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Coordinated Portfolio Investment Survey

Prepared by the Statistics Department
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I. INTRODUCTION

1. This paper briefs the Committee on work in connection with the Coordinated Portfolio Investment Survey (CPIS). In particular, it discusses results for 2007 (which were initially released at end 2008 and updated in mid-2009), and discusses work completed as well as still planned on the CPIS Data Improvements Project, an initiative launched by the Statistics Department (STA) with Committee support in response to the rising level of interest in CPIS data for analytical and surveillance purposes and to address data quality concerns. Interest in the CPIS has been rising over the past year against the backdrop of the global financial crisis and the need to improve understanding of international financial linkages.

2. The results of the 2008 CPIS are scheduled to be released at end-December 2009. It is quite possible that the results from the 2008 survey will provide interesting and unusual information, due to the sharp decline in financial asset prices resulting from the financial and economic crisis that was deepening at the end-2008 measurement date. The fact that results from the 2008 survey will become available only after a lag of about one year from the point of measurement underscores points being made by many data users about releasing CPIS results more quickly, as well as providing more frequent data.

II. 2007 COORDINATED PORTFOLIO INVESTMENT SURVEY RESULTS

A. Portfolio Investment Assets

a. Total Portfolio Investment

3. Measured in US dollars, the total value of holdings of portfolio investment assets more than tripled between 2001 and 2007 (See Table 1). The total value of portfolio investment was $39.2 trillion compared to $12.7 trillion in 2001. Total portfolio investment increased by 19 percent in 2007, compared to a 27 percent increase in 2006. The total value of equity securities increased 21 percent in 2007 (compared to a 34 percent increase in 2006) and debt securities increased 17 percent in 2007 (compared to a 22 percent increase in 2006). The top ten holders of portfolio investment, from largest to smallest, were the U.S., the UK, France, Luxembourg, Germany, Japan, Ireland, the Netherlands, Italy, and Switzerland. Since 2001, total portfolio investment assets holdings increased an average of 21 percent per year in dollar terms.

4. Table 2 shows that, as in all previous years, the U.S. was the largest holder of portfolio investment assets, at $7.2 trillion, compared to $3.4 trillion for the U.K., the second largest holder. Among the top ten holders of portfolio investment assets, Ireland and France had the highest increase from 2006 to 2007 (24 and 22 percent, respectively) followed by the U.S. and Switzerland (20 percent each).

5. In 2007, the top ten holders of total portfolio investment assets were also the same countries on the lists of top ten holders of equity, long debt securities, and short-term debt securities, although in different order of importance for each of these types of securities. As in 2006, the U.S. held more equity than debt securities; the reverse circumstance was true for each of the other countries in the top ten. This structure has been unchanged for all top ten countries since 2001, except for Switzerland in 2001, when its holdings of equity exceeded its holdings of debt securities.

6. Table 3 provides a "from-whom to-whom" perspective for the CPIS data set. The U.S. held over $1 trillion in the UK, and it held almost half of that amount in Japan and in the Cayman Islands. U.S. holdings in France and Germany also were substantial.

b. Equity Securities

7. Among the top ten holders, from 2006 to 2007, Luxembourg had the highest increase in equity securities (23 percent), followed by the U.S. and Switzerland (21 percent each). Italy and Germany had the lowest increase (8 percent and 11 percent, respectively).

c. Long-Term Debt Securities

8. All the countries in the group of the top ten holders of long-term debt securities increased the level of their holdings. The average annual increase for the period 2001-2007 was highest in Ireland (30 percent) and lowest for Japan (12 percent).

d. Short-Term Debt Securities

9. From 2006 to 2007, Germany showed the highest increase (135 percent) in holdings of short-term debt securities among the top ten holders of these securities, followed by Italy (129 percent), the Netherlands (90 percent), and Switzerland (58 percent). For the first time since the series began, Japan increased its holdings of short-term debt securities (20 percent), while the U.S. decreased by 3 percent.

B. Derived Portfolio Investment Liabilities

a. Total Portfolio Investment

10. The "derived liability" tables are generated only when the sum of reported holdings of securities issued by a given country is at least US$10 million. The derived liability tables show, from the perspective of the economy issuing the securities, the value of securities held by nonresidents as "derived" from information reported by the holders of the securities (creditor information)[1]. Table 4 shows that, in 2007, the level of portfolio investment liabilities issued to nonresidents was highest for the US ($7.4 trillion), followed by the UK ($3.7 trillion), Germany ($3.2 trillion), and France ($2.4 trillion).

11. In terms of growth from 2006 to 2007, among the top ten countries, the Cayman Islands had the highest increase in portfolio investment liabilities (29 percent), followed by Luxembourg (24 percent), Germany (23 percent), Spain (21 percent) and the U.S. (16 percent). The growth in total portfolio investment liabilities was lowest in Japan with an increase of only 2 percent[2] (Japan also had the lowest increase in total portfolio investment among all the countries that participated in the CPIS.) Of the top ten countries, U.S. portfolio investment liabilities has grown the least during the period 2001 to 2007 (average annual increase of 16 percent), while Spain's growth was the highest (average annual increase of 30 percent).

b. Equity Liabilities

12. A breakdown of derived portfolio investment liabilities shows that, in 2007, nonresident holdings of U.S. equity were the highest ($2.4 trillion), followed by Luxembourg ($1.7 trillion), the UK ($1.6 trillion), and Japan ($1.0 trillion). In regard to the percentage change from 2006 to 2007, growth was highest for equity of Cayman Islands companies (49 percent), Germany (44 percent), and Luxembourg (28 percent). Nonresident holdings of equity in companies located in the Netherlands and Japan actually fell (-10 percent for the Netherlands, and -5 percent for Japan) in 2007.

c. Long-Term Debt Securities Liabilities

13. The total value of long-term debt liabilities issued by the top ten countries ($13.8 trillion) exceeded the sum of the value of equity ($10.7 trillion) and short-term liabilities ($2.0 trillion). The U.S. was the highest issuer of these liabilities ($4.3 trillion), followed by Germany ($2.0 trillion). In regard to the 2007 percentage change, long-term debt securities

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[1] Portfolio Investment: CPIS Data: Notes and Definitions (http://www.imf.org/external/np/sta/pi/notes.htm).

[2] Percent changes are calculated from unrounded numbers (i.e., data that are in millions of dollars). The data appearing in the tables are rounded to the nearest one hundred million dollars.

liabilities grew fastest for the Netherlands (from 3 percent in 2006 to 30 percent in 2007). After declining by 4 percent in 2006, growth was positive again in Japan (2 percent).

d. Short-Term Debt Securities Liabilities

14. Short-term debt securities liabilities represented only 7 percent of derived portfolio investment liabilities in 2007. In 2007, the average growth rate of these liabilities was the highest of the three instruments among the top ten countries in the CPIS series. Creditor data show that the U.S. was the largest issuer of these instruments, followed by the UK, Germany, and France. From 2006 to 2007, growth was highest in Spain (60 percent), Japan (58 percent), and Germany (42 percent).

III. CPIS DATA IMPROVEMENTS PROJECT

15. During the past year, STA has created a Data Quality Improvements Team to improve the quality of CPIS data and to address some of the CPIS data quality concerns that have been raised. The review of the 2007 CPIS revealed several data discrepancies not only within the data set but also with the International Investment Position (IIP). Within the CPIS data sets, the 2007 results showed occasional inconsistencies between the reported totals and the sums of components. With respect to the IIP, the data reported under portfolio investment in the IIP statement was not always consistent with the data reported in the CPIS. In some cases, the inconsistencies date back to the beginning of the series in 2001. It is clear that it would not be feasible for very many countries to make revisions over such an extended period.

16. We are addressing the inconsistency within the CPIS data set by incorporating cross-checks to the CPIS report forms starting with the 2008 CPIS. These cross-checks automatically alert participating countries to any inconsistency that may exist, and allow the countries to correct the data before submitting them to the IMF.

17. Addressing the inconsistency between the CPIS and the IIP data sets may be more difficult to resolve because the reasons for inconsistencies are quite numerous and diverse. To understand the causes of the inconsistencies between the CPIS and the IIP data, we have compiled the respondents' responses to our inquiries about these differences. Several factors have been identified, including: (i) the exclusion of estimates of household's cross-border holdings of securities from the CPIS total holdings, which are included in the IIP; (ii) differences in the instrument coverage for the CPIS and the IIP; (iii) difference in the revision practices for the two series, or the absence of a revision policy for the CPIS; (iv) different source data for the two series; and (v) the fact that different agencies who may not closely coordinate are responsible for the two data submissions (CPIS and IIP data) to the IMF. These and several other issues identified by users constitute weaknesses of the CPIS (and IIP) data, which we identify and discuss in more detail in the next section.

IV. CPIS Limitations and Suggestions for Improvement

18. Several limitations of the CPIS data set were identified during the March 1-2, 2006 conference on the CPIS sponsored by the Bank of Spain in Madrid[3], and by internal (IMF) and other external users of these data.

19. Table 5 lists these limitations and relates them to elements of the Data Quality Assessment Framework (DQAF)[4], and Table 6 summarizes the responses. This examination highlighted several areas of concern or interest expressed by knowledgeable CPIS data users.

20. Table 6 shows that 13 DQAF elements can be associated with the CPIS "weaknesses." According to this table, the limitations or weaknesses that are the most mentioned by CPIS users are, by order of importance, related to scope (11 times), followed by consistency (7 times), classification/sectorization (6 times), source data (5 times), assistance to users (4 times), timeliness, resources, and data accessibility (3 times each), periodicity, revision policy and practices (2 times each), basis for recording, legal and institutional environment, and metadata accessibility (1 time each). Thus, in most cases, the weaknesses are not "errors" in the usual meaning of this word, but instead largely represent areas that the CPIS, as currently conducted, is not designed to cover but which might be considered as a future expansion of the survey. Nonetheless, there also are some errors in the CPIS, which the CPIS Data Improvements Project Team has already substantially addressed.

a. Scope

21. The issues with scope relate to the absence of geographical, sectoral, instrument, and institutional coverage of the CPIS[5]. With respect to geographical coverage, data users would like to see the list of participants include all countries that may hold large portfolio securities, such as the Caribbean countries that are financial centers and petroleum exporters in the Middle East.

22. CPIS data users would like sectoral coverage to be extended to holdings of households. (In theory, households should be covered now, but in fact their holdings are often missed because they are hard to capture.) They considered that a survey conducted by national compilers of securities that resident custodians hold on behalf of non-residents would help close a part of this data gap.

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[3] See http://www.bde.es/doctrab/confere/confee_7.htm.

[4] For a complete description of DQAF please refer to: http://dsbb.imf.org/Applications/web/dqrs/dqrsdqaf/

[5] Lane and Milesi-Ferretti: International Investment Patterns, November 28, 2005

23. With respect to instrument coverage, users have proposed the collection of separately identified or additional data, such as by type of asset-backed security, and holdings by private equity or hedge funds. Some data users asked about extending the CPIS coverage to include banking flows, including off-balance sheet items[6].

24. Finally, incomplete institutional coverage of the survey may result in under-reporting of assets. For example, some countries may comprehensively cover the holdings of their banking sector, but not those of their mutual fund industry or households (this point is related to some of the other points noted above).

b. Consistency

25. Users suggested that the CPIS be linked to other datasets such as the balance of payments, the IIP, and the Coordinated Direct Investment Survey (CDIS). With respect to IIP, it is possible to compare derived liabilities for every country with their corresponding liabilities reported through the IIP, with no counterpart country breakdown. In addition, CPIS data could be compared to domestic and international securities statistics[7], external debt statistics, and, to avoid double counting, the CDIS. Furthermore, the IMF could encourage balance of payments (BOP) and IIP compilers to use the CPIS as a benchmark when compiling these statistics. Other users have suggested to look at ways to integrate INFER with CPIS/SSIO/SEFER[8].

26. To ensure consistency within the CPIS data set, a comparison could be made between the data on liabilities reported by a country (CPIS encouraged item) with derived liabilities for this country. Even when country misallocations occur and bilateral asymmetries result, at an aggregate level, country liabilities should mirror other countries' assets. In some cases however, reported liabilities are a lot higher than derived liabilities. Part of this discrepancy is explained by key countries not reporting in the CPIS, but a check should be built into the CPIS whereby reported liabilities are compared to derived liabilities for countries that report these liabilities, and an effort should be made to further understand the causes for these differences.

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[6] BIS International Banking Statistics capture most of this information now, and so this recommendation would result in duplication.

[7] Following the publication of Part 1 in May 2009, Part II of the *Handbook on Securities Statistics* will cover debt securities holdings.

[8] INFER is the Instrument Composition of Transactions in Foreign Exchange Reserves, SSIO is the Survey of Securities Held by International Organizations, and SEFER is the Survey of Securities Held as Foreign Exchange Reserve Assets.

c. Classification/Sectorization

27. In regard to classification/sectorization issues, important suggestions were to consider expanding the breakdowns of securities by country (the country dimension is already quite complete in the CPIS), currency of denomination, instrument, and sector (of holder and of issuer). In addition, suggestions were made to expand information on the classification of securities by residency of issuer cross-classified by country of issue, as well as information on the maturity of debt securities. Another issue raised by users pertained to lack of harmonization of classifications across countries – for example, not every country uses the same definition of security – and it was felt that use of a centralized securities data base could be helpful. In addition, users have mentioned that the CPIS does not cover the domestic holdings of investors, and therefore does not provide a complete profile of the composition of portfolios but rather only details the geographical breakdown of the cross-border component of investment positions. Moreover, the CPIS reports aggregate holdings; it does not provide information on the composition of these holdings in terms of whether securities are issued (or held) by public or private institutions, nor the relative holdings of individual investors versus financial intermediaries. Finally, users have noted that the CPIS does not give details as to the "age profile" of holdings in terms of whether particular assets were recently acquired or have been held for a long time.

d. Source data

28. For some countries that participate in the CPIS, data collection methods may be inadequate[9]. Some users have encouraged collecting the CPIS data using the security-by-security system as is done by the ECB and some participating countries. Despite its cost, such a system could provide better quality data in terms of detail, including type of security, institutional sector of the resident investor/issuer, a full geographical breakdown of the assets, the currency of denomination, and the institutional/economic sector of the non-resident issuer[10]. In addition, a security-by security data collection would eliminate some of the discrepancies between the CPIS and the IIP data. Another advantage of the security-by-security system is that it may permit cross-checks that would reduce the possibility of double counting securities from both the CPIS and the CDIS.

29. Another issue that has been mentioned is that equity markets can be highly volatile, which means that valuations of equity, and the holders of equity, can change very quickly.

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[9] Lane and Milesi-Ferretti: International Investment Patterns, November 28, 2005

[10] See: The Use of Security-by-Security Databases for Portfolio Investment Statistics by João Cadete de Matos, Paula Casimiro, and Maria do Carmo Aguiar from the Bank of Portugal.

e. Assistance to Users

30. Efforts should be made to better promote the CPIS data by highlighting the analytical work that has been done with the CPIS data, and by addressing the changing requirements of the analysts. The monitoring of the CPIS mailbox (cpis@imf.org) could be improved, to help ensure that inquiries are immediately addressed.

f. Timeliness

31. Some users have noted that the lag between the measurement point and the release of the CPIS results limits the interest of analysts. At the Spain conference, some users suggested that the timeliness of the CPIS data should be improved to one year after the reference period. This improvement was adopted beginning in 2007, but there are now calls from users in the context of the Group of 20 Economies (G-20) work on information gaps (BOPCOM 09/16) and others to improve timeliness even further. Some users have noted that the use of SDMX might improve timeliness somewhat.

g. Resources

32. CPIS data users have noted that some small but active economies may lack the resources to compile the CPIS data and thus could not be included in the series. Other users have indicated the need to provide technical assistance to assist countries in order to produce a more complete series.

h. Data Accessibility

33. The CPIS web site (http://www.imf.org/external/np/sta/pi/datarsl.htm) consists of a large number of pages that, in some cases, have not been regularly maintained (see discussion of Metadata, below). There is a need to improve the dissemination format of the CPIS data. One idea is to develop software that allows for time series access. This software would allow data users to specify the range of data that they desire. This initiative has been discussed within the Fund and is being considered. Another idea that has been mentioned is to produce a matrix showing countries that report encouraged items. Each encouraged item would be a dimension in the IMF Data Warehouse to allow easy access to this data.

i. Periodicity

34. Currently, the CPIS data are annual. Initial results are released at the end of each year, and revised and more complete data are released in the middle of the following year. This periodicity is deemed low in a world in which financial information is available in real time. The dissemination of quarterly data should be considered.

j. Revision Policy and Practice

35. As mentioned earlier, the CPIS data are initially disseminated during the month of December. The disseminated data are marked preliminary and are revised during a mid-year revision exercise during the month of July. Regarding the differences between the IIP and the CPIS data, some countries have indicated that revising historical data would be very tedious, and that a switch to a security-by-security data collection method could reduce the need for revisions. The use of improved application software from developing a security-by-security system would enable them to maintain consistency between the IIP and the CPIS data.

k. Basis for Recording

36. Valuation of data reported in the CPIS should be at market prices. Data users did not note any weaknesses or suggest changes.

l. Legal and Institutional Environment

37. This element pertains to issues such as data confidentiality. Data users did not note weaknesses or suggest changes.

m. Metadata Accessibility

38. Currently the metadata posted on the CPIS web site have not been updated since 2006 for most countries and in some instances since 2003. The IMF could institute more frequent updates (such as biennial) of the metadata. Metadata templates could be sent to the countries along with the CPIS Survey. About ten countries that participate in the CPIS do not have any metadata posted on the CPIS website.

V. SUMMARY OF DATA QUALITY AND A WAY FORWARD

39. Overall, the quality of the published CPIS data is deemed adequate. That is, in general, the published data correctly show whether a given country is a large or small holder of portfolio investment. The year-to-year direction of change is probably correct, and the right judgments can be formed regarding whether the change in holdings is accelerating or decelerating. However, a number of data quality concerns have been identified (including concerns about errors and omissions), which particularly affect data at low levels of aggregation.

40. The data improvements work that is now underway (through the work of the STA CPIS Data Quality Improvements Team and other efforts) will address many of these problems, but solutions may not be found to some problems (such as the lack of reporting by some financial centers) right away. The increased level of interest in the from-whom to-whom dimension of the data places increased importance on data accuracy at lower levels of

aggregation. The interest in institutional sector information and other user requests also place increased importance on accuracy at lower levels of aggregation.

41. As noted in the Committee paper, "Statistical Developments Arising from the Current Crisis" (BOPCOM−09/16), the IMF and the Financial Stability Board (FSB) hosted a Users Conference in Washington, DC to inform the report to the G-20 containing a number of recommendations for statistical data improvement. In regard to CPIS data, a recommendation in the report was for all G-20 economies to participate in the CPIS, and for the IMF to continue its work to improve the coverage of significant financial centers in the CPIS. Another important recommendation flowing from the discussion at the conference was for the IMF, in consultation with the IMF Committee on Balance of Payments Statistics, to strive to enhance the frequency and timeliness of the CPIS data, and consider other possible enhancements, such as the institutional sector of the foreign debtor.

42. To address these recommendations, the IMF is interested in exploring whether Committee members could support a task force or team to advise the IMF on possible improvements and enhancements to the CPIS. They would contribute to a report, for consideration by the full Committee at next year's meeting.

Questions for Committee:

1. Do members of the Committee have any comments on the CPIS results for 2007?

2. Do members of the Committee have comments on priorities for enhancements to the CPIS?

Table 1: CPIS: Portfolio Investment Assets
(USD Trillion)

	Total	Equity Securities	Debt Securities
2001	12.7	5.2	7.5
2002	14.1	4.8	9.3
2003	19.0	7.0	12.1
2004	23.3	8.7	14.6
2005	25.9	10.6	15.3
2006	33.0	14.2	18.8
2007	39.2	17.2	22.0

Table 2: Top Ten Holders of Portfolio Investment
(USD Trillion)

	1	2	3	4	5	6	7	8	9	10		
	US	UK	France	Luxem-bourg	Germany	Japan	Ireland	Nether-lands	Italy	Switzer-land	Others	Total
2001	2.3	1.3	0.7	0.8	0.8	1.3	0.4	0.5	0.6	0.5	3.5	12.7
2002	2.2	1.4	0.9	0.9	0.9	1.4	0.6	0.6	0.6	0.5	4.1	14.1
2003	3.1	1.7	1.4	1.3	1.2	1.7	0.8	0.8	0.8	0.7	5.5	19.0
2004	3.8	2.1	1.8	1.6	1.5	2.0	1.1	1.0	0.9	0.8	6.8	23.3
2005	4.6	2.4	1.9	1.8	1.6	2.1	1.2	1.1	1.0	0.7	7.6	25.9
2006	6.0	3.1	2.5	2.4	2.3	2.3	1.6	1.3	1.1	0.9	9.5	33.0
2007	7.2	3.4	3.0	2.9	2.6	2.5	2.0	1.5	1.2	1.1	11.7	39.2

Table 3: Top Ten From-Whom-To-Whom 2007
(USD Trillion)

	1	2	3	4	5	6	7	8	9	10	11	
Investment from: Investment in:	U.S.	UK	France	Luxem-bourg	Germany	Japan	Ireland	Nether-lands	Italy	Switzer-land	Other countries	Total value
US	--	0.9	0.3	0.5	0.3	0.8	0.5	0.4	0.1	0.1	3.6	7.4
UK	1.1	--	0.3	0.2	0.2	0.2	0.4	0.1	0.1	0.1	1.0	3.7
Germany	0.4	0.2	0.4	0.4	0.0	0.2	0.1	0.2	0.1	0.1	1.1	3.2
France	0.4	0.2	--	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.7	2.4
Luxembourg	0.1	0.1	0.2	--	0.5	0.1	0.0	0.1	0.4	0.2	0.6	2.1
Cayman Islands	0.5	0.2	0.1	0.1	0.0	0.4	0.1	0.0	0.0	0.1	0.4	1.8
Netherlands	0.2	0.2	0.3	0.1	0.2	0.1	0.1	--	0.1	0.1	0.4	1.7
Italy	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.1	--	0.0	0.3	1.5
Japan	0.6	0.2	0.1	0.1	0.0	--	0.1	0.0	0.0	0.0	0.3	1.5
Spain	0.1	0.1	0.3	0.1	0.3	0.0	0.1	0.1	0.0	0.0	0.2	1.4
Other	3.5	1.3	0.8	1.0	0.7	0.6	0.4	0.3	0.3	0.4	3.2	12.4
Total value of investment	7.2	3.4	3.0	2.9	2.6	2.5	2.0	1.5	1.2	1.1	11.7	39.2

Table 4: Derived Portfolio Investment Liabilities: Top Ten Countries
(USD Trillion)

	1	2	3	4	5	6	7	8	9	10			
	U.S.	UK	Germany	France	Luxem-bourg	Cayman Islands	Nether-lands	Italy	Japan	Spain	Total: Top Ten	Others	Total Value of Investment
2001	3.1	1.3	1.2	0.8	0.5	0.4	0.7	0.6	0.5	0.3	9.4	3.3	12.7
2002	3.3	1.4	1.4	0.8	0.6	0.5	0.8	0.7	0.5	0.3	10.3	3.7	14.0
2003	4.2	1.8	1.8	1.3	0.9	0.7	1.1	1.0	0.7	0.5	14.0	5.0	19.0
2004	4.8	2.2	2.1	1.6	1.1	0.9	1.3	1.2	0.9	0.7	16.8	6.5	23.3
2005	5.3	2.4	2.1	1.6	1.2	1.1	1.3	1.2	1.3	0.8	18.3	7.6	25.9
2006	6.4	3.2	2.6	2.2	1.7	1.4	1.5	1.5	1.4	1.1	23.0	10.0	33.0

2007	7.4	3.7	3.2	2.4	2.1	1.8	1.7	1.5	1.5	1.4	26.7	12.5	39.2

Table 5: CPIS Data Weaknesses Reported by Users and Corresponding DQAF Element

USER	**CPIS Limitations/Weaknesses**	**Nature of Limitation or Weakness (DQAF Element)**
Bank of Japan	CPIS data would be more useful if it could collect asset-side data from Middle Eastern Countries.	Scope (Geographic coverage)
U.S. Federal Reserve Board	For business purposes, need monthly data in the major financial centers: Include banking flows (including off-balance sheet items)	Periodicity Scope (geographic and instrument coverage)
International Financial Services, London (IFSL):	*Comprehensiveness* Key countries	Scope (geographical coverage)
	Coverage of alternative investments, such as: - *Securitization:* Converts a future stable cash flow arising from a financial asset, usually a loan, into a lump sum cash advance. - *Private equity:* Any type of equity investment where equity is not freely tradable on a public stock market. - *Hedge funds*: Privately-pooled investment limited partnerships which fall outside many of the rules and regulations governing mutual funds. *Collection* of data on these alternative investments	Scope (Instrument coverage)
	Need to include cross-border investment in alternative assets in the CPIS if not currently covered. (Asset backed securities are mentioned in Compilation Guidance but only with respect to mortgage-backed obligations).	Scope (instrument coverage)
BIS	Late availability of the CPIS limits the interest of analysts.	Timeliness
	Frequency of CPIS low in this real-time financial and economic world.	Periodicity
	An insufficient promotion of the dataset.	Assistance to users (Advertising and promotion)
	Scope of reporting is different between countries	Source data
	Resource constraints in small but active centers.	Resources
	The specific case of direct investment (double counting)	Consistency
	The valuation at market prices.	Basis for recording
	The volatility of equity portfolios: holders can change	Source data

	very quickly.	
	Improve breakdowns (e.g. by country, currency, instrument, sector).	Classification
	How to respond to ever changing requirements of analysts?	Assistance to users
	Linking the information to other datasets: - Domestic and international securities statistics - External debt statistics.	Consistency
	Dealing with the confidentiality issue	Legal and institutional environment
	Its use as a benchmark by the BOP/IIP compilers should be encouraged by the IMF.	Consistency
	Prolong technical assistance.	Resources
	Research by academics should be promoted and sponsored	Usefulness
	Timeliness and dissemination should be improved, using the most up-to-date transmission tools (e.g. SDMX).	Timeliness/Data accessibility
	Links with other datasets relating to securities markets should be stepped up.	Consistency
ECB		
	Some countries are not (yet) reporting – petroleum exporters, some financial centers, some reserve holding economies	Scope (Geographical coverage)
	Classification by respondents – Residency of issuer and country of issue – Maturity of debt securities	Classification/Sectorization
	Coverage of household holdings – How to assess “third party holdings”?	Scope (sector)
	Harmonization of classifications across Countries – Base classifications on securities database – Collect data security-by-security	Classification/Sectorization Source data
	Coverage of reporting countries – Persuade more main holders of reserves to participate in the SEFER (preserving confidentiality)	Scope (Geographical coverage)
	Improve timeliness of data release – Aim at one year after the reference period	Timeliness
	Links towards the forthcoming CDIS – Identify equity of listed companies in CDIS	Consistency
	Improve coverage of third party (mainly households) holdings – Envisage survey of resident custodians about holdings	Scope (sector)

	of non-residents (if legal impediments can be overcome.	
Lane and Milesi Ferretti (2004, 2005)	The CPIS does not provide a complete profile of the investor base in international bond markets:	
	Holdings are underreported by some countries due to incomplete coverage or the complexities of tax-driven asset management structures (For instance, the German survey did not cover holdings by households)	Scope (sector)
	The bilateral data can be distorted by third-party holdings to the extent that final ownership of assets is not properly traced (This is a larger problem for those countries that primarily surveyed custodians rather than end investors.	Statistical technique
	The CPIS does not report the domestic holdings of investors; therefore, it does not provide a complete profile of the composition of portfolios but rather only details the geographical breakdown of the cross-border component of investment positions.	Classification/Sectorization
	The CPIS reports only aggregate holdings. It does not provide the decomposition in terms of whether securities are issued (or held) by public or private institutions and/or the relative holdings of individual investors versus financial intermediaries.	Classification/Sectorization
	The CPIS does not give details as to the "age profile" of the holdings in terms of whether particular assets were recently acquired or have been held for a long time.	Classification/Sectorization
Lane and Milesi Ferretti: International Investment Patterns, November 28, 2005		
	Incomplete country coverage. Among the countries/territories that did not participate to the CPIS, the largest holders of portfolio equity assets may be located in the Caribbean, east Asia, or Middle East.	Scope
	Under-reporting of assets. Under-reporting can be due to incomplete institutional coverage of the survey. For example, some Caribbean financial centers reported only the holdings of their banking sector (and not those of their sizable mutual fund industry); and a survey by a large	Scope

	European country did not cover holdings by households. Under-reporting is also likely to occur for countries that experienced substantial capital flight in the past (such as several Latin American countries) and, more generally, for assets held in offshore centers for tax shelter reasons.	
	Third-party holdings. Third party holdings refer to securities issued by country B and held by a resident of country A in an institution residing in country C. Such holdings do not pose a measurement problem when using end-investor surveys, but can lead to mismeasurement if the surveys are based on custodians (typically domestic ones, therefore missing assets held by foreign custodians on behalf of domestic residents).	Source data
	Problems in collection methods. For many countries this is the first participation to the CPIS, and therefore collection methods may still be inadequate.	Source data
Other Users	Broaden the scope of the data to include mutual funds.	Scope (instrument)
	Metadata Updates	Metadata accessibility
	Improve pattern of revisions	Revision policy and practice
	Highlight analytical work that has been done with CPIS data	Assistance to users (Advertising and promotion)
	Revise historical CPIS data for as many years as necessary	Revision policy and practice
	Web site improvement and maintenance	Data accessibility
	Improve data dissemination	Data accessibility
	Build support within the Fund and seek funding for the CPIS.	Resources
	Are there ways to integrate INFER with CPIS/SSIO/SEFER?	Consistency
	Monitor the CPIS mailbox (cpis@imf.org) on a regular basis.	Assistance to users
	Check if anything should be changed to comply with BPM6 requirements (template, CPIS Compilation guide)	Methodological soundness
	Promote internal use of CPIS within the IMF	
	Data availability by country Matrix showing countries reporting encouraged items. Each encouraged item could be a dimension in Data Warehouse so as to allow users to get this data more easily.	Data accessibility
	Compare data on liabilities reported by	Consistency

	a country (CPIS encouraged item) with derived liabilities for this country. Even when country misallocation occurs, resulting in bilateral asymmetries, country liabilities should be mirrored by other countries assets. In some cases however, reported liabilities are higher than derived liabilities, partly because of the lack of participation of key countries.	
	Compare derived liabilities for every country with their corresponding liabilities reported though IIP (with no counterpart country breakdown)	Consistency
	Increase cooperation with other institutions that produce data on securities such as the ECB which uses a security by security reporting system to ensure a reduction of discrepancies and give a uniform framework. Cooperation is also needed with the Working Group on Securities Database (WGSD) which comprises the IMF, BIS, ECB and WB.	International Cooperation

Table 6: Data Limitations of the CPIS: Classification According to DQAF Elements.

Rank	DQAF Elements	Number of Times Element is Mentioned
1	Scope (instrument and geographic coverage)	11
2	Consistency with other data sets	7
3	Classification/Sectorization	6
4	Source data	5
5	Assistance to users	4
6	Timeliness	3
7	Resources	3
8	Data accessibility	3
9	Periodicity	2
10	Revision policy and practice	2
11	Basis for recording	1
12	Legal and institutional environment	1
13	Metadata accessibility	1