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Brazilian data collection system and BPM6 issues¹

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¹ This presentation was prepared for the meeting. The views expressed are those of the author and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.

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Outline

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2. Data sources – BoP and IIP
3. ITRS – Exchange contract system
4. Compilation mechanics
5. **BPM6 issues and capital flows**

Introduction

- ❑ The Brazilian BoP and other external statistics are compiled by the Department of Economics' Balance of Payments Division (DEPEC/DIBAP) from the Central Bank of Brazil (CBB) since its inception
- ❑ DIBAP is also responsible not only for compiling external sector statistics (ESS), but also providing the analysis considering monetary policy and exchange rate policy
- ❑ CBB implemented BPM6 standard on April, 2015. The BoP figure are released on **monthly basis** in **3 or 4 weeks after the end of the base period**



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Press releases schedule 2015

Months	Foreign sector		Monetary policy and system credit operations		Fiscal policy		Open market	
	Day	Day of the week	Day	Day of the week	Day	Day of the week	Day	Day of the week
January	23	friday	27	tuesday	30	friday	28	wednesday
February	24	tuesday	25	wednesday	27	friday	26	thursday
March	25	wednesday	21	friday	31	tuesday	24	tuesday
April	22	wednesday	24	friday	30	thursday	27	monday
May	26	tuesday	27	wednesday	29	friday	25	monday
June	24	wednesday	26	friday	30	tuesday	23	tuesday
July	22	wednesday	30	thursday	31	friday	27	monday
August	25	tuesday	25	wednesday	28	friday	24	monday
September	23	wednesday	25	friday	30	wednesday	28	monday
October	23	friday	27	tuesday	30	friday	26	monday
November	25	thursday	27	friday	30	monday	24	tuesday
December	21	monday	23	wednesday	28	monday	22	tuesday

Data sources - BoP

- ❑ Main source: ITRS - basically the FX settlement system (**daily**)
- ❑ Other sources:
 - ❑ Administrative
 - ❑ Customs and Ministry of Trade (**weekly**, goods)
 - ❑ Consolidated Balance Sheets of the Financial System - COSIF (**monthly**, mainly deposit assets, assuring the double-entries for most of the transactions)
 - ❑ International Reserves Department (**daily**, interest credits)
 - ❑ Selic, a Brazilian custodian system (**monthly**, debit interests on public debt securities issued in the country)
 - ❑ Surveys
 - ❑ Brazilian capital abroad (**quarterly**, reinvested earnings) and
 - ❑ Census of foreign capital in Brazil (**annual**, reinvested earnings)
 - ❑ Information from Brazilian companies that leave exports revenues abroad
 - ❑ Others (Seagoing transportation companies, Insurance companies, ...)
 - ❑ Estimates (mainly to transportation accounts)

Data sources - IIP

- ❑ Surveys
 - ❑ Brazilian capital abroad (**quarterly**, threshold USD100 million, all assets other than reserves)
 - ❑ Brazilian capital abroad (**annual**, benchmark survey with a threshold of USD100 thousand, all assets other than reserves)
 - ❑ Census of foreign capital in Brazil (**annual**, enterprises with net worth equal or greater than USD100 million, direct investment-equity liabilities)
 - ❑ Census of foreign capital in Brazil (**five-year**, benchmark survey with no threshold, direct investment-equity liabilities)
- ❑ International Reserves Department (**daily**, reserve assets)
- ❑ Electronic Registry of Foreign Capital - RDE (**daily/monthly**, loans, debt securities and trade credits)
- ❑ Brazilian security and exchange commission (CVM) (**monthly**, stock exchange and private debt securities issued in the country)
- ❑ Selic, a Brazilian custodian system (**monthly**, public debt securities issued in the country)

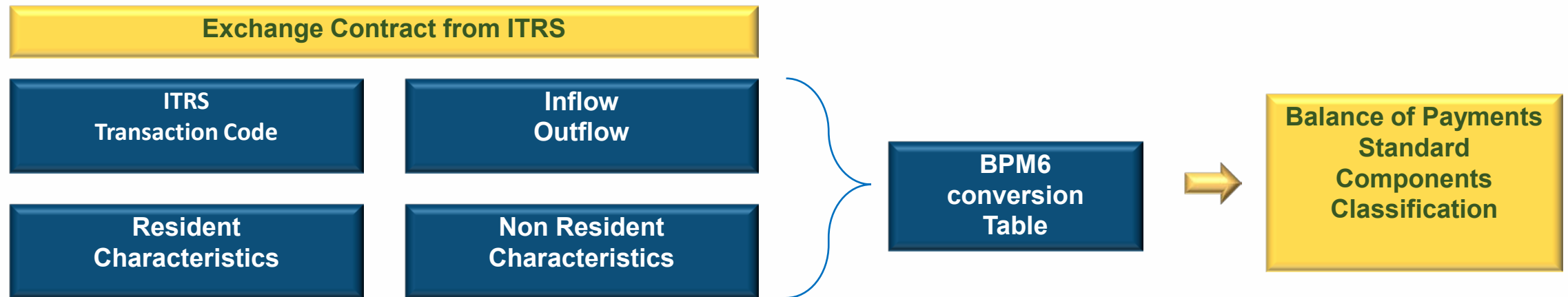
ITRS – Exchange contract system

- ❑ It is reminiscent, as in many countries, from a FX control system. Although controls were lifted years ago, the exchange registration structure was kept mainly for statistical purposes
- ❑ In Brazil there is (almost) no bank accounts denominated in foreign currency. Furthermore, with almost no exceptions, transactions among residents may not be settled in foreign currency, by law
- ❑ In this sense, FX transactions (primary market) generally reflects a BoP transaction between a resident and non resident
- ❑ Mandatory FX contracts' registration for each and every **(no reporting threshold)** resident to non-resident transaction results in high frequency data with very good coverage
- ❑ Exchange contracts are generated outside the CBB Information System (SISBACEN), but are daily submitted to it by all banks and all other foreign exchange dealers
- ❑ Data are available online:
 - ❑ More than 600.000 exchange contracts are settled monthly
 - ❑ 30.000 daily, on average

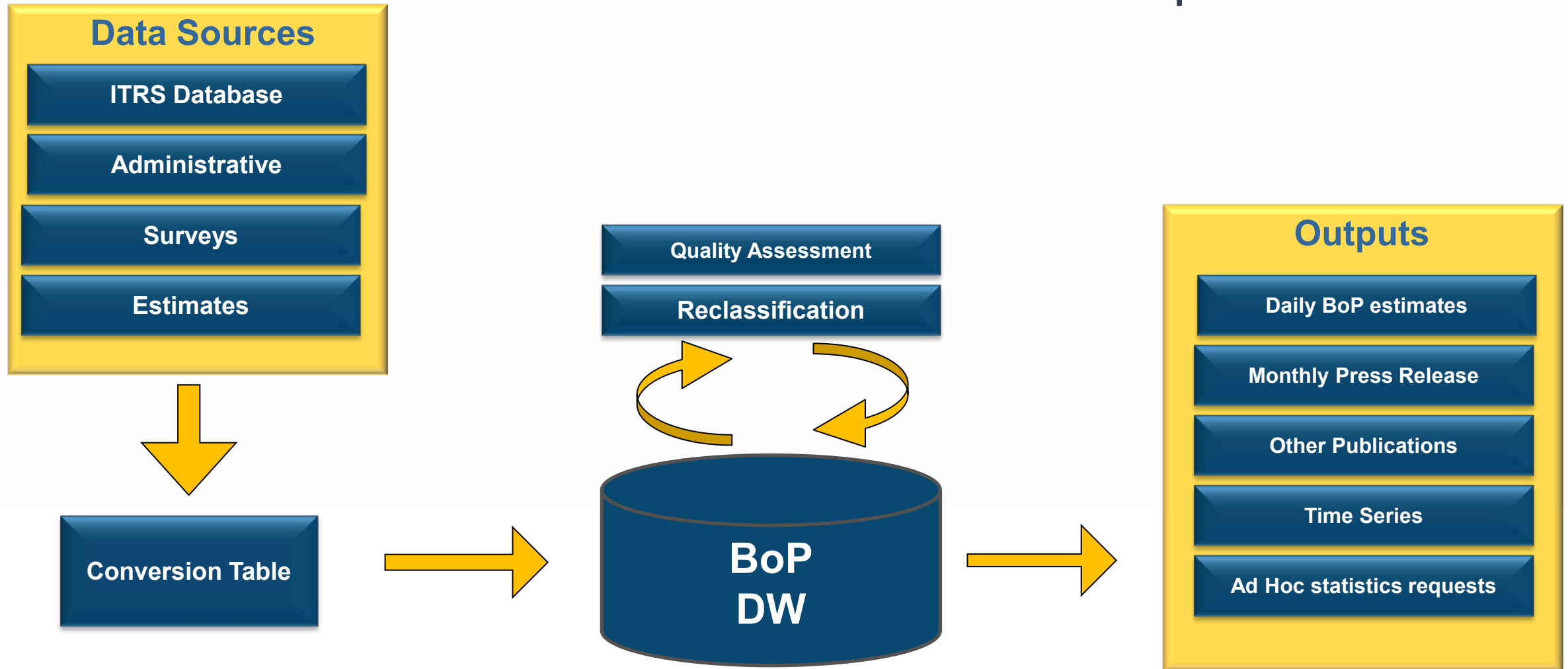
Compilation mechanics

- ❑ To transform the FX contracts into BoP data, a dedicated IT platform is needed. At the core of the data compilation process is a **Data Warehouse (DW)**, which was designed specifically for BOP
- ❑ The compilation of statistics is done by converting ITRS data into BOP data. This conversion is done by means of “translating” combinations of the ITRS fields into standard IMF BPM6 codes
- ❑ The DW receives inputs from the ITRS and the other data sources, stores and transforms them into BoP statistics, and also serves as a platform for feeding regular publications and other ad-hoc requests’ tables.

Compilation mechanics



Compilation mechanics



Compilation mechanics

- ❑ Data quality assessment procedures are used to verify transactions in any of their dimensions in order to adequately reflect the characteristics of transactions from a BOP point of view. Data can be adjusted in any of its dimensions (economic nature, economic sector of the counterpart, intercompany lending) and transactions of any value can be reclassified
- ❑ In this process, additional sources of information may be used:
 - ❑ Results of previous analyzes
 - ❑ Registries of debt and FDI positions
 - ❑ Central Bank surveys on Brazilian external assets and liabilities
 - ❑ Websites and magazines specialized in business groups info
 - ❑ Contact with the financial institution responsible for the FX contract
 - ❑ Direct contact with the resident party in the FX contract

Compilation mechanics

- ❑ Dibap (compiling external sector statistics): 19 people, but there are much more human resources, from CBB, helping the compilers:
 - ❑ Desig (bank supervision): monitoring foreign exchange market
 - ❑ Dereg: regulation in the foreign exchange market
 - ❑ Deinf: IT Department
- ❑ The CBB must give an authorization for each institution to operate in the foreign exchange market

The screenshot shows the website of Banco Central do Brasil. The main navigation bar includes links for 'Acesso à Informação', 'Sobre a Instituição', 'Perguntas frequentes', 'Glossário', 'Mapa do site', 'Sisbacen', 'Fale conosco', 'Links', and 'English'. A search bar is located on the right. Below the navigation bar, there are several service links: 'Acesso à Informação do BCB', 'Sistema de Metas para a Inflação', 'Economia e finanças', 'Câmbio e Capitais Internacionais', 'Sistema de Pagamentos Brasileiro', 'Sistema Financeiro Nacional', 'Supervisão do SFN', and 'Intervenções, liquidações e privatizações'. The main content area is titled 'Instituições habilitadas a operar no mercado de câmbio' and features a table with the following data:

Quantidade de instituições: 207			
Código	Nome da instituição	CNPJ	Atividade
00001	BANCO DO BRASIL S.A.	00000000	BANCOS MULTIPLOS COM CARTEIRA COMERCIAL
04070	BRB - BANCO DE BRASÍLIA S.A.	00000208	BANCOS MULTIPLOS COM CARTEIRA COMERCIAL
57446	AGK CORRETORA DE CAMBIO S.A.	00250699	CORRETORAS DE CAMBIO
21104	CAIXA ECONOMICA FEDERAL	00360305	CAIXAS ECONOMICAS
38070	COLUNA S/A. DISTRIBUIDORA DE TITULOS E VALORES MOBILIÁRIOS	00460065	DISTRIBUIDORAS DE TITULOS E VALORES MOBILIARIOS
05739	BANCO CETELEM S.A.	00558456	BANCOS MULTIPLOS COM CARTEIRA COMERCIAL
57466	PLANNER CORRETORA DE VALORES S.A.	00806535	CORRETORAS DE TITULOS E VALORES MOBILIARIOS
37972	BANCO BM&FBOVESPA DE SERVIÇOS DE LIQUIDAÇÃO E CUSTÓDIA S.A.	00997185	BANCOS COMERCIAIS
07747	BANCO RABOBANK INTERNATIONAL BRASIL S.A.	01023570	BANCOS MULTIPLOS COM CARTEIRA COMERCIAL
05748	BANCO COOPERATIVO SICREDI S.A.	01181521	BANCOS COOPERATIVOS
07752	BANCO BNP PARIBAS BRASIL S.A.	01522368	BANCOS MULTIPLOS COM CARTEIRA COMERCIAL
05399	HSBC BANK BRASIL S.A. - BANCO MULTIPLO	01701201	BANCOS MULTIPLOS COM CARTEIRA COMERCIAL
07757	BANCO KEB DO BRASIL S.A.	02318507	BANCOS COMERCIAIS
07860	BANCO MORGAN STANLEY S.A.	02801938	BANCOS MULTIPLOS COM CARTEIRA COMERCIAL
08493	TREVISOR CORRETORA DE CAMBIO S.A.	02992317	CORRETORAS DE CAMBIO
32442	HIPERCARD BANCO MÚLTIPLO S.A.	03012230	BANCOS MULTIPLOS COM CARTEIRA COMERCIAL
08578	BANCO J. SAFRA S.A.	03017677	BANCOS MULTIPLOS COM CARTEIRA COMERCIAL
08932	AVIPAM CORRETORA DE CAMBIO LTDA.	03443143	CORRETORAS DE CAMBIO
09239	FITTA DISTRIBUIDORA DE TITULOS E VALORES MOBILIARIOS S.A.	03512293	DISTRIBUIDORAS DE TITULOS E VALORES MOBILIARIOS

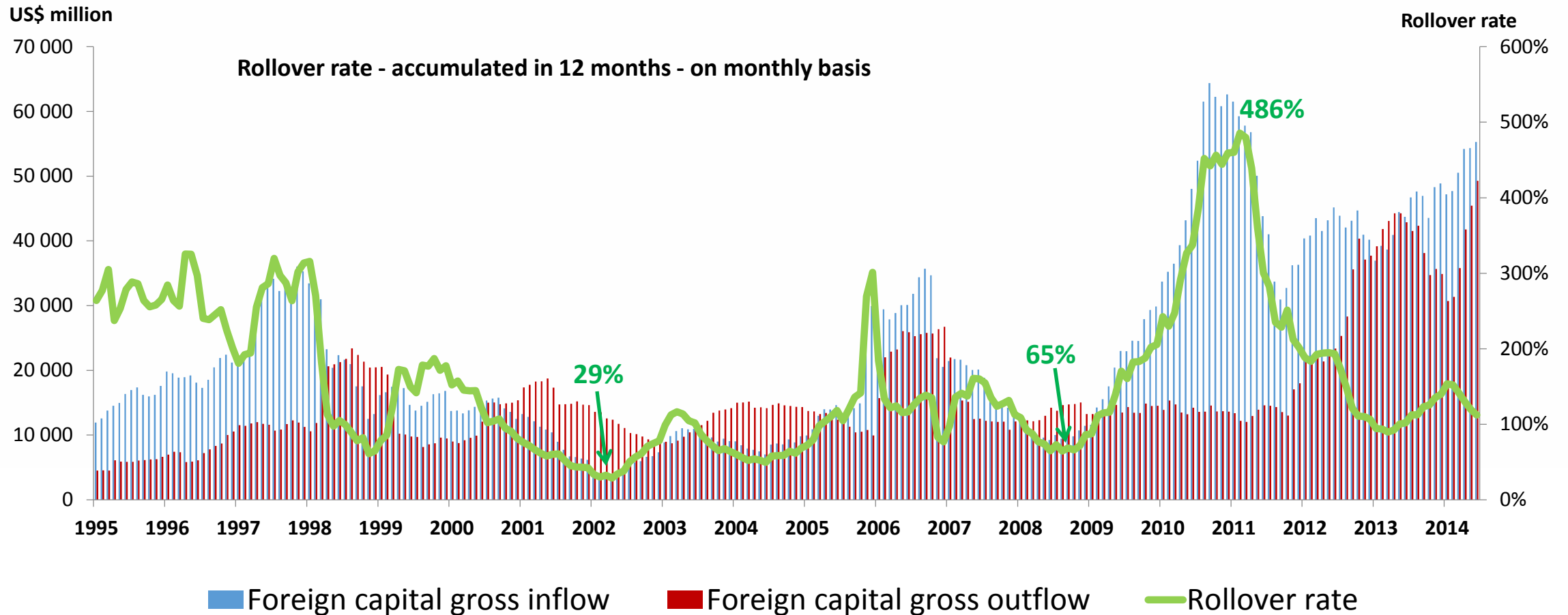
BPM6 Issues and capital flows

Some advantages of the Brazilian ITRS

- ❑ Granularity (transaction by transaction)
 - ❑ Allow to check the quality
 - ❑ Cross-check with other systems (register of foreign capital and its income)
 - ❑ Using the details and desegregation of the codes, conversion to BPM6 is easier
- ❑ High-frequency data (daily) and timeliness (daily) are very efficient to design exchange policy and other economic policies. Provision of liquidity in foreign currency in 2009 and implementation of IOF tax over foreign capital were examples
- ❑ Despite of the BPM6 recommendation to compile “net acquisition of financial assets” and “net incurrence of liabilities”, Brazilian BoP does not derive flows from the stocks, and will remain showing the gross flows, as “disbursements” and “amortizations”, in the financial account

BPM6 Issues and capital flows

- Rollover rate = gross inflows / gross outflows (loans and debt securities in the international market)
- If rollover rate = 100%, net inflows are zero, but the turnover can be US\$1 million (and the market is frozen), or US\$100 billion, as in 2011, for Brazil



BPM6 Issues and capital flows

Some disadvantages of the Brazilian ITRS (and how to overcome)

- ❑ A minor part of the non-cash transactions are covered by ITRS. In the process of the BPM6 implementation, some of these issues were addressed:
 - ❑ Reinvested earnings (solution: surveys)
 - ❑ Income on debt securities issued in the domestic market and denominated in domestic currency (solution: custodian information)
- ❑ Cost of reporting
 - ❑ Sunk costs, the system was implemented decades ago. The IT platform was updated in 2012, and the banks and enterprises are used to run their business in this way
 - ❑ From the companies point of view, these are settlements of FX transactions, and not report to the statistics compilation
 - ❑ The information regarding each settlement would exist even without the FX system, for internal purposes

BPM6 Issues and capital flows

Reinvested earnings

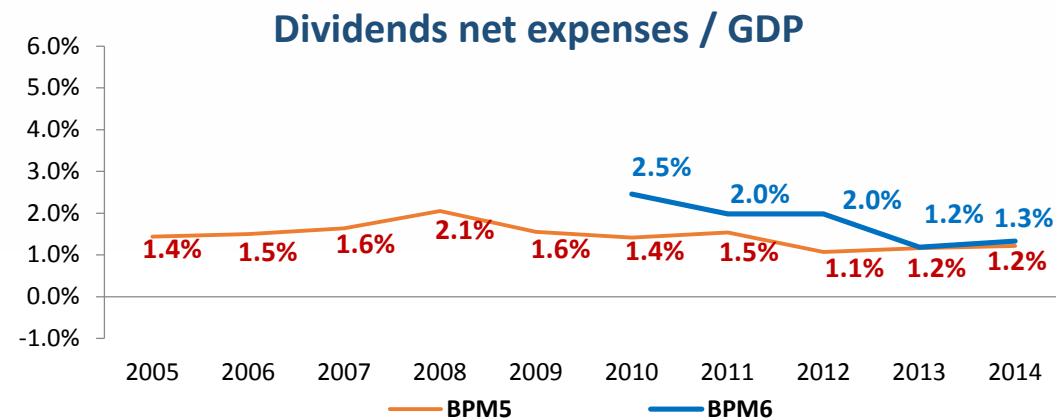
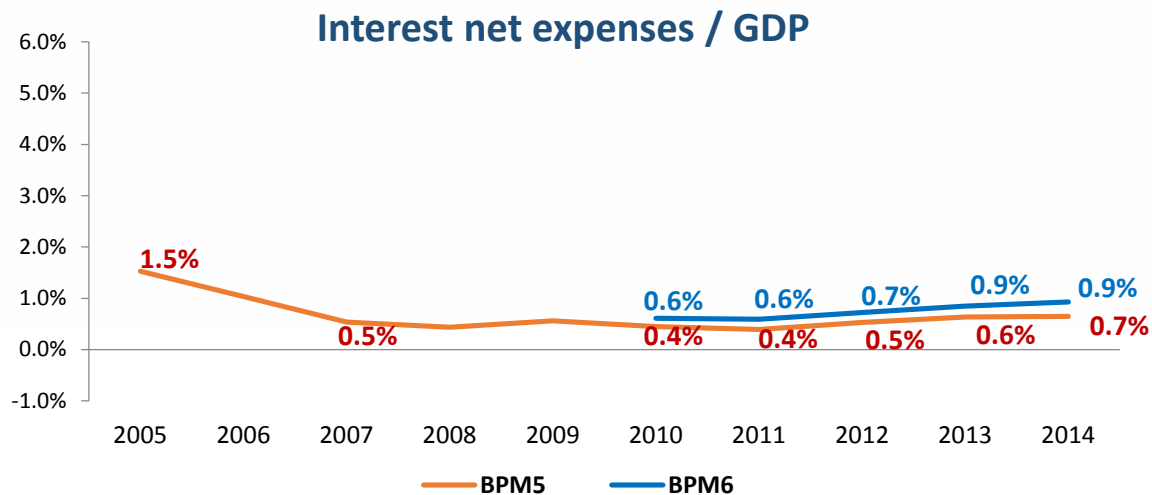
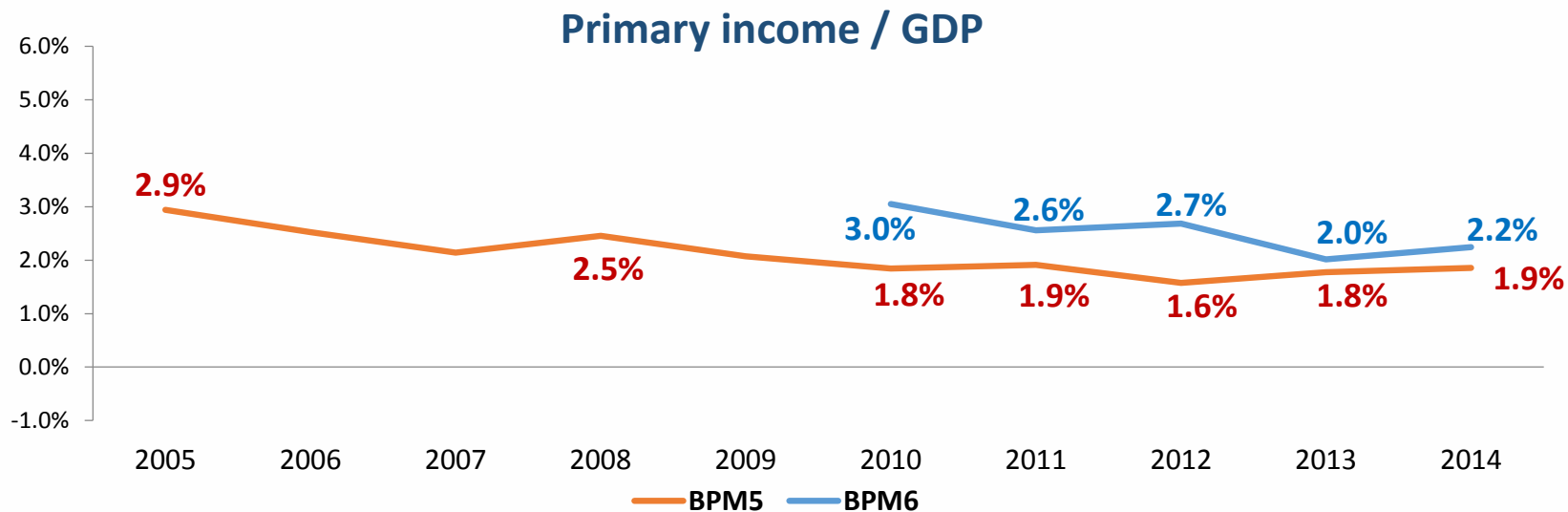
- ❑ The data source was lost in 1998
- ❑ Two surveys, Brazilian Capital Abroad (CBE) and Census of foreign capital, were modified and validated in order to produce the information requested
- ❑ Challenges in the new sources compared to other ones:
 - ❑ Frequency: annual or quarterly, not monthly
 - ❑ Timeliness: +5 months to credits; +9 months to debits
- ❑ Therefore, estimations are needed and the pattern of revision will be much different than other accounts
- ❑ Explain to domestic public: i) these are not transactions in the foreign exchange market; ii) this particular deficit in the current account is fully financed
- ❑ In 2014 reinvested earnings for enterprises in Brazil reached USD10.7 billion (net direct investment – liabilities added up USD96.9 billion)

BPM6 Issues and capital flows

Interest expenses – debt securities issued in the country

- ❑ All the settlements in the domestic market are in BRL, by law
- ❑ From 2005 until 2015 the portion of domestic public debt denominated in BRL in the domestic market, and held by non resident investors rose from less than 1% to around 20%, reaching more than USD150 billion
- ❑ Before BPM6 implementation, the BoP registered the payment of interest on these securities just when the resources were converted from BRL to foreign currency in the foreign exchange market.
- ❑ More than 90% of the interest paid in BRL were reinvested in another securities in the domestic market
- ❑ We added the Selic (custodian system) as data source to the payment of interest in BRL
- ❑ This compilation process remains considering cash basis
- ❑ The stock of domestic securities held by nonresidents was already a liability in the Brazilian IIP, but now is also classified as external debt

BPM6 Issues

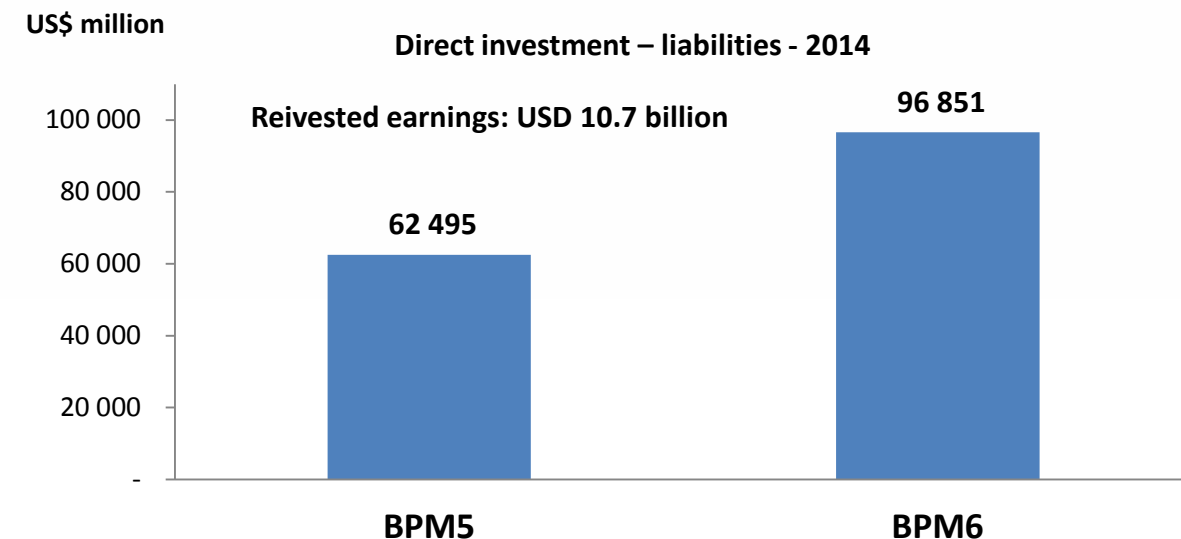
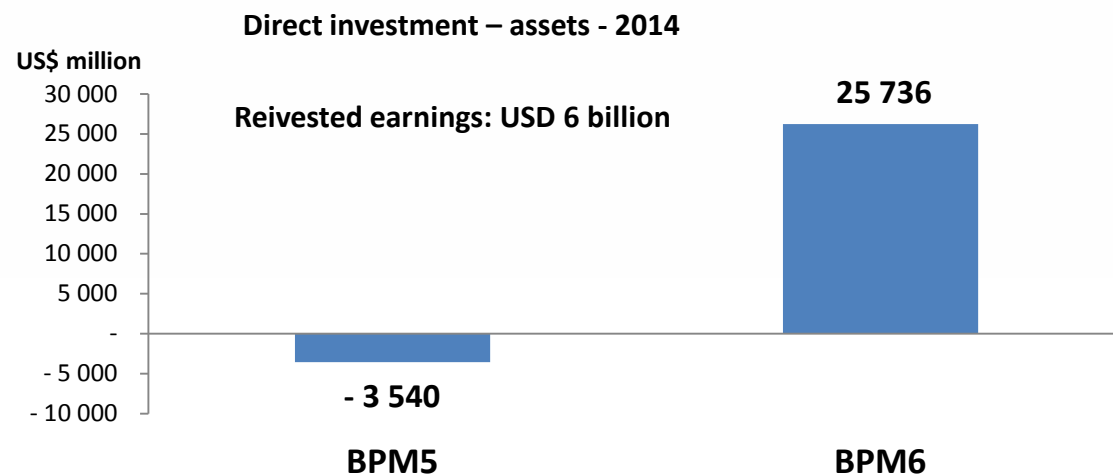


^{1/} Preliminary and estimated data for BPM6, from 2010 to 2013

BPM6 Issues and capital flows

Direct investment:

- Looking at the liquidity after financial crisis of 2008-09, the headquarters in Brazil used its affiliates abroad to issue debt securities in the international markets. The receipt of the issuing was transferred to Brazil, arising an intercompany loan
- According to BPM5 and the directional principle, the transaction was recorded as a liability reducing the asset
- Following BPM6 and the asset/liability principle, however, the transaction must be recorded as an increase of direct investment - liability



BPM6 Issues and capital flows

- ❑ BCB released methodological notes to describe the main changes adopted in the context of BPM6
- ❑ The BPM6 changes and the non BPM6 changes were mixed comprising an unique package



The screenshot shows the website of Banco Central do Brasil. At the top, there is a navigation bar with the Brazilian flag and the text "BRASIL" and "Acesso à informação". Below this, there are links for "International Cooperation", "FAQ", "Glossary", "Site Map", "Contact us", "Links", and "Português". The main header features the Banco Central do Brasil logo on the left and a 50th anniversary logo on the right with the text "Cuidando dos valores do Brasil". A search bar is located on the right side of the header. Below the header, there is a navigation menu with links for "About us", "Inflation targeting", "Economy and finance", "Exchange and Foreign Capital", "National Financial System", "Supervision", and "The Brazilian Payments System". The main content area displays the breadcrumb trail: "Home » Economy and finance » Press releases » Methodological notes » Balance of payments » Balance of Payments and International Investment Position Manual – Sixth Edition (BPM6)". The title of the page is "Balance of Payments and International Investment Position Manual – Sixth Edition (BPM6)". Below the title, there is a list of links to various documents: "Statement (PDF - 100 KB)", "Methodological Note nr.1 – External Sector Statistics – Adoption of the Sixth Edition of the Balance of Payments and International Investment Position Manual (BPM6) (PDF - 100 KB)", "Methodological Note nr.2 – Current account – Adoption of the Sixth Edition of the Balance of Payments and International Investment Position Manual (BPM6) (PDF - 84 KB)", "Methodological Note nr.3 – Direct investment and primary income (earnings) – Adoption of the Sixth Edition of the Balance of Payments and International Investment Position Manual (BPM6) (PDF - 540 KB)", and "Frequently Asked Questions (FAQ) on Conversion from BPM5 to BPM6 (PDF - 292 KB)". At the bottom of the page, there is a footer with the text "Help | Privacy | All rights reserved Banco Central do Brasil©".

BPM6 Issues and capital flows

BPM6 Project - 2011 to 2015:

- ❑ The BPM6 implementation project took formally two years, but some earlier actions were essential. For example, from 2011 to 2013, new exchange contract codes for the nature of the operations were defined (this work involved different departments of the CBB, including statistics, supervision and regulation):
 - ❑ Development of a new DW and new accounts structure on BPM6 basis
 - ❑ Data sources improvement: IBGE (Brazilian national statistical office), and other governmental and private institutions
 - ❑ Experiences from other countries: technical visits (France and Italy) and seminars
 - ❑ New format of the *External Sector Press Release*
 - ❑ Communication to internal and external audiences:
 - ❑ Officers and policy makers
 - ❑ Journalist: lessons on the new standard
 - ❑ Market: seminar with analysts (expected on second half of 2015)
 - ❑ Universities: seminar with researchers (expected on second half of 2015)

BPM6 Issues and capital flows

- ❑ Backcast the series is the current main challenge faced by compilers
- ❑ “Real” data x statistical models and length of the series
- ❑ Between September 2015 and February 2016 we expect to publish the time series backdated until 1947 (annual basis), 1979 (quarterly basis) and 1995 (monthly basis). So, the review will be more accurate as more recent the year

Thank you for your attention

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