



Monetary policy and external shocks:  
Colombia  
CIII Meeting, CEMLA

Juan José Echavarría  
Governor, Central Bank

# Monetary Policy Responses to external shocks

- Initial conditions
- Shocks
- Impact and channels
- Considerations on policy responses
  - Nature of shocks
  - The exchange rate as shock absorber
  - Monetary policy
- Policy responses



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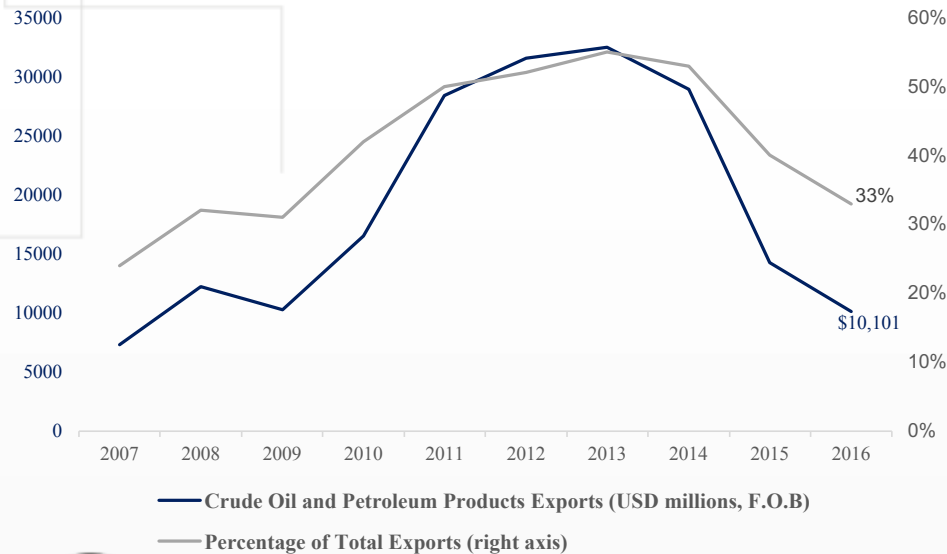


- The Colombian economy, highly oil dependent:

- Oil exports represented more than 50% of total exports
- Non commodity exports to oil dependent trading partners larger than 25%

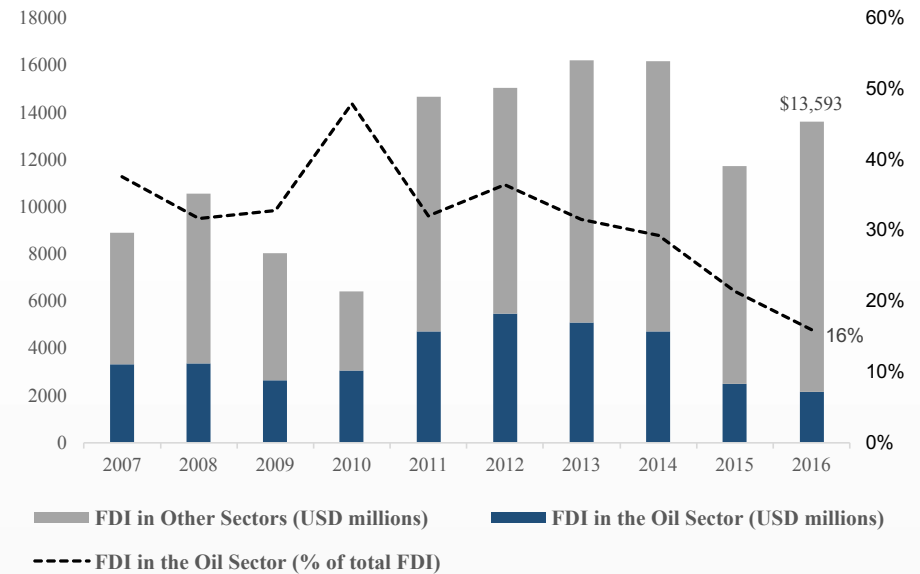
- FDI in the oil sector represented more than 35% of total FDI
- Oil related revenues represented 17% of total public revenues in 2012-2014

Crude Oil and Petroleum Products Exports



Source: DANE

FDI in the Oil Sector



Source: Banco de la República

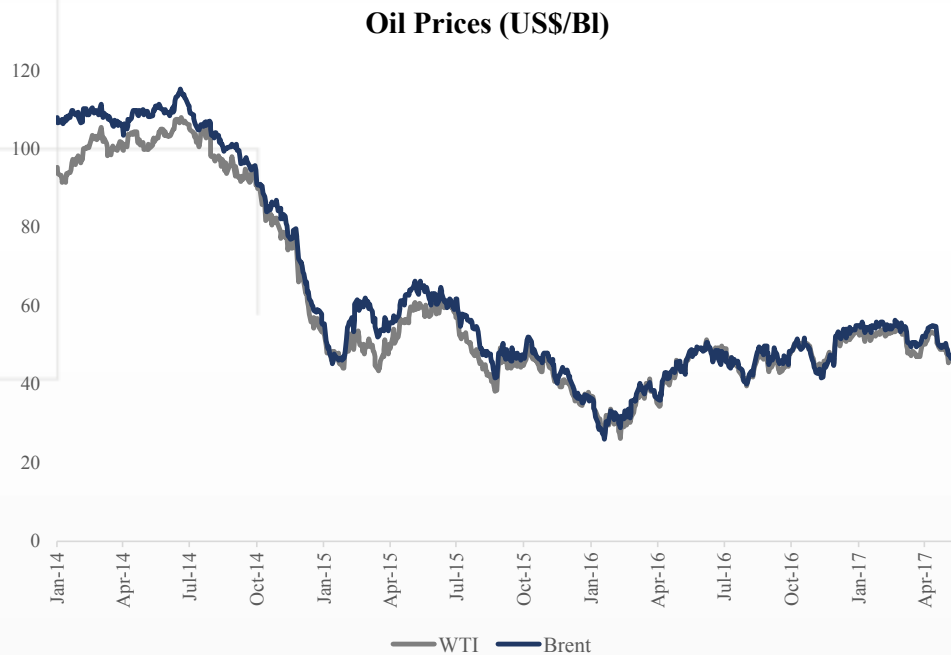


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# The Shocks



- Oil price drop
- Bad behavior of neighbor oil producer countries
- Beginning of the tightening cycle by the FED
- Increase sovereign risk premia
- Large exchange rate devaluation (90%)
- Strong *El Niño* Phenomenon and severe droughts

Source: U.S. Energy Information Administration



# Monetary Policy Responses to external shocks

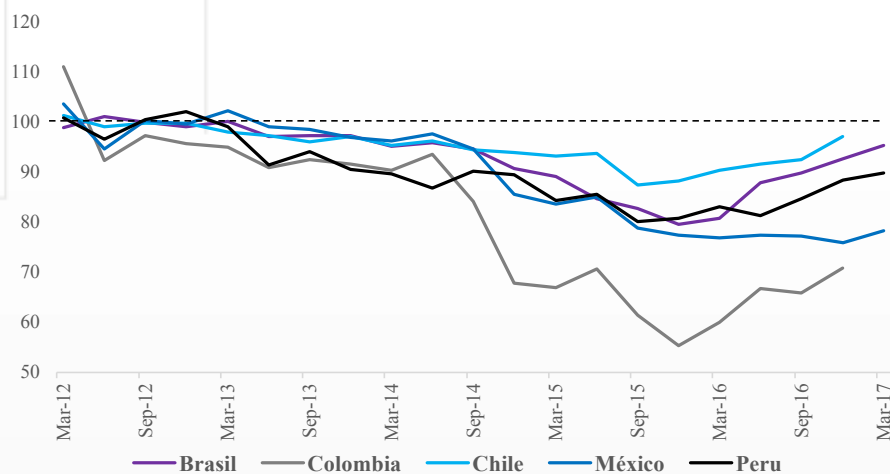
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# Shocks – Impact and channels

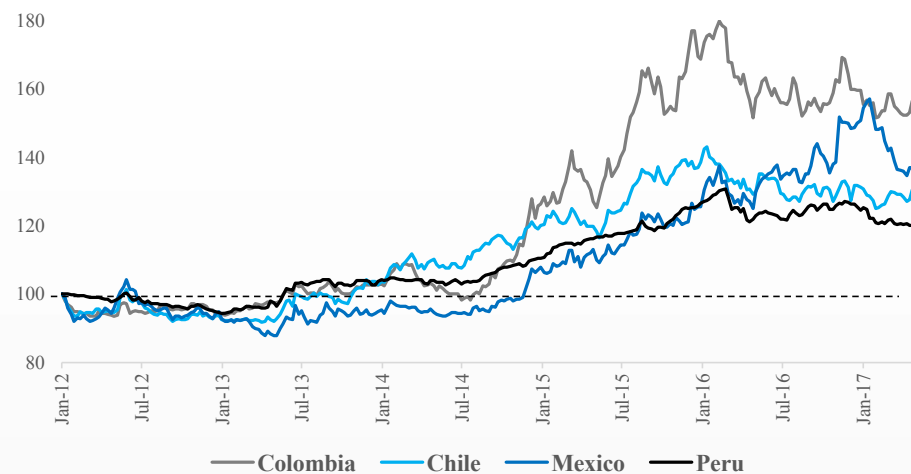
- Terms of trade shocks stronger than in other Latin American countries
- The Colombian peso depreciated more

Terms of Trade  
(Index 2012=100)



Source: Datastream

Nominal Exchange Rates - Local Currency/USD  
(Index Jan 2012=100)

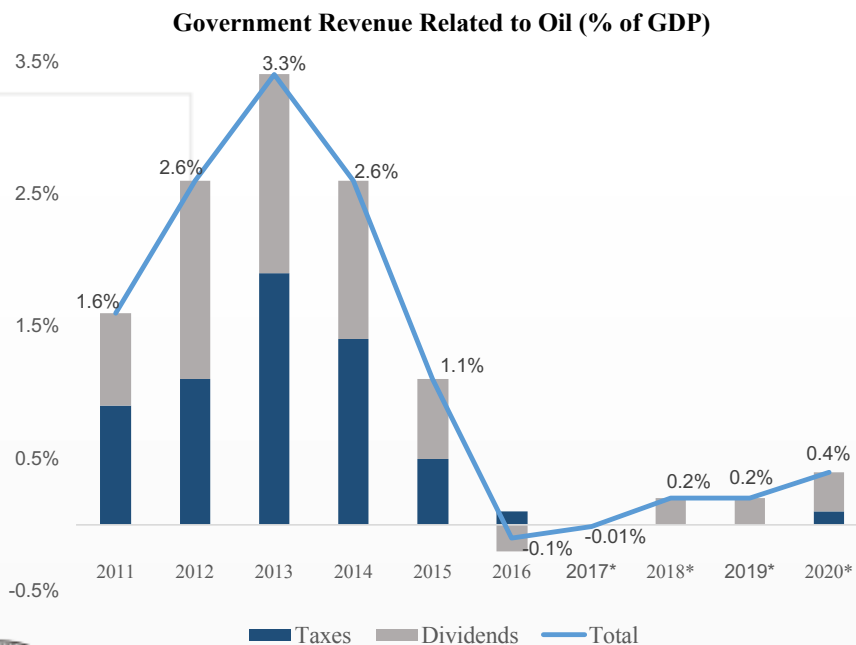


Source: Bloomberg

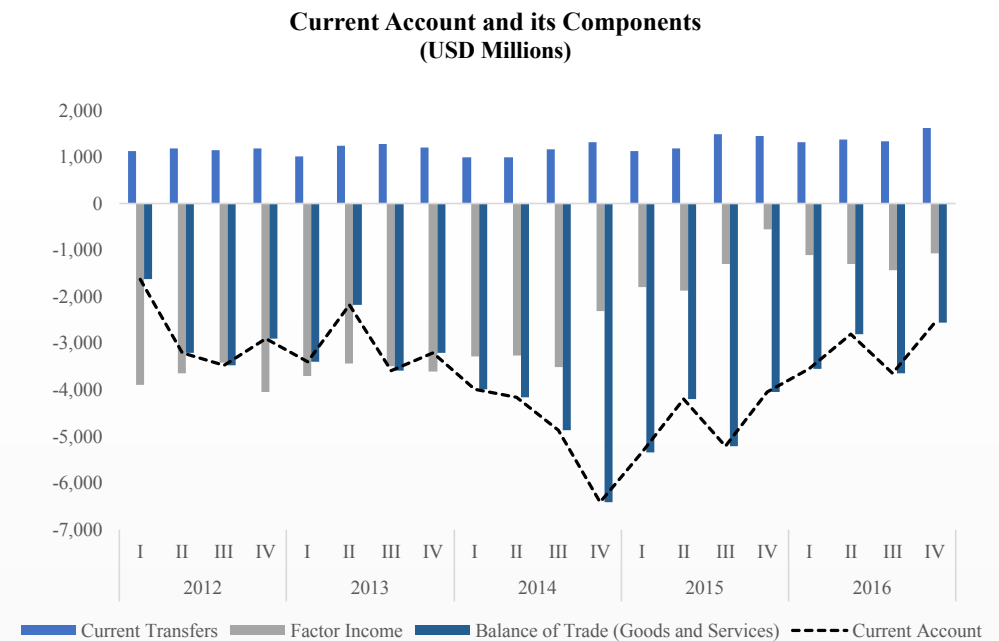




- Government revenues related to oil fell from 3,3% GDP in 2013 to almost 0% in 3 years.
- The large fall in oil and non-commodity exports widened the current account deficit from 3.4% in 2013 to 6.5% in 2015.



Source: Ministry of Finance



Source: Banco de la República

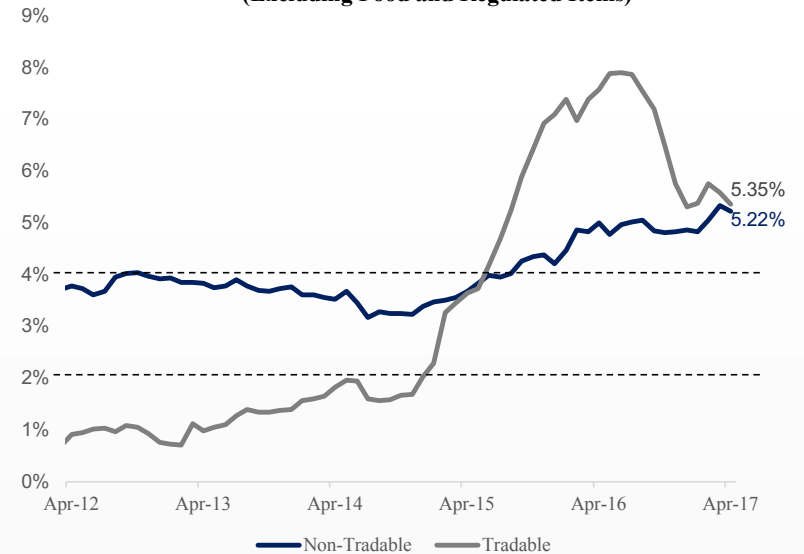


- Higher food and energy prices due to *El Niño* affected headline and core inflation.
- The large depreciation also influenced local prices despite a low pass-through.

**Annual Food Inflation**  
(CPI y/y growth)



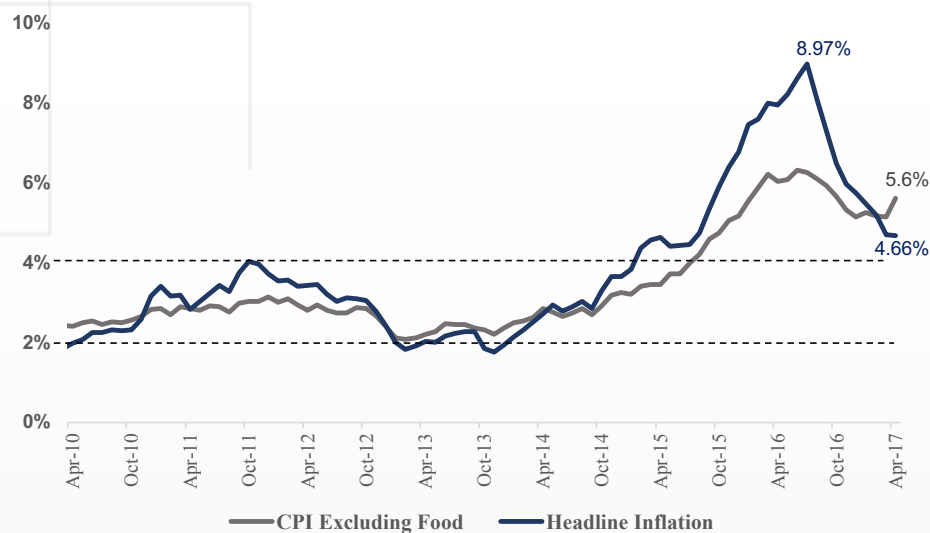
**Total Tradable and Non-tradable Inflation**  
(Excluding Food and Regulated Items)



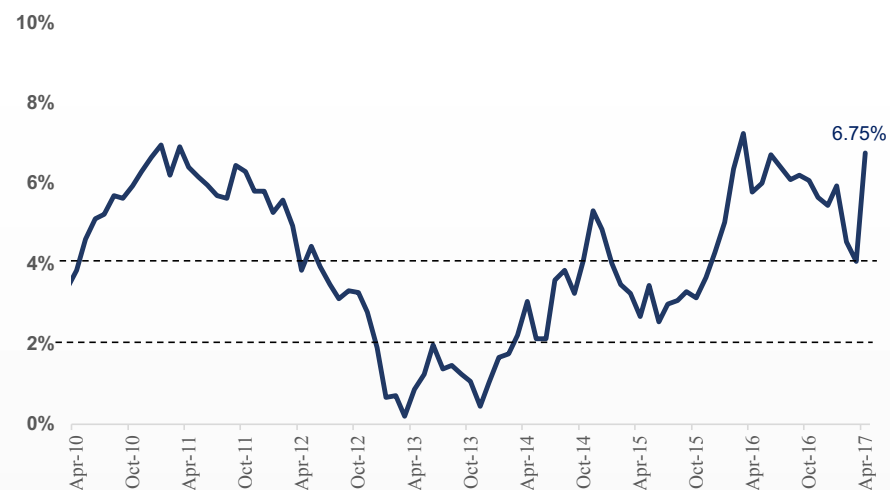
Source: DANE. Calculations by Banco de la República

- Core inflation rose above target and increased risk of no convergence after the effects of the shocks faded.
- The shocks, although transitory, affected inflation expectations and activated indexation mechanisms. Only at the end of 2016 inflation began to recede.

**Total CPI and CPI Excluding Food  
(CPI y/y growth)**



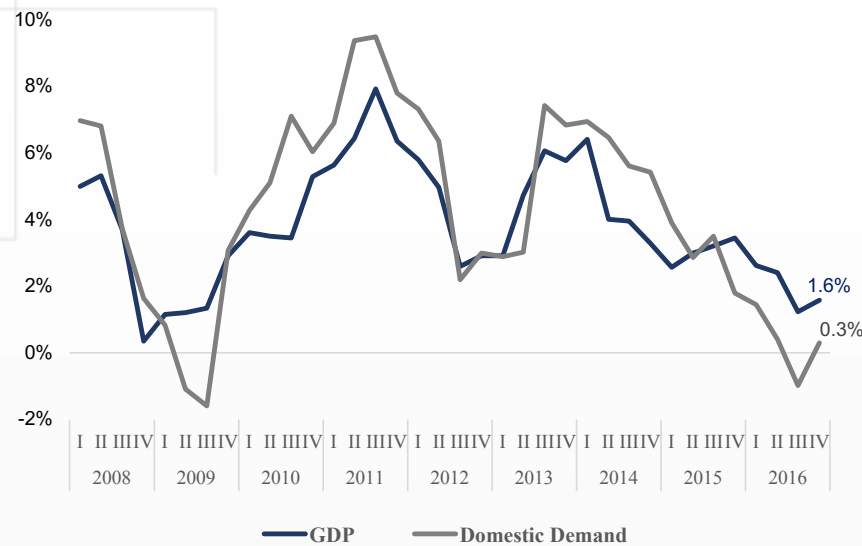
**Inflation of Regulated Items  
(CPI y/y growth)**



Source: DANE. Calculations by Banco de la República

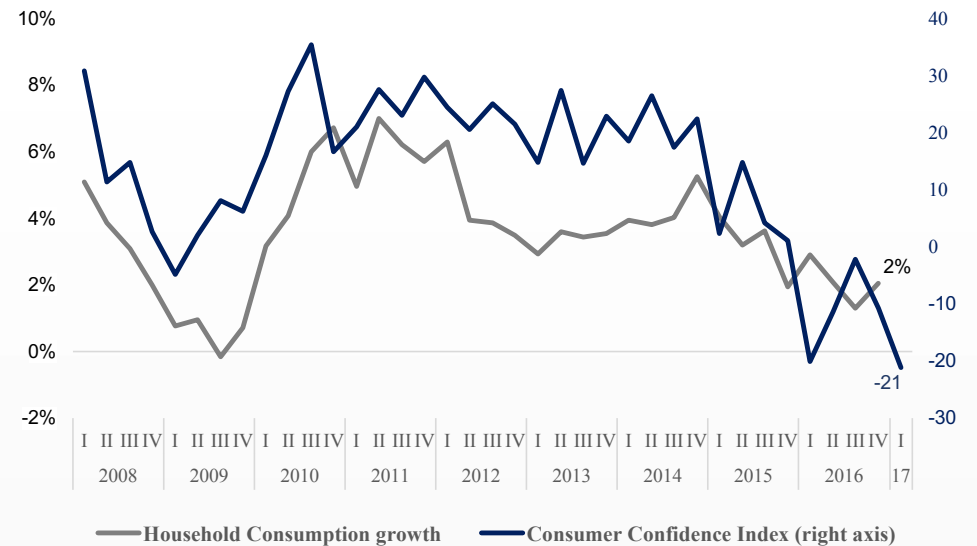
- Weaker permanent income, lower investments in the oil sector and a slower external demand caused a deceleration of output and absorption.
- Recent indicators suggest that the slowdown could be greater than expected.

**Annual Real GDP Growth and Domestic Demand**



Source: DANE. Calculations by Banco de la República

**Consumer Confidence Index and Household Consumption Growth**



Source: Fedesarrollo and DANE.



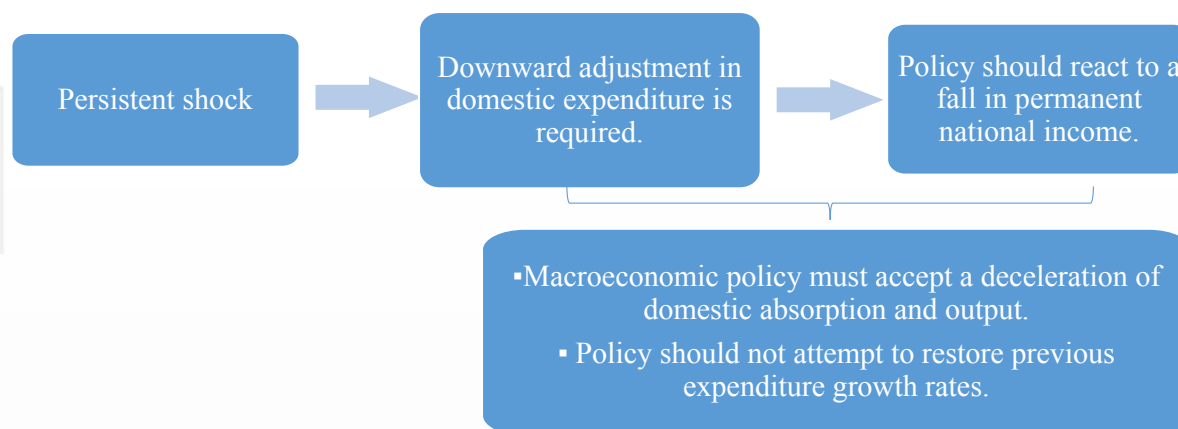
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# Identification of the nature of shocks

- Given the persistent nature of the oil shock, a prudent policy response would treat it as a **permanent** phenomenon



- If macroeconomic policy did not accept the deceleration of output, risks on fiscal and external sustainability would arise



## The exchange rate as shock absorber

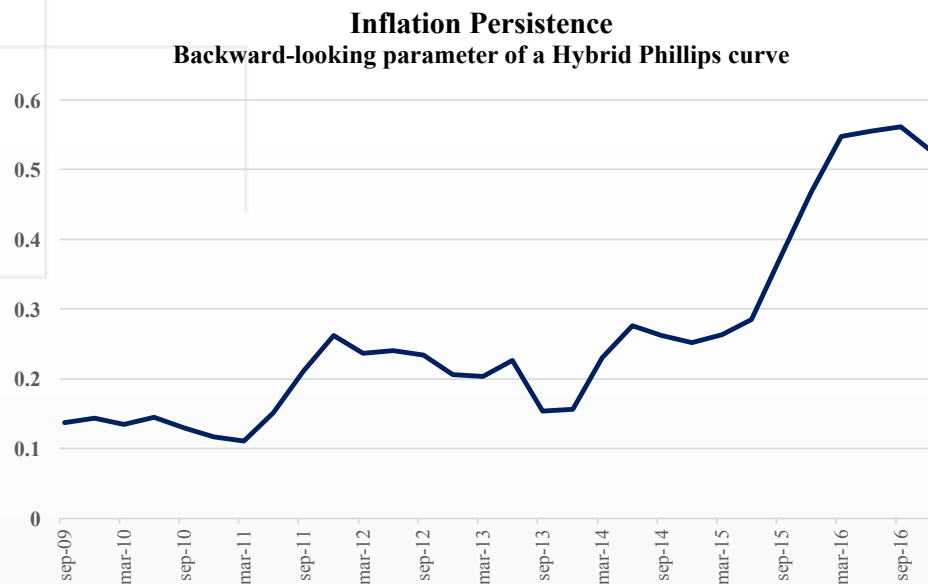
- The adjustment to the persistent oil shock includes a **sectorial reallocation** of production and expenditure. Tradable goods relative prices must rise to induce this reallocation
- Otherwise, the correction of the current account deficit would hinge only on the adjustment of absorption
- Since the currency mismatches of both the private and public sector had been contained, it was possible to allow the exchange rate to depreciate and act as a shocks absorber



# Cautious monetary policy

Two reasons for a cautious monetary policy response

A. Increased inflation inertia (indexation) and imperfect anchoring of inflation expectations to the target



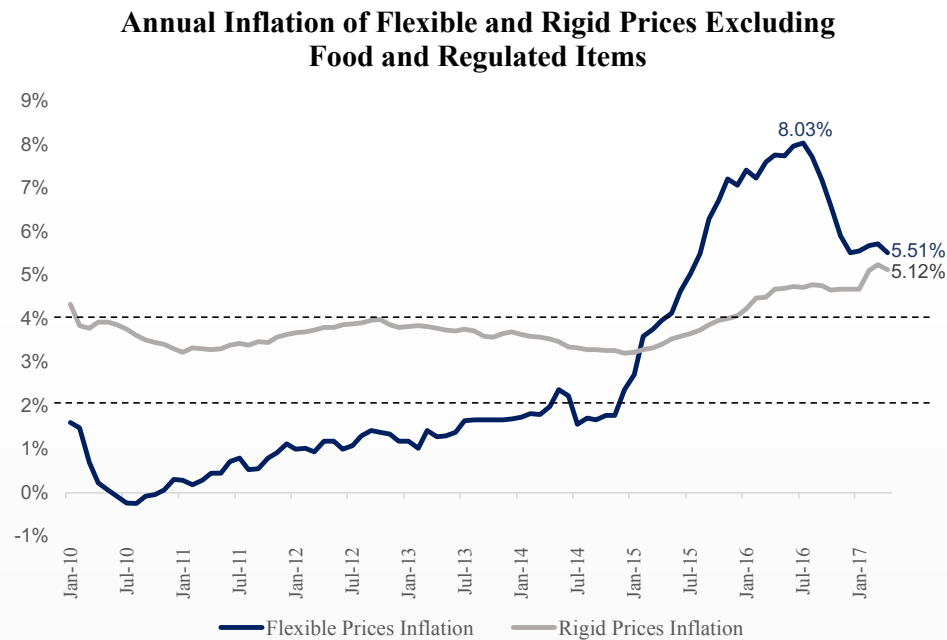
- The recent decline in inflation is mostly driven by the undoing of the supply shocks (food, regulated and tradable good prices).
- In general, any new supply shock may weaken the credibility of the inflation target and raise the cost of reaching it.

Source: Banco de la República





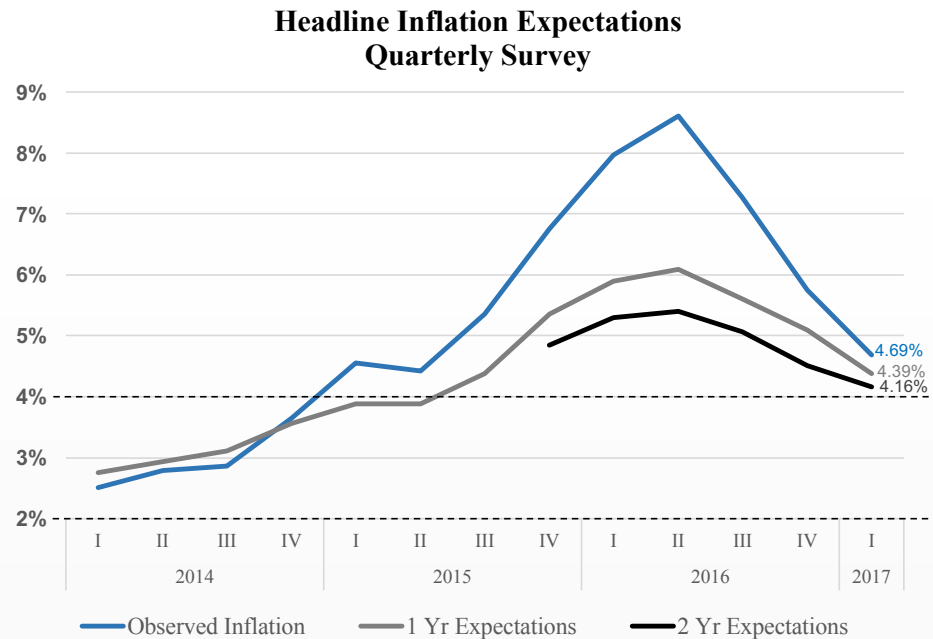
- "Rigid prices" inflation confirms the growing importance of indexation and increased inflation expectations (non tradable goods and services inflation is rising)



Source: Banco de la República



- The credibility of the inflation target was weakened after more than two years of inflation exceeding the 3% target
- Inflation expectations of analysts rose less than headline inflation, but still remain above the 3% target



Source: Banco de la República



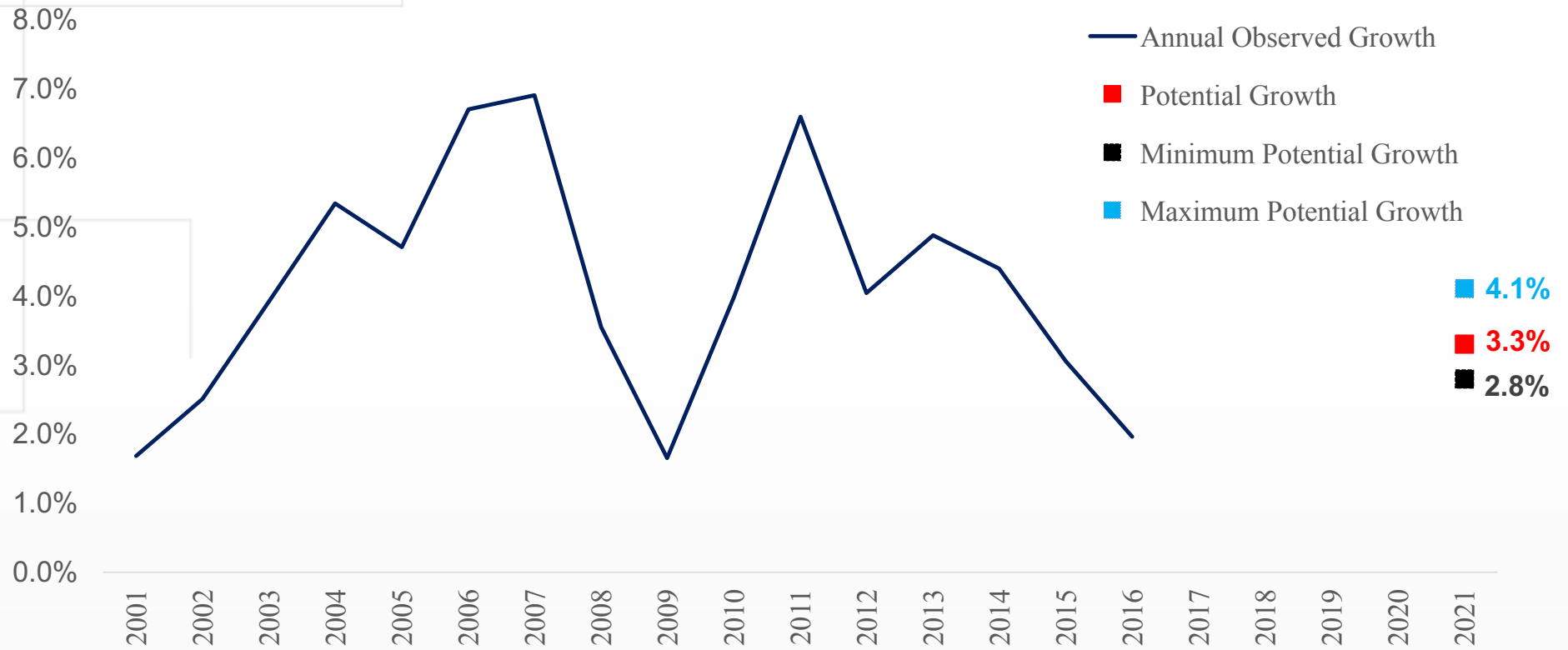
## B. Uncertainty about the new levels of potential growth and natural interest rates

- Factors pushing down potential growth and natural interest rates: a) Lower TOT, b) more expensive imported capital goods c) declining growth of labor force
- Productivity gains from infrastructure and peace are to be seen
- Lower potential growth would imply a reduced natural interest rate,...
- But possibly increasing external borrowing costs would push them up

➔ As a result, uncertainty on the size of the output gap or the neutral stance of monetary policy



## Estimates of Potential GDP Growth



Source: The maximum and minimum levels of potential non-inflationary growth are calculated by the IMF. The mid level assumes a 2% per capita growth, population growth of 1% and productivity growth of 0,3%.



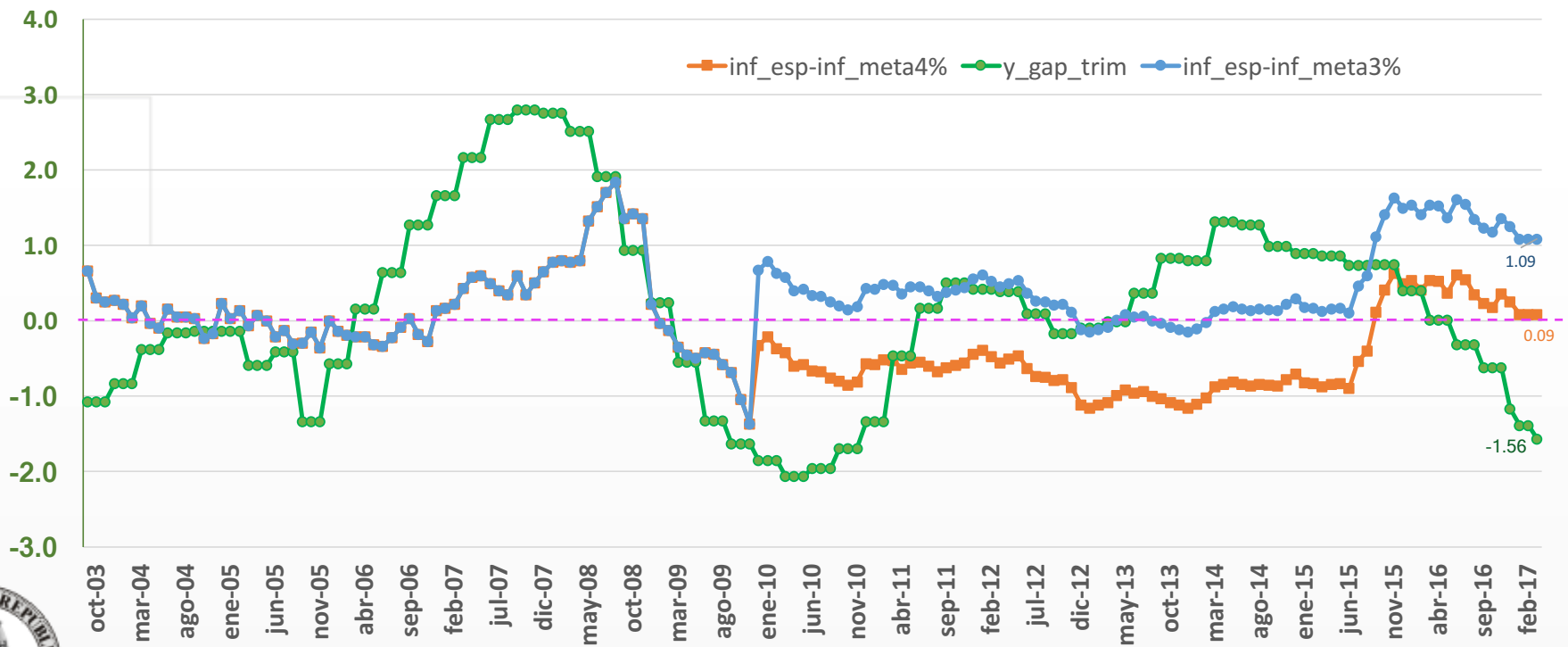
## Estimates of the Neutral Interest Rate for Colombia (IMF)

Method	Neutral Real Interest Rate	Neutral Nominal Interest Rate	Nominal Monetary Policy Gap (bps)
Uncovered Interest Parity	0.6	4.6	-264
Expected-Inflation Augmented Taylor Rule	1.0	5.0	-224
Consumption Based CAPM	3.1	7.1	-14
HP-Filter	2.2	6.2	-104
Average	1.7	5.7	-151.5

Source: IMF (2017). Selected Issues Papers



# Inflation expectations vs 3% and Ygap

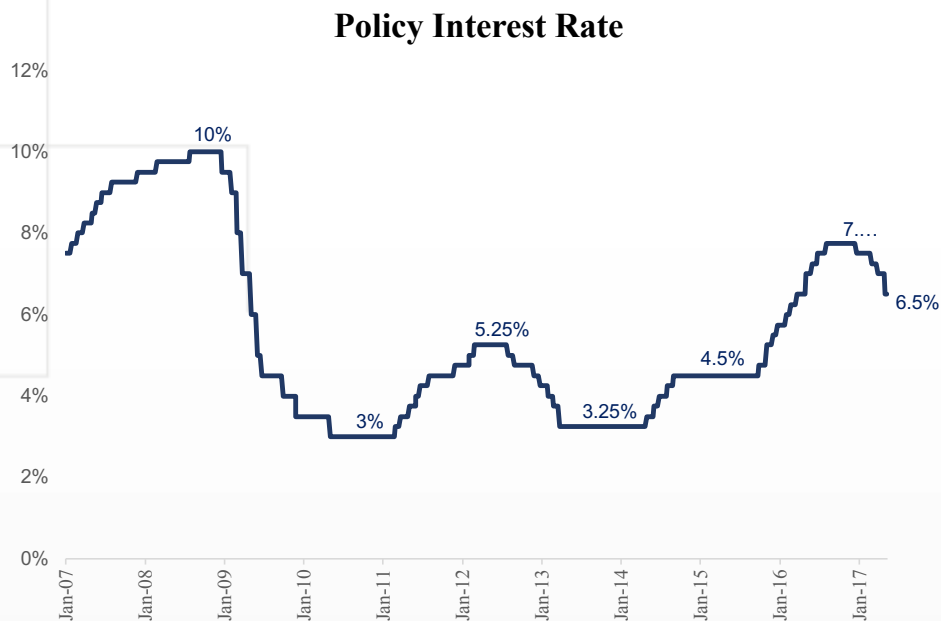


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# Policy Responses



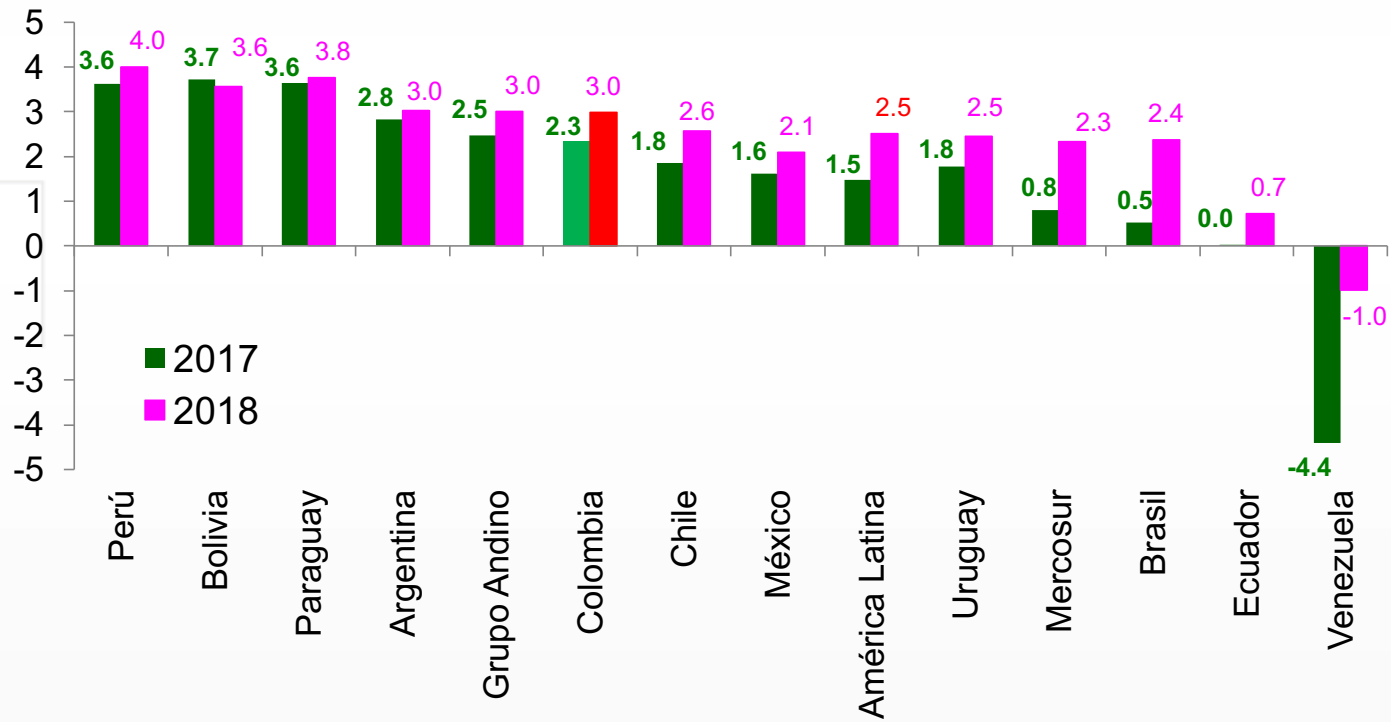
- To control inflation and to keep inflation expectations anchored, the Central Bank raised its key interest rate from 4.5% in September 2015 to 7.75% in July 2016
- Public expenditure was reduced and a tax reform was adopted
- As inflation began to recede and considering the risks of an excessive slowdown, the Board has reduced the benchmark interest rate by 125 bps. between December 2016 and April 2017

Source: Banco de la República





## GDP Growth: 2017 and 2018 (%)



Source: Latin American Consensus Forecast , april 2017

