

Brazil Economic Outlook & Challenges when Normalization begins

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Outline

- Global Economy
- EMEs
- Brazil
 - Fundamentals, Differentiation, Policy Reaction
 - Inflation
 - Growth
 - Challenges

Main Messages (1)

- Global economy a bit better (e.g., US recovery, less tail risks/false positive in EuroZone, China)
- Normalization has begun, it's a net positive; better coordination, FED's communication on UMP exit (*e.g., separation, spillovers, caution*); repricing underway of EMEs assets w/ some volatility
- Nothing really new in challenges faced by EMEs (Impossible Trinity, Mundell-Fleming) during GFC (*e.g., transmission of K flows into inflation, asset prices, exchange rate, credit market, etc.*), except for unprecedented speed+intensity + simultaneity of UMP (ZIF+QE+FG) in 3 major monetary areas

Main Messages (2)

- EME monetary policy frameworks (IT or not) had to address challenges posing significant risks to monetary and/or financial stability (*e.g., typical “boom” & “feel good” moment, followed by “sudden stop”, reversal*); but not only an EME bp (*e.g., EZ periphery, Baltics, East-Asia*)
- Good news: many EMEs had experienced, more prepared are always riding some global financial cycle (local MP in AE have global effects), we are always into some kind of “beauty contest”, especially deficit-savings countries
- Bad news (in a while): UMP unprecedented, AEs’ exit not synchronized (FED, BoJ, ECB), “New Normal” equilibria?

Main Messages (3)

- Brazil's textbook response in this transition is working well: flexible ER, AD management (FP+MP) with sizeable buffer of self-insurance (reserves); MaPs worked well for financial stability and complemented MP in upswing; FX buffer is important to reduce volatility during "tapering" and help financial stability (FS)
- Brazil's took early action (MP), prepared the reversal, addressed inflation pressure (early 2013), put in place FX hedge program, but challenges remain: ST high-persistent inflation, sticky expectations, supply shock food prices, growth-confidence nexus; MLT rotating growth from C to I, more TFP through increasing physical & human K stocks

Slightly Better but Complex, Why?

- UMP unprecedented policy framework, despite the FED's much improved FG for exit there are the Known Unknowns and the Unknown Unknowns, like what?
- AEs: NAIRU, labor market & wage, transmission into inflation, neutral rate, risks of new bubbles, potential growth & “secular decline”, etc. Issue: anxiety about “control” over slope of yield curve & timing of future changes in monetary conditions (anticipation?)
- EMEs: life after “easy money” and the commodity super-cycle? “Decoupling” or “middle-income growth traps”? Issue: anxiety about how local political economy conditions would allow necessary & timely adjustments

Different Studies for Nairu, Phillips Curve and ST-LT Unemployment & Inflation wages in the US

Authors	Outcome Variable	Sample Period	Results	Approach
Gordon (2013)	PCE inflation	1962-2013	Total and short-term unemployment rates have similar performance in the long term, but short-term rate better predicts inflation out-of-sample since the recession. Effect of short-term rate is also more stable over the full sample period.	"Triangle Model" Phillips curve incorporating inflation inertia, demand (the unemployment gap), the 8-quarter change in trend productivity growth, indicators for 1970s price controls, and supply shocks captured by import and food & energy prices. Supply shocks are allowed to have a different effect before and after 1987. Time-varying NAIRU estimated simultaneously.
Watson (2014)	Core PCE inflation	1960-2013	As in Gordon, NAIRU associated with short-term rate is more stable than that associated with total unemployment rate over the period 2007-2013.	Similar to Gordon's model in including supply shocks whose effect is different before and after 1984, and in allowing for a time-varying NAIRU estimated with a filter.
Krueger (2014)	Core PCE inflation; average hourly earnings	1976-2013	Short-term unemployment rate gives a better and more stable prediction of inflation, wages.	Price/wage Phillips curves with coefficient of 1 imposed on lag core price inflation, which is used to capture inflation expectations. No additional controls beyond the unemployment rate.

Source: Krueger, Alan B. Cramer, Judd, and Cho. Are the Long-Term Unemployed on the Margins of the Labor Market?, Brookings Panel on Economic Activity, March 20–21, 2014, Princeton University & NBER

US-Nairu

Author(s)	NAIRU estimate
Serve and Lemoine (July 2011)	7.2%
Weidner and Williams (Feb 2011)	6.7%
Daly, Hobijn, and Valletta (July 2011)	6.3%
Aaronson, Mazumder, and Schechter (2010)	6.2%
Fed Survey of Professional Forecasters (August 2011)	6%
Dickens (June 2011)	6%
Dickens and Triest (Oct 2011)	6%
Daly, Hobijn, Sahin, and Valletta (Sept 2011)	5.9%
FOMC (June 2013, Long-run unemployment rate)	5.6%
Average NAIRU estimate	6.2%

Source: Deutsche Bank. U.S. Employment Outlook. Sep., 2013.

US-Do you look by duration?

Figure 4. Unemployment Rates by Duration

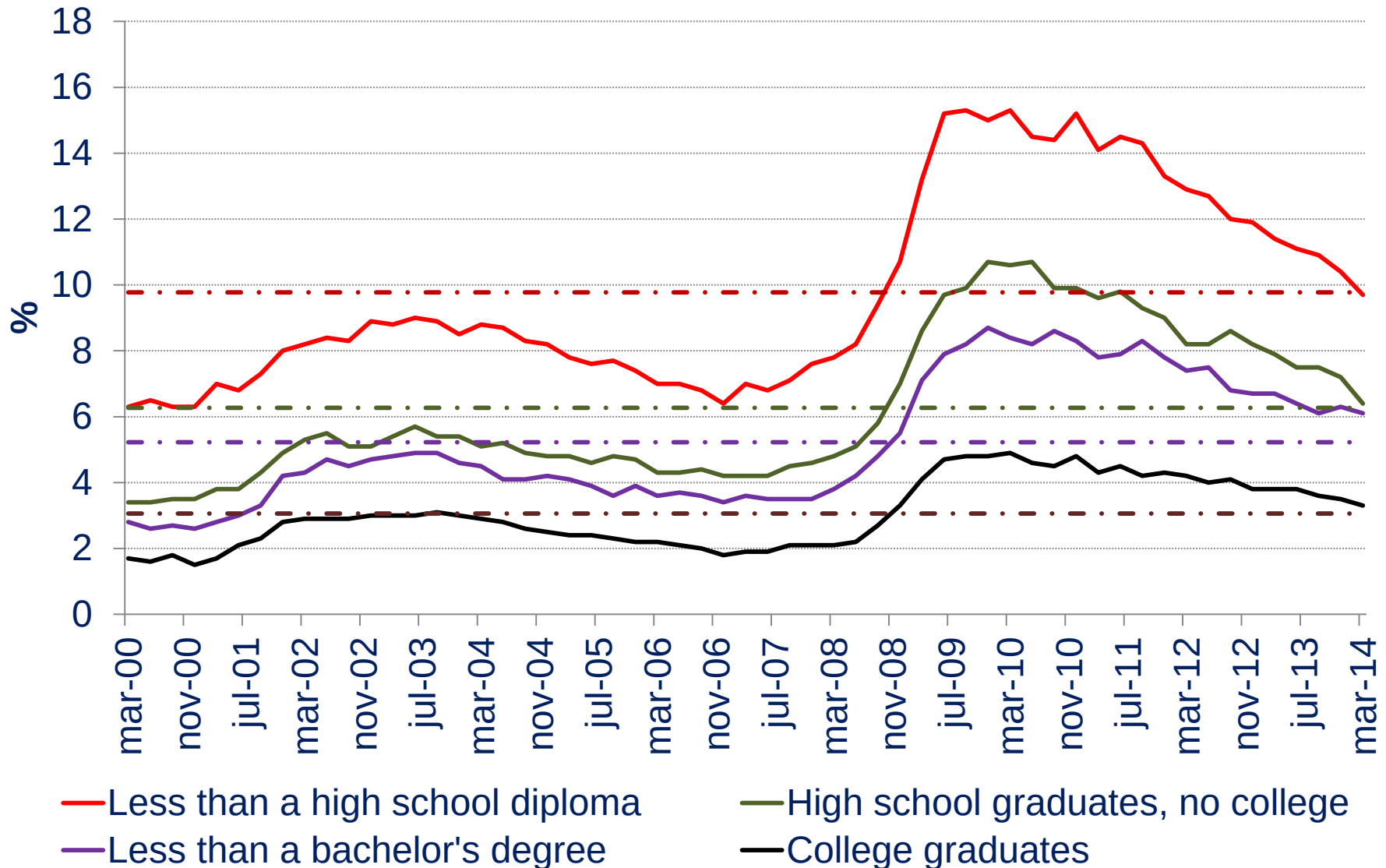
Percent of Civilian Labor Force (Seasonally Adjusted)



Source: Krueger, Alan B. Cramer, Judd, and Cho. Are the Long-Term Unemployed on the Margins of the Labor Market?, Brookings Panel on Economic Activity, March 20–21, 2014, Princeton University & NBER

US-Do you look by skills?

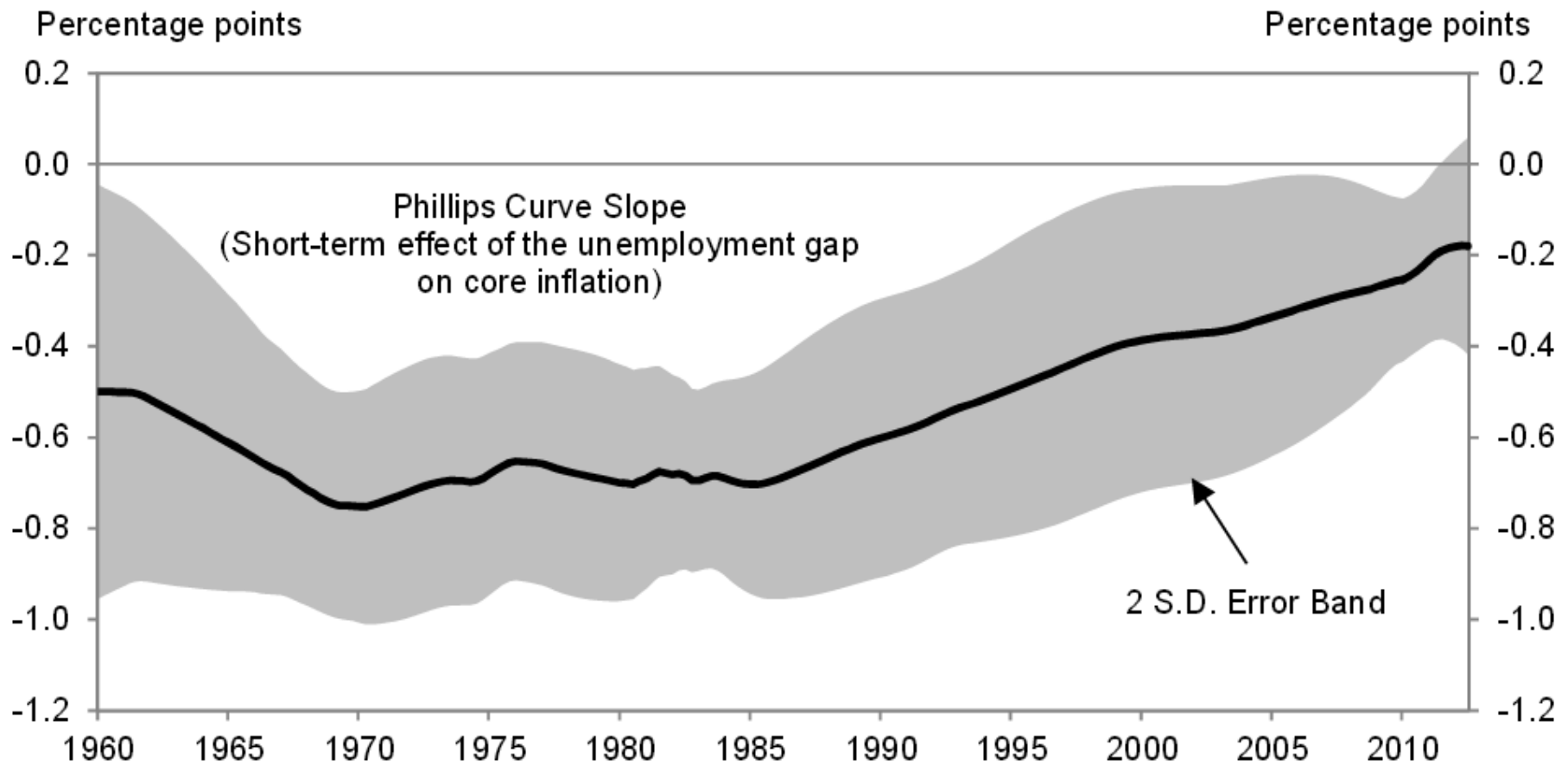
Unemployment Rates by Education



Source: US Bureau of Census for the Bureau of Labor Statistics - Current Population Survey (CPS)

Do you look at slope Phillips curve?

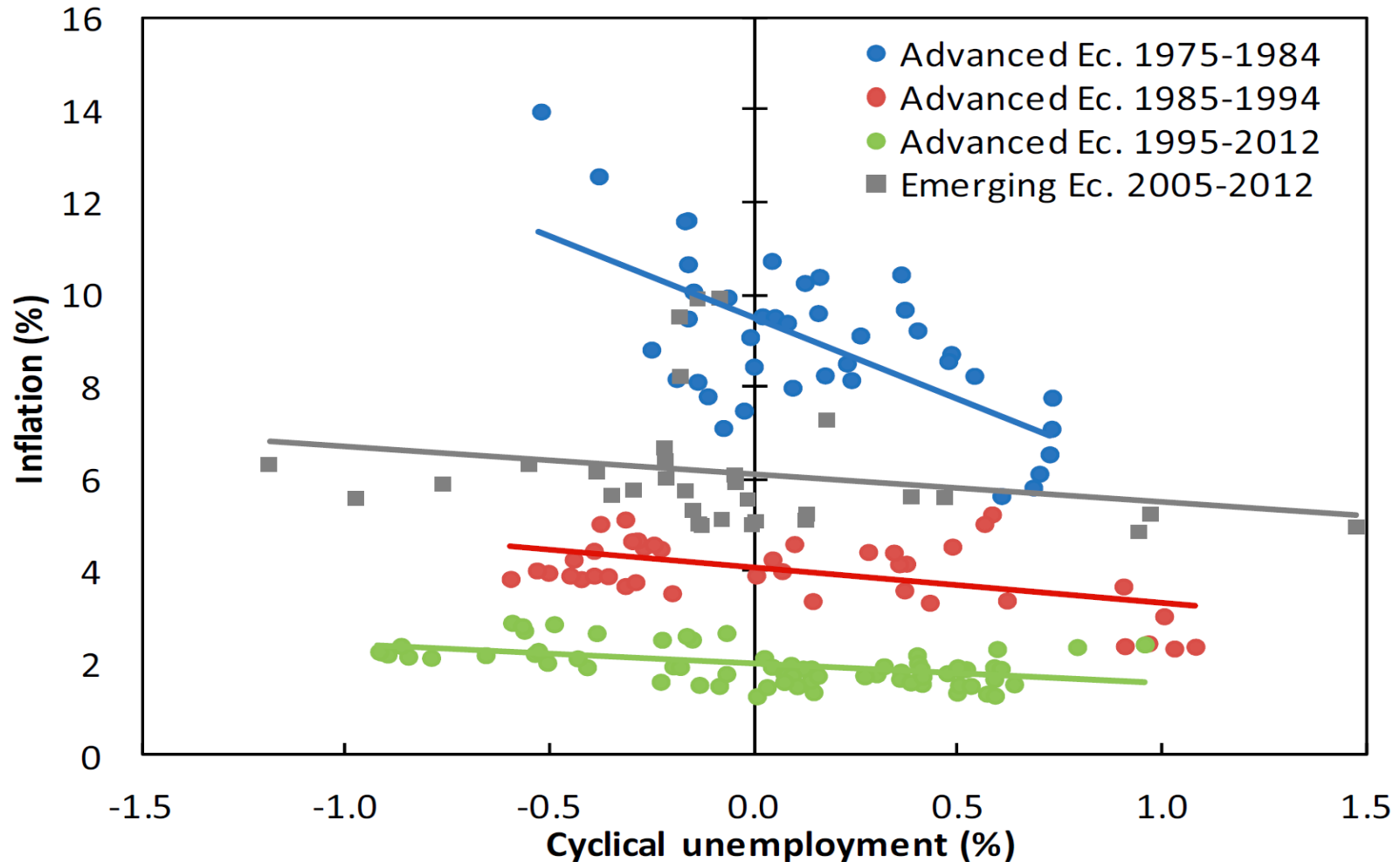
Exhibit 4: A Smaller Effect of Unemployment on Inflation



Source: Goldman Sachs Global Investment Research.

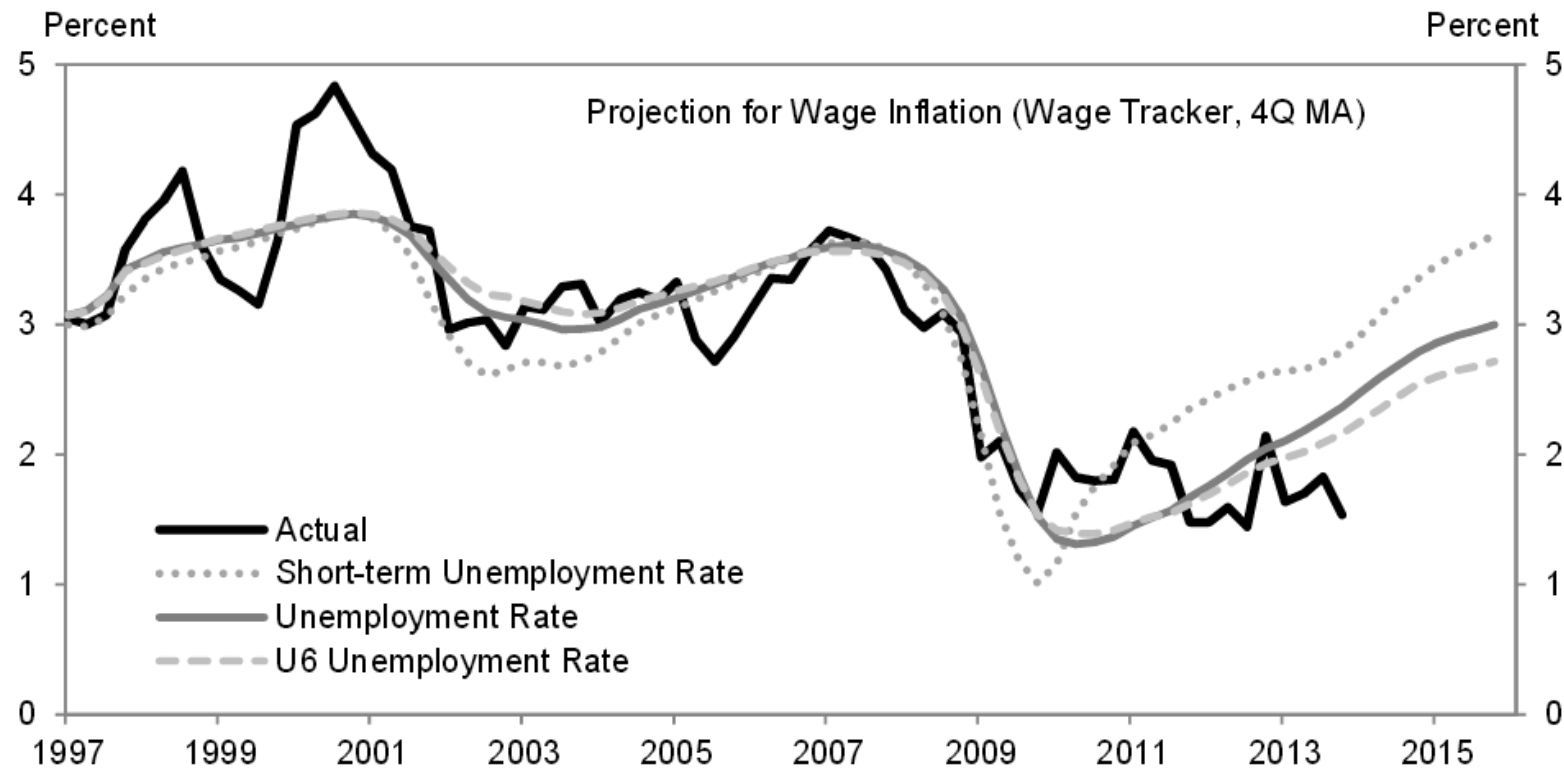
Do you look at slope Phillips curve?

Figure 2: Inflation and Cyclical Unemployment



US-Which Unemployment Projects Better Wage Growth?

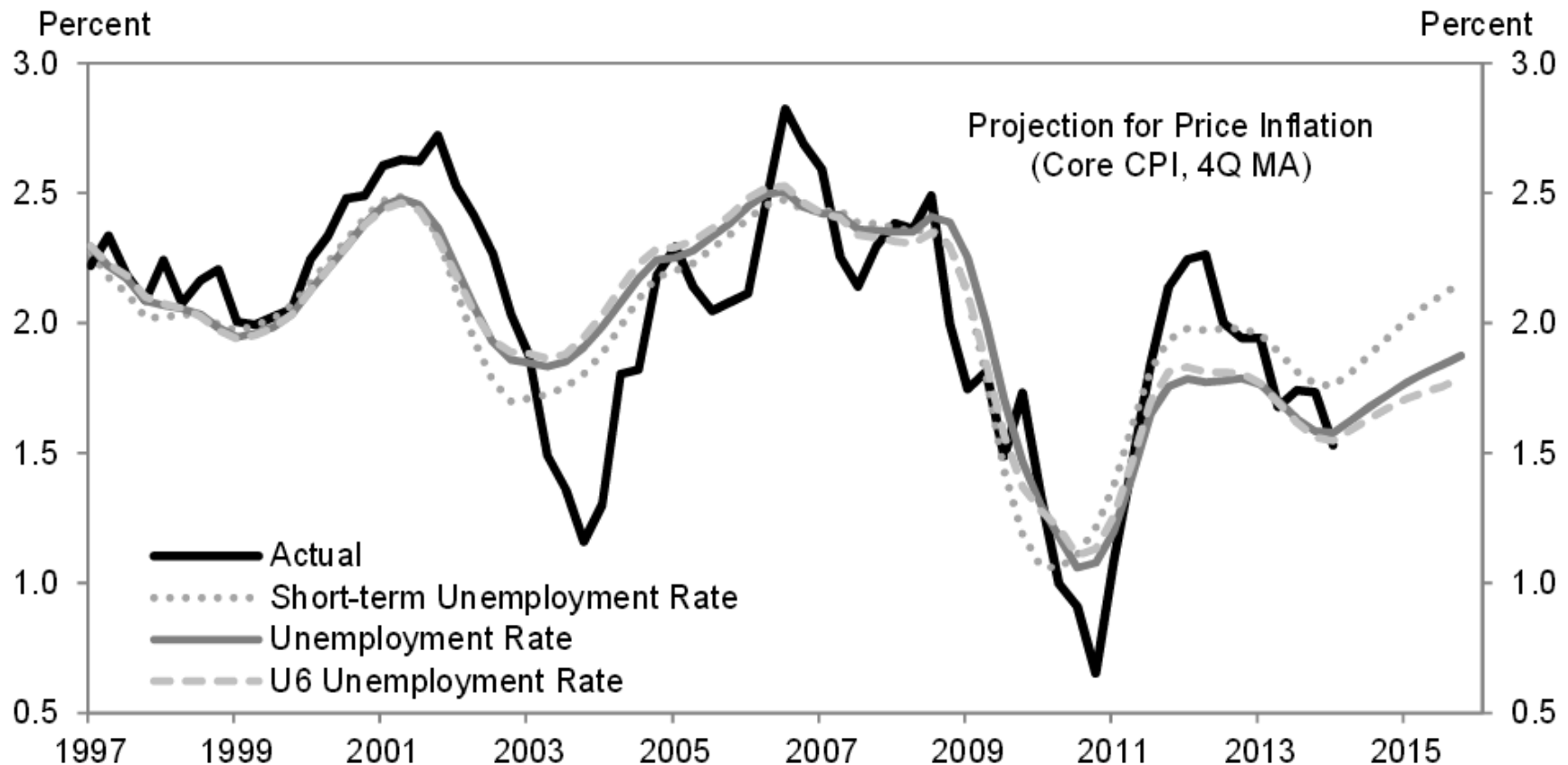
Exhibit 7: Short-term Unemployment Has Overpredicted Wage Growth



Source: Goldman Sachs Global Investment Research.

US-Which Unemployment Measure Projects Better CPI?

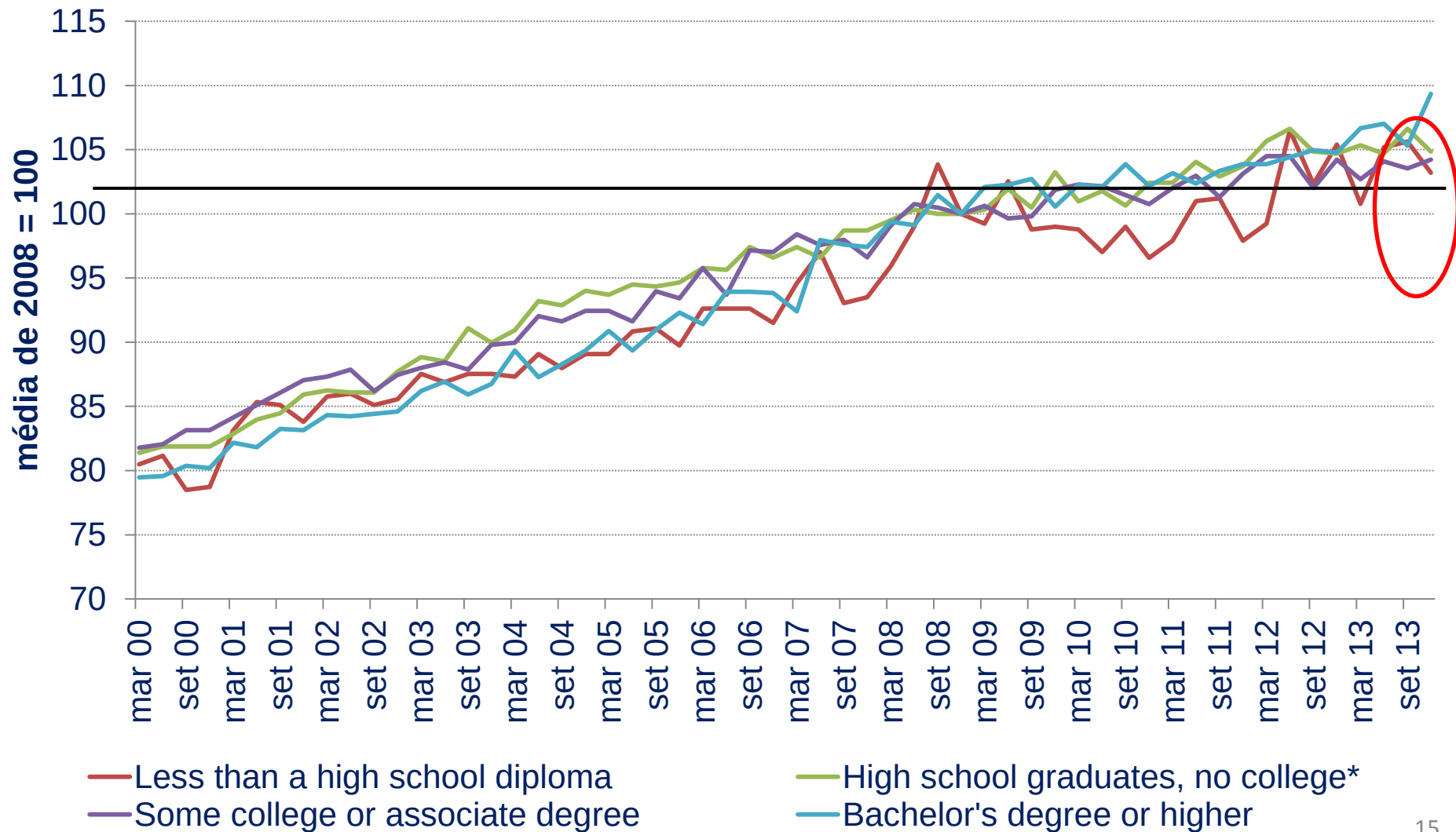
Exhibit 9: Performance of Different Slack Measures for Predicting CPI Is More Similar



Source: Goldman Sachs Global Investment Research.

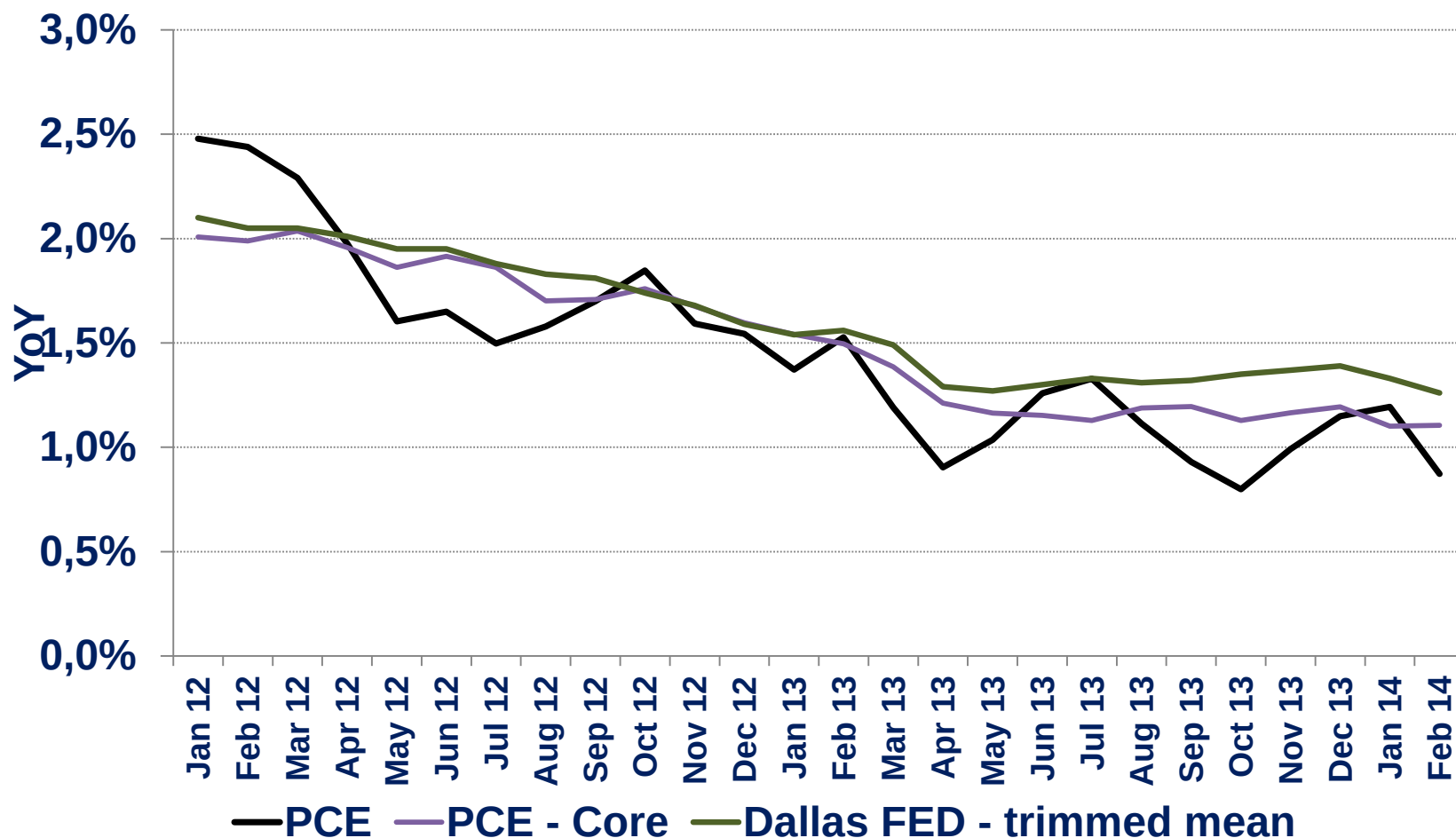
US-Unskilled Labor Wage Moderation

Weekly and hourly earnings data from the Current Population Survey



Source: US Bureau of Census for the Bureau of Labor Statistics - Current Population Survey (CPS)

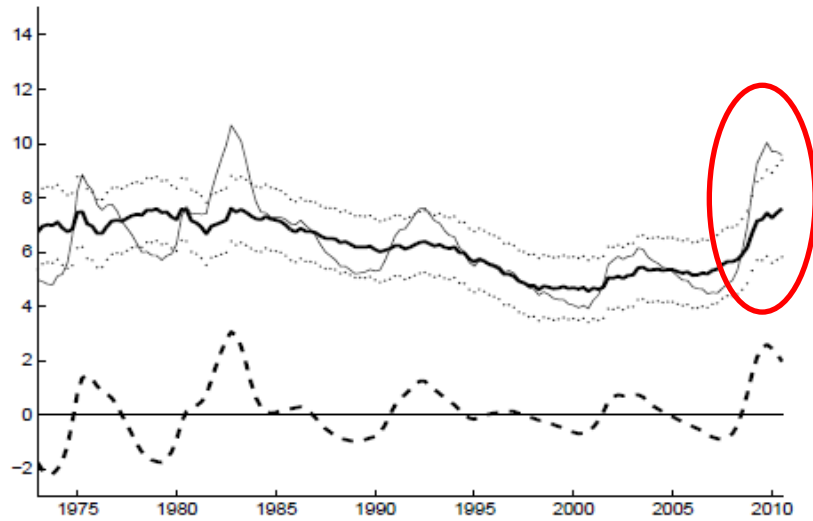
US: No inflationary surprises



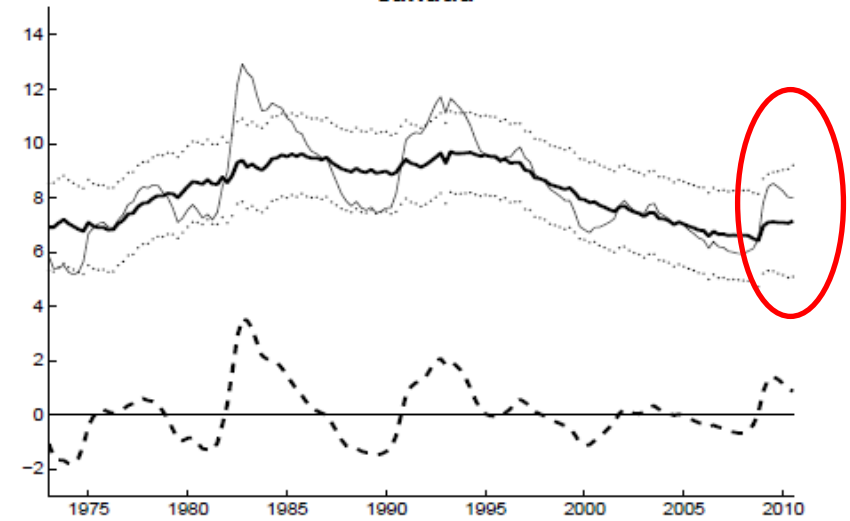
Sources: US Bureau of Economic Analysis (BEA), FED and Bloomberg

Similar Nairu Changes – selected AEs

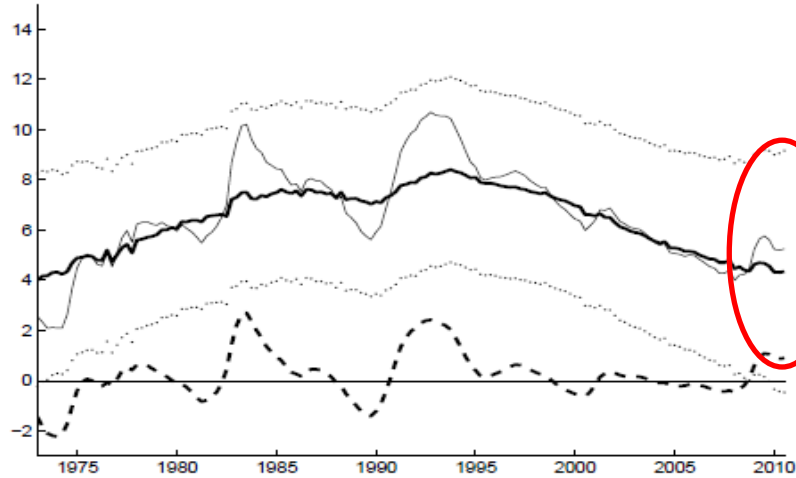
United States



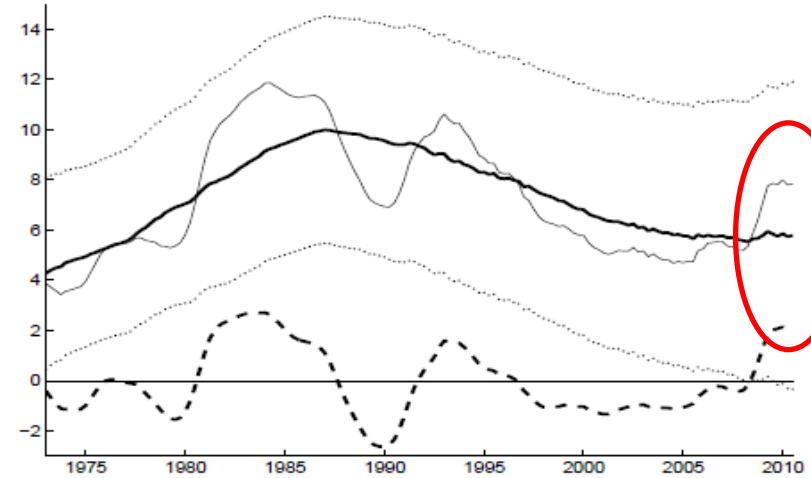
Canada



Australia



United Kingdom



Thin line: unemployment rate; bold line: tv-Nairu; dotted lines: 95%-confidence interval; dashed line: unemployment gap.

And Great Moderation Neutral interest rate?

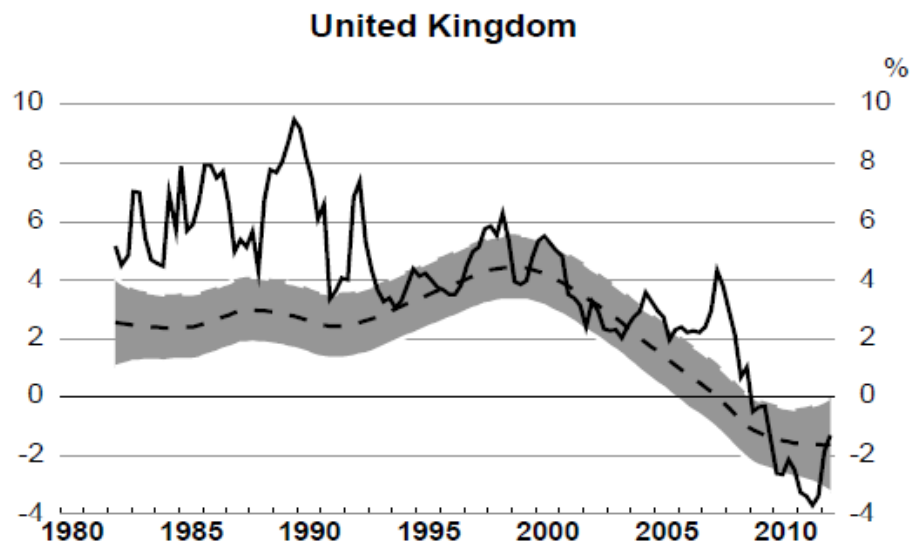
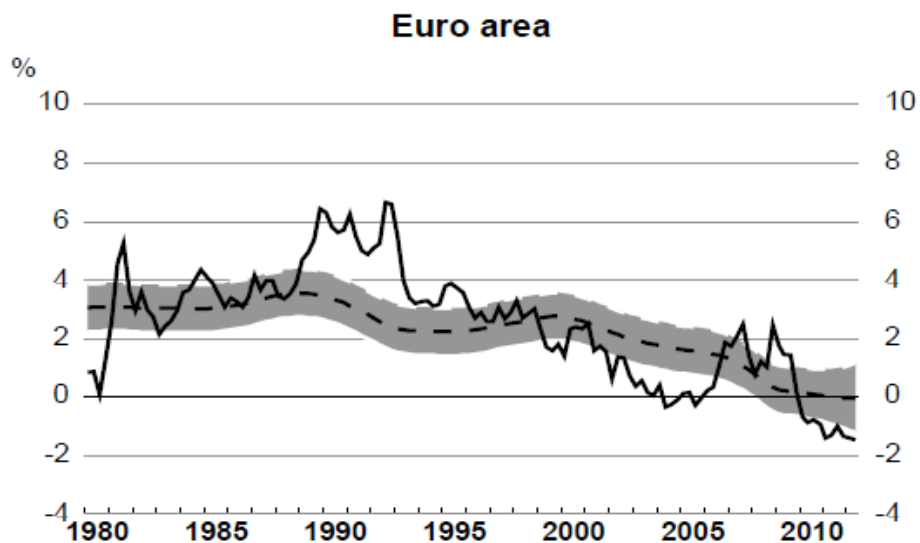
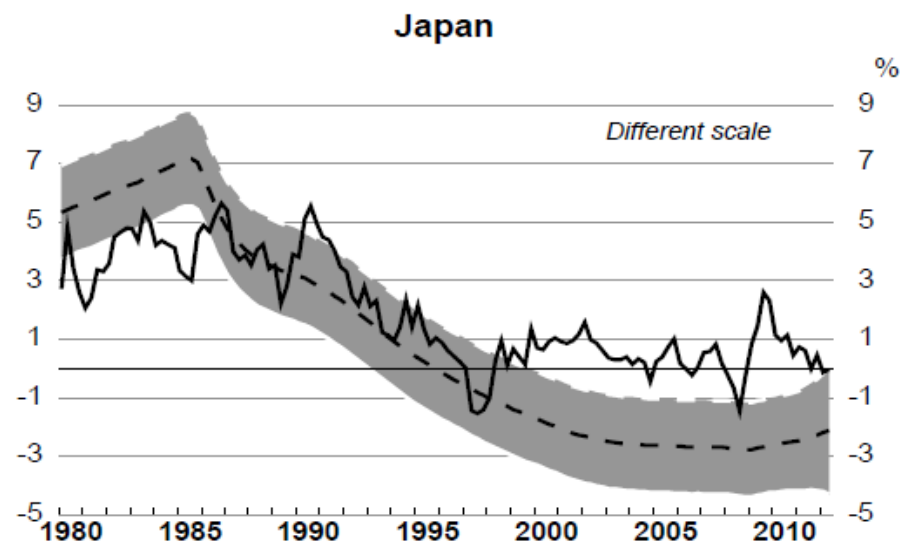
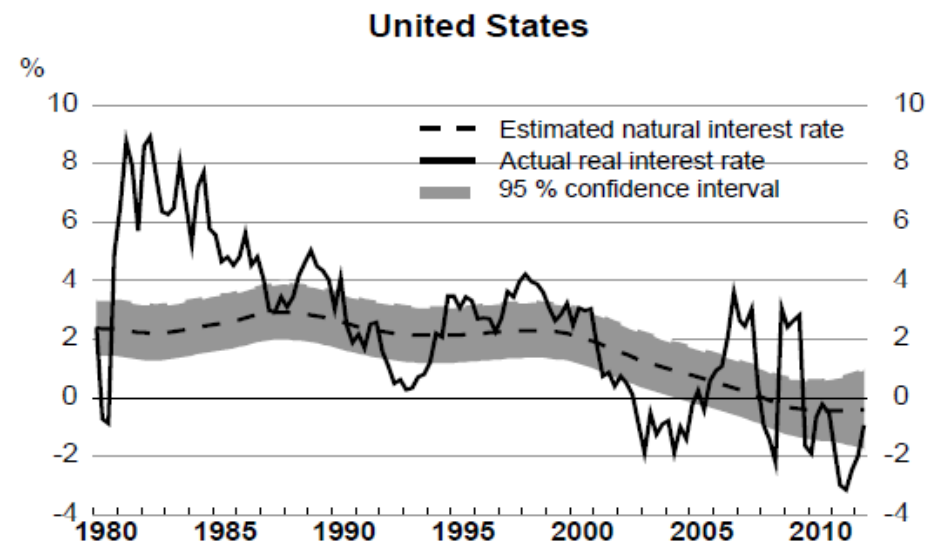
Neutral Real Interest Rate: Survey of Articles

Author	Country	Method	Period	Neutral Rate (%)
ADVANCED ECONOMIES				
Laubach & Williams (2003)	USA	Kalman Filter	2002	3.0
Crespo-Cuaresma et al. (2003)	Euro Area	Cycle-Trend Decomposition/ Kalman Filter	2002	1.5-2.0
Lam & Tkacz (2004)	Canada	DSGE	2002	1.25-2
Basdevant et al. (2004)	N. Zealand	Kalman Filter	2003	3.12
Garnier & Wilhelmssen (2005)	Euro Area	Kalman Filter	2004	2.0
Clark & Kozicki (2005)	USA	Kalman Filter	2005	2.5
Amato (2005)	USA	Time-Varying Parameter	2004	3.0
	UK		2004	4.0
	Germany		2004	2.75
Mésonnier & Renne (2007)	France	Kalman Filter	2002	1.5
Bernhardsen (2007)	Norway	Kalman Filter, Taylor Rule	2007	2.5

Source: The Neutral Interest Rate and the Stance of Monetary Policy in Brazil. Anpec 2013

And Great Moderation Neutral interest rate?

Estimated natural interest rates have declined

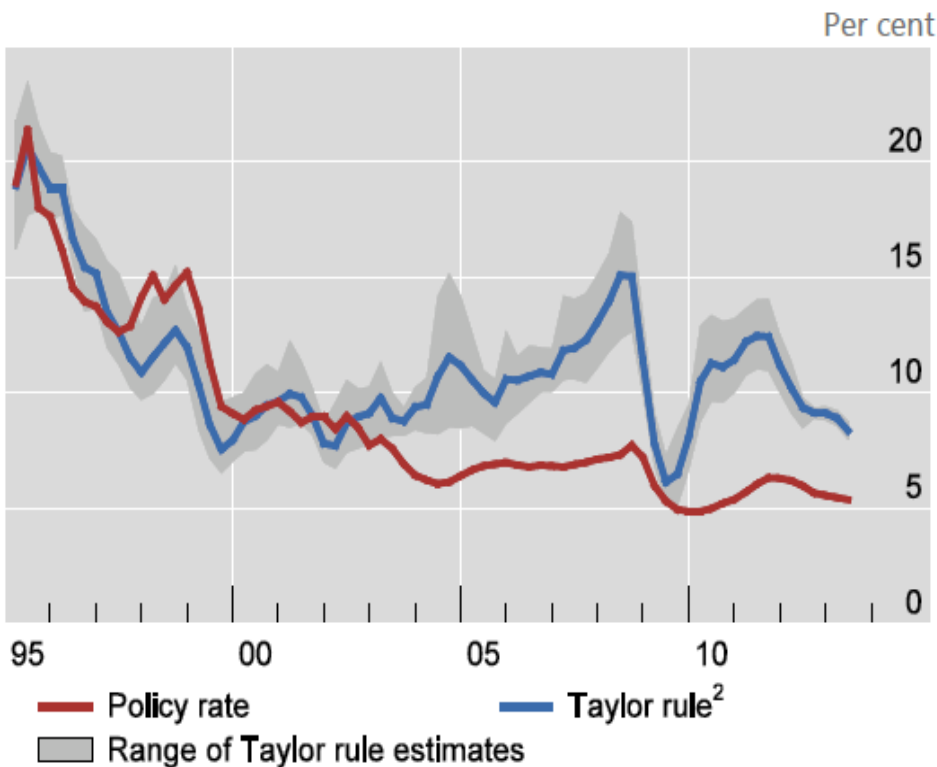


And Policy Rates in EMEs? My Taylor is Poor?

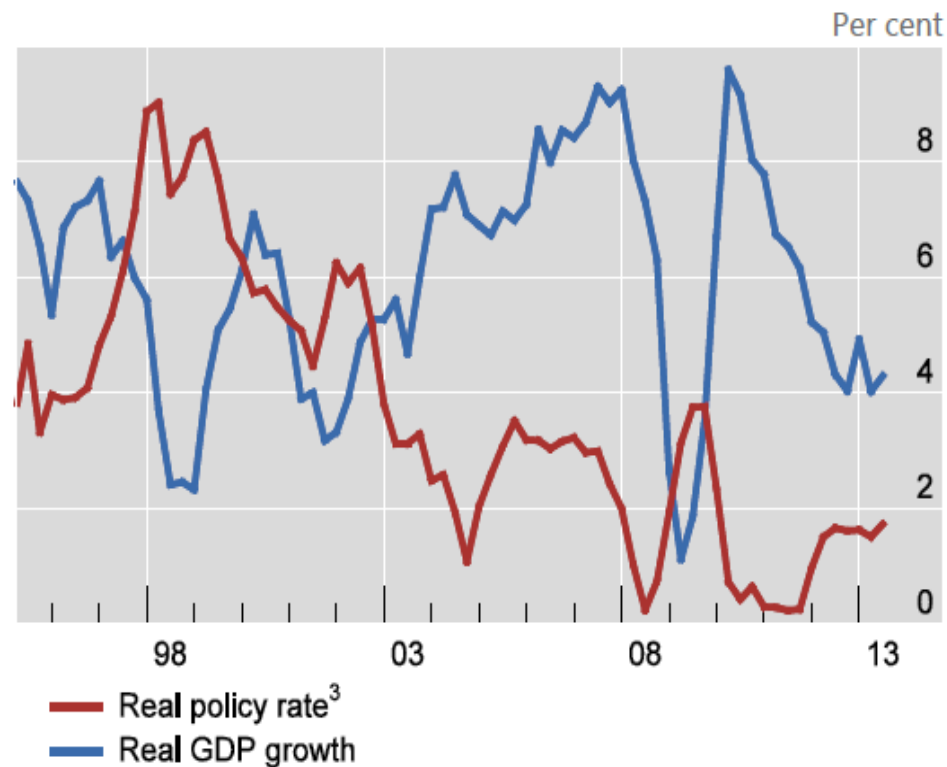
Policy rates in EMEs¹

Graph 4

Taylor rates



Growth and real policy rates



Sources: IMF, *International Financial Statistics* and *World Economic Outlook*; Bloomberg; CEIC; Consensus Economics; Datastream; national data; BIS calculations.

Baseline for Exiting UMP in the US

- Net positive for the rest of the World, despite ST volatility that will also depend on local policy stances and conditions
- FED communication is working, separation “tapering” & “tightening”, cautious approach, mindful of spillovers
- Labor market conditions, different Studies for Nairu, Phillips Curve and ST-LT unemployment & inflation wages in the US → nominal wage rigidity in downturn might moderate and/or delay wage adjustment in upturn
- Neutral interest rates different studies for AEs → levels after Great Moderation and GFC might have changed
- For the moment: despite these uncertainties, stick to Baseline, as the most likely scenario

Chronicle of a Death Foretold: EME

- As the Story goes: EMEs benefitted from “easy money” and allowed excessive relaxation of policy stances
- Local political economy favored counter-cyclical policy (especially the expansionary bit)
- Fundamentals deteriorated (e.g., asset-credit bubbles, higher current account deficits, inflationary pressure, fiscal stance-debt-to-GDP ratios, external financing for both corporates and sovereigns, etc.)
- No structural reforms in good times: lower growth prospects in the future
- Perfect storm in the making: higher vulnerability to “sudden stops” → crisis looming

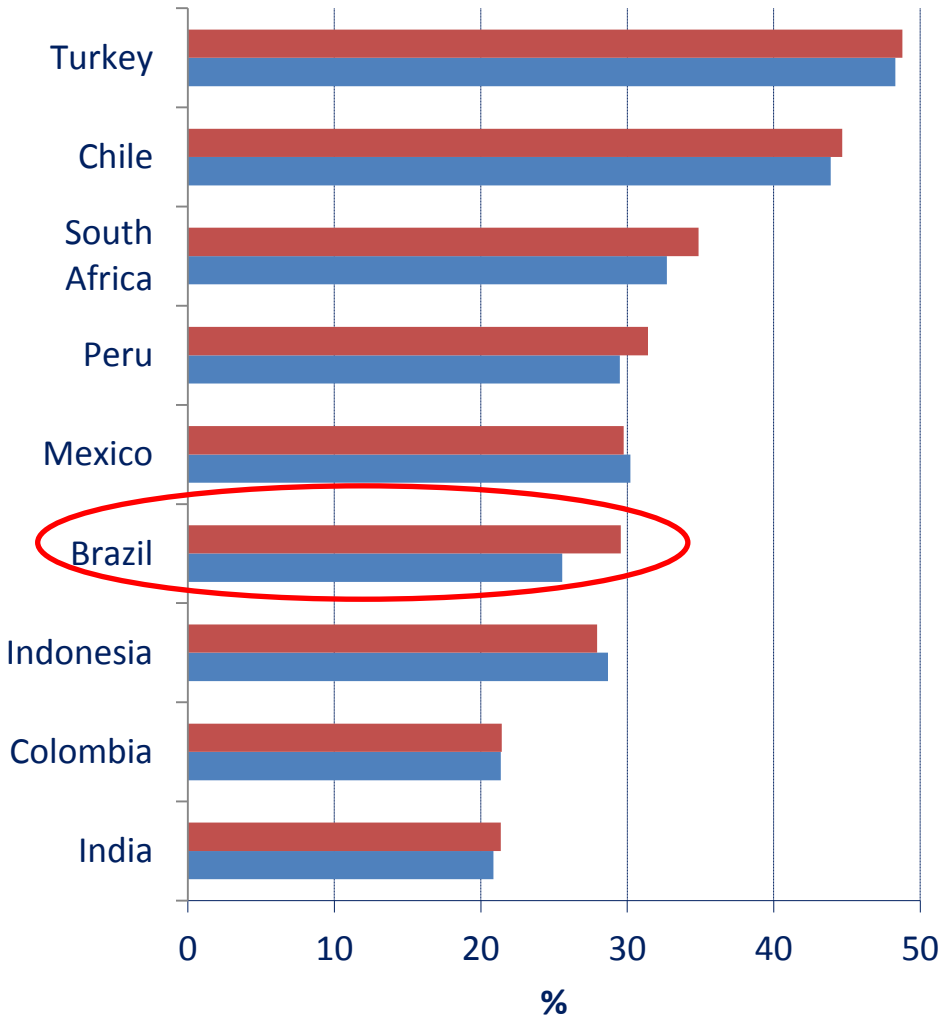
Our Answer in Brazil: No Quite So..

Brazil: Fundamentals

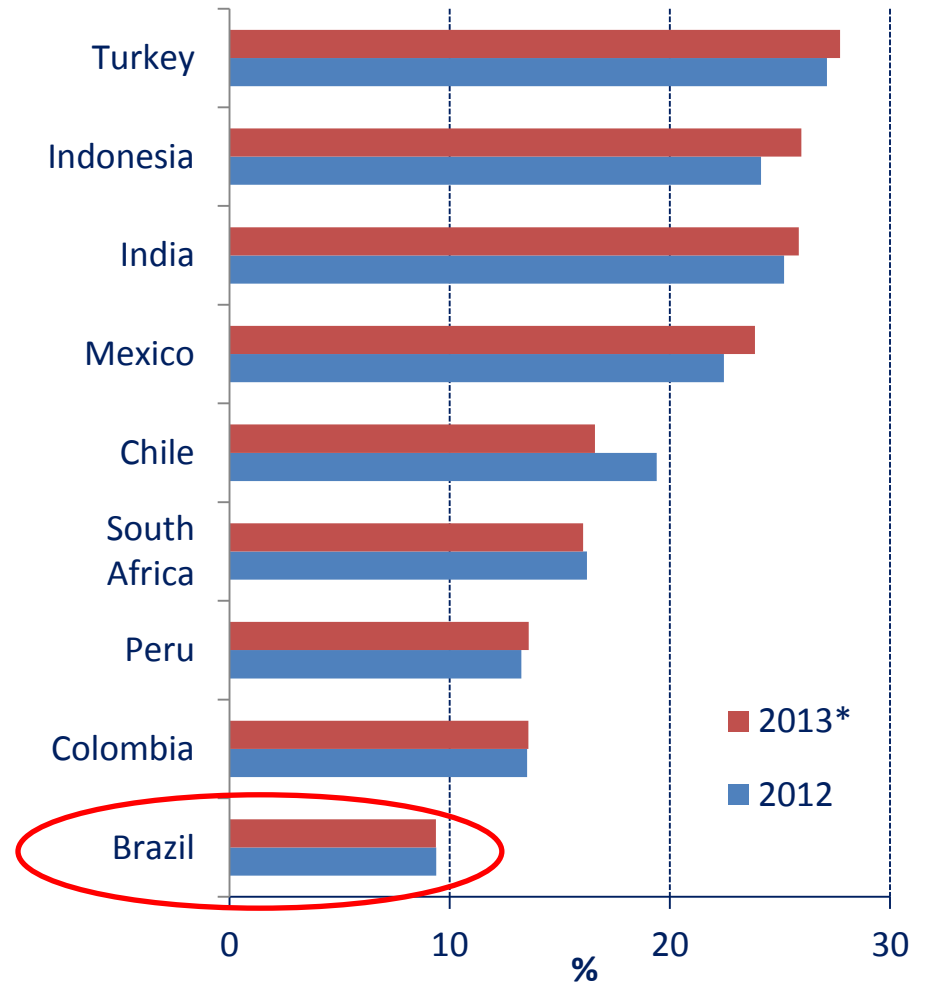
- Floating ERR, repricing of assets and depreciation is part of the solution and is not vulnerability
- Financial Sector has proven resilience, strong capital, provision and liquidity indicators
- Ratios of external financing (stocks and flows) are strong & sustainable
- Hedge program is contributing to reduce volatility, including after “perfect storm” events (e.g., tapering, EME January sell-off, Brazil’s downgrading)

External Financing

External Debt/GDP

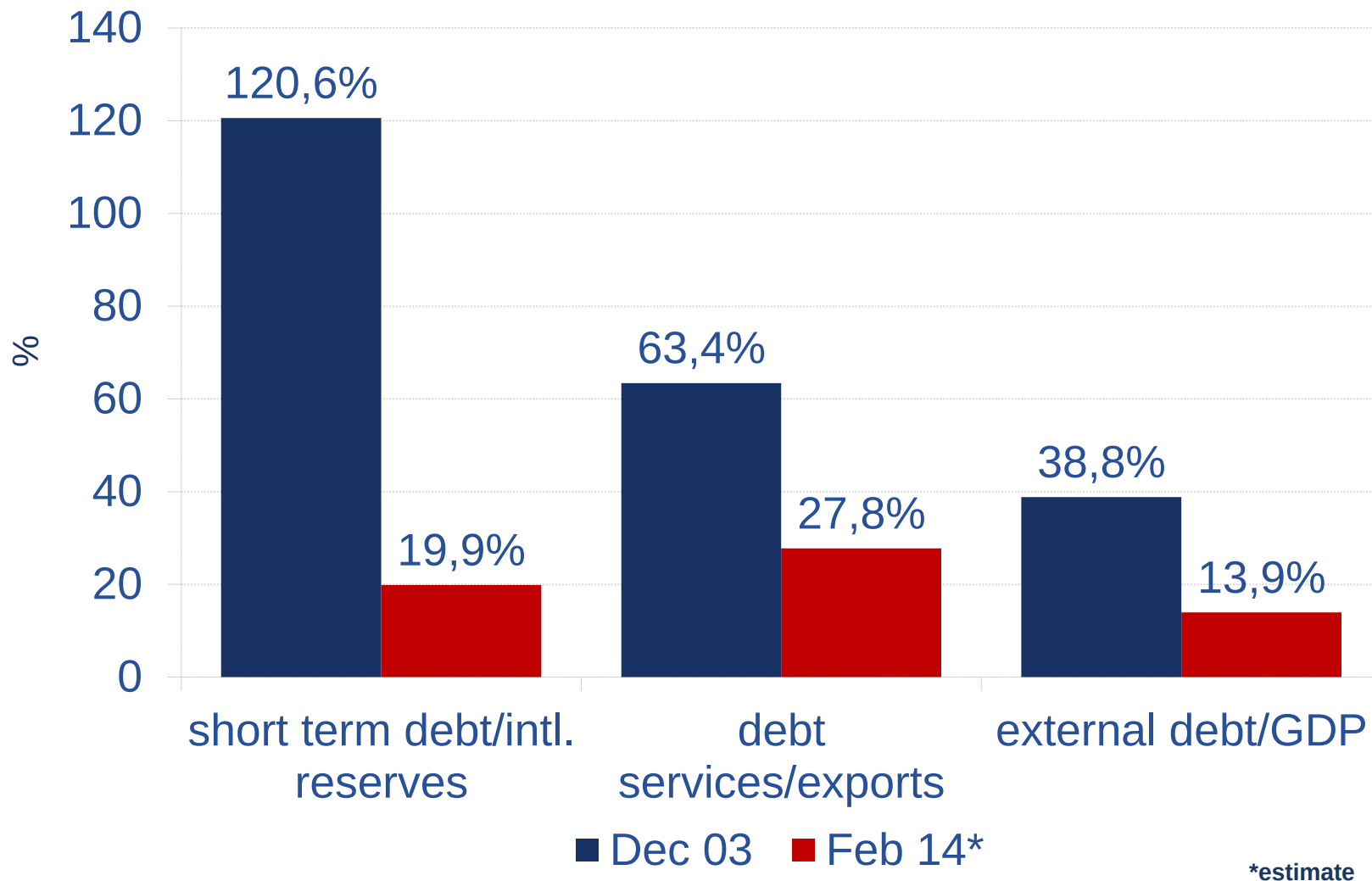


Short Debt/Total External Debt



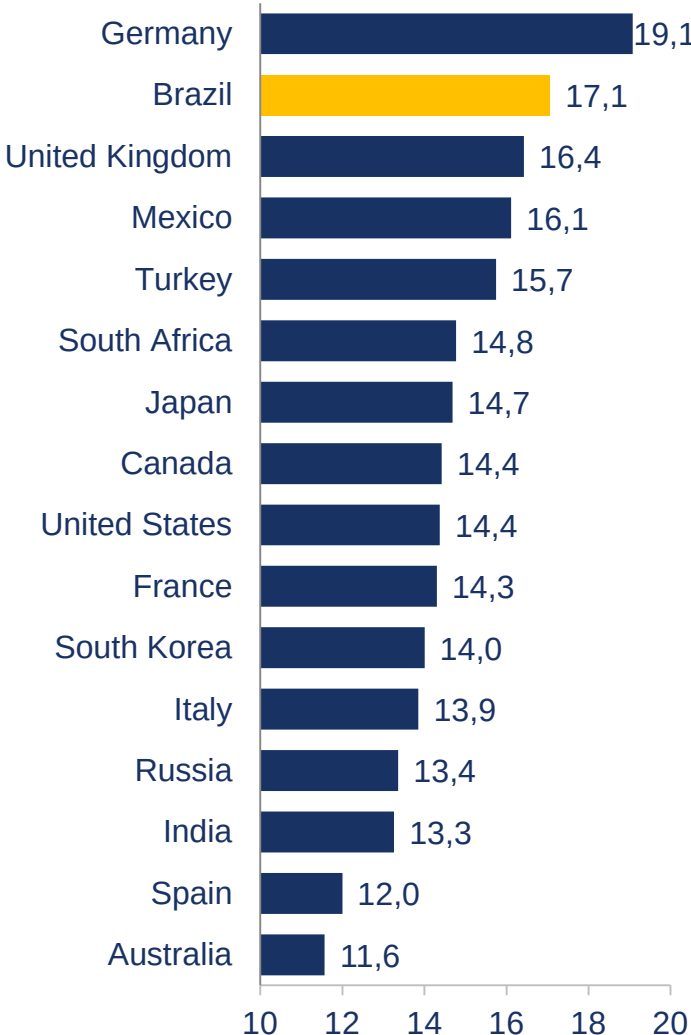
■ 2013*
■ 2012

External Debt Ratios

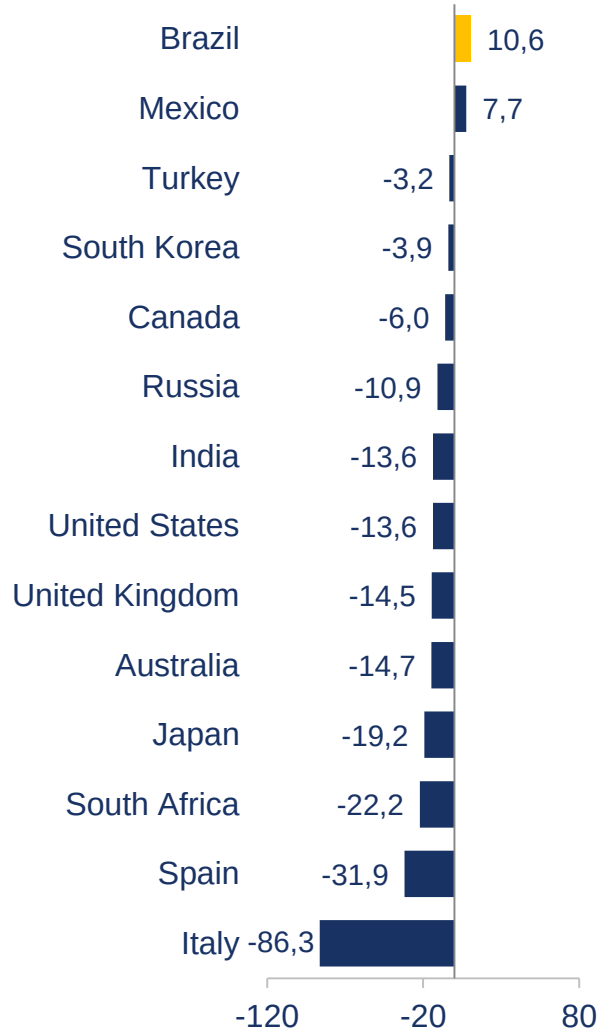


Sound financial system

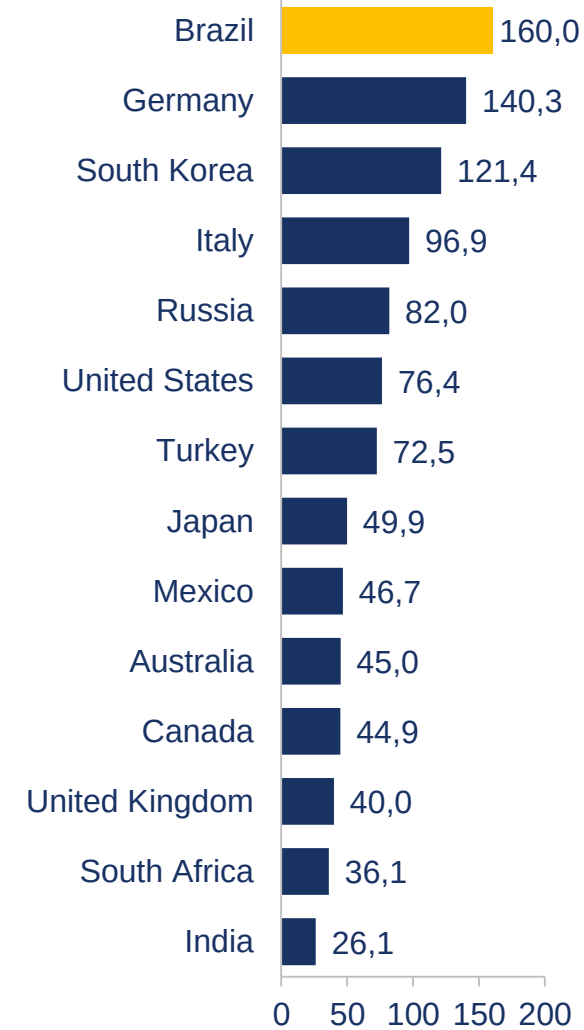
Regulatory Capital to Risk-Weighted Assets



(Provisions – NPL) / Capital

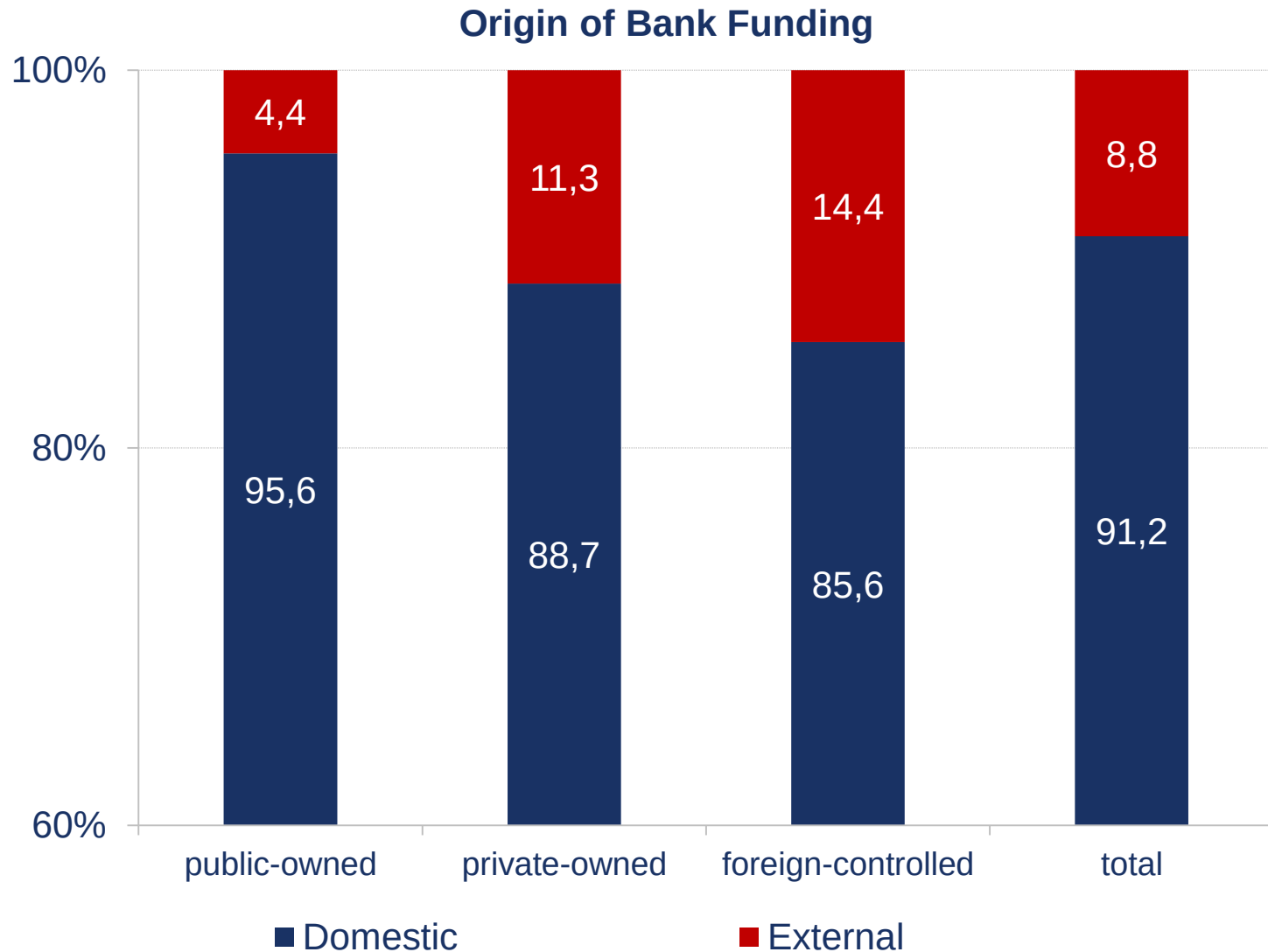


Liquid Assets to Short Term Liabilities



Source: IMF (FSI – latest available data)

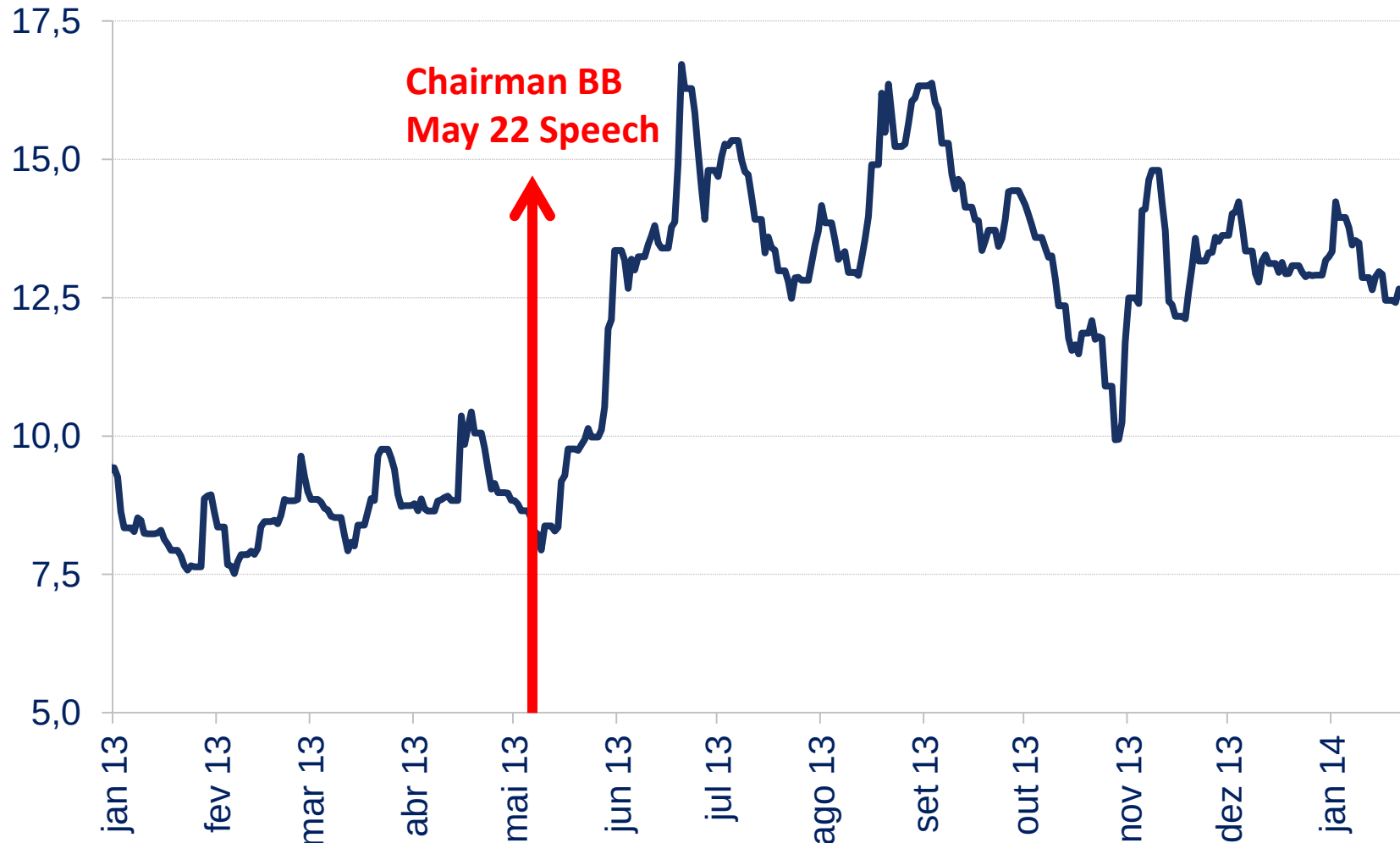
Banks: Low Share of External Funding



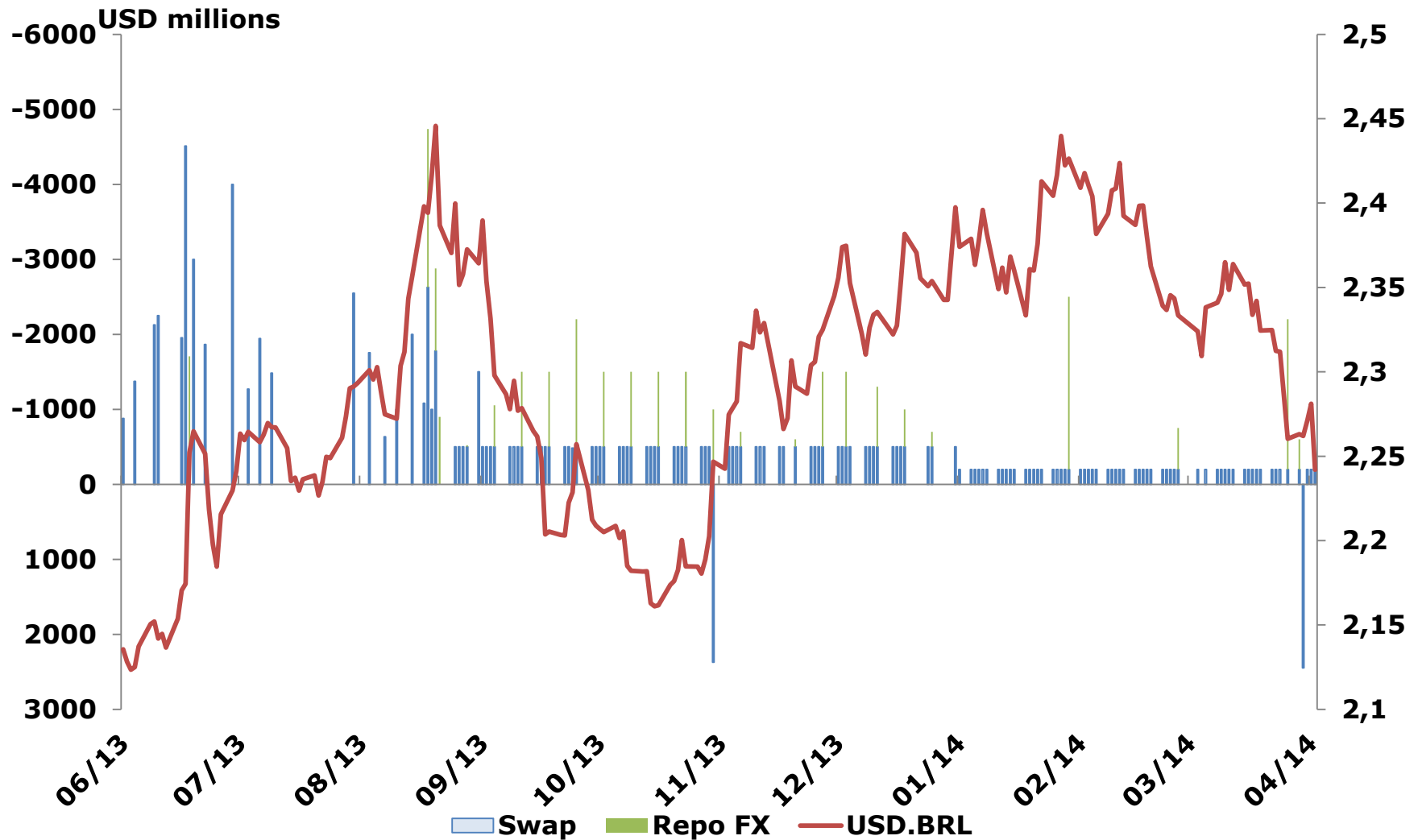
Feb 14

UMP exit brought higher volatility

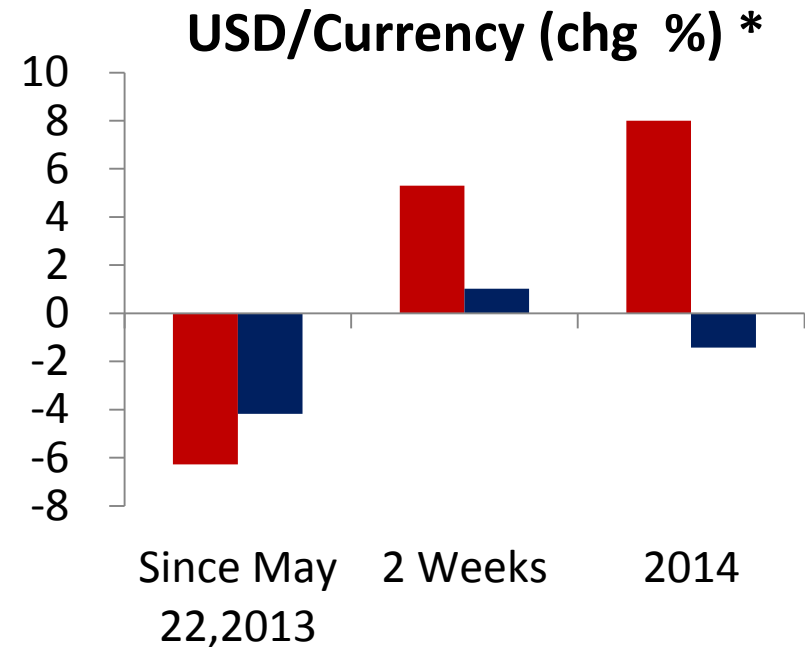
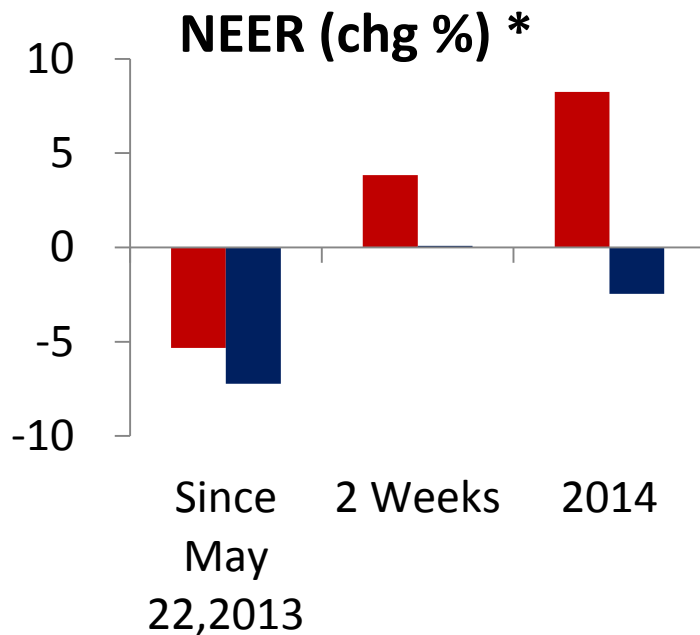
BRL Volatility
(3-Months At-the-money Implied)



But FX hedge program effect



Brazil: Resulting Differentials

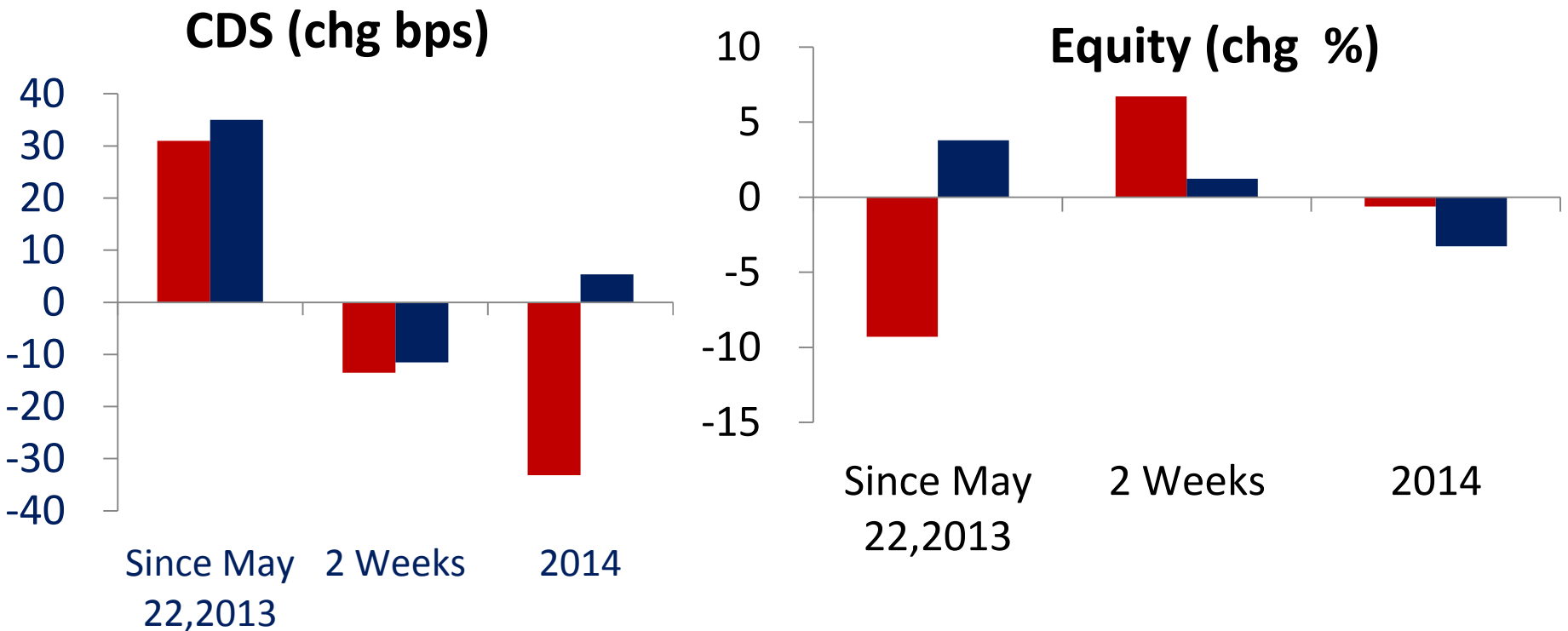


* Positive sign indicates appreciation of the country's currency / group.

Comparing Brazil with its Peers: Group Ratings and Selected Indicators

■ Brazil ■ BBB (ex-Brazil)

Brazil: Resulting Differentials



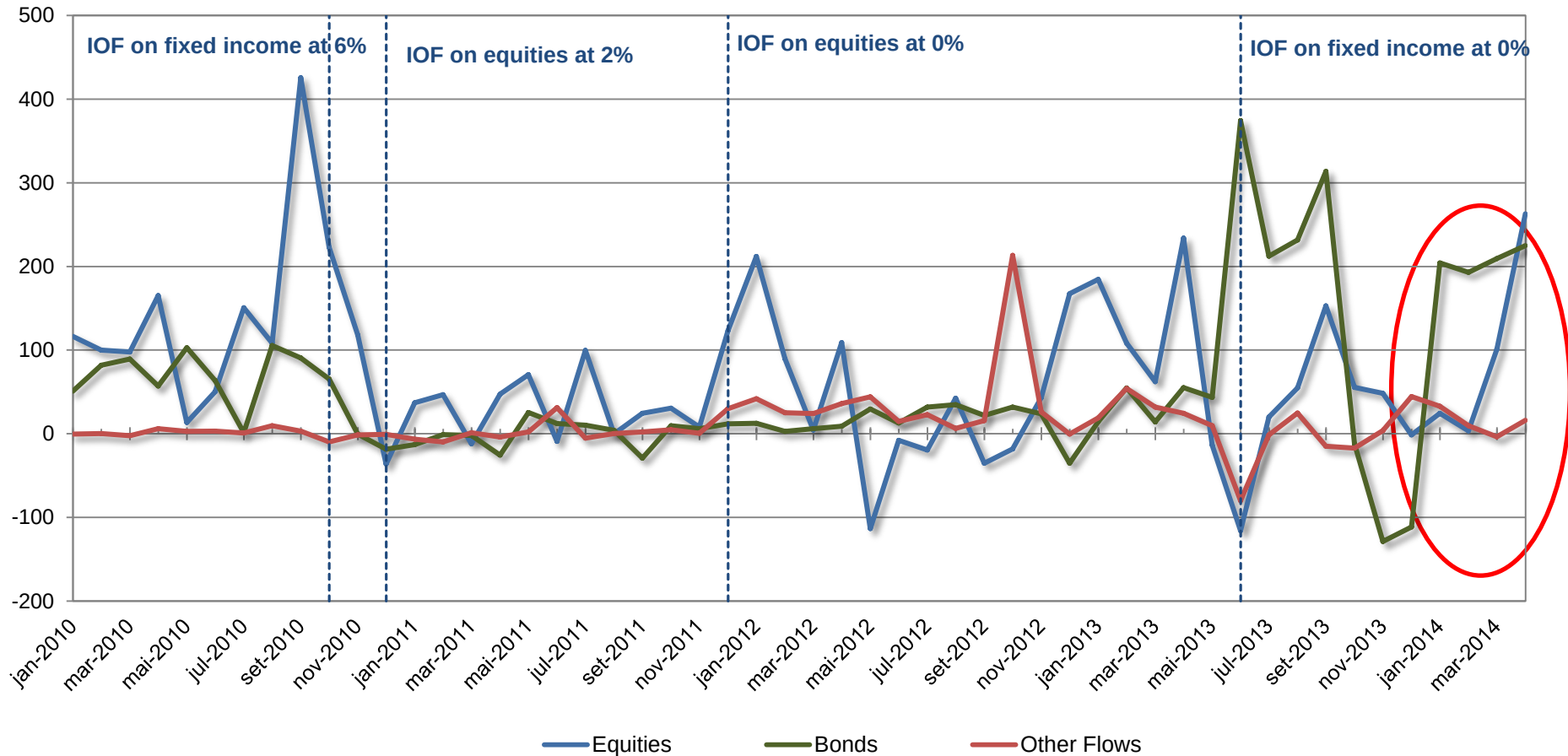
Comparing Brazil with its Peers: Group Ratings and Selected Indicators

■ Brazil ■ BBB (ex-Brazil)

Brazil: Reversal of Sentiment?

Monthly Avg.
USD Millions

Portfolio Investment - Net Flows (USD Millions)



Source: Central Bank of Brazil. Inflows from forex contracts.

Brazil: Policy Anticipation & Reaction

- We knew that reversal of market sentiment would eventually come and prepared ourselves, accumulated sizeable reserves to be used as buffers (alternative strategy: less reserves and more reliance on multilateral support like IMF-FCL)
- Preventive measures during upswing (MaPs for tightening excessive credit growth); keep strong capital, provisions & liquidity in our financial system, cautious reliance on external sources of funding
- Took early and sizeable action on Monetary Policy, complemented by Fiscal Policy

Brazil: Why Then Such Variance?

Because there are legitimate albeit difficult analytical challenges everywhere and in particular in Brazil:

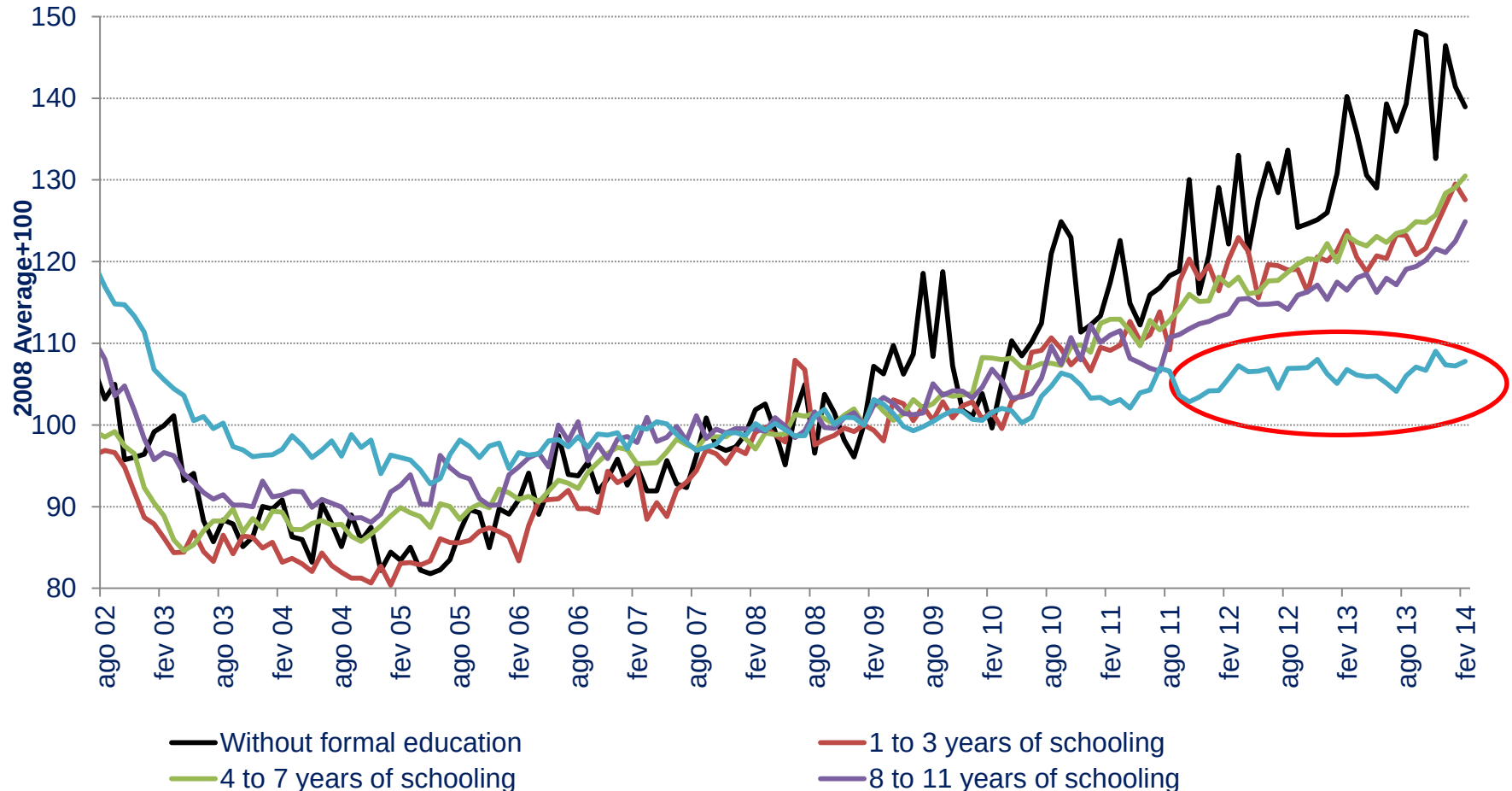
- Where is our NAIRU? Effects on wage bargaining process?
- Where is our Neutral interest rate? Down and MP more effective in an environment of less confidence
- How long would our J-Curve take? And then to affect domestic absorption and growth?

And in addition:

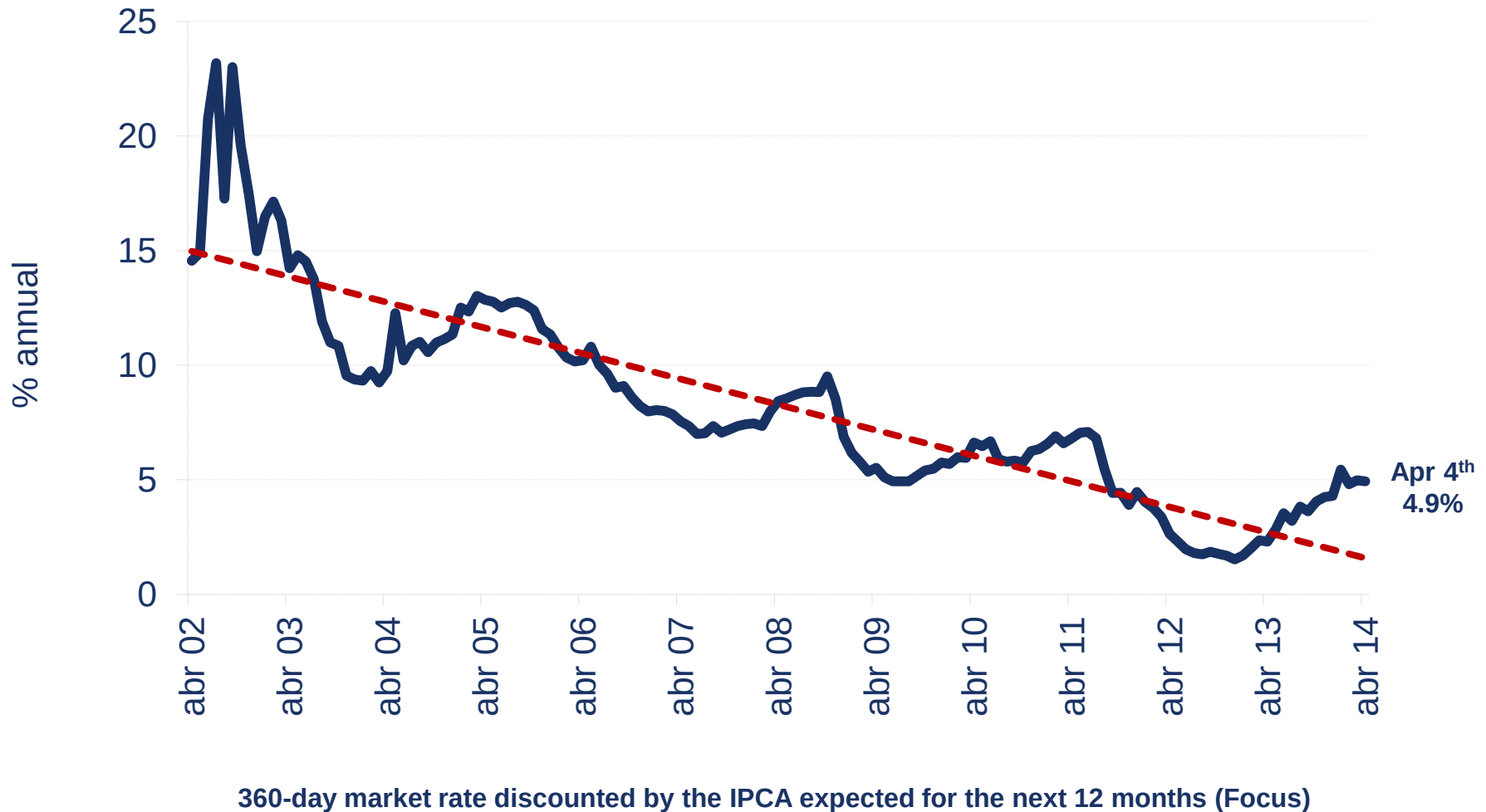
- Inflation headline hit by temporary supply shock, headline inflation impacts expectations, issue of persistence (see Roache, IMF (2014))
- Growth: confidence indicators in transition; supply policies (investment in infrastructure underway)

Skilled Wage Moderation?

Are we in the opposite symmetric of the US case? Would it also affect unskilled wage cycles?



Real Actual Interest Rate



Neutral interest rate - literature review shows large variation

Neutral Real Interest Rate: Survey of Articles for the Brazilian Case

Author	Method	Period	Neutral Rate (%)
Muinhos & Nakane (2006)	HP Filter	2000-2004	10.0
Borges & Silva (2006)	Structural VAR	2003	9.97
Barcellos Neto & Portugal (2009)	Kalman Filter	2005	9.62
Duarte (2010)	Taylor Rule – Kalman Filter	2010	5.10
Umezū (2011)	Baysean Macro Model	2010	5.00
Siqueira (2011)	Kalman Filter	2011	7.00
Nomura Securities (2012)	Taylor Rule	2013	4.60
Banco Central do Brasil (2012)	Survey	2012	5.50
Magud & Tsounta (2012)	Average of several methods	2012	5.10

Compared to our Region?

The Neutral Interest Rate: Summary Results From Various Methodologies, May 2012¹
(Percent)

	Uncovered Interest Parity	Consumption- based CAPM	HP Filter	Implicit Common Stochastic Trend	Dynamic Taylor Rule	Expected- Inflation Augmented Taylor Rule	General Equilibrium Model	Average
Brazil	4.5	4.5	4.8	5.4	5.7	5.5	5.5	5.1
Chile	1.3	2.9	2.0	2.1	2.3	2.2	1.2	2.0
Colombia	2.5	4.4	1.9	1.8	1.6	1.7	2.1	2.3
Mexico	2.0	4.2	1.7	1.3	1.3	1.3	2.9	2.1
Peru	2.3	5.0	1.3	1.5	1.8	1.0	1.3	2.0
Uruguay	3.6	3.3	1.3	2.1	5.3	-	7.2	3.8
Costa Rica	2.6	4.1	-	-	-	-	3.7	3.5
Dominican Republic	3.2	4.2	1.7	2.7	3.8	3.1	3.9	3.2
Guatemala	2.3	3.2	-	-	-	2.0	3.7	2.8
Paraguay	2.0	3.8	1.0	1.3	2.2	2.2	3.2	2.2

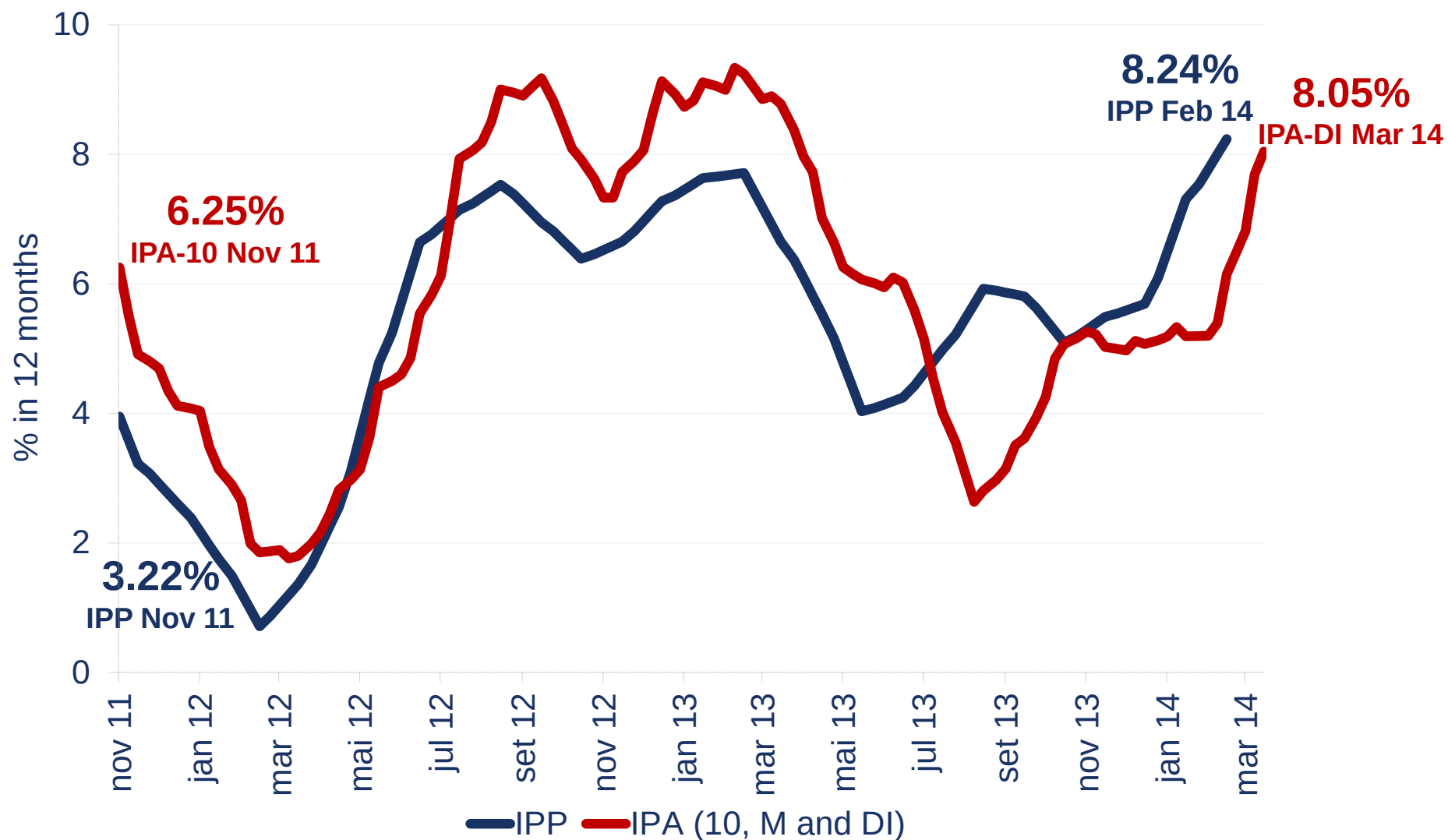
Source: Authors' calculations.

¹ For Costa Rica, Guatemala, and Uruguay, a sub-sample of methodologies is used due to data limitations.

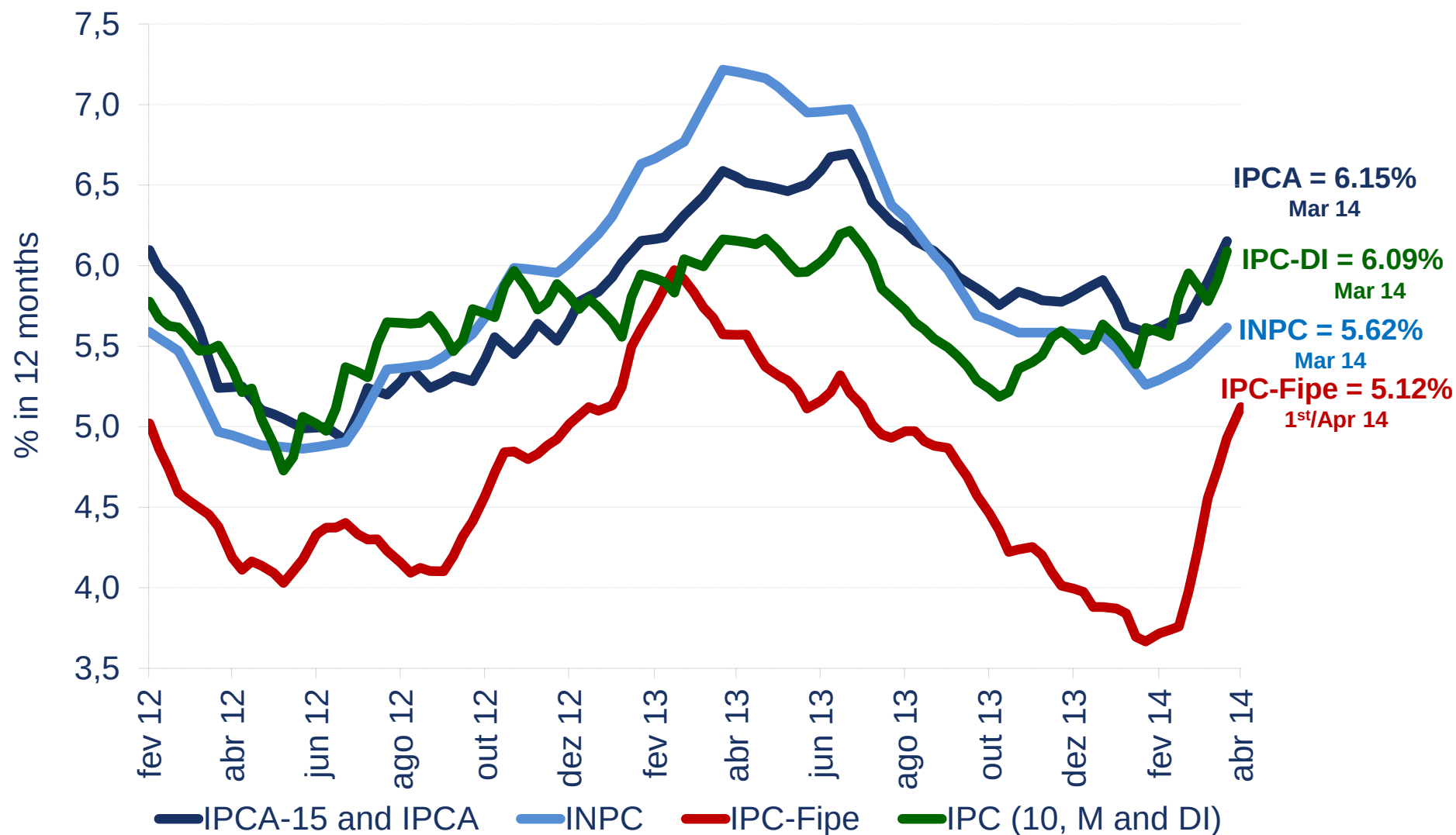
Brazil: Headline Inflation

- Inflation has been high and resistant, reflecting the elevated services inflation inertia and administrated prices realignment
- BCB has acted to secure the convergence of inflation to the target.
- MP effects on inflation are cumulative and take place with lags. In this sense, significant part of prices response to the tightening cycle is yet to materialize.
- At this moment, there are renewed external and domestic food price pressure, but in a much tighter monetary conditions environment

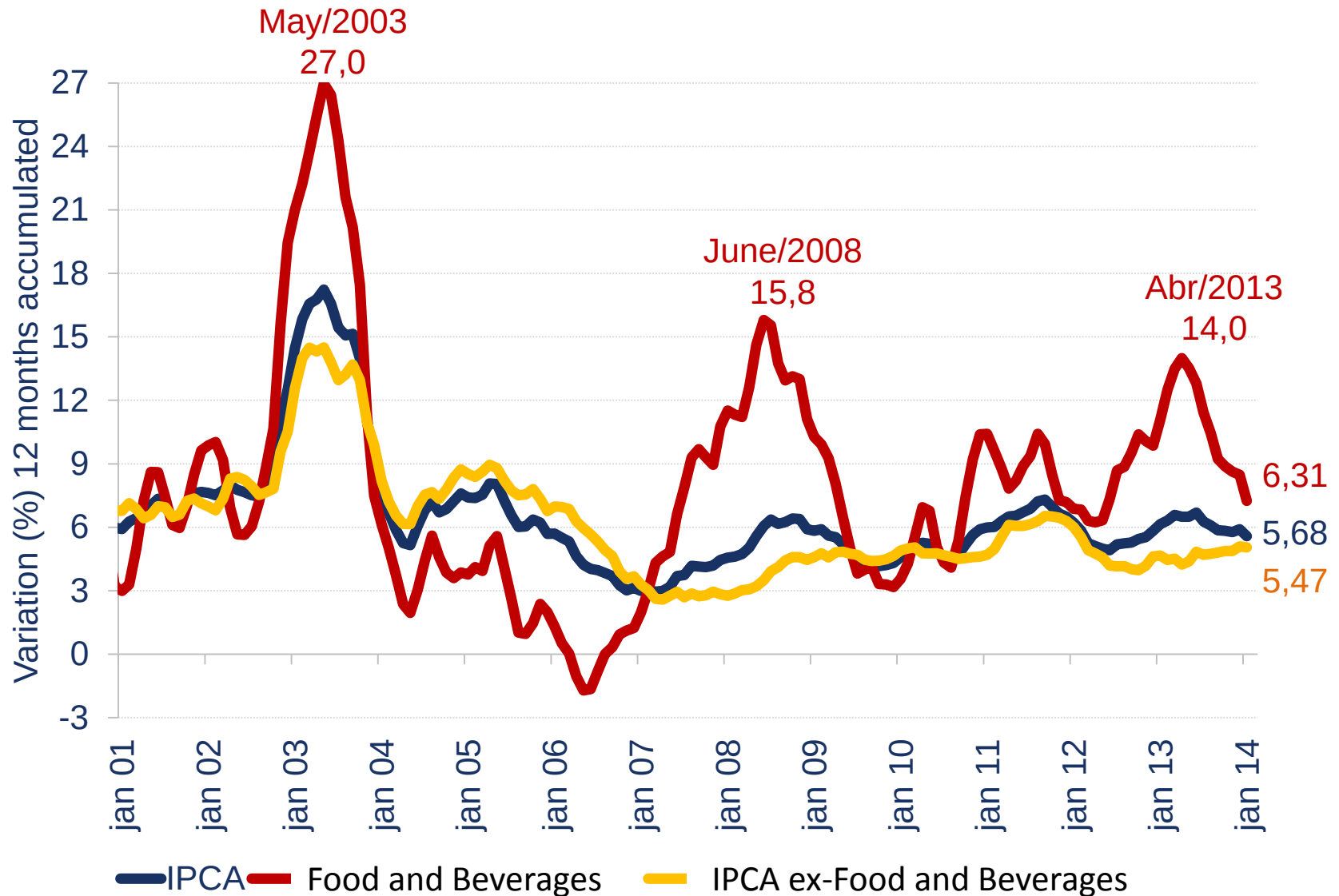
Producer Price Indexes



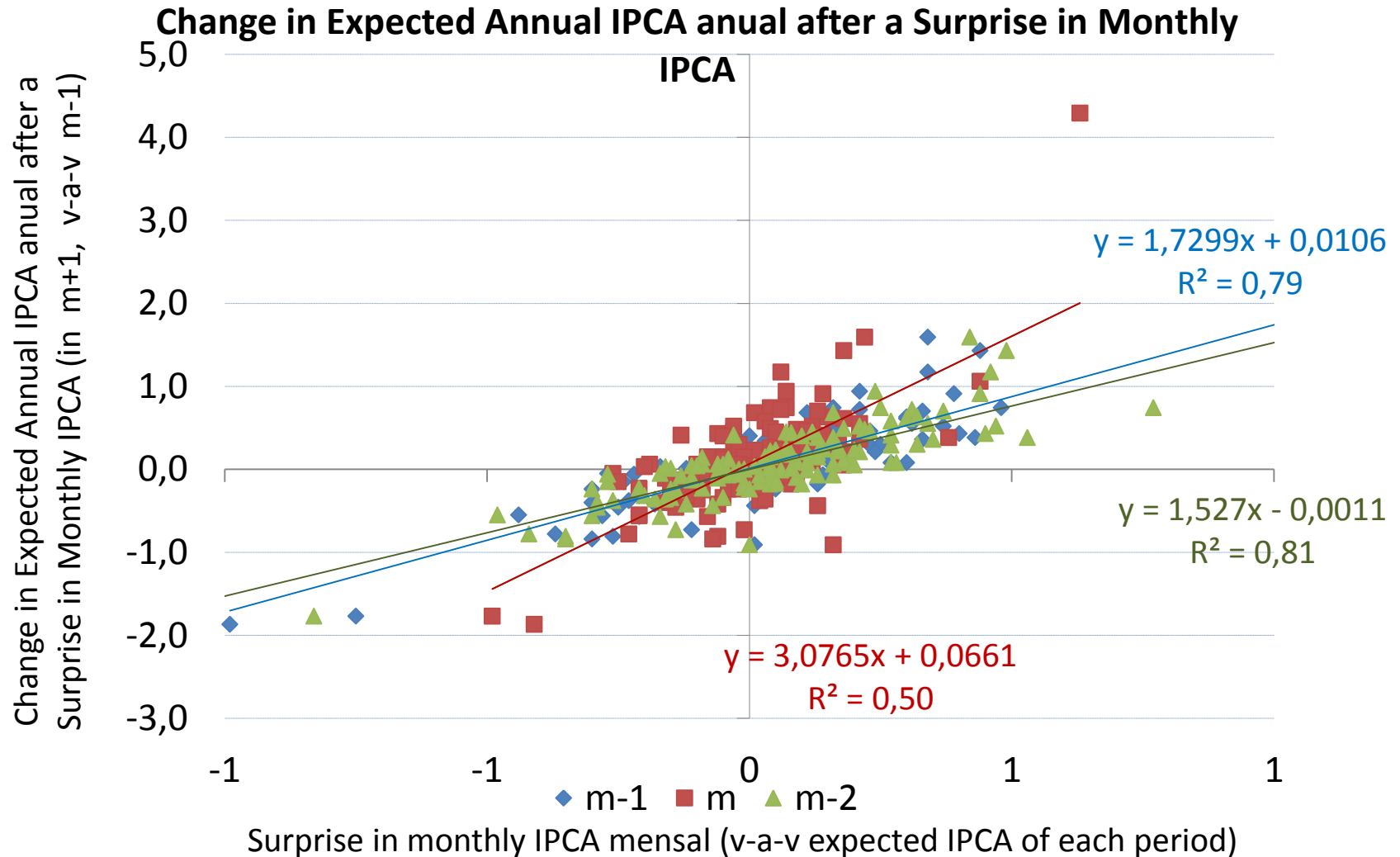
Consumer Price Indexes



IPCA and Food Prices Component



Headline Dependent Expectations?



Inflation – Convergence to Target



*Central Bank of Brazil Forecast (Inflation Report – Mar 14)

J – Curve Lags, about one year?

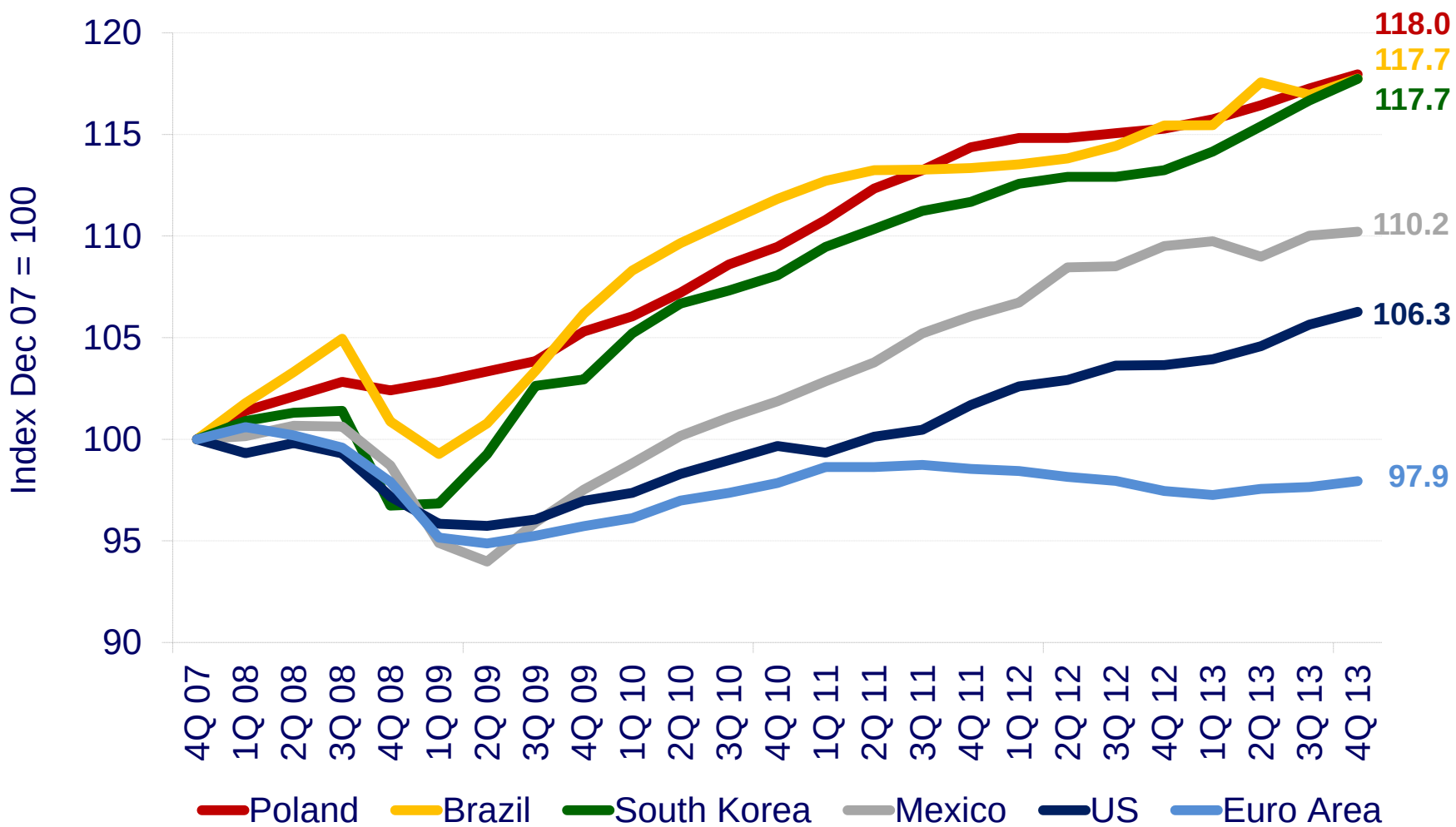
	Number of citations		Lag (quarter s)
	No evidence / partial evidence (p)	Not specify the lag	
South Africa	1		
Argentina	1		3,5
Australia	p		
Chile		1	
China	1		
Colombia	1		
Ecuador			1
Indonesia			4
Japan	p		
Malaysia			4
Mexico	1		
Peru	1		4
Thailand	1		
Turkey	1		
Uruguay			4

46

Sources: MOURA, GUILHERME and SERGIO DA SILVA, (2005) "Is There a Brazilian J–Curve?", *Economics Bulletin*, Vol. 6, No. 10 pp. 1–17, July 2005. HSING, Y. "A Study of the J-Curve for Seven Selected Latin American Countries", *Global Economy Journal*, 2008, 8(4). KALYONCU, H., OZTURK, I., ARTAN, S., KALYONCU, K. "Devaluation and trade balance in Latin American countries", *Zb. rad. Ekon. fak. Rij.*, 2009, vol. 27, sv.1, 115-128. ONAFOWORA, OLUGBENGA, (2003) "Exchange rate and trade balance in east asia: is there a J-curve?." *Economics Bulletin*, Vol. 5, No. 18 pp. 1–13, 2003. BAHMANI-OSKOOEE, M. and GOSWAMI, G. G. "A Disaggregated Approach to Test the J-Curve Phenomenon: Japan versus Her Major Trading Partners" *Journal of Economics and Finance*, Volume 27, Number 1, Spring 2003. AHMAD, J. AND YANG, J. "Estimation of the J-Curve In China", *East-West Center Working Papers*", Economic Series, nº 67, March 2004. HALICIOGLU, F. "The Bilateral J-curve: Turkey versus her 13 Trading Partners", *Munich Personal RePEc Archive Paper No. 3564*, 15. June 2007. BAHMANI-OSKOOEE, M., GOSWAMI, G. G. and TALUKDAR, B. K. "The Bilateral J-Curve: Australia Versus her 23 Trading Partners", *Australian Economic Papers*, Blackwell Publishing Ltd/University of Adelaide and Flinders University, June 2005 and Moodley, S. "An estimation of the J-Curve effect between South Africa and the BRIC countries", University of Pretoria, nov. 2010.

Growth since the Global Financial Crisis

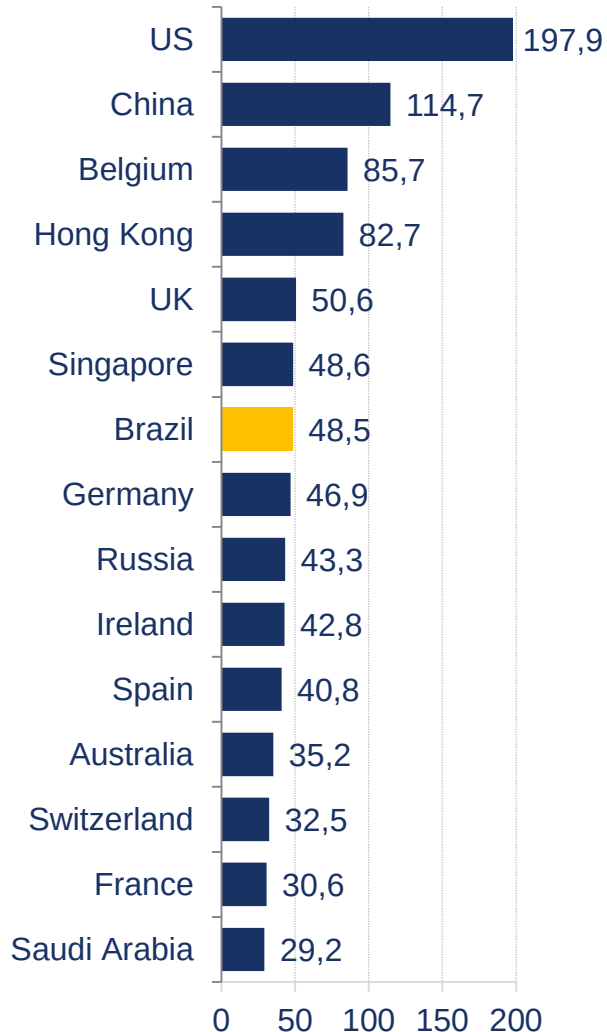
Cumulative Real GDP Growth



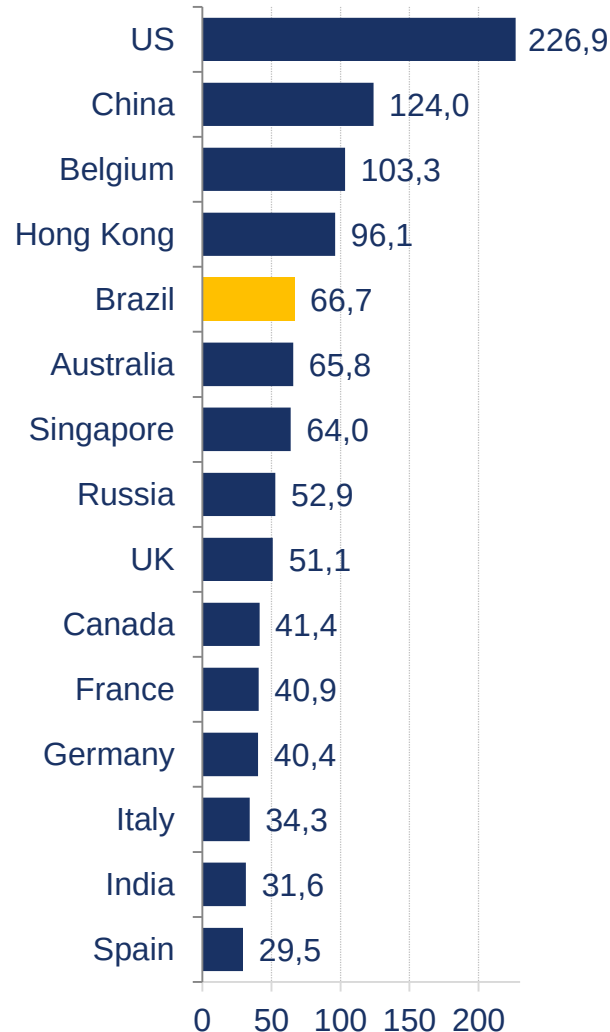
Source: Bloomberg

Brazil - Leading destination for FDI

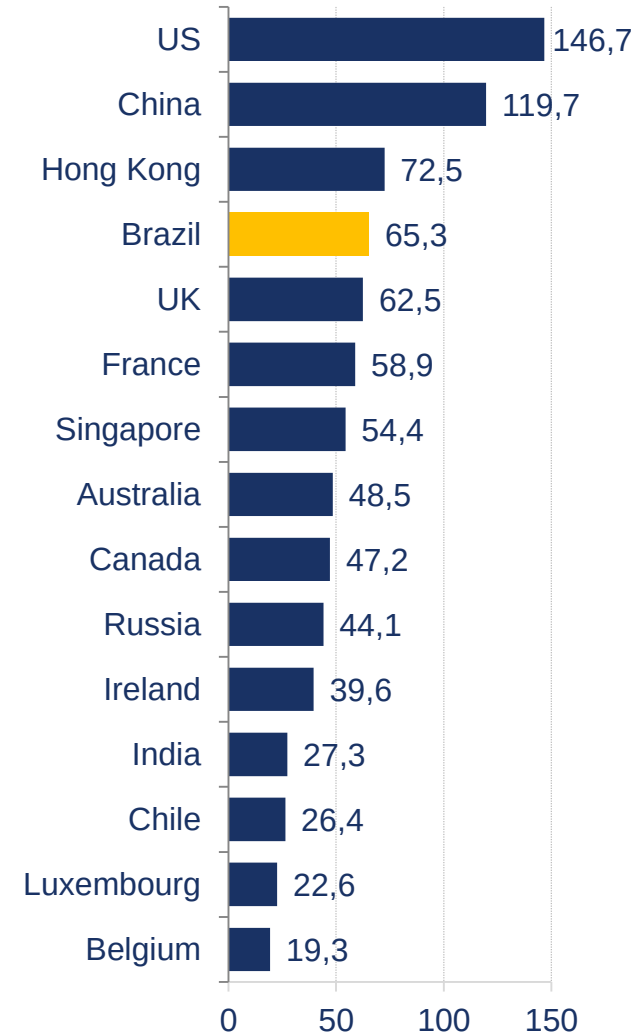
2010



2011

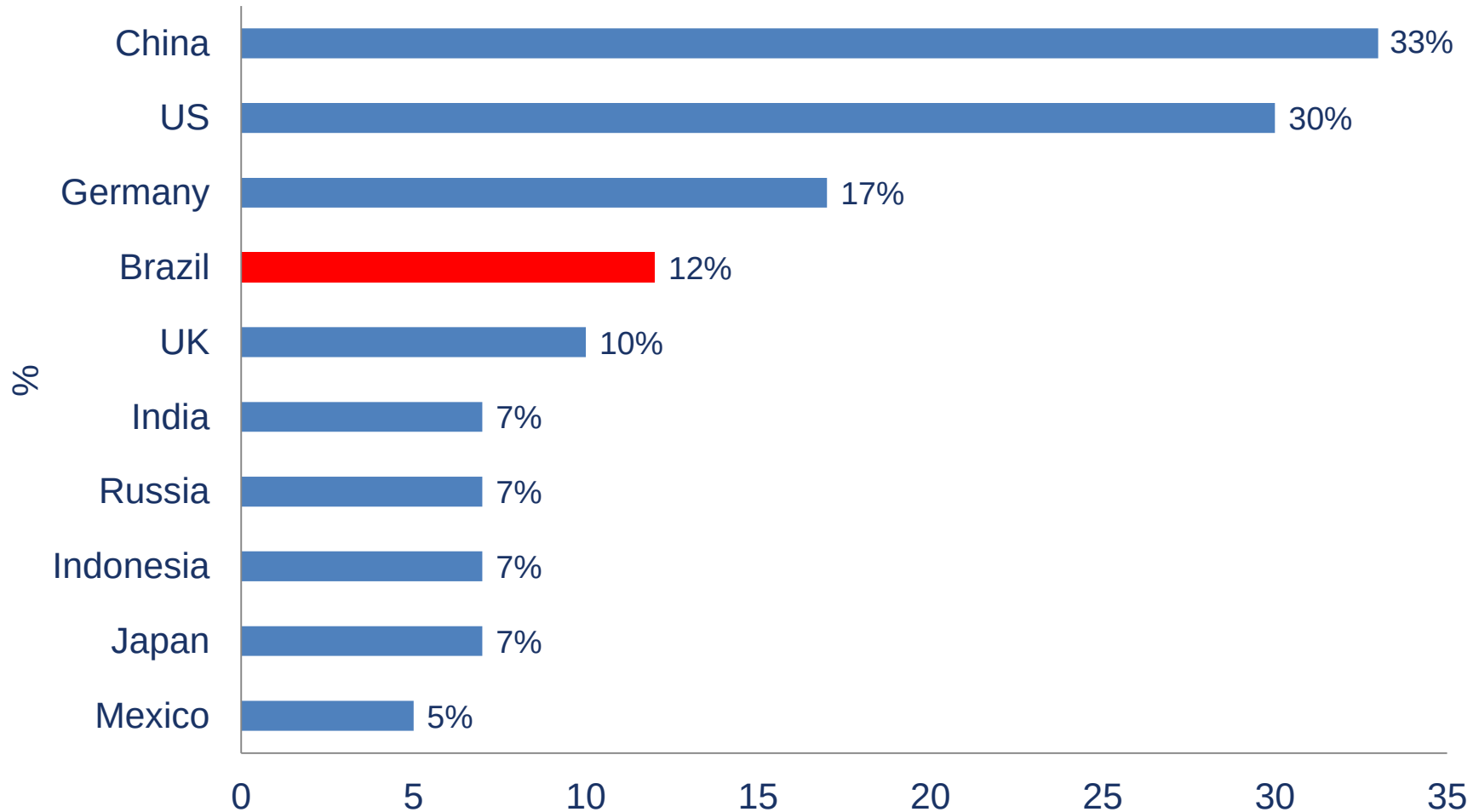


2012

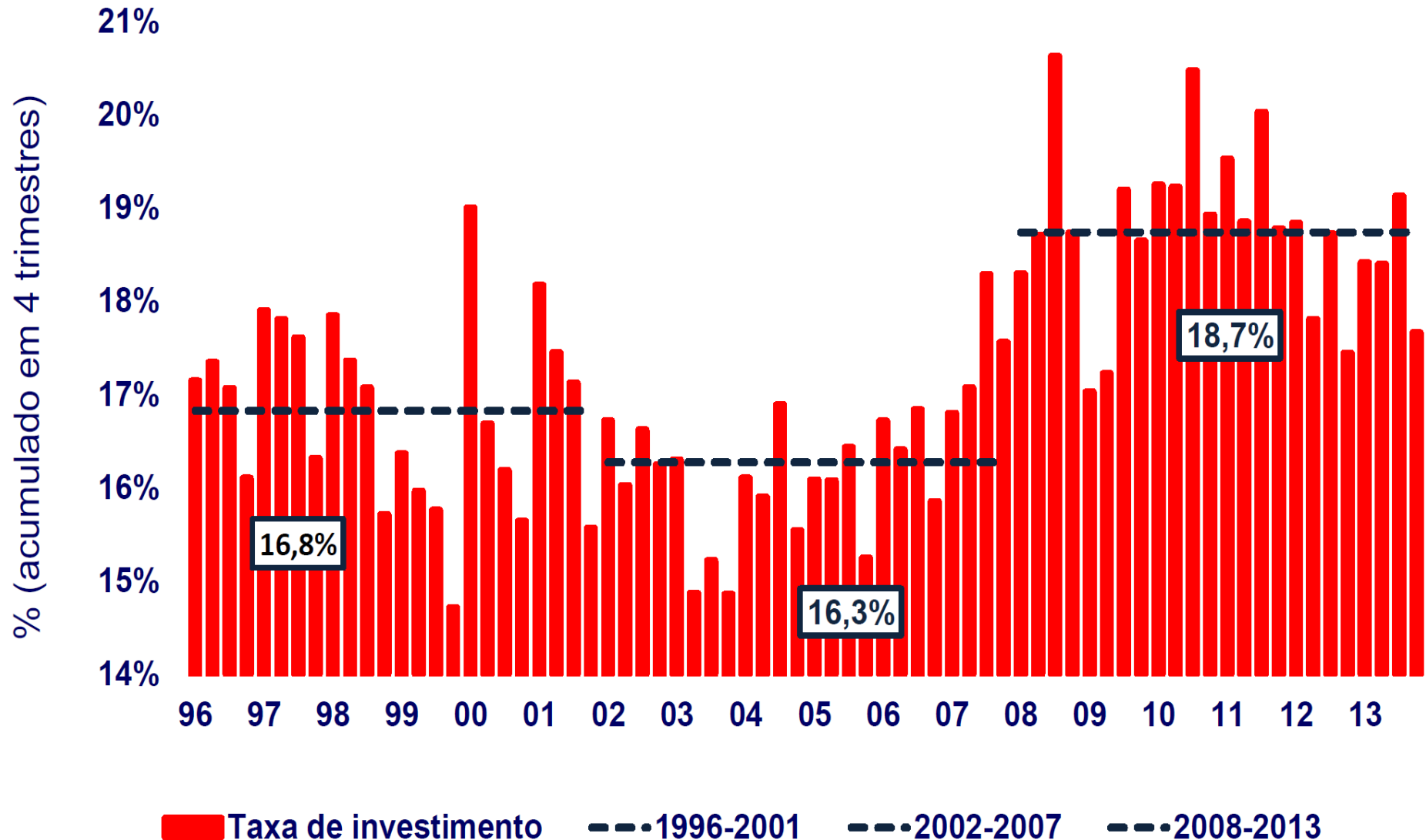


Global CEO Survey 2014: Key Countries

Which 3 countries, excluding the country in which the CEO is based, do they consider most important for their overall growth prospects over the next 12 months? *



Model Rotation: GFCF / GDP (%)



Brazil: Prospects & Challenges

- Brazilian economy is also passing through a transition, with investment expansion and families' consumption moderation.
- Brazil has been conducting a structural reform agenda to qualify work force, amplify investments and boost productivity, as well as improving business environment.
- Concerning investments, it is noteworthy the ample concessions program, which includes the transfer of airport, road, railroad and port management to private sector.

Brazil: Prospects & Challenges

- Brazilian economy faces a transition period pursuing new engines to growth: productivity gains and investment expansion. In 2014, economic activity should be somewhat lower than in 2013.
- Industry – recovery, but not very strong signs of support.
- Services – lower growth rates than previous years.
- Agribusiness – record harvest year after year, besides bad weather in 2014.

Brazil: Prospects & Challenges

- Investment started to grow again in 2013 (~6% more than the ~2% for private consumption) – continuity will depend on confidence and tends to gain traction led by infrastructure projects and oil fields exploration.
- Reform agenda – more efficient allocation of production factors of the economy and productivity gains.

Thank You!