbook is classified as "resident official" this share is rather different for various country groups (Table 47).

Table 47. Official/Private Breakdown of Reported Other Investment Income, 1983

(In billions of U.S. dollars)

	Resident Official	Private	Total
Industrial countries			
Credits	18.8	147.2	166.0
Debits	31.5	141.1	172.6
Net	-12.7	+5.7	-6.6
Developing countries 1/			
Credits	35.4	13.0	48.5
Debits	24.8	48.7	73.8
Net	+10.6	-35.7	-25.3
Total			
Credits	54.2	160.2	214.4
Debits	56.3	189.8	246.4
Net	-2.1	-29.9	-32.0

Source: IMF Balance of Payments Statistics Yearbook, 1985.

1/ Including MOB centers and Middle East oil exporters.

Most of the official interest income overlaps with bank-related or securities-related income. Official reserves and other official foreign assets are held in bank deposits, bonds, and Treasury bills; a minor part is inter-governmental. On the liabilities side, outstanding amounts result from bank lending, bond issues, and lending by governments or international organizations. Particularly for official interest paid by developing countries, most of the corresponding investment income receipts seem to have been reported. In addition, there is no reason to suspect that monetary authorities and other official sector debtors or creditors who are usually responsible for balance of payments reporting, would over- or under-estimate their payments or receipts. But some additional cross-checking may be useful.

Countries that responded to the special investment income questionnaire report official assets of $437 billion, with corresponding interest receipts of $25 billion, implying a yield of approximately 6 percent (Table 48). There are several reasons why the return on official assets may be low compared to prevailing market rates for private funds. Part of the official assets merely reflects quotas in international organizations;

Table 48. Official Investment Income:
Questionnaire Responses for Selected Countries, 1983

(In billions of U.S. dollars)

	Official Assets/Credits				Official Liabilities/Debits	
	Amount outstanding		Investment income credits			
	Total	of which: foreign exchange	Total	of which: foreign exchange	Amount outstanding	Investment income debits
Industrial countries						
Belgium/Luxembourg	5.8	3.8	0.3	0.3	20.2	1.8
Canada	15.8	2.7	--	--	26.9 1/	5.6 1/
Denmark	4.3	3.2	0.3	0.3	15.1	1.3
France	27.9	18.0	1.0	0.7	12.3	0.6
Italy	20.9	2.4	0.8	0.7	1.2 1/	1.0 1/
Germany	46.0	37.0	4.1	3.7	28.1	2.6
Japan	57.5	20.4	4.5	(1.6)	32.1	1.3
Netherlands	10.3	8.9	0.5	0.5	0.0	0.0
Sweden	5.2	3.7	0.4	0.3	16.4	1.5
Switzerland	15.6	14.3	1.3	1.3	--	--
United Kingdom	17.9	8.7	0.9	0.7	27.7	2.4
United States	101.9	6.3	4.8	1.1	187.5	17.8
Subtotal	309.1	129.4	18.4	10.7	367.5	35.9
Developing countries						
Argentina	1.3	1.2	0.3	0.3	33.2	1.1
Iran	12.8	n.a.	0.8	n.a.	0.5	0.2
Korea	6.8	2.2	0.2	(0.2)	15.9	1.1
Other Asia	6.4	4.3	0.5	(0.4)	23.4	0.7
Kuwait	59.7	4.2	3.1	(0.3)	--	--
Mexico	1.6	3.6	0.2	0.2	38.3	4.4
Turkey	2.3	1.2	0.1	(0.1)	17.7	1.4
Venezuela	10.8	6.1	0.9	0.6	30.1	2.9
Subtotal	127.7	22.8	6.6	2.6	159.1	11.8
Grand total	436.8	152.2	25.0	13.3	526.6	47.7

Source: Responses to special investment income questionnaire, except for outstanding reserves, which are taken from IFS. Numbers in parentheses: breakdown is estimated, since data are not reported separately.

1/ Sector breakdown used in questionnaire response is different for stocks and flows.

a considerable share of official lending may be at concessional terms (official development assistance); and not all income is appropriately classified (Canada, for instance, includes interest receipts of the official sector under "non-official investment income"). Official foreign exchange holdings alone yield more plausible rates of return, i.e., 9 percent for the industrial countries, and 11.5 percent for the developing countries.

Interest payments for official liabilities as reported in the questionnaire responses ($48 billion) are also plausible compared to the outstanding official debt ($527 billion). Deviations for individual countries can be explained by low rates (Japan), concessional terms (India), interest arrears (Argentina), or inappropriate classification (Italy and Canada). Results for individual countries are listed in Table 48.

As a matter of fact, "resident official investment income" for the world as a whole cannot be expected to be zero. As previously explained, cross-border financial positions may be official on one side and private on the other; this makes it impossible to measure any discrepancy on "resident official" account alone.

e. Eastern Europe and international organizations

i. Eastern European non-IMF members

Separate estimates are required for Eastern European countries that are not IMF members. They are included in the IMF Balance of Payments Statistics Yearbook, Part 2 only as part of a global current account estimate and are omitted entirely from the published tables for individual transaction categories that are the basis for the published discrepancies. (Hungary and Romania, however, which are IMF members, are included under "European developing countries".) Since the Eastern European countries are net debtors, adjusting for their omission actually increases the statistical discrepancy on investment income account.

The Eastern European non-IMF member countries have been net debtors since the early 1970s. Their gross hard currency debt vis-à-vis the western world (mainly the debt of Poland and the U.S.S.R.) increased to $66 billion through 1979, came to a peak in 1981 ($73 billion), and since then has declined. On the other hand, these countries have always held some deposits with western banks (Table 49).

Practically no direct information is available on the interest burden of the Eastern European countries. However, statistics show that two-thirds of the gross debt is the result of hard currency borrowing from western banks, and that the remaining one-third was incurred in western capital markets, so that some estimates can be made. Interest rates to be paid to western creditors are probably close to market rates, making allowance for some lags in adjusting and an appropriate mixture of currencies (roughly 70 percent U.S. dollars, and 30 percent Deutsche mark, Swiss francs, and other currencies). Resulting interest burden estimates

Table 49. Outstanding Debt and Investment Income Flows of Five Eastern European Non-IMF Member Countries 1/

(In billions of U.S. dollars)

	1979	1980	1981	1982	1983	1984
Outstanding amounts						
Assets/bank deposits	14.0	14.0	14.0	15.4	17.8	19.7
Gross debt	65.6	70.3	73.2	72.0	69.5	68.0
Net debt	51.6	56.3	59.2	56.4	51.7	48.3
Interest Rates						
Applied rate for estimates 2/	8.3	11.9	13.4	13.9	8.4	8.5
Investment Income Flows 3/						
Credits	0.8	1.7	1.9	1.9	1.3	1.5
Debits	4.6	7.8	9.4	9.0 4/	5.0 4/	4.9 4/
Net	-3.8	-6.1	-7.5	-7.0	-3.7	-3.4

1/ Bulgaria, Czechoslovakia, German Democratic Republic (excluding intra-German debt), Poland, U.S.S.R. (including CMEA banks). Poland has been a member since 1986, thus was not incorporated into the 1985 Balance of Payments Statistics Yearbook.

2/ For derivation of interest rates see Table 27. Debit rates are assumed to be relatively low, since a relatively high share of the debt is presumably denominated in low interest currencies.

3/ Estimated on the basis of outstanding amounts (beginning of period) and cross-border interest rates.

4/ Excluding Poland's unpaid interest obligations of $1 billion in each year.

correspond well with calculations of other international organizations. They are close to OECD estimates and also close to the estimates of the United Nations' Secretariat of the Economic Commission for Europe (ECE) in Geneva. Poland's unpaid interest obligations excluded (they also remained unrecorded by the creditor countries), gross interest debits amounted to $5.0 billion in 1983, against which there was about $1.3 billion of unreported income on foreign assets.

ii. Income of international organizations

The last adjustment to be made is for the interest received and paid by international organizations. Data for these institutions are not included in the IMF Balance of Payments Statistics Yearbook, 1985, but will be collected in the future by the Fund's Bureau of Statistics (Balance of Payments Division). Accounting information can be derived from published sources (mostly annual reports), supplemented by some minor estimates. In order to keep the project within available resources only the international organizations with the largest investment income accounts were covered. On this basis the following institutions were included: African Development Bank, Arab Monetary Fund, Asian Development Bank, BIS, Caribbean Development Bank, East African Development Bank, Eastern Caribbean Central Bank, European Coal and Steel Community, EEC, European Investment Bank, Inter-American Development Bank, IMF (including administered accounts), Islamic Development Bank, Nordic Investment Bank, and World Bank (covering IBRD, IDA and IFC). All these institutions are regularly regarded as "non-resident" by the countries with which they have debtor or creditor relationships (including the countries in which they are located).

Estimates were made for the years 1979, 1983 and 1984. Data for 1984 were not available for the Caribbean Development Bank, the European Coal and Steel Community, the Arab Monetary Fund, or the Eastern Caribbean Central Bank; in the case of the last institution data were also unavailable for 1983. Estimates for these institutions were therefore made on the assumption that these debits and credits would move similarly to the average of the institutions for which data were available.

Adjustments for the omitted investment income of international organizations are $13.4 billion for credits, and $10.3 billion for debits, i.e., a $3.1 billion net credit in 1983 (Table 50).

f. Adjustments for 1979 through 1984

The same methods described above have been applied to 1979 through 1982, and 1984. However, available information for earlier years is much less detailed than for 1983, although the questionnaire responses in most cases also included 1979 data. In particular, there is no regional breakdown for bank deposits of nonbanks by residence of depositor, and also no breakdown for nonbanks' liabilities by residence of borrower. For lack of better information, the same proportions were assumed as for end-1981, the first time for which such a breakdown is available. On that basis, bank-related income flows of MOB centers could be derived (as shown earlier in Table 38). In addition, bank-related income flows of industrial and developing countries (other than MOB centers) are derived on an aggregated basis (for details see Table 51). Moreover, income on securities is consistently estimated on the basis of outstanding amounts and corresponding rates of return (see Table 52).

Table 50. Investment Income of International Organizations

(In billions of U.S. dollars)

	1979		1983	
	Credits	Debits	Credits	Debits
IMF	1.11	0.87	3.66	3.33
World Bank 1/	2.90	1.92	4.65	3.43
BIS 2/	0.13	0.03	0.16	0.03
European Investment Bank	1.10	0.89	2.16	1.78
European Coal and Steel Community	0.61	0.50	0.68	0.52
Other institutions 3/	1.12	0.48	2.05	1.18
Total	6.97	4.69	13.36	10.27

Source: IMF Bureau of Statistics, Balance of Payments Division.

1/ International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), and International Finance Corporation (IFC).
2/ Credits: net interest income; debits: dividends paid to participants.
3/ Mostly regional development banks.

It may be noted that the quality of reporting, measured by the non-reported flows as a percent of actual flows, obviously worsened since 1979. A comparison of the estimated actual income on bank-positions and securities with the numbers reported to the Fund indicates that the

Table 51. Investment Income Related to Nonbanks' Cross-Border Bank Positions, 1/ 1979-85

(In billions of U.S. dollars)

		1979	1980	1981	1982	1983	1984	1985
Deposits with banks/Interest receipts								
Outstanding amounts, end of year		320	403	512	562	612	631	712
Interest rate (percent) 2/		8.3%	11.9%	13.4%	13.9%	8.4%	8.5%	7.8%
Actual receipts		20.2	38.1	54.0	71.2	47.2	52.0	49.2
of which:	Reported 3/	10.0	17.9	22.7	26.4	15.1	14.0	--
	Not reported 3/	10.2	20.8	31.9	45.2	32.1 4/	37.7	--
	(percent)	50%	54.5%	59%	63.5%	68%	72.5%	--
Liabilities to banks/Interest payments								
Outstanding amounts, end of year		440	527	631	680	712	726	786
Interest rate (percent) 2/		10.8%	14.4%	15.9%	16.4%	10.9%	11.0%	10.3%
Actual receipts		38.4	63.4	83.8	103.5	74.1	77.8	72.9
of which:	Reported 3/	33.1	53.9	70.4	86.0	60.6	63.1	--
	Not reported 3/	5.3	9.5	13.4	17.5	13.5 5/	14.7	--
	(percent)	14%	15%	16%	17%	18%	19%	--

1/ Positions of nonbanks of industrial and developing countries, and unallocated positions. Excluding MOB centers, Eastern Europe and international organizations, which are treated separately (see Tables 38, 49, and 50).
2/ For derivation of interest rates see Table 27.
3/ For derivation see Table 53.
4/ See Table 19, credits, lines 2.1, 2.3, 2.4, and 2.6.
5/ See Table 19, debits, lines 2.1, 2.3, 2.4, and 2.6.

Table 52. Investment Income Related to Cross-Border Securities, 1979-85 1/

(In billions of U.S. dollars)

	1979	1980	1981	1982	1983	1984	1985
Bonds							
Outstanding amounts							
Total	230	270	320	400	450	540	685
Excluding bank positions 2/	200	220	250	310	340	380	420
Rate of return (percent)	7.7%	7.9%	8.3%	8.9%	9.5%	9.7%	10.0%
Actual income flows	13.0	15.8	18.3	22.3	29.5	33.0	38.0
Reported: credits 3/	9.5	10.8	11.7	13.3	16.2	16.8	
debits 3/	10.9	13.1	15.0	18.1	23.6	25.7	
Not reported: credits 3/	3.5	5.0	6.6	9.0	13.3	16.2	
debits 3/	2.1	2.7	3.3	4.2	5.9	6.9	
(percent): credits	27%	31.5%	36%	40.5%	45%	49%	
debits	16%	17%	18%	19%	20%	21%	
Equities							
Outstanding amounts	100	140	160	190	250	250	260
Rate of return (percent)	4.8%	4.8%	4.7%	5.0%	4.0%	4.0%	n.a.
Actual income flows	4.1	4.8	6.6	8.0	7.6	10.0	12.0
Reported: credits 3/	3.0	3.3	4.2	4.8	4.2	5.1	
debits 3/	3.4	4.0	5.4	6.5	6.1	7.9	
Not reported: credits 3/	1.1	1.5	2.4	3.2	3.4	4.9	
debits 3/	0.7	0.8	1.2	1.5	1.5	2.1	
(percent): credits	27%	31.5%	36%	40.5%	45%	49%	
debits	16%	17%	18%	19%	20%	21%	

1/ For derivation of 1983 data see section 2c ("Income on Securities"), and for derivation of rates of return see Tables 27 and 42.

2/ Calculated on basis of the numbers given in the BIS report on "Recent innovations in international banking" (April 1986).

3/ Derived in Table 53.

Table 53. Other investment Income of Nonbanks: Derivation of 1979 Adjustments

(In billions of U.S. dollars)

	Credits		Debits	
	1979	1983	1979	1983
Estimated actual flows 1/	37.3	84.3	55.5	111.2
Nonbanks' bank accounts 2/	20.2	47.2	38.4	74.1
Securities	17.1	37.1	17.1	37.1
Reported flows	22.5 3/	35.5	47.5 4/	90.3
Nonbanks' bank accounts 2/	10.0 5/	15.1	33.1 5/	60.6
Securities	12.5 5/	20.4	14.3 5/	29.7
Non-reported flows	14.8	48.8	8.0	20.9
Nonbanks' bank accounts 2/	10.2	32.1	5.3	13.5
Securities	4.6	16.7	2.8	7.4
In percent of actual flows				
Nonbanks' bank accounts	50%	68%	14%	18%
Securities	27%	45%	16%	20%

1/ Calculated on the basis of outstanding amounts and cross-border interest rates (see corresponding tables).

2/ Industrial and developing countries, and unallocated positions. Excluding MOB centers, Eastern Europe, and international organizations.

3/ Estimated on the basis of data reported to the Fund which indicate a 62 percent increase of recorded receipts of private nonbanks (questionnaire data, including dividends).

4/ Estimated on the basis of data reported to the Fund which indicate an 85 to 90 percent increase of recorded payments (Industrial countries, according to questionnaire: payments of private nonbanks, including dividends; and payments of official sector to banks and to private nonbanks. Developing countries, excluding MOB centers: total payments according to BOP Yearbook, minus estimated payments of banks).

5/ Estimated by assuming that reporting of bank-related and security income became similarly worse.

Table 54. Portfolio Investment Income: Summary of Adjustments, 1979-84

(In billions of U.S. dollars)

	1979	1980	1981	1982	1983	1984
Reported in BOP Yearbook	-7.3	-11.2	-22.3	-35.9	-32.0	-41.6
Adjustments	+7.5	+15.0	+23.1	+36.4	+32.8	+41.1
of which:						
1. Revisions and reclassifications 1/						
1.1 Questionnaire revisions	-0.8	n.a.	n.a.	n.a.	+3.3	n.a.
1.2 Reclassification of direct investment income data	+2.3	n.a.	n.a.	n.a.	-0.7	n.a.
2. Adjustments based on banking data						
2.1 Major offshore banking centers 2/	+0.8	+4.3	+5.1	+6.4	+2.9	+5.7
2.2 Bank accounts of other countries 3/						
Interest receipts on deposits	+10.2	+20.8	+31.9	+45.2	+32.1	+37.7
Interest payments on borrowings	-5.3	-9.5	-13.4	-17.5	-13.5	-14.7
Net receipts	+4.9	+11.3	+18.5	+27.7	+18.6	+23.0
3. Income on securities (net) 4/						
3.1 Bonds	+1.4	+2.3	+3.3	+4.8	+7.4	+9.3
3.2 Equities	+0.4	+0.7	+1.2	+1.7	+1.9	+2.8
4. Transactors not incorporated in Balance of Payments Yearbook 5/						
4.1 Eastern Europe	-3.8	-6.1	-7.5	-7.0	-3.7	-3.4
4.2 International organizations 6/	+2.3	+2.5	+2.5	+2.8	+3.1	+3.7
Adjusted flows	+0.2	+3.8	+0.8	+0.5	+0.8	-0.5

1/ For derivation see Tables 21 and 22.
2/ For derivation see Table 38.
3/ Industrial and developing countries, including unallocated positions. Excluding MOB centers, Eastern Europe, and international organizations. See Tables 51 and 53.
4/ For derivation see Tables 52 and 53.
5/ For derivation see Tables 50 and 51.
6/ Data for 1980 through 1982 are estimated, based on procedures of 1979 and 1983 analysis.

proportion of non-reporting was substantially lower in 1979 compared to 1983 (for details see Table 53). While this tendency is evident, reported data are not sufficiently detailed to separate precisely the reported income on bank positions and securities. Therefore it has been assumed that reporting of bank-related and security income became similarly worse. For instance, non-reporting of interest receipts on bank deposits may have equaled 50 percent in 1979 (compared to 68 percent in 1983), and non-reporting of income on securities may have equaled 27 percent (instead of 45 percent in 1983).

Overall adjustments for 1979 through 1984 are shown in Table 54. Results are rather consistent, except for 1980 when the second wave of oil price increases coincided with the beginning of the debt crisis, so that the reporting of capital movements and investment income may have been additionally distorted. Adjustments for 1984 are larger than those for 1983, since the level of relevant interest rates was mainly unchanged (see Table 27), but the amount of missing assets increased again. During 1984, almost $100 billion of current account receipts of nonbanks and $80 billion of net capital exports were missing (see Table 55). Non-reported capital outflows, probably again mainly bank deposits and securities investments, would add about $8 billion to unreported net interest receipts. This amount almost entirely explains the increase in the non-direct investment income discrepancy.

Table 55. Reported World Balance of Payments Data, 1983 and 1984

(In billions of U.S. dollars)

	1983	1984
Current account	-75	-96
Capital movements	+66	+76
of which: Increase in liabilities	(+305)	(+365)
Increase of assets	(-239)	(-289)
Errors and omissions	+9	+20

g. Geographic breakdown of adjustments

Almost all the data available for geographic breakdowns are stated or implied in the preceding tables. Only a few additional assumptions have to be made. For income on securities the available evidence indicates that roughly 80 percent of the missing credits may be allocated to industrial countries, 10 percent to oil exporters, and 5 percent each to MOB centers and non-oil developing countries (see section 2c, "Income on securities"). As a result, the breakdown emerges as shown in Table 56.

The unallocated adjustments ($1.3 billion and $5.9 billion) could reflect non-reporting of any country group. The remaining asymmetries of $0.2 billion in 1979, and $0.8 billion in 1983, reflect non-reporting which is hard to track down. All income flows subject to major uncertainties have been covered, except loans between nonbanks, i.e., mostly trade credits, which are not identifiable in the available data. These are unlikely to generate large discrepancies, although again it is probable that debits are more completely recorded than credits. Some other minor discrepancies may occur due to leads or lags, and some transactions may still be misclassified. A question for further exploration is the discrepancies that may come from differing treatment of interest arrears. Indebted developing countries are estimated to have been in arrears by $2-3 billion in 1983, and Poland by $1 billion. In most cases, non-paid interest is not included in the balance of payments of the debtors, and creditors probably also report mostly on a cash basis. However, countries such as the United States which may continue to estimate income as accruing on a given stock of outstanding loans for some time after arrears begin to accrue, may still be reporting credits (with an implicit offsetting debit in the capital accounts).

3. Evaluation of Adjustment Procedure

Some of the adjustments suggested in this chapter are probably quite precise (questionnaire revisions, reclassifications, Eastern Europe, international organizations), but a large part results from applying various rates of return to stocks of particular types of assets or liabilities. In the latter case, the question arises as to how much the estimated adjustments would be affected if different interest rates or, in some cases, different amounts outstanding, had been used in the exercise. That is, how sensitive are the results to these assumptions?

As a first approximation, the adjustments were re-estimated based on interest rates that are, on average, one percentage point lower than those used in the original estimates. It turns out (Table 57) that the net credit adjustments would be lower by almost $6 billion, i.e., that much of the adjustments, or "improvement" in the reported discrepancy, is lost. As shown in the table, most of the change in net income shows up in the bank-related income (nonbanks' bank assets and liabilities), because the non-reported receipts are much larger than the non-reported payments. There are only small net effects for the MOB centers (where positions are closely balanced) or for income on securities (where positions are relatively small and not far out of balance). Moreover, the impact of alternative rates on the estimated interest payments of Eastern European non-IMF members is also negligible.

Table 56. Geographic Allocation of Portfolio Investment Income Discrepancy

(In billions of U.S. dollars)

	Reported Data		Adjustments		Adjusted Data	
	1979	1983	1979	1983	1979	1983
Credits						
Industrial countries	98.5	166.0	31.0	77.5	129.5	243.5
Middle East oil exporters	13.5	26.7	1.0	3.0	14.5	29.7
MOB centers	3.0	6.9	25.2	54.0	28.2	60.9
Other developing countries	11.5	14.9	3.2	9.8	14.7	24.7
Eastern European countries	--	--	0.8	1.3	0.8	1.3
International organizations	--	--	7.0	13.4	7.0	13.4
Unallocable	--	--	2.8	8.9	2.8	8.9
Total	126.6	214.4	71.0	168.0	197.6	382.4
Debits						
Industrial countries	99.4	172.6	27.2	63.6	126.6	236.2
Middle East oil exporters	1.4	1.9	-0.1	1.1	1.3	3.0
MOB centers	2.9	6.3	22.7	48.0	25.6	54.3
Other developing countries	30.1	65.6	2.9	4.3	33.0	69.9
Eastern European countries	--	--	4.6	5.0	4.6	5.0
International organizations	--	--	4.7	10.3	4.7	10.3
Unallocable	--	--	1.5	3.0	1.5	3.0
Total	133.9	246.4	63.5	135.2	196.5	381.6
Net						
Industrial countries	-0.9	-6.6	+3.8	+13.9	+2.9	+7.3
Middle East oil exporters	+12.0	+24.8	+1.1	+2.0	+13.1	+26.8
MOB centers	+0.1	+0.6	+2.5	+6.0	+2.6	+6.6
Other developing countries	-18.6	-50.7	+0.3	+5.5	-18.3	-45.2
Eastern European countries	--	--	-3.8	-3.7	-3.8	-3.7
International organizations	--	--	+2.3	+3.1	+2.3	+3.1
Unallocable	--	--	+1.3	+5.9	+1.3	+5.9
Total	-7.3	-32.0	+7.5	+32.8	+0.2	+0.8

Table 57. Sensitivity of Adjustments to the Level of Interest Rates, 1983

(In billions of U.S. dollars)

	Applied Procedure			Alternative 1/			Net
	Credits	Debits	Net	Credits	Debits	Net	Difference 2/
Bank-related income							
Nonbanks' banking positions 3/							
Interest rates (percent)	8.4%	10.9%	--	7.4%	9.9%	--	--
Estimated actual flows	47.2	74.1	-26.9	41.6	67.3	-25.7	+1.2
Reported flows 7/	15.1	60.6	-45.5	15.1	55.3	-40.2	+5.3
Adjustments	32.1	13.5	+18.6	26.5	12.0	+14.5	-4.1
MOB centers 4/							
Interest rates (percent)							
Bank positions	10.6%	10.0%	--	9.6%	9.0%	--	--
Nonbank positions	8.4%	10.9%	--	7.4%	9.9%	--	--
Estimated actual flows	60.0	54.3	+5.7	54.3	48.9	+5.4	-0.3
Reported flows	8.4	5.6	+2.8	8.4	5.6	+2.8	--
Adjustments	51.6	48.7	+2.9	45.9	43.3	+2.6	-0.3
Income on Securities							
Bonds 5/							
Interest rates (percent)	9.5%	9.5%	--	8.5%	8.5%	--	--
Estimated actual flows	29.5	29.5	--	26.4	26.4	--	--
Reported flows 7/	16.2	23.6	-7.4	14.5	21.1	-6.6	+0.8
Adjustments	13.3	5.9	+7.4	11.9	5.3	+6.6	-0.8
Equities 6/							
Interest rates (percent)	4.0%	4.0%	--	3.0%	3.0%	--	--
Estimated actual flows	7.6	7.6	--	5.7	5.7	--	--
Reported flows 7/	4.2	6.1	-1.9	3.0	4.6	-1.6	+0.3
Adjustments	3.4	1.5	+1.9	2.7	1.1	+1.6	-0.3

1/ Assuming that interest rates are one percentage point lower.
2/ Net result of alternative minus net result of original adjustment.
3/ Based on Table 51.
4/ Based on Table 38.
5/ Based on Table 45.
6/ Based on Table 46.
7/ For nonbanks' borrowings from banks, and for assets and liabilities related to securities, non-reported amounts are unknown but are likely to form a certain percentage of actual flows.

In addition to altering the level of interest rates, the sensitivity of adjustments to different interest spreads of banks has been checked. The bank spread applied in the adjustment procedure was 2.5 percent vis-à-vis nonbanks (lending rate minus deposit rate), implying an overall spread for banks of roughly 0.8 percent, and for MOB center banks 0.6 percent (see the derivation of interest rates in Table 27). If the bank-nonbank spread is increased by 1 to 3.5 percent, estimated interest receipts of nonbanks are smaller, and estimated interest payments are larger, thereby generating a nonbank adjustment which is lower by $3.2 billion (see Table 58). However, larger bank spreads would also increase the net income of the banks located in MOB centers and thereby add net credits to the adjustments. Therefore, the overall impact of alternative bank spreads vis-à-vis nonbanks that are larger by one percentage point would not exceed $2 billion.

Another uncertainty is generated by poor data on some outstanding amounts. The international banking statistics, for instance, are not yet perfect and the outstanding deposits of nonbanks may be underestimated by some amount. If these deposits are in fact $100 billion larger than assumed, actual receipts and corresponding adjustments would be increased by almost $8 billion (see Table 59). On the other hand, an alternative assumption on the outstanding amounts of securities, but otherwise unchanged procedures, would hardly affect the necessary adjustments. The adjustment for income on bonds is derived from the non-reported amount of bond assets and bond liabilities (see Table 44). An alternative total of outstanding amount changes the non-reported holdings and liabilities by the same amount, but does not alter the non-reported net holdings; the same is true for the equities.

In addition to an alternative level of interest rates, to alternative bank spreads, or different amounts outstanding, results may also be sensitive to some other assumptions. For instance, income on financial positions between nonbanks (other than on securities) that is likely to be small in any case is assumed to be equally deficient on the credit and the debit side. The marginal impact of those estimates that are not explicitly analyzed in this chapter is assumed to be negligible.

However, it is not sufficient to calculate alternative results just by assuming different rates of return, different spreads, or different outstanding amounts wherever such estimates are used in the adjustment procedure. A fully consistent alternative requires changes in a larger set of factors. For instance, an alternative with a modified level of interest rates cannot continue to assume that all other elements can be held constant. Particularly, in an alternative with lower rates, a substantial amount of reported debits that have been accepted as correct would have to be lowered to maintain a reasonable spread between rates paid and charged by banks and others. Otherwise the bank spread must be changed, or outstanding amounts must be modified. As a result, adjusted net flows again would be close to zero, because several adjustments would have to be altered simultaneously as part of a consistent estimation procedure.

Table 58. Sensitivity of Adjustments to Interest Spreads of Banks, 1983

(In billions of U.S. dollars)

	Applied Procedure			Alternative			Net Difference
	Credits	Debits	Net	Credits	Debits	Net	
Nonbanks' bank positions							
Interest rates (percent)	8.4%	10.9%	--	7.9%	11.4%	--	--
Actual flows	47.2	74.1	-26.9	44.4	77.5	-32.9	-6.0
Reported flows	15.1	60.6	-45.5	15.1	63.4	-48.3	-2.8
Adjustments	32.1	13.5	+18.6	29.3	14.1	+15.4	-3.2
MOB centers							
Interest rates (percent)							
Bank positions	10.6%	10.0%	--	10.8%	9.9%	--	
Nonbank positions	8.4%	10.9%	--	7.9%	11.4%	--	
Actual flows	60.0	54.3	+5.7	60.8	53.9	+6.9	+1.2
Reported flows	8.4	5.6	+2.8	8.4	5.6	+2.8	--
Adjustments	51.6	48.7	+2.9	52.4	48.3	+4.1	+1.2

For explanations see Table 57.

Table 59. Sensitivity of Adjustments to Estimated Amounts Outstanding, 1983

(In billions of U.S. dollars)

	Applied Procedure	Alternative	Difference
Bank deposits of nonbanks 1/			
Outstanding amount	612	712	+100
Actual receipts	47.2	54.9	+7.7
Adjustments	32.1	39.8	+7.7
Bonds			
Outstanding amount	340 2/	440	+100
Actual receipts	29.5	38.0	+8.5
Adjustments (net credits)	7.4 3/	7.4 3/	--
Equities			
Outstanding amount	250	350	+100
Actual receipts	7.6	10.6	+3.0
Adjustments (net credits)	1.9 4/	1.9 4/	--

1/ Based on Table 51.

2/ Net of bonds held or issued by banks (see Table 25).

3/ The adjustment for the non-reported net receipts is based on the non-reported net assets outstanding of $70 billion ($140 billion assets, minus $67 billion liabilities; see Table 25) which is not affected by a change in the total amount outstanding.

4/ Based on non-reported net assets outstanding.

The question remains: What level of interest rates can be supported by evidence from the market or other sources? The intrest rates used in this chapter are carefully based on a set of available actual rates, and do not leave much room for alternatives. As shown earlier in this chapter, all bank-related rates are based on the LIBOR rate, allowing for a certain lag or adjustment and an appropriate mix of currencies (see particularly Table 27). Resulting rates have been cross-checked against the implied rates derived from the questionnaire responses with which they are consistent. As far as bonds are concerned, rates are a mixture of actual market rates (see Table 42), and equity returns are estimated on the basis of U.S., U.K., German, and Japanese equities.

Even if the set of estimated factors that are necessary to adjust for the reporting gaps was slightly different from the one actually applied, it is very likely that the results and conclusions would be mainly unchanged. In particular, alternative assumptions would not alter the conclusion that most of the missing receipts represent income on bank deposits and security holdings of private nonbanks, and that the addition of net credits is spread among many country groups.

4. Conclusions and recommendations

The main result of analyzing the gaps in portfolio investment income reporting is that the discrepancy results mainly from the understatement of receipts by the private nonbank sector, and that this deficiency is widespread across countries. Moreover, none of the methods for collecting such data directly from private nonbanks seems likely to be capable of covering these missing credits. Compilations based on exchange control systems do not capture transactions that bypass controls, and compilations based on reports of transactors do not capture the numerous transfers of individuals that either do not know of any reporting obligations or conceal their transactions deliberately. Moreover, estimates based on outstanding stocks of assets are likely to be inadequate if national authorities rely on stock data from domestic sources only.

The procedures applied in this chapter to reduce the discrepancies in the world portfolio investment income account can serve as a framework for a set of recommendations for actions that can be applied immediately, as well as over the longer run. National authorities and international organizations will share responsibility for improving the data, so that most recommendations involve participation and cooperation at both levels.

a. National authorities should give careful consideration to the revisions of their data for portfolio income indicated in this Report, and should be prepared to apply the estimating procedures described by the Working Party unless other procedures are demonstrably superior. Revisions made in response to the special income questionnaire should be maintained and support the view that a critical look at existing figures can lead to improvements.

b. Specifically, national compilers should take advantage of the data base on outstanding banking positions published by the Fund to create improved estimates of their portfolio income debits and credits, along the lines demonstrated in this chapter. Wherever possible, countries should also relate income debits and credits to other forms of outstanding cross-border assets and liabilities. Existing income estimates should be tested for reasonableness against all available stock data.

c. The Fund should continue its very useful program for extending and refining the banking data reported regularly in the IFS. Such data are essential for the estimating process recommended in this Report, and the Fund should make sure that they are brought to the attention of all national compilers. Moreover, the potential role of these data in computing international capital flows should also be highlighted. The Fund, together with national compilers, should study the reasons for differences between national banking data and the data published by the Fund, and should aim at using the data that are most comprehensive and consistent on a worldwide basis. It might be useful for the Fund to introduce some of the IBS data on the country pages of the IFS.

A very important facet of the refinement of the IBS would be the availability of greater geographic detail on the cross-border positions of non-banks, especially from those economies that now supply only global aggregates.

d. An increasingly serious gap in the information available on the international financial situation is the lack of reasonably comprehensive data on cross-border holdings of securities, including securities issued in home markets as well as bonds issued in international markets or in particular foreign markets. The Fund, the BIS, and the OECD should continue their efforts to improve this information, in collaboration with industry groups and national statistical offices. As an immediate goal, greater efforts should be made to obtain information from banks on their own holdings and liabilities in the form of securities, and to identify those items separately in their reports to the BIS or the Fund. Moreover, it is likely that information on a large part of the publicly-held stock of securities could be developed from the custody records of banks or other financial institutions. Developing such data should be a medium-term goal of the Fund and other concerned organizations.

e. The Fund should establish a process for advising and encouraging countries to revise their portfolio income estimates in the light of the results in this Report. In some cases the Fund may prepare alternative estimates for countries or groups of countries to demonstrate the differences that result, and also as part of the process for introducing correction factors into regional or global summations of world portfolio income accounts. Individual national compilers should be made aware of the necessity for establishing consistent estimating procedures across countries.

f. The Fund should enter estimates of transactions of economies which do not report to the Fund more explicitly into the IMF Balance of Payments Yearbook, Part 2. With respect to the income accounts this is required mainly for the Eastern European non-IMF members, and also for international organizations and some smaller economies (MOBs plus Bermuda) which are not yet clearly incorporated in Part 2. Even though the world current account would not be greatly affected in net terms, such entries would be helpful for reconciling the individual accounts, including the investment income account.

Chapter VI. International Financial Centers and Financial Innovation

Chapter VI. International Financial Centers and Financial Innovation

1. Introduction

In accordance with the directive in its Terms of Reference, the Working Party has examined the effects on balance of payments accounting of both the proliferation of offshore financial centers and the spreading use of new financial instruments. However, as it would go beyond the scope of this report to present a detailed analysis of the complex nature of cross-border transactions involving such centers and instruments, this section looks primarily at the distortions which these operations may cause in the international investment income account, with brief reference to other types of transactions. Some estimates of the extent to which transactions performed via offshore centers have contributed to the discrepancies in the global investment income account are given in earlier chapters. The net effect of the various adjustments found to be necessary for the income accounts was small in the years covered by our study but there were sizable omissions of both debits and credits. The size of these omissions has probably grown substantially since 1983. Innovations in financial techniques have created statistical problems of increasing severity that will require some rethinking of the standard categories used in the balance of payments accounts, and changes in data collection techniques.

2. International financial centers

a. Principal features

Mainly for historical reasons, but also because of different characteristics, two broad categories of international financial centers (IFCs) can be distinguished: the traditional--or classical--IFCs located in Europe and the United States, which have evolved since the 19th and early 20th centuries, and the offshore financial centers (OFCs) which are a relatively recent post-World War II phenomenon.

The traditional IFCs emerged in response to demands for financial services related to interregional and international trade and investment. Their growth was stimulated by access to ample sources of capital, the development of professional and technical skills, good communication facilities and, more generally, the business and personal connections required to provide the banking, insurance and other financial services needed by traders, shipping firms and investors. In addition, these centers enjoyed political stability and laissez-faire policies which allowed unfettered trade and capital flows. Activity in the IFCs--which had dwindled in the years of depression in the 1930s--began to expand gradually after World War II and received a major impetus from the advent of the Euro-currency markets in the early 1960s, which greatly enhanced their appeal as low-cost and highly efficient conduits for transactions with and among nonresidents.

The OFCs are of relatively recent origin and owe their existence to the deliberate attempts of the authorities in these centers to offer a range of advantages which were not, or not to the same extent, available in the traditional IFCs. The various incentives provided in the OFCs attracted captive insurance companies, shipping companies and other non-financial firms to set up management and holding companies in these centers, and to shift a part of their operations to them. More importantly, however, favorable and flexibly administered tax laws and exchange controls, as well as the virtual freedom from banking and other regulations or restrictions on operations, induced banks to transfer business to these centers. Indeed, the very large volume of international banking business, totally unrelated to the size of the domestic market, is the single most prominent feature of all OFCs. The banks which engage in offshore business in these centers can be broadly divided into two groups. First, there are "letter-box" or "brass-plate" companies which act as legal and booking channels for business that is in fact conducted elsewhere, i.e., to a large extent in the traditional financial centers located in the countries of residence of the banks which control the letter-box companies. The second group of banks has genuine transactions offices, i.e., banking operations consisting of deposit banking and final lending with business conducted with at least some measure of independent decision making.

While all international financial centers offer certain basic services, such as relative freedom from some taxes and regulations, anonymity, and efficiency in effecting transactions, there is also a considerable amount of specialization in the attractions offered to customers. The older centers provide a wide range of services, of course, though London is clearly the dominant center in the Eurobond market, while Swiss banks are preeminent in offering custodial and other services to their depositors.

Among the OFCs, there is a general tendency to impose no income taxes on financial intermediaries or their customers, or to have only nominal rates. Few have any capital gains taxes, commonly there is no taxation of foreign-source income, and individuals taking up residence may be free of estate taxes. In addition to the use of widespread and sometimes specially designed tax incentives, some OFCs have established favorable regimes for particular industries. Thus, for example, insurance operations are centered in Bermuda, and to a lesser extent in The Bahamas, the Channel Islands, and the Isle of Man, while Liberia and Panama have been established for many years as advantageous countries in which to register ships. In recent years many companies, especially U.S. companies, found that because of the tax situation it was advantageous to conduct their international borrowing operations via a specialized subsidiary in the Netherlands Antilles, and in some other offshore centers. Changes in the tax situation have now greatly reduced that advantage. In general, however, it seems fair to say that any interference in market efficiency that results from attempts to tax or regulate will quickly result in the creation of some special provision in some OFC which will attempt to neutralize the effect of such actions. As these new channels for flows are opened, usually without any attempt at balance of payments accounting, the task of the balance of payments compiler is made harder.

Some statistics can be cited that will illustrate the size and growth rates of the international business of the main financial centers. In Table 60 the growth of the foreign assets of banks located in both old and new financial centers can be seen, as they doubled from $1,000 billion in 1979 to $2,100 billion at the end of 1985. The increase in the share of MOBs can also be seen, and it would have been even greater (and the share of the United States substantially less) except for the switch of funds to head offices located in the United States when international banking facilities were allowed in the United States at the end of 1981.

Table 60. Shares of Selected
International Financial Center Banks in
Deposit Banks' Total Foreign Assets

(In percent)

	1972	1979	1983	1985
Belgium/Luxembourg	8.7	9.7	6.9	7.6
Switzerland 1/	16.6	8.0	6.6	6.9
United Kingdom	30.0	19.2	19.8	18.6
United States 2/	8.8	10.5	17.6	15.1
Sub-total	64.1	47.4	50.9	48.2
Seven MOB centers 3/	10.5	19.7	22.3	21.2
All other countries	25.4	32.9	26.8	30.6
World total	100.0	100.0	100.0	100.0
Memorandum items: (In billions of dollars)				
Old financial centers	130	705	1,247	1,430
New financial centers	27	293	546	629
World total	259	1,486	2,447	2,969

Source: IMF, International Financial Statistics Yearbook, 1986.
Note: Coverage of the series may change over the period.
1/ Including trustee accounts channeled through Swiss banks.
2/ Including International Banking Facilities (IBFs).
3/ The "major offshore banking centers" according to IFS definition: Hong Kong, Singapore, Bahrain, The Bahamas, the Cayman Islands, the Netherlands Antilles, and Panama.

In Table 61 the phenomenal growth of the foreign assets of banks located in each of the major OFCs is shown. This table also discriminates to the extent possible between the assets held by banks carrying out a general banking business and institutions specially organized to carry out offshore business, though the distinction is obviously not always meaningful.

b. Relation to statistical discrepancy

Several kinds of statistical problems result from the operations of international financial centers, and the problems are likely to grow with the passage of time as the business of international finance becomes increasingly sophisticated. One problem is that some MOB centers do not include in their balance of payments accounts the transactions of certain intermediaries that they regard as essentially non-resident. This aspect is described in the section on MOBs in Chapter V, and is discussed in Chapter I, which indicates the adjustments to the international investment accounts that are required in order to bring these economies into line with the reporting by the rest of the world. About $6 billion was missing from reported income debits and credits in 1983. This amount would be larger now, and it does not indicate how much of an adjustment might be necessary for non-investment-income accounts such as insurance premiums, fees charged by financial institutions, or revenues of registered ships not reported elsewhere. Table 62 shows for individual MOBs the extent of the revisions required for bank-related portfolio investment income.

Another kind of problem is that as funds flow through these centers their classification is often transformed because of incomplete reporting. For instance, premiums paid from the United States to a captive insurance company in Bermuda and placed in a bank account in London will not be reported at all by Bermuda but will appear as an insurance debit in the U.S. current account and a short-term capital account inflow in the U.K. balance of payments. Thus, the OFCs generate discrepancies in both the current and capital accounts, or sometimes asymmetries as between different elements of the current account.

Furthermore, in many cases the MOBs' "normal" residents also have substantial foreign interests that are not reported by the MOBs but are recorded in the accounts of partner countries. These interests include direct or portfolio investments that generate income, including the interest on official reserves, or substantial shipping operations.

Another problem arising from operations of IFCs is the question of whether these countries or economies should be required to report the transactions of the intermediaries operating in their territories on a gross or net basis. In principle, they should report on a gross basis, according to the Manual, but in practice this may tend to inflate their significance in the true savings and investment pattern of the world economy. The same question arises, of course, when considering the measurement of capital flows via IFCs, or the presentation of the banks' international balance sheets. One alternative would be to introduce net

Table 61. Foreign Assets of Banks in Major Offshore Banking Centers, 1972-85

(In billions of U.S. dollars)

	1972	1979	1983	1985
Hong Kong - total 1/	1.2	27.7 2/	67.6	101.2
Singapore - total 3/	0.5	32.7	88.2	120.4
Deposit money banks	0.2	3.2	5.8	9.6
Asian currency unit institutions	0.3	29.5	82.4	110.8
Bahrain - total 3/	0.1	23.7	54.6	50.7
Commercial banks	0.1	0.6	1.3	1.6
Offshore banking units	--	23.1	53.4	49.1
Bahamas - total 3/	7.2	109.8	157.2	143.1
Commercial banks	2.6	30.1	32.0	29.5
Offshore banks	4.5	79.7	125.2	113.6
Cayman Islands - total 4/	--	61.8	131.3	173.9
Netherlands Antilles - total 3/	0.1	5.1	10.2	6.6
Commercial banks	0.1	1.5	2.5	1.2
Offshore banking units	--	3.6	7.8	5.4
Panama - total 3/	0.3 5/	31.8	37.3	33.1
Deposit money banks	0.3	19.4	24.6	22.6
International license banks	6/	12.3	12.6	10.5
Total	27.1	292.6	546.4	628.9

Source: IMF, International Financial Statistics Yearbook, 1986.

Note: Coverage of the series may change over the period.

1/ All deposit-taking institutions can engage in offshore banking. No separate category that is restricted.
2/ Break occurred in series in 1978.
3/ Includes assets of non-monetary financial institutions.
4/ No detail available to distinguish between assets of Class A licensed banks, which can engage in both domestic and foreign operations, and Class B licensed banks, which can engage only in offshore operations.
5/ Estimate based on partial data.
6/ Less than $50 million.

Table 62. Major Offshore Banking Centers:
Discrepancies in Reported Non-Direct Investment Income, 1983

(In billions of U.S. dollars)

	Reported Data 1/			Estimated Data 2/			Adjustments to Reported Net Credits
	Credit	Debit	Net	Credit	Debit	Net	
Hong Kong	0.80	0.41	0.39	7.38	6.41 3/	0.97	0.58
Singapore	1.53	0.20	1.34	9.58	8.55	1.03	-0.31
Bahrain	0.43	0.06	0.37	5.50	4.92	0.58	0.21
Bahamas	1.56	0.90	0.64	16.05	15.04	1.01	0.37
Cayman Islands	--	--	--	13.61	12.30	1.31	1.31
Netherlands Antilles	0.07	0.04	0.03	1.63	1.57	0.06	0.03
Panama	4.04	3.89	0.15	6.23	5.46	0.77	0.62
Total	8.4	5.6	2.8	60.0	54.3	5.7	2.9

1/ Balance of payments transactions recorded in the IMF Balance of Payments Statistics Yearbook, Part 2, 1985. Hong Kong: Yearbook figures are Fund estimates. The Bahamas: Yearbook data revised by the response to the investment income questionnaire and reclassified on the basis of Fund staff estimates. Singapore: Yearbook data revised on the basis of Fund staff estimates.

2/ Based on amounts outstanding (International Financial Statistics), and on cross-border interest rates (see Chapter V, Table 38). Does not include income related to investments in bonds and equities (Table 39).

3/ Does not include interest payments on bank liabilities vis-à-vis nonresident nonbanks.

entries under the appropriate transactions accounts in balance of payments statements, but to supply gross flows as memorandum information.

Finally, the use of IFCs by international investors and borrowers tends to obscure the geographic patterns of capital and income flows, and by the same token it eliminates the possibility for detecting discrepancies by direct comparisons of bilateral accounts. This problem is far from new, but it is becoming greatly intensified not only by the greater use of IFCs but also by the accelerated introduction of innovative financial instruments, discussed below. In combination, these phenomena cast doubt on traditional methods of recording international capital and income flows in the international accounts. Since many OFCs offer opportunities to minimize reporting requirements, or obscure the identification of beneficial parties to transactions, it is unlikely that they can be converted to becoming full reporters of their balance of payments accounts. Wherever possible, therefore, the Fund staff should prepare estimates for inclusion in aggregated tables published in Part 2 of the Yearbook.

3. Financial innovation

Since the early 1980s the emergence and growing use of new types of financial instruments or adaptations of existing ones have been an important feature of the conduct of financial transactions, both in the domestic markets of some major countries and, in particular, in international markets. The report on "Recent Innovations in International Banking", published in April 1986 by the Bank for International Settlements (BIS), describes the principal instruments and their background and discusses the implications of financial innovation for macro-economic policies, prudent bank management and financial stability. The report also examines some of the consequences of innovation for financial reporting and its impact on international banking statistics, but does not focus on the issue of whether and to what extent the spread of new financial instruments in cross-border transactions might give rise to discrepancies in the balance-of-payments accounting of capital flows and associated income streams.

The upsurge of financial innovation in recent years seems to involve a cumulative learning process designed to exploit market opportunities and improving technology, plus reactions to governmental actions with respect to macroeconomic policy and financial regulation. Market participants were prompted to innovate by many factors, such as: shifts in the pattern of net flows of international savings and investment; the volatility of nominal and real interest rates and exchange rates; the deregulation of national financial markets; the repercussions of international debt problems on the creditworthiness of borrowers and the attitudes of their main creditors; the introduction of more stringent capital requirements for banks; rapid technical progress in the fields of communications and data processing; and strong competition in international financial markets. Indeed, by allowing interest, liquidity, and credit risks to be priced separately and negotiated in separate markets, the new instruments have greatly enhanced the possibilities of investing, borrowing, hedging and speculating and have thus contributed significantly to the rapidly expanding volume of international financial transactions in recent years. However, as such transactions became more diversified, with different types of transactors and a much greater volume of transactions, it also became more difficult to capture and correctly identify and classify the corresponding balance-of-payments capital and income flows. Consequently financial innovation has become a factor in the world current-account discrepancy.

Some indication of the pace of innovation is given in Table 63, which shows that newer instruments of credit intermediation, as characterized by floating rate notes (FRNs), accounted for only about 6 percent of activity in international credit markets in 1981 but for about 30 percent by 1985. The steep rise in fixed rate bonds was partly attributable to the introduction of new features of bond finance, such as zero coupon bonds, multi-currency bonds, convertible bonds and bonds with warrants attached to them, but also reflects the increasing use of swaps to tailor the features of these underlying instruments to the needs of market participants. In 1983, the base year for this report, use of the newer instruments was still rather limited, so that the observations made here are directed primarily to their potential for creating discrepancies, rather than their possible effects on our base year.

Table 63. New Lending Activity in International Credit and Capital Markets

(In billions of U.S. dollars)

	1981	1982	1983	1984	1985
International bonds and notes	44	72	72	108	163
of which: floating rate notes	(8)	(13)	(15)	(34)	(55)
Syndicated Euro-bank loans 1/	97	101	52	37	22
Total	141	173	124	145	185
Memo: Note issuance facilities 2/	1	2	3	19	49

Source: Bank of England, as shown in BIS, Recent Innovations in International Banking, April 1986, p. 130.

1/ Excludes U.S. takeover-related standbys.
2/ Includes revolving underwriting facilities, multiple-component facilities (if they include a note issuance option), and other Euro-note facilities. The facilities may not be fully utilized, or may be utilized at a later date.

The use of new financial instruments is likely to pose two major problems for balance-of-payments compilers. First, some of the new instruments facilitate international credit flows that by-pass banks' balance sheets, so that flows that are fairly comprehensively and reliably captured under existing reporting systems based on banks' records tend to escape reporting. Second, a number of new instruments, as well as increased use of swaps, are designed to manage interest and exchange risks, and while their use does not necessarily give rise to errors in capturing capital and interest flows, they generate larger payments and receipts of fees, commissions and other service payments which should be included in balance-of-payments reporting but which are difficult to estimate or compile.

The shift toward less easily recordable transactions is clearly demonstrated in Table 63 by the rising share of new lending in the form of FRNs, or involving NIFs, in total international credit intermediation. Briefly, FRNs carry a rate of interest which is reset at regular intervals in relation to a predetermined reference rate (such as LIBOR), and thus help to reconcile borrowers' needs for medium- and long-term finance with investors' preferences for liquid assets with a low price risk. A NIF is a medium-term, legally binding commitment under which a borrower can issue short-term paper in its own name, with the underwriting banks committed either to purchase any notes which the borrower is unable to sell, or to provide standby credit. For bank borrowers the paper is usually short-term certificates of deposit, while for non-bank borrowers it is in the form of promissory notes (commonly known as Euro-notes). Holders of these notes (whether or not they have underwritten the facility) show them as an asset on their balance sheets, but an underwriting commitment normally does not appear on the balance sheet of the banking institution involved. More recently the arrangement for NIFs has been developing into a Euro-commercial-paper market, i.e., high-grade borrowers are able to raise the funds in the form of short-term paper without a directly associated credit backing (underwriting commitment) by banks.

There are many variants of short- and long-term financing that now take the form of securities, but the main characteristic that affects balance-of-payments accounting is that instead of the relatively clear record of cross-border assets and liabilities that appears on banks' balance sheets when they act as principals in the extension of credit and as deposit takers, there is now only a much more amorphous record related to credit arrangements concluded on behalf of non-banks, with banks underwriting, or simply accepting, a general undertaking to arrange for the placement of notes for a borrower. Of course, banks themselves also make active use of the securities markets and carry on their balance sheets sizable foreign positions reflecting the issue and purchases of securities.

The substitution of marketable financial instruments for direct bank lending, known as "securitization", together with the enhanced liquidity of the new instruments, means that it is more difficult at any given time to identify the cross-border assets or liabilities of residents. In fact, often the issuers of marketable paper and sometimes even the holders of such paper, are not aware that the counterparty is a non-resident. Banks' records will still be useful in compiling information on the amount of new borrowing by residents that is to be conducted in international markets, but not necessarily on the amounts actually taken down, the residence of the creditors, or the amount outstanding at any given time. Moreover, whenever securities held in the market are acquired by banks there will be an increase in bank lending that could be misleading if the disinvestment by the non-bank holder of the security is not also accounted for. Finally, additional difficulties might be created by the issue of securities by special purpose subsidiaries set up in the foreign financial centers.

Experience with the U.S. system, which is based on reporting of resident/non-resident positions by banks and non-banks, already showed evidence of difficulty in recognizing cross-border borrowing and lending some years ago, when most lending was via banks. In this case the difficulty often arose because U.S. borrowers did not know whether the actual lender was the U.S. office of a U.S. or foreign bank, or a foreign branch or head office with which a U.S. banking office might be affiliated. The expansion of cross-border financing with less information appearing on banks' records in a usable form will exacerbate this problem. Other countries with different systems for collecting data may perhaps be able to obtain better coverage, especially if the number of potential transactors is small. However, even as countries try to cope with this problem with different degrees of success, the scope for discrepancies in the reporting of capital flows will grow.

The difficulty of identifying outstanding cross-border assets and liabilities may also be increased by the growing use of interest rate and currency swaps which have been instrumental in opening up markets to borrowers for whom direct access would be more difficult or costly. A "currency swap" normally involves the exchange of instruments payable in two different currencies with repayments over time according to a predetermined schedule encompassing both interest payments and amortization of principal. In an "interest rate swap" no actual principal is exchanged either initially or at maturity, but interest payment streams of differing character--usually interest payments on a floating basis against fixed rate interest payments--are exchanged according to predetermined rules and based on an underlying notional principal amount.

The basic motivation behind swap arrangements is that they allow both parties in the transaction to exploit their comparative advantages in different markets and to trade the obligations to mutual benefit. As each party raises funds in the market where it can obtain the best terms, the exchange of the debt service payments enables each party to acquire the desired kind of financing on terms and conditions which it could not have obtained directly. Apart from the cost aspect, swap arrangements also provide a useful tool to hedge interest and exchange rate exposures.

From the point of view of compiling the balance-of-payments accounts, swap transactions present several difficulties. Apart from the further twist in the already confused puzzle of identifying outstanding foreign assets and liabilities, there is greater ambiguity about the value of the stream of interest and principal payments between residents and non-residents. To complicate the accounting situation further, the standard accounting rules in the United States, and probably also in other countries, become very complex when dealing with swaps, treating them essentially as hedges and therefore tending to spread any gains or losses over time and to assign them to either translation accounts or current income, depending on circumstances. It is not yet clear how these rules may be carried through into balance-of-payments accounting, or even whether the corrections that may be necessary are significant on the global scale. At the very least, however, some elaboration of the appropriate sections of the current Fund Manual would seem to be called for.

The balance-of-payments implications of the spreading use of new hedging devices such as foreign currency and interest rate options and forward rate agreements (FRAs) are somewhat different and probably less severe for current-account discrepancies than the trend toward securitized credit flows. More specifically, as is the case with interest rate swaps, hedging with options and FRAs does not involve an exchange of principal, i.e., it does not give rise to changes in cross-border positions, but it may entail payments of fees, commissions and other service income between residents and non-residents.

Foreign currency and interest rate options are contracts conveying the right, but not the obligation, to buy or sell a specified financial instrument at a fixed price before or at a certain future date. There are two parties to an option contract: the buyer purchases from the writer a commitment that the option writer will stand ready to sell or purchase a specified amount of the underlying instrument on demand. The option buyer's cost for this right is paid to the option writer. The option extends or is "alive" until a set date. On the expiry date, the option owner can exercise his right to buy or sell the underlying asset, can let the contract expire, or, under certain conditions, can sell the option contract in the market.

Forward rate agreements are arranged between two parties wishing to protect themselves against a possible future movement in interest rates. They agree on an interest rate for a specific period of time for a specified future settlement date and based on an agreed principal amount.

The fundamental problem arising from these new hedging devices is that they may generate cross-border income streams which are not easy to capture and aggregate in a standardized fashion. In the case of options, for instance, records are needed to capture both the payment for an option and the transaction when the option is exercised--if it is exercised. Similarly, some special record appears to be required to account for the payments and receipts made on an FRA at the time of settlement. While it is not clear to what extent these cross-border transactions related to banks' off-balance-sheet business are included in balance-of-payments records of capital flows, it should be emphasized that not all the associated service payments and receipts are necessarily incorrectly recorded.

As the BIS report emphasizes, financial innovation creates new challenges for bank supervision and for the evaluation of the macro-economic credit situation and macro-economic policies. Some suggestions are given in that report for dealing with the statistical difficulties stemming from the "securitization" of bank lending and the disappearance of activity from banks' balance sheets. However, the accounting problems that are accumulating for balance-of-payments compilers are not discussed in any detail in that report.

4. Conclusions and recommendations

The increasing use of international financial centers by participants in international financial transactions, coupled with the introduction of new instruments and techniques for conducting international financial transactions, does not create entirely new problems for compilers of the balance of payments accounts, but it heightens the significance of long-standing sources of error or obscurity in the international accounts. In its research covering the 1979-83 period the Working Party found that increasing amounts of investment income attributable to residents of the offshore centers were being omitted because these centers provided little or no information on the transactions of entities operating in their territories that they did not count as residents; similarly the earnings of financial and other types of businesses established by foreign parent companies, or of personal holding companies established by non-residents, were commonly omitted. These omissions create large discrepancies in both recorded credits and debits, though the two sides tended to offset each other in 1983. Because of these omissions, there is a danger that without continuing adjustment the IFCs will add to the global discrepancy on income account in the coming years.

In addition to the problem of omitted transactions, the IFCs make it increasingly difficult if not impossible to trace financial and income flows between investors and final users of the funds. This lack of geographic information does not necessarily add further to the world discrepancy, but it severely limits economic analysis and the ability to unearth the sources of error in the accounts.

There seem to be two main statistical problems stemming from the acceleration of innovation in financial techniques. First, the increased speed and complexity of transactions, and secondly, the number of stages or transitions that may be involved in consummating a single operation. These developments put great pressure on any statistical system in which either a transactor or a financial intermediary is expected to report the amount, time, and nature of an international transaction. Furthermore, as new instruments enter the market and are traded or undergo transformations of terms or currency and ownership it becomes increasingly difficult to determine the residence of the creditor at any given time, and that criterion is essential for balance of payments accounting.

The Working Party believes it can suggest several actions that would improve the situation (these are listed in abbreviated form below) but would caution that there may be some difficulties that can not be solved at reasonable cost.

Recommendations

a. Compilers in international financial centers or other important intermediary economies should be encouraged to prepare complete balance of payments accounts, even if they are satisfied with an alternative presentation for their own use. Where such accounts are not prepared the staff of the Fund should develop the necessary data sources and prepare proxy accounts consistent with the data being reported by partner countries.

b. For the period immediately ahead, until such time as the preceding recommendation can be implemented, the Fund should carry forward the adjustment procedures employed by the Working Party, and should improve on them as time permits.

c. The Fund should institute a number of activities designed to bring the practices of balance of payments accounting into closer accord with the realities of contemporary financial markets. A review of the Fund's Manual, which is now being planned in the context of the System of National Accounts, should include specifically an updating of the sections relevant to the treatment of the newer financial instruments, the effects of rapid technological change in financial markets, and the preparation of balance of payments accounts by all economies that serve as financial intermediaries. Since these are highly technical subjects, the Working Party recommends that the Fund organize a consultative group of experts, both in balance of payments compilation and in actual market practice, that could serve as a source of advice in matters of accounting principles and also in terms of the practical application of such principles. Such a standing group could also be useful in keeping up with the continuous change that is characteristic of financial markets.

Chapter VII. International Shipping and Transportation Services

Chapter VII. International Shipping and Transportation Services

1. Introduction

Although the main task of the Working Party was to explore the origin of the growing discrepancy in the international investment income accounts, within the time and resources available an analysis of the persistent discrepancies in the shipping and transportation services accounts was initiated. This chapter attempts to identify the essential ingredients of any study of these accounts, and reports on the results of the preliminary work on this topic undertaken by the Working Party.

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". The "shipment" account records 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 payment. 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. Under "shipment" credits should be reported revenues (gross receipts) from non-residents, i.e., freight on exports and cross-trades, earned by all vessels or other means of transportation operated by residents of the reporting country, regardless of flag of registry. This includes the earnings of foreign-flag vessels "chartered in" as well as vessels owned and operated by domestic residents. The converse, of course, applies to "shipment" debits, which should cover freight on imports in vessels operated by nonresidents, including domestic-flag vessels "chartered out" to nonresident operators.

The "other transportation" account includes international passenger fares, expenditures by international carriers in countries other than that of the operator of the carrier, charter fees paid to nonresident shipowners, and other transportation services when provided internationally.

The first of these two accounts has consistently shown a considerable excess of debits in recent years, with no discernible trend from 1979 to 1983. The asymmetry on "other transportation" has been small (see Table 64). 1/ It is important to note that there is a relationship between the "shipment" account and that part of "other transportation" that consists of expenditures of foreign carriers in domestic ports--bunker fuel, ships stores, port charges, and the like. However, the relationship is not necessarily the same from country to country, or stable over time, when reflected in balance of payments accounts. It will be affected by the volume of transactions that do not enter the balance of payments (freight on imports in, and expenditures in domestic ports of, nationally operated

1/ But, as will be shown, there is reason to believe that the global IMF data significantly understate both debits and credits.

carriers), by the geographic composition of freight earnings (a high ratio of foreign port expenditure to revenues, for instance, may accompany a high proportion of revenues from cross-trades), and the composition of the revenue by type of vessel (liner, bulk dry cargo, tanker).

Table 64. International Shipping and Transportation Accounts, 1979-83

(In billions of U.S. 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
	Ratio of net to total debits (percent)	38	37	38	40	40
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
	Ratio of net to total debits (percent)	2	4	7	6	5

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

While it is possible that the debits on "shipment" may be overstated by some countries, 1/ it is virtually certain that the large discrepancy on "shipment" reflects mainly the omission on the credit side of the revenues of a large portion of the world shipping fleet from recorded balance of payments data, principally the earnings of fleets operated by Hong Kong, Eastern European, 2/ and Greek enterprises. Hong Kong and Eastern Europe

1/ Such an overstatement might occur if, for instance, a country used an incorrect factor in converting import statistics reported on a c.i.f. basis in customs returns to an f.o.b. basis for balance of payments reporting.

2/ Other than IMF members.

are not included in the IMF balance of payments statistics, so far as the "other transportation" accounts are concerned. The Greek balance of payments data exclude the operations of the Greek fleet, 1/ one of the largest in the world. There are a few countries that report no shipment credits, in spite of the fact that they have ships under national registry. And there is a possibility that some countries do not capture in their statistics the transactions of all vessels under domestic operation, particularly foreign-flag ships "chartered in" to domestic operators.

In any event, the relative stability over time of the ratio between the discrepancy on shipment (fourth line of Table 64) and total "shipment" debits indicates that the principal cause of the discrepancy has probably been correctly identified as the "missing" fleets. The ratio between recorded "shipment" debits and the total insurance and freight component of world trade has also been fairly constant over the 1979-83 period, ranging between 75 and 78 percent. These results are imprecise, in that the insurance and non-maritime freight components are included. But they imply that there has not been much variation in the proportions of world trade carried by three major categories of carriers, namely (a) the importing countries' own vessels, (b) vessels operated by other countries included in the IMF data, and (c) the "missing" fleets.

In order to address these issues, the Working Party requested 26 countries, including all the major maritime countries supplying balance of payments data to the IMF, to complete a special questionnaire giving a detailed breakdown of the "Shipment" and "Other transportation" accounts in their balance of payments statistics. (The questionnaire is reproduced in Appendix G).

In the meantime, the IMF Bureau of Statistics conducted an extensive examination and revision of the data it collects from member countries on the ratio between the c.i.f. and f.o.b. values of their imports. These data, as revised, 2/ provide the only available measure, albeit an indirect one, of the freight and insurance on imports into all countries other than the Union of Soviet Socialist Republics and other economies not reporting to the IMF.

In this chapter, we present our analysis of existing asymmetries in the shipping and transportation accounts. While we believe we can identify the causes of most of the discrepancies, much more work is needed to improve reporting by countries and to generate precise adjustment factors where

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1/ Many Greek shipowners live in other countries. But so far as the Working Party is aware, they are not actually considered residents of those countries for balance of payments purposes, at least so far as the shipping accounts are concerned, unless they are identified as resident operators.

2/ See International Financial Statistics, Yearbook, 1986, pp. 122-25. However, further and as yet unpublished revisions to these data are employed in this chapter.

necessary. This means testing each country's entries in the balance of payments accounts for internal consistency with the data on exports and imports, and with whatever information is available, from domestic or external sources, regarding international transportation--size of the national fleet, freight rates, chartering practices, and other relevant factors. More specific recommendations for further research are presented in the concluding section of this chapter.

2. Shipment

In order to determine how much of the asymmetry on shipment account can be attributed to the revenues of fleets entirely omitted from the IMF statistics (mainly Greece, Hong Kong and Eastern European countries not members of the IMF--plus a few reporting countries which, although possessing merchant marines, show no shipment credits), it is necessary first to evaluate the reported data. This involves checks on several elements of the debit and credit sides of the accounts. Also, we need to distinguish, to the extent possible, the revenues and expenses of marine transport from those of other means of transportation.

a. Evaluation of debits

As already indicated, the debits on shipment exceeded recorded credits by $31.8 billion in 1983. While it might be assumed, as a first approximation, that this amount represents primarily unreported shipping revenues, the accuracy and appropriateness of the debit totals also need to be tested. That is, do the debits include items that would have no counterpart in a "shipment" credit reportable, in principle, either by a reporting country or by the operators of the "missing" fleets? For instance, if a country overestimated the amount of freight included in the c.i.f. value of its imports, it would *ipso facto* understate the f.o.b. value of its imports. The partner countries would in principle report a higher export value and lower shipping receipts. However, the total current account discrepancy would not be affected.

It has been suggested that the data on the relationship between the c.i.f. and f.o.b. values of imports, as published in the IMF's International Financial Statistics Yearbook, do in fact overstate the implied insurance and freight costs, especially for developing countries. This may be the case but the evidence is not conclusive. It is true that, over the last decade or so, the c.i.f./f.o.b. relationship has declined significantly for industrialized countries (reflecting mainly a relative decline in freight rates compared to merchandise values) and has not declined in the case of the developing countries. In part, at least, the latter phenomenon reflects a great increase in the proportion of Middle Eastern countries' imports to the world total, coupled with the fact that freight and insurance rates to that area are, in general, higher than to most of the rest of the world.

Aside from the c.i.f./f.o.b. problem, and since we are focusing our attention at this point on missing ocean freight revenues, 1/ our "shipment" debits need first to be purged of payments for other purposes, mainly (a) insurance and (b) freight carried on other means of transport.

Insurance. In principle, insurance debits should include only payments to nonresident insurers by importers of the merchandise. It seems likely that this would occur mainly when goods are invoiced on a c.i.f. basis. In that case the exporter probably places the insurance in his own country, resulting in a payment by the importer to a nonresident insurer through the exporter. On the other hand, in the case of f.o.b. or f.a.s. billings, it seems likely that importers would in most cases place their insurance domestically. In response to our questionnaire, countries accounting for 48 percent of world shipment debits reported insurance debits equal to 4.8 percent of total shipment debits. This ratio reflects (a) the ratio of insurance costs to the f.o.b. value of the merchandise and (b) the portion of the insurance placed abroad. Based on this sample, it can be estimated that reported shipment debits of $78.7 billion include insurance debits of $3.8 billion, 4.8 percent of the total. 2/

Other means of transport. Respondents to our questionnaire survey reported total shipment debits of $5.6 billion relating to non-maritime means of transport. As a measure of the total included in the IMF data, this is obviously a minimum figure; receipts of $6.6 billion were reported on the questionnaires. However, because of the wide variety of means of transport involved, there seems to be no practical way to expand it to a world total. As a preliminary step, therefore, we assume that reported world shipment debits include $5.6 billion of payments for non-maritime shipping services.

Other adjustments. There are also certain missing debits that should be added because they are reportable in principle as credits, either by countries actually reporting credits, or by the operators of the "missing" fleets, whose earnings we are trying to measure. First are the shipment debits related to exports from the "world" (as defined in Direction of Trade Statistics) to the non-market countries not IMF members (COMECON). Such exports, on an f.o.b. basis, totaled $54.2 billion in 1983; 3/ total freight costs might be conservatively estimated at 4.5 percent of the f.o.b. value of the merchandise, approximately equal to the freight on imports of the industrialized countries (5.0 percent for freight and insurance less, say, 10 percent thereof for insurance), or

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1/ While reported "shipment" debits would include payments to non-maritime as well as maritime transportation facilities operated by Hong Kong, Greece, etc., the amounts involved would presumably be small.

2/ Note that international premium payments as reported in balance of payments statistics is all that is being measured here. An estimate of total insurance premiums on world trade will be developed later, for a different purpose. See p. 174.

3/ Direction of Trade Statistics Yearbook, 1986, p. 51.

$2.4 billion. 1/ As a rough estimate we assume that one-half of this amount may have been paid to maritime operators of other countries. Similarly, allowance must be made for shipment debits on imports into two other economies not included in the balance of payments data, Hong Kong and Bermuda. Hong Kong's imports were reported at $24.1 billion; exports of the "world" to Bermuda were $0.4 billion, according to Direction of Trade Statistics. Freight on imports to these two economies might have been about 8 percent (based on the c.i.f./f.o.b. tables in IFS). If half came in foreign vessels the implied debit would be 4 percent of $24.5 billion or $1.0 billion.

Among countries reporting balance of payment statistics, some reported no shipment debits; perhaps they reported their imports c.i.f. or included the freight debits in some other classification in the balance of payments. These were mostly relatively small countries in Africa and Asia; their total imports were $8.3 billion. Again, at 4 percent, freight on imports in foreign vessels would be $0.3 billion.

Summary. Thus adjustments to arrive at world ocean shipment debits that would match reported or reportable credits would be as follows:

Table 65. Adjustments to Shipment Debits, 1983

(In billions of U.S. dollars)

Shipment debits as reported	78.7
Insurance	-3.8
Other means of transport	-5.6
COMECON payments to other countries	+1.2
Other non-reporting areas	+1.0
Reporting areas	+0.3
Adjusted total, ocean only	71.8

1/ The difference between exports of the rest of the "world" to these countries (f.a.s. or f.o.b.) and their imports from the "world" (c.i.f.) was $5.4 billion, or about 10 percent of their f.o.b. value, according to the IMF's Direction of Trade Statistics. This is because the "import" data were based on data reported by the exporting countries, to which the IMF adds 10 percent to cover freight and insurance costs. But this ratio seems high, given the fact that almost two-thirds of such exports were from countries where the merchandise could move by rail or truck. We have preferred to use the lower ratio of 5 percent, which is based on the (unrevised) figures shown in the IFS Yearbook, 1986.

b. Evaluation of credits

In order to arrive at an estimate of reported "shipment" credits on maritime trade, similar adjustments also have to be made on that side, where the recorded total is $46.9 billion.

Insurance. It seems likely, both on a priori grounds and based on the questionnaire returns, that total shipment credits contain a smaller proportion of insurance premium receipts than the debits--based on our questionnaire responses, 2.2 percent. Allowance for this factor would thus be $1.0 billion.

Other means of transport. Countries responding to the questionnaire reported total non-maritime shipment credits of $6.6 billion. Again this amount is taken as representing the world total, although it is certainly a minimum.

Summary. Allowance for both of these factors would reduce reported credits to $39.3 billion (see Table 66), with a remaining discrepancy on maritime freight of $32.5 billion.

Table 66. Adjustments to Shipment Credits

(In billions of U.S. dollars)

Shipment credits as reported		46.9
Less:	Insurance	-1.0
	Other means of transport	-6.6
Adjusted total, ocean only		39.3

It may be noted that acceptance of this result implies that the revenues of all ships operated by reporting countries, including foreign-flag vessels chartered in, are in fact included in the reported totals. All but one of the countries responding to our questionnaire stated that to be the case, at least in principle. The validity of this implication of complete reporting needs to be tested by further research.

c. Evaluation of the adjusted discrepancy in shipment data

If the adjusted excess of debits on marine freight of $32.5 billion is correct, it must represent the revenues earned by fleets not covered by the IMF data from carrying goods other than their own imports. The only independent means of testing the reasonableness of this result that seems feasible is to relate the revenues of the two groups--those included in the IMF data and those not so included--to the amount of tonnage operated by each group. However, there is no independent compilation of maritime shipping that conforms exactly to the country-of-operation basis required for balance of payments accounting. Data on world shipping by flag of registry and type of vessel, and also by various types of ownership, are maintained by Lloyds, 1/ but Lloyd's statistics do not identify the current employment of ships under charter from one company to another mainly because changes occur so frequently. However, it may be possible to obtain special tabulations from Lloyds that fit the balance of payments requirement fairly well. The principal difficulty is the prevalence of chartering, especially of vessels registered under so-called flags-of-convenience (primarily Liberia and Panama, but now a growing list of countries or territories), but also among the principal maritime countries themselves. Moreover, there are intricate chains of ownership and many varieties of management and operating arrangements. Consequently, no simple criterion, such as flag of registry or ultimate ownership (if the latter could be reliably determined) would yield the correct allocation of shipping tonnage among countries.

One of the main tasks to be accomplished in solving the problem of the shipping account discrepancy will be to find a reliable means of allocating the operating world tonnage by country, so that the accuracy of the reported earnings can be verified and the missing credits can be assigned to the appropriate non-reporting countries or economies. Pending the availability of such data, it may be useful to illustrate the necessary estimating process by using data published by the United Nations Conference on Trade and Development (UNCTAD) that distributes the tonnage of five open-registry countries (Liberia, Panama, Cyprus, Bermuda, and the Bahamas) to the countries of "true management". 2/

It seems unlikely that this definition coincides in all cases with country of operation as defined for balance of payments purposes. For instance, by using the UNCTAD data no allowance is made for chartering among major maritime countries themselves, nor for ships registered under flags of convenience other than the 5 "open-registry" countries just named. Nevertheless, the use of UNCTAD data presumably brings one closer to the tonnage operated by individual countries than do the simple flag-of-registry statistics, and even closer if--as is done here--contries are combined in large groups so that cross-chartering is covered, at least in

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1/ The data on ships registered by flag of registry and type and tonnage of vessel are published regularly in Lloyd's Register of Shipping: Statistical Tables. A convenient summary is in the OECD annual report, Maritime Transport. The allocation of open-registry fleets by UNCTAD for 1983 appears in a document prepared for the eleventh session of the Committee on Shipping of the United Nations Trade and Development Board: TD/B/C.4/261, 26 October 1983. In this paper all vessels other than those of the five countries named above are assigned to the country of registry.

2/ Defined as "the person, company or organization responsible for day-to-day husbandry of the ship concerned".

part. Using Lloyds' data adjusted by the UNCTAD allocations, revenue per registered ton can be calculated, and a comparison made between "reported" and "missing" earnings per ton. However, to make such a comparison one must include not only the international revenues from exports and cross-trades but also the revenues earned in carrying imports and coastwise traffic of the countries operating the ships--revenues which are not included in the balance of payments.

Including the UNCTAD reallocations, the tonnage associated with countries not included in the Fund's reported total of shipment credits totaled 195 million dead weight tons (DWT), out of world tonnage in 1983 of 648 million DWT. Although, as already indicated, the allocation by country in the UNCTAD data may not fit the balance of payments criteria, it seems clear that the largest missing fleets (including nationally registered vessels) are those operated by Greece, Hong Kong, and the U.S.S.R. Using the UNCTAD-adjusted information, inadequate as it may be, to illustrate the estimating process, we can proceed as follows.

To estimate the earnings of the "reported" and "missing" fleets revenues from carrying the imports of their respective countries of operation so as to eliminate them since they are not "international", (Note: It was not possible, on the basis of available information, to estimate the earnings from coastwise (domestic) traffic, or, to accomplish the same end, to eliminate coastwise shipping from the tonnage figures.) the following procedure was used:

(In billions of U.S. dollars)

1.	Total freight and insurance on imports of all areas included in the Balance of Payments Statistics Yearbook, Part 2 was estimated at 6.4 percent of the f.o.b. value of such imports, based on the world c.i.f./f.o.b. factor pubished in IFS. 1/ The amount was	104.2
2.	This was reduced by 0.4 percent of the value of the merchandise to allow for the insurance component or	-6.3 2/
3.	It was further reduced by the amount of non-maritime freight, as estimated above, p. 169	-5.6 3/
4.	Leaving total ocean freight costs of "reporting" (Yearbook, Part 2) countries of	92.3
5.	Plus: Freight on COMECON imports from other countries	2.4
6.	Total ocean freight costs = revenues 4/	94.7
7.	Of this, the amount earned by vessels foreign to the country of importation was (see above, p. 170)	71.8 4/
8.	Leaving an estimate for ocean freight on imports in national vessels of	22.9
9.	Less estimated freight on imports in national vessels of countries included in Yearbook but not reporting shipment credits (part of the "missing" fleet) of	-2.4
10.	Leaving freight on imports in national vessels of countries reporting shipment credits	20.5

1/ Corrected in 1986 annual IFS.

2/ Based on opinions of insurance industry specialists.

3/ In addition to the caveat expressed on p. 169, this figure should in principle include freight on imports through third countries earned by carriers of the importing countries, for example, German trucks carrying imports from the United States through the Netherlands. Such earnings are part of the freight component of the c.i.f. value but, like freight on imports in domestic vessels, are not a balance of payments item.

4/ Excluding trade among the COMECON countries.

Thus we arrive at total and average earnings of the "reported" and "missing" fleets as follows:

Table 67. Earnings Per Registered Ton

(In billions of U.S. dollars)

	Reported Fleets	"Missing" Fleets	Total
International earnings	39.3	32.5	71.8
Carriage of own imports	20.5	2.4	22.9
Total earnings	59.8	34.9	94.7
Tonnage, adjusted basis (million DWT)	453	195	648
Average (dollars per ton)	132	179	146

Note: Excludes COMECON earnings on intra-COMECON trade.

The differences in the averages per ton are, on their face, unlikely, and probably reflect primarily the inadequacy of the UNCTAD data as a basis for establishing the tonnage actually operated by each country, rather than large errors in estimating gross shipping earnings of the two groups.

It is quite possible, for instance, that the UNCTAD data reflect country of ultimate beneficial ownership rather than actual operation, where these are different. For instance, an international oil company might have a tanker fleet operated by a Panamanian subsidiary. The operations of such a company would, in all probability, not be reflected in the Panamanian balance of payments statistics. In such a case, the UNCTAD data might classify the vessels by the country of the parent oil company (e.g., United States, United Kingdom), whereas, following the preceding analysis, it would be proper to consider the vessels as part of the missing fleet. To the extent such situations occur, the tonnage attributed to "reported" fleets is overstated, and earnings per registered ton understated--with an opposite effect on "missing" fleets.

The foregoing analysis has focused on estimating the international maritime earnings of the "missing" fleets, which we have placed at \$32.5 billion. In the process, we have, in effect, ignored the (estimated) discrepancy on insurance of -\$2.8 billion (debits, \$3.8 billion; credits

$1.0 billion) and the discrepancy of +$1.0 billion on shipment by non-maritime means of transport (debits, $5.6 billion; credits $6.6 billion). The combined discrepancy on these two accounts of -$1.8 billion (which to repeat, cannot be known but only roughly estimated from our questionnaire data) would remain.

But we have brought the maritime freight part of the "shipment" account into balance by assuming that the excess of debits, adjusted, measures the international earnings of the "missing" fleets.

Table 68. Adjustments to Shipment Account

(In billions of U.S. dollars)

	Credits	Debits	Net
As reported	46.9	78.7	-31.8
Plus COMECON payments to:			
The "world"		+1.2	-1.2
Hong Kong and Bermuda		+1.0	-1.0
Reporting areas		+.3	-.3
"Missing" fleets	+32.5	--	+32.5
	79.4	81.2	-1.8

3. Other Transportation

In the preceding section, we have estimated the freight earned by maritime operators whose activities are not reflected as credits in the IMF's balance of payments statistics. By the same token, the expenditures of these fleets in the ports of countries other than their own are not reflected as debits in the "other transportation" account. We deal with this subject in this section, together with other possible adjustments to this account. The data for this account as reported are: credits $70.2 billion; debits $73.6 billion; net discrepancy -$3.4 billion (see Table 64).

This account consists of three main components: passenger fares, charter hire and port expenditures. Both ocean shipping and other means of transport are included. To arrive at port expenditures, the other two components must be deducted from the total.

Fortunately, passenger fares are reported separately to the IMF by most countries; some countries include them in the travel rather than the transportation account, and some include them, properly, in "other transportation" but do not report them separately. Reported fares were virtually balanced at: credit, $18.1 billion; debit, $18.0 billion.

Charter fees are not reported separately to the IMF, but can be roughly estimated on the basis of information furnished on our questionnaires. The questionnaire respondents accounted for 74.7 percent of total shipment credits. Assuming that both charter payments and charter receipts are related more closely to total shipment earnings than to any other available number, charter payments and receipts as reported in the questionnaire were divided by 0.747 to arrive at estimated world totals of $10.0 billion and $3.3 billion respectively. It can be assumed that the excess of debits of $6.7 billion is an approximate measure of charter payments to owners of flag-of-convenience shipping. Thus it would be appropriate to add $6.7 billion to "other transportation" receipts, since such countries have clearly not included them in their balance of payments reports.

Deducting passenger fares and (estimated) charter fees from the total leaves estimates for port expenditures, by all means of transportation, shown in the following table.

Table 69. Derivation of Port Expenditures

(In billions of U.S. dollars)

	Credits	Debits	Net
Other transportation, as reported to IMF	70.2	73.6	-3.4
Less: Passenger fares	-18.1	-18.0	-.1
Less: Charter fees	-3.3	-10.0	+6.7
Remainder, mostly port expenditures	48.8	45.6	+3.2

As indicated above, the "missing" fleets had total estimated freight revenues of $34.9 billion in 1983. Presumably the port expenditure debits related to these earnings were also omitted from the *Yearbook* data. On the other hand, at least as a first approximation, it is assumed that the countries receiving these port expenditures would generally have reported them as a credit. (However, port expenditure credits may have been widely understated.)

The only reasonably reliable data available on the relation between total shipping revenues and expenditures in foreign ports are those derived from our special shipping questionnaire. 1/ The results are summarized in Table 70 (for sea transportation only).

Table 70. Expenditures in Foreign Ports

	Total Earnings 1/	Expenditures Abroad	Ratio	Proportion of Cross-Trade Earnings
	(In millions of dollars)		(In percent)	
Brazil	1,670	718	43	10
Denmark	1,782	1,166	65	n.a.
Germany	3,262	1,587	49	n.a.
Italy	3,730	1,119	30	n.a.
Korea	2,250	971	43	36
Netherlands	1,446	804	56	n.a.
Norway	4,097	2,163	53	92
Portugal	298	114	38	n.a.
South Africa	457	169	37	7
Sweden	1,291	652	51	n.a. 2/
United Kingdom	4,190	2,348	56	73
United States	5,896	1,984	33	58
Total	30,369	13,795	45	

1/ On exports, imports, cross-trades, and passengers.
2/ 56 percent in 1984.

The major part of the business of the two major components of our "missing" fleets, Hong Kong and Greece, presumably arises in third-country trade. As a rough estimate, we may place their port expenditure figure at the high end of the range, say 60 percent, or $20.9 billion (based on total revenues of $34.9 billion), an amount which can appropriately be added to "other transportation" debits.

1/ Note that this relationship is not the simple one between revenues and total costs, but between total revenues and costs incurred in foreign ports only.

On the other hand, there seems to be evidence of gross underreporting of "other transportation" credits, presumably mainly port expenditures, especially by developing countries. Inquiries by the Working Party indicate that the proportion of total ships' revenues used for port expenditures, including the cost of bunkers, averages well over fifty percent. Thus for any country one would expect port expenditure receipts to be equal to at least half of the amount reported or reportable as shipping debits. On this assumption, we can increase port expenditure receipts by $13.0 billion. 1/ (It may be noted that for many countries the ratios were much higher than 50 percent, in some cases over 100 percent.) In addition an allowance of $1.1 billion was made for port expenditure receipts of countries not included in the IMF data (COMECON, Hong Kong, etc.)

Table 71. Adjustments to Other Transportation Account

(In billions of U.S. dollars)

	Credits	Debits	Net
As reported	70.2	73.6	-3.4
Charter fees	+6.7		+6.7
Port expenditures of missing fleets		+20.9	-20.9
Underreporting of port expenditures	+14.1		+14.1
Adjusted	91.0	94.5	-3.5

1/ This figure was calculated by taking actual "other transportation" credits, or 50 percent of "shipment" debits, whichever was larger, for each country included in the IMF data, and for countries not so included, 50 percent of shipment debits as estimated in this paper. For Germany and Austria the reported figures were used, even though less than 50 percent, because much of their ocean-borne imports are landed in other countries.

4. Geographical allocation

Adjustments to the "shipment" and "other transportation" accounts relating to the revenues and expenses of the "missing" fleets have been allocated by country according to the "true management" tonnage as adjusted by the UNCTAD data. The charter fees credits of $6.7 billion are not allocated to a particular country group, although it is likely that a significant part--assuming that our analysis is reasonable--should be attributed to Panama, a major offshore banking center, and Liberia. The underreporting of port expenditures of $14.1 billion was derived from detailed country data, and thus could be accurately allocated. The remaining (small) adjustments to the "shipment" account (Table 68) were also attributable to specific areas. The results are summarized in Table 72.

Table 72. Geographic Distribution of Adjustments to Shipment and Other Transportation Accounts, 1983

(In billions of U.S. dollars)

	Shipment		Other Transportation		Total		
	Credits	Debits	Credits	Debits	Credits	Debits	Net
Industrial countries	--	--	1.0	--	1.0	--	+1.0
Eastern Europe, et al.	5.7	1.2	0.6	3.7	6.3	4.9	+1.4
Major offshore banking centers	8.8	1.0	0.5	5.6	9.3	6.6	+2.7
Middle East oil exporters	2.4	--	6.7	1.5	9.1	1.5	+7.6
Other developing countries	15.6	0.3	5.3	10.1	20.9	10.4	+10.5
Unallocated (charter fees)	--	--	6.7	--	6.7	--	+6.7
Total	32.5	2.5	20.8	20.9	53.3	23.4	+29.9

5. Some important reservations

The estimates presented in the three preceding sections of this chapter do not pretend to be definitive, but only to be illustrative of procedures that could be followed to identify and measure the erroneous or missing elements in existing data. The following caveats need to be kept in mind.

a. The reliability of the c.i.f./f.o.b. data. While the c.i.f./f.o.b. ratios, as published in the Fund's IFS Yearbook, were not used directly in calculating any of the adjustments to the balance of payments entries, they were used above to estimate freight revenues on imports in national vessels. Nevertheless, it may be that the actual balance of payments debits on "shipment" account and the c.i.f./f.o.b. data both are overstated--especially for some of the developing countries.

To illustrate the problem, the calculations presented earlier were reworked on the assumption that the ratio of insurance plus freight (i. and f.) costs to the f.o.b. value of the merchandise for developing countries (other than those in the Middle East) 1/ declined from 1973 to 1983 by 28.4 percent, the same as the decline in the ratio for industrial countries. Under this assumption total i. and f. for those developing countries, and for the world, would have been $6.3 billion less. An unknown part of the $6.3 billion would have been applicable to freight on imports in national carriers. Nevertheless, if the entire $6.3 billion were deducted from adjusted shipment debits, 2/ Table 67 would be changed to read as follows:

(In billions of U.S. dollars)

	Reported Fleets	"Missing" Fleets	Total
International earnings	39.3	26.2	65.5
Carriage of own imports	20.5	2.4	22.9
Total earnings	59.8	28.6	88.4
Tonnage, UNCTAD basis (million DWT)	453	195	648
Average (dollars per ton)	132	147	136

Note: Excludes COMECON earnings on intra-COMECON trade.

1/ The Middle East countries, mainly oil exporters, showed a rise from 11.1 to 13.2 percent from 1973 to 1983, which seems reasonable in light of the growing unrest in the area. The reported ratio for other developing countries declined by 11 percent, from 10.6 to 9.4 percent of the f.o.b. value of imports.

2/ Part of this amount would presumably have been applicable to imports in national vessels, and therefore not included in "shipment" debits. Moreover, the adjustment would not affect the current account balance, since if it is assumed that the c.i.f. value of imports was correct, the same amount would have to be added to imports f.o.b.

Thus even with this (probably excessive) adjustment, the average earnings per million DWT of capacity are still not compatible with what would be expected on an *a priori* basis, namely that the "missing" fleets, which are comprised to a relatively larger than average extent of bulk cargo and tanker vessels, should have lower than average earnings.

b. The reliability of the UNCTAD data as a measure of nationalities of operators. Some reasons for lack of confidence in these data were given in the preceding sections of this chapter. It may also be noted that since the status of any individual vessel may change from voyage to voyage it is likely to be very difficult to obtain the relevant data for, say, an entire year.

c. The lack of adequate data on capacity utilization. Even if all vessels could be correctly assigned to the proper country of operation, the amount of tonnage actually employed in international trade at any given time would also be difficult to estimate. In recent years large amounts of tonnage have been laid up; data on laid-up tonnage are available by flag of registry, but, so far as the Working Party is aware, not by nationality of operator. If the laid-up tonnage was proportionately greater for the "reporting" than the "missing" fleets, the average earnings per ton employed would be greater for the former and less for the latter than is shown above. Also some countries, notably the United States, employ a substantial amount of the nationally registered shipping in coastwise trade.

6. Summary and recommendations

In this chapter we have attempted to identify and to establish some magnitudes for what appear to be the major missing elements in the "shipment" and "other transportation" accounts. In part this was accomplished by sheer assumption; as noted, there is no reliable external evidence to support our estimate of the earnings of fleets omitted from the IMF data. However, we believe that the existing asymmetries are reasonably well explained by our analysis.

Nevertheless, the Working Party has not been able to explain the transportation discrepancies with the degree of confidence that can be attributed to its resolution of the investment income discrepancies. Relatively more research by the IMF staff remains to be accomplished before statistical procedures for reducing the discrepancies can be put in place. Our recommendations, therefore, are necessarily somewhat less specific than those applicable to investment income.

1. Careful consideration should be given to the possibility of enlisting the aid of the Greek and Hong Kong authorities in developing estimates for earnings and port expenditures of their respective fleets. The Hong Kong authorities collect considerable data from resident shipping companies. Even if those authorities do not receive the exact information needed for balance of payments entries, they should be in a better position than, say, the IMF staff, to produce acceptable estimates. The Greek situation may be more difficult, since many "Greek" shipowners apparently do not reside in Greece, but there are indications that some useful data

exist. Another possibility would be to regard vessels operated by non-resident Greeks as part of the national shipping of the actual countries of residence. However, it is not likely that such a procedure would be acceptable to the authorities of those countries.

2. As noted earlier, further refinement of the shipping discrepancy analysis will require the accumulation of much better data on the shipping tonnage actually operated by each country. The Working Party recommends that the Fund pursue such resarch, using outside experts as necessary.

3. A proper evaluation of the missing shipment credits is at least partly dependent on the ability to arrive at an estimate for the total freight and insurance bill of the world. This, in turn, can at present only be estimated by the use of the c.i.f./f.o.b. factors compiled by the IMF and published in International Financial Statistics Yearbook. We recommend that these data be carefully monitored, and especially that their consistency with balance of payments data be established and maintained.

4. We also recommend that responsibility for monitoring the transportation data be centralized in some individual in the Balance of Payments Division, who would also be responsible for making estimates of "missing" data for inclusion in the World Economic Outlook. The field is complex, and it would not be worthwhile to ask all the country specialists in the Balance of Payments Division to become experts on shipping and transportation statistics, even on those supplied by the countries they concentrate on.

5. As indicated above, it appears that the credit entries for port expenditures are understated by a significant number of countries, perhaps because of outright omissions of certain types of receipts (such as bunker fuel deliveries) 1/ or of some netting in the estimating process. It is recommended that this possibility be investigated by the IMF, perhaps with a clearly focused one-time survey. Such an investigation could also serve as a stimulus to encourage more accurate reporting of the transportation accounts. The Working Party survey could help in designing an inquiry. All countries reporting "other transportation" credits significantly less than 50 percent of "shipment" debits would be candidates for inclusion in such a survey.

6. Further proghess on resolving the shipping discrepancy will require information on the industry that is likely to be available mainly from industry sources. We recommend that consultations with experts be held to establish more precise specifications for the information required and to explore the feasibility of acquiring such data from country or industry sources.

1/ These may be reflected in the merchandise export statistics; if so their inclusion in "other transportation" credits would require an offsetting adjustment to merchandise trade.

Chapter VIII. Unrequited Official and Private Transfers

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1. Introduction

Entries to record unrequited transfers are required in the balance of payments when one party provides to a nonresident a good, a service or cash, without any obligation for payment. The country of residence of the provider of a gift in the form of goods, for example, records in its balance of payments a credit entry for the value of the goods in the merchandise account, and offsets this by a debit contra-entry for the same amount in unrequited transfers.

Unrequited transfers are reported in the balance of payments under two main headings--private and official. Private transfers are, in principle, only those in which both transactors belong to the private sector, while official transfers cover transactions in which one or both parties belong to the official sector. In practice, however, it may be difficult to determine the sector of the foreign trasnactor so that for convenience or lack of information all transactions which involve the resident private sector may be classified as private.

The main types of official transfers are development assistance, whether in the form of cash or in kind, or through the voluntary cancellation of debt, budgetary contributions to international organizations and non-development grants provided by international organizations; government pension payments; and the receipt and payment of taxes, particularly withholding taxes. Private transfers include, inter alia, migrants' transfers, reflecting the net worth of people who migrate from one country to another; remittances of private nonprofit institutions, normally for aid or welfare purposes; gifts and inheritances; and tickets sold by and prizes won from nongovernment lotteries.

As shown in Table 73, the discrepancies in both private and official unrequited trasnfers have opposite signs and have remained relatively stable in the period from 1978 to 1984. The credit balance on privat etrasnfers peaked in 1980 at $7 billion, while the debit balance on official transfers reached a high of $20.8 billion in that year. The decline in this discrepancy is partly arbitrary because it reflects the lack of reported data after 1981, in the 1985 data base, for a large Mid-East donor, whose debits in this account were of the order of over $5 billion annually. It may be that the appropriate amounts are being included under another heading, so that the overall current account discrepancy may not be affected to this extent. It is not known to what extent the recipients of any continuing stream of transfers reported these amounts as credits.

The discrepancies on private and official transfers largely arise out of independent factors. The fact that one partly offsets the other is mainly fortuitous, except for the minor classification problem referred to earlier when an official sector donor makes a grant to a foreign private sector recipient. In such cases, the donor country should have no

Table 73. Unrequited Transfers, by Region

(In billions of U.S. dollars)

	1978	1979	1980	1981	1982	1983	1984
Official transfers							
Credits: All countries	25.2	32.7	37.0	35.5	34.9	35.9	35.2
Industrial countries	16.6	20.1	23.0	20.7	20.8	21.9	20.6
Developing countries	8.6	12.6	14.0	14.8	14.1	14.0	14.6
Mid-east oil exporters	--	0.2	0.1	0.2	0.1	0.2	0.2
Other developing countries	8.6	12.3	13.9	14.7	14.0	13.8	14.4
Debits: All countries	42.7	49.0	57.8	54.5	49.7	48.8	49.4
Industrial countries	34.9	41.5	47.3	44.5	46.5	46.1	47.6
Developing countries	7.8	7.4	10.6	9.9	3.2	2.6	1.7
Mid-east oil exporters	7.0	6.5	9.2	8.9	2.2	1.7	1.0
Other developing countries	0.8	1.0	1.3	1.0	1.0	0.9	0.7
Net: All countries	-17.5	-16.3	-20.8	-18.9	-14.8	-12.9	-14.2
Industrial countries	-18.3	-21.5	-24.3	-23.8	-25.7	-24.2	-27.1
Developing countries	0.8	5.2	3.5	4.9	10.9	11.3	12.9
Mid-east oil exporters	-7.0	-6.3	-9.1	-8.7	-2.1	-1.5	-0.7
Other developing countries	7.8	11.4	12.6	13.6	13.0	12.9	13.6
Private transfers							
Credits: All countries	32.2	38.6	45.8	44.2	43.7	43.0	37.4
Industrial countries	10.9	12.8	14.8	14.2	13.8	13.2	13.2
Developing countries	21.3	25.8	31.0	30.1	29.9	29.8	24.1
Mid-east oil exporters	--	--	--	--	--	--	--
Other developing countries	21.3	25.7	30.9	30.0	29.9	29.	24.1
Debits: All countries	27.8	32.6	38.8	38.5	39.9	36.3	33.6
Industrial countries	16.6	19.7	22.6	20.8	19.6	19.2	18.0
Developing countries	11.2	13.0	16.2	17.8	20.3	17.1	15.7
Mid-east oil exporters	6.9	8.0	10.6	12.5	14.9	12.8	11.8
Other developing countries	4.3	4.9	5.6	5.3	5.3	4.4	3.9
Net: All countries	4.5	5.9	7.0	5.7	3.8	6.7	3.7
Industrial countries	-5.7	-6.9	-7.8	-6.6	-5.8	-6.0	-4.7
Developing countries	10.1	12.8	14.7	12.3	9.6	12.6	8.5
Mid-east oil exporters	-6.8	-8.0	-10.6	-12.5	-14.9	-12.7	-11.8
Other developing countries	17.0	20.8	25.4	24.8	24.5	25.3	20.3

Source: IMF Balance of Payments Statistics Yearbook, 1985.

difficulty assigning such a transaction to the resident official sector, but the recipient country might be either unable to allocate the transaction to a foreign official sector or have no such classification in its balance of payments. In either case the recipient country would include the trasnaction with the resident private sector, tending to generate a net credit in this account.

The regional breakdowns given in Table 73 show that for official transfers the excess of debits largely reflects an imbalance between industrial and developing countries, for reasons discussed in this chapter. Also, the abrupt drop in Mid-East oil exporter debits stands out. For private transfers, as reported in the Yearbook, one of the outstanding characteristics is the large net debit reported by the Mid-East oil producers, while other developing countries are shown with large net receipts. A substantial factor in this pattern is the remittances of temporary workers who are considered to be residents of the country of temporary residence for balance of payments purposes.

2. Data comparisons

In order to try to pinpoint the sources of discrepancy in the series for official and private transfers, it was decided to obtain more data from the countries accounting for the bulk of the transactions in transfers reported to the Bureau of Statistics for the year 1983. The questionnaire used for this survey is shown in Appendix H. It was sent to 48 countries, with 33 responding, including all major industrial donor countries. The questionnaire asked for information on transfers broken down by the official and private sectors. Within the official sector, extensive detail was sought regarding the kinds of development assistance donated and received. In addition, respondents were asked to identify their major partner countries to provide the basis for making inter-country comparisons.

A comparison of the data obtained on the special questionnaires with those contained in the Balance of Payments Statistics Yearbook for the same countries is shown in Table 74. To make the comparisons valid, it is necessary to adjust for some reclassifications made by the Fund staff to the accounts as originally reported.

Comparing the data in columns 2 and 3 of Table 74, it is apparent that the biggest adjustment, of $5,083 million, has been made to private unrequited transfer credits. This reflects the reallocation by the Fund of personal remittance receipts to transfers rather than including them in service receipts as reported by the countries concerned. The last column indicates the extent of revisions suggested by the questionnaire replies.

3. Sources of discrepancy

The results of the questionnaire survey by type of transfer are shown in Table 75. Because the coverage of the small number of major donors is

Table 74. Unrequited Transfers,
Questionnaire and Yearbook Data, 1983

(In billions of U.S. dollars)

	Questionnaire Respondents				All BOPS Countries	
	BOPS Yearbook (1)	Questionnaire Response (2)	Questionnaire Response Adjusted 1/ (3)	Difference (3)-(1)	As Reported	Adjusted
Official transfers						
Credits	27.2	28.6	28.5	1.3	35.9	37.2
Debits	44.9	44.9	45.1	0.2	48.8	49.0
Net	-17.7	-16.3	-16.6	1.1	-12.9	-11.8
Private transfers						
Credits	21.9	17.8	22.8	1.0	43.0	44.0
Debits	18.3	18.3	18.5	0.1	36.3	36.5
Net	+3.6	-0.5	+4.4	0.8	6.7	7.5

1/ The adjustments are to incorporate reclassifications by the Fund staff of data as originally reported by the countries. The major reclassification involved shifting reported credits from factor services to private unrequited transfers.

much more complete than the coverage of recipient countries, the survey coverage of total official debits was much more comprehensive than of official credits. Nevertheless, the coverage was sufficiently high to be able to support some conclusions about the discrepancies in the global data for unrequited transfers. The analysis is hampered at this stage, however, because of the inability of some countries to provide data on their trasnfers in the detail called for in Table 75.

For official transfers, the largest factors causing the discrepancy are:

(a) The lack of credits covering transfers of non-development support to international institutions themselves, in particular the transactions of the European Economic Community (EEC). For questionnaire respondents, which include all major industrial countries, reported net transfers to such institutions, other than for development assistance, reached $6.5 billion in 1983, about half of the total discrepancy on official transfers. These institutions receive larger amounts from their member countries than they pay out to them in the form of transfers, and this imbalance is reflected in the excess of reported debits by the countries transferring funds on balance to these institutions. As shown in Table 75, under "other multilateral", the reported debit balance for reporting EEC countries (reports were received from all except Greece and Ireland) was over $3.4 billion, reflecting the imbalance between extremely large gross flows. Gross flows to non-EEC institutions under the same heading were much smaller, but because transfer receipts from these institutions, whether reported by industrial or developing countries, were very small, a net reported debit balance of almost $3.1 billion resulted.

(b) To a lesser extent a similar problem exists for development assistance channelled through international agencies, where the discrepancy is a net debit of $1.6 billion. That discrepancy arises from gross debits by reporting countries of $2.1 billion, only partly offset by reported aid receipts from the institutions of $0.5 billion. The imbalance partly reflects the financing of the overhead costs of the institutions themselves but the questionnaire results exaggerate the discrepancy somewhat because of the limited coverage of credits by developing countries. The actual discrepancy would be reduced if relevant data for the international agencies themselves were recorded, and this could also throw some light on the shortfall in credits reported by recipient countries.

(c) The excess of debits reported in the questionnaire for bilateral development assistance was $3.4 billion, which to some extent reflects the less complete coverage of recipient countries than of donor countries in the questionnaire survey. Since no data were available for one major non-industrial donor, Saudi Arabia, the discrepancy in this category for all countries is understated to the extent that recipient countries recorded such flows, and, of course, the gross flows are probably too low. Recipient countries were able to identify and report much higher amounts of transfers in the form of cash, than did donor countries, where perhaps the information was not readily available to balance of payments compilers.

Table 75. Unrequited Transfers as Reported in Questionnaire, by Type, 1983

(In millions of U.S. dollars)

	Credit	Debit
Total official sector	28,594	44,931
Development assistance	5,893	12,171
Bilateral	5,306	8,702
Development programs	1,273	4,808
Technical assistance	371	1,848
Food aid	642	1,058
Debt forgiveness	--	59
Other	2,198	674
Unallocated	822	255
Multilateral aid	511	2,057
EEC	96	615
Other	415	841
Unallocated	--	601
Unallocated	76	1,412
Memo: In cash	2,819	627
Other multilateral	17,269	23,811
EEC	17,150	20,601
Other	119	3,210
Pensions	1,415	4,050
Miscellaneous	3,879	3,775
Unallocated	138	1,124
Total private sector	17,776	18,250
Institutional remittances	794	112
Other	11,456	8,942
Unallocated	5,526	9,197

The high proportion of cash to total transfer credits as reported by recipients suggests that recipient countries might have difficulty in identifying and valuing non-cash development assistance, particularly technical cooperation, and that this difficulty could account for a large part of the discrepancy of $3.4 billion. Alternatively, the donors may be assigning a relatively higher value to non-cash assistance than the recipient country.

(d) The discrepancy for pension payments was a net debit of $2.6 billion. All major paying countries were covered in the survey, but the coverage of recipient countries was incomplete. If total receipts were increased by, say, $600 million to include an estimate for this incomplete coverage, this would still leave a discrepancy for all countries of over $2 billion, reflecting the difficulties of recipient countries in identifying and measuring these flows. Of course, it is also possible that pension credits may be erroneously included elsewhere in the current account.

(e) Within the total of miscellaneous transfers for the official sector, the small net credit balance of $104 million considerably understates the real discrepancy between gross credits and debits owing to offsets within components of this balance. For example, only three countries (Australia, Canada and Germany) reported withholding tax transactions, which resulted in a net credit balance of $0.7 billion, composed of gross credits of $1.5 billion and debits of $0.8 billion. Discrepancies in other components of this category of transfers cannot be identified because no further details are available. To the extent they are reported military grants should also be included here.

It should be noted that the discrepancy caused by the omission of data for international agencies, described in (a) and (b) above, will not affect the overall current account to the extent that these agencies have expenses in the countries where they are located that are incorporated as service receipts in the balance of payments of those countries. Similarly, it should be noted that the treatment of withholding taxes discussed in (e) above, will have an effect on discrepancies in the accounts for transfers and the items on which withholding taxes are levied, such as investment income, but to the extent that these taxes are treated consistently throughout the accounts there will be no effect on the overall current account asymmetry.

For private transfers, the questionnaire asked only for a disaggregation between institutional remittances and other transfers. Data on institutional remittances were requested to complement the information obtained on official sector development assistance. The numbers reported were, however, rather small, particularly for the countries where these non-government organizations are located. This might reflect the fact that to the extent these organizations are government funded the data are in the official sector, while recipient countries cannot, of course, classify aid received from these organizations on the basis of their funding.

A major problem area for private transfers, which was not probed by the questionnaire, appears to be workers' remittances. This might to some extent be a definitional problem, relating to residence. With a few exceptions, if a person is resident in an economy for one year or more he is deemed, according to the Manual, to be a resident of that economy. If he makes payments to family members in his country of origin, these payments are unrequited transfers. However, some countries consider that their nationals working abroad remain residents of their country of origin, so that the payments received are classified as services rather than transfers.

To the extent possible, the Bureau of Statistics in its publications has tried to ensure that the conceptually correct treatment is followed and has accordingly adjusted countries' data. These adjustments are, however, easier to identify and to incorporate as credits than as debits, because they tend to bulk large among the credits reported by some countries. As noted above, the Fund's adjustments add $5 billion to reported private transfer credits in 1983--helping to create a positive residual.

If adjustments were made to official transfers for the factors identified above which can be most readily addressed, the results for 1983 (and probably similar results for preceding years) would be as follows:

Table 76. Adjusted Discrepancy on Official Unrequited Transfers, 1983

(In billions of U.S. dollars)

	Yearbook Revised per Questionnaire 1/	Adjust- ments	Adjusted Totals
Credits	37.2		
Add: International Institutions			
Non-Development Assistance		6.0 2/	
Development Assistance		1.0 3/	
Pensions		2.0	46.2
Debits	49.0		
Add: Saudi Arabia		2.0 4/	
Witholding tax		0.7	51.7
Net discrepancy	-11.8	6.3	-5.5

1/ From Table 74.
2/ Derived from the $6.5 billion imbalance reported in the questionnaire less an estimate for undercoverage in the questionnaire survey, compared with Yearbook net credits, of $0.5 billion
3/ Derived from the $1.6 billion imbalance reported in the questionnaire less an estimate for undercoverage in the questionnaire survey, compared with Yearbook net credits, of $0.6 billion
4/ This net amount is added, conjecturally, to compensate for the lack of data after 1981 in the 1985 Yearbook.

The net discrepancy of $5.5 million, after taking into account the adjustments made in Table 76 of $6.3 billion, probably largely reflects under-recording of credits for development assistance and possibly some military aid.

The problems concerning the recording of development assistance transfers have recently been explored by the OECD which, as a contribution to the work of the Working Party, has produced a report entitled Official Development Assistance Grants and the Discrepancy in the Reporting of Official Unrequited Transers, dated June 17, 1985. That report concentrated on comparing the data on official unrequited transfer debits and credits reported in the Balance of Payments Statistics Yearbook with the data on official development assistance (ODA) supplied to the Development Cooperation Directorate (DCD) of the OECD.

The analysis contained in the DCD document was impeded by a lack of detail for the data published in the Yearbook. Total grants for ODA by DAC countries in 1983 are reported as $18.1 billion, and it was presumed by the DCD that this amount would be consistent with the balance of payments debit entry. However, the maximum amount of development assistance that can be included in the gross balance of payments debit of $49.0 billion, as reported in the Yearbook adjusted for the questionnaire results, is $17.4 billion, 1/ and this covers all countries included in the balance of payments tables and not just DAC countries reporting ODA data to the DCD. It would therefore appear that, if the ODA total as compiled by the OECD is accepted as correct, the gross debits in the balance of payments are understated by perhaps $700 million--which would increase the reported discrepancy.

However, in using the ODA data it should be recognized that there are definitional and coverage differences between these data and the balance of payments data. For example, transfers to French overseas departments are included in ODA but not in the French balance of payments as reported to the Fund. Similarly, while DAC members include in ODA the administrative costs of their aid programs which cannot be allocated to specific parts of these programs, they do not appear usually to include such costs in their balance of payments statements, with the notable exception of the United States.

To quantify these differences and to try to resolve the discrepancies, further comparisons should be made at the finest possible level of detail between the data obtained from the questionnaire survey and those in the DCD information system. To the extent possible, bilateral flows of

1/ This is the total of $12.2 billion reported as development assistance in Table 75, plus the $1.1 billion of official debits, not allocated to any major category in Table 75, and $4.1 billion representing the difference between the adjusted Yearbook total official debit of $49.0 billion and the questionnaire survey total of $44.9 billion, i.e., the debits for the countries not covered by the questionnaire survey.

transfers should be compared. Unfortunately, however, the availability of geographic data in the questionnaire survey is somewhat limited as the balance of payments compilers did not seem to have access, in all cases, to the data base from which data are supplied to the DCD.

4. Recommendations

(1) The Fund should incorporate into its balance of payments data base information for international institutions. This should be done not just for unrequited transfers but for all current and capital account transactions. The information should be collected directly from the institutions concerned through specially designed report forms. The information for specific institutions should, to the extent possible, be compared by the Fund with data obtained from member countries of these institutions, and in particular with the accounts of the countries in which these institutions are located.

(2) Data collected on official transfers in the balance of payments should show development assistance separately, in order to permit comparisons with the information collected by the DCD of the OECD. If balance of payments data are available on a bilateral basis, comparisons with the DCD data will be facilitated and problem areas can be narrowed down. In the meantime the Bureau of Statistics should explore with the OECD discrepancies between the bilateral and other data obtained from the questionnaire survey and the DCD reporting system, to learn more about the nature of these discrepancies and what can be done to reduce them.

(3) The Fund should establish a focal point for the compilation and exchange of bilateral data on such transfers as payments of pensions, workers' remittances, and development assistance.

(4) Only a few countries include withholding taxes in their balance of payments statements, resulting in a sizeable net credit of $0.7 billion under that heading--with an offsetting discrepancy, in principle, under the heading of the income or other factor payment involved. Consideration should be given to treating such taxes separately in global totals of official transfers, so that part of the discrepancy can be explained.

(5) The present treatment of workers' remittances in the <u>Manual</u> should be reviewed to determine whether the treatment prescribed is consistent with actual experience.

Chapter IX. Allocation and Interpretation of Discrepancies on a Regional Basis

Chapter IX. Allocation and Interpretation of Discrepancies on a Regional Basis

1. Geographic allocation of adjustments

In the process of deriving adjustments to the reported balance of payments data to correct the statistics and reduce some of the global discrepancies the Working Party has also attempted to allocate these adjustments by region, and in a few cases by country. It must be emphasized, however, that such allocations are at best partially judgemental, and the basis for making them ranges from fairly good for the investment income data to rather poor, at this stage, for the shipping, transportation, and transfers accounts. Moreover, while introducing such adjustments may reduce the global discrepancies considerably, this does not necessarily lead to a clear-cut improvement in the analysis of the external situation of particular countries. Since the allocation problem is different for each of the main categories studied by the Working Party, it seems best to describe each one in some detail before attempting an over-all summary.

a. Investment income

The Working Party analyzed the international investment income accounts in considerable detail, and was able to suggest adjustments that eliminated most of the discrepancy. However, major problems remain for the geographic analysis of the direct investment portion of those adjustments. In the case of reinvested earnings, the indicated adjustments can be based on any one of three premises: (1) the credits are likely to be reported more completely and accurately, so the appropriate adjustment would be to add debits where they seem to be inadequately reported; (2) since an excess of credits seems to be characteristic of this sector, the discrepancy can be reduced by eliminating the credits for which there are no corresponding debits; (3) since there is a built-in bias in this sector, it would be appropriate simply to eliminate all the data on reinvested earnings when aggregating the world current account. Clearly, the balances of regions, as adjusted, would be considerably affected by the choice of the adjustment procedure--at least until the reporting of reinvested earnings is greatly improved.

There is a further complication in the case of reinvested earnings, because whichever adjustment is made for any country or region there should be, by definition, an opposite and equal adjustment in the capital account, so that the net arithmetical effect on the total balance of payments statement would be zero. Nevertheless, there would be some gain in understanding the economic significance of the operations of these enterprises, for both creditors and debtors, if an effort is made to include all their earnings, whether distributed or not, in the international accounts. On that basis, the first column of Table 78 shows the effect of retaining the amounts reported as credits, and compensating, on balance, by inserting debits in the locations where the analysis completed up to this point suggests that they should be. The result is to reduce somewhat the net credits of industrial countries but to add a sizeable amount to the debits attributable to developing countries.

For "other", or distributed, direct investment income the geographic allocation of adjustments is shown in the second column of Table 78. For this category, the adjustments tend to raise credits or reduce debits, with the effect of adding a considerable amount of net credits to industrial countries and Middle East oil exporters. However, a considerable global net debit remains under this heading, centered on the developing countries. As noted in Chapter IV, these remaining discrepancies seem to be traceable to a few countries, and further analysis may show whether the debits were reported erroneously, or whether they should be shifted to another payments category without affecting the over-all current account discrepancy.

In the case of portfolio investment income, which is comprised mainly of returns on positions with banks and on holdings of securities (including assets held as official reserves), results are shown in column 3 of Table 78. The suggested adjustments almost eliminate the discrepancy under this heading, but this result should not be taken too literally--it is the result of a rather complicated process (see Chapter V) and no doubt there are many offsetting and accidental errors remaining. Nevertheless, the body of statistics and the methodology underlying this set of adjustments seems to the Working Party to be relatively well-founded. The net effect of these adjustments is to add to the net income credits reported by all areas except Eastern Europe, but to add rather more net credits to industrial countries and offshore centers than to the developing countries. It should be noted that $5.9 billion of the suggested increase in net credits cannot be allocated geographically, reflecting mainly the lack of information on residence of asset holders in the banking position data. For convenience, the adjustments for investment income data, apart from the more problematic allocation of reinvested earnings, are shown in Table 77.

Table 77. Adjustment of Investment Income, 1/ 1983

(In billions of U.S. dollars)

	As Reported	Adjust-ments	Adjusted Data
Industrial countries	-1.7	+17.7	16.0
Middle Eastern oil exporters	18.5	+6.0	24.5
MOB centers	0.4	+3.1	3.5
Other developing countries	-60.6	+6.2	-54.4
Eastern European countries	--	-3.7	-3.7
Intrnational organizations	--	+3.1	3.1
Unallocable	--	+5.9	5.9
Total	-43.5	+38.4	-5.1

1/ Excluding reinvested earnings.

b. Shipment and "other" transportation

In the case of the large net debit shown for the shipping and other transport categories, taken together, the Working Party at this stage can offer only interim answers on the likely geographic distribution. However, some general comments may help in the further pursuit of this subject. As shown in Chapter VII, the largest discrepancy is an excess of debits (averaging over $30 billion per year recently) in the shipping account. This discrepancy results primarily from the lack of reporting of freight revenues by several countries or economies whose residents operate very large merchant fleets. On the basis of this information, it could be inferred that most of the missing credits could be attributed to ships owned or operated by persons or enterprises associated with Greece, Hong Kong, and the U.S.S.R., and other countries of Eastern Europe that are not members of the Fund. In addition, there is probably some understatement of credits by the industrial countries that may have some difficulty in capturing information on all the ship operators resident in their countries. Further, sizable revenues are probably accruing to ships operated by multinational companies via subsidiaries organized in countries that do not compile data of this kind. Such ships are probably not counted among the fleets operated by the residents of the home countries of such multinationals.

The Working Party has not been able to carry through a detailed evaluation of the shortfall in reported revenues, but the first of the possibilities mentioned above is undoubtedly the most important. Further research will be required to assess the importance of the other factors mentioned. The sizable portion of net revenues generated by chartering ($6.7 billion) cannot be allocated by residence, and remains unallocated at this time.

Corresponding to the missing revenues traceable to non-reporting by countries where operators reside, there is also a set of unreported debits by these countries representing the foreign operating costs of these fleets. Such debits should appear in the "other transportation" category. However, such an adjustment raises the existing discrepancy in that category--confirming that a major problem also exists in under-reporting by many countries of "other transportation" credits. Some estimates of where these missing credits are located are given in Chapter VII, but they are still rather impressionistic. A summary of the indicated adjustments is given in Table 78.

Even if all the suggested estimates for the shipping and transportation accounts could be made, however, the improved arithmetic results would still be inadequate for the analysis of the economic impact of these transactions on individual countries. For instance, the fleet operated by residents of Greece may generate large revenues and expenditures, but the net result may be relatively small, and could be either a credit or debit balance in any given year. Moreover, the cash flow representing the net operating result, as well as the flows associated with the purchase and financing of ships, may in large part be retained abroad by the operators,

Table 78. Allocation of Services and Transfer Discrepancy, by Country Groups, 1983

(In billions of U.S. dollars)

	Income on Investments				Shipment and Transport	Other Services	Transfers	Total Current Account, Excluding Merchandise
	Reinvested earnings	Other direct investment income	Non-direct investment income	Total				
Reported data 1/								
Industrial countries	11.7	4.9	-6.6	10.0	-6.0	19.6	-30.3	-6.7
Middle East oil exporters	-0.1	-6.3	24.8	18.4	-13.4	-37.0	-14.2	-46.2
MOB centers	0.1	-0.2	0.6	0.5	1.3	6.4	-0.1	8.1
Other developing countries	-1.7	-9.9	-50.7	-62.3	-17.1	0.9	38.3	-40.2
Eastern European countries	--	--	--	--	--	--	--	--
International organizations	--	--	--	--	--	--	--	--
Unallocated	--	--	--	--	--	--	--	--
Total	9.9	-11.5	-32.0	-33.6	-35.2	-10.0	-6.2	-84.9
Adjustments								
Industrial countries	-5.3	+4.4	+13.9	+13.0	+1.0	--	--	+14.0
Middle East oil exporters	-0.1	+4.0	+2.0	+5.9	+7.6	--	-2.0	+11.5
MOB centers	-1.9	-3.7	+6.0	+0.4	+2.5	--	--	+2.9
Other developing countries	-3.1	+0.6	+5.5	+3.0	+10.4	--	+3.4	+16.8
Eastern European countries	--	--	-3.7	-3.7	+0.8	--	--	-2.9
International organizations	--	--	+3.1	+3.1	--	-7.0	+7.0	+3.1
Unallocated	--	--	+5.9	+5.9	+6.7	--	--	+12.6
Total	-10.4	+5.3	+32.8	+27.7	+29.0	-7.0	+8.4	+58.1
Adjusted data								
Industrial countries	6.4	9.3	7.3	23.0	-5.0	19.6	-30.3	7.3
Middle East oil exporters	-0.2	-2.3	26.8	24.3	-5.8	-37.0	-16.2	-34.7
MOB centers	-1.8	-3.9	6.6	0.9	3.8	6.4	-0.1	11.0
Other developing countries	-4.8	-9.3	-45.2	-59.3	-6.7	0.9	+41.7	-23.4
Eastern European countries	--	--	-3.7	-3.7	0.8	--	--	-2.9
International organizations	--	--	3.1	3.1	--	-7.0	+7.0	3.1
Unallocated	--	--	5.9	5.9	6.7	--	--	12.6
Total	-0.5	-6.2	0.8	-5.9	-6.2	-17.0	+2.2	-26.8

1/ Balance of Payments Statistics Yearbook, Part 2, 1985.
Note: Details may not add to totals because of rounding.

and might not affect the Greek economy, apart from actual requirements for expenditures in Greece. To some extent, this result parallels the situation in the investment income accounts, where identifying the countries whose credits or debits are not correctly reported is a necessary step in understanding their underlying economic situation, but is not sufficient for understanding the full significance of the missing data.

c. Unrequited transfers and "other" services

Attempts to reduce the discrepancies in the reported data on unrequited transfers are also in an early stage, so that the analysis of geographic allocations is obviously sketchy. The Working Party believes, however, that adjusting for a few of the major anomalies may go some way toward correcting the record. There is also a considerable element of asymmetry as between unrequited transfers and "other services," depending on the point of view of the reporting country. Since a few of these asymmetries are discussed in this Report (although the Working Party has not investigated "Other services" as such) they are included in this brief discussion of the geographic allocation problem.

As shown in Table 78, the main adjustment derived from Chapter VIII involves an addition of $7.0 billion to cover the excess of net reported transfers to international organizations for which no data are included in the present Fund tabulations. It will also be noted that $3.1 billion of credits was added to net portfolio income for these institutions. Of this combined total of about $10 billion, it is very roughly estimated that about $7 billion should be inserted as a debit adjustment under "Other services" to represent the unreported expenses of these organizations; these expenses are, in principle, among the credits reported by countries where the expenditures are made. In fact, little is known about the accounting for these operations and additional research is needed to establish an adequate basis for a final adjustment.

A further net credit amounting to $3.4 billion is added to transfer receipts of other developing countries, representing a minimum amount by which their reporting appears to understate receipts of development assistance. On the other hand, $2 billion is added to the transfer debits of Middle East oil exporters to make up for data not reported separately, but perhaps now recorded under "Other services." It is not yet possible to estimate what the geographic distribution should be for the recipients of reported pension payments, or for the payers of workers' remittances as reported by the receiving countries.

When these adjustments to transfers and other services are inserted in Table 78, the effect is to enlarge the discrepancy under "Other services" to $17.0 billion, and to shift the total under transfers from -$6.2 billion to +$2.2 billion. Since these categories are inter-mixed to some extent, it might be best to combine them, and note that the combined net debit was -$16.2 billion as originally reported, and remains quite large at -$14.8 billion after adjustment.

The net result of this preliminary set of adjustments is to reduce the over-all discrepancy on services and transfers from -\$85.0 billion to about -\$27 billion. Including the merchandise trade balance the result, shown in Table 79, is to reduce the over-all current account discrepancy from -\$75 billion to -\$17 billion. In the process, all areas except Eastern Europe emerge with larger net credits or reduced net debits. The allocation of these adjustments should be viewed as experimental at this stage, but is probably sturdy enough to enhance the analysis of the data. Even on an experimental basis, however, a considerable part of the adjustment remains unallocated.

2. Evaluation of results

a. Analytical aspects of allocations

The principal finding of this study, from the point of view of the analysis of world economic developments, is that the negative discrepancy in the world current account is not concentrated in any individual country or grouping of countries to such an extent that the interpretation of basic economic problems has been distorted. Nevertheless, adoption of the adjustments suggested in this report, together with continued emphasis on improving the quality of the available data and estimates of international transactions, will help to sharpen the focus of advice and guard against any further deterioration of the basic data. In a few cases the adjustments suggested may cause some reappraisal of economic policies, and they may be useful in the context of Article IV consultations. However, it should be remembered that the Working Party can not reconstruct national accounts as they would be if there were no statistical problems, but can only suggest adjustments that would alleviate certain evident discrepancies. Moreover, the range of uncertainty in the adjustments widens as the focus shifts to individual countries, though the direction of the indicated change may be fairly clear.

Another finding of the study that carries analytical implications is that there would be considerable benefit from enhanced integration of the research and data collection functions in individual countries and at the level of international organizations. When the aggregated data are submitted to analysis not only on a regional basis but also in terms of the substantive content of the various types of transactions, the perspectives of those responsible for the compilation and analysis of data would be brought closer together, and there would be earlier awareness of emerging discrepancies and of changes in the economic environment that might call for corresponding adjustments in compilation techniques.

A specific contribution of the procedures adopted by the Working Party is that they should enhance the dialogue between the Fund and member countries in the context of the Fund's surveillance responsibilities. For such purposes it is essential not only that a common body of statistics should be available, but that the parties should be aware of any gaps or discrepancies in basic data that might lead to analytical errors or disagreements. In particular, the results of this study should be taken

Table 79. Adjusted Current Account Balances, by Country Groups, 1983

(In billions of U.S. dollars)

Country Group	Current Account Balance as Reported 1/	Indicated Adjustments 2/	Adjusted Balances
Industrial countries	-18.5	+14.0	-4.5
Developing countries	-56.6	+31.2	-25.4
Major offshore financial centers	-0.9	+2.9	2.0
Middle East oil exporters	-13.3	+11.5	-1.8
Other developing countries	-42.5	+16.8	-25.7
Eastern Europe	(3)	-2.9	-2.9
International organizations	(3)	+3.1	3.1
Unallocated	--	+12.6	12.6
Total	-75.1	+58.1	-17.0

1/ Balance of Payments Statistics Yearbook, Part 2, 1985.
2/ See Table 78. Adjustments cover only selected current account sectors.
3/ Not included in Yearbook data; adjusted balances reflect only indicated adjustments.

into account in the context of analyses of the problems of international indebtedness.

Finally, it is recommended in this Report that the Fund, and the OECD, should apply adjustments regularly to the current account balances of geographic groupings as reported, so as to effect corrections of the discrepancies that have been identified. Such adjustments may of necessity have a large judgemental element, but they will also provide an opportunity for observing the kinds of abnormalities in national reporting that have been the cause of some of the large year-to-year swings in the global discrepancy. As noted in Chapter I, such swings introduce a considerable additional uncertainty into the projecting of economic activity and savings/investment balances.

b. Allowance for hidden assets

The geographical allocation of the discrepancies in the investment income accounts in this Report is based primarily on readily available data on stocks of assets and liabilities. There is a general perception that there is also a large stock of hidden cross-border assets and liabilities that would generate unrecorded income flows. This subject is discussed briefly in Appendix F, but the results are necessarily inconclusive. On the one hand, it would appear that the stock of external assets, at least for developing countries, that underlies the income estimates in this Report is lower than various estimates of unrecorded plus recorded capital outflows, but is nevertheless very large. On the other hand, it is clear that estimates of "capital flight" do not generate an asset stock useable as a basis for income estimates for countries or even regions.

c. Effects of offshore financial centers and financial innovation

One of the major concerns leading to the initiation of this study was the possibility that the growing use of international financial centers, especially those relatively newly-established in offshore locations, might be causing a deterioration in the statistics on international transactions. As noted in Chapter VI, the tendency to pass transactions through these centers does create asymmetries in the current account (the countries where the ultimate transactors reside may account for the same amount of funds but under different transaction categories), and may also create offsetting discrepancies as between the capital and current accounts as recorded in third countries. Of course, the use of these centers makes it difficult if not impossible to trace the flow of funds between particular final parties to transactions. Such tracing is not essential for accuracy in the overall balance of payments accounts of a country, but as these centers encourage the breakdown of geographic boundaries they undermine the essential resident/non-resident demarcation of the international accounting framework.

It appears that the major immediate problem created by these centers is not their functioning as intermediaries (this is, after all, a long-standing feature of the international scene) but their failure to supply information to the Fund on their balance of payments accounts, and, in some cases, their failure to supply geographic data on the assets and liabilities of the banks and other financial intermediaries operating in their jurisdictions. The lack of data on their own balance of payments accounts leads to sizable omissions respecting the activities of their own residents and of the enterprises or intermediaries established in these locations by foreigners. The extent of the omissions is indicated in Chapter VI. The lack of geographic detail on banking positions hampers the attempt to allocate income by country or area, as in Chapter V, and, as these positions grow, they will loom larger as a barrier to geographic analysis.

In summary, the operations of international financial centers cause difficult statistical problems, but do not seem to be responsible for a large part of the growth in the current account discrepancy over time.

A somewhat parallel development has been the introduction of new methods for conducting international financial transactions, associated with the diminution of barriers to capital flows and the ease of conducting business via computers and improved communications, together with the remarkable spread of innovative financial instruments. These developments challenge the statistical apparatus designed to capture international capital flows, partly because of the sheer size and speed of the transactions and partly because it becomes more difficult to fit the transactions into the traditional catagories of the balance of payments accounts, and especially into geographic boundary lines.

Probably the most disturbing elements of the innovation process from the point of view of balance of payments compilation are (1) the nature of the transactions becomes obscure as a chain of transformations occurs via swaps of all kinds, so that at any given time the instrument involved may be short-term or long-term, local or foreign currency, bank loan or marketable security, etc., (2) the identity of the ultimate creditors or debtors may be more difficult to establish, threatening a breakdown of the residence principle essential for international accounting, and (3) the transactions are increasingly carried out between the final parties, with banks arranging the transactions in many cases, but not carrying the resulting international asset or liability on their own books. This last factor is especially important because it is much more difficult to obtain the relevant information from the universe of potential transactors than from the more limited, and more statistically experienced, banking sector. A related facet of this tendency to diversify financial transactions is that the largest multinational companies, who are often the major parties in the transactions, also have less incentive to pay attention to national boundaries when accounting for their financing operations.

It may be that these difficulties will be accommodated over time by modifications in the statistical process, but there is some evidence that the ability to measure over-all capital flows has degenerated, reinforcing the tendency to capture inflows more effectively than outflows which has become obvious since 1979. The ability to collect data on such flows in meaningful geographic breakdowns has never been robust, and must be increasingly doubtful. The effect of innovation on the geographic allocation of current account transactions would be less severe, but for countries making such allocations based on information regarding the currency of payment or the location of the account being credited, the record could become increasingly misleading.

3. Future prospects of geographic analysis

The regional allocations of discrepancies attempted in this Report can certainly be refined and extended to more categories of transactions. We believe the Fund could adopt the procedures we have developed, and could prepare estimates of the appropriate adjustments. The size of the adjustments needed will vary over time depending on (1) whether the underlying factors causing the discrepancies are becoming stronger, and (2) whether the countries whose accounts are deficient are beginning to make the called-for corrections. For broad analytical purposes these adjustments need not be precise, but some careful analysis will be required.

One major element in refining the allocation process for the income accounts would be continuing efforts by the Fund to obtain more geographic information from some countries reporting substantial banking positions.

There is a connection between the process of allocating the current account discrepancy to countries and regions and the efforts by individual countries to produce geographic breakdowns of their international accounts. This is seen most clearly in the work on direct investment income, where the existence of discrepancies, and their location, can be effectively traced only through comparisons of individual country data generated by a few major creditor countries with the data available in host countries. In principle, the matching of bilateral data should help to identify discrepancies in other accounts as well, but experience with such comparisons suggests that they are difficult to achieve and time-consuming. Regional allocations of such transactions as income on positions with foreign banks, for instance, will be almost notional if they largely reflect the flows vis-à-vis international financial centers.

From the point of view of reducing, or at least understanding, the discrepancies in the current account, the Working Party can recommend intensified work on sorting out direct investment transactions geographically. In addition, more complete country detail on banking positions, and on the ownership of securities, would be very useful. Progress could surely be made in sorting out the shipping and transportation accounts if better data on the industry could be assembled. It also appears that discrepancies in the unilateral transfer accounts could be explored more effectively with greater country detail. However, whether each country should be urged to prepare geographic distributions of a wide range of transactions is a broader question that does not seem to be critical for the discrepancy problem.

Chapter X. Statistical Findings and Recommendations

Chapter X. Statistical Findings and Recommendations

1. Introduction

This chapter is intended to bring together and sum up the findings of the Working Party resulting from its research into the sources of the discrepancies in several sectors of the world current account--especially the discrepancy in accounting for income on international investments. It is mainly devoted to formulating recommendations of a general nature. More extended discussions and detailed recommendations are given in the relevant chapters.

Based on our studies we believe considerable progress can be made in reducing these discrepancies both at the level of global aggregation and at the level of the statistics prepared in individual countries. The data reported by individual countries are the foundation of the world accounts, of course, but since gaps or inconsistencies in the national data are almost inevitable there is also a need for the Fund to work with national compilers to improve international consistency, to press for the correction of errors, and, where necessary, to supply missing data or adjustments of the type described herein. In fact, lasting improvements can only be accomplished through close cooperation and effective interchange of views and information between the Fund and the national authorities responsible for preparation of the international accounts. Moreover, policy makers must express their interest in and support for these recommendations if they are to have their intended effect.

The recommendations listed below fall into two main groups: those that apply directly to actions to be taken by responsible officials and statisticians in individual countries, and those that require actions by the Fund, often in conjunction with national compilers or other international agencies. Since the production of the balance of payments accounts usually involves inputs from more than one official agency, and should be integrated into the overall national accounts of each country, some of the recommendations refer to this broader framework as well as the specific aspects of the balance of payments accounts.

At the broadest level of generality, the experience of the Working Party is that the producers of the international accounts can often generate better statistics, or additional details, when their attention is focussed on areas that are deficient or have been neglected. Also, the Working Party considers that compilers and the Fund are able to improve the accuracy and usefulness of the balance of payments accounts by taking greater advantage of relevant data collected for other purposes, such as the international banking data. In that connection, the Fund can work with compilers to help in establishing priorities and to prepare improvements in data where the Fund staff finds deficiencies. At the same time, the Working Party believes that an important aim should be the limitation of costs and the enhancement of timeliness, and that these aims can be furthered by flexible and imaginative use of existing resources, coupled with a concentration of effort on the items of greatest significance for each country.

The Working Party is very much aware that it is easier to identify sources of error for a particular year, and to suggest remedial measures, than it is to carry through the reforms that will reduce discrepancies in the future. Therefore, a major theme of this Report is that much of the effort will be wasted unless a sustained effort is organized to follow up and capitalize on the findings of the Working Party. Moreover, the explorations by the Working Party have certainly not exhausted the possibilities for ongoing research into existing problems with data on international transactions, or into the problems that are certain to arise from continuing changes in practices on international financial markets and the conduct of trade in goods and services. It should be noted that the absence of a world "discrepancy" in one or another of the categories of international transactions does not establish that there is not room for improvement in the data for that type of transaction.

2. Main statistical results of study

Two observations about the statistical results of this study are of general applicability. First, the double entry nature of the balance of payments accounts makes it immediately obvious when a discrepancy begins to appear in the accounts of a country, while conformity across countries with the principles of the Fund's Manual should bring to light any discrepancy in the global accounts for any given transactions category. This consistent statistical framework also lends itself to the detection of sources of error along the lines pursued in this Report. Therefore, the Working Party believes that even though statistical difficulties are likely to increase there will be scope for tracking down excessive imbalances in the reported data.

Second, the results of the analysis by the Working Party indicate that the large discrepancies observed in recent years are fairly widespread geographically, so that it does not appear that the unadjusted data have been the cause of serious miscalculations of the external economic situation of particular countries or regions. Nevertheless, the Working Party would emphasize that it would be wrong to expect too much precision from the corrective measures suggested herein. A considerable part of the information on stocks of assets and liabilities that countries are advised to use can not be allocated geographically at present, and the possibility of unearthing hidden stocks or flows with available statistical resources is limited.

a. Direct investment income

The Working Party found that the causes of discrepancy in reported direct investment income for 1983 could be traced to two principal factors. For the reinvested earnings portion of this income there were excess reported credits of $9.9 billion, and examination of the data showed that this was the automatic result of the fact that major creditor countries regularly collected data on their share of these earnings, while the debtors tended not to collect such data. Thus, the global discrepancy on this account could be greatly reduced either by making use of the geographic data on reinvested earnings as computed by creditors, or by eliminating reinvested earnings from global summations of income. However, the appropriate response is clearly to encourage the collection of this information by all countries.

Other direct investment income (dividends, interest, and branch profits) showed excess debits of $11.5 billion as reported in 1983. The Working Party was able to eliminate about half of this discrepancy by a combination of corrections to data that were incorrectly reported and the use of bilateral comparisons of reported direct investment income which helped to expose certain anomalies in reporting. A sizeable negative discrepancy remained after these adjustments were made, but the Working Party believes it has shown where further corrections can be made on the basis of additional consultations by the Fund with country compilers.

b. Portfolio income

The largest single discrepancy for 1983 was reported in connection with income on positions vis-à-vis banks, plus income derived from securities and miscellaneous assets--excess debits of $32.0 billion. By a series of adjustments the Working Party was able to virtually eliminate this discrepancy, though it does not attach a high degree of precision to its results. The largest source of error was the under-reporting of income from cross-border positions with banks, which accounted for about two-thirds of this discrepancy. Most of the remaining discrepancy resulted from the under-statement of income derived from cross-border investments in securities. Several other sizeable adjustments were made to account for missing data (including the net income of international organizations themselves), to correct or reclassify particular country submissions, and to account for interest paid by non-members of the Fund.

The statistical procedures used by the Working Party to effect these adjustments can be repeated as necessary by the countries concerned or by the Fund staff, with such modifications of assumptions or other factors as may be required by changes over time. However, as noted above, the characteristics of available data limit the accuracy to be expected.

c. Shipping and other transportation

The combined discrepancy for these two inter-related accounts was an excess of debits of $35.2 billion in 1983, and has been of that order of magnitude since 1980. These accounts are rather complex because of the nature of the shipping industry, which typically involves intricate chains of ownership and operating responsibility, and also has a high proportion of its operations under the control of residents of countries or economies that do not compile the necessary statistics or report balance of payments accounts. In the limited time available for its research on this topic, the Working Party has attempted to quantify and locate the source of the shipping revenues--mostly ocean freight--that are omitted and therefore result in an excess of reported shipping debits. Similarly, the Working Party has shown that many countries understate their earnings from port expenditures (a major portion of "other transportation") and has suggested a procedure for testing the adequacy of national data reported under this heading.

Although the Working Party can only report the results of preliminary research on these two accounts, it considers that the essentials for further progress have been delineated sufficiently to serve as a basis for substantial reduction of this discrepancy.

d. Unrequited transfers

By using corrected data based on a special survey, and by introducing the missing transactions related to the operations of a number of international institutions, the Working Party reduced the initial reported discrepancy on official unrequited transfers (-$12.9 billion) by about half. Other corrections to the reported data were approximately offsetting. In the case of private unrequited transfers the Working Party found that part of the discrepancy (+$6.7 billion) reflected reclassifications of workers' remittances by the Fund staff, but this does not change the overall current account discrepancy.

Considerable gaps in the reporting of official and private transfers remain, even when the adjustments suggested by the Working Party are carried out. However, follow-up analysis by the Fund and the OECD, along the lines indicated in Chapter VIII, should succeed in effecting further improvements.

e. Financial centers and innovation

Cutting across the analysis of particular categories of international transactions is the question of the extent to which the operations of offshore financial centers, together with the accelerated pace of financial innovation, are undermining countries' ability to obtain the statistics necessary for accurate accounting. The Working Party looked at the major offshore financial centers (MOBs), and some other intermediary economies, in the context of direct and portfolio investment income, insurance, and shipping transactions, and found that these centers caused difficulties in at least two ways. In the first place some of these centers do not provide balance of payments accounts to the Fund, so that the transactions of their residents--including banks, insurance companies, holding companies, etc., established primarily or exclusively to conduct activities unrelated to the domestic economies of these centers--are missing from global tabulations. The missing income accounts were already quite large in 1983, involving $6.0 billion of missing credits on portfolio income and -$5.9 billion of debits on direct investment income. It happens that these adjustments were nearly offsetting in 1983, so that the net effect on the global income residual was small, but the potential for large discrepancies is quite evident. Similarly, some economies serve as the countries of residence (at least in terms of balance of payments accounting principles) for a sizable part of the world's merchant fleet whose international earnings and expenditures are missing from the shipping accounts, and are also very important as centers through which insurance premiums and losses, and associated capital flows, are transmitted among third countries. The lack of complete reporting on these activities leaves a gap in the statistics the full dimensions of which are not yet known.

A second difficulty caused by the operations of international financial centers, is that the identities of the beneficial owners of assets, or of the actual parties to transactions, are often impossible to determine. This would not necessarily in itself cause discrepancies in the accounts if the countries ultimately involved in the transactions had adequate information on the activities of their residents, but, of course, a main feature of the intrmediaries is that they facilitate the concealment of assets and transactions from the countries in which transactors reside.

In a similar vein, the surge in financial innovation in recent years creates statistical problems largely because the transactions using the newer instruments and methods of conducting international business are difficult to capture in existing statistical structures--especially because the records are no longer so concentrated at banks, and are less likely to provide the essential resident/non-resident distinction. The Working Party can not evaluate quantitatively the impact of these institutional changes on the quality of international financial statistics, but is concerned that unless adaptations are made the measurement of international capital flows, and related income streams, will be severely impaired.

3. Recommendations applicable at the national level

No. 1: National statistical agencies, with the assistance of the Fund, should implement the specific suggestions for adjustments given in this Report, adapting them when necessary to meet individual circumstances, but aiming at overall international consistency.

In the view of the Working Party, this Report lays out the groundwork for methods and procedures that can be applied in many cases quite rapidly, and would yield considerable reductions in the existing discrepancies. Thus, member countries should be invited to implement the suggestions presented in this Report. Some countries may disagree with the procedures or results given in this Report, but in that case the Working Party believes such countries should respond by notifying the Fund of the nature of their objections. If better options are available, that also should be brought to the attention of the Fund. At a minimum, however, national compilers should feel an obligation to check their data against the suggestions made in this Report, and to make adjustments or corrections where they are justified.

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No. 2: The Working Party is convinced that much of the world discrepancy in the international investment accounts results from inadequacies in the methods of compiling statistics on international transactions, and strongly recommends that each country conduct a reappraisal of its methodology in the light of the findings in this Report and in conformity with the Manual.

There are several aspects of national compilation procedures that should be reviewed. These are discussed separately below.

a. Direct investment earnings

Inquiries conducted by the Working Party indicate that while many countries have developed a systematic method of accounting for the international transactions of direct investment enterprises, either as creditors or as host countries, there are many countries that do not collect adequate data. This is hardly surprising given that data on the earnings of direct investment enterprises, whether distributed or retained, are among the most difficult to collect. The disarray that exists in accounting for direct investments is manifest in the chapter on direct investment income in this Report, and in the description of the varying methodologies now being employed. It is the view of the Working Party that the only hope for reasonably comprehensive and accurate rendering of these accounts is the more general adoption of standard survey (questionnaire) techniques designed to obtain uniformly defined sets of data directly from the enterprises themselves. Such surveys need not be nearly as elaborate as those now employed by some countries--they should be confined to immediately relevant information, and they could concentrate on those enterprises with considerable economic weight. They should cover both capital and income accounts in an internally consistent framework.

Since uniformity in the format of such surveys is important to both the statistical agencies and the respondents, the international agencies, especially the Fund, should take the initiative of reviewing the existing questionnaire systems and attempting to establish a minimum set of uniform data. Some work along these lines has already been initiated by the OECD and should be coordinated with the work of the Fund.

One important means of filling some of the gaps in countries' data on direct investment income is to use data compiled by partner countries. The Working Party strongly recommends that countries should be invited to initiate comparisons of bilateral data on direct investments with partner countries that produce detailed statistics to check on the validity of their own data, to track the complicated flows characteristic of multinational corporations, and to fill gaps where data collection systems do not exist. The Fund should be prepared to organize such exchanges of data.

(Additional specific recommendations are given in Chapter IV.)

b. Portfolio interest and dividends

With respect to the collection of data, or preparation of estimates, or portfolio investment income credits and debits, the Working Party finds that statistics depending entirely on exchange transaction records are insufficient, and should be supplemented by estimates based on all available data on residents' international assets and liabilities.

In carrying out its assignment, the Working Party found that the only effective and credible way to judge the accuracy of a country's data or estimates for interest and dividends received or paid on resident positions with non-resident banks, or on portfolio holdings of stocks and bonds, was to relate the income figures to the best available figures for the stock of cross-border assets and liabilities. This process also helps to ensure that the adjustments that are made are consistent across countries. Much of Chapter V of this Report is based on such an estimating procedure, though, as noted therein, great precision can not be expected.

The stumbling block for many countries is that they themselves do not produce comprehensive statistics of the cross-border assets and liabilities of their residents. Some of this information is available from reliable external sources--notably the cross-border banking data produced by the BIS and the IMF, and the statistics on the debts of developing countries produced by the OECD and the IBRD. Country compilers should make use of these data--and also data compiled by partner countries. National authorities who collect their own data on the cross-border assets and liabilities of their residents can check their results against the data compiled via the international agencies, and should investigate differences. In general it is likely that banks' reporting on their liabilities to nonresidents will be more comprehensive than data obtained from the holders of these assets, if only because the asset holders are diffused through the whole population of persons and enterprises. Further, the data on changes in outstanding cross-border banking assets can be used (with some adjustments) to measure capital flows in given periods, in addition to being useful as a check on income statistics.

More generally, the Working Party believes each country would improve its understanding of its external position if it would attempt to develop comprehensive data on its international investment position and relate changes in that position to the flow data in their balances of payments.

(Additional specific recommendations are given in Chapter V.)

c. Offshore financial centers and financial innovation

With respect to the statistical problems associated with offshore financial centers, the Working Party considers that these centers should be urged to give a higher priority to producing data for those sectors of their balance of payments accounts that have a significant counterpart in the international accounts of other countries. The Fund should prepare estimates of some of the missing elements, such as gross interest received or paid or the earnings of intermediary financial enterprises, but it is unlikely that this can be done effectively without considerable cooperation from the authorities of these economies.

The Working Party is also concerned that the rapid spread of new instruments and techniques for carrying out international financial transactions will blur the lines between some of the categories now deemed significant in the Fund Manual and, more importantly, may seriously weaken the ability to identify those cases where a resident/non-resident transaction has taken place. It will become increasingly difficult to measure cross-border assets and liabilities that no longer are identified as international on the books of financial institutions or even in the accounts of the end users or suppliers of funds. The solution to this problem may differ among countries depending on the compilation system in use, and, in the interest of arriving at consistent solutions, the Working Party would suggest (as noted below) that the Fund put this issue high on the agenda of a joint session with national compilers. It seems to the Working Party that the necessary information on resident/non-resident positions must come either from financial intermediaries or the ultimate transactors, or possibly some mixture, and that advice on this subject should be sought from financial institutions and national compilers. Since the problems associated with innovations in the field of international finance are persistent, the Working Party would also suggest that a consultative group on this subject might be organized as a resource for the Fund and national compilers when new problems arise.

(Additional specific recommendations are given in Chapter VI.)

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> No. 3: In order to make the best use of all the information available in a country that is relevant for construction or analysis of the international accounts, national authorities should require all their agencies to coordinate and share their relevant information, and should provide for a continuing mechanism to act as a focal point for this activity. Work on the international accounts should not be isolated from other macroeconomic statistical activities.

In most countries responsibility for the preparation of the over-all balance-of-payments accounts is centered in one office, which usually depends to a considerable degree on data supplied by other official agencies, or coming from the banking sector. The actual compiler is often the central bank or a central statistical office, or the responsibility may be given to a specialized agency. Sometimes these statistics are collected explicitly for inclusion in the balance-of-payments accounts, using definitions and concepts designed for those accounts, but more often these collateral sources of relevant data serve for administrative purposes (as with tax returns or bank supervision) or as part of a broader collection of national statistical aggregates. Based on discussions with many national compilers of the international accounts, the Working Party has a strong impression that coordination and interchange of information among all the various agencies engaged in statistical work is not always as good as it could be.

In several countries, the central bank uses exchange transactions data as a basis for current account entries, but since these are not adequate for the purpose the banks' economists infer the greater part of their overall non-trade current account from surveys of industry conducted by the national statistical office, and make the necessary adjustments by some relatively arbitrary allocations. This process is often carried out with a minimum of contact between the two agencies, nor is there a serious effort to apply existing surveys to yield results more useful for the balance of payments. In one country the agency responsible for preparing the balance of payments does not have timely access even to vital trade data available in another ministry.

Interchange between the main agencies charged with preparing such statistics, typically the central banks and national statistical offices, is especially important, and should be as comprehensive as possible.

The Working Party was created because of serious concern that large and growing discrepancies in measures of national and world current accounts could lead to misdirected policy recommendations. This consideration points out the intimate relationship between the collection of raw data, the assembly of those data in ways meaningful for economic analysis, and the content and conduct of economic analysis itself. Consequently the Working Party must emphasize that this connection should be recognized at the policy-making levels in national governments, and in international organizations.

In practice, this means that the persons or offices responsible for these separate activities should not only be encouraged to communicate with each other but should be required to integrate data requirements and analytical priorities. Where necessary to reinforce this integration, authorities might consider formal organizational ties between agencies, or offices within an agency, charged with these associated responsibilities. The Working Party has observed that the relatively narrow focus of those whose only explicit responsibility is to collect bits of data leads to failures to recognize emerging difficulties or lacunae in the data, while those whose preoccupation is the preparation of analyses intended to inform policy discussions are often unaware of the fragility of the statistical underpinning of their conclusions. Moreover, the analysts are more likely to give their support to the work of the statistical offices when they are in closer touch with the day-to-day problems of those offices. One result of such support may be improved morale in the offices collecting basic statistics, and more readiness to take initiatives to improve data. As well, the allocation of resources to data collection can be made on a better-informed basis.

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No. 4: The agency responsible for preparation of the international accounts should be given adequate support to obtain necessary information from market participants and from other agencies.

The Working Party has noted that whereas in some countries the central bank, or some other agency, has full power to require reporting of any desired level of detailed data, in many others there is no legislative or regulatory mandate for such data collection, so that the compiler must depend on voluntary compliance. It is obvious that strong authority does not necessarily yield reliable data, but it is even more obvious that under many circumstances purely voluntary reporting would be futile. Of course, this is true of all statistical programs, not only the balance of payments data, but the lack of authoritative backing may be a particularly acute problem for the international sector because it is difficult to check on the accuracy and completeness of reporting, and the data themselves may not be readily available in the desired form from the records of the transactors.

On the whole, the Working Party believes that to achieve improvements in data the statisticians need to carry the support and authority of the government, not merely in terms of legal powers but especially in terms of the expressed interest of national officials. At the same time, any such authority should be used with discretion to minimize reporting burdens and avoid the accumulation of irrelevant or out-of-date information.

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No. 5: National compilers should develop systematic programs for bilateral comparisons of major transaction categories with their most important partner countries, and this activity should be promoted by international agencies.

Several countries collect data on their international accounts with considerable geographic detail. This information provides an opportunity for cross-checking of several items with partner countries.

In addition to comparing the statistics for the same transaction as they appear in the accounts of partner countries, and potentially determining where corrections should be made, countries often find that a partner country has access to data that are not available at all in the other country, or may be available only at considerable cost. In such cases, the two countries may agree to share statistics rather than duplicate their efforts. An example would be the arrangement between the United States and Canada, by which the United States uses information collected by Canada on Canadian tourists in the United States, and vice versa. In addition, the two countries also make mutual adjustments to conform their trade and other current account data and also exchange data on capital flows. Another example would be the cooperation between the United States and Mexico in arriving at estimates of transactions in the border area. In Europe, several countries have undertaken bilateral comparisons of their data, and such work is of considerable interest to Eurostat.

While the Working Party would not expect immediate results in reducing discrepancies from such bilateral discussions, we believe experience shows they are a useful tool for improvements in basic data and their interpretation over the longer run. Furthermore, the international agencies could facilitate any such arrangements first of all by identifying those cases where bilateral or broader discussions may be most urgent because of the kinds of discrepancies that are emerging, and also by providing a mechanism for organizing such discussions. For example, the Fund will have to decide to what extent it should try to induce countries that do not have data on reinvested earnings to accept the figures produced by partner countries.

4. Recommendations emphasizing actions by the Fund

No. 6: The Working Party considers it essential that the Fund staff prepare an immediate plan of action to implement these recommendations, and develop a longer-run program to guard against a recurrence of major discrepancies.

One conclusion reached by the Working Party is that the staff of the Fund, especially the staff of the Bureau of Statistics, has a central and critical role in not only ensuring the greatest possible accuracy in national balance of payments accounts but also in providing a world-wide perspective on the international consistency of the reported accounts and of the major types of transactions that enter into the accounts. To carry out this role a number of specific changes are suggested by the Working Party in the existing Fund program for handling these statistics for enhanced contact with national compilers. However, the effect of these suggestions is likely to be dissipated if they are not brought together into an organized plan of action, with specific goals and a firm timetable.

The Working Party is aware that the implementation of this recommendation would require, at least for some time ahead, a commitment of resources beyond those customarily devoted to this set of statistics, as well as some restructuring of existing resources. It may be possible to reduce this commitment when the various adjustments suggested in this Report have been built into the regular flow of balance of payments statistics. However, the experience of the Working Party clearly indicates that without a special effort to implement its proposals, and a high-level assignment of responsibility, the underlying statistical problems are likely to continue indefinitely.

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No. 7: The Working Party recommends that the Fund take the lead in arranging for the interchange among compilers of practical advice, to develop improved techniques for collecting and evaluating the data essential for the balance-of-payments accounts. This could be done either by the use of Fund staff, or by encouraging the exchange of technical experts among countries. This is the direct way that countries with well-developed systems can be helpful to countries that are in the early stages of developing these and other macroeconomic accounts.

It is taken for granted that the Fund will keep on providing national compilers with advice on questions of accounting principles, including the use of the Manual and occasional visits by Fund experts in response to requests from member countries. In addition, the Fund conducts a training course, which could be a vehicle for providing advice at an operational level, with less emphasis on the elaboration of the precepts of the Manual. The Working Party believes the Fund could improve its interaction with national compilers on the practical problems of data collection or evaluation, and can help national compilers to evaluate the relative importance to be attached to the various sectors of the international accounts.

The Working Party considers that advice on the development of statistical systems is of the utmost importance, especially in newly-organized statistical agencies. It is not clear whether the best source for the advice would at present be the Fund staff (that would depend on whether there is sufficient in-house experience at this level) or experts from countries whose systems are relatively advanced. By one means or another, however, the Working Party believes progess in improving international accounting could be accelerated if the necessary practical advice on procedures and priorities could be provided at an early stage, and followed up as necessary.

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No. 8: The Working Party believes the Fund should give a high priority to activities aimed at reducing the discrepancies in the shipping and unrequited transfer accounts. In both of these cases the corrections that might be desirable for individual countries will depend to a considerable degree on overall analyses of the global accounts by the Fund and other interested agencies.

With respect to the shipping and transportation accounts, basic data for the industry must be developed before either the appropriate global totals of credits or debits, or a reasonable allocation by country, can be determined and put into a consistent framework. This will probably require contributions from industry sources and may require a special consultation among national experts on this subject.

Data for official unrequited transfers are reported to both the OECD and the Fund, and comparisons of these sources by those agencies should help to identify problem areas. In addition, however, the Fund should continue the analyses of specific problems, such as reporting by international institutions, that was initiated in this Report, and should exploit existing bilateral data to identify anomalies in the reporting of these transactions by donor or recipient countries. The Fund is also in a position to provide a focal point for sharing information on such items as pensions, workers' remittances, and tax collections.

(Additional specific recommendations are given in Chapters VII and VIII.)

No. 9: The Working Party believes that the Bureau of Statistics and the Research Department of the Fund could contribute to improvement of the collection and analysis of balance-of-payments data over the years ahead by instituting a few operational changes.

A number of topics related to the compilation or publication of the balance-of-payments accounts are concerned mainly with the statistical program of the Fund itself in this area. For convenience, they are grouped below, and are listed with only a brief discussion. In some cases the items listed are matters for consideration rather than firm recommendations.

a. The Fund's *Manual* should be reviewed and updated and should benefit from the advice of national compilers. The objectives should be to take into account new developments in international transactions since the last publication in 1977, to improve the presentation of various subjects, to simplify the language and distinguish more clearly between major and minor issues, and to bring the *Manual* closer to operational problems of national compilers. The Fund, in collaboration with compilers, should also consider issuing a companion to the *Manual* that would present a simplified set of basic accounts, principles, and definitions. In addition, the *Manual*, or a companion publication, might suggest sources and techniques for obtaining the data necessary for the accounts, and for checking on the consistency of data.

Meetings are scheduled for early 1987 to discuss definitional consistency between the concepts expressed in the *Manual* and the concepts of the SNA, recognizing that the international transactions of a country are an integral part of its macroeconomic statistical framework. However, it is essential that the broader problems outlined above also be covered in a revision of the *Manual*.

As a corollary to a revision of the *Balance of Payments Manual*, the Fund should review the balance of payments publications of the STA, especially the *Balance of Payments Statistics Yearbooks*. In addition to changes in categories or presentation which may result from changes in the *Manual*, consideration should be given to changes in the statistical publications which would reflect developments in the economic environment, and to modifications that would make these publications more useful to their audience.

Part 2 of the Balance of Payments Statistics Yearbook, which has been central to the Working Party's inquiry into world discrepancies in the balance of payments accounts, is of particular interest. Strengthening Part 2 and developing it into a more accessible and well-rounded publication would be a significant contribution by the Fund to information on world economic matters.

b. As data are received from member countries they should be viewed in a relatively broad perspective for their consistency not only within the country's own accounts but also in terms of data available from sources external to the country. This may be more time-consuming, and suggests that there might be several stages in the review of incoming reports. Also, the process for incorporating Fund estimates into the Statistical Yearbooks should be brought under systematic control.

c. From the vantage point of the Working Party's responsibilities and interests the country-by-country orientation of the staff of the Balance of Payments Division of the Bureau of Statistics has had certain advantages, but the Working Party has at times found that its studies required cutting across country lines to deal with the totality of such important categories as investment income, shipping, transportation, or official transfers. At this stage there is no focal point in the Division for analyzing major types of transactions. In the view of the Working Party it would have been helpful to have subject matter responsibilities assigned in the Division, as a means of recognizing an emerging discrepancy earlier, and as an organized way to analyze the difficulties that may appear in particular global accounts. Therefore, the Working Party would recommend that the Division organize its work along topical lines as well as the strictly geographic lines of responsibility that are now the rule.

d. The Working Party would suggest that the Bureau of Statistics might strengthen its capability to provide practical advice on data collection problems, tempering its emphasis on the intricacies of definitions and principles in the light of the realities of on-the-ground difficulties of national compilers. This emphasis would parallel the Working Party's recommendations for some reordering of the emphasis in the present Manual. Some of the world discrepancy problem is no doubt a reflection of local difficulties that the Fund might be able to ameliorate by working with compilers at the most elementary level.

e. As its work has progressed the Working Party has encountered a number of problems on which it would not offer firm recommendations, but which the Fund is urged to take under review. Without elaboration, these topics include: The problem of dealing with offshore financial centers that do not report the activities of the institutions in their jurisdictions that have little or no contact with the local economy; the best way to publish accounts when an element is clearly badly reported, as in the case of reinvested earnings, or is omitted; the utility of continuing to publish the Balance of Payments Statistics Yearbook using the SDR as numeraire rather than the U.S. dollar; the validity or usefulness, in current circumstances of floating rates and heavy official dependence on credit, of the groupings into partial balances that are now published and of the category of "exceptional finance."

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No. 10: The efforts of the Bureau of Statistics to obtain improved reporting from national sources should be effectively supported at the highest levels of the International Institutions.

Part of the difficulty found by the Working Party in studying the current account discrepancies is that a number of countries do not submit adequate accounts on a timely basis despite requests by the Bureau of Statistics. Moreover, the Working Party found, in connection with its questionnaire survey, that compilers often were able to improve their statistics when they intensified their efforts. When reporting is incomplete, or inaccurate, the Bureau faces the dilemma that it is constrained to publish country data as submitted, with any corrections or extrapolations appearing only as an unidentified adjustment to area or global totals published in the Yearbook. The Working Party commends the efforts of the Bureau to carry through these adjustments, but believes this process leaves significant gaps in the statistical record. Moreover, for some countries the data as published in the Yearbook may be unsuitable for use in the surveillance process or in bilateral discussions.

Based on its experience, the Working Party believes the efforts of the Bureau to obtain improved national balance of payments accounts would be strengthened considerably if they were directly based on a renewed determination at a high level that the Fund attaches great importance to these statistics and expects members to make every effort to comply with the Bureau's requests.

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No. 11: Since much of the analysis of the Working Party was focussed on discrepancies between countries and regions, the question of possible restoration of the country or regional breakdowns that were at one time requested of member countries by the Fund and the OECD was discussed.

While the first priority is to get the global data for each balance-of-payments sector correct, and to do so promptly, there is also considerable interest in the geographic distribution of each of these sectors. Countries vary greatly in the degree of geographic detail they collect for each part of their balance-of-payments accounts, reflecting in some cases a lack of interest in such details and in other cases a lack of the necessary resources. The process of integration of financial markets is eroding the ability to obtain data segregated by residence, and there can be no doubt that country or area detail is increasingly burdensome for the collection process, not only for the compilers but also for those supplying the data. On the other hand, many users of the data are interested in country or regional breakdowns. In view of the unsettled balance of the pros and cons of collecting geographic detail the Working Party suggests that this issue be put on the list of topics to be discussed at the next assembly of national compilers.

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No. 12: The Working Party commends the Fund, the BIS, and other international agencies for producing very useful statistics on international banking positions and on the debt of developing countries. Moreover, the Working Party notes the Fund's publication explaining some of these data 1/ and understands that other agencies are also preparing explanations of these data. Nevertheless, <u>the Working Party recommends consideration of a broader handbook for the public bringing together the diverse data on these subjects and explaining their similarities and differences</u>.

In its work on the discrepancy in the world income accounts the Working Party has worked intensively with data on international banking developed by the BIS and the Fund, and data on international debt issued by the OECD and the IBRD. These data are the result of devoted work by the agencies concerned, which deserve much credit for the results they have achieved. The path of the Working Party in using these computations has been smoothed by ready access to the compilers themselves, so that questions of definition, coverage, or interpretation could be easily resolved. However, even the Working Party, with its ready access to the sources of the data, found that it was rather time consuming to establish what series was best suited for its purposes, or to keep up with revisions and modifications of the data (see Appendix C).

It would be a considerable service to users of the data if a readily-available handbook could be prepared that described the nature and relationships of the several series on international banking data and international debt produced by the BIS, the Fund, the OECD, and the IBRD, and provided time series to the extent possible. These data are increasingly in demand for studies of international debt, capital flows, and investment income.

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No. 13: <u>The Working Party recommends that the OECD and the Fund confer on the possibilities for coordination, or at least the preparation of regular reconciliations, of their respective reports on official transfers</u>. National compilers should be asked for their

1/ <u>The Fund's International Banking Statistics</u>, IMF, 1986.

comments on their experience in reporting these data for the two purposes, and the possibilities of coordinating their national submissions.

For the purposes of its study of the discrepancy in the world balance on official unrequited transfers the Working Party has attempted a reconciliation of data on assistance programs collected by the OECD and data on official unrequited transfers--a broader concept than development assistance--reported to the Fund as part of national balance-of-payments accounts. These two sets of data are compiled for different purposes, and should not be expected to be the same, but they are related and should be consistent wherever the definitions and coverage are, in principle, identical. The Working Party understands that some of the differences arise from the fact that the national agencies supplying the data may be different as between the two series. Some improvement in the quality of the data on official unrequited transfers, and perhaps some reduction in the reporting burden on member countries might be achieved, if reporting to the OECD and to the Fund on this subject were better coordinated.

The Working Party has conducted a questionnaire survey on this topic, the results of which should facilitate the reconciliation process as well as helping to identify errors or gaps in the reporting for balance of payments purposes.

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No. 14: <u>The Working Party recommends that compilations be prepared at the Fund to fill reporting gaps for some non-reporting entities; it also suggests that within the Fund there should be regular consultations on this subject among the interested departments</u>. The results of this work should be available to the public and incorporated more clearly in Part 2 of the annual volume on balance-of-payments statistics.

In carrying out its assignment the Working Party has had occasion to develop data for certain entities for which Fund sources are inadequate or missing. These groupings include the countries of Eastern Europe (with respect to their income accounts), the international organizations themselves, certain countries or economies not members of the Fund, and countries that do not report the activities of large shipping fleets operated by their residents. The Working Party has carried these estimates as far as necessary for its purposes, mainly for the year 1983. However, continued preparation of data for these missing accounts will be necessary if the gaps they leave in the world's international accounts are to be closed. The Fund staff should prepare such data for international organizations, and for certain countries whose activities are in whole or in part not regularly submitted to the Fund. One important class of such countries would be the offshore financial centers.

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No. 15: Since the aggregation of corrected world and regional current accounts will inevitably require a high degree of judgement, and will be intimately related to analyses of world economic developments, <u>the Working Party recommends that the Research Department at the Fund, in cooperation with the staff of the OECD, should take the lead in evaluating the adjustments suggested by the Working Party in terms of how best to integrate them into revised statistical summations and into the analysis of world international transactions</u>.

As a result of its work the Working Party has provided the basis for regional allocations of some of the gaps in the compilation of current account balances. It is for the Fund, in cooperation with the OECD, to consider how best to integrate these results into revised statistical summaries of world international transactions. Of course, the Working Party has not provided pin-point estimates of data deficiencies, nor is it able to carry all of these adjustments to the level of particular countries. Even the assignment to broad geographic areas must be viewed as somewhat impressionistic. Because these allocations of adjustments have a direct bearing on the analytical inferences that may be drawn, it is important that anybody making such inferences keep clearly in mind the assumptions on which they depend. Fund staff may well want to attempt to refine these assumptions and procedures.

Given the nature of the result, the Working Party feels that the reconstruction of the accounts, incorporating estimates of the gaps in the country data, will be essentially a research project rather than a purely statistical operation. This consideration also reflects the view, expressed above, that there should be better links between the research and statistical functions that are concerned with balances of payments.

Finally, the Working Party has of necessity made little or no attempt to consider the discrepancies and asymmetries that are evident in the global capital accounts. However, it is recommended that consideration be given to a review of these discrepancies and their interactions with the global current account discrepancy.

Statistical Appendix

Appendix A. IMF Balance of Payments Statistics

The balance of payments statistics that are assembled and published by the Fund's Bureau of Statistics are the basic data for this appraisal of world payment imbalances and provide the measures of the discrepancies that are the focus of the Working Party. The principal published form of the Fund's statistics is the Bureau's Balance of Payments Statistics Yearbook, which becomes available in the second half of each year with data for most countries through the preceding calendar year.

The Yearbook has two parts that are published in separate volumes. Part 1 is a collection of balance of payments statements for individual countries, each stated in the standard categories described in the Fund's Manual and each expressed in SDRs. Countries included in the 1985 Part 1 consisted of about 125 Fund members and Switzerland. Some members were missing, notably Iran, Iraq, Qatar, and the United Arab Emirates, and there are no statements for Eastern European nonmembers or for Hong Kong, Bermuda, and other economies that do not produce national balance of payments statements. Part 1 also omits international organizations such as the Fund itself.

Part 2 of the Yearbook is a separate publication that summarizes the information in Part 1 across countries to produce regional- and world-total balance of payments statements. It is in Part 2 that the world balances appear that concern the Working Party. Several technical aspects of the construction of this volume need to be mentioned to understand the nature of the numbers it contains, the relationships among its tables, and the adjustments needed to reach consistency across countries and across types of transaction.

Part 2 begins with a set of "A" tables that organizes the data into a number of subtotals, or "analytic" balances, including the current account, that show country, regional, and world amounts for each type of balance. These tables are followed by a set of "B" tables that give regional balance of payments statements, structured to summarize major types of transactions rather than analytic balances. Finally there is a set of 46 "C" tables giving country and regional data for each of the main individual categories of current or capital transactions in the Fund's standard balance of payments presentation.

Part 1 of the Yearbook reproduces country data essentially as reported by the countries, though the Fund staff may rearrange the national submissions to fit as closely as possible the Fund's standard classifications. In constructing the tables for Part 2, however, the Fund staff (including both the Area Departments and the Bureau of Statistics) provides estimates for reports that have been delayed and for countries that do not regularly report to the Fund. These estimated quantities are not shown separately in the Part 2 tables, but are carried into the regional and global aggregates. One consequence is that the country data shown do not add up to regional or global totals.

For its assignment the Working Party required both an authentic published measure of the total world current account (whether correct or not) and a consistent set of accounts for individual transactions that added up to that aggregate. The current account as shown in the A tables of Part 2 was the logical candidate, but it was necessary to make an adjustment to eliminate from those current account totals the balances estimated by the Fund staff for certain countries (mainly in Eastern Europe) for which the Fund did not prepare estimates of the transactions components of the current account.

The C tables contain the country data for the individual types of transactions on which the Working Party concentrated (investment income, shipping, other transportation, and unrequited transfers) and were the main focus of the analysis. This set of tables was the basis for Tables 1 and 2 of Chapter I. To facilitate its research, the Working Party had available the full country breakdown of these tables, including the staff estimates for missing items. Moreover, the Working Party was able to obtain these data over extended time periods, and in terms of U.S. dollars. For its purposes the Working Party prepared estimates, where necessary, for the income and shipping transactions of countries not included in the C tables.

There are other published measures of world current account balance besides those in the Statistical Yearbook, all of which show approximately the same levels and changes. Table A-1 compares the 1985 Yearbook balance with those published in the Fund's World Economic Outlook (WEO) and the OECD Economic Outlook. The WEO figures, although closely related to Yearbook statistics, are put together in the Fund's Research Department; they are prepared at a different date and are somewhat independent of Bureau of Statistics figures. The OECD states that its balances are based heavily on information supplied by OECD members, and that information is used in constructing data for nonmembers. OECD results are thus more distant than WEO from the Yearbook numbers, which are from national sources and Fund estimates. From 1978 to 1982 the several series are closely parallel. For 1983-85 the differences reflect to a large extent successive levels of revision from the inflow of new information and the use of different estimates when current data are incomplete.

Table A-1. World Balances on Current Account
Comparison of Alternative Versions 1/

(In billions of U.S. dollars)

	IMF Balance of Payments Statistics Yearbook, October 1985	IMF World Economic Outlook		OECD Economic Outlook, May 1986
		October 1985 2/	October 1986	
1978	-20	-21	-20	-17
1979	-19	-20	-18	-16
1980	-35	-35	-33	-31
1981	-69	-69	-65	-62
1982	-114	-108	-106	-117
1983	-75	-74	-84	-69
1984	-96	-84	-94	-101
1985			-72	-100

1/ Each series omits Council for Mutual Economic Assistance (CMEA) countries that are not Fund members and the OECD total also omits Hungary and Romania. The first column is the series adopted by the Working Party.
2/ Adjusted to include official transfers.

Appendix B. Investment Income Questionnaire

Several chapters of the Report use the results of a special questionnaire designed by the Working Party covering investment income flows and the stocks of cross-border assets and liabilities that generate income flows. The questionnaire was sent by the Working Party to about 60 countries in an effort to learn more about the figures that the countries have sent to the Fund's Bureau of Statistics; in particular, the sources of the data, recent revisions, and unpublished detail on the types of investment income that were being reported. Replies were received from 46 countries. These replies brought out many questions of consistency and completeness, and served as a basis for discussions with the respondent countries that involved not only the questionnaire replies but also turned up related problems. The principal uses of the questionnaire results appear in Chapters II, IV and V.

The questionnaire itself is reproduced below. It asks for income flow data for the two years 1979 and 1983, which were respectively before and after the sudden growth of income flow discrepancies, and on lines 40 to 69 it asks for stocks of international assets and liabilities for the one year 1983. It asks in particular for cross-border banking information--interest flows and positions of banks vis-à-vis banks and nonbanks. The banking distinction, when available, allows a comparison between balance of payments data reported by countries and the body of International Banking Statistics (IBS) that is compiled and published by the Fund 1/. That comparison can reveal inconsistencies across countries in their data or estimates of stocks and related income for this major sector of international claims and liabilities. Lines 30 to 39 asked about data sources in a schematic form, and the results of that survey appear in Chapter II.

Table B-1 is a broad summary statement of the results of the questionnaire. The table compares questionnaire income flows with those published in the 1985 Balance of Payments Statistics Yearbook both for the respondent countries and for all countries. Lines 25-27 show that the 46 questionnaire replies came from countries with about 90 percent of the Yearbook totals of investment income. Industrial countries had a heavier weight in the replies than in the Yearbook, and as a result virtually all credits for direct investment income were covered while debits were less well represented. Because of this weighting in direct investment income, the balance in questionnaire countries is a sizable net credit, dominated by the reinvested earnings credit balance, both in the questionnaire (line 2 of Table B-1, rightmost column) and in the Yearbook (line 9), whereas for all countries direct investment income had a small net debit (line 23) in 1983. For other income the respondent countries had a larger net debit than the Yearbook totals, mainly because a $25 billion net credit included in the Yearbook for mid-east oil exporters was only thinly represented in questionnaire responses.

1/ Appendix C describes IBS in some detail.

Differences from the Yearbook for the respondent countries, on lines 15 to 21 of Table B-1, reflect a combination of new information, reclassifications, and statistical revisions. For reinvested earnings the larger amount in the questionnaire comes principally from data for Netherlands and the United Kingdom, both debits and credits, that are in the questionnaire but not in the Yearbook. "Other" direct investment income is also larger because of a U.K. change that was in the questionnaire but not in the 1985 Yearbook. For the United Kingdom, these questionnaire revisions resulted mainly from direct investment income of the petroleum industry, which was entirely excluded from direct investment income totals in the 1985 Yearbook and was instead combined with other investment income in both credits and debits. At the world level this was an asymmetry with other-country recording of these flows. The United Kingdom changed the procedure in 1985 to shift U.K. petroleum industry earnings into direct investment income. The U.K. data in the revised version that appears in the 1986 Yearbook, includes data for the petroleum industry, including reinvested earnings, in direct investment income beginning with data for 1984, so that hereafter the U.K. data will be comparable with the data of partner countries. For the questionnaire U.K. statisticians provided estimates for the petroleum industry on a global basis for 1983 comparable with 1984 and later years as published in the 1986 Yearbook. However, country detail for the U.K. petroleum industry in 1983 is not available, so that the bilateral comparisons in Chapter IV are based on U.K. data excluding the petroleum industry.

The U.K. shift of petroleum direct investment, included in the questionnaire but not in the 1985 Yearbook, produces an equal and opposite difference in other investment income in Table B-1, lines 19 and 21. That shift is obscured, however, by another U.K. change, this one to include income from Eurocurrency positions on a gross basis rather than net as it had been in Yearbooks up through 1985. These grossing changes had much larger effects on credits and debits separately than the petroleum income shift and are the dominant component of line 21 of Table B-1.

The U.K. grossing of Eurocredit income has no effect on net balances in the right-hand columns of Table B-1, and the shift of direct investment income has only offsetting effects on the two components on lines 16 and 19. While the net effect of the questionnaire for all countries together was small for 1983 on line 15 it raised the 1979 balance by $5 billion, resulting in an even steeper slide into net debit than the Yearbook had shown. Six countries were the source of most of the slide, including the Netherlands in reinvested income and the United Kingdom for data revisions beyond procedural changes. All of the major statistical revisions in the questionnaire acted to deepen the 1983 net debit on total investment income relative to 1979.

Lines 20 and 21 show a sizable shift from private to official debits within total other income. As mentioned in Chapter V, the division between private and official income is statistically weak and difficult to use on a world basis, and this questionnaire result was not used in Chapter V.

Tables B-2 and B-3 give, for flows and stocks respectively, the full detail of the questionnaire replies, with the regional division that is used in Chapter V. Components are less than totals in these tables because some replies did not include all detail asked for, but the large gaps are mainly in official income and official assets and liabilities.

The stock data from the questionnaire, in Table B-3, constitute a fairly complete inventory of information currently available from national sources on crossborder financial positions. Position data are not published in nearly as systematic a form as international payments statements, and for stocks there has been no single volume such as the Balance of Payments Statistics Yearbook that catalogs the data available. Although the Yearbook is increasing its coverage of stock data there were still in 1985 only a few countries showing position statements. Asset and liability positions are useful in calculating income credits and debits, as Chapter V illustrates, and even sketchy and incomplete estimates can be applied in estimating some part of income flows. However, the discussion in Chapter V illustrates that many of these national estimates of positions are inadequate when compared with data from international sources, and the questionnaire can be seen as suggesting an agenda for further development of data on international investment positions.

The countries included in these results are listed in Tables B-4 and B-5, with total income flows and stocks reported for each country in direct investment and other investment respectively. Most of the 46 replies to the questionnaire included some stock information, if only reserves and bank positions of the kind published in the Fund's International Financial Statistics. Beyond the banking sector, 32 countries included private nonbank debt to foreigners and 25 reported some amounts for nonbank assets abroad.

The direct investment results in Table B-4 illustrate the limitations of statistics in this field. Many countries combined direct-investment with other income and cannot show it separately. Several industrial countries, however, give separate debits for direct-investment income but no credits, even though they are likely to have direct-investment assets. In a few cases asset stocks are given without income credits, suggesting that part of the missing credits in direct investment is connected with these countries. Stock data for direct investments are not systematically related to earnings for several reasons, including the variations in the valuations used (usually book values but not necessarily) and variations in earnings experience from year to year or across countries because of changes in economic conditions in different industries. Also, multinational enterprises have considerable freedom to make arbitrary allocations of earnings among their subsidiaries.

Table B-5 shows a more complete set of country statistics for other investment income, although in many cases these numbers include direct-investment as well as other income. Most countries supplied stock figures to some extent, as well as income figures. Even when the relationship seems reasonable, however, there is the problem, discussed in Chapter V, that while income and stocks as measured in national statistics may be consistent with one another within a given country, they can be inconsistent with data available from other countries.

Tables B-6 and B-7 compare questionnaire replies on bank-related positions with corresponding IBS positions. For banks, in B-6, the differences are principally in institutional coverage. Industrial country amounts are very close to those that appear in BIS banking statistics, which reflect a more narrow definition of bank than the Fund's IBS. For offshore centers the questionnaires exclude most of the international banking activity that is also generally excluded from the balance of payments accounts of these areas, but these balances are included in BIS, IBS, and the Chapter V adjustments. The nonbank figures in Table B-7 are relatively much less complete and generally much lower than the independently derived estimates based on IBS that are explained in Appendix C. For countries where comparisons are possible, questionnaire reports covered only 60 percent of IBS figures for nonbank liabilities and just 40 percent of the IBS asset totals as reported by nonresident banks.

Total debt as reported in the questionnaire can also be compared with the statistics on debt published by OECD for developing countries (see Appendix D). The OECD data are taken mainly from creditor reports rather than from the debtor countries. Table B-8 shows the comparative data for the questionnaire respondents that reported debt figures in their replies and that also are covered in the OECD tabulations. 1/ The 22 countries shown owed more than half of the OECD total of developing country debt in 1983, even though Brazil, Nigeria, and China are omitted for lack of a comparable questionnaire amount. For the countries listed in Table B-8, results indicate that in general the creditor-based amounts tend to be only slightly larger than totals compiled by national authorities. There are a few sizable differences, however, that may be causing difficulties. As Appendix D mentions, there is no parallel comprehensive independent measure of industrial country debt beyond the bank-related amount in IBS. For cross-border assets only the IBS exists to give some information as an "other party" measure of positions for either industrial or other countries. The special questionnaire attempted to cover the whole spectrum of international investment positions, but coverage is incomplete. This is an area of international economic relationships deserving of greater attention.

1/ The Bahamas, Cayman Islands, and Hong Kong are omitted because their questionnaires included some or all of the international banking liabilities that are uniformly excluded from OECD totals. The questionnaire amounts for these countries were thus many times the size of OECD totals.

SPECIAL QUESTIONNAIRE ON INTERNATIONAL INVESTMENT INCOME ACCOUNTS

Please read the attached instructions and retain one copy of your reply for reference. Please return one copy to:

Working Party on the Statistical Discrepancy
Research Department
International Monetary Fund
Washington, D.C. 20431

Country: ____________________

Please report amounts in millions of U.S. dollars ☐ (if available) or

millions of other currency units ☐ (specify unit ______________________)

Line No.	Item	1979 Credit	1979 Debit	1983 Credit	1983 Debit
1	I. Direct Investment Income, total				
2	a. Reinvested earnings.......................				
3	b. Distributed earnings.......................				
4	Dividends................................				
5	Interest..................................				
6	Branch profits				
7	Other (specify)...........................				
8	II. Other Private Income, total..................				
9	a. Interest received or paid by resident banks, total				
10	(1) From/to nonresident banks.............				
11	(2) From/to other private nonresidents.....				
12	(3) From/to official nonresidents...........				
13	b. Interest received or paid by .... other private residents, total...............				
14	(1) From/to nonresident banks.............				
15	(2) From/to other private nonresidents.....				
16	(3) From/to official nonresidents...........				
17	c. Dividends (other than on direct investment)				
18	d. Other (specify type)......................				
19	Memo: Commitment, renegotiation, or other fees charged by banks				
20	a. Included in investment income				
21	b. Included in other services.................				
22	c. Other (please specify where included)				

Line No.	Item	1979		1983	
		Credit	Debit	Credit	Debit
23	III. Resident Official Income, total				
24	From/to foreign official institutions...........				
25	From/to international institutions.............				
26	From/to nonresident banks				
27	From/to other private nonresidents				
28	Memo: Income on reserve assets included above......................				
29	Memo: Accrued interest in arrears included above......................				

		Assets	Liabilities
		(Enter a check ☑ in the appropriate box)	
30	IV. Basic Data Sources (Please refer to instruction section)		
31	a. Direct investment income		
32	Questionnaire to enterprises involved	☐	☐
33	Reports from banks	☐	☐
34	Other (describe in attachment)............	☐	☐
35	b. Other private income		
36	Reports from nonbank holders of assets or liabilities	☐	☐
37	Reports from banks	☐	☐
38	Estimate based on stocks and yields......	☐	☐
39	Other (describe in attachment)............	☐	☐

Line No.	Item	(estimated value at year-end 1983; if other year-end, state year: 19____)
40	V. Stocks of International Assets and Liabilities.......	
41	Assets, total......................................	
42	International reserves (excluding gold), total.......	
43	a. Claims on nonresident commercial banks.....	
44	b. Other (including on central banks ________).	
45	Other official foreign assets......................	
46	Direct investments...............................	
47	Foreign bonds, public or private, held in portfolio......................................	
48	Foreign stocks (corporate equities) held in portfolio......................................	
49	Other assets held by resident nonbank enterprises.	
50	Foreign assets of resident banks, total	
51	a. Claims on nonresident banks.................	
52	b. Claims on other nonresidents	
53	Other (specify)..................................	
54	Memo: Amounts in lines 49 and 53 that are claims on nonresident banks..........	
55	Liabilities, total..................................	
56	Resident official debt held abroad, total	
57	a. Held by nonresident commercial banks.......	
58	b. Other (including by foreign authorities________)	
59	Direct investments..............................	
60	Other domestic bonds held in nonresident portfolios....................................	
61	Domestic stocks held in nonresident portfolios....................................	

Line No.	Item	(estimated value at year-end 1983; if other year-end, state year: 19___)
62	Liabilities of resident banks to nonresidents, total...	
63	a. Liabilities to nonresident banks...............	
64	b. Liabilities to other nonresidents	
65	of which: to foreign authorities	
66	Liabilities of other residents to nonresident banks	
67	Other (specify)....................................	
68	Memo: Claims on nonresidents held in trust or custody accounts established by nonresidents and not included above......	
69	Memo: Liabilities to nonresidents held in trust or custody accounts established by nonresidents and not included above......	

Identification of person responsible for completing this form:

Name: ______________________________

Address: ______________________________

____

Phone number: ______________________________

Notes and Instructions for Questionnaire on International Investment Accounts

Purpose

This questionnaire is part of a special effort by the Working Party on the Statistical Discrepancy, established by the IMF, to develop a comprehensive and up-to-date set of relevant data and methodological descriptions for the international investment accounts. The first three parts cover the principal types of international investment income receipts and payments for two years, 1979 and 1983. This will allow us to capture the major changes in this item, in considerable detail, during the period when the global discrepancy in reported investment income became very large. The final part of the questionnaire requests data on the stock of international assets and liabilities at the end of 1983, or the most recent year-end for which such data may be available. The purpose of this part is to provide a basis for judging whether the reported income flows bear a reasonable relationship to the relevant stocks of assets and liabilities.

Most of the data requested are already part of the data collection system of the Bureau of Statistics of the IMF, though the details and specifications may differ in some respects. However, the Working Party believes that by pulling together these data in this more direct and concentrated way it will be possible to bring to light certain gaps or discrepancies that may be overlooked in the ordinary routine of completing the standardized forms. Moreover, it is the intention of the Working Party to pursue the results of this questionnaire through direct contacts between members of the Technical Staff of the Working Party and the national compilers and authorities of a cross-section of member countries.

A further major purpose of the questionnaire is to obtain a comprehensive set of methodological notes on the collection and estimation of data on international investment income by national compilers. Such a set of notes will not only facilitate comparisons of data across countries, but will also provide an opportunity for national compilers and their authorities to provide their own comments on the origins and nature of the massive discrepancy in the global income accounts.

It should be emphasized that this inquiry is in no way a substitute for the material regularly prepared for the IMF's Bureau of Statistics. For purposes of this questionnaire, the best estimates of the compilers are requested where actual data are not available or are considered to be too imprecise to be reported to the Bureau of Statistics. Such estimates should be identified with an asterisk. Where the data now available are revisions of data supplied earlier to the Bureau of Statistics, please indicate by noting (rev.).

Confidentiality

The Working Party will restrict the use of any reported information to the staff of the Working Party and the IMF wherever such a restriction is requested by the respondent.

Methodological descriptions

A check-list of the types of data sources is provided in Part IV of the questionnaire. However, each national compiler is also requested to provide a description, in considerable but not exhaustive detail, of the origins of each of the income items reported under Parts I, II and III. To some extent descriptions already prepared for other purposes would be acceptable, but for the special purpose of this survey respondents should call attention to statistical problems that are known to exist. In those cases where an income item is calculated by applying an estimated rate of return to an estimate of the relevant stock of assets or liabilities, please supply the relevant rates of return (and method of estimation) and stocks used for 1983.

Respondents should bear in mind that the Working Party is concerned primarily with the shortcomings of the sources of income data and estimating procedures as experienced by different national compilers, and especially with any changes in your methods between 1979 and 1983 that might help to account for the rising discrepancy. Comments on your plans for improving these data would also be very helpful.

Withholding taxes

Please indicate whether your income receipts and payments for 1983 are net of withholding taxes. This question is relevant for items 3, 9, 13, and 17.

Geographical detail

The questionnaire items do not call for any geographic breakdowns of the data requested, but any study of the discrepancy inevitably requires comparisons of data reported by different countries or regions. Of course, there is great variation among countries in the extent and derivation of any such geographic detail. Therefore, rather than prescribe a fixed format for such information the Working Party is requesting each national compiler to provide, along with the questionnaire itself, the most detailed geographic breakdowns that are available for the most recent year, either in published form or as estimated for internal use, for the items listed in the questionnaire, or for similar items, wherever possible.

In supplying geographic data, the respondent should indicate, where relevant, the allocation principle that is being used. For instance, are interest payments allocated to (a) the country to which the payment is transferred, (b) the country of residence of the beneficial owner of the asset (if different), or, (c) the country of the currency denomination of the asset?

Specific instructions

(References are to paragraphs in the IMF Balance of Payments Manual, Fourth Edition, 1977, or to item numbers in the IMF Balance of Payments Report Form or the IMF Report Form on Stocks).

The income and asset categories used in this form are broken down into details that may not correspond to the data available to national compilers. Where necessary, therefore, please indicate where detailed items are combined or are contained only in sub-totals or totals. For items where you have no information and make no estimate please insert a dash in the appropriate line; insert a zero where no transactions exist.

Line Number

1 For definitions of direct investment income, refer to Manual, ¶ 295, 299–306.

2 Corresponds to lines 11 and 12 of Report Form.

3 Included in lines 13 and 14 of Report Form. Please identify any deviations from the Manual, such as the inclusion of fees and royalties, or inclusion of unrealized capital gains or losses.

6 Branch profits should be included whether actually distributed or not. Include the net earnings of branches of foreign banks in your territory, but *not* the interest received from or paid to nonresidents (including their own offices abroad) by these branches. Such interest items should be reported in Section II of this questionnaire.

8 Other private income excludes transactions of resident official agencies.

9 Include all interest paid or received by resident banks, including resident affiliates of foreign banks, and including interest paid or received vis-à-vis non-resident branches or parent organizations. Include all interest charged or credited to the accounts of nonresidents, whether remitted or not. Credit and debit entries should be entered gross, if possible, even if they are commonly netted out by the banks or the national compilers. Include, and show separately if possible, interest paid or received on liabilities or assets payable in foreign currencies.

14 Include, inter alia, interest paid on credits guaranteed by resident or nonresident official agencies.

19 Indicate whether your international accounts include these non-interest charges by banks, and, if they are included, under what headings they appear in your accounts.

23 Corresponds to lines 15 and 16 of Report Form.

24 Include interest or charges received or paid vis-à-vis international institutions in line 25.

25 Include in this line transactions with international institutions normally included in lines 15 and 16 of the Report Form. If there are other fees or charges vis-à-vis international institutions that are included in other items in the Report Form please attach a note showing the amounts included in your balance of payments accounts for 1983.

"International institutions" includes regional institutions, i.e., institutions whose members are drawn largely from a single geographic region rather than from the world at large.

28 Enter here that part of your resident official income that represents earnings on official international reserves, as distinct from interest on credits, loans, or advances, to nonresidents.

29 Please include in this line accrued interest that you have entered in your international accounts with respect to credits on which interest was in arrears in excess of 90 days. This is intended to facilitate comparisons with partner country entries.

30 The purpose of this section is to obtain an overview of the basic methodological sources employed in deriving your international income data. Where a mixture of sources is used, please check the main source. It is expected that the descriptions of your methodology that are being requested as part of this questionnaire will contain any necessary elaboration of your sources and methods.

40 The purpose of this section is to establish as far as possible the stocks of international assets and liabilities, insofar as they are known or estimated by national compilers, that correspond in principle to the entries in the income accounts. Please provide a methodological note indicating the basis of valuation of the various items shown (i.e., face value, book value, market value, etc.).

41 This compilation excludes any gold holdings, official or private.

42 Corresponds to items 101-108 in IMF Report Form for Stocks.

45 Corresponds to items 62–64, 84, and 85 in IMF Report Form for Stocks.

Do not include private sector claims guaranteed by the official sector in this line, but include them as private sector items.

46 Corresponds to items 45–48 in IMF Report Form for Stocks.

47 Corresponds to items 53 and 56 of IMF Report Form on Stocks.

48 Corresponds to item 59 of IMF Report Form on Stocks.

49 Include foreign assets of resident nonbank enterprises not included elsewhere, such as suppliers' credits, bank deposits, minority interests in foreign enterprises. Included in items 77–79, 93 and 94 of IMF Report Form on Stocks.

50 Include portfolio holdings of bonds or stocks in lines 47 or 48.

51 and 52 Corresponds to parts of items 69–71 and 89 of IMF Report Form on Stocks.

54 Insert here any data you have on claims of your private residents on nonresident banks. This will facilitate comparison with banking data from other sources.

56 Corresponds to items 54, 55, 65–68, 86–88, and 110 of IMF Report Form on Stocks.

59 Corresponds to items 49–52 of IMF Report Form on Stocks.

60 Corresponds to items 57 and 58 of IMF Report Form on Stocks.

61 Corresponds to items 60 and 61 of IMF Report Form on Stocks.

62 Corresponds to items 72–76 and 90–92 of IMF Report Form on Stocks.

63 Corresponds to parts of items 74–76 and 92 of IMF Report Form on Stocks.

64 Corresponds to items 72 and 73, parts of items 74–76, items 90 and 91, and part of item 92 of IMF Report Form on Stocks.

66 Corresponds to parts of items 81-83, 96 and 97 of IMF Report Form on Stocks.

67 Corresponds to item 80, parts of items 81-83, item 95, and parts of items 96 and 97 of IMF Report Form on Stocks.

68 and 69 Include here assets and liabilities of nonresidents that are held as trusteed or managed funds by residents, but are not counted as assets or liabilities of such residents.

Table B-1. Comparison of Questionnaire Replies with Yearbook
(In billions of U.S. dollars)

	1979 Credit	1979 Debit	1983 Credit	1983 Debit	Net Credit 1979	Net Credit 1983
All questionnaire respondents						
Questionnaire replies.....						
1 Total investment income	192.1	177.8	271.2	303.4	14.2	-32.2
2 Direct investment income	60.3	34.9	41.7	35.2	25.4	6.5
3 Reinvested earnings	26.1	11.8	17.5	8.1	14.4	9.4
4 Other	34.2	23.1	24.2	27.1	11.1	-2.9
5 Other investment income	131.8	143.0	229.5	268.2	-11.2	-38.7
6 Official	26.8	30.2	30.7	62.4	-3.4	-31.7
7 Private	105.0	112.8	198.8	205.8	-7.7	-7.0
As included in BoP Yearbook.....						
8 Total investment income	165.3	155.9	225.3	257.8	9.3	-32.5
9 Direct investment income	50.9	30.9	36.0	28.0	19.9	8.1
10 Reinvested earnings	23.3	10.4	13.9	3.5	13.0	10.5
11 Other	27.5	20.6	22.1	24.5	7.0	-2.4
12 Other investment income	114.4	125.0	189.2	229.8	-10.6	-40.5
13 Official	26.7	26.2	30.8	48.0	0.5	-17.2
14 Private	87.6	98.6	158.1	181.6	-11.1	-23.5
Differences.......						
15 Total investment income	26.8	21.9	45.9	45.6	4.9	0.3
16 Direct investment income	9.4	3.9	5.7	7.2	5.5	-1.5
17 Reinvested earnings	2.8	1.4	3.6	4.6	1.4	-1.0
18 Other	6.6	2.5	2.0	2.5	4.1	-0.5
19 Other investment income	17.4	18.0	40.2	38.4	-0.6	1.8
20 Official	0.1	4.1	-0.1	14.4	-3.9	-14.5
21 Private	17.5	14.1	40.7	24.2	3.3	16.5
All countries included in BoP Yearbook						
22 Total investment income	177.5	173.0	250.6	284.2	4.5	-33.6
23 Direct investment income	50.9	39.1	36.2	37.8	11.9	-1.6
24 Other investment income	126.6	133.9	214.4	246.4	-7.3	-32.0
PERCENT COVERED (1)						
25 Total invest. income	93%	90%	90%	91%		
26 Direct	100%	79%	100%	74%		
27 Other	90%	93%	88%	93%		

(1) Ratio of 1985 Yearbook amounts for questionnaire respondents to totals for all countries in the Yearbook.

Table B-2. Regional Totals of Income Questionnaire--Income Flows
(1983 year totals in billions of U.S. dollars)

	All respondents		Industrial countries		Offshore financial centers		Mideast oil exporters		Other countries	
	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit
I. Direct investment income	41.7	35.2	41.2	24.1	.	1.6	.	.	0.5	9.5
a. Reinvested earnings	17.5	8.1	17.5	6.0	.	0.7	.	.	.	1.4
b. Distributed earnings	24.2	27.1	23.6	18.1	.	0.9	.	.	0.5	8.0
Dividends	16.2	12.6	15.9	7.6	.	0.5	.	.	0.3	4.5
Interest	-2.0	4.6	-2.0	4.1	.	.	.	.	.	0.5
Branch profits	7.2	5.9	7.1	3.9	.	0.4	.	.	0.1	1.7
Other	0.2	0.6	0.2	.	.	.	.	.	.	0.6
II. Other Private Income	198.8	205.8	188.6	173.8	1.6	1.9	2.6	0.7	6.0	29.4
a. Of resident banks	150.6	148.7	145.8	135.6	1.6	1.6	.	.	3.3	11.4
(1) From/to banks	64.1	69.4	63.0	61.2	.	.	.	.	1.1	8.1
(2) From/to other pvt.	28.5	21.2	28.4	21.2	.	.	.	.	0.1	.
(3) From/to official	5.7	2.0	5.7	1.9	.	.	.	.	.	0.1
b. Of other private	37.5	40.5	35.1	28.9	.	0.2	.	.	2.4	11.4
(1) From/to banks	9.5	13.1	8.1	5.2	.	.	.	.	1.5	7.9
(2) From/to other pvt.	11.4	7.9	10.8	7.1	.	0.1	.	.	0.6	0.7
(3) From/to official	0.8	1.7	0.7	1.1	.	.	.	.	0.1	0.6
c. Dividends	4.4	9.1	4.4	8.4	.	0.1	.	.	.	0.6
d. Other	2.5	0.9	2.3	0.5	.	.	.	.	0.1	0.4
Memo: Bank fees	2.1	1.1	1.9	0.9	0.1	.	.	.	0.1	0.1
a. In investment income	.	.	.	.	.	.	.	.	.	.
b. In other services	2.0	1.0	1.9	0.9	0.1	.	.	.	.	.
c. Other	.	.	.	.	.	.	.	.	.	.
III. Resident Official Income,	30.7	62.4	20.8	38.9	1.5	0.3	3.9	0.2	4.5	23.0
From/to fgn. off. inst.	1.8	18.9	0.8	15.4	.	.	0.1	.	0.9	3.5
From/to int. instit.	1.2	3.4	1.1	0.9	.	.	.	.	0.1	2.5
From/to banks	2.4	13.7	0.7	2.9	.	0.2	0.1	0.2	1.6	10.4
From/to other private	5.2	9.6	4.3	8.5	.	.	0.6	.	0.3	1.1
Memo: On reserve assets	13.2	0.4	10.8	0.3	.	.	.	.	2.3	0.1
Memo: Interest arrears	.	1.4	.	.	.	.	.	.	.	1.4
Total income exc. direct inv.	229.5	268.2	209.4	212.7	3.1	2.2	6.5	0.9	10.5	52.4

Table B-3. Regional Totals of Income Questionnaire--Stocks of Assets and Liabilities
(1983 year-end, in billions of U.S. dollars)

	All respondents	Industrial countries	Offshore financial centers	Mideast oil exporters	Other countries
Assets, total	3563.4	3083.7	252.2	99.0	128.6
Reserves except gold	272.3	190.6	9.3	18.0	54.4
a. Claims on banks	23.9	8.3	-0.1	.	15.7
b. Other	66.1	58.2	0.1	.	7.9
Other official assets	233.2	168.4	.	54.5	10.2
Direct investments	487.8	484.3	1.0	.	2.6
Foreign bonds	209.1	208.4	0.4	.	0.3
Foreign corporate equities	131.6	130.7	0.5	.	0.4
Other nonbank assets	288.1	242.2	1.9	15.8	28.3
Resident bank fgn. assets	1864.2	1582.9	239.1	10.7	31.5
a. Claims on banks	1129.7	946.9	161.7	5.8	15.3
b. Claims on other	565.4	482.4	77.4	2.9	2.6
Other	77.4	76.5	.	.	0.9
Memo: Nonbank claims on banks	114.5	91.5	1.2	.	21.8
Liabilities, total	3746.3	3005.9	248.5	11.8	480.0
Resident official fgn. debt	612.4	394.4	0.6	0.5	216.9
a. To banks	127.3	15.9	0.5	.	110.9
b. Other	281.3	202.8	0.2	.	78.3
Direct investments	384.9	344.7	8.9	.	31.3
Other domestic bonds	175.7	165.5	.	.	10.1
Domestic corporate equities	209.8	208.9	0.6	.	0.4
Resident bank foreign debt	1896.8	1554.2	233.3	7.8	101.4
a. To banks	1219.5	971.6	170.3	4.9	72.7
b. To other	476.8	398.8	63.0	0.7	14.2
of which:to fgn. auth.	103.0	101.8	.	.	1.1
Nonbank debt to fgn. banks	222.2	151.1	0.4	.	70.7
Other	227.4	188.0	5.4	3.5	30.6
Assets exc. direct investment	3075.6	2599.4	251.2	99.0	126.0
Official	505.4	359.0	9.3	72.5	64.6
Private	2570.2	2240.4	241.9	26.5	61.4
Banks	1864.2	1582.9	239.1	10.7	31.5
Nonbanks	706.0	657.5	2.8	15.8	29.9
Liabilities exc. direct inv.	3361.4	2661.2	239.7	11.8	448.7
Resident official fgn. debt	612.4	394.4	0.6	0.5	216.9
Private	2749.0	2266.8	239.0	11.3	231.8
Banks	1896.8	1554.2	233.3	7.8	101.4
Nonbanks	852.2	712.6	5.7	3.5	130.4

Table B-4. Direct Investment Income
Summary of Investment Income Questionnaire Replies
(In billions of U.S. dollars)

	1983 Income Flows				1983 Stocks	
	Reinvested		Other			
	Credit	Debit	Credit	Debit	Assets	Liabilities
All questionnaire respondents	17.5	8.1	24.2	27.1	487.8	384.9
INDUSTRIAL COUNTRIES	17.5	6.0	23.6	18.1	484.3	344.7
UNITED STATES	9.6	0.1	11.7	5.5	227.0	137.1
CANADA	.	.	1.7	2.2	28.8	59.9
AUSTRALIA	0.2	.	0.1	1.3	3.0	16.1
JAPAN	.	.	2.0	0.7	32.2	4.4
NEW ZEALAND	0.1	0.2	.	0.1	.	.
AUSTRIA	.	.	.	0.2	0.9	2.2
BELGIUM-LUXEMBOURG	.	.	.	.	2.4	9.4
DENMARK	.	0.1	0.1	0.2	1.6	3.0
FINLAND	.	.	.	0.1	1.1	0.4
FRANCE	.	.	0.5	0.2	.	.
GERMANY	0.2	.	0.4	1.5	27.6	18.0
ITALY	.	.	0.1	0.1	9.8	7.3
NETHERLANDS	1.5	0.7	1.9	1.8	39.1	16.9
NORWAY	.	.	.	0.6	0.6	0.7
SPAIN	.	.	.	0.2	1.6	8.4
SWEDEN	.	.	0.4	0.1	.	.
SWITZERLAND	0.5	0.3	0.5	.	19.3	8.3
UNITED KINGDOM	5.5	4.7	4.0	3.5	89.2	52.7
OFFSHORE BNKING CTRS	.	0.7	.	0.9	1.0	8.9
BAHAMAS	.	.	.	.	.	.
CAYMAN ISLANDS	.	.	.	.	.	.
HONG KONG(1)	.	.	.	.	.	.
PANAMA(1)	.	.	.	.	.	.
SINGAPORE(1)	.	.	.	.	.	.
MID EAST OIL EXPORTERS	.	.	.	.	.	.
IRAN, I.R. OF	.	.	.	.	.	.
KUWAIT	.	.	.	.	.	.
LATIN AMERICA	.	1.1	.	1.7	0.5	17.0
ARGENTINA	.	0.1	.	0.3	.	.
BRAZIL	.	0.7	.	0.8	.	.
CHILE	.	.	.	0.1	0.1	.
COLOMBIA	.	0.1	.	0.1	0.2	.
MEXICO	.	0.2	.	0.2	.	14.9
PERU	.	.	.	0.1	.	.
VENEZUELA	.	.	.	0.2	0.2	2.1

(Continued)

"." indicates that item is missing.

Table B-4 (continued). Direct Investment Income
Summary of Investment Income Questionnaire Replies
(In billions of U.S. dollars)

	1983 Income Flows				1983 Stocks	
	Reinvested		Other			
	Credit	Debit	Credit	Debit	Assets	Liabilities
OTHER COUNTRIES	.	0.3	0.5	6.3	2.0	14.3
CHINA, PEOPLE S REP.	.	.	.	.	.	.
EGYPT	.	.	0.1	.	.	.
HUNGARY(1)	.	.	.	.	.	.
INDIA(1)	.	.	.	.	.	.
INDONESIA	.	.	.	2.9	.	5.4
ISRAEL	.	.	0.1	0.2	.	.
KOREA	.	.	.	0.1	0.5	1.1
MALAYSIA	.	0.3	.	1.2	.	.
NIGERIA	.	.	.	0.4	.	.
PHILIPPINES	.	.	.	0.1	.	.
PORTUGAL	.	.	.	.	.	0.3
SOUTH AFRICA	.	.	0.2	1.1	1.5	6.2
THAILAND(1)	.	.	.	.	.	.
TURKEY	.	.	.	0.1	.	.
INDUSTRIAL COUNTRIES	17.5	6.0	23.6	18.1	484.3	344.7
OFFSHORE BNKING CTRS	.	0.7	.	0.9	1.0	8.9
MID EAST OIL EXPORTERS	.	.	.	.	.	.
LATIN AMERICA	.	1.1	.	1.7	0.5	17.0
OTHER COUNTRIES	.	0.3	0.5	6.3	2.0	14.3
All questionnaire respondents	17.5	8.1	24.2	27.1	487.8	384.9
Totals for countries reporting BOTH flows and stocks:						
INDUSTRIAL COUNTRIES	17.5	5.8	22.7	17.1	446.9	305.1
OFFSHORE BNKING CTRS	.	0.7	.	0.9	1.0	8.9
MID EAST OIL EXPORTERS	.	.	.	.	.	.
LATIN AMERICA	.	0.2	.	0.4	.	.
OTHER COUNTRIES	.	.	0.3	4.4	1.6	12.9
All questionnaire respondents	17.5	6.7	22.9	22.8	449.5	326.9

(1) Reported amounts are included in totals but not shown separately.
"." indicates that item is missing.

Table B-5. Other Investment Income
Summary of Investment Income Questionnaire Replies
(In billions of U.S. dollars)

	1983 Income		1983 Stocks		Income-stock ratios(1) (Per cent)	
	Credit	Debit	Assets	Liabilities	Credit	Debit
All questionnaire respondents	229.5	268.2	3075.6	3361.4	7.7	7.9
INDUSTRIAL COUNTRIES	209.4	212.7	2599.4	2661.2	8.0	8.0
UNITED STATES	56.8	47.0	655.7	650.6	8.7	7.2
CANADA	6.4	14.9	91.0	179.0	7.0	8.3
AUSTRALIA	0.7	2.6	10.5	31.6	6.8	8.2
JAPAN	13.6	11.8	238.9	229.4	5.7	5.2
NEW ZEALAND	0.1	0.6	.	.	.	.
AUSTRIA	2.6	2.8	35.4	37.4	7.3	7.4
BELGIUM-LUXEMBOURG	18.1	18.2	166.5	166.3	10.9	10.9
DENMARK	0.8	2.7	15.2	33.9	5.0	7.9
FINLAND	0.5	1.5	10.9	20.1	5.0	7.6
FRANCE	18.8	19.6	181.3	194.1	10.3	10.1
GERMANY	12.1	9.8	197.0	182.0	6.1	5.4
ITALY	4.1	8.0	85.2	106.7	4.8	7.5
NETHERLANDS	7.3	7.6	85.9	71.7	8.5	10.5
NORWAY	1.3	2.5	16.8	28.4	7.9	8.8
SPAIN	1.1	3.3	24.2	41.8	4.4	7.8
SWEDEN	1.2	3.6	23.4	43.7	5.1	8.3
SWITZERLAND	9.6	4.3	151.7	74.1	6.4	5.7
UNITED KINGDOM	54.3	51.9	609.6	570.4	8.9	9.1
OFFSHORE BNKING CTRS	3.1	2.2	251.2	239.7	2.6	2.1
BAHAMAS	1.6	1.8	32.1	32.2	4.9	5.5
CAYMAN ISLANDS	.	.	131.3	130.4	.	.
HONG KONG(2)	.	.	.	.	.	.
PANAMA(2)	.	.	.	.	.	.
SINGAPORE(2)	.	.	.	.	.	.
MID EAST OIL EXPORTERS	6.5	0.9	99.0	11.8	6.5	7.3
IRAN, I.R. OF	0.8	0.2	14.8	2.7	5.4	6.9
KUWAIT	5.7	0.7	84.2	9.2	6.8	7.4
LATIN AMERICA	4.6	33.5	52.8	220.3	7.3	10.5
ARGENTINA	0.4	5.4	1.3	46.0	33.4	11.8
BRAZIL	0.7	10.3	.	.	.	.
CHILE	0.2	1.8	3.8	18.9	4.9	9.6
COLOMBIA	0.3	1.0	2.1	7.0	13.2	14.5
MEXICO	1.4	10.4	23.0	98.8	5.9	10.6
PERU	0.1	1.1	1.6	12.4	6.3	8.9
VENEZUELA	1.5	3.4	20.9	37.2	7.2	9.2

(Continued)

(1) Regional ratios omit countries missing income or stocks.
(2) Reported amounts are included in totals but not shown separately.
"." indicates that item is missing.

Table B-5. Other Investment Income
Summary of Investment Income Questionnaire Replies
(In billions of U.S. dollars)

	1983 Income		1983 Stocks		Income-stock ratios(1) (Per cent)	
	Credit	Debit	Assets	Liabilities	Credit	Debit
OTHER COUNTRIES	6.0	18.9	73.3	228.3	7.1	7.9
CHINA, PEOPLE S REP.	0.7	0.3	.	.	.	.
EGYPT	0.5	1.1	14.1	11.3	3.5	9.6
HUNGARY(2)	.	.	.	.	.	.
INDIA(2)	.	.	.	.	.	.
INDONESIA	0.6	1.3	9.3	2.7	6.4	49.8
ISRAEL	1.4	2.5	11.4	29.7	12.4	8.4
KOREA	0.5	3.3	9.3	40.5	5.8	8.2
MALAYSIA	0.5	0.9	5.5	18.5	9.7	5.0
NIGERIA	0.1	0.6	.	.	.	.
PHILIPPINES	0.4	2.0	2.4	24.8	15.6	8.0
PORTUGAL	0.1	1.2	2.0	14.6	6.5	8.1
SOUTH AFRICA	0.2	1.5	4.3	18.0	5.2	8.5
THAILAND(2)	.	.	.	.	.	.
TURKEY	0.1	1.4	2.3	18.4	3.4	7.7

Totals for countries reporting BOTH flows and stocks:

INDUSTRIAL COUNTRIES	209.2	212.1	2599.4	2661.2	8.0	8.0
OFFSHORE BNKING CTRS	3.1	2.2	119.9	109.2	2.6	2.1
MID EAST OIL EXPORTERS	6.5	0.9	99.0	11.8	6.5	7.3
LATIN AMERICA	3.9	23.2	52.8	220.3	7.3	10.5
OTHER COUNTRIES	5.2	18.0	73.3	228.3	7.1	7.9
All questionnaire respondents	227.9	256.5	2944.4	3230.9	7.7	7.9

(1) Regional ratios omit countries missing income or stocks.
(2) Reported amounts are included in totals but not shown separately.
"." indicates that item is missing.

Table B-6. Comparison of Questionnaire with IBS Bank Positions
(1983 year-end positions in billions of U.S. dollars)

	Bank Claims on ALL Foreigners			Bank Liabilities to ALL Foreigners		
	Questionnaire	IBS	IBS less Questionnaire	Questionnaire	IBS	IBS less Questionnaire
Comparable totals(1)	1773.2	2205.6	432.3	1786.2	2196.4	410.2
INDUSTRIAL COUNTRIES	1492.0	1673.7	181.7	1446.6	1606.5	159.9
UNITED STATES	398.5	430.0	31.4	294.7	305.8	11.1
CANADA	42.2	41.0	-1.2	62.8	61.3	-1.6
AUSTRALIA	0.2	0.2	-	1.1	0.6	-0.4
JAPAN	.	109.1	.	.	106.6	.
NEW ZEALAND	.	0.5	.	.	0.3	.
AUSTRIA	25.7	25.7	-	26.4	26.4	-
BELGIUM-LUXEMBOURG	146.8	169.7	22.9	142.8	174.2	31.4
DENMARK	6.6	6.7	-	7.0	7.1	0.1
FINLAND	5.0	4.8	-0.2	7.0	7.2	0.2
FRANCE	141.5	148.9	7.4	139.4	158.7	19.3
GERMANY	58.3	74.8	16.5	62.4	57.9	-4.5
ITALY	35.9	37.7	1.8	48.8	52.2	3.4
NETHERLANDS	58.0	58.7	0.7	55.8	56.1	0.3
NORWAY	2.3	2.6	0.3	4.5	6.7	2.3
SPAIN	14.8	16.2	1.4	17.5	21.4	3.9
SWEDEN	7.5	9.3	1.8	14.6	18.1	3.5
SWITZERLAND	60.6	162.4	101.7	53.1	137.5	84.4
UNITED KINGDOM	488.1	485.2	-2.8	508.6	515.3	6.6
OFFSHORE BNKING CTRS	239.1	481.5	242.4	233.3	476.2	242.9
BAHAMAS	32.0	157.2	125.3	32.0	156.5	124.5
CAYMAN ISLANDS	131.3	131.3	-	130.4	130.4	-
HONG KONG	67.6	67.6	-0.1	59.7	59.6	-0.1
PANAMA	2.4	37.3	34.9	2.4	37.0	34.6
SINGAPORE	5.8	88.2	82.3	8.8	92.6	83.9
MID EAST OIL EXPORTERS	10.7	14.7	4.0	7.8	10.7	2.9
IRAN, I.R. OF	2.0	2.3	0.3	2.1	1.9	-0.2
KUWAIT	8.8	12.4	3.7	5.7	8.8	3.1

(Continued)

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(1) Regional totals include IBS amounts only for countries reporting corresponding questionnaire amounts. IBS data are also shown for replies lacking the item.

"." indicates that item is missing.

Table B-6(continued). Questionnaire-IBS Comparison
(1983 year-end positions in billions of U.S. dollars)

	Bank Claims on ALL Foreigners			Bank Liabilities to ALL Foreigners		
	Questionnaire	IBS	IBS less Questionnaire	Questionnaire	IBS	IBS less Questionnaire
LATIN AMERICA	3.6	3.1	-0.5	43.6	42.8	-0.8
ARGENTINA	.	1.2	.	.	7.8	.
BRAZIL	.	2.3	.	.	24.0	.
CHILE	0.8	0.8	-	6.8	6.3	-0.5
COLOMBIA	.	0.4	.	.	2.1	.
MEXICO	2.4	0.9	-1.5	35.0	33.2	-1.8
PERU	.	0.3	.	0.4	0.4	-
VENEZUELA	0.3	1.3	1.0	1.4	2.9	1.5
OTHER COUNTRIES	27.8	32.5	4.7	54.9	60.1	5.2
CHINA, PEOPLE S REP.	.	.	.	.	.	.
EGYPT	11.6	9.1	-2.5	11.3	6.7	-4.6
HUNGARY	0.1	-	-0.1	7.8	1.2	-6.7
INDIA	.	.	.	.	0.4	.
INDONESIA	4.5	4.5	-	0.8	1.0	0.1
ISRAEL	6.0	6.8	0.9	11.7	10.9	-0.9
KOREA	1.4	4.8	3.5	12.3	18.5	6.2
MALAYSIA	1.1	2.3	1.3	.	3.0	.
NIGERIA	.	0.6	.	.	0.4	.
PHILIPPINES	1.7	2.6	1.0	4.3	10.4	6.1
PORTUGAL	1.5	1.7	0.2	1.7	6.6	5.0
SOUTH AFRICA	-	0.6	0.6	2.2	1.6	-0.6
THAILAND	.	1.0	.	2.0	2.4	0.4
TURKEY	.	1.0	.	0.7	0.9	0.2

(1) Regional totals include IBS amounts only for countries reporting corresponding questionnaire amounts. IBS data are also shown for replies lacking the item.

"." indicates that item is missing.

Table B-7. Comparison of Questionnaire with IBS Bank Positions
Year-end positions, 1983
(1983 year-end positions in billions of U.S. dollars)

	NONBANK Claims on Foreign Banks			NONBANK Liabilities to Foreign Banks		
	Questionnaire	IBS	IBS less Questionnaire	Questionnaire	IBS	IBS less Questionnaire
Comparable totals(1)	113.4	258.8	145.4	221.9	358.8	136.8
INDUSTRIAL COUNTRIES	91.5	234.5	142.9	151.1	225.0	74.0
UNITED STATES	52.8	167.9	115.1	10.4	58.0	47.6
CANADA	.	11.4	.	5.9	10.6	4.7
AUSTRALIA	.	0.9	.	1.0	17.4	16.4
JAPAN	.	2.0	.	.	11.3	.
NEW ZEALAND	.	0.4	.	.	4.5	.
AUSTRIA	.	1.3	.	4.2	3.6	-0.6
BELGIUM-LUXEMBOURG	4.2	10.5	6.3	1.0	12.0	11.0
DENMARK	.	0.4	.	.	12.4	.
FINLAND	.	0.2	.	4.7	4.4	-0.3
FRANCE	.	11.8	.	18.8	16.4	-2.4
GERMANY	2.3	10.5	8.2	27.2	40.7	13.5
ITALY	.	10.6	.	40.5	22.7	-17.8
NETHERLANDS	.	10.2	.	1.7	6.8	5.0
NORWAY	1.1	1.3	0.2	.	7.3	.
SPAIN	.	5.2	.	20.1	16.4	-3.7
SWEDEN	.	0.8	.	.	10.6	.
SWITZERLAND	11.2	23.8	12.5	.	7.7	.
UNITED KINGDOM	19.8	20.5	0.7	15.6	16.0	0.4
OFFSHORE BNKING CTRS	.	.	.	0.1	12.4	12.3
BAHAMAS	.	2.7	.	-	1.5	1.5
CAYMAN ISLANDS	.	4.3	.	.	2.4	.
HONG KONG	.	15.5	.	.	8.7	.
PANAMA	.	22.1	.	0.1	10.9	10.7
SINGAPORE	.	1.8	.	.	2.4	.
MID EAST OIL EXPORTERS	.	.	.	.	.	.
IRAN, I.R. OF	.	2.4	.	.	0.9	.
KUWAIT	.	4.7	.	.	3.7	.

(Continued)

(1) Regional totals include IBS amounts only for countries reporting corresponding questionnaire amounts. IBS data are also shown for replies lacking the item.

"." indicates that item is missing.

Table B-7(continued). Questionnaire-IBS Comparison
(1983 year-end positions in billions of U.S. dollars)

	NONBANK Claims on Foreign Banks			NONBANK Liabilities to Foreign Banks		
	Questionnaire	IBS	IBS less Questionnaire	Questionnaire	IBS	IBS less Questionnaire
LATIN AMERICA	21.8	23.5	1.7	38.3	86.1	47.8
ARGENTINA	.	7.9	.	9.3	19.1	9.8
BRAZIL	.	8.1	.	.	49.1	.
CHILE	.	2.1	.	5.7	6.5	0.8
COLOMBIA	.	2.6	.	.	5.4	.
MEXICO	12.1	12.7	0.5	22.3	56.7	34.4
PERU	.	1.2	.	1.1	3.8	2.7
VENEZUELA	9.7	10.8	1.1	.	22.7	.
OTHER COUNTRIES	-	0.8	0.8	32.4	35.2	2.8
CHINA, PEOPLE S REP.	.	0.4	.	.	0.8	.
EGYPT	.	2.1	.	.	2.8	.
HUNGARY	.	-	.	0.1	1.4	1.3
INDIA	.	1.8	.	.	2.6	.
INDONESIA	.	0.5	.	.	13.0	.
ISRAEL	.	2.8	.	2.3	2.7	0.4
KOREA	.	0.3	.	12.1	11.8	-0.3
MALAYSIA	.	1.2	.	.	8.5	.
NIGERIA	.	1.4	.	.	7.6	.
PHILIPPINES	-	0.8	0.8	2.3	6.2	3.9
PORTUGAL	.	2.6	.	7.5	9.3	1.9
SOUTH AFRICA	.	2.9	.	.	11.5	.
THAILAND	.	0.2	.	8.1	3.8	-4.3
TURKEY	.	2.1	.	.	2.1	.

(1) Regional totals include IBS amounts only for countries reporting corresponding questionnaire amounts. IBS data are also shown for replies lacking the item.

"." indicates that item is missing.

Table B-8. Total Debt Reported in Questionnaire Compared With OECD Data for Selected Countries (1983 year-end in billions of U.S. dollars)

Country	Quest-ionnaire	OECD	Difference
PANAMA	5.9	3.9	1.9
IRAN, I.R. OF	2.7	7.6	-4.9
KUWAIT	9.2	10.3	-1.2
ARGENTINA	46.0	44.0	2.0
CHILE	18.9	20.1	-1.3
COLOMBIA	7.0	11.7	-4.8
MEXICO	98.8	101.5	-2.7
PERU	12.4	13.6	-1.1
VENEZUELA	37.2	31.1	6.1
EGYPT	11.3	27.7	-16.4
HUNGARY	8.2	8.3	.
INDONESIA	2.7	31.0	-28.4
ISRAEL	29.7	27.0	2.6
KOREA	40.5	44.6	-4.1
MALAYSIA	18.5	18.0	0.5
PHILIPPINES	24.8	28.4	-3.6
PORTUGAL	14.6	21.6	-6.9
SOUTH AFRICA	17.8	23.2	-5.4
THAILAND	13.9	15.6	-1.8
TURKEY	18.4	22.8	-4.4
Totals for countries listed above	438.4	512.2	-73.8
Total OECD debt for all developing countries	.	961.0	

Source for OECD data: "Statistics on External Indebtedness: Debt and Other External Liabilities of Developing, CMEA, and Certain Other Countries and Territories At End-December 1983 and End-December 1984" (OECD, Paris, December 1985). Includes use of Fund credit and "other" liabilities.

Table B-9. Direct Investment Income
Published in 1985 Balance of Payments Statistics Yearbook
(In billions of U.S. dollars)

Reinvested earnings on direct investment

		1977	1978	1979	1980	1981	1982	1983	1984
ALL COUNTRIES	Credit	9.7	14.9	23.4	21.5	17.4	9.2	13.9	14.9
	Debit	6.0	8.3	11.6	10.3	7.0	1.8	4.0	9.1
	Net	3.7	6.7	11.8	11.2	10.4	7.5	9.9	5.8
INDUSTRIAL COUNTRIES	Credit	9.7	14.9	23.3	21.5	17.3	9.2	13.9	14.9
	Debit	4.1	5.8	8.7	7.3	3.7	-1.5	2.2	7.3
	Net	5.6	9.1	14.6	14.2	13.7	10.7	11.7	7.6
OFFSHORE BNKING CTRS	Credit	-	-	-	-	-	-	-	-
	Debit	-	-	.4	.1	-	-	-.1	.1
	Net	-	-	-.4	-.1	-	-	.1	-.1
MID EAST OIL EXPORTERS	Credit	-	-	-	-	-	-	-	-
	Debit	.1	.1	.1	.1	.1	.1	.1	-
	Net	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-
OTHER DEVEL AREAS	Credit	-	-	-	-	-	-	-	-
	Debit	1.8	2.3	2.3	2.7	3.2	3.2	1.8	1.7
	Net	-1.8	-2.3	-2.3	-2.7	-3.2	-3.2	-1.7	-1.7

Other direct investment income

		1977	1978	1979	1980	1981	1982	1983	1984
ALL COUNTRIES	Credit	18.8	20.5	27.6	30.5	29.9	26.2	22.3	23.1
	Debit	22.8	25.1	27.5	38.2	40.7	37.6	33.8	34.8
	Net	-4.0	-4.6	.1	-7.6	-10.7	-11.3	-11.5	-11.7
INDUSTRIAL COUNTRIES	Credit	18.4	20.1	26.9	29.7	28.2	24.8	21.3	21.4
	Debit	9.5	10.8	13.6	16.6	16.1	17.6	16.4	18.0
	Net	9.0	9.2	13.3	13.1	12.1	7.2	4.9	3.3
OFFSHORE BNKING CTRS	Credit	-	-	-	-	-	-	-	.2
	Debit	.1	.1	.3	.2	.2	.1	.2	.1
	Net	-.1	-.1	-.3	-.2	-.2	-.1	-.2	.1
MID EAST OIL EXPORTERS	Credit	-	-	-	-	-	-	-	-
	Debit	5.9	6.5	4.0	9.1	11.8	8.2	6.3	5.1
	Net	-5.9	-6.5	-4.0	-9.1	-11.8	-8.2	-6.3	-5.1
OTHER DEVEL AREAS	Credit	.3	.4	.7	.9	1.7	1.5	1.0	1.5
	Debit	7.3	7.7	9.6	12.2	12.5	11.6	10.9	11.5
	Net	-7.0	-7.3	-8.9	-11.3	-10.8	-10.2	-9.9	-10.0

Table B-10. Other Investment Income
Published in 1985 Balance of Payments Statistics Yearbook
(In billions of U.S. dollars)

Other investment income

		1977	1978	1979	1980	1981	1982	1983	1984
ALL COUNTRIES	Credit	57.7	83.2	126.6	181.7	234.8	247.1	214.4	228.9
	Debit	64.0	89.4	133.9	192.9	257.1	283.0	246.4	270.5
	Net	-6.3	-6.2	-7.3	-11.2	-22.3	-35.9	-32.0	-41.6
INDUSTRIAL COUNTRIES	Credit	44.7	63.6	98.5	135.1	175.6	191.2	166.0	181.1
	Debit	47.6	66.3	99.4	141.0	185.8	199.9	172.6	190.7
	Net	-3.0	-2.7	-.9	-5.9	-10.2	-8.7	-6.6	-9.5
OFFSHORE BNKING CTRS	Credit	1.3	1.9	3.0	6.4	8.7	8.6	6.9	7.2
	Debit	1.3	1.8	2.9	6.3	8.1	8.2	6.3	6.5
	Net	-	.1	.1	.1	.6	.4	.6	.7
MID EAST OIL EXPORTERS	Credit	6.9	10.3	13.5	22.4	29.1	28.5	26.7	23.0
	Debit	.5	1.1	1.5	1.9	2.3	2.2	1.9	2.4
	Net	6.3	9.3	12.0	20.5	26.8	26.2	24.8	20.5
OTHER DEVEL AREAS	Credit	4.9	7.4	11.5	17.8	21.4	18.8	14.9	17.6
	Debit	14.6	20.2	30.1	43.7	61.0	72.6	65.6	70.9
	Net	-9.6	-12.8	-18.6	-25.9	-39.6	-53.8	-50.7	-53.3

Appendix C. International Banking Statistics

Chapter V makes extensive use of a body of statistics known as International Banking Statistics (IBS) in assessing income credits and debits for individual countries. IBS is compiled by the IMF's Bureau of Statistics and is published each month in International Financial Statistics (IFS) as part of the world tables in the front pages. It is a fundamental source of information on international banking developments at a world level and, with the dominant position that banks have maintained in international financial markets, a major statistical source on financial developments. The nature and construction of the numbers affect substantially the ways in which IBS is used in Chapter V, and in many other uses. 1/

The global picture of cross-border banking assets and liabilities that appears in IBS results from integrating two separate forms of bank information--on the one hand country totals of bank cross-border positions that are reported to IMF by national authorities and that appear on the country pages of IFS in the sections on international liquidity; and on the other hand detailed geographical distributions of bank assets and liabilities that are reported to the Bank for International Settlements (BIS) and to IMF by industrial countries and offshore financial centers. BIS collects, compiles, and publishes the geographic detail separately from the Fund's system of banking statistics 2/ and it is the Fund's Bureau of Statistics that integrates these data with their own banking totals. The resulting information, as it appears in IFS, consists of a set of four tables that show for the world, each region, and each country:

1. Total cross-border assets and liabilities of deposit banks,

2. Cross-border interbank claims, as assets and as liabilities,

3. Cross-border claims on nonbanks, as bank assets and nonbank liabilities, and

4. Cross-border liabilities to nonbanks, as bank liabilities and as nonbank assets.

This information appears for year-ends 1979, 1983, and 1985 in Table C-1 in rearranged form for the major regional groups that are used in Chapter V. There is no coverage of nonbank claims on nonbanks such as intergovernmental loans and trade credit, and to that extent the totals

1/ A more complete description of IBS appears in "The Fund's International Banking Statistics" by Joslin Landell-Mills, published by the IMF, June 1986.

2/ "International Banking and Financial Market Developments", a quarterly publication by BIS.

are short as measures of total cross-border positions. As Appendix E indicates, however, the banking positions are a large part of the total of all claims and a dominant segment of the world financial system.

The most important part of the table for Chapter V consists of lines 1 to 3 on nonbank positions vis-à-vis banks, and the nature of those numbers is explained below in some detail.

1. Nonbank positions vis-à-vis foreign banks

The contribution of the BIS statistics to IBS is in the amounts published for banks in BIS reporting countries as claims on or liabilities to the nonbanks of each of a long list of individual countries covered in the BIS survey. Added up across all BIS reporting countries, as they are in the BIS publications, these positions against nonbanks result in "derived" totals of nonbank positions in each country vis-à-vis foreign banks included in BIS. Such positions are statistically separate from all national estimates in the nonbank countries and are independent measures of nonbank positions. Indeed, for most countries they are the only measure available on resident nonbank positions with foreign banks, and for many countries they are the only measure of any type of nonbank foreign positions. It is the IBS form of these externally measured nonbank positions that is used in Part 2.b. of Chapter V as a base for estimating related income flows. For countries that have comparable national estimates of nonbank positions the IBS versions are all larger, with the excess usually greater in assets than in liabilities. Whether or not country estimates of income flows are based on stocks data, furthermore, the use of IBS-based nonbank positions almost always results in increased net credits in income flows uniformly across countries. 1/

The Fund's Bureau of Statistics integrates BIS nonbank information into IBS in several steps that broaden the usefulness of the numbers. There are, first, several countries beyond the BIS reporting group that

1/ Mexico is an exception to these statements, because it directly uses the IBS-derived nonbank total assets for Mexico in its international statistics.

send to IMF geographical distributions of bank positions that the Fund adds to the BIS totals. 1/ Second, the Fund makes a major adjustment for Switzerland to eliminate the imbalance in BIS associated with Swiss trust accounts. Banks outside Switzerland report liabilities to these trust accounts as owed to Swiss banks, while Swiss reports to BIS do not include the trust positions in their bank assets. 2/ In IBS the foreign assets of Swiss trust accounts are added to external assets of Swiss banks to balance these accounts, and they are classed as interbank claims on evidence that they are predominantly claims on non-Swiss banks. At the same time, Swiss trust account liabilities to foreigners are added in IBS to Swiss bank liabilities to nonbanks and are then distributed geographically using data published by the Swiss National Bank. A smaller adjustment of the same kind brings U.S. custody assets and liabilities into the IBS totals for a similar reason.

Finally, this geographic detail on nonbanks from the 32 reporting countries is fitted together in IBS tables with world totals of bank positions vis-à-vis nonbanks that IMF takes from its own country-reported banking statistics. The IMF totals are somewhat larger than the totals of derived nonbank geographic data, for several reasons discussed below, and the excess enters IBS tables for nonbanks as "unallocated", which is the rightmost column of Table C-1. For 1983, the unallocated amounts were, in non-bank assets, 22 percent of the world total of claims on banks, and in liabilities 11 percent of bank credit to nonbanks; by 1985 the proportions had risen to 26 percent and 14 percent respectively. It is the income flows of these unallocated positions that are estimated in Section 2.b. vii of Chapter V.

1/ Countries reporting to BIS are:

Austria	Italy	United Kingdom	Cayman Islands
Belgium	Luxembourg		Hong Kong
Denmark	Netherlands	Canada	Netherlands Antilles
Finland	Norway	Japan	Panama (U.S. branches)
France	Spain	United States	Singapore
Germany	Sweden	Bahamas	
Ireland	Switzerland	Bahrain	

Additional countries included by IMF are:

Israel	Philippines	United Arab Emirates
Korea	Portugal	
Lebanon	Saudi Arabia	

2/ The discrepancy is apparent in the BIS quarterly publication, where banks report $151 billion of liabilities to Swiss banks at year-end 1983, while Switzerland reports only $56 billion of bank claims on all foreigners. Trust account positions appear on the Switzerland pages of IFS, in the section on international liquidity.

There are three principal reasons for unallocated nonbank positions. First, the BIS-IMF geographic detail itself is not complete, and remaining residuals are carried unallocated into the IBS compilation. Second, IBS includes banks in many countries other than the 32 BIS-IMF reporters, and these other banks have positions vis-à-vis foreign nonbanks for which no geographic detail is available. Third, the IBS range of institutions included as banks is broader than in BIS tabulations for most countries that report to BIS. For some countries only large banks are included in BIS totals, while IBS uses data for all banks of BIS countries. IBS also includes savings banks and specialized financial institutions that are not part of national banking figures in many countries. Thus even for BIS countries there are unallocated amounts that are the positions of these other institutions. This third reason explains part of the rise in unallocated nonbank positions in recent years, because IBS coverage of institutions has been broadening substantially during that period and will probably continue to do so, country by country. Without parallel increases in BIS coverage of geographic detail the added nonbank positions fall into the unallocated category by default.

Table C-1 gives no nonbank positions on lines 1 to 3 for 1979 except in the "world" column, where bank-reported positions vis-à-vis nonbanks are used to complete the nonbank cells. IBS nonbank data in their current form are based on a reporting system that began with year-end 1983 figures and that covers a broader range of reporting countries than the previous system. BIS publications show a major break at year-end 1983, with bank positions vis-à-vis nonbanks 30 percent larger on the new basis than on the former one. In IBS tables geographic distributions of nonbank positions are extrapolated backward on the new basis only to 1981.

2. External positions of banks

The IBS tables on claims of banks give external bank assets and liabilities for each country divided between positions vis-à-vis nonbanks and vis-à-vis banks. The positions with nonbanks, lines 4 to 6 of Table C-1, provide the all-country totals mentioned above for the nonbank positions, on lines 1 to 3, and they are based almost entirely on national reports to IMF on bank external positions. The country reports and regional totals appear in the IBS tables on bank positions with nonbanks by residence of bank.

In the tables on interbank cross-border positions, IBS data have the important attribute that they include monetary authority positions vis-à-vis foreign deposit banks and deposit bank positions vis-à-vis foreign monetary authorities. This is reflected in the form of Table C-1 in lines 7 to 12. The division in Table C-1 between monetary authorities and deposit banks does not appear explicitly in IBS publications, but it can be derived from the other tables in the IBS structure.

Although the coverage includes official accounts the interbank tables are conceptually symmetric in that the total of crossborder assets should be identical with the total of crossborder liabilities. In practice the world totals of interbank assets and liabilities are indeed very close in recent years even though, unlike nonbank claims, the two sides are compiled separately from and independently of each other. As published in IFS, however, the world totals of interbank liabilities include BIS liabilities to monetary authorities, even though probably very little of these claims on BIS are included on the asset side of the tables. 1/ Table C-1 omits those BIS liabilities from lines 8 and 11, and the resulting close match between assets and liabilities appears in the combined interbank net total in Table C-1, on line 15. Positions of banks vis-à-vis nonbanks are combined with interbank positions on lines 16 to 18 to give total bank external positions. These bank totals do not appear in the published form of IBS.

3. Geographic coverage

The BIS problem mentioned above is one of the questions of geographic coverage that attaches to IBS statistics. The basic universe for IBS consists of all Fund members together with other countries that report banking data to the Fund or to BIS, such as Switzerland, Hong Kong and the Cayman Islands. This is a group labeled "all countries" that appears on each page of the IBS tables as published in IFS.

Beyond this group are nonmember countries that do not report to either BIS or IMF--mainly U.S.S.R. and Eastern Europe--and international organizations such as BIS itself and the World Bank, both of which have substantial claims on deposit banks. For nonreporting countries and international institutions the principal data available are the "derived" positions that emerge from reports of the 32 members of "all countries" that give geographic detail to BIS and the Fund. The IBS tables can thus include amounts for these two groups in positions vis-à-vis the 32 reporters, including nonbank positions by residence of nonbank, but nothing is available for the positions of banks in these groups against one another or against any group of nonbanks. 2/ Where international organizations and Eastern Europe can be included in tabulations, IBS shows a total for the "world" that is broader than "all countries." It is this world total that is in Table C-1 as the first column. IBS "all countries" consists of the next four columns, divided into the groups used in Chapter V, together with the "unallocated" column at the right.

1/ BIS claims on deposit banks, on the other hand, are reported as interbank liabilities by deposit banks and appear in Table C-1 in the column for international organizations, line 7.

2/ In the international group only the BIS is a bank. The World Bank and other development banks are in the nonbank category.

4. Comparison of BIS and IBS banking statistics

Table C-2 gives a comparison between BIS and IFS versions of banking data in a form that shows differences between them both within countries and across countries. In the totals at the bottom of the table, banks in the 25 countries that report to BIS have about 80 per cent of the world totals in IBS for all members and other areas. The BIS geographic allocations thus cover a large part of all of the claims included in IBS. Another 10 percent comes from the broader IBS coverage of claims in the BIS group, mentioned earlier, that includes Swiss trust accounts and institutions of the BIS reporting countries that are omitted from the BIS bank group. Swiss additions to IBS totals account for about half of the total added for industrial countries (as shown in the footnote to Table C-2), but other countries also have sizable differences. The remaining 10 per cent of total IBS coverage comes from the 110 or more Fund members that are not BIS reporters, from Eastern Europe, and from the claims of the BIS itself on deposit banks.

The differences in Table C-2 are in principle the source of unallocated nonbank positions in Table C-1, but in practice the relation is more complex. IBS uses Swiss data for geography on Swiss trust liabilities, and it uses U.S. data to distribute U.S. custody accounts. It has geography for its own reporters of IBS data, and it uses estimating procedures to distribute much of the $40-50 billion of BIS unallocated positions vis-à-vis nonbanks. These reductions are offset, though, by including in deposit banks a broad range of financial institutions that lack geographic information and by adding the Fund members that give no geography. The net result of this long procedure is that unallocated amounts are somewhat smaller than the Table C-2 differences for positions with nonbanks after additions and reductions.

Table C-1. International Banking Statistics
(In billions of U.S. dollars)

		World			Industrial countries			Offshore banking centers			Mid-east oil exporters		
		1979	1983	1985	1979	1983	1985	1979	1983	1985	1979	1983	1985
	A. Nonbank positions vis-a-vis foreign banks:												
1	Claims on foreign banks	355	673	785	.	301	328	.	54	65	.	48	49
2	Liabilities to foreign banks	453	760	850	.	286	319	.	32	44	.	19	18
3	Net asset	-99	-87	-65	.	14	9	.	22	21	.	29	31
	B. Bank positions vis-a-vis foreign nonbanks:												
4	Claims on foreign nonbanks	453	760	850	345	550	625	99	190	204	5	9	11
5	Liabilities to foreign nonbanks	355	673	785	259	463	560	66	159	168	.	.	1
6	Net asset	99	87	65	86	87	66	33	31	36	5	9	10
	C. Bank positions vis-a-vis foreign banks:												
	Monetary authorities												
7	Claims on foreign banks	208	197	240	22	16	30	7	5	12	61	48	45
8	Liabilities to foreign banks	67	97	125	2	2	1	-5	.	1	7	.	1
9	Net asset	141	99	115	20	14	29	12	5	11	54	48	44
	Deposit banks												
10	Claims on foreign banks	1,034	1,686	2,049	786	1,235	1,552	193	356	392	15	37	40
11	Liabilities to foreign banks	1,183	1,788	2,162	871	1,256	1,598	223	379	409	14	20	18
12	Net asset	-149	-102	-114	-85	-21	-47	-29	-23	-17	1	16	21
13	Total interbank claims	1,242	1,882	2,288	808	1,251	1,582	200	361	404	76	85	85
14	Total interbank liabilities	1,250	1,885	2,287	873	1,258	1,599	217	380	410	21	20	20
15	Net interbank asset	-8	-3	2	-65	-6	-17	-17	-19	-6	55	65	65
	D. TOTAL bank positions vis-a-vis foreign (B + C):												
16	Total bank claims	1,695	2,642	3,139	1,152	1,802	2,207	299	551	608	81	94	96
17	Total bank liabilities	1,604	2,558	3,072	1,132	1,721	2,159	283	539	578	21	21	21
18	Net asset	91	84	66	20	81	48	16	13	30	60	74	75

		Other devel-oping countries			Eastern Europe, etc.			Inter-national orgs.			Unallo-cated		
		1979	1983	1985	1979	1983	1985	1979	1983	1985	1979	1983	1985
	A. Nonbank positions vis-a-vis foreign banks:												
1	Claims on foreign banks	.	116	130	.	1	1	.	6	7	.	147	204
2	Liabilities to foreign banks	.	315	327	.	10	10	.	6	10	.	92	121
3	Net asset	.	-199	-197	.	-9	-10	.	.	-2	.	55	82
	B. Bank positions vis-a-vis foreign nonbanks:												
4	Claims on foreign nonbanks	4	10	10	.	.	.	.	.	.	.	.	.
5	Liabilities to foreign nonbanks	29	51	57	.	.	.	.	.	.	.	.	.
6	Net asset	-25	-40	-47	.	.	.	.	.	.	.	.	.
	C. Bank positions vis-a-vis foreign banks:												
	Monetary authorities												
7	Claims on foreign banks	78	80	94	13	19	24	28	28	35	.	.	.
8	Liabilities to foreign banks	30	63	81	34	33	41	.	.	.	.	.	.
9	Net asset	49	18	13	-21	-14	-17	28	28	35	.	.	.
	Deposit banks												
10	Claims on foreign banks	39	57	65	.	.	.	.	.	.	.	.	.
11	Liabilities to foreign banks	75	132	136	.	.	.	.	.	.	.	.	.
12	Net asset	-36	-75	-71	.	.	.	.	.	.	.	.	.
13	Total interbank claims	117	138	159	13	19	24	28	28	35	.	.	.
14	Total interbank liabilities	105	195	217	34	33	41	.	.	.	.	.	.
15	Net interbank asset	13	-57	-58	-21	-14	-17	28	28	35	.	.	.
	D. TOTAL bank positions vis-a-vis foreign (B + C):												
16	Total bank claims	122	148	169	13	19	24	28	28	35	.	.	.
17	Total bank liabilities	134	245	274	34	33	41	.	.	.	.	.	.
18	Net asset	-12	-98	-105	-21	-14	-17	28	28	35	.	.	.

Source: International Financial Statistics,
June 1986.

Notes to Table C-1

1. The data in the table are as published in the June 1986 issue of International Financial Statistics (IFS), which is published monthly by the Fund. The tables are identified in the IFS table of contents as "International Banking, page 50" and consist of the four sets of tables listed on page C-2 above.

2. Regional groups are those used in Chapter V. They conform to IBS groupings except Mideast oil exporters--Iran, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, and U.A.E.--and the residual of other developing countries.

3. Lines 1 through 6 on relations between banks and nonbanks exclude monetary authorities on both sides. Interbank positions on lines 7 through 15 include position of monetary authorities with deposit banks but not with other monetary authorities.

4. Monetary authority positions are not shown separately in published forms of International Banking Statistics. They are derived for Table C-1 by adding together published IBS amounts for interbank positions and bank positions vis-à-vis nonbanks and then subtracting amounts also in IBS for total external positions of deposit banks, i.e., IBS banks that are not monetary authorities. The residual is used in Table C-1 as monetary authority positions vis-à-vis deposit banks.

Table C-2. Comparison of BIS and IBS on International Banking Positions, Year-end 1983

(In billions of U.S. dollars)

	BIS	IBS "World" Totals	IBS less BIS
Bank positions vis-à-vis nonbanks			
Claims on foreign nonbanks of banks in:	666	760	94
Industrial countries	499	550	51
Offshore centers	168	190	22
Other	--	20	20
Liabilities to foreign nonbanks of banks in:	471	673	202
Industrial countries	319	463	144
Offshore centers	152	159	7
Others	--	51	51
Interbank positions cross-border			
Claims on foreign banks of banks in:	1,432	1,882	450
Industrial countries	1,098	1,251	153
Offshore centers	334	361	27
Other	--	270	270
Liabilities to foreign banks of banks in:	1,557	1,885	328
Industrial countries	1,225	1,258	33
Offshore centers	332	380	48
Other	--	247	247
Total cross-border positions of banks			
Total foreign claims of banks in:	2,098	2,642	544
Industrial countries	1,597	1,802	205 1/
Offshore centers	502	551	49
Other	--	289	289
Total foreign liabilities of banks in:	2,028	2,558	530
Industrial countries	1,544	1,721	176 1/
Offshore centers	484	539	55
Other	--	298	298

1/ Differences for industrial countries are as follows:

	Claims	Liabilities
Belgium	5	8
Luxembourg	18	15
France	8	20
Germany	12	--
Switzerland	106	103
United States	33	11
Other	23	19
Total	205	176

Sources: "International Banking and Financial Market Developments", BIS, May 1986; International Financial Statistics, IMF, June 1986.

Appendix D. Debt Statistics for Developing Countries

Chapter V, in Table 37, uses statistics on total debt of developing countries that are compiled and published by the OECD's Development Cooperation Directorate. 1/ The OECD compilation is parallel to and complementary to debt information published by the World Bank 2/, and together these two sources constitute primary information on developing country debt amounts, structure, and status. Both sources have had major changes in scope each year since 1982, when developing-country debt became prominent as an international problem, and by 1986 both were covering virtually all external debt of developing countries, the OECD using mainly creditor information and the World Bank mainly data from the debtor countries themselves. The OECD statistics are often known loosely as the Creditor Reporting System (CRS), although CRS is only one creditor source that OECD uses, and the World Bank figures are known as the Debtor Reporting System (DRS) even though the Bank uses sources other than DRS. Both contain important information for assessing the reasonableness of income flows in the current account and capital flows in the capital account.

OECD debt statistics give information for over 150 countries and other areas, including CMEA 3/ countries and several colonies such as Gibraltar and the Cayman Islands. The debtor coverage is essentially all of the world except OECD members and international institutions, and the credit included consists in principle of all external credit claims on each country divided into credit from OECD countries, multilateral credit, and other credit. 4/ A summary form of the data appears in Table D-1. In general the OECD totals include credit to banks as well as to nonbanks in the countries covered, but (as indicated in the second line of the table), for offshore banking centers the international banking positions have been excluded. The $16 billion shown for offshore centers is far below the $570 billion debt that appears in Chapter V, Table 38, and covers only liabilities of resident nonbanks.

For credit from OECD countries--the first four columns of Table D-1--OECD uses:

1/ The OECD figures for 1975 and 1980-84 appear in "Financing and External Debt of Developing Countries--1985 Survey"(Paris, 1986), which also includes definitions and explanations of scope and data sources.

2/ "World Debt Tables, 1985-86 Edition" (March 1986) includes the year-end data for 8 years ranging from 1970 to 1984.

3/ Council for Mutual Economic Assistance: Bulgaria, Cuba, Czechoslovakia, German Democratic Republic, Hungary, Mongolia, Poland, Romania, U.S.S.R., and Viet Nam. Only Cuba, Mongolia, and Viet Nam are included in the OECD Survey, but the other CMEA countries are given in the OECD publication cited in notes to Table D-1.

4/ Three members of OECD--Greece, Portugal, and Turkey--are included among the borrower countries.

(1) Official development assistance (ODA) lending by members of the OECD's Development Assistance Committee (DAC) to countries classified by DAC as developing;

(2) export credits, supplier credits, and financial trade credits that are official or officially backed in creditor countries, as reported to OECD by members of the Creditor Reporting System;

(3) BIS-IBS information on bank lending from creditor countries to developing countries, described in Appendix C; and,

(4) for other private claims, data from several sources on bonds, nonguaranteed suppliers' credits, foreign parent company claims, and other claims.

There is considerable overlap between (2) and (3), and OECD uses its CRS data to eliminate double counting of supplier and trade credits in (2) that are held by banks in (3). Bank credit in OECD's published tables excludes officially-guaranteed claims, which are grouped entirely with category (2). Some of the bonds in (4) are held by banks and included in (3), but the amount is not known, and the resulting overlap remains in the totals. Much of (4) results from a collation of OECD creditor reports with World Bank debtor data that yields, inter alia, claims by OECD countries not guaranteed by OECD governments.

Multilateral credit consists of loans from the World Bank group and several other multinational public lending institutions. Most of the data come from published and unpublished information of the lenders, although some is from DRS. "Other" countries' credit is mainly from CMEA and OPEC countries and is based principally on DRS information. "Other liabilities" are to a large extent deposits of foreign nonbanks in debtor country banks that are reported in IBS information on bank external liabilities.

The OECD's 1985 Survey is expanded from earlier editions to include estimates of net flows of finance to developing countries in addition to the debt stocks and debt service payments--interest and amortization of outstanding debt--that have been published earlier. The new financial flow figures are, like debt stocks, based mainly on creditor information, and they can be used to create measures of capital inflow that are independent of the debtor country's own balance of payments calculations and that can be compared with national estimates. This would be similar in the capital account to using IBS information to estimate income flows, although with larger potential for error and uncertainty.

The World Bank's DRS statistics on external debt are, like OECD's figures, based on several sources of information. The core of the Bank data structure is the set of reports that countries send to the Bank on long-term external debt that is either public or publicly guaranteed in the borrower country. This publicly-backed debt is itemized loan by loan in the reports to the Bank, and the level of detail available allows OECD to use DRS to include credit from lending countries that do not report to OECD. 1/ Such detail exists in DRS only for long-term publicly-backed debt, however, and for a complete measure of country debt DRS needs additional information on long-term private debt that is not publicly guaranteed and on all forms of short-term debt. These debt forms are less systematically reported by countries and in much less detail than publicly guaranteed debt. In the 1985-86 edition of World Debt Tables the Bank has nevertheless markedly expanded its debt statistics for these debt forms for the 107 countries included. Beyond country reports the Bank has used the same data sources as OECD, such as BIS-IBS banking data and CRS reports on export, supplier, and trade credits.

The World Bank result is thus a compilation of debtor information about debt positions supplemented by creditor information where necessary to complete the picture. OECD data, on the other hand, are a compilation of lender information supplemented where necessary by debtor data to complete the totals. It is not possible to compare the grand totals in the two compilations because the geographic coverages are very different, but Table D-2 compares them for a set of large borrowers for which the World Bank includes all debt types. These 21 countries owe about three-quarters of all of the developing country debt in both compilations. Table D-2 indicates, once again, that other-transactor data--in this case from OECD--tend to be larger than estimates based on country information but that in the case of debt the differences are small, as mentioned in Chapter V. The comparisons are variable, however, and one-third of the countries have higher debt in World Bank figures than in OECD. Some of the differences may have very specific explanations, but very broadly the two estimating methods probably give similar results because (1) debtor countries know well the amounts of publicly guaranteed debt, (2) they have good knowledge of debt that governments in creditor countries have guaranteed, and (3) a sizable part of short-term and long-term non-guaranteed debt is derived from a single body of international banking statistics.

These two survey programs to compile developing country debt are not matched by any systematic procedures to measure assets of developing countries, and for industrial countries nothing equivalent exists for either assets or liabilities. The international banking statistics described in Appendix C measure a large part of developing country assets, but banking claims are considerably less than the total. Appendices E and F suggest from indirect evidence that developing country assets were in the range of $400-500 billion at 1983-year-end (omitting Mid-East oil exporters and offshore financial centers), and IBS measures of banking claims together with foreign reserves not in banks are about three-fifths

1/ The detail also gives much information about publicly-backed debt beyond total amounts outstanding: types of lender, commitments for future disbursements, past and future repayments of principal, interest payments, and total projected debt service. These are tabulated and published as part of the country data in "World Debt Tables".

of that total. There has been exploratory work recently at the Fund and elsewhere in estimating developing country assets, but results so far are not firm enough to use along with IBS in testing balance of payments flows. To provide analytically useful information the estimates need more specific reporting from financial centers on the types and amounts of assets held for these countries.

For industrial countries there exists beyond IBS only the estimates of the countries themselves as evidenced in the income questionnaire described in Appendix B. In Chapter V, Tables 29 and 30 show many discrepancies vis-à-vis IBS in both asset and debt reporting in relation to foreign banks, and estimates of income derived from national data on such positions in industrial countries are likely to be incomplete. For both assets and liabilities the picture for industrial countries could be much improved by an international reconciliation of information sources along the lines of the OECD and World Bank efforts for developing country debt.

Table D-1. OECD Debt Data by Region and Source of Credit, Year-end 1983
(In billions of U.S. dollars)

	---OECD Countries and Capital Markets--- Official devel. credit	Nonbank trade credit	Total bank credit	Other private claims	Multi-lateral credit	Credit from other countries	TOTAL debt	Other liab-ilities(1)	IMF credit	Total liab-ilities
DEVELOPING COUNTRIES	60.2	112.3	545.9	34.1	85.9	50.0	889.4	40.4	31.3	961.0
OFFSHORE BNKING CTRS	0.4	3.4	10.1	0.7	0.9	0.5	16.0	.	0.2	16.2
MID EAST OIL EXPORTERS	0.4	13.9	37.6	0.1	0.7	1.5	54.1	0.4	.	54.5
OTHER DEVEL AREAS	59.4	94.9	498.1	33.3	84.4	48.1	819.2	40.0	31.1	890.3
AFRICA	8.5	25.1	61.5	2.2	16.2	15.3	128.8	0.9	6.8	136.4
ALGERIA	0.3	7.9	8.4	0.2	0.4	0.9	17.9	.	.	17.9
CAMEROON	0.4	0.5	1.3	.	0.6	0.2	3.0	.	.	3.0
IVORY COAST	0.3	0.7	3.7	.	1.1	.	5.8	0.1	0.6	6.5
KENYA	0.7	0.4	0.8	.	1.2		3.1	.	0.4	3.6
MADAGASCAR	0.2	0.5	0.8	.	0.4	0.4	2.2	.	0.1	2.3
MOROCCO	0.9	1.2	4.7	0.2	1.4	3.0	11.4	.	0.9	12.4
NIGERIA	0.3	2.7	11.5	.	0.9	0.6	15.9	.	.	15.9
SENEGAL	0.2	0.5	0.5	.	0.7	0.3	2.1	.	0.2	2.3
SOUTH AFRICA	.	1.6	19.4	1.5	.	.	22.4	.	0.8	23.2
SUDAN	0.2	1.5	1.1	.	0.9	2.7	6.3	.	0.6	6.9
TANZANIA	0.4	0.3	0.3	.	0.9	0.9	2.9	.	0.1	3.0
TUNISIA	1.1	1.0	1.4	0.1	0.8	0.6	4.9	0.4	.	5.2
ZAIRE	0.6	2.4	0.8	.	0.6	0.3	4.6	.	0.5	5.1
ZAMBIA	0.5	0.6	0.5	.	0.6	0.7	2.9	.	0.7	3.6
ZIMBABWE	0.2	0.1	1.2	0.3	0.1	0.3	2.2	.	0.2	2.4
OTHER	2.4	3.3	5.1	.	5.7	4.5	21.0	0.3	1.7	23.0
ASIA	30.4	26.4	105.2	6.5	31.8	11.0	211.2	7.4	10.1	228.6
BANGLADESH	1.8	0.4	0.2	.	2.1	0.6	5.0	.	0.4	5.5
BURMA	1.0	0.1	0.6	.	0.6	0.3	2.6	.	0.1	2.7
CHINA, PEOPLE S REP.	0.8	3.9	4.3	0.1	0.4	.	9.6	.	.	9.6
HONG KONG	.	1.9	4.9	0.2	0.1	.	7.0	.	.	7.0
INDIA	7.7	1.3	3.2	0.1	10.5	1.3	24.0	.	3.7	27.7
INDONESIA	6.5	4.2	14.1	1.0	3.5	1.4	30.6	.	0.4	31.0
KOREA	2.7	5.6	30.2	0.3	3.8	0.1	42.8	0.4	1.4	44.6
MALAYSIA	0.7	1.0	11.6	2.0	1.1	0.1	16.5	1.2	0.3	18.0
PAKISTAN	4.7	0.6	1.1	.	2.4	1.9	10.6	.	1.4	12.0
PHILIPPINES	1.3	1.7	15.1	1.1	2.9	0.1	22.2	5.3	0.9	28.4
SINGAPORE	0.1	0.8	1.7	0.3	0.2	.	3.0	.	.	3.0
SRI LANKA	1.0	0.2	1.1	.	0.5	0.2	3.1	0.1	0.3	3.6
TAIWAN	.	3.0	6.9	0.6	0.2	0.1	10.8	.	.	10.8
THAILAND	1.2	1.1	8.9	0.8	2.4	0.1	14.5	0.3	0.9	15.6
VIET NAM	0.3	0.1	0.3	.	0.1	3.0	3.9	.	.	3.9
OTHER	0.5	0.4	1.0	.	1.0	2.0	5.0	.	0.1	5.1

(1) Mainly liabilities of resident banks to foreign nonbanks

".": Indicates missing and zero amounts.

Source: OECD, Statistics of External Indebtedness (W. 1085D, 33,358). See note at end of table.

Table D-1(continued). OECD Debt by Region and Type, Year-end 1983
(in billions of U.S. dollars)

	---OECD Countries and Capital Markets--- Official devel. credit	Nonbank trade credit	Total bank credit	Other private claims	Multi-lateral credit	Credit from other countries	TOTAL debt	Other liab-ilities(1)	IMF credit	Total liab-ilities
EUROPE	4.5	9.6	56.3	1.4	10.2	5.5	87.5	12.0	5.5	105.0
GREECE	0.2	1.3	11.8	0.2	1.2	0.2	14.9	5.2	.	20.1
HUNGARY	.	0.6	6.0	0.8	.	0.2	7.7	.	0.6	8.3
PORTUGAL	0.6	1.0	11.4	.	1.2	0.4	14.7	6.5	0.4	21.6
ROMANIA	.	0.6	3.4	0.4	1.8	1.7	7.9	.	0.9	8.9
TURKEY	3.3	3.9	8.9	.	3.8	1.3	21.2	.	1.6	22.8
YUGOSLAVIA	0.4	2.2	14.0	.	1.9	1.5	19.9	.	2.1	22.0
OTHER	0.1	0.1	0.7	.	0.2	0.1	1.2	0.3	.	1.5
MIDDLE EAST	9.2	29.5	56.3	2.8	5.8	9.0	112.7	8.8	0.1	121.7
EGYPT	5.6	5.2	8.7	0.1	3.6	3.3	26.5	1.2	0.1	27.7
IRAN, I.R. OF	0.2	4.4	2.3	.	0.3	0.4	7.6	.	.	7.6
IRAQ	0.2	2.9	2.4	.	0.3	0.9	6.6	.	.	6.6
ISRAEL	2.2	8.5	7.0	2.7	0.1	.	20.4	6.6	.	27.0
JORDAN	0.5	0.9	1.0	.	0.4	0.5	3.2	0.6	.	3.8
KUWAIT	.	0.5	9.8	0.1	.	.	10.3	.	.	10.3
LIBYA	.	1.2	1.7	.	.	.	2.9	.	.	2.9
SAUDI ARABIA	.	3.8	10.3	.	.	.	14.1	.	.	14.1
SYRIAN ARAB REP.	0.4	0.4	0.9	.	0.4	1.3	3.5	.	.	3.5
UNITED ARAB EMIRATES	.	0.7	9.7	.	.	.	10.4	0.3	.	10.7
OTHER	0.1	1.0	2.8	.	0.7	2.6	7.3	0.1	.	7.4
WESTERN HEMISPHERE	7.6	21.7	266.6	21.2	21.9	9.2	349.1	11.3	8.8	369.3
ARGENTINA	0.1	3.3	30.3	5.6	1.4	0.3	41.0	1.8	1.2	44.0
BOLIVIA	0.4	0.3	0.9	.	0.6	0.9	3.1	.	0.1	3.3
BRAZIL	1.5	6.6	79.1	4.8	5.1	1.1	98.3	1.9	2.6	102.8
CHILE	0.5	0.4	17.5	0.1	0.6	0.3	19.5	.	0.6	20.1
COLOMBIA	0.8	1.0	7.6	.	2.2	0.1	11.7	.	.	11.7
COSTA RICA	0.3	0.2	1.3	0.4	0.6	0.5	3.2	.	0.2	3.4
DOMINICAN REPUBLIC	0.4	0.3	0.9	0.1	0.4	0.3	2.4	.	0.2	2.7
ECUADOR	0.2	1.2	5.1	.	0.6	0.3	7.4	.	0.2	7.7
GUATEMALA	0.1	0.2	1.0	.	0.5	0.3	2.2	.	0.1	2.3
JAMAICA	0.6	0.2	1.1	.	0.6	0.2	2.8	.	0.6	3.5
MEXICO	0.2	3.5	77.1	6.9	4.2	0.3	93.2	7.1	1.3	101.5
NICARAGUA	0.3	0.1	1.1	0.2	0.6	1.3	3.6	.	.	3.6
PANAMA	0.2	0.3	2.2	0.2	0.6	0.2	3.7	.	0.2	3.9
PERU	0.7	1.7	7.0	0.9	1.0	1.7	12.9	.	0.7	13.6
URUGUAY	0.1	0.1	2.0	0.3	0.2	0.3	2.9	.	0.2	3.2
VENEZUELA	.	1.1	28.4	1.5	0.1	.	31.1	.	.	31.1
OTHER	1.2	1.1	4.0	0.2	2.4	1.0	9.9	0.4	0.5	10.8

(1) Mainly liabilities of resident banks to foreign nonbanks

".": Indicates missing and zero amounts.

Notes to Table D-1

The totals of debt in Table D-1 are different from those that appear in OECD publications mainly because of geographic coverage differences. Table D-1 gives the OECD totals for countries that are in an IMF list of developing countries that is used in the Balance of Payments Statistics Yearbook, Part 2. The Fund's list has several differences from OECD's, but in debt totals the most important are that the Fund includes South Africa, Hungary, and Romania and the OECD does not. These three countries are partly offset by countries not members of the Fund, such as Cuba, that are excluded from the Fund's list but included by OECD, and by colonies such as Gibraltar and Macao that the Fund excludes and OECD includes.

Another difference in Table D-1 is that the numbers shown are as published by OECD at the end of 1985 in "Statistics of External Indebtedness . . . at End-December 1983 and End-December 1984 " (W.1085D, 33.358). The later publication cited at the beginning of this appendix includes revisions that raised short-term bank credit and credit from non-OECD countries by a total of $8 billion. Chapter V uses the December level of revision to estimate income payments.

Table D-2: Comparison of OECD and World Bank Measures of Total Debt for Large Developing Countries

(1983 year-end stocks in billions of U.S. dollars)

	OECD 1/	World Bank 2/	OECD less World Bank
Brazil	100.9	95.5	5.4
Mexico	94.5	93.7	.8
Korea	44.2	40.4	3.8
Argentina	42.2	46.0	-3.8
Venezuela	31.1	32.3	-1.2
Indonesia	31.0	30.2	.8
India	27.7	28.3	-.6
Egypt	26.6	21.9	4.7
Philippines	23.1	23.9	-.8
Turkey	22.8	20.4	2.4
Yugoslavia	22.0	20.3	1.7
Israel	20.4	23.4	-3.0
Chile	20.1	18.2	1.9
Algeria	17.9	14.9	3.0
Nigeria	15.9	19.7	-3.8
Thailand	15.4	13.9	1.5
Portugal	15.1	14.5	.6
Greece	14.9	13.2	1.7
Peru	13.6	12.4	1.2
Pakistan	12.0	11.6	.4
Colombia	11.7	11.4	.3
	623.1	606.1	17.0

1/ From Table D-1: Total debt plus IMF credit

2/ Includes IMF credit.

Appendix E. Summary of World Cross-Border Assets and Liabilities

Chapter V makes use of several sets of global statistics on cross-border assets and liabilities to estimate income-generating financial positions of individual countries. These sets of statistics are used separately for particular purposes in different sections of Chapter V, but they can also be fitted together into a unified picture of a major part of world financial relationships. This appendix gives one form of such an integrated statement, using mainly the information that was put together for Chapter V.

Table E-1 is a statement showing the results of such an integration of data as of the end of 1983, using the regional divisions that appear in Chapter V. The table includes all forms of cross-border financial claims except positions in direct investment and portfolio equities, where valuation questions and scarcity of information raise major problems. It includes all forms of credit in principle, but some forms are not well documented, as described below. Nevertheless, the table gives an indication of the relative size of different types of credit and of the relative importance of different sectors and regions as holders of claims or liabilities.

The data series that are the principal sources of Table E-1 are employed by many countries as elements in the capital account of their balances of payments, but not by all countries. International consistency could be improved if some agency such as the Fund regularly constructed a table of this type for the purpose of checking on the aggregates of capital flows for regions and the world as a whole, and comparing with the sums of individual country statements. An important aspect of the table is that it combines world credit market statistics and national data in a consistent format, and is therefore more broadly based than national estimates alone.

Table E-1 has several sections with separate sources: the Fund's International Banking Statistics, U.S. data on ownership of U.S. government securities, Working Party estimates, OECD totals of developing country debt, and Fund data on reserve holdings and use of Fund credit. For each type of claim the table provides an estimate of the amount that is included in country reports of reserve holdings. In Chapter V reserves are treated as a separate category of assets, but in a table that matches assets and liabilities of specific types the reserves must be distributed among those types along with other assets in order to match assets of each type with liabilities of that type. Foreign exchange components of reserves are totalled at the bottom of the table to amounts that can be reconciled with foreign exchange reserves published in International Financial Statistics.

The Fund's International Banking Statistics are used in Table C-1 in Appendix C and appear in lines 1-13, where they are a dominant part of Table E-1. The total of the four IBS items is 75 percent of the $4,300 billion total of claims in the table on lines 43 and 44. Interbank items

Table E-1. Cross-Border Assets and Liabilities, Year-end 1983
(In billions of U.S. dollars)

		World totals		Industrial countries		Offshore financial centers		Mid-East oil exporters		Other developing countries		International organiz.		USSR, etc.		Unallocated	
		A	L	A	L	A	L	A	L	A	L	A	L	A	L	A	L
1	Interbank claims																
2	Official--Assets																
3	Reserves	139	.	15	.	5	.	43	.	29	.	28	.	19	.	.	.
4	Other official	58	.	.	.	.	.	5	.	53	.	.	.	.	.	.	.
5	--Liabilities	.	98	.	2	.	.	.	.	.	63	.	.	.	33	.	.
6	Deposit banks--Assets	1686	.	1235	.	356	.	37	.	57	.	.	.	.	.	.	.
7	--Liabilities	.	1788	.	1256	.	379	.	20	.	132	.	.	.	.	.	.
8	Nonbank deposits at banks																
9	--Assets	673	.	301	.	54	.	48	.	116	.	6	.	1	.	145	.
10	--Liabilities	.	673	.	463	.	159	.	.	.	51	.	.	.	.	.	.
11	Bank credit to nonbanks																
12	--Assets	755	.	549	.	190	.	9	.	8	.	.	.	.	.	.	.
13	--Liabilities	.	755	.	286	.	32	.	19	.	315	.	6	.	10	.	87
14	Short-term securities																
15	Reserve assets	54	.	20	.	6	.	.	.	24	.	4	.	.	.	.	.
16	Other assets	48	.	38	.	.	.	5	.	.	.	5	.	.	.	.	.
17	Liabilities	.	102	.	85	.	.	.	.	.	17	.	.	.	.	.	.
18	Long-term debt securities																
19	Reserve assets	106	.	67	.	.	.	.	.	39	.	.	.	.	.	.	.
20	Other assets	335	.	270	.	.	.	60	.	.	.	5	.	.	.	.	.
21	Liabilities	.	441	.	365	.	.	.	.	.	16	.	60	.	.	.	.
22	Development assistance credit																
23	Assets	196	.	60	.	.	.	18	.	10	.	86	.	22	.	.	.
24	Liabilities	.	196	.	.	.	2	.	3	.	191	.	.	.	.	.	.
25	Nonbank trade credit																
26	Assets	112	.	112	.	.	.	.	.	.	.	.	.	.	.	.	.
27	Liabilities	.	112	.	.	.	3	.	14	.	95	.	.	.	.	.	.
28	Total cross-border positions in credit instruments																
29	Assets	4162	.	2667	.	611	.	225	.	336	.	134	.	42	.	145	.
30	Liabilities	.	4165	.	2457	.	575	.	56	.	880	.	66	.	43	.	87
31	Other foreign exchange claims																
32	Deposits at BIS	32	32	32	.	.	.	.	.	.	.	.	32	.	.	.	.
33	Deposits at EF	33	33	33	.	.	.	.	.	.	.	.	33	.	.	.	.
34	Deposits at central banks	8	8	8	8	.	.	.	.	.	.	.	.	.	.	.	.
35	SDR holding and allocations--																
36	Holdings	22	.	12	.	.	.	1	.	2	.	7	.	.	.	.	.
37	Allocations	.	22	.	15	.	.	.	1	.	6	.	.	.	.	.	.
38	IMF positions--																
39	Reserve positions in Fund	41	41	27	.	.	.	11	.	3	.	.	41	.	.	.	.
40	Use of Fund credit	31	31	.	.	.	.	.	.	.	31	31	.	.	.	.	.
41	Total positions in credit instruments,																
42	foreign exchange reserves, SDRs, and IMF position--																
43	Assets	4329	.	2779	.	611	.	237	.	341	.	172	.	42	.	145	.
44	Liabilities	.	4332	.	2480	.	575	.	57	.	917	.	172	.	43	.	87
45	Total official foreign exchange included above:																
46	Assets	372	.	175	.	11	.	43	.	92	.	32	.	19	.	.	.
47	Liabilities	.	372	.	307	.	.	.	.	.	.	.	65	.	.	.	.

on lines 6 and 7 are a large part of IBS positions, but when they are excluded from the IBS and world figures the remaining IBS claims still account for over 60 percent of the totals for all types of claims. This prominence of banking claims was at a peak in 1982 and decreased somewhat in later years, when banks reduced their international lending because of loan problems that surfaced in 1982, and when new forms of credit tended to bypass banks. As discussed in Chapter VI, international financing shifted toward security markets after 1982, but banks' balance sheets still reflect by far the largest sector of international lending. To some extent this dominant position results from the wide scope of banking statistics, which include assets and liabilities of banks in the form of securities as well as direct loans and deposits.

As mentioned above, the table shows separately those assets designated by countries as official reserves. The total of reserves in the form of foreign exchange (line 46) is as reported in IFS (US$321 billion) plus amounts for the BIS and Eastern Europe included among banks' liabilities or as holdings of U.S. government securities. The total shown in line 46 is distributed across lines 3, 15, 32, 33 and 34 of the table, indicating the variety of forms in which foreign exchange reserves are maintained. Other official reserves are shown in lines 36 (holdings of SDRs) and 39 (reserve positions in the Fund), and a further amount of liquid official assets is shown in line 4, which is derived as a residual from the total amount reported as commercial bank liabilities to non-resident official accounts.

For securities, lines 14-21 consist mainly of estimated amounts of cross-border bonds shown in Chapter V (Table 44), plus U.S. Treasury data on foreign official holdings of U.S. government securities. The short-term component is entirely U.S. Treasury securities except a $17 billion liability of developing countries derived as a residual from OECD data. The geographic distribution of holdings of U.S. Treasury securities is from U.S. sources. For other securities, estimates were made for holdings by the BIS and the Mid-east oil exporters, and the remainder was allocated to industrial countries as a residual.

Development assistance credit and trade credit are mainly from OECD debt compilations described in Appendix D. Holdings of development credit are from OECD data supplemented by a special tabulation of World Bank debt data detailed by creditor rather than debtor country. The trade credit number is only one component of the total of outstanding trade credit, namely the OECD figure for officially guaranteed nonbank credit extended by OECD member countries to developing countries. Total trade credit is much larger than the $112 billion shown, but there is no systematic information on such credits that can be used at a world level, and they are therefore omitted from Table E-1 except for the OECD-reported component.

Most trade credit doesn't generate income debits and credits and thus doesn't enter significantly the Chapter V discussion of investment income. The lack of data on this type of cross-border capital flow, as well as the absence of similar flows among affiliated companies, limits the usefulness of a credit structure such as Table E-1 as a basis for the balance of payments accounts.

The lower part of the table--lines 31-40--shows distributions for reserves that are not directly part of credit market activity: claims on the BIS, the European Fund, other central banks, and the IMF, use of Fund credit, and SDRs. The amount shown for the European Fund (EF) represents the value of claims on the EF that are backed by gold at the current price of gold. EF holdings of U.S. securities are consolidated with other European holdings in industrial country assets on lines 15 and 19.

The "unallocated" column of the table represents only amounts not distributed by country in the IBS data. As mentioned earlier, the residual in security holdings is allocated to industrial countries, and for all other credit forms the geographic distribution of assets and liabilities is complete in the data sources used. The world totals of assets and liabilities differ by $3 billion, which is the IBS discrepancy in interbank claims for 1983 that appears in Appendix Table C-1.

In this form Table E-1 develops a position statement for industrial countries that is not available from other sources. The same sources could be used to further subdivide the totals into about five large countries and an "other" industrial group. The principal uncertainty for further industrial country division is in the distribution of security holdings, on lines 14-21, among industrial countries, and the existence of a large unallocated banking position. However, the table does not attempt to cover direct investments, which also involve a major credit element, or forms of government financing other than development assistance. Nevertheless, it illustrates an important aspect of the international economic relationship of these countries. Further information for some major countries, including data on direct investments, is given in Appendix B, based on the special income questionnaire returns.

Appendix F. Cross-Border Assets, Recorded and Estimated

The approach used in Chapter V of the Report to estimate individual countries' missing interest receipts is based largely on geographically allocated cross-border assets derived from the International Banking Statistics (IBS). For many developing countries, these cross-border claims on banks (excluding official claims) are much smaller than the amounts implied by various analyses attempting to measure "capital flight". That term has no precise definition, but is often applied to all, or nearly all, gross accumulations of foreign assets by residents of certain countries.

The purpose of this Appendix is first to compare the results of various "capital flight" estimates, or estimates of private external assets derived from certain sets of assumptions, with the data used in Chapter V to calculate portfolio income credits. Secondly, there is some discussion of the reasons why the "capital flight" estimating procedures do not produce results for individual countries that can provide a satisfactory basis for estimating external assets and related investment income. This discussion is confined to the experience of developing countries, 1/ especially the major debtors.

Estimates of foreign assets

In connection with the debt crisis of developing countries, various estimates have been made of the capital outflow that may have occurred from certain individual countries (see Table F-1). Most estimates, including those published by the World Bank and those appearing in a recent paper produced in the Fund's Research Department, use reported balance of payments data as a starting point. Usually "capital flight" is defined as the implicit outflow of private resident-owned capital, and the total of external claims is calculated as the cumulative amount of private capital outflow, whether reflected in the capital accounts of the balance of payments or not. Since it is assumed that much of the accumulation of foreign private assets is not so recorded, an indirect method of estimating the accumulation is usually employed, as follows:

1. Take total foreign borrowing during a given period. Since balance of payments reports often fail to measure this amount accurately, the increase in outstanding liabilities to foreigners as compiled by external sources such as the OECD is used as a substitute measure.

2. Add the net inflow of direct investment capital, both liabilities and assets.

3. The sum of the two foregoing items represents the total amount of funds made available from abroad, which can be used in three ways:

1/ Excluding Mid-east oil exporters and major offshore banking centers.

Table F-1. Capital Outflow and External Claims

(In billions of U.S. dollars)

	"Capital Flight"		External Claims	
	World Bank, 1/ 1979-82	Dooley paper, 2/ through 1983	Dooley paper, 3/ end-1983	Technical Staff approach, 4/ end-1983
Argentina	19.2	31.5	35.9	10.3
Brazil	3.5	5.6	13.1	14.8
Chile	n.a.	1.5	3.4	4.9
Korea	0.9	8.4	14.0	7.3
Mexico	26.5	40.6	53.7	17.5
Peru	n.a.	2.9	4.1	2.9
Philippines	n.a.	4.7	8.6	4.2
Venezuela	22.0	25.3	41.2	19.5
Total	n.a.	121	174	81

1/ World Development Report 1985, p. 64. Definition: Gross capital inflows, minus current account deficit, minus official reserves.

2/ M.P. Dooley (IMF Research Department), "Capital Flight: A Response to Differences in Financial Risks", July 1986, Appendix E. Definition: Difference between capitalized value of (recorded) investment income receipts . . . and the total stock of external claims.

3/ Appendix C. Definition: Recorded plus non-recorded external claims, including an initial stock.

4/ Limited to assets that can be allocated to individual countries. See Chapter V, Table 36.

a. To build up official reserves and other official balances abroad; this buildup can be measured either by cumulating balance of payments data, or by taking the difference between outstanding amounts at the beginning and end of the period.

b. To finance current account deficits, as measured in the reported balance of payments statements.

c. To accumulate private assets abroad. Part of this accumulation is reflected in the balance of payments reports, but for this purpose the total is customarily measured as a residual, that is, by deducting the reserve accumulation (a) and the current account deficit (b) from total funds available (3).

Part of the total thus measured represents "normal" capital outflow, e.g., trade credit, working balances, natural portfolio diversification, and the attraction of higher interest rates. The term "capital flight" implies a further set of factors such as the fear of inflation, exchange depreciation, political upheaval, tax avoidance, evasion of exchange control laws, etc., but it is statistically impossible to classify capital movements, especially the unrecorded movements, according to motive. On the other hand, the stocks of private assets used in the Technical Staff approach are limited to those that can be identified in available statistics, with only minor estimated elements.

The following table shows how the process of estimating "capital flight" works as applied to all developing countries as a group (except major offshore banking centers and Mid-east oil exporters).

Table F-2. Funds Supplied to and Used by Developing Countries, 1964-83

(In billions of U.S. dollars)

Funds supplied	
Direct investment (net inflows less outflows)	95
Total borrowing, as measured by increase in liabilities	855 1/
Total	950
Funds used	
Increase in official assets	86
Current account deficit	532
Increase in private assets (residual)	332
(Of which: Recorded in balance of payments accounts)	(99)
Total	950

Note: This procedure ignores any changes in the value of assets, including changes in foreign exchange rates, and takes no account of SDR allocations or other non-debt-creating inflows.

1/ Based on $890 billion of total debt outstanding at end-1983, in OECD estimates (Appendix D). The amount outstanding at end-1963 is not known, but was probably between $30-40 billion.

The aggregate increase in foreign private and official assets derived by this method ($418 billion) may be compared to the amount implicit in the derivation of estimated portfolio income in Chapter V, as shown in Table F-3.

Table F-3. External Claims of Developing Countries 1/ as Implied in Chapter V

(In billions of U.S. dollars)

Assets identified by country (Chapter V, Table 18a) 2/	281
Securities (implicit in Chapter V, Tables 26 and 27)	30
Total	311 3/

1/ Excluding MOB centers and Mid-east oil exporters.
2/ Official foreign exchange holdings plus other bank-related assets.
3/ Does not include any allowance for trade credit related to exports (generally not interest-bearing) or any share of the unallocated world total of $147 billion of bank deposits for which no geographic breakdown can be determined.

The Working Party estimates of the foreign assets of individual major debtors are almost always lower than those resulting from the "capital flight" approach, and the total for all developing countries is also lower. However, if some part of the unallocated bank deposits is added to the total used by the Working Party, and allowing for a reasonable amount of trade credit outstanding, the implicit shortfall of income-earning assets may not be more than, say, 15 percent.

Estimation problems

The foregoing discussion shows that the magnitudes for aggregate foreign assets of LDCs resulting from estimates of accumulated foreign assets (or "capital flight") of developing countries and from the procedure used to derive the foreign asset positions on which the income estimates presented in Chapter V are based are not greatly different. However, it must be noted that estimates of accumulated external assets, especially for individual countries, that depend in part on the data on current account deficits as reported by those countries are subject to several major caveats.

In the first place, in a situation encouraging capital flight current-account balances are likely to be distorted by a high propensity to understate exports or overstate imports as a device for accumulating hidden funds abroad. To the extent this happens, current account deficits are overstated, and the implicit accumulation of flight capital is understated. Moreover, the accruing income on these hidden assets would also add to the total not covered in the current account calculations. On the other hand, it is not known to what extent the funds that are measured as "capital flight" are used for unrecorded current consumption (to pay for foreign travel or educational expenses, for instance, or to acquire personal property) rather than being placed in unrecorded income-yielding investments. Sometimes the "outflow" represents the repayment of outstanding but unrecorded trade or other credit lines. Also, there are instances of imports by state agencies and others that are not recorded in countries' import statistics.

Because of the great range of uncertainty surrounding such estimates, they do not seem to be suitable as a basis for estimating income receipts of particular countries, or for groups of countries. This consideration becomes especially important when it is recalled that it is necessary for the purposes of this study to match the credit and debit sides of the income accounts. The estimates presented in Chapter V reflect the total amount of investment income payments either reported in the balance of payments data of the countries where the funds are invested or added in the adjustments made in Chapter V.

Appendix G. Shipping and Transportation Questionnaire

Chapter VII makes use of a special questionnaire on shipping and transportation that the Working Party sent to a number of member countries, concentrating on those with major shipping fleets. The questionnaire was designed to yield several types of information underlying the summary shipment figures in the Yearbook that could help in explaining the large excess of debits in the shipment and "other transportation" accounts as reported in the Yearbook. The questionnaire form and instructions appear below, and published totals from Part 2 of the 1985 Yearbook are summarized in Table G-1.

The questionnaire was sent to 26 countries, and 21 respondents returned usable replies. 1/ Questionnaire amounts were almost identical with the Yearbook for most respondents, and for the group as a whole revisions suggested by the questionnaire were negligible. The indicated revisions are shown in Table G-2, line 3. Because the questionnaire was directed to selected countries with important merchant fleets the respondents accounted for a large part of total shipment credits--75 per-cent of the Yearbook totals (line 5 of Table G-2)--but covered a much smaller part of shipment debits. The rather small discrepancy for the respondent group on shipment transactions results from this bias rather than from improved information. In "other transportation", which includes much of the operating costs of ships, the respondent group had a much larger debit balance than the Yearbook (lines 1 and 4), reflecting again a bias in the coverage toward countries that operate large fleets.

A cell-by-cell summary of returns for Form A of the questionnaire appears in Table G-3. Chapter VII uses the air and "other" shipment figures from this table directly, as minimum estimates for the world without any attempt to add to them. Because the respondent group is tilted strongly toward maritime activity there is no systematic method for treating the results in Table G-3 as a "sample" of the world that could be put to such a use. The questionnaire was nevertheless useful for estimating relationships among world quantities related to shipping.

Some of the replies gave less than complete details in the form, and for each total in the tables there is a residual amount not allocated in detail. The memo items and lines for cross trades and bunker fuel were also reported incompletely, and the questionnaires had to be used selectively and individually to estimate reasonable values for the ratios used in Chapter VII.

1/ Brazil, China, Denmark, Germany, Indonesia, Israel, Italy, Japan, Korea, Malaysia, Mexico, Netherlands, Nigeria, Norway, Philippines, Portugal, South Africa, Sweden, Thailand, United Kingdom, United States

Table G-1. Regional Balances in Shipment and Other Transportation Published in 1985 Balance of Payments Statistics Yearbook

(In billions of U.S. dollars)

		1977	1978	1979	1980	1981	1982	1983	1984
Shipment									
All countries:	Credit	31.5	35.7	45.4	55.0	55.3	50.4	46.9	48.5
	Debit	50.5	60.0	72.8	87.0	89.9	84.2	78.7	82.0
	Net	-19.1	-24.2	-27.4	-32.0	-34.6	-33.8	-31.8	-33.5
Industrial countries:									
	Credit	27.0	30.0	37.9	46.1	45.2	40.2	36.9	37.5
	Debit	27.2	31.6	39.1	43.8	42.5	38.9	37.9	42.5
	Net	-0.2	-1.6	-1.2	2.3	2.7	1.2	-1.0	-5.0
Middle East oil exporters:									
	Credit	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2
	Debit	6.3	8.2	9.1	11.8	13.9	15.5	13.8	12.6
	Net	-6.2	-8.2	-9.0	-11.7	-13.7	-15.3	-13.7	-12.4
Other countries:	Credit	4.4	5.6	7.4	8.7	9.9	10.0	9.9	10.8
	Debit	17.0	20.0	24.5	31.4	33.4	29.7	27.0	26.9
	Net	-12.6	-14.4	-17.1	-22.6	-23.6	-19.7	-17.1	-16.1
Other transportation									
All countries:	Credit	44.2	50.1	64.0	79.5	80.9	75.4	70.2	73.4
	Debit	46.4	51.8	65.3	82.9	87.0	79.8	73.6	74.5
	Net	-2.3	-1.7	-1.3	-3.4	-6.1	-4.4	-3.4	-1.1
Industrial countries:									
	Credit	33.8	39.1	49.4	60.2	60.9	56.8	53.0	54.4
	Debit	37.3	41.5	52.0	64.6	67.4	62.2	58.0	58.6
	Net	-3.5	-2.4	-2.6	-4.4	-6.5	-5.5	-5.0	-4.2
Middle East oil exporters:									
	Credit	1.9	1.6	2.3	2.3	2.2	1.0	0.8	0.7
	Debit	1.3	1.0	1.1	1.5	1.8	0.6	0.5	0.4
	Net	0.7	0.6	1.2	0.9	0.4	0.4	0.2	0.3
Other countries:	Credit	8.4	9.4	12.3	17.0	17.8	17.7	16.4	18.3
	Debit	7.9	9.3	12.1	16.8	17.9	17.0	15.1	15.5
	Net	0.5	0.1	0.1	0.2	-0.1	0.7	1.3	2.8

Table G-2. Shipping Questionnaire Compared with 1985 Yearbook

(In billions of U.S. dollars)

	Shipment			Other Transportation		
	Credit	Debit	Net	Credit	Debit	Net
1. Questionnaire totals	35.8	38.9	-3.1	40.9	51.3	-10.5
2. Yearbook totals for respondent countries	35.1	37.5	-2.4	41.5	51.1	-9.7
3. Questionnaire revisions	0.7	1.5	-0.7	-0.6	0.2	-0.8
4. Yearbook totals, all countries	46.9	78.7	-31.8	70.2	73.6	-3.4
5. Respondent countries (line 2) as percent of all countries (line 4)	75%	48%		59%	69%	

Table G-3. Shipping Questionnaire Totals for All Respondents, 1983

(In millions of U.S. dollars)

	Forms of Transport				
	Sea	Air	Other	Unallocated	Total
Shipment, total credits	28,568	2,806	3,764	1,084	36,221
Freight on exports, in-transits, and cross trades	27,765	2,413	2,506	155	32,839
of which: domestic registry	10,606	--	--	--	--
foreign registry	4,333	--	--	--	--
not allocated	12,827	--	--	--	--
Credits on cross trades in line 2	5,154	378	--	--	5,532
Memo: freight on imports paid to domestic operators)	7,525	754	59	243	8,581
Insurance on exports	--	--	--	951	951
Other credits	25	231	1,258	-18	1,496
Not allocated	777	162	--	-5	935
Shipment, total debits	29,959	2,401	3,247	3,454	39,061
Freight on imports	28,730	2,264	2,607	1,388	34,989
Insurance on imports	--	--	--	1,667	1,667
Other debits	426	69	640	532	1,666
Not allocated	804	68	--	-133	739
Other transportation, total credits	18,512	18,430	764	3,240	40,945
Foreign operators' expenditures in this country	11,931	6,941	479	2,408	21,758
of which: bunker fuel	1,962	1,061	--	1,596	4,619
Passenger revenue	1,705	10,792	165	63	12,726
Memo: revenue from carriage of domestic residents	514	426	--	--	940
Charter fees	2,158	45	90	144	2,436
Other credits	2,637	564	29	351	3,582
Not allocated	81	89	--	274	444
Other transportation, total debits	27,516	20,246	1,534	2,103	51,399
Domestic operators' expenses abroad	19,534	7,480	889	1,115	29,018
of which: bunker fuel	5,085	986	--	1	6,072
Passenger revenue	526	12,384	350	115	13,375
Charter fees	7,031	32	26	348	7,437
Other debits	421	349	26	215	1,011
Not allocated	4	1	243	310	558

Special Questionnaire on International Shipping and Transportation Accounts

Form A. Details of Shipping and Transportation Entries in Balance of Payments Accounts, 1983

Please return one copy to: Working Party on the Statistical Discrepancy
Room 9-310
Research Department
International Monetary Fund
Washington, D.C. 20431

Country: ______________ Please report amounts in millions of U.S. dollars [ ] (if available) or

millions of other currency units [ ] (specify unit ______________)

Line No.		Sea Transport Dry cargo (1)	Sea Transport Tanker (2)	Sea Transport Total (3)	Civil Aviation (4)	Other Means of Transport (5)	Total (6)
1	<u>Shipment, total credits (receipts)</u>						
2	Freight on exports, in-transit, and cross trades						
3	of which: domestic registry				xxx	xxx	
4	foreign registry				xxx	xxx	
4a	Credits on cross trades included in line 2					xxx	
5	(Memorandum item: freight on imports, paid to domestic operators)						
6	of which: domestic registry					xxx	
7	foreign registry					xxx	
8	Insurance on exports	xxx	xxx	xxx	xxx	xxx	
9	Other credits						
10	<u>Shipment, total debits (expenditures)</u>						
11	Freight on imports						
12	Insurance on imports	xxx	xxx	xxx	xxx	xxx	
13	Other debits						
14	<u>Other Transportation, total credits (receipts)</u>						
15	Foreign operators' expenditures in your country	xxx	xxx				
16	of which: bunker fuel	xxx	xxx			xxx	
17	Passenger revenues	xxx	xxx				
18	(Memorandum item: revenue of national operators from international carriage of domestic residents)	xxx	xxx				
19	Charter fees received						
20	Other credits						
21	<u>Other Transportation, total debits (expenditures)</u>						
22	Domestic operators' expenditures abroad						
23	of which: bunker fuel						
24	Passenger revenues	xxx	xxx				
25	Charter fees paid						
26	Other debits						

		<u>Domestic Registry</u>	<u>Foreign Registry</u>
	<u>Memorandum item</u> (sea transport only)		
27	Tonnage (DWT) of ships operated by residents		
28	Tanker		
29	Dry cargo		

Special Questionnaire on International Shipping and Transportation Accounts

Form B. Transportation Other Than Sea and Air (Breakdown of Form A, Column 5), 1983

Please return one copy to: Working Party on the Statistical Discrepancy
Room 9-310
Research Department
International Monetary Fund
Washington, D.C. 20431

Country: ____________ Please report amounts in millions of U.S. dollars [ ] (if available) or millions of other currency units [ ] (specify unit ______________)

Line Numbers Form B	Form A 1/		Road (truck, bus) (1)	Inland Waterway (2)	Railway (3)	Pipelines (4)	Other (specify) (5)	Total (6)
1	(1)	Shipment, total credits (receipts)						
2	(2)	Carriage of exports						
3	(2)	Carriage of cross trade and in-transit trade						
4	(9)	Other credits						
5	(10)	Shipment, total debits (payments)						
6	(11)	Carriage of imports						
7	(13)	Other						
8	(14)	Other Transportation, total credits (receipts)						
9	(15)	Foreign operators' expenditures in your country						
10	(17)	Passenger fares				xxx		
11	(19)(20)	Other credits						
12	(21)	Other Transportation, total debits (payments)						
13	(22)	Domestic operators' expenditures abroad						
14	(24)	Passenger fares				xxx		
15	(25)(26)	Other debits						

1/ Corresponding line or lines on Form A.

Note: To be completed only if the amounts reported in Form A, column 5, lines 1 + 14, or lines 10 + 21, exceed 20 percent of the corresponding totals in column 6 of Form A.

Notes and Instructions for Special Questionnaire on International Transportation Accounts

I. Purpose

This questionnaire is part of the effort by the Working Party on the Statistical Discrepancy to explain the asymmetry in world current account balances, to produce a description of the methodologies in use, and to make recommendations that could lead to more consistent estimating procedures. To this end, we are asking a selected group of countries to provide information on the various components of the entries under the headings of "shipment" and "other transportation" in their balance of payments accounts and certain additional information relevant to international transportation, together with a detailed description of the procedures used in arriving at the estimates.

II. Confidentiality

The Working Party will restrict the use of any information reported to the staff of the Working Party and the IMF wherever such a restriction is requested by the respondent.

III. General Instructions

All countries receiving the questionnaire are requested to complete Form A; Form B should be completed only by those countries that have large international receipts and payments related to transport other than by sea and air. As a rule of thumb, use Form B if either total credits (lines 1 plus 14) or total debits (lines 10 plus 21) in column 5 of Form A exceed 20 percent of the corresponding totals in column 6.

Respondents are asked only to provide data already available in some form, or which can be estimated from available data without recourse to extensive research.

If readily available, please supply geographic detail, by country or area, for those items that are important in your accounts. The revenues on cross trades should be attributed to the countries of final destination.

IV. Specific Instructions

The following detailed instructions should assist compilers in completing the forms. See also Part V, Notes on Methodology.

Form A

Columns 1-3. Give total only (column 3), if breakdown not readily available.

Line 1. Total "shipment" credits, as reported to IMF, by type of carrier.

Lines 2, 3, 4, 4a. Freight on exports, in-transit and cross trades earned by domestically operated carriers, with a separation between national and foreign flag vessels. If you have separate figures for freight on cross-trades please enter them on line 4a. The separation by flag of registry is not needed for line 4a.

Lines 5, 6, 7. This memorandum item (not in balance of payments) will help to calculate total revenues of reported fleets and thus, by deduction, to estimate revenues of fleets not covered by IMF data.

Line 8. Insurance on exports, placed with resident insurers. Show total only (column 6).

Line 9. If large, please explain what is included in this item.

Line 10. Total "shipment" debits, as reported to the IMF, by type of carrier.

Line 11. Freight on imports in foreign-operated carriers.

Line 12. Insurance on imports, placed with nonresidents, either directly or indirectly--as would be the case with imports invoiced on a c.i.f. basis. Show total only (column 6).

Line 13. Other shipment debits, if any. Explain if large.

Line 14. Total "other transportation" credits as reported to IMF by type of carrier.

Line 15. Foreign carriers' expenditures in domestic ports. See Part V below for important questions regarding methodology.

Line 16. Bunker fuel sales included in line 15.

Line 17. This item should reflect only the international portion of passenger revenues received by domestic carriers from nonresidents.

Line 18. This memorandum item will be helpful in analyzing the relationships between receipts and expenditures, especially of air carriers. The sum of lines 17 and 18 should, of course, equal total passenger revenues of domestic lines in their international business.

Line 19. Applicable mainly to sea and air transport.

Line 20. Explain, if entries are more than 20 percent of total credits.

Line 21. Total "other transportation" debits, as reported to IMF.

Line 22. Domestic carriers' expenditures in foreign ports.

Line 23. Bunker fuel purchases included in line 22.

Line 24. Payments by domestic residents to foreign carriers.

Line 25. Applicable mainly to sea and air transport.

Line 26. Explain, if large.

Lines 27-29. These items are intended to provide an additional perspective on the extent of the gap in the reporting of merchandise transport in the balance of payments accounts. Data on tonnage operated by resident enterprises should refer as nearly as possible to the mid-1983 amount and should relate to the receipts reported in lines 2 and 5. Reasonable estimates would be sufficient.

Form B

The totals (column 6) should agree with Form A, column 5; note that insurance is not included.

V. Notes on Methodology

In order to make the best use of the data supplied, it is important to be able to evaluate the differences in national data sources and methodology. We have prepared a set of questions that should cover the major sources of such differences. If you have a description of your methodology that covers these or other points please send it with the statistical data. In any case, specific replies would be most helpful.

1. In your statistics on shipping and transportation do you encompass all vessels, planes, etc., whether under domestic or foreign registry, that are operated by residents of your country? Yes [ ] No [ ]

If the answer is no, or if there are some special circumstances, please attach a note explaining the coverage of your data.

2. Are your statistics for earnings and expenditures abroad of domestically-operated carriers obtained from:

	Yes	No
Reports by the carriers	[ ]	[ ]
Exchange records from domestic banks	[ ]	[ ]

Other (please explain: ______________________________

____)

3. Are your statistics for payments to foreign carriers and their expenditures in your country obtained from:

	Yes	No
Reports by the carriers or their agents	[ ]	[ ]
Exchange records from domestic banks	[ ]	[ ]
Reports by domestic suppliers (lines 15 & 16)	[ ]	[ ]

Other (please explain: ____________________

____________________)

4. In cases where statistics are based on exchange records from domestic banks, or where agents or other intermediaries supply information on these accounts, please indicate whether these sources provide the gross credit and debit items required for the balance of payments accounts. If they do not, do you enter only net amounts? If you adjust to a gross basis, please describe the method you use to estimate the gross amounts paid and received.

5. Does your information on freight earnings include earnings of domestic operators on cross-trade abroad? Yes [ ] No [ ] Explain, if necessary. See instructions for line 4a.

6. If it is necessary for you to convert import data from a c.i.f. to an f.o.b. basis to conform with the requirements of the balance-of-payments accounts, please describe briefly your estimating procedure. Do you use such estimates as a basis for calculation of shipping debits? Yes [ ] No [ ]

7. Questions related to lines 15 and 22 of Form A:
Do these items bear a reasonable relationship to the gross revenues of the carriers, inbound, outbound, and cross-trades combined? Do they include or exclude estimates for the personal expenditures of crews, sea and air? Do they include those hotel and other expenses of air crews that are presumably paid for, or reimbursed, by the carrier? If excluded here, are such expenditures included elsewhere in your balance of payments statement, e.g., under travel?

8. Questions related to lines 17 and 24 of Form A:
Are the data based on information provided by the carriers or their agents? Or are they derived from information provided by, or about, individual travelers? Please describe your method of estimating.

9. Questions related to lines 19 and 25 of Form A:
What is your source of information--the domestic owners (line 19) or domestic carriers (line 25) themselves? Are the operations of vessels chartered by residents included in lines 2-7 and 22?

Appendix H. Unrequited Transfers Questionnaire

Chapter VIII makes extensive use of a questionnaire that the Working Party sent to 48 countries requesting more detailed information on the transfers data that appear in the Balance of Payments Statistics Yearbook. The questionnaire form and its instructions are reproduced below. As the instructions indicate, the questionnaire was designed for consistency with the Yearbook and with data collected and published by the OECD, and a form was included to help in reconciling the response with the DAC data that OECD produces.

Replies were received from 34 countries 1/, and totals of these replies appear in Table H-1. This table combines the first two pages of the questionnaire into a single summary, and it reproduces the form of those pages with additional lines and columns for amounts reported in totals but not in full detail. Table 3 of Chapter VIII reproduces the two total columns of this table. Table H-1 gives further information by type of foreign transactor. One problem with these categorizations is that they may be reported asymmetrically as between donors and recipients. For example, the close balance on the miscellaneous line reflects sizable imbalances vis-à-vis foreign official and foreign private that happen to offset each other. Negative amounts shown for the "unspecified" totals in the lower right corner of the table reflect replies that give data for the total row and the total column without accompanying detail within the table.

The questionnaire page on geographic distribution of transfers was filled in by a number of countries, in some cases in extensive detail. The results were not in a form, however, that could be compiled into bilateral comparisons and were also too partial to be tabulated into totals.

1/ Countries that returned usable replies to the transfers questionnaire were:

Australia	Ethiopia	Jordan	Philippines
Bangladesh	France	Mali	Senegal
Belgium-Luxembourg	Germany	Mexico	Somalia
Botswana	India	Nepal	South Africa
Canada	Indonesia	Netherlands	Sri Lanka
Denmark	Israel	Pakistan	Switzerland
Egypt	Italy	Panama	Thailand
El Salvador	Ivory Coast	Peru	United Kingdom
	Japan		United States

Unrequited Transfers as Recorded in the Balance of Payments, 1983 - Aggregate Data

Please return one copy to: Working Party on the Statistical Discrepancy
Room 9-310
Research Department
International Monetary Fund
Washington, D.C. 20431

Country: ____________________ Please report amounts in millions of U.S. dollars [ ] (if available) or

millions of other currency units [ ] (specify unit ____________________)

Line No.	Item	Total	By Sectors: Multilateral Institutions with Resident: Official	Multilateral Institutions with Resident: Private	Foreign Official with Resident: Official	Foreign Official with Resident: Private	Foreign Private with Resident: Official	Foreign Private with Resident: Private
	CREDITS							
1	I. Official, total							xxx
2	(a) Development assistance, total							xxx
3	(i) Bilateral		xxx	xxx				xxx
4	Development programs and projects		xxx	xxx				xxx
5	Technical cooperation		xxx	xxx				xxx
6	Food aid		xxx	xxx				xxx
7	Debt forgiveness		xxx	xxx				xxx
8	Other		xxx	xxx				xxx
9	(ii) Aid from multilateral institutions				xxx	xxx	xxx	xxx
10	EEC institutions				xxx	xxx	xxx	xxx
11	Other				xxx	xxx	xxx	xxx
12	Memo: Development assistance received in form of cash							xxx
13	(b) Receipts from International Organizations (not covered in I(a)(ii))				xxx	xxx	xxx	xxx
14	EEC institutions				xxx	xxx	xxx	xxx
15	Other				xxx	xxx	xxx	xxx
16	(c) Pensions, benefits		xxx		xxx		xxx	xxx
17	(d) Other (specify amounts 25 percent or more of total official credits)							xxx
								xxx
18	II. Private, total							
19	(a) Institutional remittances		xxx	xxx	xxx	xxx	xxx	
20	(b) Other		xxx	xxx	xxx	xxx	xxx	

Unrequited Transfers as Recorded in the Balance of Payments, 1983 - Aggregate Data

Country: ____________________

Line No.	Item	Total	By Sectors: Multilateral Institutions with Resident		Foreign Official with Resident		Foreign Private with Resident	
			Official	Private	Official	Private	Official	Private
	DEBITS							
21	III. Official, total							xxx
22	(a) Development assistance, total							xxx
23	(i) Bilateral		xxx	xxx	xxx			xxx
24	Development programs and projects		xxx	xxx	xxx			xxx
25	Technical cooperation		xxx	xxx	xxx			xxx
26	Food aid		xxx	xxx	xxx			xxx
27	Debt forgiveness		xxx	xxx	xxx			xxx
28	Other		xxx	xxx	xxx			xxx
29	(ii) Aid to multilateral institutions				xxx	xxx	xxx	xxx
30	EEC institutions				xxx	xxx	xxx	xxx
31	Other			xxx	xxx	xxx	xxx	xxx
32	(iii) Administrative costs not allocated bilaterally		xxx	xxx	xxx	xxx		xxx
33	Memo: Development assistance paid in form of cash							xxx
34	(b) Contributions to International Organizations (not covered in III(a)(ii))				xxx	xxx	xxx	xxx
35	EEC institutions				xxx	xxx	xxx	xxx
36	Other				xxx	xxx	xxx	xxx
37	(c) Pensions, benefits		xxx	xxx	xxx	xxx		xxx
38	(d) Other (specify amosunts 25 percent or more of total official debits)							xxx
39	IV. Private, total							
40	(a) Institutional remittances		xxx	xxx	xxx	xxx	xxx	
41	(b) Other		xxx	xxx	xxx	xxx	xxx	

Unrequited Transfers as Recorded in the Balance of Payments, 1983 -
Geographic Distribution 1/

Please return one copy to: Working Party on the Statistical Discrepancy
Room 9-310
Research Department
International Monetary Fund
Washington, D.C. 20431

Country: ______________________

Please report amounts in millions of U.S. dollars [ ] (if available) or

millions of other currency units [ ] (specify unit ______________________)

Multilateral Institution or Country	Credits				Debits			
	Official				Official			
	Development Assistance	Other	Total	Private Total	Development Assistance	Other	Total	Private Total

1/ Please provide separate data for all geographic areas and multilateral institutions which account for at least 10 percent of total unrequited transfer credits or debits.

Notes and Instructions for Questionnaire on Unrequited Transfers

This questionnaire is part of a special effort by the Working Party on the Statistical Discrepancy, established by the IMF to examine the sources of discrepancy in the global accounts on official unrequited transfers. The data requested cover the year 1983, which is a reference year for examining the global current account asymmetry.

The main data items are consistent with the data collection system of the Bureau of Statistics of the IMF, though the present questionnaire is more detailed. The Working Party believes that by pulling together these data in this more direct and detailed way it will be possible to bring to light certain gaps or discrepancies that may be overlooked in the ordinary routine of completing the standardized forms.

It should be emphasized that this inquiry is in no way a substitute for the material regularly prepared for the IMF's Bureau of Statistics. For purposes of this questionnaire, the best estimates of the compilers are requested where actual data are not available or are considered to be too imprecise to be reported to the Bureau of Statistics. Such estimates should be identified with an asterisk. Where the data now available are revisions of data supplied earlier to the Bureau of Statistics, please indicate by noting (rev.).

Confidentiality

The Working Party will restrict the use of any reported information to the staff of the Working Party and the IMF wherever such a restriction is requested by the respondent.

Geographic data

As the study of the discrepancy inevitably requires comparisons of data reported by different countries or regions as well as by multilateral institutions certain limited bilateral information has been requested as an extension of the main set of aggregate data. Of course, there is great variation among countries in the significance of individual partner countries and multilateral institutions as well as in the extent and derivation of any such geographic detail. Therefore, rather than prescribe a fixed list of countries and multilateral institutions for which such information is requested the Working Party is asking each national compiler to provide data for the most important partner countries and multilateral institutions. As a guideline it is suggested that separate data should be provided for all countries and multilatral institutions which account for 10 percent or more of total debits or credits. If detailed geographic breakdowns are available, either in published form or as estimated for internal use, for the items listed in the questionnaire, or for similar items, such data could be provided in lieu of the questionnaire on geographic distribution.

Specific instructions

(References are to paragraphs in the IMF Balance of Payments Manual, Fourth Edition, 1977, or to lines in Table 2 of Balance of Payments Statistics (BOPS)).

The categories used in these forms are broken down into details that may not correspond to the data available to national compilers. Where necessary, therefore, please indicate where detailed items are combined or are contained only in sub-totals or totals. For items where you have no information and make no estimate please insert a dash in the appropriate line; insert a zero where no transactions exist. For definitions and coverage of official unrequited transfers, please refer to the Manual, paragraphs 354-359. Private unrequited transfers are covered in paragraphs 347-353.

Aggregate data

Line Number	
1 & 21	Corresponds to lines 39-44 of Table 2 of BOPS. Official unrequited transfers cover those which involve either the resident or a foreign official sector, including multilateral institutions.
4-8 & 24-28	This breakdown is consistent with that used by the Development Cooperation Directorate of the OECD.
8 & 28	Includes emergency and distress relief.
12	Includes amounts in items 3-11 received directly from the donor in the form of cash.
13	Covers non-development assistance receipts from international organizations which are not private organizations.
18 & 39	Includes only transactions between the resident private sector and a foreign private sector. The private sector includes non-government organizations which operate internationally.
20 & 41	Corresponds to lines 33-36 and parts of lines 37 and 38 of Table 2 of BOPS.
28	Includes official funding of private non-government organizations engaged in development and humanitarian assistance abroad.

Line Number	
33	Includes amounts of items 24-31 paid directly to a foreign aid recipient in the form of cash.
34	Includes budgetary contributions.

Geographic distribution

The data by country or multilateral institution should be conceptually consistent with those provided on the aggregate data questionnaire. Data for official transactions include those which are effected by either a resident or nonresident official sector. Private transactions include only those which are effected by both the resident and a nonresident private sector.

When reporting data for multilateral institutions, please note that agencies within one institution can be grouped together, for example, the United Nations would include the FAO, WHO, UNICEF, UNDP, etc.

Official Unrequited Transfers, 1983 - Reconciliation with DAC Data

Please return one copy to: Working Party on the Statistical Discrepancy
Room 9-310
Research Department
International Monetary Fund
Washington, D.C. 20431

Country: ____________________

Please report amounts in millions of U.S. dollars [ ] (if available) or millions of other currency units [ ] (specify unit ____________________)

Item of DAC Statistics	As in DAC Statistics	As in Transfer Account of Balance of Payments	Differences
I.A., 1.1 Bilateral grants, total			
- For development programs and projects			
- Technical cooperation			
- Food aid			
- Debt forgiveness			
- Other (subitems 1.1d, f, g, h, of DAC Questionnaire)			
1.2 Grant-like flows, total 1/			
I.B., 1. Grants to multilateral agencies, total			
UN agencies			
EEC			
Other agencies			

1/ Transactions in this item, and in items I.A., 2 and I.B., 2 of the DAC Form (not shown above) will probably be included in balance of payments items other than the transfer account.

Please provide in this space explanations of significant differences.

Table H-1. Totals of Transfers Questionnaire Replies
(In millions of U.S. dollars, 1983)

A. Official Unrequited Transfers

	Total		Multilateral Res. official		Multilateral Res. private		Foreign official Res. official		Foreign official Res. private		Foreign private Res. official		Unspecified	
	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit
Total official	28,594	44,931	17,517	25,973	214	39	5,354	11,783	1,443	623	2,620	6,520	1,445	-7
Development assistance	5,893	12,171	389	2,051	113	.	4,819	9,223	43	.	30	318	499	578
Bilateral	5,306	8,702	12	.	.	.	4,819	8,394	43	.	30	307	401	.
Development programs	1,273	4,808	12	.	.	.	1,144	4,774	42	.	.	34	75	.
Technical assistance	371	1,848	.	.	.	.	341	1,684	.	.	7	163	23	.
Food aid	642	1,058	.	.	.	.	538	1,046	.	.	.	11	104	.
Debt forgiveness	.	59	.	.	.	.	.	59	.	.	.	.	.	.
Other	2,198	674	.	.	.	.	2,085	660	2	.	23	15	88	-1
Unspecified	822	255	.	.	.	.	711	171	.	.	.	84	111	1
Multilateral aid	511	2,057	376	2,051	113	.	.	.	.	.	.	.	22	6
EEC	96	615	96	615	.	.	.	.	.	.	.	.	.	.
Other	415	841	281	835	113	.	.	.	.	.	.	.	22	6
Unspecified	.	600	.	600	.	.	.	.	.	.	.	.	.	.
Development assistance unspecified	76	1,412	.	.	.	.	.	829	.	.	.	11	76	572
Memo: In cash	2,819	627	99	549	.	.	2,686	78	.	.	.	.	34	.
Other multilateral	17,269	23,811	17,117	23,366	87	33	.	.	.	.	.	.	65	412
EEC	17,150	20,601	17,063	20,568	86	33	.	.	.	.	.	.	1	.
Other	118	3,209	54	2,797	1	.	.	.	.	.	.	.	63	412
Pensions	1,415	4,050	.	.	6	.	.	.	1,258	5	22	4,046	129	.
Miscellaneous	3,879	3,775	8	17	5	1	358	1,818	109	145	2,521	1,631	878	-1
Unspecified	139	1,124	4	540	4	5	176	741	33	473	48	525	-126	-996

B. Private Unrequited Transfers

	Total		Multilateral		Foreign private		Unspecified	
	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit
Resident private with foreign private	17,776	18,250	32	32	17,264	18,188	481	26
Institutional remittances	794	112	10	25	713	85	70	2
Other	11,456	8,942	.	3	11,070	8,911	386	24
Unspecified	5,526	9,197	21	4	5,480	9,193	25	.

Table H-2. 1983 Unrequited Transfers
Published in 1985 Balance of Payments Statistics Yearbook
(In millions of U.S. dollars)

	Official			Private		
	Credits	Debits	Net	Credits	Debits	Net
ALL COUNTRIES	35,897	48,774	-12,877	43,020	36,337	6,683
INDUSTRIAL COUNTRIES	21,939	46,149	-24,210	13,245	19,199	-5,954
GERMANY	5,097	11,530	-6,433	567	4,716	-4,149
UNITED STATES	40	8,555	-8,515	1,440	2,443	-1,003
FRANCE	3,657	5,741	-2,084	1,392	3,127	-1,735
UNITED KINGDOM	3,352	6,398	-3,046	1,725	2,050	-325
JAPAN	90	1,457	-1,367	391	571	-180
NETHERLANDS	1,901	2,302	-401	356	854	-498
SWEDEN	3	627	-624	122	418	-296
BELGIUM-LUXEMBOURG	702	1,562	-860	574	755	-181
SWITZERLAND	762	791	-29	162	1,070	-908
NORWAY	.	525	-525	175	230	-55
AUSTRALIA	20	746	-726	840	579	261
ITALY	3,426	3,637	-211	1,780	374	1,406
CANADA	1,161	961	200	1,059	624	435
IRELAND	1,068	285	783	61	4	57
SPAIN	4	41	-37	1,500	292	1,208
OTHER	656	991	-335	1,101	1,092	9
MID EAST OIL EXPORTERS	177	1,669	-1,492	43	12,764	-12,721
OTHER DEVEL AREAS	13,781	956	12,825	29,732	4,374	25,358
YUGOSLAVIA	.	2	-2	3,662	11	3,651
ISRAEL	2,006	60	1,946	1,082	154	928
INDIA	309	.	309	2,482	.	2,482
PORTUGAL	.	.	.	2,208	76	2,132
EGYPT	.	.	.	3,315	.	3,315
PAKISTAN	262	5	257	3,116	2	3,114
SYRIAN ARAB REP.	1,281	3	1,278	461	.	461
TURKEY	237	.	237	1,569	20	1,549
JORDAN	797	.	797	1,130	206	924
GREECE	837	.	837	937	4	933
YEMEN ARAB REP.	163	3	160	1,223	137	1,086
BANGLADESH	766	.	766	648	.	648
MOROCCO	139	41	98	929	41	888
LEBANON	180	.	180	.	.	.
CHINA, PEOPLE S REP.	174	99	75	446	10	436
THAILAND	125	.	125	1,016	19	997
VENEZUELA	.	24	-24	.	187	-187
NIGERIA	10	29	-19	8	383	-375
IVORY COAST	137	131	6	.	357	-357
OTHER	6,358	559	5,799	5,500	2,767	2,733

"." indicates missing and zero amounts.

Table H-3. Unrequited Transfers
Published in 1985 Balance of Payments Statistics Yearbook
(In billions of U.S. dollars)

Official unrequited transfers

		1977	1978	1979	1980	1981	1982	1983	1984
ALL COUNTRIES	Credit	21.6	25.2	32.7	37.0	35.5	34.9	35.9	35.2
	Debit	32.5	42.7	49.0	57.8	54.5	49.7	48.8	49.4
	Net	-10.9	-17.5	-16.3	-20.8	-18.9	-14.8	-12.9	-14.2
INDUSTRIAL COUNTRIES	Credit	12.4	16.6	20.1	23.0	20.7	20.8	21.9	20.6
	Debit	26.9	34.9	41.5	47.3	44.5	46.5	46.1	47.6
	Net	-14.5	-18.3	-21.5	-24.3	-23.8	-25.7	-24.2	-27.1
MID EAST OIL EXPORTERS	Credit	.3	-	.2	.1	.2	.1	.2	.2
	Debit	4.9	7.0	6.5	9.2	8.9	2.2	1.7	1.0
	Net	-4.6	-7.0	-6.3	-9.1	-8.7	-2.1	-1.5	-.7
OTHER DEVEL AREAS	Credit	8.9	8.6	12.4	13.9	14.7	14.1	13.8	14.4
	Debit	.7	.8	1.0	1.4	1.1	1.0	1.0	.8
	Net	8.2	7.8	11.4	12.6	13.6	13.0	12.8	13.6

Private unrequited transfers

		1977	1978	1979	1980	1981	1982	1983	1984
ALL COUNTRIES	Credit	25.7	32.2	38.6	45.8	44.2	43.7	43.0	37.4
	Debit	19.8	27.8	32.6	38.8	38.5	39.9	36.3	33.6
	Net	5.9	4.5	5.9	7.0	5.7	3.8	6.7	3.7
INDUSTRIAL COUNTRIES	Credit	8.8	10.9	12.8	14.8	14.2	13.8	13.2	13.2
	Debit	13.2	16.6	19.7	22.6	20.8	19.6	19.2	18.0
	Net	-4.4	-5.7	-6.9	-7.8	-6.6	-5.8	-6.0	-4.7
MID EAST OIL EXPORTERS	Credit	-	-	-	-	-	-	-	-
	Debit	3.0	6.9	8.0	10.6	12.5	14.9	12.8	11.8
	Net	-3.0	-6.8	-8.0	-10.6	-12.5	-14.9	-12.7	-11.8
OTHER DEVEL AREAS	Credit	16.9	21.3	25.7	30.9	30.0	29.8	29.7	24.1
	Debit	3.6	4.3	4.9	5.6	5.2	5.3	4.4	3.8
	Net	13.3	17.0	20.8	25.3	24.8	24.5	25.4	20.3

Appendix I. The Eurostat Approach to Balance of Payments Asymmetries

The effects of differences in methodologies and the difficulties of overcoming them are illustrated by the work done by the Statistical Office of the European Economic Community (Eurostat) on balance of payments asymmetries. The Eurostat working plan covers descriptions of methodology, quantitative analysis and bilateral or multilateral contacts between member states and the European Community.

As a first step, Eurostat has published descriptions of the balance of payments methodologies of a number of the member countries of the European Community, following a consistent outline. Methodologies have been published for Belgium-Luxembourg, Denmark, France, Germany, the United Kingdom and Greece.

Eurostat has also commissioned detailed studies on criteria for a geographical breakdown of the balance of payments usable at the Community level, dealing respectively with the current account of EC members, 1/ the capital account of EC members, 2/ and the current and capital accounts of EC members and of Australia, Canada, and the United States. 3/ The studies contain detailed descriptions of sources and methods and consideration of the possibility of construction an intra-EEC balance of payments, in which the algebraic sum of the entries for each item would in principle be zero. The study of the current account found pervasive methodological differences among the individual items in the current accounts of member countries, and characterized the investment income data as the "most diverse and intractable" of any in the current account. 4/

The Veil study, which encompassed the practices of selected non-EC countries as well as EC countries, reached a number of conclusions, including the superiority of compiling balance of payments data through the transactions approach and the merits of benchmark and sample surveys as means of collecting the data. 5/

The quantitative program of Eurostat in this field includes, as a first step, the establishment of a computerized data base containing the

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1/ Alves, John, Study on Criteria for Geographical Breakdown of the Current Account of the Balance of Payments Statistics Usable at a Communities Level, Statistical Office of the European Communities, 1982.

2/ Senff, Kurt, Criteria for the Geographical Breakdown of Certain Items of the Capital Account of the Balance of Payments Statistics Usable at a Communities Level, Statisticsl Office of the European Communities, 1982.

3/ Veil, Erwin, Criteria for the Geographical Breakdown of the Current Account and Certain Items of the Capital Account at a Community Level, Maisons-Laffitte/France, 1982.

4/ Alves, op. cit., p. 46.

5/ Veil, op. cit., pp. 29-32.

bilateral balances of payments of the EC Member States, the United States, and Japan, beginning with data for 1970. This detailed geographical breakdown explores the absolute and relative magnitude of the discrepancies by item and country, after a considerable time lag. From this work it appears that the sum of reported data of intraEUR 10 1/ (including the Community institutions) is a small net credit, a result that does not change appreciably when the scope is enlarged with EUR 10 current transactions with the United States and Japan. Eurostat economists believe that the geographical breakdown analysis is a useful tool to indicate asymmetries and their origin. Therefore, Eurostat, in collaboration with its Member Countries, is examining how the principles of the geographical breakdown could be refined.

Concurrently with the factual analysis and pending completion of the long-term reconciliation of the national interpretations and implementations of the IMF methodology, Eurostat considers it useful to quantify the bilateral discrepancies to point out where harmonization is most urgent.

At this stage, Eurostat has been testing a grossing-up algorithm designed to indicate persistent asymmetries due to inappropriate net recording. The outcomes of this exercise, together with methodological questions arisen from the algorithmic results, are submitted to the Member States for examination. At a later stage, on the basis of these results, Eurostat contemplates arranging a cross-checking of figures between Member States, limited to those areas where significant amounts are involved. A future goal is to organize a forum for similar comparisons with the main third countries. Studies are in progress concerning the possibility of completing the grossing-up algorithm for discrepancies stemming from shifts between items, differences in timing, etc.

The data currently published by Eurostat present both an unadjusted and an adjusted version of the combined intra-Community balance of payments and extra-Community balance of payments (with the rest of the world). The unadjusted version of the former is the result of a simple totalling of the balance of payments items reported by each member country, and shows substantial statistical discrepancies on both current account and capital account items. The discrepancies are attributed to "the different methods still being used by the member countries to establish their balances of payments and to break them down by geographical area; (and) time-lags and inaccuracies which occur in recording transactions." 2/

Pending "harmonization of the methods used by the various countries and the gradual narrowing down of deviations", 2/ Eurostat has adjusted both the intra-Community and the extra-Community balances of payments to obtain an adjusted intra-Community balance of payments in which the

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1/ Data for Spain and Portugal have not yet been incorporated.
2/ Statistical Office of the European Communities, Balance of Payments, Geographical Breakdown, 1979-1982, p. XII.
3/ Ibid., p. XII.

balances are zero, and an adjusted extra-Community balance of payments in which the balances correspond to the sum of the appropriate items in each member's balance of payments with the rest of the world. The adjustment of the intra-Community balance of payments is accomplished by the substitution of the amounts reported as debits by the member countries for the amounts reported as credits, thus bringing all of the intra-Community balances to zero. The amounts by which the credits in the intra-Community balance of payments are adjusted (i.e., the differences between the debits and the unadjusted credits) are then added to the credits reported in the unadjusted extra-Community balance of payments to obtain the adjusted extra-Community payments balance.