On Some Desperately Missed Rudimentary Inflation Traits in Turkey

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The Phillips Curve: Back to the '60s?
By Olivier Blanchard

$$\pi_t = \theta_t\left(u_t - u_t^*\right) + \lambda_t \pi_t^e + (1 - \lambda_t)\pi_{t-1}^*$$
$$+ \mu_t \pi_{mt} + \varepsilon_t$$
$$\pi_t^e = \alpha_t + \beta_t \pi_{t-1}^* + \eta_t,$$
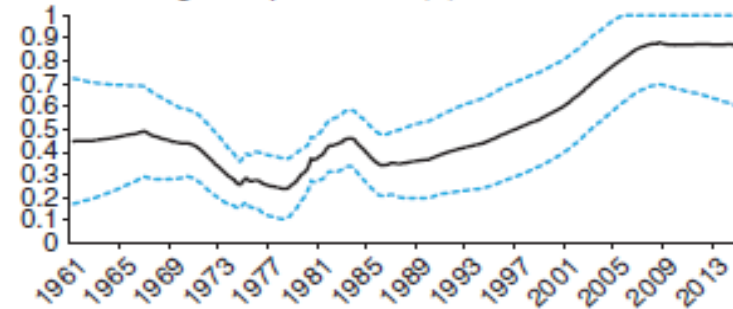
The anchoring of expectations (λ)

FIGURE 1
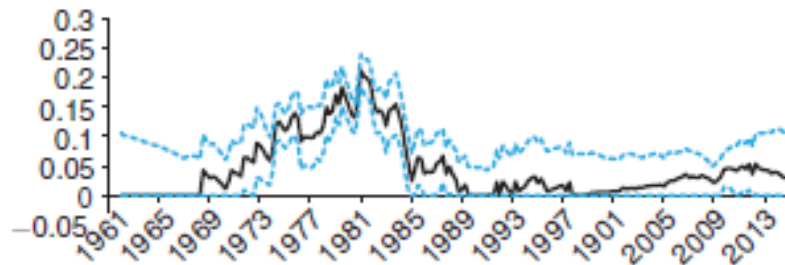
The anchoring of long term expectations (β)

FIGURE 2
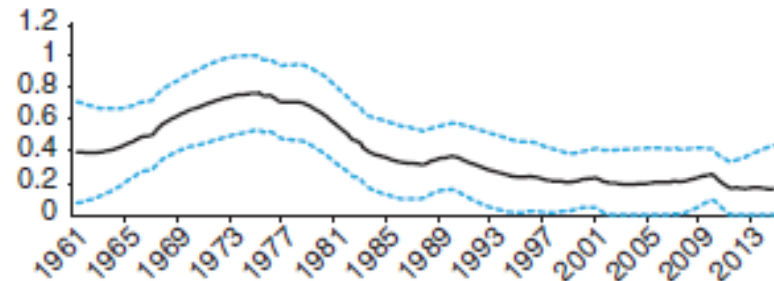
The decrease in the slope of the Phillips curve (θ)

FIGURE 3

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The Phillips Curve: Back to the '60s?
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- The weight of long-term expectations of inflation on inflation, λ, has steadily gone up after the 80s and is now close to one!! Consequently, the weight of past inflation, $(1 - \lambda)$, has steadily decreased through time.

- The coefficient reflecting the effect of past inflation on long-term expected inflation, β, decreased in the 80s and has been close to zero since then (note the increase in the 70s and the decline thereafter).

- Put together, the two inferences above suggest that inflation now depends mostly on long-term inflation expectations rather than inflation memory, and that long-term expectation in turn depends little on past inflation.

- Third graph depicts the evolution of the slope of the Phillips curve which increased from 60s to 70s, then steadily decreased till late 80 and has remained roughly constant at that low level since then. The decline from 0.7 levels to 0.2 levels is indeed very drastic!!

- For any given reduction in the unemployment rate, the increase in inflation is much less than before and similarly for the reverse direction argument.

- Why?? Blanchard: ''The most convincing is that, as the level of inflation has decreased, wages and prices are changed LESS OFTEN, leasing to smaller response of inflation to labor market conditions.''
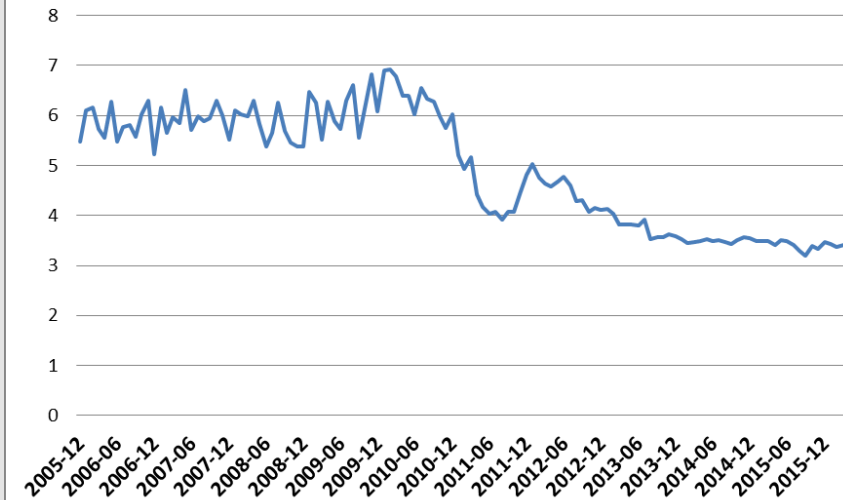
The Phillips Curve: Back to the '60s?
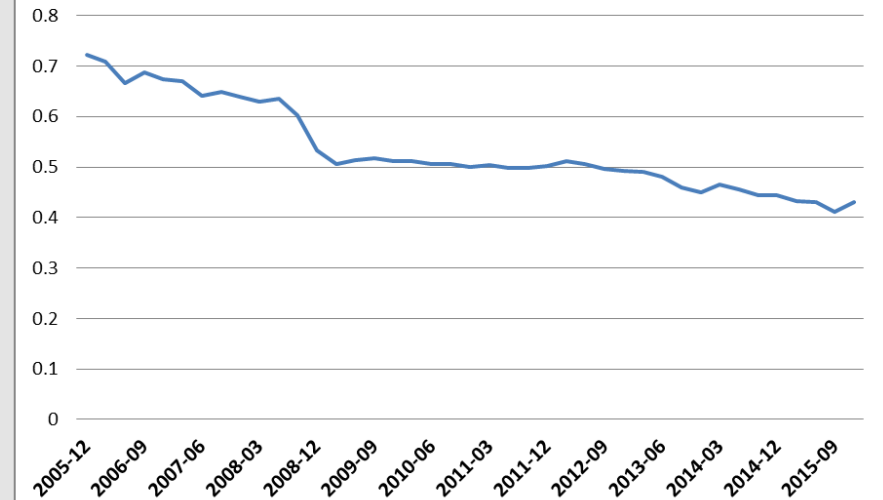# By Olivier Blanchard

- For the US economy, the fit of the relation obtained by Blanchard is poor; standard deviation of the residual is roughly 1 percent (at an annual rate), a very large value given the inflation rate around 1 to 2 percent. This suggests that the US economy is far from the condition whereby keeping inflation constant delivers the best unemployment rate policy can deliver.

- What exactly lies behind the anchoring of expectations which is so pivotal in all these conclusions?? Blanchard again: '' It must be in large part due to monetary policy credibility and a long period of low inflation; in this case, prolonged deviations of inflation from target may de-anchor expectations. Inflation below target does not appear to have had this effect so far, but it is hard to know what margin monetary policy has before they get de-anchored. Another possibility is that the anchoring of expectations reflects a lack of salience: at very low rates of inflation, people may not focus on inflation, and thus may not adjust expectations in response to movements in inflation.''

- MULTIPLY BY –(1) ALL THE RESULTS ABOVE AND YOU PROBABLY GET THE TURKISH INFLATION PICTURE!!

Turkey: Money Multiplier and Velocity
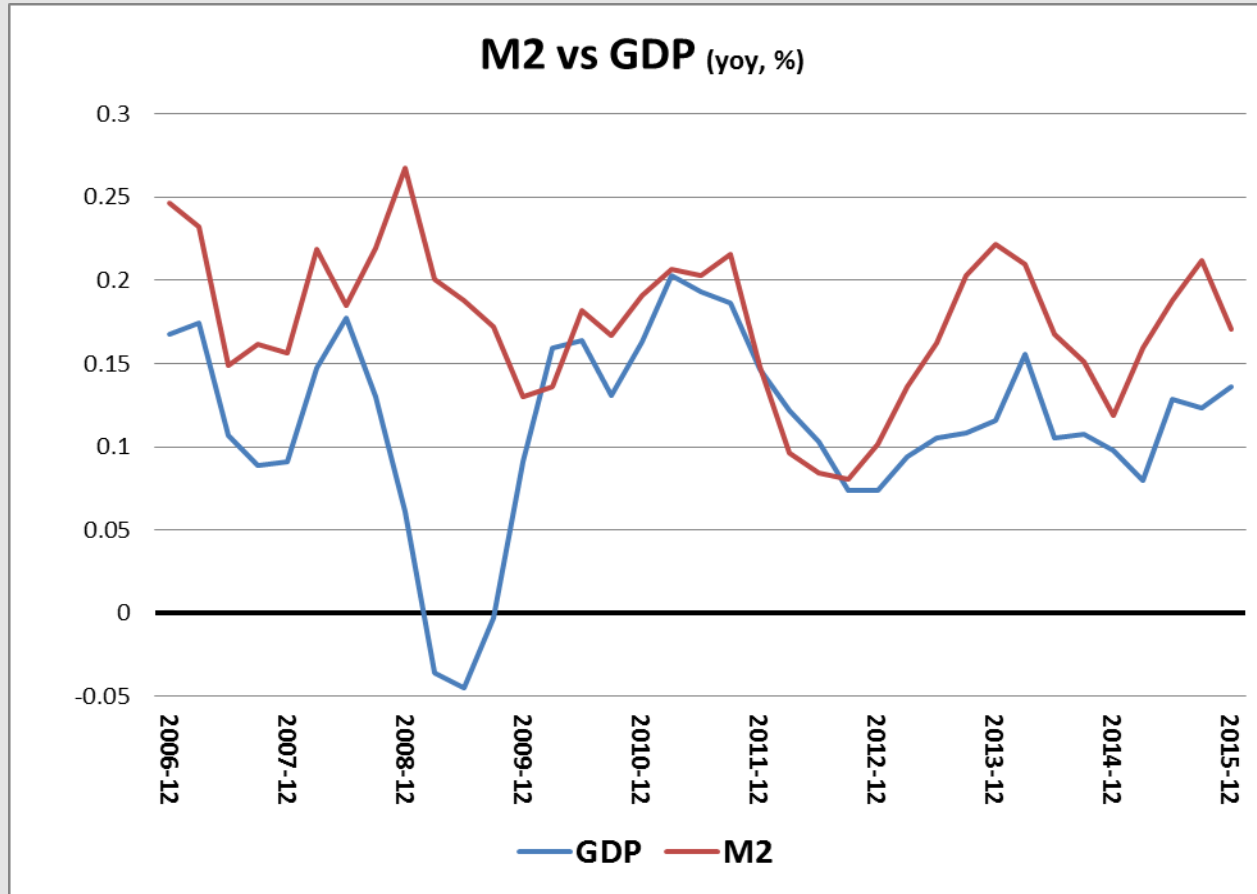
M3/Reserve Money

(Chart: M3/Reserve Money, vertical axis 0–8, horizontal axis from 2005-12 to 2015-12. Series starts around 6, fluctuates between 5 and 7 through 2009–2010, then declines sharply to around 4 in 2011, dropping further to about 3.4 by 2015.)

V (Velocity)

(Chart: V (Velocity), vertical axis 0–0.8, horizontal axis from 2005-12 to 2015-09. Series starts around 0.72, declines to about 0.5 by 2009, stays roughly flat through 2012, then gradually declines to about 0.42 by 2015.)

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Turkey: M2 vs GDP

M2 vs GDP (yoy, %)

Source: *TDM, own calculations*

VAR   Imports Unit Index – DPPI – CPI (2005-2016)

Source: *own calculations*

Variance Decomposition
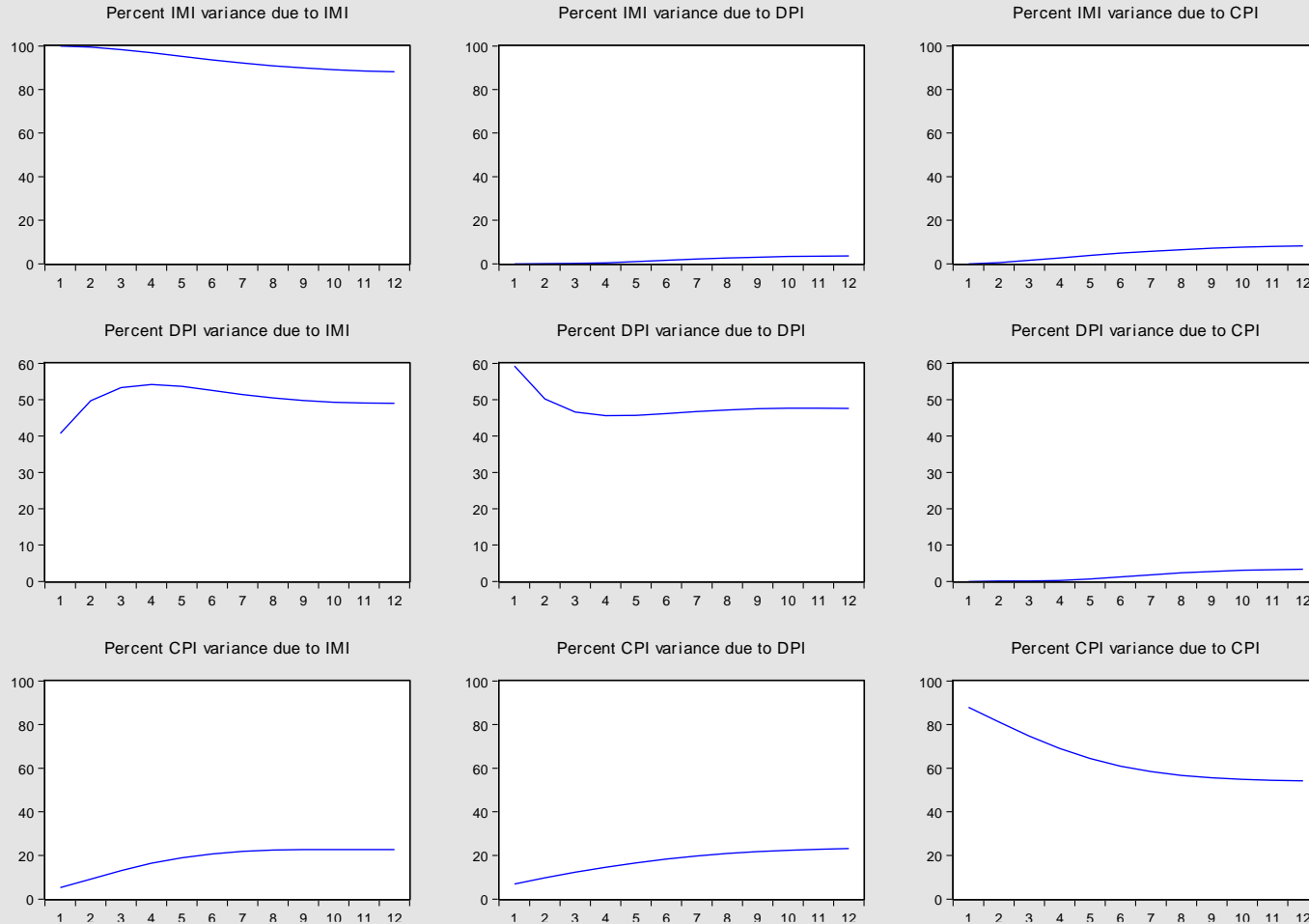
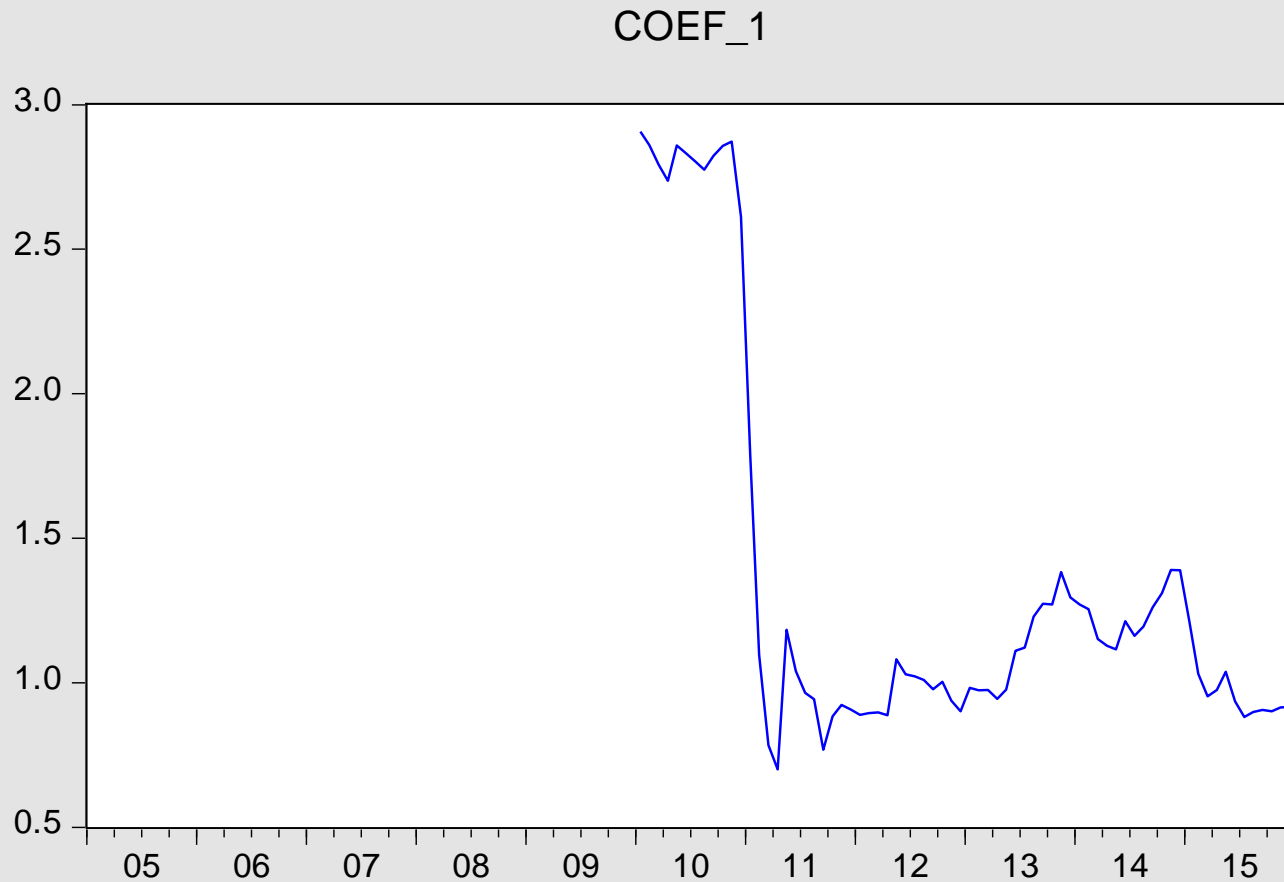**Source:** *own calculations*

CPI vs Imported Goods Price Changes
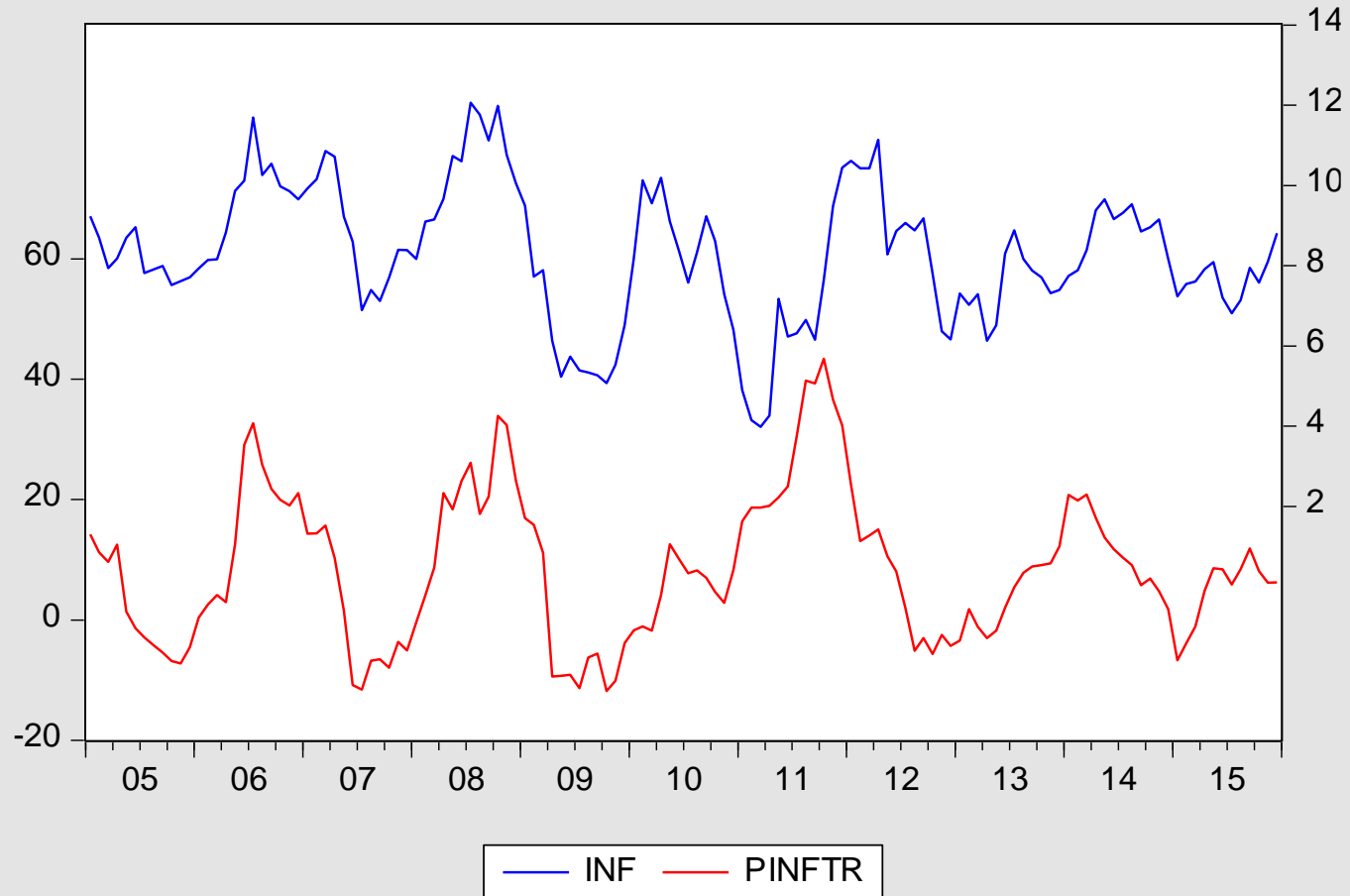
60-month moving window estimates for   inf = f (c, inf(lagged), import prices)

COEF_1

COEF_2

60-month moving window estimates for   inf = f (c, inf(lagged), import prices)

COEF_3
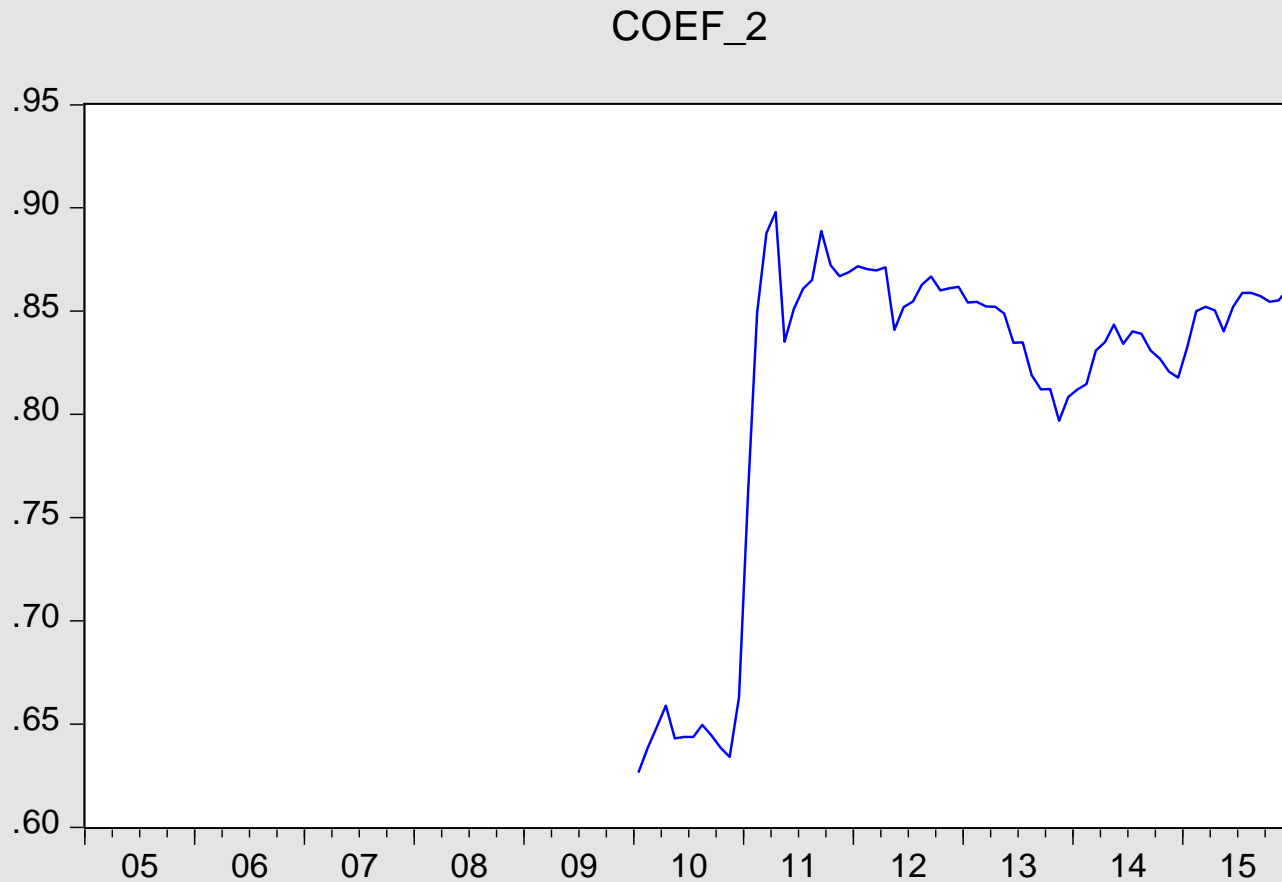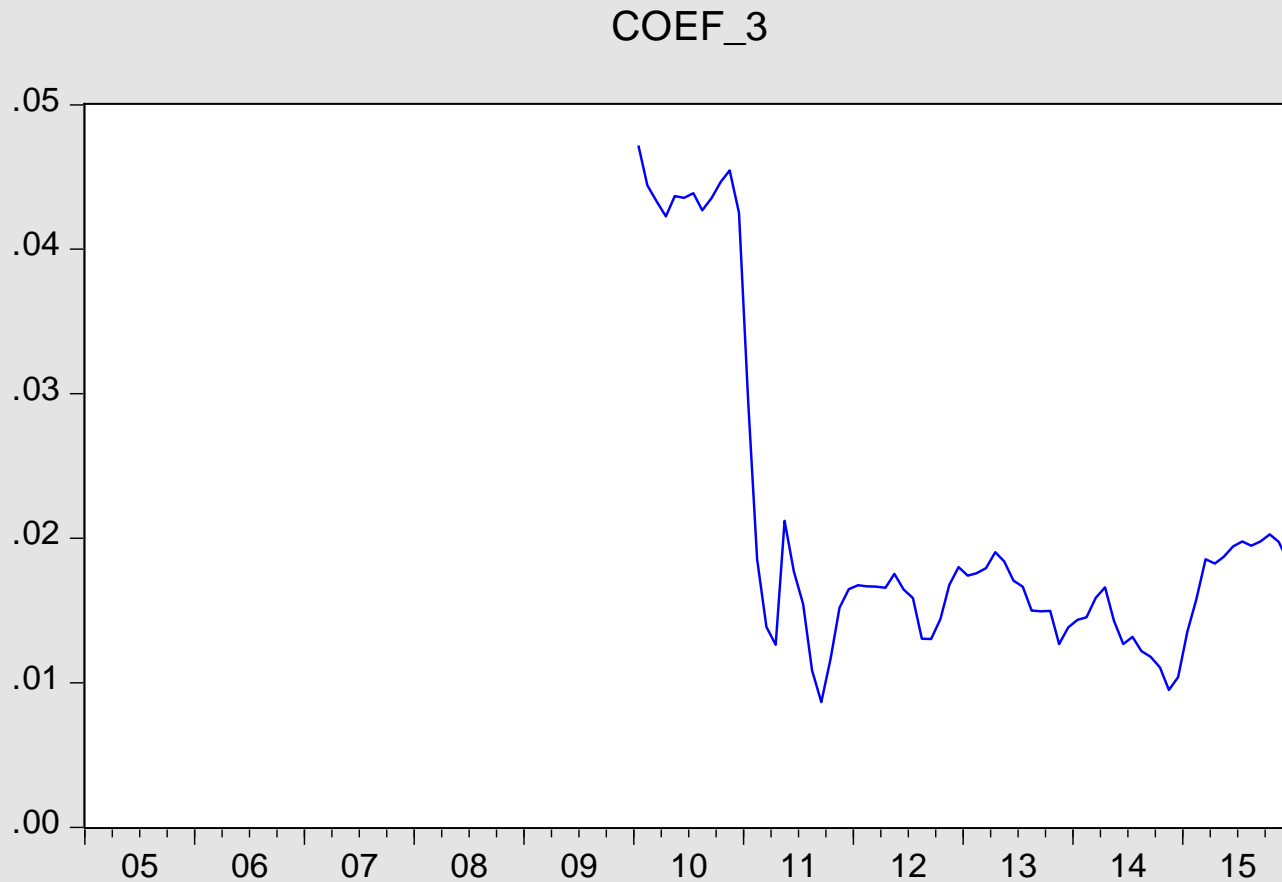
US Bond Rates

US Bond Rates

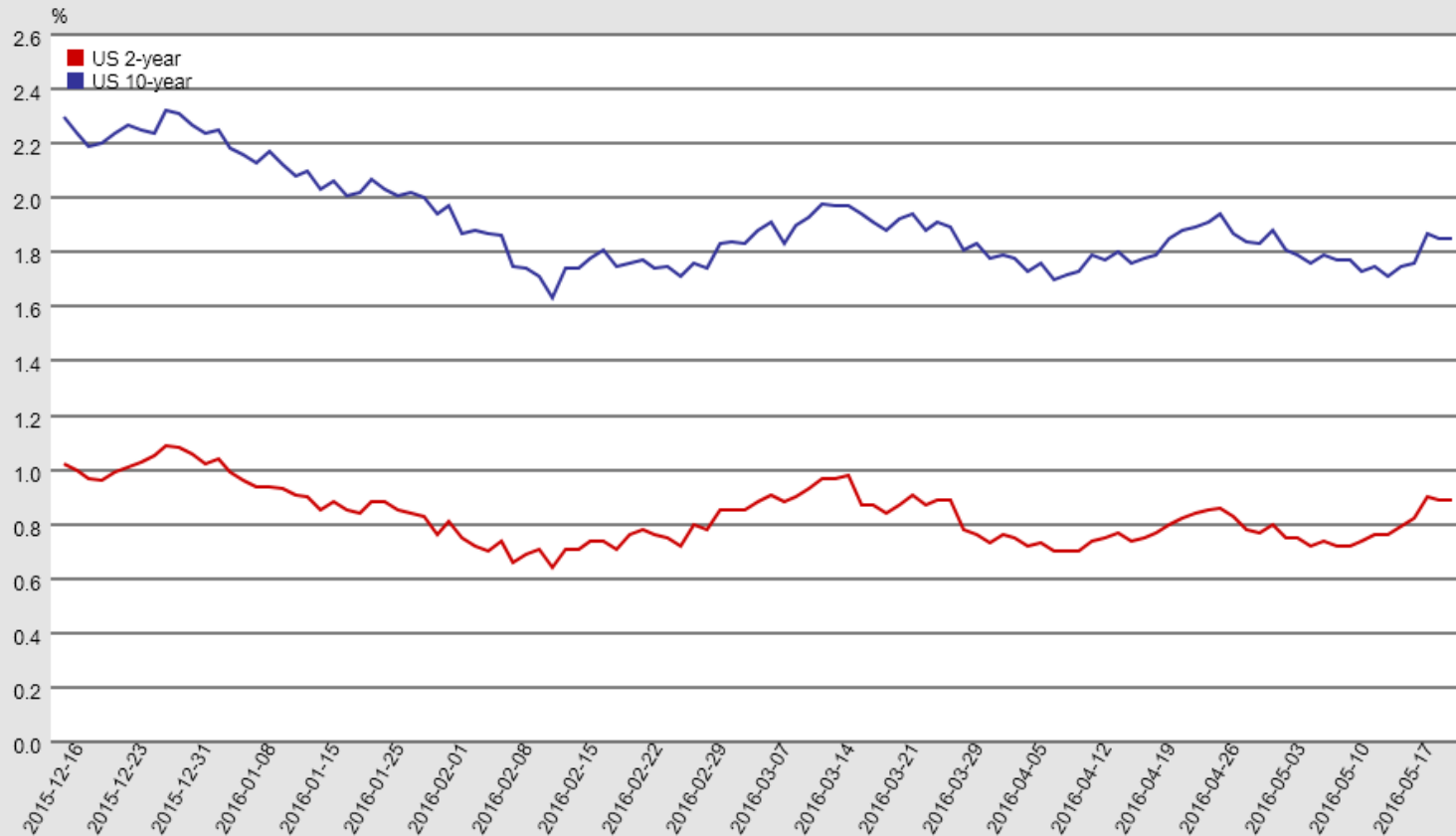Legend: US 2-year (red), US 10-year (blue)

Source: FED TDM

US Bond Rates- The Flattening of the post-Normalization(?) Yield Curve

US Bond Rates 2Y vs 10Y

TURKEY DATA MONITOR

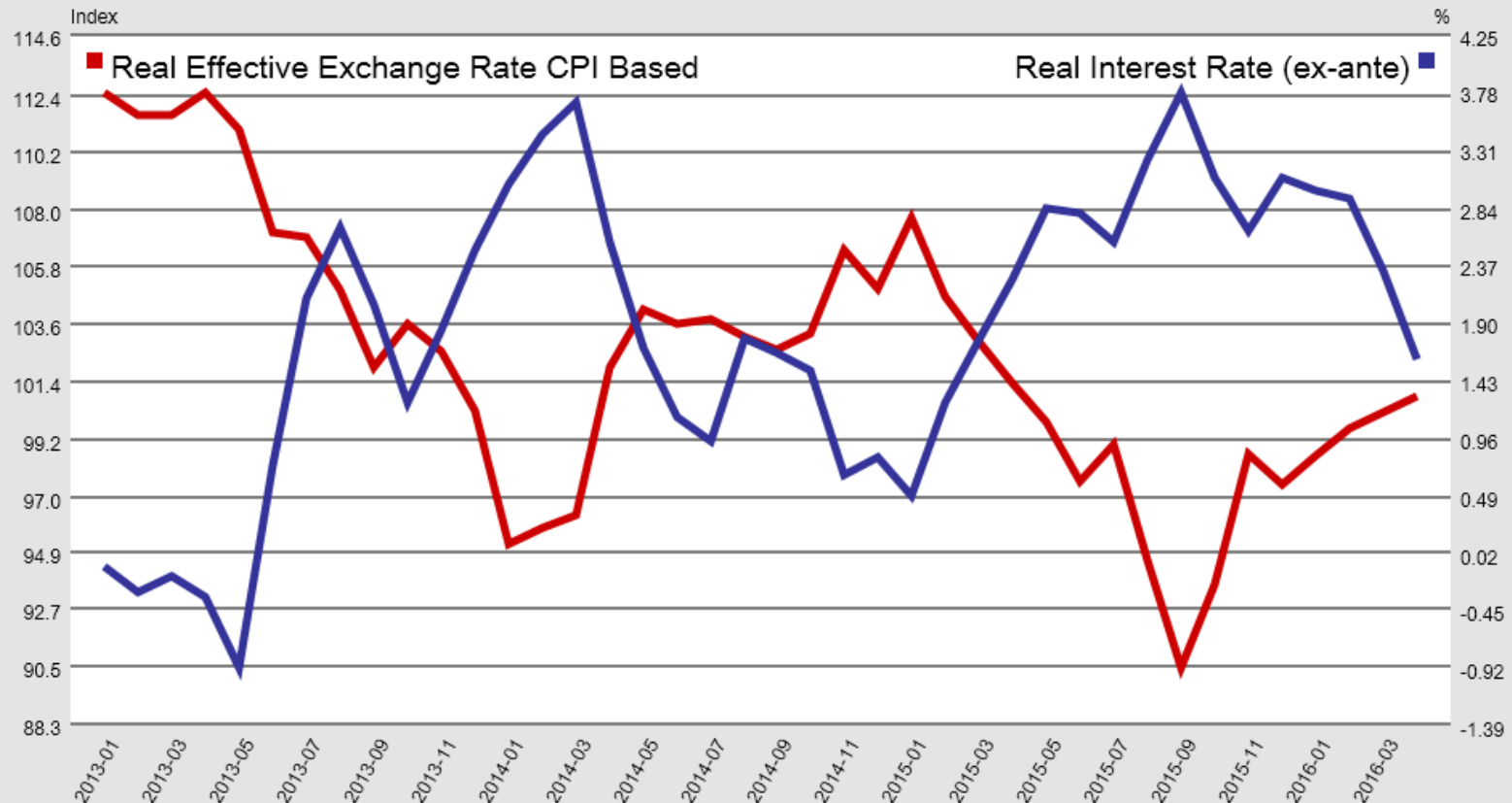**Source: FED TDM**

Real Interest Rate & Real Exchange Rate – The Perfect Regime Switch

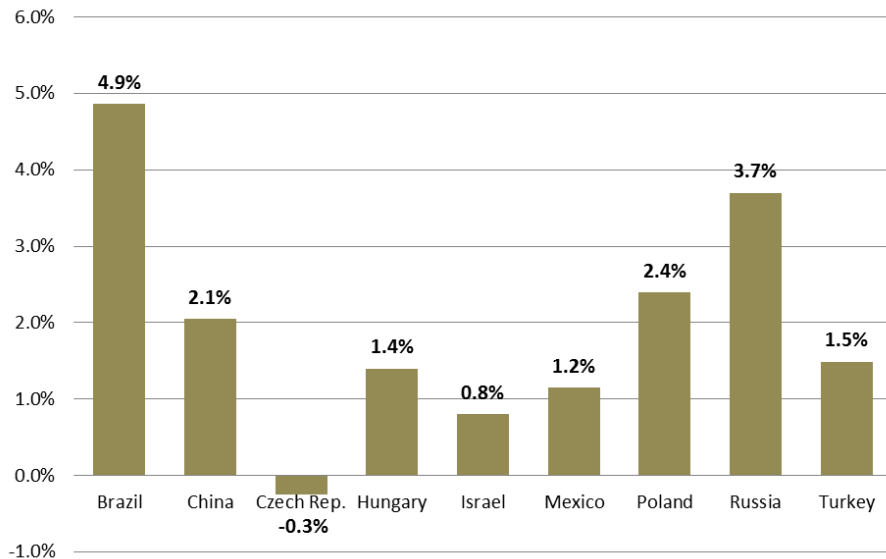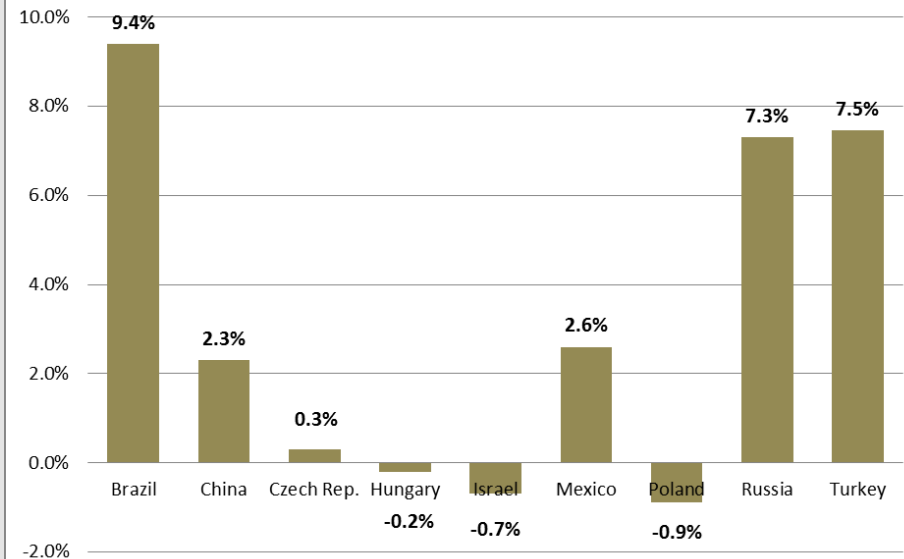Real Effective Exchange Rate vs Real Interest Rate

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Real Policy Rates

Real Policy Rates

Country	Value
Brazil	4.9%
China	2.1%
Czech Rep.	-0.3%
Hungary	1.4%
Israel	0.8%
Mexico	1.2%
Poland	2.4%
Russia	3.7%
Turkey	1.5%

Inflation

Country	Value
Brazil	9.4%
China	2.3%
Czech Rep.	0.3%
Hungary	-0.2%
Israel	-0.7%
Mexico	2.6%
Poland	-0.9%
Russia	7.3%
Turkey	7.5%

Source: Bloomberg, own calculations

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YapıKredi

Real Interest Rate - Regime Switch
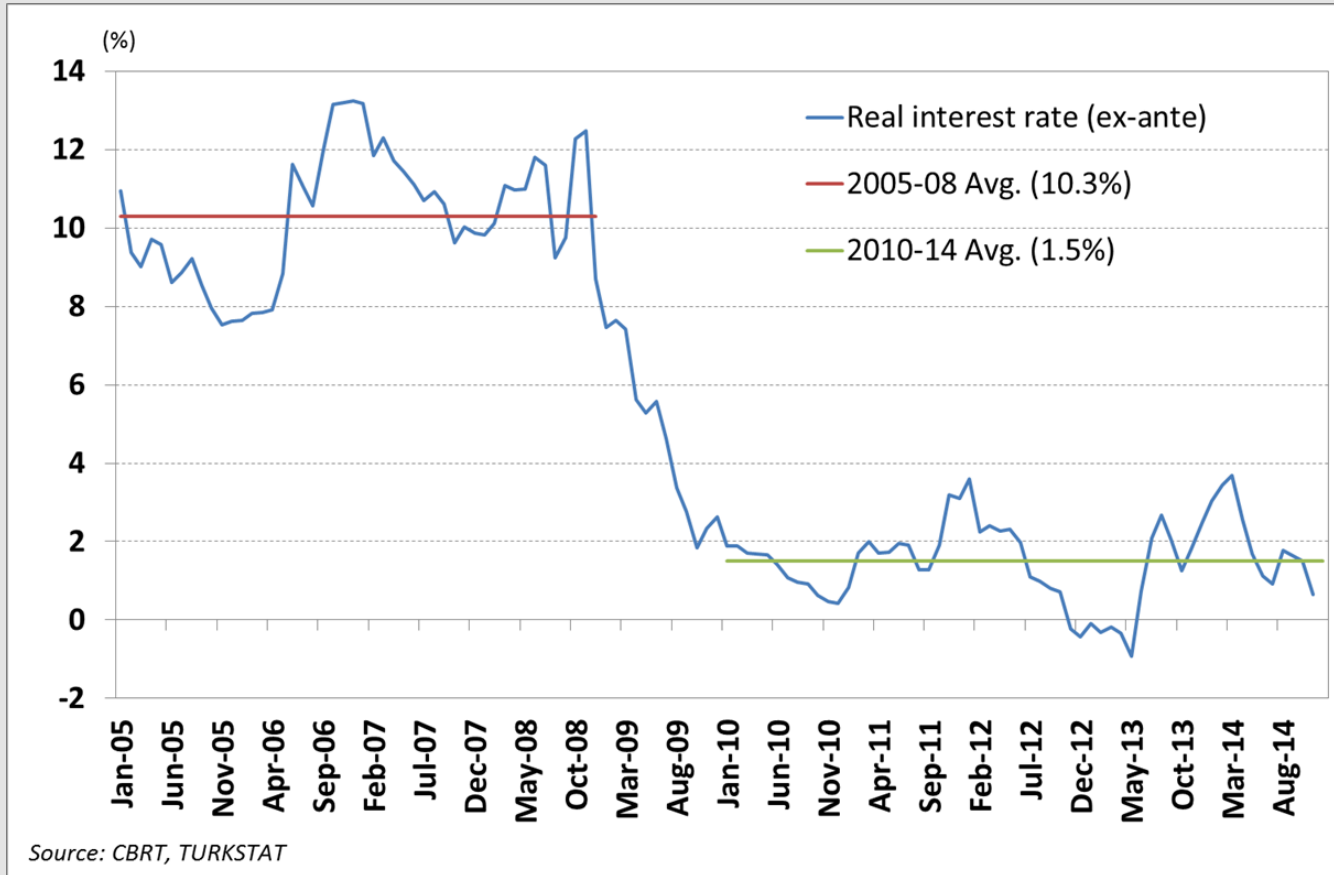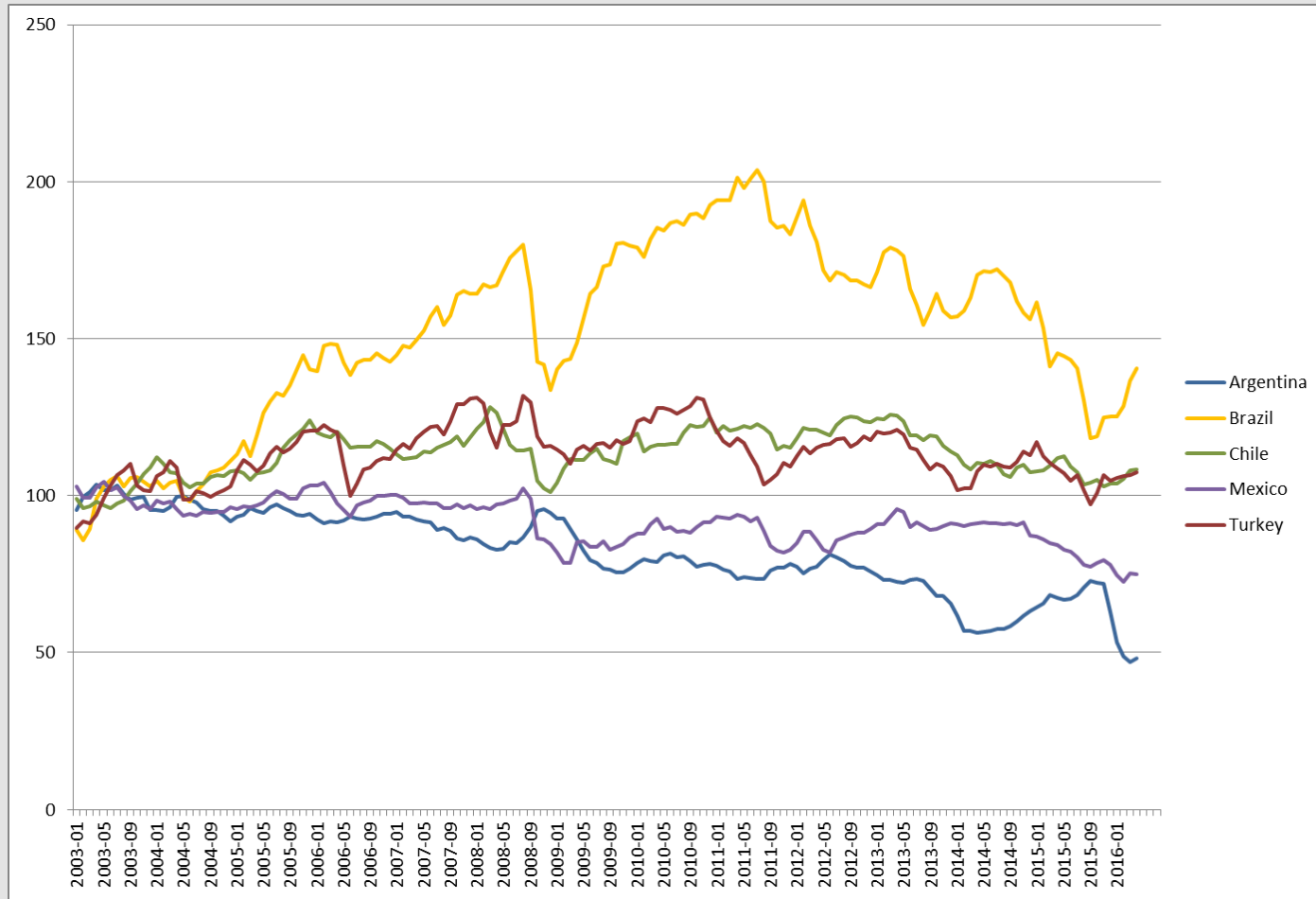
Source: CBRT, TURKSTAT

Real Exchange Rate – Selected Countries
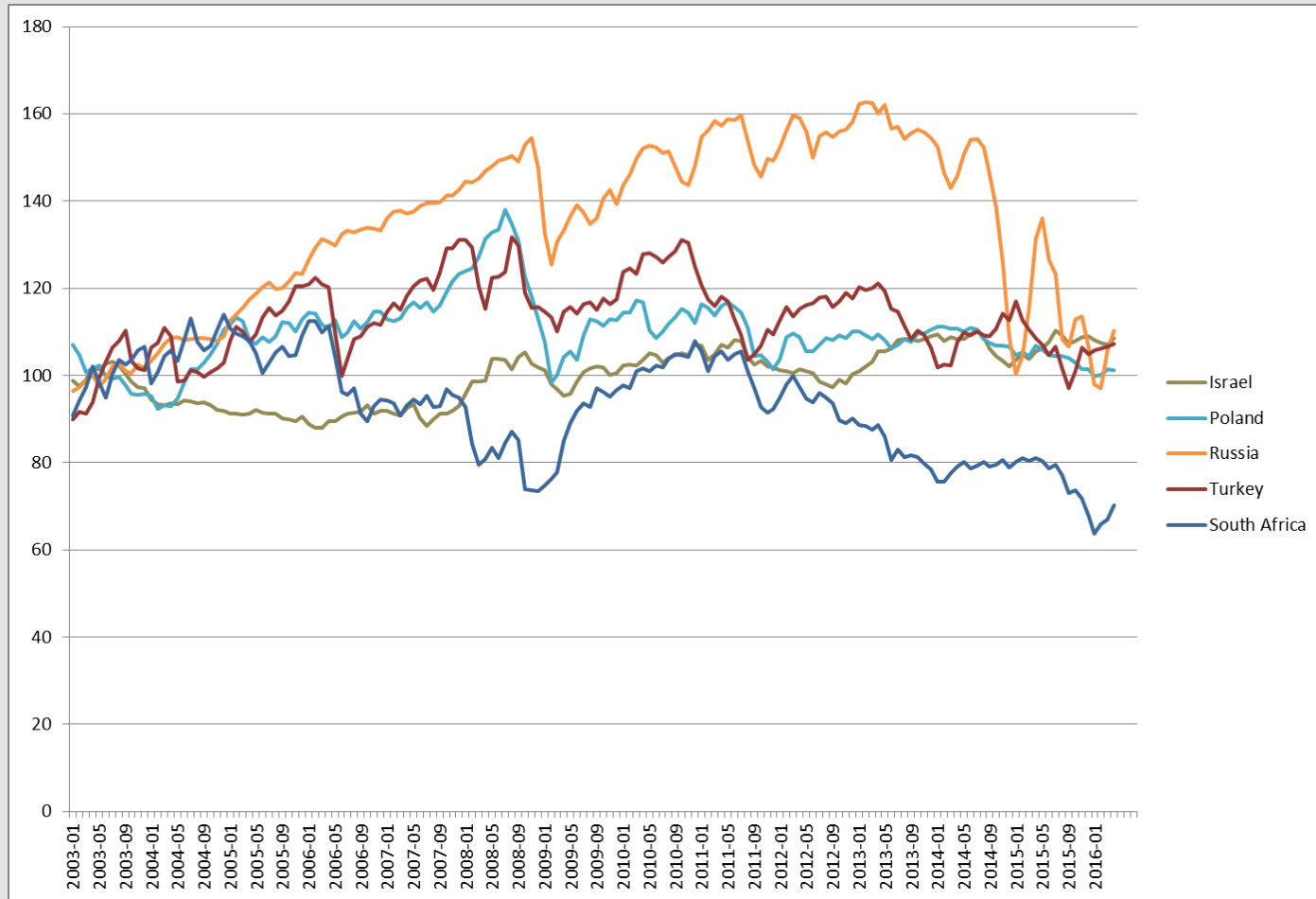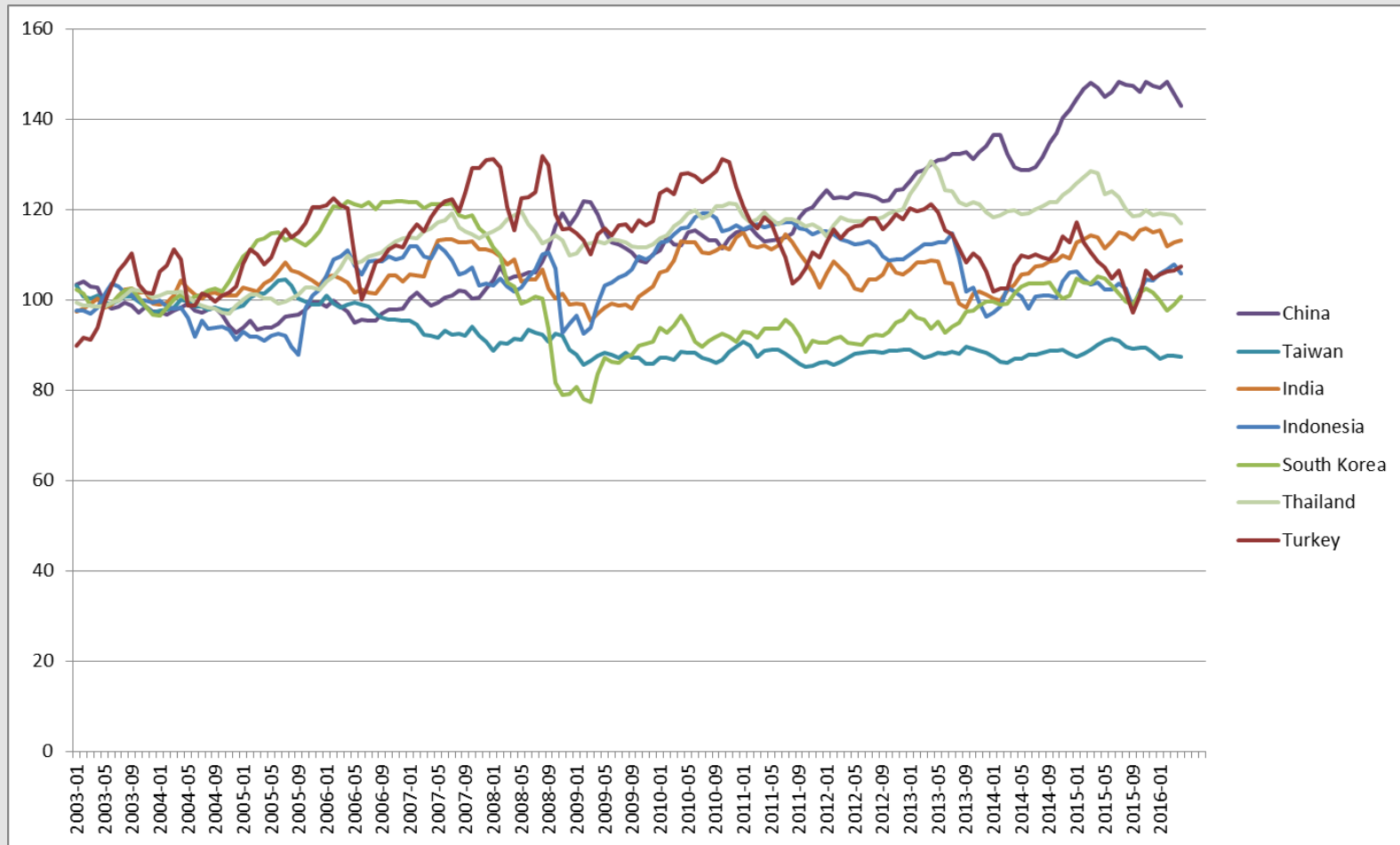**(CPI Based, 2003 avg = 100)**

Real Exchange Rate – Selected Countries
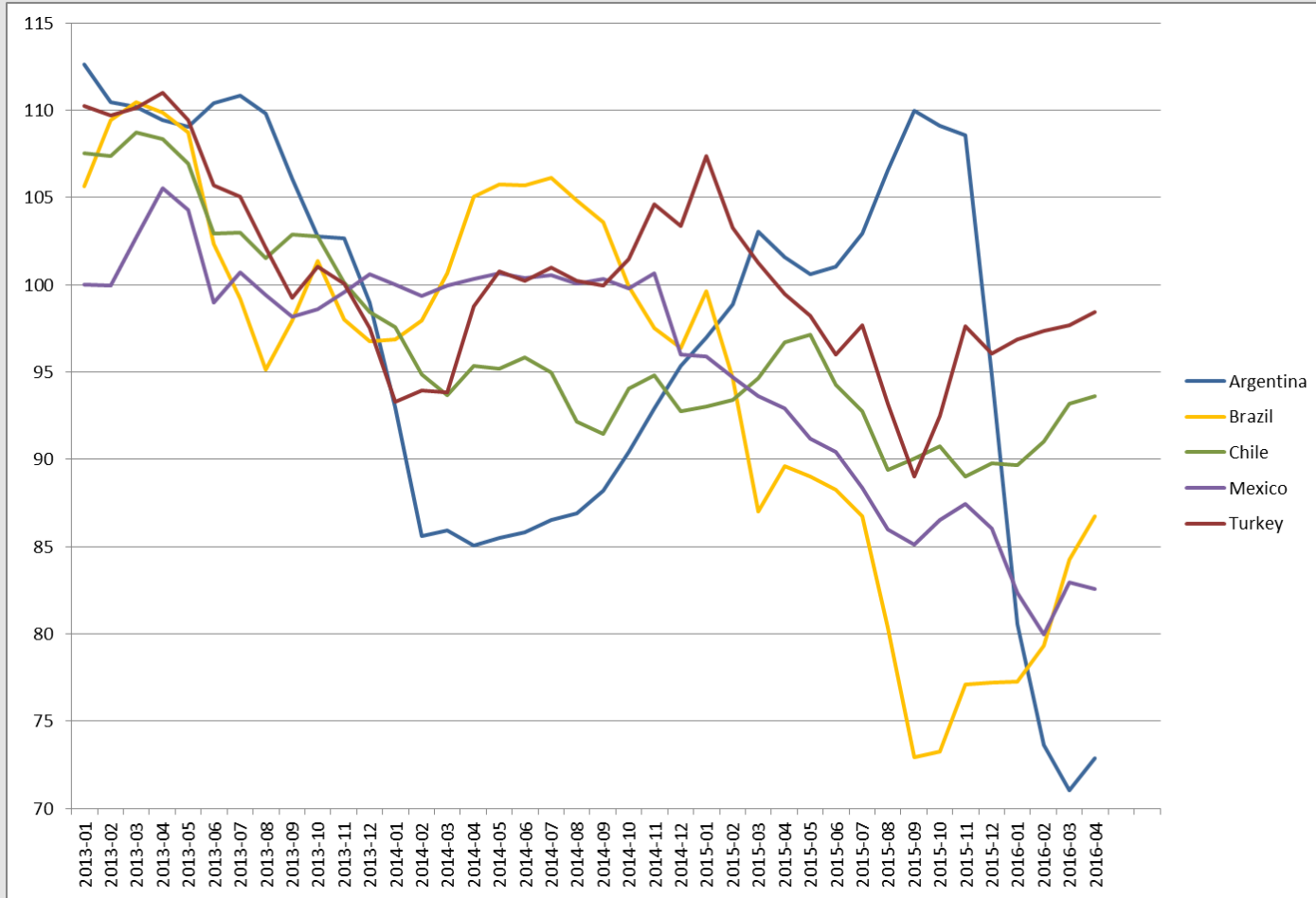**(CPI Based, 2003 avg = 100)**

Real Exchange Rate – Selected Countries
(CPI Based, 2003 avg = 100)

Real Exchange Rate – Selected Countries
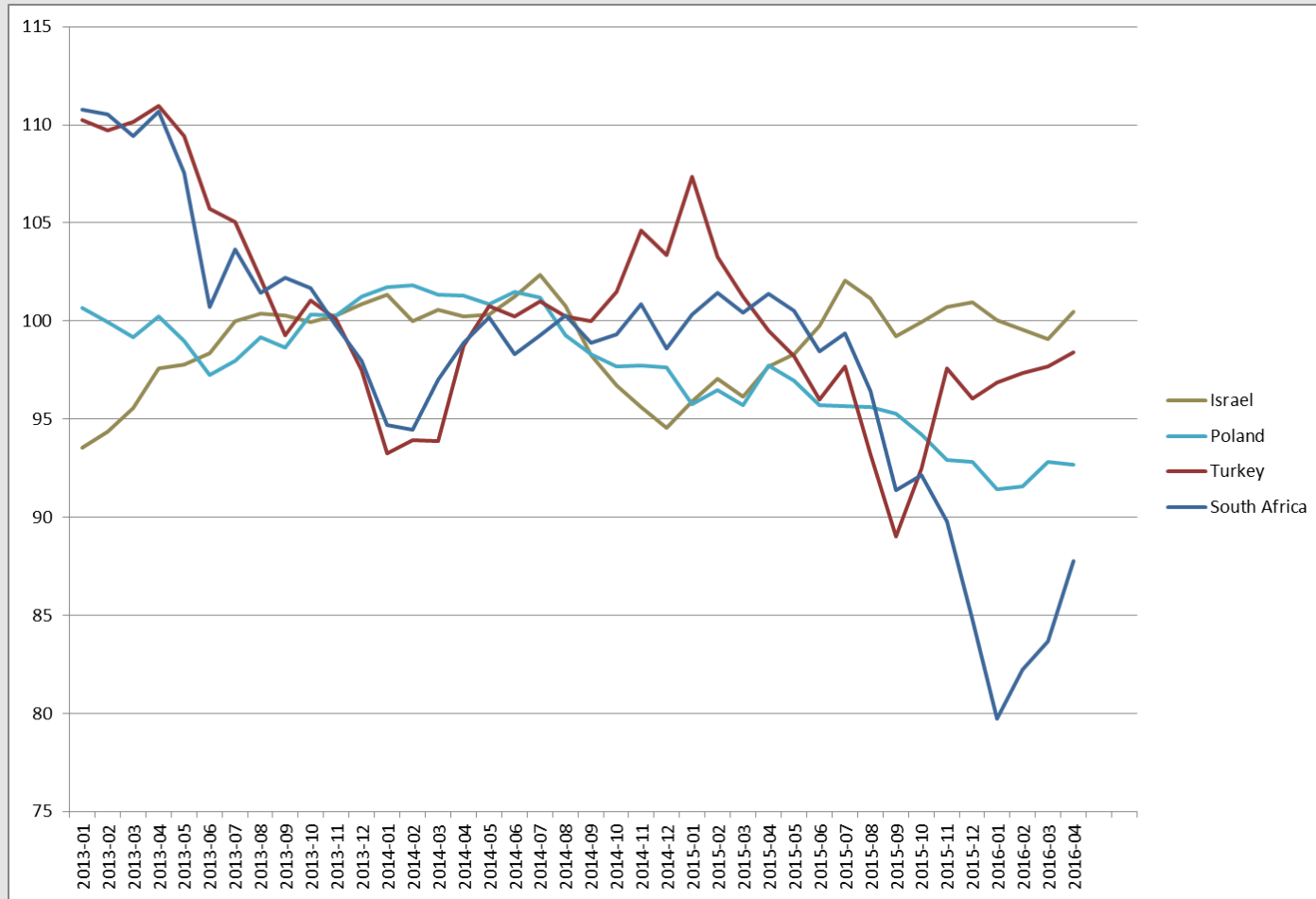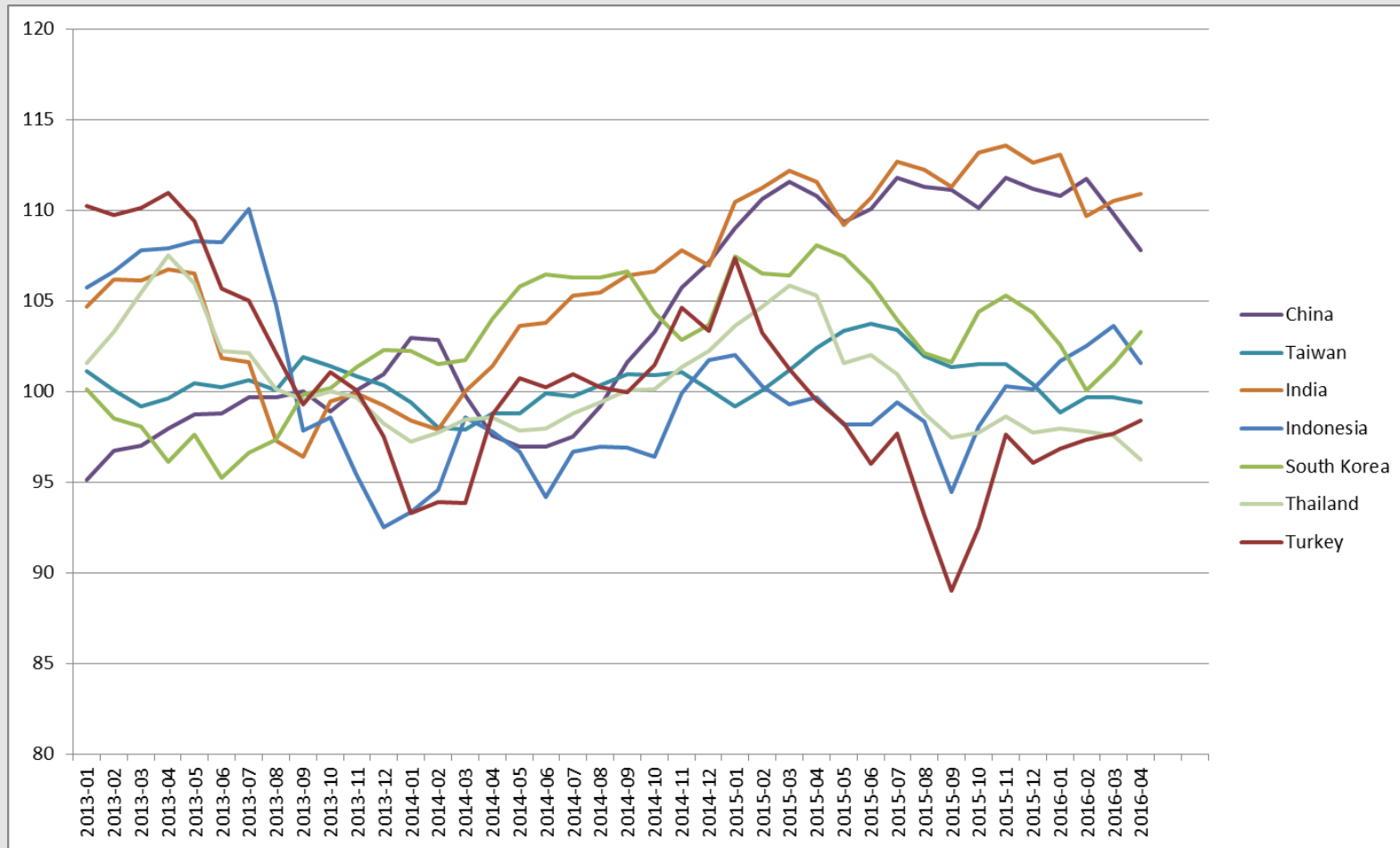## (CPI Based, 2013M05-2014M04=100)

Real Exchange Rate – Selected Countries
(CPI Based, 2013M05-2014M04=100)

Real Exchange Rate – Selected Countries
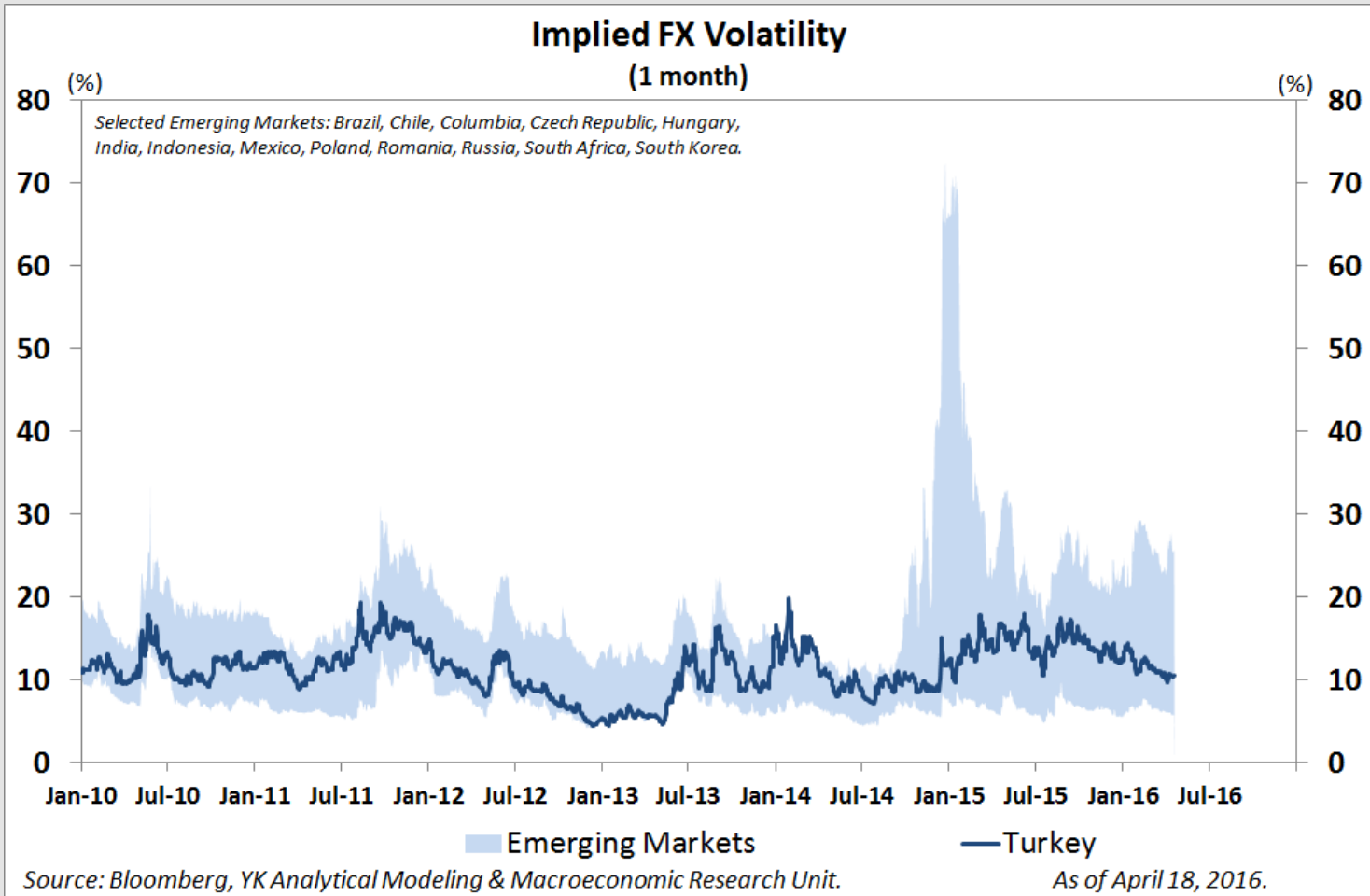(CPI Based, 2013M05-2014M04=100)

Implied FX Volatility

Implied FX Volatility
(1 month)

Selected Emerging Markets: Brazil, Chile, Columbia, Czech Republic, Hungary, India, Indonesia, Mexico, Poland, Romania, Russia, South Africa, South Korea.

Emerging Markets — Turkey

Source: Bloomberg, YK Analytical Modeling & Macroeconomic Research Unit.   As of April 18, 2016.

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