

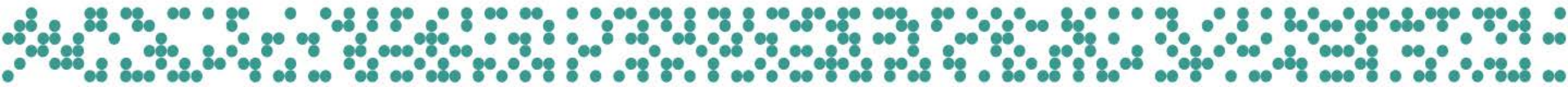
FX policy implementation – Impacts on BCB balance sheet

Isabela Ribeiro Damaso Maia

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Agenda



1. FX Intervention tools
2. Brazilian swaps
3. Risk monitoring
4. Results
5. Final remarks





1. FX Intervention tools



Foreign exchange rate



- “Floating” exchange rate regime;
- The BCB does not have a target level for the foreign exchange rate;
- FX market interventions aim to smooth foreign exchange rate volatility.

Foreign exchange rate



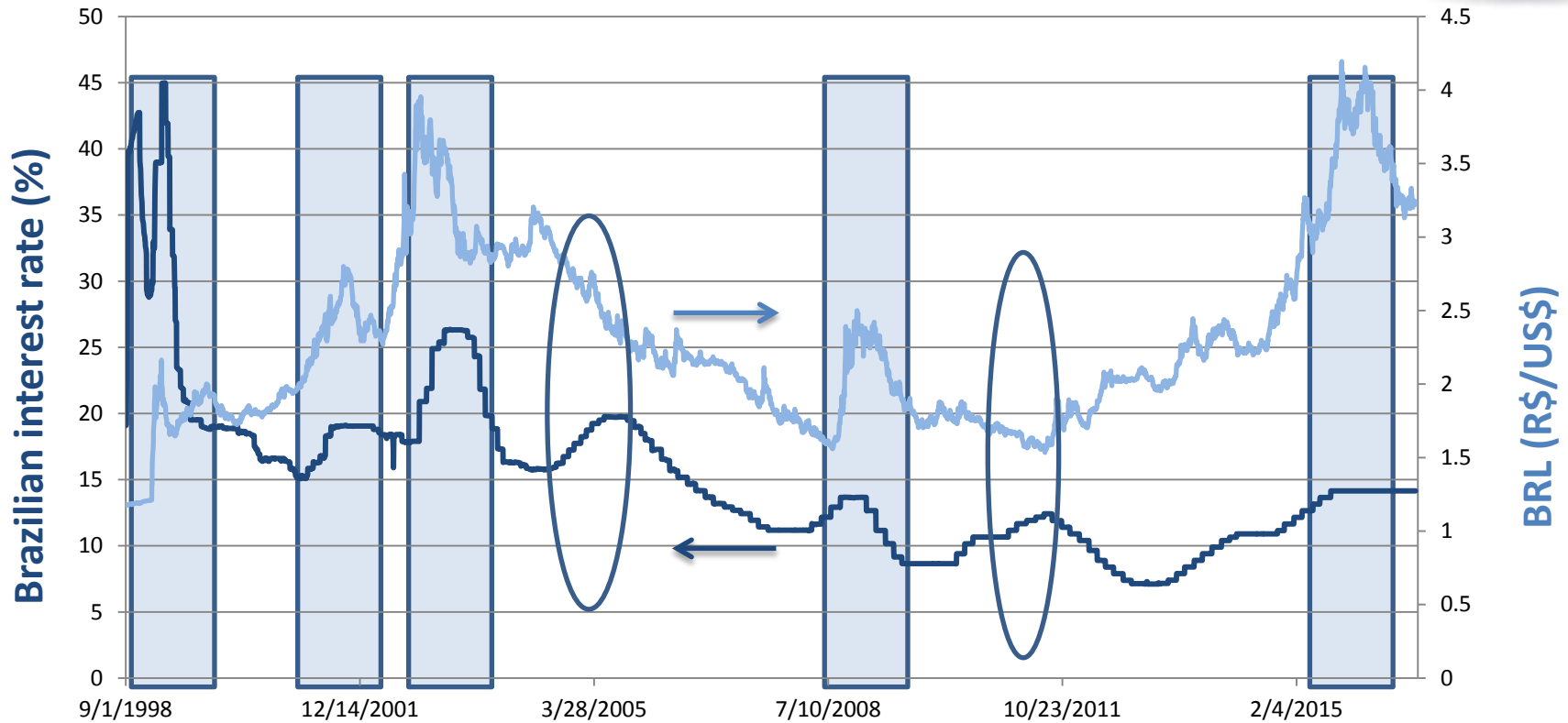
Intervention tools



- International reserves
- Capital controls
- Exchange Rate Swaps (“SCS”)
- US Dollar-repurchase agreements
- Collateralized loans (2008 crisis)



Monetary policy interactions with FX exchange rate



Russia 1998
Float 1999

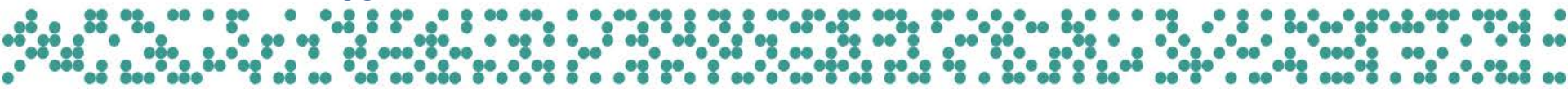
Argentina
2001

Brazilian
Election 2002

Financial crisis
2008

US monetary policy
Brazilian impeachment

...



International reserves



(US\$ billion)



Capital Controls



IOF (tax for financial operations): capital flows

- 1990s: capital flows started to be gradually liberalized;
- 2000s: almost completely open capital account;
- 2008:
 - March: taxes on foreign capital transactions (IOF) were reintroduced (1,5% on fixed-income investments);
 - October: IOF tax was reduced to zero;
- 2009: 2% tax on fixed-income and equity inflows was reintroduced;
- 2010 October: IOF was increased to 6%;
- May 2016:
 - IOF tax rate increased from 0.38% to 1.1% on transactions of dollar purchase and;
 - IOF was reduced to 0% for foreign inflows.

Brazilian FX swaps



- Introduced in 2002, a derivative similar to NDF;
- US dollar “forward contracts” that are settled in domestic currency, the Brazilian real (BRL);
- Made available by BCB to FX Dealers through auction process;
- There are daily mark-to-market adjustments;
- The operations are registered on the BM&FBOVESPA Exchange.



USD Repurchase agreement



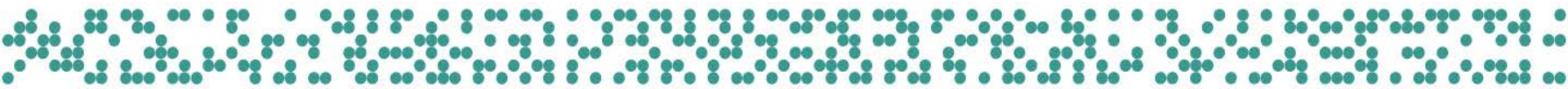
- Two simultaneous operations: a spot sell and a forward buy of the same amount;
- The repurchase rate is the forward rate for the repo maturity;
- The objective is to provide temporary liquidity when needed;
- Available through BCB FX Desk auction



Collateralized loans



- Designed and utilized during 2008 financial crisis;
- BCB offered USD loans at auction to FX dealers under dollar-denominated collateral;
- Collateral could be based on foreign exchange rate contracts and on exports contracts or global bonds.
- The objective was to provide US dollar liquidity due to shortage of external credit lines.

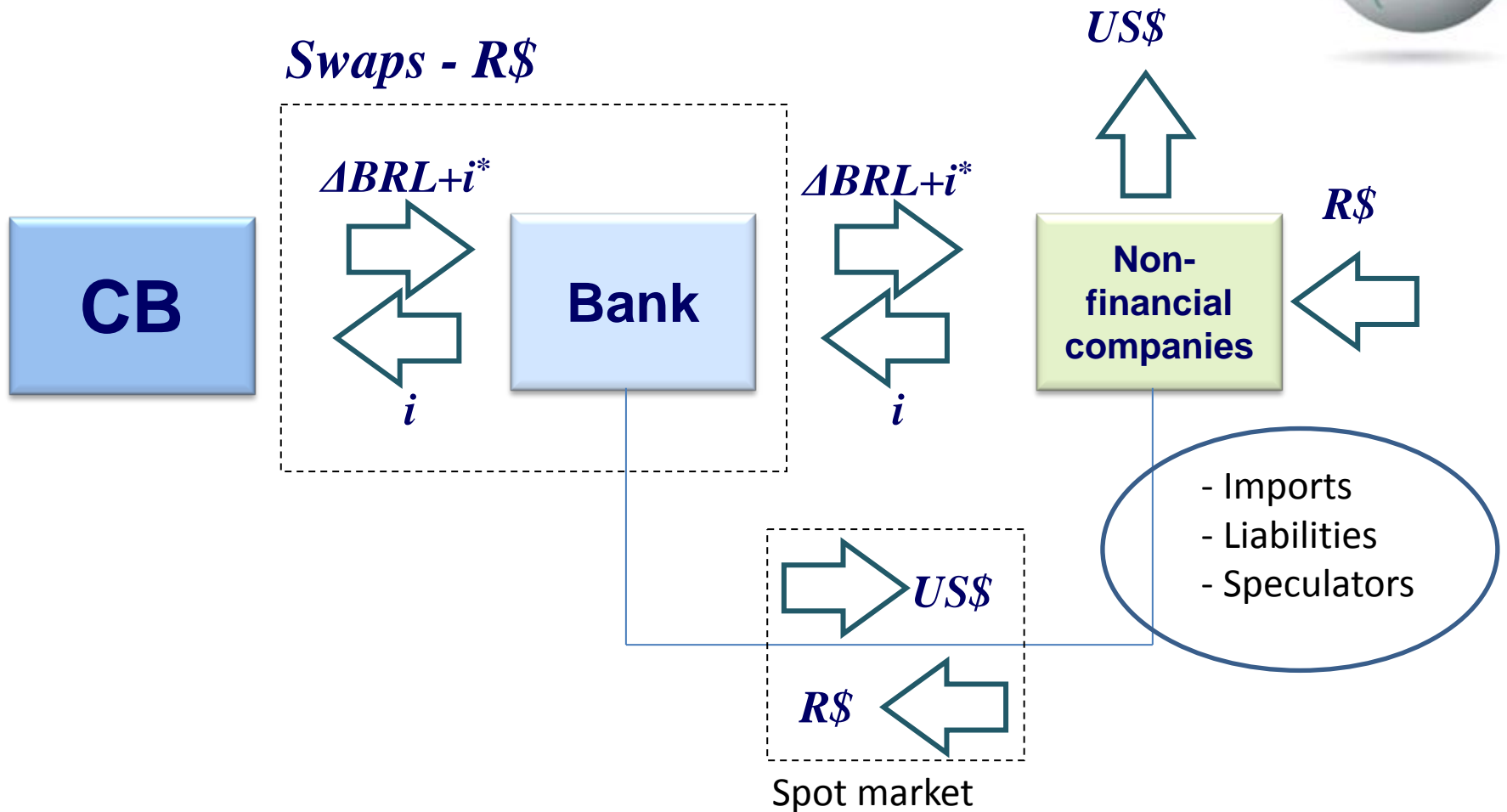




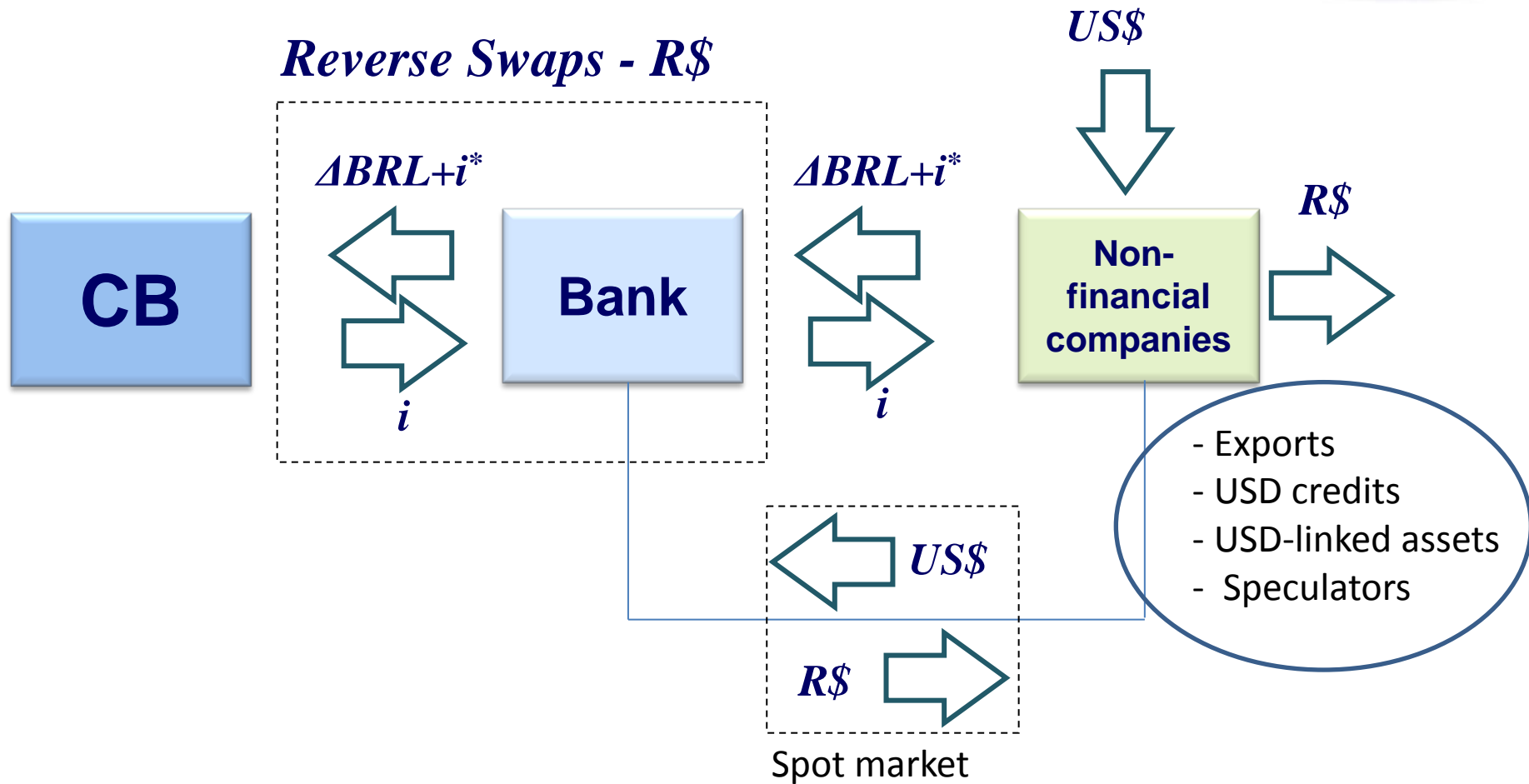
2. Brazilian swaps



Brazilian swaps



Brazilian reverse swaps



Brazilian swaps



Covered interest rate parity

$$F = S \times \frac{(1+i)}{(1+i^*)}$$

i^* : USD interest rate in Brazil (“*cupom cambial*”)

i : BRL interest rate (Selic rate)

S : Spot rate

F : Forward rate



FX Swaps Governance



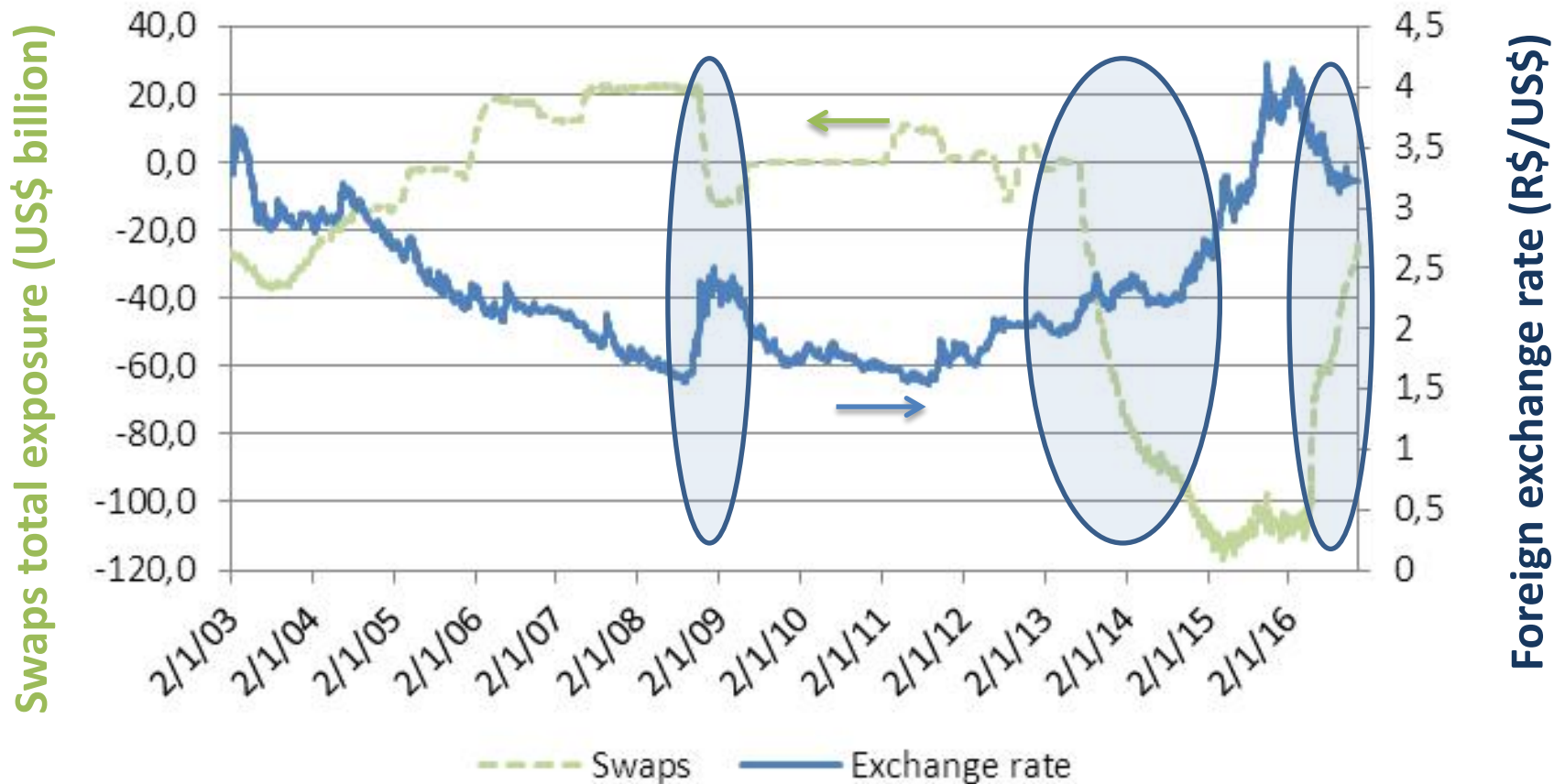
- The Exchange Rate Swap (SCS) is conducted by the Open Market Department.
- The International Reserves Department provides information on capital flows.
- Deputy-Governor for Monetary Policy is responsible for the auction decision (cut-off future foreign exchange rate “F”).



Brazilian FX swaps



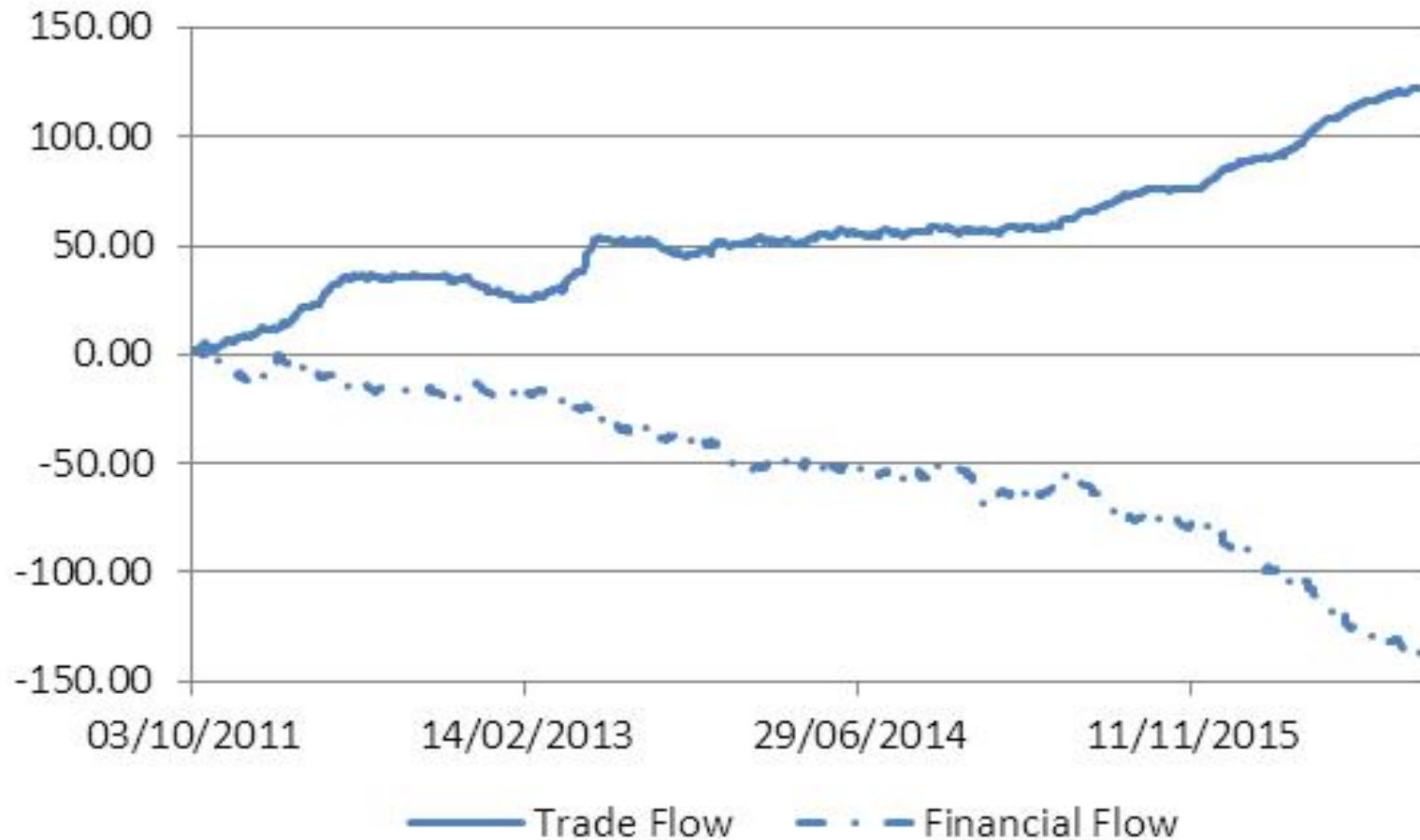
Negative total exposure means that Central Bank is short in the foreign exchange rate



USD Flow



Trade and Financial Flows (US\$ billion)





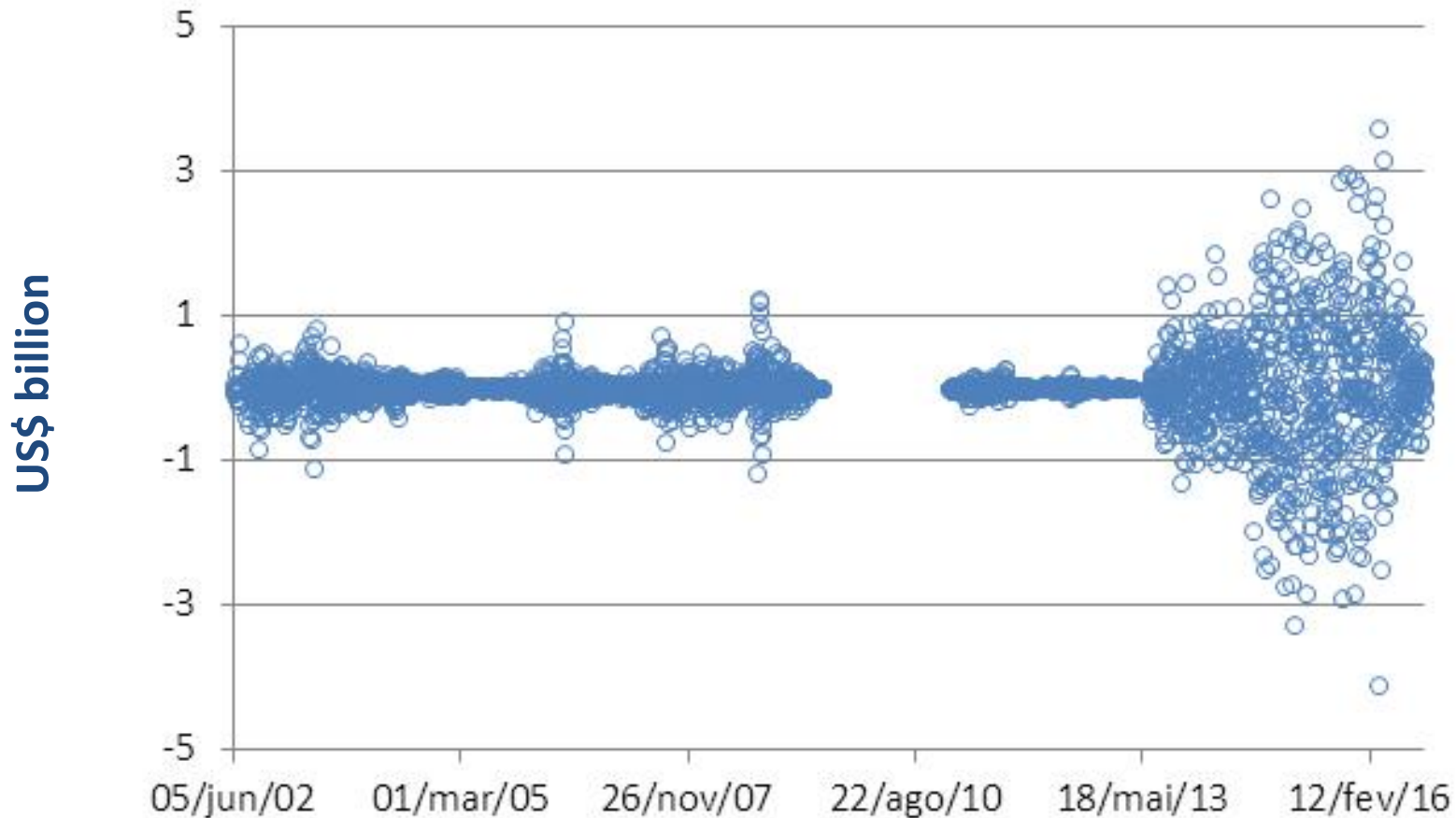
3. Risk monitoring



Brazilian swaps



Swaps daily adjustment (US\$ billion)



Risk monitoring



Swaps scenario analysis (US\$ billion)

SWAP - SENSITIVITY ANALYSIS								
Foreign exchange rate Parallel shift in the "cupom cambial" curve	2,90	3,00	3,10	3,20	3,30	3,40	3,50	3,60
-200	9,7	6,5	3,3	0,1	-3,1	-6,3	-9,5	-12,7
-100	10,0	6,8	3,6	0,4	-2,8	-6,0	-9,2	-12,3
-50	10,1	6,9	3,7	0,5	-2,6	-5,8	-9,0	-12,2
0	10,2	7,0	3,9	0,7	-2,5	-5,7	-8,9	-12,0
50	10,3	7,2	4,0	0,8	-2,4	-5,5	-8,7	-11,9
100	10,5	7,3	4,1	0,9	-2,2	-5,4	-8,6	-11,7
200	10,7	7,5	4,4	1,2	-1,9	-5,1	-8,3	-11,4

Obs: Cupom cambial is
a USD interest rate

Foreign exchange rate: R\$ 3,2212

Market expectations
end of period: R\$ 3.40

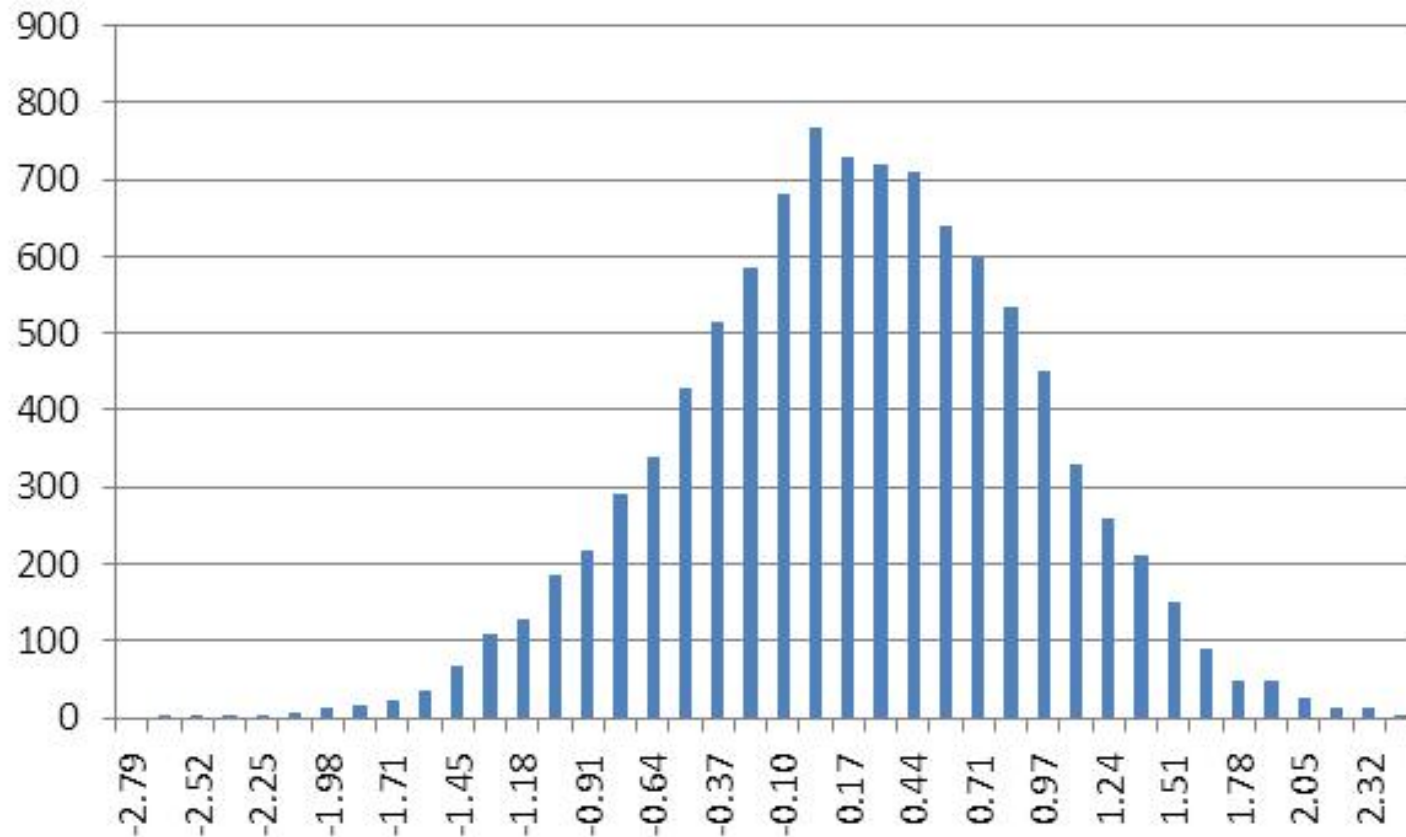


Risk monitoring



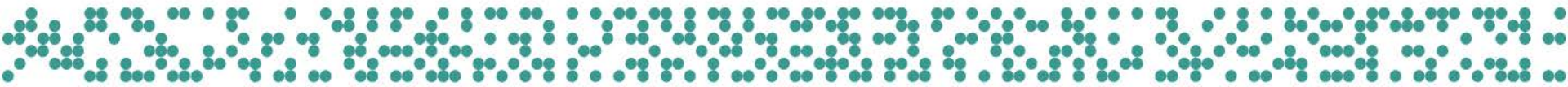
Swaps – Monte Carlo simulation (US\$ billion)

Risk and expected result (as end of October 2016 until January 2017)

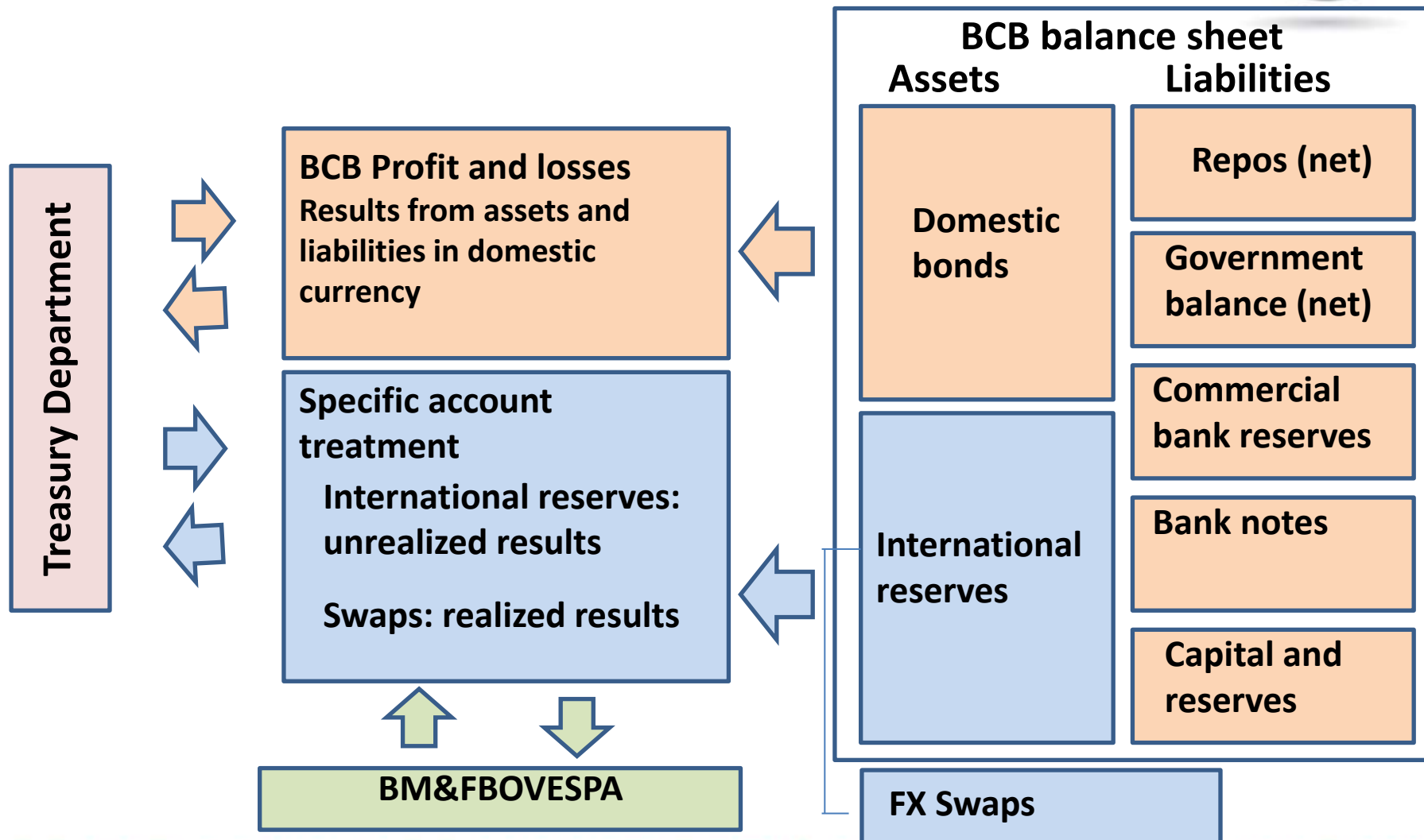




4. Results



Brazilian swaps



Brazilian swaps



Scenario:

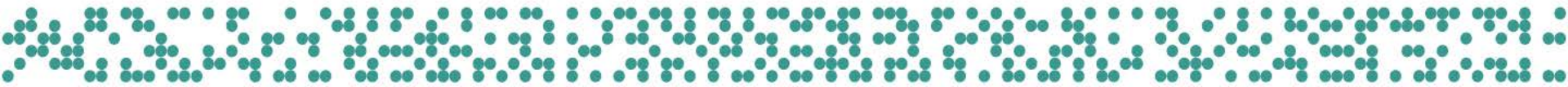
- ✓ BRL devaluation (US dollar appreciation)
 - International reserves: unrealized profits
 - Swaps: realized losses
 - Reverse swaps: realized profits

- ✓ Real appreciation (US dollar devaluation)
 - International reserves: unrealized losses
 - Swaps: realized profits
 - Reverse swaps: realized losses





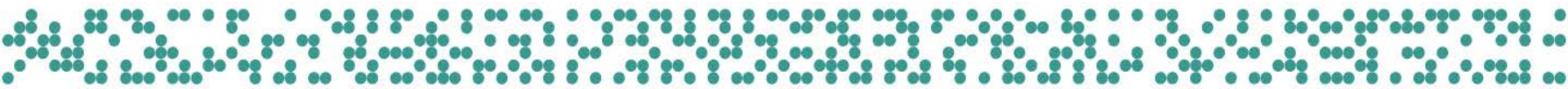
5. Final remarks



Final remarks



- The Brazilian Central Bank intervenes in the market to smooth volatility;
- There is no target for a level of foreign exchange rate;
- The Central Bank of Brazil does not rely only on spot market interventions;
- The swap operation is an additional intervention tool that gives more flexibility for the BCB.
- Swaps operations provide hedge for currency exposure;



Final remarks



- Swaps operations help BCB to avoid selling international reserves during periods of turbulence in the market.
- The international reserves have **unrealized** profit/loss impact on the BCB balance sheet.
- The swaps operations have **realized profit/loss** impact on the BCB balance sheet.
- There is a special arrangement between the BCB and the Treasury Department to prevent the impacts of foreign exchange rate volatility on the BCB balance sheet.

