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### **Progress in Implementing IIP Enhancements— Brazil's Experience**

Prepared by the Banco Central do Brazil



## **Progress in Implementing IIP Enhancements – Currency Composition The Brazilian Experience**

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### **I - Introduction**

The Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6), published in 2009, confirmed the growing importance of the International Investment Position (IIP) in external sector statistics. For one side, it highlighted the need for an integrated analysis of flows and stocks – also allowing an additional tool for quality and consistency checks for both the balance of payments (BoP) and the IIP. For the other side, as the increasing international financial integration translates into higher IIP assets and liabilities, changes to the IIP have become be less related to BoP flows and more due to changes in prices and exchange rate movements<sup>1</sup>.

External vulnerability or liquidity conditions studies do not rely solely on capital flows financing current account deficits anymore. Other aspects such as the size and composition of external assets and liabilities, including its currency composition, are at least of the same importance. As such, analysts and policymakers now demand more detailed IIP data, with improved periodicity and timeliness. The issues they need to address include evaluating the adequacy of the size of the IIP assets to prevent speculative attacks or to face a sudden-stop in capital flows; the composition of IIP liabilities, more investment-related, turning the primary income account behavior more cyclical, or more debt-related; and also IIP liabilities shorter or longer maturity profile.

**Regarding currency composition, the main analytical issue from an emerging economy point of view seems to be who bears the exchange rate risk, the resident debtor (or investor) or the nonresident.** The IIP currency composition is also a first step towards compiling foreign currency exposures and currency mismatches.

On this scenario, BPM6 included tables A9-I-1a and A9-I-2a as encouraged tables for the compilation of currency composition of IIP assets and liabilities by institutional sector. The issue was also included in the second phase of the G-20's Data Gaps Initiative (DGI), as recommendation II.10, and its feasibility discussed in the last International Monetary Fund (IMF) Committee on Balance of Payments Statistics (BOPCOM) meeting.

**Brazil started compiling the currency composition of IIP assets and liabilities by institutional sector on July 2016, concerning end 2015 position, and will publish this data on yearly basis.** This paper presents the data sources for the recently compiled statistics and describes their main characteristics and data operationalization methods.

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<sup>1</sup> See **The Trend to Improved IIP Measures at Statistics Canada**, presented at the 28<sup>th</sup> BOPCOM Meeting at Rio de Janeiro in 2015 (BOPCOM-15/13.a), available at <https://www.imf.org/external/pubs/ft/bop/2015/pdf/15-13a.pdf>.

## II – Compiling currency composition of Brazilian IIP assets

**With the exception of international reserves, the survey “Brazilian Capitals Abroad” (BCA) is the primary data source for compiling the currency composition of IIP assets by institutional sector.** The Banco Central do Brasil (BCB) conducts the BCA survey since 2001 aiming at measuring the positions of foreign assets held by Brazilian residents. One of the main reasons for the creation of the BCA survey was for Brazil to participate in the IMF’s Coordinated Portfolio Investment Survey (CPIS).

From 2001 to 2010, the BCA survey was conducted annually for year-end positions, as a census, once it sought to collect information from all resident enterprises and households<sup>2</sup>. Since 2011 – and due to recommendation 12 of the first phase of the DGI, to compile IIP on a quarterly basis – BCB established quarterly BCA sample surveys (for end-March, - June and -September positions), aiming a better follow-up of positions and increasing frequency. This quarterly BCA sample survey is focused on major respondents with total external assets of US\$100 million or more.

**The 2015 BCA census survey had 40,562 respondents, of which 36,474 households and 4,088 corporations. Of the total declared external assets of USD388.2 billion, approximately one quarter were held by households,** showing the importance of such surveys to be extended beyond corporations to reach the adequate coverage<sup>3</sup>. Quarterly BCA sample surveys had around 450 respondents, of which about two-thirds are corporations. The total external assets in this sample survey are around 75% of the census survey. The BCB staff is responsible for expanding the sample survey results using last census survey and BoP flows data and other estimation techniques.

The survey is conducted electronically, through BCB’s web site. The web form provides several advantages for respondents and compilers. For respondents, it is easier to answer and send the questionnaire to the BCB. In addition, they may interrupt the survey any time, continue latter and have access to all previous submitted questionnaires. For compilers, such operationalization provides automatic checks for answers, improving data quality, as well the filling of all mandatory questions. Moreover, compilers are able to monitor on line most relevant respondents and general response ratio.

The information captured by BCA surveys comprehends data on the following modalities of external assets: direct investment, stocks and funds, Brazilian depositary receipts, bonds, derivatives (future markets, swaps and options), loans and financial leasing, trade credit, deposits, and other assets, especially real estate.

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<sup>2</sup> This was assured by the very low threshold of the BCA survey, as only residents with total external assets lower than USD100,000 are exempt from providing information to the BCB.

<sup>3</sup> Besides the broader coverage of total external assets, the composition of external assets held by households is different from corporations. In general, households maintain their external assets mainly as deposits and real estate.

**For each asset modality, respondents must inform original asset currency**, immediate invested country and market value at base date. Although the BCA surveys do not collect data on a security-by-security basis, only assets denominated in the same currency can be informed aggregated. The same rule is valid for deposits. The economic sector of respondents is also a mandatory question. From this data source, the BCB is able to compile currency composition as requested both by the CPIS and now by the encouraged IIP assets table.

Electronic information sent by respondents is automatically stored in a data warehouse, thus allowing a preliminary data release shortly after the survey deadline. An automatic validation mechanism on the online system ensures answers consistency. After the collection period, data is also validated by two approaches: (i) checking significant variations not explained by BoP flows (ITRS) and (ii) crosschecking survey's data with other data sources. **Specifically considering the validation process for the currency of the assets, the main issue is to assure that respondents are using the original currency. In many situations, respondents are consulting balance sheets and other documents with values expressed in domestic currency.**

Table 1, below, presents the CBA survey annual results showing Brazilian assets abroad by class of asset.

**Table 1 – Brazilian Capitals Abroad – Asset distribution**

Itemization	US\$ million				
	2011	2012	2013	2014	2015
Total	280 265	355 982	391 575	394 246	388 194
Foreign direct investments	202 586	266 252	295 382	294 048	282 950
Equity	192 933	247 172	272 921	269 832	259 294
Intercompany Loans	9 654	19 080	22 461	24 216	23 656
Of w hich: Trade credits and advance	...	10 569	14 988	15 666	17 741
Portfolio Investments	28 485	22 124	25 437	28 241	24 840
Equity	16 903	13 367	16 930	18 622	18 916
Brazilian Depository Receipts (BDR)	5 823	3 796	4 031	3 811	3 532
Others	11 080	9 572	12 899	14 811	15 384
Debt securities	11 581	8 757	8 507	9 618	5 924
Short-term	5 545	5 932	4 223	6 351	4 005
Long- term	6 036	2 825	4 283	3 268	1 919
Financial derivatives	668	555	647	609	887
Other investments	48 526	67 051	70 109	71 348	79 517
Trade credits and advance	...	8 096	8 420	7 949	7 130
Loans	14 835	19 538	15 939	15 987	16 019
Short-term	114	339	257	278	256
Long- term	14 720	19 199	15 682	15 709	15 763
Currency and deposits	26 376	30 780	35 998	37 300	45 718
Real estate	3 601	4 612	5 409	5 700	5 559
Other assets	3 714	4 026	4 344	4 411	5 091

### III - Compiling currency composition of Brazilian IIP liabilities

Regarding currency composition of external liabilities, this has always been an important issue for an emerging economy, with our long history of balance of payments and external debt crisis. Brazilian foreign capitals law of 1962 established the mandatory register of foreign capitals in the BCB, including a legal commandment for this register to be made in the currency of the investing country. Current regulation established the register to be made in the foreign currency in which the funds actually entered Brazil<sup>4</sup>.

Thus, **the main source of information for compiling IPP debt liabilities' currency composition is the Electronic Declaratory Registration – Register of Financial Operations (RDE-ROF)**. RDE-ROF began as printed reports in the late 1960s, were transformed to the current electronic version in modules between 1997 and 2001, and is currently been updated to an internet platform that should be launched in 2018.

This system aims to register financial transactions between resident debtors – which are responsible for fulfilling the questionnaire by themselves or using a representative – and nonresident creditors. Loans, leasing operations, import financing, fixed income securities issued abroad and debt service settled abroad are the financial transactions subject to registration at the RDE-ROF. Although the RDE-ROF does not have a minimum threshold for registration, some short-term transactions, like trade credits, are exempt from register by regulation.

Each record represents one single liability, receives an individual identification code and must contain: the identification of all parties involved in the operation – debtor, creditor, agents, guarantors, etc.; all the contract's financial details – principal amount and maturity, type of interest rate and spread, periodicity of payments, surcharges, fees, commissions, **currency of denomination**, type of operation.

This unique identification code should be informed whenever a payment linked to the original debt transaction is made and its exchange contract registered at the ITRS. In other words, disbursements, interest payments, amortizations, as well as any contract modification, due to debt reorganization, write-offs, or debt assumption must provide the correct identification code from the original register at the RDE-ROF. Thus, the RDE-ROF allows the monitoring of Brazil's external debt, its amount and the related flows, and the currencies in which the debt was issued, on a daily basis if needed.

Table 2 shows the national presentation of the currency composition of Brazilian external debt, using data extracted from RDE-ROF.

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<sup>4</sup> Article 4 of Law 4,131, of September 9, 1962, available (only in Portuguese) at [http://www.planalto.gov.br/ccivil\\_03/leis/L4131.htm](http://www.planalto.gov.br/ccivil_03/leis/L4131.htm), and Article 1, Paragraph 2, of Resolution 3,844, of March 23, 2010, available at <http://www.bcb.gov.br/rex/legce/Ingl/Ftp/Resolution3844.pdf>.

Table 2 – Brazil Gross External Debt – distribution by currency

<b>Gross external debt</b>								
<b>By currency<sup>1/2/</sup></b>								
Itemization	2014		2015		2016			
	Dec		Dec		Mar		Jun	
	US\$ million	% share	US\$ million	% share	US\$ million	% share	US\$ million	% share
<b>Gross External Debt (A)</b>	<b>352 821</b>	<b>100,0</b>	<b>334 745</b>	<b>100,0</b>	<b>334 608</b>	<b>100,0</b>	<b>336 413</b>	<b>100,0</b>
US dollar	293 067	83,1	277 356	82,9	277 414	82,9	277 752	82,6
Goods	27 417	7,8	29 691	8,9	29 852	8,9	30 142	9,0
Euro	12 641	3,6	11 604	3,5	11 572	3,5	11 227	3,3
Real	11 488	3,3	8 110	2,4	7 582	2,3	9 362	2,8
SDR	4 195	1,2	4 017	1,2	4 086	1,2	4 062	1,2
Yen	3 150	0,9	2 964	0,9	3 099	0,9	3 140	0,9
Others	863	0,2	1 002	0,3	1 003	0,3	728	0,2
<b>Intercompany</b>								
<b>lending (B)</b>	<b>207 756</b>	<b>100,0</b>	<b>205 711</b>	<b>100,0</b>	<b>213 596</b>	<b>100,0</b>	<b>217 553</b>	<b>100,0</b>
Goods	102 466	49,3	104 014	50,6	104 564	49,0	106 787	49,1
US dollar	69 677	33,5	62 641	30,5	63 295	29,6	61 128	28,1
Real	19 907	9,6	20 884	10,2	24 495	11,5	28 726	13,2
Euro	12 005	5,8	12 023	5,8	14 663	6,9	14 213	6,5
Yen	563	0,3	747	0,4	903	0,4	1 119	0,5
Others	3 138	1,5	5 402	2,6	5 675	2,7	5 579	2,6
<b>Domestic fixed income securities held by non residents - denominated and settled in Reais (C)</b>	<b>152 078</b>	<b>100,0</b>	<b>124 645</b>	<b>100,0</b>	<b>127 555</b>	<b>100,0</b>	<b>141 655</b>	<b>100,0</b>
Real	152 078	100,0	124 645	100,0	127 555	100,0	141 655	100,0
<b>Gross external debt, including intercompany lending and domestic fixed income securities held by non residents</b>								
<b>D=(A+B+C)</b>	<b>712 655</b>	<b>100,0</b>	<b>665 101</b>	<b>100,0</b>	<b>675 759</b>	<b>100,0</b>	<b>695 621</b>	<b>100,0</b>
US dollar	362 744	50,9	339 997	51,1	340 710	50,4	338 881	48,7
Real	183 472	25,7	153 639	23,1	159 632	23,6	179 742	25,8
Goods	129 883	18,2	133 705	20,1	134 416	19,9	136 930	19,7
Euro	24 646	3,5	23 627	3,6	26 235	3,9	25 440	3,7
SDR	4 195	0,6	4 017	0,6	4 086	0,6	4 062	0,6
Yen	3 714	0,5	3 711	0,6	4 002	0,6	4 259	0,6
Others	4 001	0,6	6 404	1,0	6 678	1,0	6 307	0,9

1/ End-of-period parities.

2/ Includes liabilities in goods.

From the above table, one can see that almost 20% of the currency breakdown of the Brazilian gross external debt refers to a “strange currency”, namely “goods”. The typical transaction is import financing, mostly from nonresident trading companies to its parent resident company. The financial transaction is an export advance payment and its payment is the export in itself. In this case, it is not expected an amortization using any kind of cash, any currency. The risk for the debtor is not an exchange rate

depreciation, but the change in the goods export price. In order to compile appropriately this different kind of risk, the BCB included an entry for goods in its external debt currency breakdown national presentation.

#### IV – IIP currency breakdown: putting the data on tables A9-I-1a and A9-I-2a

From the above sources and including data from international reserves, the BCB published tables A9-I-1a and A9-I-2a with the currency breakdown of the IIP assets and liabilities, related to December 2015, as reproduced below.

**Table 3 – Table A9-I-1a for Brazil: IIP assets**

<b>Currency composition of debt instruments</b>								
<b>Assets</b>								
US\$ million								
Itemization	2015							
	Central Bank	General Government	Banks <sup>1/</sup>	Other sectors			Intercompany lending	Total
				Total	Other financial corporations	Others		
<b>Total<sup>2/</sup></b>	<b>406</b>	<b>1 316</b>	<b>20 975</b>	<b>58 808</b>	<b>18 131</b>	<b>40 677</b>	<b>23 656</b>	<b>105 161</b>
Domestic currency	-	-	172	380	45	334	1 751	2 303
Foreign currency	406	1 316	20 803	58 428	18 086	40 342	21 905	102 858
U.S. dollar	406	1 316	19 656	54 553	17 908	36 645	20 491	96 422
Euro	-	0	828	2 952	125	2 827	1 282	5 062
Yen	-	-	38	203	0	203	45	286
Other currencies	-	-	281	720	53	667	87	1 088
Unallocated	-	-	-	-	-	-	-	-
<b>Of which one year or less</b>	<b>406</b>	<b>2</b>	<b>19 815</b>	<b>36 177</b>	<b>5 016</b>	<b>31 161</b>	<b>17 365</b>	<b>73 765</b>
Domestic currency	-	-	79	234	45	189	585	899
Foreign currency	406	2	19 736	35 943	4 971	30 972	16 780	72 866
U.S. dollar	406	1	18 589	32 693	4 905	27 788	15 885	67 575
Euro	-	0	828	2 425	30	2 394	799	4 052
Yen	-	-	38	203	0	202	45	286
Other currencies	-	-	281	622	35	587	51	954
Unallocated	-	-	-	-	-	-	-	-
<b>Reserve assets</b>								<b>356 464</b>
In SDR basket								332 686
Not in SDR basket								23 777

1/ Deposit-taking corporations, except the central bank.

2/ Excluding reserve assets.



Table 4 – Table A9-I-2a for Brazil: IIP liabilities

<b>Currency composition of debt instruments</b>								
<b>Liabilities</b>								
US\$ million								
Itemization	2015							
	Central Bank	General Government	Banks <sup>1/</sup>	Other sectors			Intercompany lending	Total
				Total	Other financial	Others		
<b>Total</b>	<b>4 110</b>	<b>184 553</b>	<b>147 361</b>	<b>123 366</b>	<b>773</b>	<b>122 593</b>	<b>205 711</b>	<b>665 101</b>
Domestic currency	-	123 565	1 236	7 954	9	7 945	20 884	153 639
Foreign currency	4 110	60 988	146 125	85 721	764	84 957	80 813	377 756
U.S. dollar	109	57 723	141 974	77 550	762	76 788	62 641	339 997
Euro	-	2 632	2 681	6 291	0	6 291	12 023	23 627
Yen	-	616	693	1 654	-	1 654	747	3 711
Other currencies	4 001	17	776	226	1	225	5 402	10 421
Goods	-	-	-	29 691	-	29 691	104 014	133 705
Unallocated	-	-	-	-	-	-	-	-
<b>Of which one year or less</b>	<b>109</b>	<b>-</b>	<b>47 497</b>	<b>3 534</b>	<b>9</b>	<b>3 525</b>	<b>10 019</b>	<b>61 159</b>
Domestic currency	-	-	87	164	-	164	2 740	2 991
Foreign currency	109	-	47 410	3 370	9	3 360	7 279	58 168
U.S. dollar	109	-	47 032	3 252	9	3 243	5 634	56 027
Euro	-	-	45	114	-	114	1 476	1 635
Yen	-	-	-	3	-	3	122	125
Other currencies	-	-	334	0	-	0	48	382
Goods	-	-	-	-	-	-	-	-
Unallocated	-	-	-	-	-	-	-	-

1/ Deposit-taking corporations, except the central bank.

2/ Does not include the outstanding amount of domestic fixed income securities held by non residents.