



Balance of Payments Statistics

A NEWSLETTER FROM THE BALANCE OF PAYMENTS AND EXTERNAL DEBT DIVISIONS • STATISTICS DEPARTMENT • IMF

The IMF's Dissemination Standards Bulletin Board Linked to National Summary Data Sites

For a number of countries it is now possible to move directly from the IMF's Dissemination Standards Bulletin Board (DSBB) on the Internet (<http://dsbb.imf.org>) to national Internet data sites to gain access to key economic and financial data. The first such electronic links (hyperlinks) opened in April 1997. Data users can now move between the DSBB and the actual data of seven countries: Canada, Israel, Mexico, Singapore, South Africa, Switzerland, and United Kingdom—Hong Kong.

The DSBB describes the statistical practices of countries that subscribe to the IMF's Special Data Dissemination Standard (SDDS). The IMF introduced the SDDS in April 1996 to guide its member countries in providing to the public comprehensive, timely, accessible, and reliable economic and financial statistics. (See also *IMF Balance of Payments Statistics Newsletters*, December 1996, June 1996, and December 1995.)

Countries that voluntarily sign up for the SDDS undertake to make the necessary changes to their statistical practices to meet the SDDS requirements for data coverage, periodicity, timeliness, public access to the data, integrity of data, and data quality. To date, there have been 42 subscriptions to the SDDS, and comprehensive information about data dissemination practices (i.e., metadata) is currently shown on the DSBB for 33 of them.

Each of the seven subscribers that has developed hyperlinks shows the data that are described in the country's metadata. Data users can move from the subscriber's page on the DSBB to the national summary data pages by clicking on "New Access to [subscriber's] data" wherever it appears. From many of these national summary data pages, users can move to more detailed data using hyperlinks that the subscriber has provided. Users also can move in the other direction, from national pages to the DSBB.

Hyperlinks from the DSBB to national data sites of Finland, Japan, Peru, and Turkey are expected in the near term. Hyperlinks to more DSBB subscribing countries will follow.

*Internet providing
important new
data links
. . . more to follow*



Volume V, Number 1
June 1997

IMF Balance of Payments Statistics Newsletter is now available
on the Internet at
<http://www.imf.org/external/pubs/ft/bop/news/index.htm>.
Also available at the same Web site are *Annual Report of the IMF
Committee on Balance of Payments Statistics* and selected working
papers prepared under the auspices of the Committee.

Contents

The IMF's Dissemination Standards Bulletin Board Linked to National Summary Data Sites	1
Work Program of the Committee on Balance of Payments Statistics Continuing in Full Swing	3
Selected Topics	
Major Trends in World Trade and Finance as Reflected in the <i>1996 Balance of Payments Statistics Yearbook</i>	6
On the Measurement of Financial Derivatives	13
Canada's Approach for Recording Foreigners' Portfolio Investment in Canadian Bonds	17
Netherlands' Quality Control of Balance of Payments Statistics	20

IMF Balance of Payments Statistics Newsletter • Volume V, Number 1 • June 1997
(<http://www.imf.org/external/pubs/ft/bop/news/index.htm>)

The IMF *Balance of Payments Statistics* newsletter is published twice a year by the Statistics Department of the International Monetary Fund. The purpose of the newsletter is to inform balance of payments data compilers and users about national and international developments in the collection of such data. Editions are published in English, French, Spanish, and Russian. The opinions and material contained in this newsletter do not necessarily reflect the

official views of the IMF. Draft submissions are welcome and should be addressed to Anne Y. Kester, Editor, IMF Balance of Payments Statistics Newsletter, Balance of Payments and External Debt Division II, Statistics Department, Room IS5-300, International Monetary Fund, Washington, D.C. 20431, U.S.A. Telephone: (202) 623-7922 • Fax: (202) 623-8017. Graphic design for this newsletter is provided by Isabelle Grohol.

Work Program of the Committee on Balance of Payments Statistics Continuing in Full Swing

The IMF Committee on Balance of Payments Statistics is scheduled to hold its annual meeting on October 22–24, 1997. Among other subjects, the Committee will discuss the progress it made during the first half of 1997 on coordinating the international portfolio investment survey, the development of an international securities database, a survey of direct investment methodologies of IMF member countries, and work on the conceptual treatment of financial derivative transactions.

Coordinated portfolio investment survey

As part of an effort to improve the quality of portfolio investment data, many countries under the auspices of the Committee will conduct a coordinated survey of portfolio investment as of the end of December 1997. The initiative arose because data users and compilers have expressed concerns that with the liberalization of financial markets, financial innovations, and the changing behavior of investors, balance of payments statistics are failing to measure accurately portfolio investment activity. This has been reflected in the global statistics: there is a significant asymmetry between recorded portfolio assets and liabilities. Planning for the survey began in 1994 with the creation of an international task force to develop guidelines to assist countries in conducting it. In August 1996, the work of the task force was published in the form of the *Survey Guide for the Coordinated Portfolio Investment Survey*. It is anticipated that in addition to improving the quality of portfolio investment data, the survey will facilitate cross-country comparisons, permit data exchanges, encourage standardization, and lead countries to emulate the best statistical practices identified.

Most of the participating countries are well advanced in their preparations. Many have developed survey forms and discussed them with potential respondents. During June 18–20, 1996, the IMF's Statistics Department (STA) convened a meeting in Washington for the national compilers of the participating countries. It afforded compilers an opportunity to exchange their experiences concerning the preparatory stage of the survey and to review the consistency of the different approaches compilers use to address important methodological issues (such as the treatment of securities involved in repurchase agreements). Consistency is needed in so far as possible to ensure the comparability of survey results. Participants also discussed the modalities of sharing survey results and the development of an international securities database, issues that the Committee will revisit in October 1997.

Development of an international securities database

To help ensure participating countries in the coordinated portfolio investment survey allocate securities geographically on a consistent and accurate basis, the Committee has been examining the possibility of developing an international

Work program initiatives varied, innovative, and promising

securities database. Significant progress has been made in recent months. The Ufficio Italiano dei Cambi (UIC) has established a database of more than 100,000 of the most actively internationally traded securities. National compilers agreed upon specifications for the database at their meeting in September 1996. Compilers subsequently reexamined them in April 1997. The Committee will review these developments at its meeting in October and decide how to proceed. While this remains an ambitious project, in part because of the number of securities in existence, it has the potential to improve significantly the quality of the survey results.

Survey of direct investment methodology

At its meeting in Singapore in October 1996, the Committee endorsed a proposal that the IMF and the Organization for Economic Cooperation and Development (OECD) conduct a joint survey of countries' metadata (i.e. comprehensive information on the data) on direct investment income, flows, and stocks. The survey will be timely in view of the increasing importance of multinational enterprises and their geographical and sectoral diversity. Such factors have stimulated interest in foreign direct investment (FDI) statistics among policymakers, analysts, and others. Both the IMF and OECD have a well-known and established interest in FDI statistics because of their maintenance of international databases on such statistics and their publication of international methodological guidelines for the measurement of direct investment.

The main purposes of the joint IMF-OECD survey on direct investment are these:

- To determine the extent to which member countries have implemented the recommendations on direct investment statistics advanced in the fifth edition of the IMF's *Balance of Payments Manual (BPM5)* and the third edition of OECD *Benchmark Definition of Foreign Direct Investment*;
- To gather metadata on countries' data sources, collection methods, and reporting practices; and
- To facilitate the exchange of information among countries.

The IMF recently sent a draft survey form for review to the Committee and the OECD's Group of Financial Statisticians (GFS). After consultation, including discussions at a meeting of the GFS on April 9–10, 1997, the survey form was approved and dispatched to all OECD and IMF member countries in May 1997. The IMF requested that countries complete the survey form by mid-July 1997.

One of the aims of the questionnaire design was to minimize the time compilers require to complete it, while covering all the major issues. With this in mind, the survey form is presented as a multiple choice questionnaire. This approach standardizes the information to be collected and thereby increases the usefulness of the survey results.

The IMF and OECD plan to review the survey results and produce a joint report focusing on the comparability and reliability of countries' FDI statistics. The Committee will receive a status report in October 1997. Copies of the final

report on the survey results will be made available to the Committee and OECD and IMF member countries. The IMF and OECD will use the survey data to construct a metadatabase on countries' FDI statistics. The availability of the metadata to compilers and users of FDI statistics will afford a clear understanding of the methodologies used in compiling the data and facilitate analysis of FDI statistics. It will also promote the exchange of information among compilers, encouraging them to adopt some of the sound practices identified.

Treatment of financial derivatives

In the light of financial market developments, the Committee since 1993 has been reviewing the methodological treatment of financial derivatives. During 1996, monetary and national accounts compilers also became involved in this work through a meeting of the Informal Group on the Measurement of Financial Derivatives organized in April 1996 under the IMF's auspices. They also became engaged through the meeting of experts on monetary and financial statistics held at the IMF in Washington in November 1996. The latter meeting was convened in conjunction with the finalization of the *IMF's Manual on Monetary and Financial Statistics*. From the work of these groups has emerged a discussion draft – *The Statistical Measurement of Financial Derivatives*. The draft clarifies the conceptual approach set forth in the *1993 System of National Accounts (1993 SNA)* and the *BPM5*. It also recommends some changes to these guidelines. Most notably, it proposes that net settlement payments on interest rate swaps and forward rate agreements be recorded in the financial, not the current, account. (See also article on pp. 13–16 of this *Newsletter*.) The draft was sent to all IMF member countries in April 1997; the IMF welcomes and encourages comments from countries on the important issues raised.

The IMF plans to convene a second meeting of the Informal Group on the Measurement of Financial Derivatives on September 4–5, 1997, in Washington, D.C., to discuss the draft paper and the comments received from member countries. The IMF expects to present a revised paper to the Committee in October 1997 for approval. Thereafter, the paper will be sent to the Intersecretariat Working Group on National Accounts (IWGNA), a group consisting of the United Nations, the IMF, the World Bank, the OECD and the Eurostat. The IWGNA can approve changes to the recommendations contained in the *1993 SNA*. □

Selected Topics

1996 Yearbook

World trade in goods and services saw substantial growth in 1995

Major Trends in World Trade and Finance as Reflected in the 1996 *Balance of Payments Statistics Yearbook*

The 1996 *Balance of Payments Statistics Yearbook* (1996 Yearbook) was published by the IMF in December 1996. It contains detailed tables on the balance of payments statistics of 160 countries and international investment position data of 35 countries. The 1996 Yearbook presents data of individual countries and global aggregates through the year 1995. It also describes the methodologies, compilation practices, and data sources of 110 countries. The expanded coverage of the 1996 Yearbook was highlighted in the December 1996 issue of the *IMF Balance of Payments Statistics Newsletter*. In response to readers' interest in the major trends in world trade and finance as gleaned from the voluminous data shown in the Yearbook, this article provides such an analysis¹. It also reports on efforts the IMF has undertaken to improve global balance of payments statistics.

Major trends

World trade in goods, in U.S. dollars terms, continuing its upward trend in 1994, grew nearly 20 percent in 1995, the highest growth rate since 1990. Trade in services also increased in 1995, by 12 percent. Although this marked a sizable gain for services trade, the growth rate was well below that of 1990, when services trade grew by 20 percent (Chart 1). Developing countries of Asia and of Europe accounted for much of the 1995 increase in trade in goods and services. Such trade also grew in industrial countries in 1995, but at a slower rate than in developing ones. Developing countries' share in world trade in goods and services rose from 28 percent in 1990 to 32 percent in 1995. Meanwhile, for most industrial and developing countries, external trade in goods and services as a share of their gross domestic products rose over the same period.

The industrial countries posted a current account surplus of approximately \$10.5 billion and net financial outflows of about \$30 billion in 1995 (Chart 2). This was in contrast to 1994, when these countries registered a current account deficit of about \$11 billion, accompanied by net financial inflows of about \$25 billion. The developing countries, including the economies in transition, saw their combined current account deficit widen by 35 percent in 1995, while their net financial inflows rose by 45 percent from the 1994 level (Chart 2). In 1995, notable among financial flows (including direct investment, portfolio investment, other investment, and changes in reserves) were the increases in the absolute value of reserves in both industrial and developing countries, \$80 billion and \$118 billion, respectively (Chart 3). These increases reflected the large-scale intervention by selected countries (especially Japan, China, and Brazil) facing upward pressure on their national currencies and strong capital inflows. To absorb the pressure, these countries through their interventions increased their foreign exchange reserves.

Despite improvements countries have made in their data compilations, problems have persisted with incomplete coverage, misclassification of transactions, and other associated difficulties. As will be explained later, these factors have contributed to the existing large discrepancies in global balance of payments accounts.

Industrial Countries

The reversal between 1994 and 1995 from a deficit to a surplus in the industrial countries' combined current account can be attributed to the continuing growth in exports of goods and services, the decline in net outflows of current transfers, and little change in the net interest payments of these countries. Industrial countries as a group since 1990 have consistently recorded surpluses in trade in goods and services, and the magnitude of these surpluses in 1995 surpassed those of 1994 (about \$141.3 billion in 1995 versus \$123.4 billion in 1994). Meanwhile, net outflows of current transfers (for examples, official aid flows, humanitarian aid, workers' remittances, and other private transfers in cash and in kind) declined from \$110 billion in 1994 to \$105 billion in 1995. The 1995 overall deficit in the investment income component of the current account of industrial countries remained at the 1994 level of about \$18 billion. More generally, since 1990, the movement of current transfers and investment income largely have accounted for the periodic swings between deficit and surplus in the combined current account balance of industrial countries.

Although the United States, Germany, and Australia continued to record sizable current account deficits in 1995 (\$148 billion, \$20 billion, and \$20 billion, respectively), Japan, Switzerland, Italy, Belgium, Luxembourg, the Netherlands, and France registered current account surpluses in aggregates amounting to about \$206 billion.

Between 1994 and 1995, inward and outward direct investment in industrial countries rose by 50 percent and 30 percent, respectively. During this period, inward portfolio investment flows increased by 70 percent and outward portfolio flows jumped by 30 percent. Meanwhile, "other" investment flows changed even more significantly: inflows doubled and outflows tripled. ("Other" investment includes loans, currency and deposits, trade credit, and changes in other financial assets and liabilities not included in direct and portfolio investments.) The surge in other investment flows in 1995 reflected in part the active international syndicated credit market in that year, as new facilities were used to refinance outstanding loans at lower costs. It also reflected the rise in loan trading in international financial markets.

Other developments have been evident in the financial flows of industrial countries since the beginning of this decade. For example, since 1990, Japan's international lending activities have retrenched from the strong growth recorded in the late 1980s. Meanwhile, cross-border lending has expanded in Europe (especially in Germany). Over this period, international securities transactions have grown most rapidly in the United States, and inward and outward direct investment flows have remained strong in the United States, the United Kingdom, and Germany.

Developing Countries

Despite the narrowing of their overall deficit in trade in goods and services, developing countries saw their combined current account deficit widen by \$27 billion in 1995 to \$103 billion. The increased current account deficit resulted largely because of a rise of about \$22 billion in net interest payments. Net interest payments rose nearly \$20 billion in Asia, about \$2 billion each in Africa and the Western Hemisphere, and \$1 billion in developing countries in Europe. Such net

*Industrial
countries'
combined current
account in surplus
in 1995 . . .*

*. . . that of
developing
countries again
in deficit*

payments declined in the Middle East. Most of the increase in net interest payments in Asia arose in relation to the surge in the recorded income payments on direct investment (approximately \$10 billion in China and \$1 billion each in Indonesia and Korea). In the case of China, the recorded increase can be attributed in part to the improved collection of data.

Overall financial movements in developing countries—including changes in international reserves—showed a net inflow of nearly \$110 billion in 1995, well above the net inflow of \$75 billion in 1994, but comparable to the 1993 level. Although there have been high levels of financial inflows to developing countries, disparities remain among countries and regions. In 1995, for example, financial inflows doubled in developing countries of Europe (especially the Czech Republic, Hungary, and Poland). They rose by nearly 30 percent in Asia (in particular, in China, Indonesia, Korea, and Thailand), about 12 percent in the Western Hemisphere (especially in Argentina and Brazil), and approximately 6.5 percent in Africa (mainly in South Africa). Such inflows declined in the Middle East.

During 1990–1995, while developing countries of Asia continued to experience sizable financial inflows in all types (specifically, direct investment, other investment, and portfolio investment, in that order), financial inflows to Africa and the Middle East consisted mainly of loans. Although loans, during this period, represented a major source of financing to developing countries of Europe and the Western Hemisphere, significant inflows in direct investment, and to a lesser extent, portfolio investment, were also evident in these countries. However, reductions in inflows of portfolio investment were pronounced in countries of the Western Hemisphere after the Mexican financial crisis at the end of 1994.

Rates of industrialization and economic growth, the relative easing of capital controls (especially those on financial inflows), and the extent of development of domestic financial markets have been among factors behind the various levels of financial flows and their composition in developing countries in recent years.

International Organizations

The current account balance of international organizations—including the IMF, the Bank for International Settlements, the European Monetary Institute, and international development banks—posted a surplus of \$10.5 billion in 1995, compared to the 1994 surplus of about \$9 billion. The increase derived in part from a rise in net receipts of investment income on portfolio and other investments. Most of the current account surpluses of international organizations reflect their operational surpluses. The surpluses, which are frequently lent to member countries, result mainly from a positive interest margin on these organizations' lending operations.

Net financial outflows increased to \$10.7 billion in 1995 from \$9 billion in 1994. This resulted largely from an increase in portfolio and other investment outflows of the international organizations.

Global Discrepancies

Conceptually, the combined surpluses and combined deficits in the current accounts of all countries and international organizations should offset each other,

leaving no net balance (or discrepancy) in the global current account. The same principle applies to the global capital and financial accounts. In practice, however, global discrepancies are recorded each year, primarily because of incomplete coverage, inaccurate recording of transactions by countries, and omission of countries for which data are unavailable. In addition, countries use different methods and sources to compile their data, which can result in inconsistent classifications of transactions among countries and in global asymmetries of corresponding accounts.

The statistical discrepancy in the global current account for 1995 amounted to approximately -\$82 billion, or about 0.5 percent of gross current account transactions. (A negative statistical discrepancy in the global current account indicates an excess of recorded debits, which may reflect an under-recording of credits, an overstatement of debits, or both.) This outcome was similar to those for 1993 and 1994 but represented an improvement compared to the 1990-92 level, when the discrepancy averaged -\$120 billion (or about 1.1 percent of gross current account transactions). Among the different components of the global current account, the largest discrepancy continued to appear in investment income (especially for portfolio and "other" investments), followed by that for trade in goods. The asymmetry shown for recorded trade flows in services was the smallest.

With regard to factors accounting for these discrepancies, the ongoing liberalization of financial markets and proliferation of financial instruments, for example, have exacerbated the difficulty of estimating investment income, especially when investment flows (particularly portfolio investment) themselves are not easily captured. As concerns goods, developments such as the European Union's reliance on the administration of the value-added tax to collect intra-EU trade data directly from enterprises, as opposed, in the past, to Customs data, have posed challenges to the measurement of trade among EU members. Most of the discrepancies related to services trade, which are found in transportation transactions, can be attributed to difficulties in measuring movement in ocean freight.

The statistical discrepancy in the global financial account continued to decline. The discrepancy was about \$70 billion in 1995, compared to an average amount of \$85 billion for 1994 and 1993, and an average discrepancy of \$130 billion for 1990, 1991, and 1992. This approximates 2 percent, 4 percent, and 7 percent, respectively, of reported financial inflows and outflows in these three periods. (A positive statistical discrepancy in the global financial account indicates an understatement of capital outflows, an overstatement of recorded inflows, or both.) Among the various types of financial flows, the largest asymmetry was recorded for portfolio investment, a broad category that includes equity and debt securities (such as bonds and notes, money market investments, and financial derivatives). For portfolio investment, recorded flows in liabilities in 1995 exceeded those in assets by nearly \$150 billion. In that year, the discrepancy for other investment was about -\$40 billion. The asymmetry for direct investment flows remained the smallest, at about \$20 billion.

As noted, the liberalization of financial markets and the proliferation of financial instruments have outpaced traditional methods of capturing many portfolio and other investment flows. In many countries, such methods have largely relied on reports of domestic financial institutions on international financial flows that pass through them. The increasing portfolio and other investment flows that bypass domestic financial channels are often not captured in countries'

1996 Yearbook

*Statistical
discrepancy in
global current
account improved
since 1992*

*Discrepancy in
financial account
also declined*

balance of payments. In addition, as countries' financial activities become more globalized, cross-border financial transactions increasingly represent capital flows among worldwide offices and branches of countries' financial institutions. These developments have complicated the identification of transactions between residents and nonresidents, the basic concept underlying the balance of payments accounts.

IMF initiatives to improve balance of payments statistics

Although the statistical imbalances in the global current and financial accounts of the balance of payments have declined in recent years, significant discrepancies persist in a number of the components. This is notably the case for the investment income component in the current account and the portfolio and other investment flows in the financial account.

In a major effort to improve countries' data on cross-border portfolio investment and related income flows, the IMF, in collaboration with participating countries, is coordinating a survey of international portfolio investment. The survey requires participating countries to collect comprehensive data on their residents' ownership of foreign securities (equities and long-term bonds and notes) as of December 31, 1997. The purpose of the survey is to improve statistics on cross-border ownership of securities as well as of associated financial flows and investment income. (See also article on p. 3.)

The IMF also encourages countries to use international banking statistics compiled by the Bank for International Settlements (BIS) to enhance their estimates of "other" investment flows in balance of payments. The BIS data contain an extensive array of detail on banks' international assets and liabilities; data are reported on total and nonbank positions by country and currency. The reported assets include deposits and balances placed with nonresident banks (including banks' own related offices) and loans and advances to foreign bank and nonbank customers. Similarly, on the liability side, they take account of deposits and loans received from nonresident banks and nonbanks. By aggregating the reported data on a country-by-country basis, the BIS is able to derive a statistical series on the external positions of banks vis-à-vis the bank and nonbank sectors in some 200 individual countries. (See also *IMF Balance of Payments Statistics Newsletter*, June 1996, pp. 11–15.)

In addition, beginning with the 1996 *Balance of Payments Statistics Yearbook (Yearbook)*, the IMF for the first time presents descriptions of methodologies, compilation practices, and data sources that individual member countries employ in compiling their balance of payments. These technical reviews are provided by countries. They are designed to facilitate readers' use of the data presented in the *Yearbook* and to enhance their understanding of the data coverage, as well as data limitations. They are also intended to inform national balance of payments compilers of the data sources and compilation practices of their counterparts in other countries. In this way, the reviews should help to foster cooperation and the exchange of ideas among national compilers. The reviews also should encourage them to improve their data. □

¹An abridged version of the analysis appeared in the February 10, 1997 issue of the *IMF Survey*.

Chart 1
Growth Rates of World Trade in Goods and Services
 (Percent)

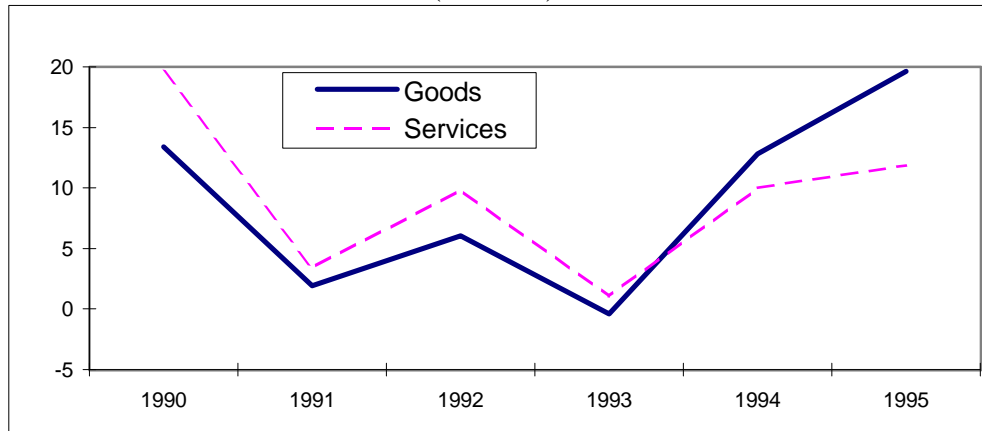


Chart 2
Net Financial Flows
 (Billions of U.S. dollars)

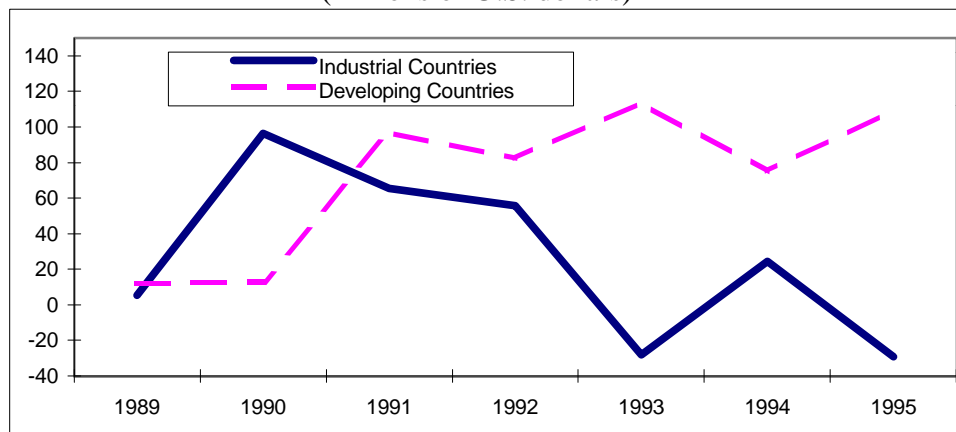
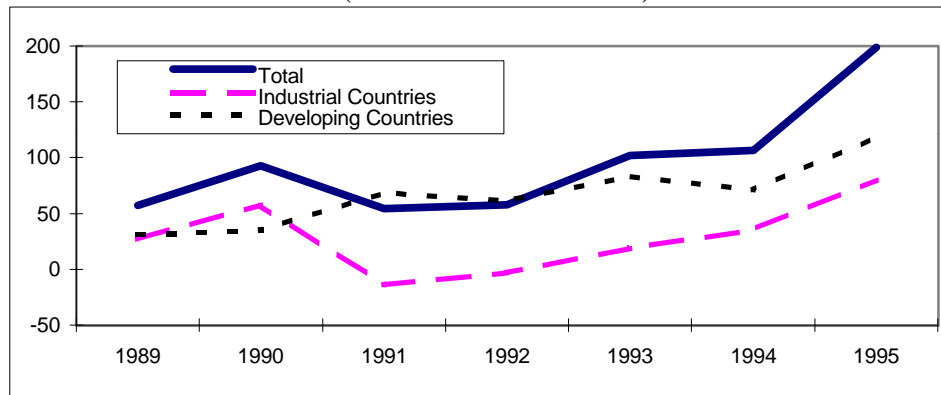


Chart 3
Changes in Reserve Assets
 (Billions of U.S. dollars)



Source: Balance of Payments Statistics Yearbook, Part II, 1996

Industrial Countries: Summary of International Transactions
(Billions of U.S. dollars)

	1989	1990	1991	1992	1993	1994	1995
Current account (net)	-91	-120	-45	-49	24	-11	11
Goods	-34	-37	2	38	100	94	125
Credits	2,118	2,435	2,478	2,635	2,545	2,857	3,400
Debit	2,152	2,472	2,476	2,597	2,445	2,763	3,276
Services	3	5	24	28	32	30	17
Credits	541	657	693	768	752	821	887
Debits	538	652	668	740	720	791	871
Income	5	-6	-12	-19	-10	-24	-25
Credit	616	744	773	791	797	856	1,055
Debit	611	750	785	810	807	880	1,080
Current Transfers	-65	-82	-59	-97	-98	-110	-106
Credit	81	99	153	117	105	104	128
Debit	146	181	212	214	203	214	233
Capital account (net)	3	0	5	7	5	-2	7
Financial account (net)	56	96	66	56	-28	25	-29
Direct investment	-45	-55	-74	-61	-70	-72	-69
Abroad	-212	-224	-187	-179	-207	-211	-278
In reporting economy	167	170	113	118	136	140	209
Portfolio investment	69	45	94	57	76	9	143
Assets	-281	-169	-317	-328	-538	-307	-398
Liabilities	350	214	411	385	613	316	541
Other investment	59	164	31	57	-15	123	-22
Assets	-611	-510	1	-227	-362	-145	-536
Liabilities	670	674	30	283	347	268	514
Reserves	-27	-58	14	3	-19	-36	-80
Net errors and omissions	31	24	-26	-13	-1	-12	12

Data Source: IMF Balance of Payments Statistics Yearbook, 1996

Developing Countries: Summary of International Transactions
(Billions of U.S. dollars)

	1989	1990	1991	1992	1993	1994	1995
Current account (net)	-13	-15	-83	-70	-110	-76	-103
Goods	51	53	28	6	-27	3	-10
Credits	913	1,000	1,029	1,092	1,182	1,354	1,636
Debit	862	947	1,002	1,086	1,208	1,351	1,646
Services	-37	-46	-64	-55	-50	-38	-38
Credits	178	203	198	218	250	287	346
Debits	215	248	261	273	300	325	383
Income	-61	-62	-60	-66	-74	-79	-100
Credit	61	69	70	68	64	71	87
Debit	122	131	129	134	138	150	187
Current Transfers	35	40	13	46	40	37	44
Credit	65	84	84	88	85	86	95
Debit	29	44	71	42	44	48	50
Capital account (net)	2	12	3	5	5	7	4
Financial account (net)	12	13	97	82	114	75	109
Direct investment	16	21	34	36	58	75	89
Abroad	-11	-11	-7	-12	-15	-16	-19
In reporting economy	27	32	41	48	74	91	108
Portfolio investment	2	5	20	41	104	83	31
Assets	-5	-17	-11	-7	-10	-19	-11
Liabilities	7	22	31	49	114	101	42
Other investment	25	22	111	65	34	-12	108
Assets	-32	-37	41	3	-23	-58	-43
Liabilities	57	59	70	62	57	46	151
Reserves	-31	-35	-69	-61	-83	-71	-119
Net errors and omissions	-1	-10	-16	-18	-8	-5	-10

Data Source: IMF Balance of Payments Statistics Yearbook, 1996

On the Measurement of Financial Derivatives

In April 1997, the Statistics Department of the IMF circulated to statistical agencies in all IMF member countries a discussion draft for comment on the *Statistical Measurement of Financial Derivatives*. The discussion draft is intended to be a comprehensive document that will clarify and amplify the guidelines on financial derivatives contained in the 1993 System of National Accounts (1993 SNA) and fifth edition of the IMF's *Balance of Payments Manual (BPM5)*. The draft includes examples of how to treat certain transactions and positions in financial derivatives. It also provides a glossary of terms.

In many respects, the draft endorses the key recommendations of the 1993 SNA and BPM5. It notes that financial derivatives should be treated as financial assets and that such transactions should, in general, be treated as separate transactions, rather than as integral parts of the underlying financial assets from which they are derived. Nonetheless, it recommends that some changes be made to the 1993 SNA and BPM5 guidelines. Most notably, it proposes that net settlement payments on interest rate swaps and forward rate agreements be recorded in the financial account, as opposed to the current account. This article summarizes the main conclusions of the discussion draft and explains their rationale.

What are financial derivatives?

The discussion draft refines the description of financial derivatives as set forth in the 1993 SNA. According to the draft, "Financial derivatives are financial instruments that are linked to a specific financial instrument or indicator or commodity, and which involve the trading of financial risk. Financial derivatives are used for a number of purposes including risk management, hedging, and speculation.¹ Unlike debt instruments, no principal amount is advanced to be repaid; no investment income accrues. The value of a financial derivative derives from the price of an underlying item."

As compared with the description of financial derivatives in the 1993 SNA, a significant addition here is that of "trading of financial risk." For instance, parties to a swap arrangement exchange their risk exposure, and by creating new contracts with third parties can further trade the risk underlying the swap to others. Similarly, other forward-type contracts and options are instruments through which financial risk can be traded from one party to another. In short, financial derivatives enable parties to trade risk to other entities who view the same risk differently. Moreover, financial derivatives contracts are usually settled by net payments of cash—often before maturity in the case of exchange-traded contracts such as commodity futures—and they do not require ownership or delivery of an underlying item. This logically follows from the use of derivatives to transfer risk independently of the ownership of the underlying item.

To clarify what a financial derivative instrument is for statistical purposes, the discussion draft provides examples of what are **not** financial derivative instruments for statistical purposes. These include:

- **Fixed price contracts**, if the main purpose of the contract is to deliver an underlying item in exchange for cash (or some other asset). For

Financial Derivatives

Financial derivatives are instruments that, among other things, provide for the trading of financial risk

Financial Derivatives

instance, a commercial contract to deliver a commodity is not a financial derivative unless, as is the case with commodity futures, it is traded as a standardized contract on an exchange so that financial risk can be traded.

- **Timing delays** arising in the normal course of business, which may entail exposure to price movements. Such timing delays include normal settlement periods for spot transactions in financial markets and those that arise in the normal course of trade in goods and services.
- **Insurance** because its purpose is not to facilitate trading of financial risk but rather to provide individual institutional units exposed to certain risks with financial protection against the consequences of the occurrence of specified events.
- Contingencies, such as **guarantees and letters of credit** because their purpose is not to facilitate the trading of financial risk but rather to make payments under specified conditions.
- **Embedded derivative-like features** of standard financial instruments that are an inseparable part of the underlying instrument because the risk element cannot be separately traded.

Which financial derivatives are financial assets?

To distinguish financial assets from other financial arrangements that are not assets, the *1993 SNA* notes that most financial assets involve unconditional relationships between debtors and creditors. Arrangements that are conditional to one or both parties are generally to be excluded from financial assets, although a conditional arrangement can be a financial asset if the arrangement itself has market value. “Tradeability” is, of course, a sufficient condition for demonstrating value, but it is not a necessary condition. The *1993 SNA* does not specify other means for determining value but does allow for them, for example, in the case of a “nontradeable” arrangement that can give rise to holding gains and losses.

A key characteristic of most derivatives contracts is that transactors commit themselves forward to an agreed price or set of prices at which they will, or are willing to, transact in an underlying “asset.” The value of a financial derivative derives from the difference between the agreed contract price(s) and the prevailing, or expected prevailing, market price(s), appropriately discounted, and in the case of options taking into account potential volatility of the price of the underlying instrument, the time to maturity, and interest rates. More details on how value is established for financial derivatives are set out in the discussion paper.

Of course, to calculate the value of any financial derivative instrument it is essential that a prevailing market price for the underlying item be observable. It is no coincidence that the most frequently traded over-the-counter financial derivatives—interest rate swaps, forward rate agreements (FRAs), foreign currency swaps, and forward foreign exchange contracts—are based on underlying items for which prevailing market prices are readily observable. These are common financial risks to be “managed,” and they can be readily valued. The draft suggests that, in the absence of an observable price for the underlying item, the “financial

derivative” cannot be valued, cannot be regarded as a store of value, and thus cannot be regarded as a financial asset.

Treatment of selected instruments

The draft considers the treatment of specific financial derivative instruments:

- Interest rate swaps, FRAs, foreign currency swaps, and forward foreign exchange contracts. The draft proposes that all transactions in these instruments be recognized as financial assets because they are stores of value and can generate holding gains and losses. The draft proposes that net settlements of interest rate swaps, FRAs, and the interest component of currency swaps be recorded in the financial account, not in the current account, of the balance of payments.
- Credit derivatives, a relatively new group of instruments. The draft concludes that there is no inherent reason why a credit derivative cannot be classified as a financial asset, but classification depends upon the characteristics of the specific instrument in question.

Treatment of margin payments

In the *1993 SNA* (paragraph 11.40) a distinction is made between “initial” and “variation” margin, reflecting common terminology in organized financial derivatives markets. However, as the use of margin or collateral has become more prevalent in financial markets and as different institutional arrangements exist in different markets, it has become apparent that the terms “initial” and “variation” have limited applicability. They can convey different meanings to different compilers. As a consequence, in order to clarify, rather than revise the recommendations contained in the *1993 SNA* and *BPM5*, the draft emphasizes the terms “repayable” and “nonrepayable” margins. A repayable margin resembles an initial margin, and a nonrepayable margin resembles a variation margin.

A repayable margin is a margin or collateral that remains under the ownership of the entity that deposits the margin. While the use of the margin/collateral may be restricted, if the entity depositing the margin retains the risks and rewards of ownership, such as the right to receive dividends, coupons, and/or interest from the debtor, it still owns the margin. The discussion draft suggests that the type of financial asset being deposited as a repayable margin determines whether entries are required in the national accounts. When repayable margin deposits are made in “currency and deposits,” transactions are recorded in the financial account under “currency and deposits.” When repayable margin deposits are made in noncash assets, such as securities, no transactions are recorded in the national accounts. This is because there has been no change in ownership of these assets

A nonrepayable margin is a margin or collateral that once paid is no longer owned by the entity that pays the margin: that entity no longer has the right to the risks and rewards of ownership, such as receiving dividends, coupons,

Financial Derivatives

*Treatment and
classification
issues merit close
attention*

Financial Derivatives

and/or interest from the debtor. The discussion draft suggests that the payment of a nonrepayable margin will always require entries in the national accounts because a change in ownership of the asset has occurred.

Classification issues

In the *1993 SNA*, all financial derivative contracts that are financial assets are included under “securities other than shares.” Within the balance of payments, *BPM5* recommends that financial derivative transactions and positions should primarily be included under “portfolio investment.” However, if a monetary authority owns or transacts in financial derivative assets and the assets meet the criteria of a reserve asset, such transactions and positions could be included under “reserve assets.” Alternatively, if the transactors are in a direct investment relationship, such transactions and positions are to be recorded under “direct investment.” The discussion draft suggests that financial derivatives could be recognized as a separate instrument category of financial assets in the national accounts and as a separate functional group in the balance of payments, reflecting their distinct characteristics. □

¹The use of financial derivatives can reduce transaction costs and/or facilitate price discovery.

Canada's Approach for Recording Foreigners' Portfolio Investment in Canadian Bonds

Canada

Foreign holdings of Canadian bonds represent a substantial portion of Canada's external liabilities. For this reason, Statistics Canada has developed an elaborate statistical system for recording such holdings. The Canadian system is noted for the detailed information it elicits on each bond. This includes the name, sector, and industrial classification of the Canadian issuer; the dates of issue and of maturity, the currency of issue, the interest rate, the timing of payments of interest, etc.; the identification of foreign holders according to their respective country of residence or at least by broad geographical area and whether or not they are related to the Canadian issuer.

The major features of the Canadian statistical system for recording nonresidents' holdings of Canadian bonds include the various prices used to value bonds, the calculation of income, the derivation of capital transactions, the reconciliation between financial transactions and the positions outstanding, and the commissions incurred from issuing and trading Canadian bonds. This article, contributed by Lucie Laliberté of Statistics Canada, describes how these four features form an integral part of the system.

Bond Pricing

In the Canadian statistical system, four prices are maintained on bonds: issue prices, maturity prices, the book value of the issuer, and market prices at year-ends.

The issue price represents the proceeds received by the issuer when issuing the bond. The maturity price is the amount the issuer will pay the holder on the date of redemption of the bond. The book value tracks the costs of the issuer, that is, the issue price plus the accrued interest on the bond. The accrued interest is calculated as the accrual of the coupon plus the accrual of the difference between the issue price and the maturity price.

The market price is either obtained from the bond trading survey in the month preceding the valuation or calculated using the following formula:

$$\text{Present value} = \sum_{t=1}^N \frac{C}{(1+i)^t} + \frac{M}{(1+i)^N}$$

where C is the coupon rate times the maturity value, i.e.,
coupon interest for the year
 N is the number of years left to maturity
 M is the maturity value
 i is the market yield of the bond

The market yield "i" is an external variable introduced into the system. It is a very complex variable derived using market information as well as risk differentials among the various sectors of Canadian issuers.

Canada

Canadian system based on bond pricing, income, and other key information . . .

Investment income from holding bonds

Income from bonds can be calculated in a number of ways. They represent variations of two main methods: the cash (realized) method or the accrual (expected) method.

Cash (realized)		Accrual (expected)	
Coupon (Case 1)	Coupon and capital (Case 2)	Coupon (Case 3)	Coupon and capital (Case 4)

Case 4 is retained for determining income in the Canadian system, with the income calculated from the point of view of the Canadian issuer (as opposed to the foreign holder). The income is calculated as the accruals of the coupon plus the amortization of the difference between the issue price and the maturity price.

Financial transactions

Financial transactions are of four types: new issues, retirements, trade in outstanding securities, and amortization and changes in interest payable.

New issues represent the amount received by the Canadian issuer from foreigners at the time of issue. Retirements represent the amount of capital reimbursed by the issuer to foreigners on the date of maturity of the bond. Retirements are generated automatically by the system at maturity.

For trade in outstanding bonds, two prices are provided by the broker: the transaction price and the par value of the bond. The transaction price is recorded in the financial account. The par value is used to determine the book value.

Amortization arises from the income accrual of the difference between the issue price and the maturity price over the life of the bond. Changes in interest payable arise from the accrual of the coupons. These two components represent the capitalization of that portion of income recognized but not yet been paid out by the Canadian issuer.

Reconciliation between capital flows and positions

The value of foreign holdings of Canadian bonds fluctuates from one period to another as a result of transactions with nonresidents as well from price changes in the value of the bonds held, including exchange rate fluctuations for bonds denominated in foreign currencies. The Canadian system calculates the effect of the exchange rate by taking into account the transactions in original currencies and assessing their effects when bonds are converted into Canadian dollars at the end of prescribed periods.

In Canada's international investment position, the book value is currently used to value bonds at the end of the period. The change in the book value from one year to the next is due to financial transactions and valuation changes that occurred during the period. Financial transactions on a bond are recorded at trans-

actions prices¹ but the position is priced at the book value. It is therefore necessary to calculate the difference between the transaction prices and the book value for all the financial transactions of the period. This is a first valuation change. In addition, for transactions on bonds denominated in foreign currencies, it is also necessary to calculate the difference between the exchange rate used for transactions and that used to value the bonds at the end of the period. Finally, it is also necessary to calculate the difference between the exchange rate used to convert foreign currency bonds which were outstanding at the end of the previous period and which are still outstanding at the end of the next period.

Commissions

Commissions are calculated on two types of transactions: at issue and for trading in the secondary market. Income is generated at the time of issue from commissions paid by Canadian issuers to foreign financial intermediaries for issuing their bonds in foreign markets. Commission income is also generated on trading Canadian bonds with nonresidents, with Canadian financial intermediaries earning commissions from both the foreign sellers and the foreign buyers of Canadian bonds.

Summary

In the Canadian statistical system, foreign holdings of Canadian bonds are valued according to four prices. First, the issue price is maintained to derive the amount of new issues and, if the issue price differs from the maturity price, to accrue this difference as income. Second, the maturity price is also maintained to derive the amount of retirements and to compile the income arising from coupons as well as from the difference, if any, between the issue and maturity prices. The book value of the Canadian issuers is maintained to track the income expense incurred by Canadian issuers that has not been paid out. Finally, the market price is also maintained in the Canadian system on the basis of market observations, when available, or calculation otherwise.

The investment income on foreign holding of Canadian bonds is calculated as that incurred by the Canadian issuer. Income on commissions is calculated for new issues (i.e. incurred by the issuer) as well as for trading in the secondary market (i.e., earned by both Canadian and nonresident intermediaries).

The degree of detail maintained and the flexibility of the Canadian system make it possible to generate many more variables than have been covered in this article. An additional variable generated include the funds that will be needed to service the debt in the years to come, taking into account the coupons to be paid as well as the retirements that are expected. The system enables one to analyze the term to maturity of the debt and its evolution throughout the years. It is also possible to derive a weighted coupon rate on the external bond liability or the size of the foreign versus domestic currency portion of bonds held by nonresidents. □

¹The transaction effectively occurred at the market price which prevailed at the time the transaction occurred. To the extent that there are several transactions on a bond during a period, there will be as many market prices as there are transactions. This is why the term "transaction prices" is used to stress the fact that there may be more than one market price.

*... yielding
detailed data on
nonresidents'
holdings of
Canadian bonds*

Netherlands' Quality Control of Balance of Payments Statistics

Data quality is fundamental to the usefulness of economic and financial statistics. Data quality has many aspects. Among them are (1) reliability, that is, not subject to many substantial revisions; (2) accuracy, that is, the approximation of "true" figures; (3) timeliness; (4) consistency with other statistical measures; (5) international comparability; (6) easy access to the data by the public; and (7) transparency, that is, good documentation of the methodology used to compile the data and data sources. To enhance the usefulness of their balance of payments data, countries are developing various quality control mechanisms. This article discusses new data quality control initiatives the Netherlands has introduced. It is the second article that addresses the issue of the quality of balance of payments statistics that has appeared in this Newsletter. Previously, this Newsletter presented an article on the quality control methods of Australian compilers. (See IMF Balance of Payments Statistics Newsletter, December 1996, pp.16-19.)

The Netherlands is making major changes to its balance of payments compilation system as it prepares for European Monetary Union (EMU), strives to promote international harmonization of statistics, and works with a selected group of major respondents. Moreover, the country is gradually transforming its "closed" reporting system into a "semi-open" one. This will afford balance of payments compilers the prospect of exploiting related data sources and cooperating more closely with compilers of national accounts. The considerable growth in Netherlands' volume of balance of payments transactions and the reporting burden on respondents, especially since the mid-1980s with the liberalization of capital markets, also have given impetus to changes made to the Netherlands' compilation system. One major innovation in the Netherlands' compilation system is the introduction of new quality control tools in the form of a meta information system (MIS), which has been integrated into an automated compilation process. The MIS provides profiles of respondents and operational updates on the compilation process. It is used to reduce the impact of nonresponses and late responses and, more generally, to upgrade the quality of the balance of payments data. The new compilation procedures are intended to provide a better tradeoff between timeliness and reliability of data. The compilation process is monitored from its beginning, i.e., upon receipt of data from individual respondents, to its end, i.e., the publication of the aggregate data. The transition to the new system is to take place over several years.

This article is an edited and abridged version of a paper provided by P. Kramer of the Nederlandsche Bank. It is based on observations of the bank staff and on findings of a task force on balance of payments statistics of the Statistical Information and Reporting Department of the Nederlandsche Bank, which Mr. Kramer supervised.

Introduction

In the Netherlands, a variety of features of quality are monitored in conjunction with the balance of payments compilation process. Quality control during the compilation of statistics is essential to ensure the quality of aggregate data. An assumption is made that superior quality data will be comparable on an

international basis and across related domestic statistical sets. Furthermore, errors and omissions, including reporting errors, will be smaller, and data revisions, not large or less frequent.

In the Netherlands, discrepancies now exist both on a bilateral level and within national data sets. For example, in comparing Dutch and German balance of payments data, Dutch exports to Germany do not equate with German imports from the Netherlands. To minimize such quantitative international discrepancies, compilers have to work together to harmonize bilaterally and multilaterally specific definitions and concepts. (See *IMF Balance of Payments Statistics Newsletter*, June 1996.)

Within the Netherlands, quantitative differences exist among related national statistical sets, such as discrepancies between balance of payments and money and banking statistics for items that are supposed to measure the same phenomena. Steps to reconcile money and banking and balance of payments statistics with national accounts are under way in the Netherlands. Such efforts involve the adoption of common methodologies (for example, the *1993 Systems of National Accounts (1993 SNA)* and the fifth edition of the *IMF Balance of Payments Manual (BPM5)*) and common data sources for the different data sets.

More important, Dutch balance of payments data are updated many times. The Dutch compilers are now monitoring the frequency, magnitude, and patterns of the data revisions. They find that for most items, the preliminary observations show large underestimates, compared to revised ones; that revisions in the financial account items are larger and more erratic than those in the current account components; and that preliminary and final estimates often move in opposite directions.

The Dutch compilers have noted that underestimation is caused by nonresponses and late responses, as well as delayed processing of individual balance of payments returns. They have concluded that improved reporting and processing can help to reduce underestimation.

Key methods the Dutch compilers are introducing to enhance the quality of balance of payments data are described below.

Old versus new compilation methods and quality control tools

The development of new quality control measures in the Netherlands is going hand in hand with the gradual transition of the compilation process from a “closed” to a “semi-open” system. The old and the new compilation and quality control methods are summarized in chart 1. The important changes to the Netherlands balance of payments compilation practices have included the transition to a selected group of major respondents, the “opening” of the reporting system, and the reconciliation with other statistical sets. The new quality control methods will be based on a meta information system that enables checking of data from the micro level to the macro level.

Dutch balance of payments data traditionally have been compiled under a “closed” (self-balancing) system. Data have been collected on all payments and settlements between residents and nonresidents channeled through (1) accounts

Netherlands

*Netherlands
compilers adopting
new methods to
improve quality
control . . .*

Netherlands

... while moving from a "closed" to a more "open" compilation system

in authorized Netherlands financial institutions, (2) accounts in foreign banks, and (3) accounts with foreign firms or institutions. The reporting population consists of banks, individuals, and businesses (financial and nonfinancial).

An important aspect of the "closed" system is that many transactions are reported that do not have direct relevance for the balance of payments (e.g., payments between nonresidents). These are so-called "neutral" transactions. In the methodology of the self-balancing system, the neutral transactions function as a means of checking the completeness of the reported transactions relevant to the balance of payments. In the past the neutral transactions were reported in the Netherlands system to account for the difference between the opening and closing positions of an account. In principle, the balance of neutral transactions should have been nil. When that was not the case for any month, that was likely have been due to differences in timing or to classification errors.

Quality control in the case of the "closed" system was based on the following elements:

- The "closed" system permitted effective checking of the data reported, since all changes in accounts had to be reported and since the closing balance of an account in the previous period had to correspond to the opening balance of the account in the current period. The system included checks of neutral transactions.
- All changes in accounts had a counter-entry elsewhere in the balance of payments because of the simultaneous reporting of each underlying transaction. As a consequence, by definition, the Netherlands' balance of payments on a cash basis did not include the residual item of net errors and omissions. "Items in transit" were allocated to banking transactions and to various items making up private capital transactions.
- Transactions were compiled on a gross basis, i.e., they were not netted out with other transactions involving the same nonresidents.

As a result of deregulation of the financial markets and the liberalization of capital movements, the number of international transactions reported in the Netherlands' balance of payments compilation system has expanded dramatically since the early 1980s. In addition, owing to the massive volume and increased complexity of the transactions (most of which have been financial), the neutral transactions have lost much of their significance as a method of checking balance of payments data. For these reasons, the Nederlandsche Bank has altered its compilation and quality control methods.

The Nederlandsche Bank has started to "open" the system to compile balance of payments statistics.¹ This approach relies on reporting by a selected group of major respondents, the use of other relevant data sources, and the estimation of nonresponses and late responses. It also emphasizes harmonization of balance of payments and money and banking statistics and consistency of data among data sets. In particular, "net errors and omissions" are made an explicit part of the balance of payments. "Net errors and omissions" can arise as a result of erroneous and late reporting, data misclassification, and timing differences in transactors' recording of transactions.

Old and New Compilation and Quality Control Methods

Old Method

New Method

Compilation and Reconciliation With Other Statistical Sets

Accounts of respondents

- full coverage of accounts
- full coverage of transactions

Closed system:

- no errors and omissions
- no use of other data sources
- no estimates

- no harmonization between money/banking and BOP
- no consistency with national accounts

Accounts of respondents

- selected group of accounts/transactions
- neutral transactions not (fully) reported

Semi-open system:

- with errors and omissions
- use of other data sources
- estimates for nonresponses and late responses

- harmonization between money/banking and BOP
- consistency with national accounts

Quality Control

- no reconciliation between money/banking and BOP data
- partial use of meta information
- full use of meta information
- accounts of respondents
- plausibility check at macro level
- no monitoring of balancing items (errors and omissions)

- reconciliation between money/banking and BOP
- use of neutral transactions
- no use of neutral transactions
- economic entities: transactor
- plausibility check at transactor/sectoral/macro levels
- monitoring of errors and omissions
- monitoring of reliability and timeliness

The Nederlandsche Bank is establishing an MIS to control data quality. The MIS is integrated into the automated production process of balance of payments statistics. The MIS is based on:

- A register of foreign accounts and respondents. It shows the quantitatively most important respondents. Selected respondents are dealt with by the same employees. A sectoral breakdown of respondents supports detailed analysis of data provided by the various groups of respondents.
- Procedures to keep the register up to date. Coverage of the reporting population is monitored. New respondents are added, as necessary.
- Manuals with reporting instructions available to respondents. The quality of statistics depends on the quality of data that respondents provide. Good instructions and close contact between respondents and compilers add to the quality of individual returns and aggregate data.

When these elements of the MIS are in place, the optimal use of the meta information will be possible. The MIS will provide information to compilers in the form of various tables and graphs. It will specify such information as numbers of returns received and processed, causes of delays, and reporting practices by major respondents. It will also contain analyses of errors and omissions, revisions, and outliers. Such meta information will be made available on-line to compilers throughout the compilation process. This will enable compilers to undertake necessary adjustments.

Netherlands

New approach to emphasize selected major respondents, use of other relevant data sources, estimation of nonresponses and late responses

Netherlands

The meta information will supply an overall picture of the balance of payments statistics compilation process from the micro (individual respondent) to the macro (aggregate data) levels. Integrated information at both levels will facilitate the tracing of macro patterns or outliers back to the micro level. On the micro level, information will be gathered on the balance of payments transactions reported by major respondents for current and past periods. On the macro level, information will be collected on the total population and various balance of payments components. In particular, detailed information on errors and omissions will afford insights into the quality of the balance of payments data as a whole and provide tools to monitor and improve the quality of the data.

Schematic Overview of the Meta Information System (MIS)

Input: returns

- received/processed at cut-off date
- completeness
- non/late responses (incidental/structural)

Detailed information

- causes of delays
- missing returns (micro estimates)
- reporting practices of respondents
- balance of payments data per respondent
- time series per respondent

Output: compilation of statistics

- revisions
- trade-off between timeliness and reliability
- macro estimates based on missing returns

¹See "Adjustments in the Presentation of the Dutch Balance of Payments," De Nederlandsche Bank, *Quarterly Bulletin*, June 1994, pp. 51–55.