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Work on Bilateral Asymmetries in the Coordinated Direct Investment Survey

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This paper updates the IMF Committee on Balance of Payments Statistics (Committee) on the results of the second exercise to analyze bilateral asymmetries in the Coordinated Direct Investment Survey (CDIS). With a very large response rate (90 percent), this exercise was of value for most of the 42 economies participating in the exercise: 88 percent favor regular bilateral asymmetries exercises, 70 percent were able to identify the main reasons for the discrepancies, and 55 percent will implement specific actions to reduce their asymmetries.

Since the exercise proves that bilateral collaboration is key to improving data consistency, Committee members are invited to support additional efforts in this direction. In particular, the CDIS work program will include the possibility of organizing a workshop for CDIS compilers to facilitate the exchange of confidential CDIS information.

I. BACKGROUND

1. [The Coordinated Direct Investment Survey](#) (CDIS) is a worldwide statistical data collection effort led by the IMF designed to improve the availability and quality of data on direct investment (DI), both in the international investment position at overall level and by immediate counterpart economy.² The IMF is making continuous efforts to broaden participation as well as to improve the quality of the reported data.
2. As part of these efforts, in May 2016, the IMF's Statistics Department (STA) conducted a project to raise awareness on (and to the extent feasible try to address) large bilateral asymmetries based on the 2015 CDIS release (for end-2014 CDIS data), contacting a total of 47 CDIS participants.
3. STA conducted a similar project in 2013 based on the 2012 CDIS release with a more reduced scope (28 CDIS participants).³ Both exercises provided insights into the reasons for asymmetries. They also helped some economies detect errors and consider taking actions to further improve the quality of their DI data.
4. At a global level, total inward direct investment should be equal to total outward direct investment for all economies. However, there are small differences in world totals as shown in Appendix I. These global differences have been decreasing in the last three years (less than one percent), which could imply an improvement in the quality of the CDIS data.

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² The CDIS database presents detailed data on inward DI positions cross-classified by economy of immediate investor, and data on outward DI positions cross-classified by economy of immediate investment.

³ As a result of this work, STA posted a paper, "[Coordinated Direct Investment Survey \(CDIS\): Project on Bilateral Asymmetries: June 2014](#)".

II. PURPOSE AND SCOPE

5. The main purpose of the project was to (i) contact CDIS reporting economies and bring information to their attention on the main bilateral asymmetries between CDIS data reported by them and mirror CDIS data reported by their main counterpart economies for end-2014 (or the latest reported year); (ii) encourage countries to address (explain and overcome) their asymmetries by reviewing their estimation techniques, contacting their counterpart economies, and assuring that their estimates were robust; and (iii) foster relevance of the CDIS metadata questionnaires, which provide detailed information on collection and compilation practices adopted by CDIS reporting economies, and include contact information.

6. The exercise focused on large target players, comprising OECD economies, most G-20 countries, BOPCOM members, and economies not included in the former categories with asymmetries over US\$25 billion that represented at least 25 percent of the total reported DI position with the counterpart economy (see Appendix II). In the future, the possibility to have a second phase to include other CDIS participants (regional emphasis) could be assessed.

III. METHODOLOGY

7. Following the above-mentioned criteria, the scope of the survey was **extended to cover a wider number of economies** (47 versus 28 in the previous exercise).

8. The following materials/inputs were distributed: (i) a **brief survey questionnaire** (Appendix III) on bilateral asymmetries to share their findings and any outcomes of their efforts and (ii) **an economy-specific Excel file** (Appendix IV), identifying *their top-ten asymmetries*, for **inward and outward DI**, as applicable, with information based on data posted on the CDIS website.

9. The exercise was successful as 42 economies, out of 47, completed the survey.

IV. MAIN REASONS FOR BILATERAL ASYMMETRIES

10. **Valuation**—Valuation of unlisted equity using criteria other than at own funds at book value (OFBV) (20 respondents) and listed equity using criteria other than at market value (13 respondents). The most common methodological discrepancy is the use of different valuation methods for DI equity. Countries should use OFBV⁴ for unlisted equity and market value for listed equity, however, the asymmetries caused by different valuation methods should not be significant.

⁴ According to 2015 *CDIS Compilation Guide*, paragraph 3.12, for the CDIS, where the focus is on consistency of valuation for bilateral data, unlisted equity and other equity should be valued using the concept of OFBV.

11. **Definition and coverage**—Limited or lack of coverage of SPEs (13 respondents) and fellows (9 respondents).
12. One main reason for CDIS bilateral asymmetries is the lack of coverage, particularly for SPEs. SPEs are entities that channel a large amount of funds between entities outside the economy in which they are located and have little presence in the host economy. Data on SPEs are difficult to collect and have a large impact on DI data.
13. **Geographical allocation of direct investment**—Some economies report data based on the ultimate (rather than the immediate) counterpart (12 respondents).
14. CDIS data should be reported by immediate counterpart economy. Countries with a geographical allocation based on the ultimate counterpart should be encouraged to move to that based on the immediate counterpart for CDIS reporting. While the discrepancies in country allocation should be corrected, they do not contribute to global asymmetries between inward and outward data.
15. **Collection methods**—Some economies are reporting consolidated data for the local enterprise group (14 respondents)
16. **Other**—Asset/liability basis data rather than according the directional principle, confidentiality, vintage issue, misreporting of country allocation, limited response of the private nonbank sector, etc.

Table 1. Identified Reasons for CDIS Bilateral Asymmetries

Identified reasons for bilateral asymmetries	Number of Responses
Different valuation method for unlisted equity	20
Different valuation method for listed equity	13
The use of the directional principle vs. asset liability principle	4
The use of the directional principle for fellows that are not located in the same country as the ultimate controlling parent (positions between fellows could be recorded by one country as positive inward and as negative inward for the other country - rather than as a mirror outward position)	5
Different treatment for permanent debt between selected affiliated financial intermediaries	2
Different data collection methods (enterprises vs. local enterprise group LEG)	14
Different geographic allocation (ultimate vs. immediate counterpart)	12
Differences in definitions of country or geographic territory	1
Confidentiality (for example for specific investments/ statistical units)	4
Lack of data coverage, or partial coverage for SPEs	13
Lack of data coverage, or partial coverage for Fellows	9
Other (please specify)	14

V. LESSONS LEARNED

17. **The bilateral asymmetries are an issue of interest**, proved by a 90 percent response rate to the survey (42 of 47); furthermore, all participants found bilateral asymmetries tables useful.

18. **Importance of metadata:** the CDIS metadata questionnaire has also proved to be useful in analyzing the reasons for asymmetries —34 economies (81 percent) favored the inclusion of main reasons for bilateral asymmetries in the metadata.

19. **Valuable exercise**

- 37 economies (88 percent) favor regular participation in bilateral asymmetries exercises.
- 30 economies (71 percent) were able to identify and report the main reasons for their large asymmetries. In many cases, this could be achieved via bilateral contacts with the counterpart jurisdictions.
- 23 economies (55 percent) plan to correct/revise their CDIS data, and 12 of them will revise their data for the December 2016 CDIS release.
- 19 economies are planning to implement specific actions or changes in their collection/compilation methods to reduce their asymmetries.
- 30 respondents (71 percent) agreed on posting bilateral asymmetries tables on the CDIS website (few, with minor changes) and 12 economies did not.⁵ For an example of this table, see Appendix IV.

VI. WAY FORWARD

20. CDIS future work program on bilateral asymmetries include:

- Conduct bilateral asymmetries exercises on regular basis
- Consider organizing a workshop in 2017 for CDIS compilers to facilitate bilateral exchange of information aimed at reducing asymmetries.
 - STA could approach the 37 economies that favor regular participation in bilateral asymmetries exercises and invite them to participate, through a detailed data reconciliation, desirably at the enterprises' level. A key factor for

⁵ In an effort to facilitate easier access to bilateral asymmetries data, STA considered the possibility of disseminating for each reporting economy a predefined table identifying top ten asymmetries for all CDIS reporting economies on the CDIS website, starting with the 2016 CDIS release. The table can be obtained from the data currently available at the CDIS website in “Table 3: Individual Economy Mirror Data”. STA requested views from all CDIS reporting economies (the 47 target economies and the remaining CDIS reporters) on the usefulness of such tables and on the possibility of disseminating them. The results of this wider consultation indicate that all CDIS reporting economies that responded considered the tables useful and 77 percent of them agreed on posting bilateral asymmetries tables on the CDIS website (few, with minor changes) and 23 percent did not.

participants would be possible legal constraints to exchange information that could be confidential.

- The workshop will be addressed to countries willing to exchange granular data with compilers from their partner economies. Participation will be voluntary and all participants will be committed to preserve the confidentiality of the data exchanged bilaterally.
 - STA role would be aimed at facilitating a venue for the exchange of information and providing methodological advice to economies involved.
 - It would be interesting to find out how this exchange of confidential data has been undertaken by countries and the legal basis underlying such an exchange to define the way to further progress in this area.
- Liaise with international organizations to explore synergies.
 - Assess whether new questions on bilateral asymmetries should be added to the CDIS metadata questionnaire (for example on main reasons that explain asymmetries; counterpart countries, instruments (equity/debt), type of investments, or sectors involved; future or current work to address/understand/reduce them; etc. Comments could be provided in a comment box in free text).
 - Individual bilateral asymmetries tables will not be posted on the CDIS website before contacting those economies that did not agree on posting their data.

21. In addition, STA will continue its efforts to improve data quality and granularity (particularly for G-20 economies, in line with recommendation II.13⁶ of the second phase of the G-20 Data Gaps Initiative) and to increase CDIS participation particularly in Francophone Africa and South America, as well as offshore centers.

Questions for the Committee:

1. *Do Committee members support the proposal to organize workshops for CDIS compilers to facilitate the bilateral exchange of information on DI aimed at reducing asymmetries? Committee members with experience organizing or participating in this kind of workshops are invited to share their experience.*
2. *Would Committee members agree to participate in the workshop planned to be conducted in 2017?*
3. *Do Committee members support adding new questions to the CDIS metadata questionnaire on bilateral asymmetries?*

⁶ Increase in the number of economies participating in CDIS including inward and outward data with the split by net equity and net debt positions, and the reporting of gross debt assets and liabilities positions.

Appendix I: World Table

	<i>US Dollar, Billions</i>			Number of CDIS reporters	
	Total Inward	Total Outward	Diff	Inward	Outward
2009	20,472	20,780	-308	91	62
2010	23,012	22,578	433	97	68
2011	24,339	24,741	-402	103	73
2012	26,795	27,015	-220	104	72
2013	27,668	27,696	-28	103	72
2014	26,903	27,041	-138	100	70

Notes:

Data Source: IMF [CDIS database](#), 2015 CDIS Release.

At global level, total inward direct investment should be equal to reported total outward direct investment. However, there are differences because (i) not all economies participate in the CDIS, (ii) not all CDIS reporting economies provide outward data, and (iii) there are some bilateral asymmetries.

Appendix II: List of Economies Targeted in the CDIS Bilateral Asymmetries Project

1	Australia	25	Japan
2	Austria	26	Korea
3	Barbados	27	Luxembourg
4	Belgium	28	Mauritius
5	Brazil	29	Mexico
6	Canada	30	Netherlands
7	Chile	31	New Zealand
8	China P.R. Hong Kong	32	Norway
9	China, P.R.: Mainland	33	Philippines
10	Cyprus	34	Poland
11	Czech Republic	35	Portugal
12	Denmark	36	Russian Federation
13	Estonia	37	Singapore
14	Finland	38	Slovak Republic
15	France	39	Slovenia
16	Germany	40	South Africa
17	Greece	41	Spain
18	Hungary	42	Sweden
19	Iceland	43	Switzerland
20	India	44	Turkey
21	Indonesia	45	Uganda
22	Ireland	46	United Kingdom
23	Israel	47	United States
24	Italy		

The list comprises OECD economies, most G-20, BOPCOM members, and economies not included in former categories with asymmetries over US\$25 billion that represented at least 25 percent of the total reported DI position with the counterpart economy.

Appendix III: Survey on the 2016 CDIS Bilateral Asymmetries Project

All fields with an asterisk (*) are required.
*1. Participating country/economy: (*Required)

2. Institution:

*3. Did you find the information in the table Top Ten CDIS Bilateral Asymmetries (attached to the email) useful? (*Required)				
<i>Select one.</i>				
<table border="1"> <tr> <td style="text-align: center;"><input type="radio"/></td> <td>Yes</td> </tr> <tr> <td style="text-align: center;"><input type="radio"/></td> <td>No</td> </tr> </table>	<input type="radio"/>	Yes	<input type="radio"/>	No
<input type="radio"/>	Yes			
<input type="radio"/>	No			

*4. The IMF is considering the possibility of disseminating a predefined table identifying top ten asymmetries for all CDIS reporting economies on the CDIS website, starting with the 2016 CDIS release (For your economy the table would be similar to the one attached. Data are based on information publically available). Would you have any reservations about this? (*Required)						
<i>Select one.</i>						
<table border="1"> <tr> <td><input type="radio"/></td> <td>No, I do not have any reservations.</td> </tr> <tr> <td><input type="radio"/></td> <td>Yes, I have reservations.</td> </tr> <tr> <td><input type="radio"/></td> <td>No reservations, subject to some changes (please, explain below)</td> </tr> </table>	<input type="radio"/>	No, I do not have any reservations.	<input type="radio"/>	Yes, I have reservations.	<input type="radio"/>	No reservations, subject to some changes (please, explain below)
<input type="radio"/>	No, I do not have any reservations.					
<input type="radio"/>	Yes, I have reservations.					
<input type="radio"/>	No reservations, subject to some changes (please, explain below)					
(Answer question number 4.1.)						

4.1 Please explain the changes.					
<table border="1"> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> </table>					

*5. Have you identified the reasons for your largest asymmetries? (*Required)		
<i>Select one.</i>		
<input type="radio"/>	Yes	(Answer question number 5.1, 5.2.)
<input type="radio"/>	Some	(Answer question number 5.1, 5.2.)
<input type="radio"/>	No, due to resource constraints	
<input type="radio"/>	No	

*5.1 Please indicate main reason(s) for the asymmetries. (select all that apply) (*Required)	
<i>Select at least 1 choice.</i>	
<input type="checkbox"/>	Different valuation method for unlisted equity
<input type="checkbox"/>	Different valuation method for listed equity
<input type="checkbox"/>	The use of the directional principle vs. asset liability principle
<input type="checkbox"/>	The use of the directional principle for fellows that are not located in the same country as the ultimate controlling parent (positions between fellows could be recorded by one country as positive inward and as negative inward for the other country - rather than as a mirror outward position)
<input type="checkbox"/>	Different treatment for permanent debt between selected affiliated financial intermediaries
<input type="checkbox"/>	Different data collection methods (enterprises vs. local enterprise group LEG)
<input type="checkbox"/>	Different geographic allocation (ultimate vs. immediate counterpart)
<input type="checkbox"/>	Differences in definitions of country or geographic territory
<input type="checkbox"/>	Confidentiality (for example for specific investments/ statistical units)
<input type="checkbox"/>	Lack of data coverage, or partial coverage for SPEs
<input type="checkbox"/>	Lack of data coverage, or partial coverage for Fellows
<input type="checkbox"/>	Other (please specify):
	<input type="text"/>

5.2 Please provide additional comments regarding the main reason(s) for the asymmetries you indicated above.
<input type="text"/>
<input type="text"/>
<input type="text"/>
<input type="text"/>
<input type="text"/>

*6. Did you contact your main counterpart economies to analyze asymmetries? (*Required)	
<i>Select one.</i>	
<input type="radio"/>	Yes
<input type="radio"/>	Some of them
<input type="radio"/>	No

*7. If you reviewed your counterparts CDIS metadata questionnaire, did you find it useful in analyzing the reasons for asymmetries? (*Required)	
<i>Select one.</i>	
<input type="radio"/>	Yes
<input type="radio"/>	No
<input type="radio"/>	Not applicable

*8. Would you find it useful that main reasons for bilateral asymmetries were included in the CDIS metadata questionnaire? (*Required)	
<i>Select one.</i>	
<input type="radio"/>	Yes
<input type="radio"/>	No

*9. Are you planning to implement any specific action or changes in your collection/compilation process to reduce the asymmetries? (*Required)	
<i>Select one.</i>	
<input type="radio"/>	Yes (Answer question number 9.1.)
<input type="radio"/>	No

9.1 Please describe the specific action or changes in your collection/compilation process to reduce the asymmetries.

*10. Are you planning to revise or correct your data for the next CDIS data submission to the IMF to reduce asymmetries? (*Required)	
<i>Select one.</i>	
<input type="radio"/>	Yes (Answer question number 10.1.)
<input type="radio"/>	No, will revise /correct in a subsequent submission
<input type="radio"/>	No

10.1 Please describe how you plan to revise or correct your data for the next CDIS data submission to the IMF to reduce asymmetries.

*11. Would you find it useful to regularly participate in the CDIS bilateral asymmetries project? (*Required)	
<i>Select one.</i>	
<input type="radio"/>	Yes
<input type="radio"/>	No

12. Please include any additional comments you may have regarding the bilateral asymmetries between CDIS data reported by your economy and by your main counterpart economies.

Appendix IV: Inward Direct Investment--Top Ten Bilateral Asymmetries Between Inward Reported by Australia and Outward Reported by Counterpart Economy

Australia (193), Period 2014

US Dollar, Millions

	Direct Investment Positions				Equity Positions (Net)				Debt Instruments Positions (Net)			
	Inward Reported by Australia	Outward Reported by Counterpart Economy	Difference in absolute value	% Difference	Inward Reported by Australia	Outward Reported by Counterpart Economy	Difference in absolute value	% Difference	Inward Reported by Australia	Outward Reported by Counterpart Economy	Difference in absolute value	% Difference
United States	134,029	180,315	46,286	35	72,022	111,138	39,116	54	62,007	69,177	7,170	12
United Kingdom	71,664	46,069	25,596	36	62,233	C			9,431	C		
Netherlands	31,527	50,886	19,359	61	22,162	31,340	9,178	41	9,365	19,545	10,180	109
China, P.R.: Hong Kong	9,404	17,591	8,187	87	6,471	16,873	10,401	161	2,932	718	2,214	75
Luxembourg	2,126	9,352	7,226	340	650	8,040	7,390	1,136	1,476	1,312	164	11
Japan	54,235	60,651	6,417	12	47,116	56,382	9,265	20	7,119	4,270	2,849	40
New Zealand	4,410	10,238	5,828	132	2,853	7,234	4,381	154	1,557	3,004	1,447	93
Ireland	657	5,870	5,213	794	340	6,614	6,274	1,843	317	-744	1,061	335
Korea, Republic of	2,585	7,388	4,803	186	2,142	4,851	2,709	126	443	2,537	2,094	473
South Africa	2,425	6,070	3,645	150	C	5,975			C	95		

Outward Direct Investment— Top Ten Bilateral Asymmetries Between Outward Reported by Australia and Inward Reported by Counterpart Economy

Australia (193), Period 2014

US Dollars, Millions

	Direct Investment Positions				Equity Positions (Net)				Debt Instruments Positions (Net)			
	Outward Reported by Australia	Inward Reported by Counterpart Economy	Difference in absolute value	% Difference	Outward Reported by Australia	Inward Reported by Counterpart Economy	Difference in absolute value	% Difference	Outward Reported by Australia	Inward Reported by Counterpart Economy	Difference in absolute value	% Difference
United States	111,751	47,340	64,411	58	99,637	45,061	54,576	55	12,114	2,280	9,834	81
United Kingdom	45,238	20,409	24,829	55	49,848	17,515	32,332	65	-4,610	2,894	7,503	163
New Zealand	50,546	40,589	9,957	20	49,247	32,618	16,629	34	1,299	7,971	6,672	514
Singapore	10,704	17,107	6,404	60	10,841				-138			
Belgium	564	-2,199	2,764	490	C	334			C	-2,533		
Mozambique	24	1,763	1,740	7,314	24	642	618	2,598	0	1,122	1,122	
Malaysia	4,949	3,432	1,517	31	4,047				903			
China, P.R.: Mainland	9,903	8,589	1,315	13	9,883	8,589	1,294	13	21		21	100
Japan	427	1,483	1,057	248	400	1,127	727	182	27	356	329	1,214
Thailand	454	1,503	1,050	231	511	1,292	781	153	-58	211	269	462

Notes:

- These tables show for a given reporting economy the top ten bilateral asymmetries by comparing inward (outward) data on direct investment positions as reported by the economy, with outward (inward) data as reported by its counterpart economies (mirror data).
- Asymmetries for direct investment positions are shown only when both the reporting economy and the counterpart economy report direct investment positions (inward or outward, as applicable), and when those positions with the respective counterpart are not confidential.
- For each of the above asymmetries, the table shows the breakdown for equity and debt instrument positions. Differences in equity and debt instrument positions are calculated only when both the reporting economy and the counterpart economy report this split, and when those positions with the respective counterpart are not confidential.
- Blank cells reflect data not available and cells with “C” reflect data that were suppressed by the reporting economy to preserve confidentiality.
- Data Source: 2015 CDIS Release (Table 3).