Monetary Policy Post COVID in Colombia: Strong Recovery, Supply Shocks, and Macro Imbalances

XVIII Monetary Policy Managers Meeting
Session I

Juan José Ospina Tejeiro

September 26, 2022

Agenda

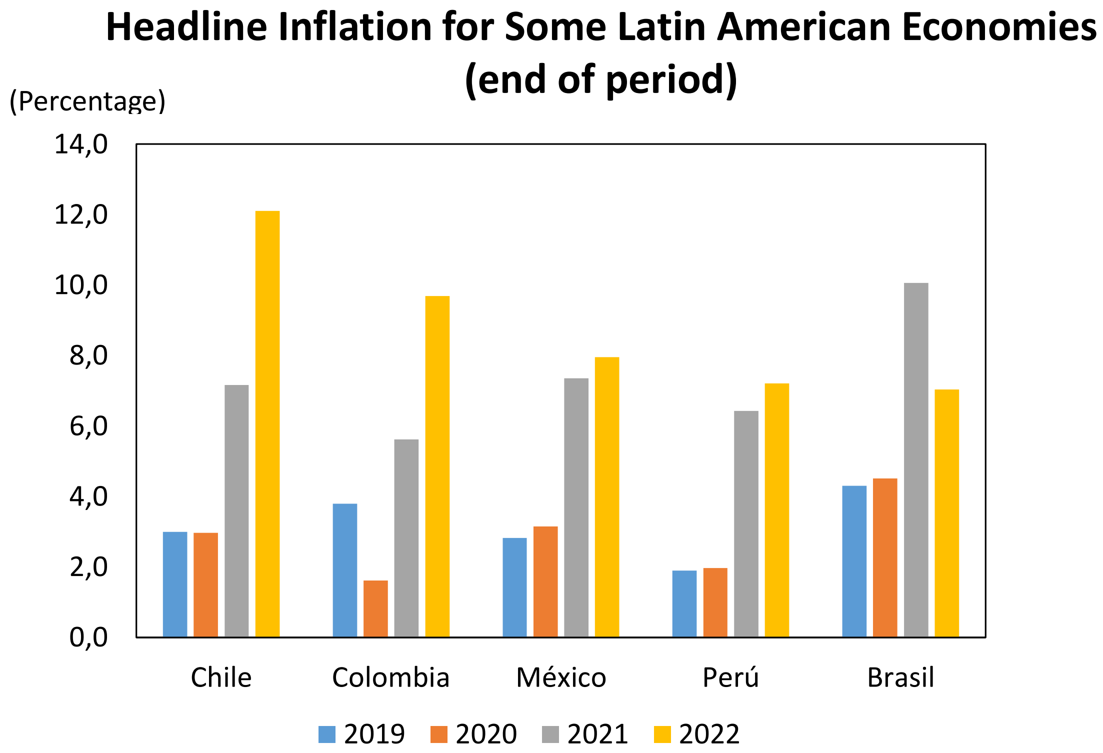
STRONG RECOVERY AND SUPPLY SHOCKS

OUTLOOK AND MONETARY POLICY

RISKS AND CHALLENGES GOING FORWARD: MACRO IMBALANCES

Inflation in Colombia was lower during the Covid-19 pandemic and now is higher than in peer economies

- Lots of relief measures through prices
- Some particular supply shocks on top of global shocks
- Stronger recovery



Note: For 2022 Colombia´s value is the forecasts in the July 2022 Monetary Policy Report. For the other economies the 2022 value corresponds to the consensus in the August Focus Economics Survey
Source: Focus Economics and Banco de la República.

Lots of relief measures were implemented through prices

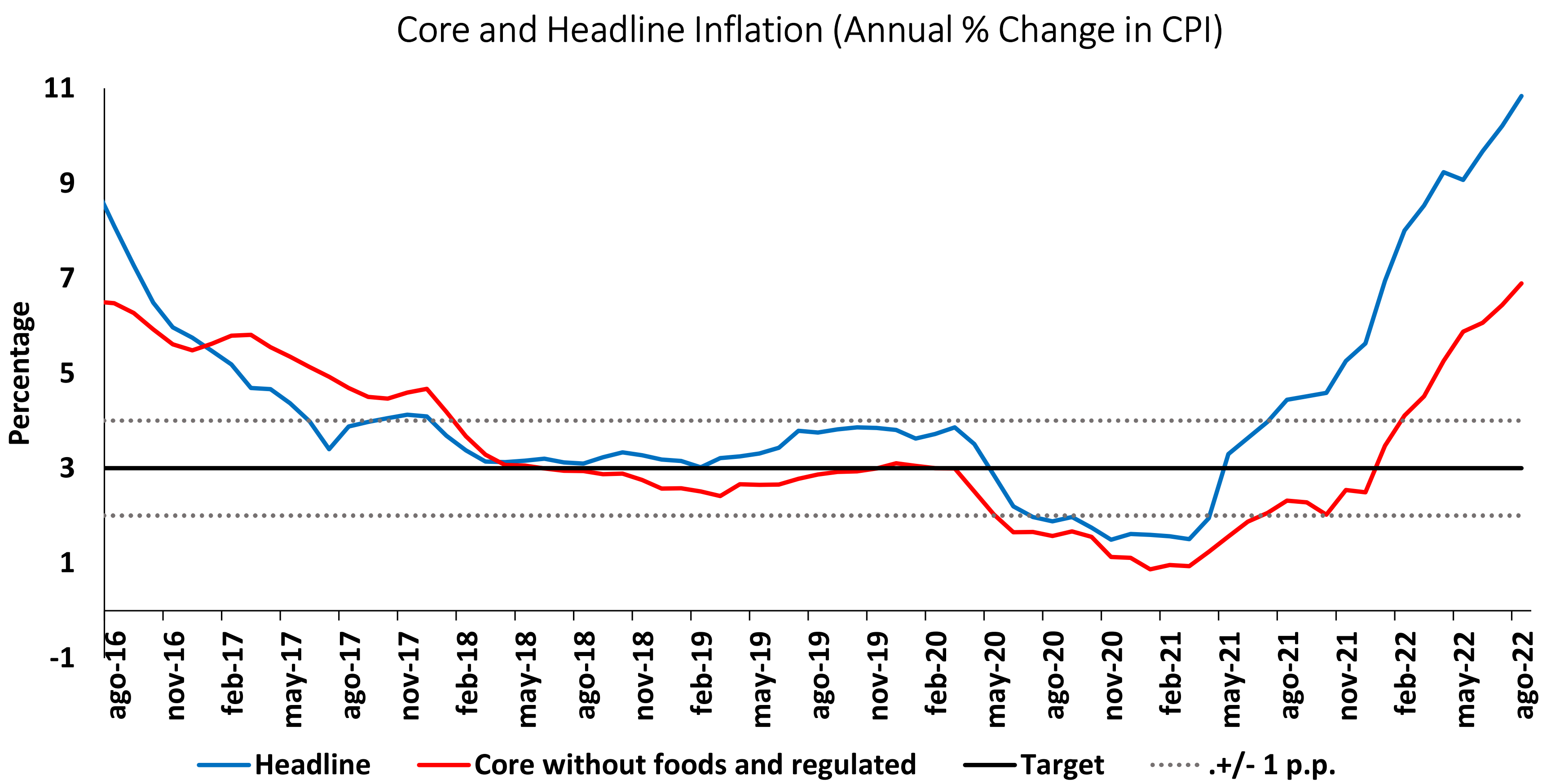
- Added volatility to inflation
- The end of the measures have contributed to increase measured inflation as their effects get reversed

mar-20	abr-20	may-20	jun-20	jul-20	ago-20	sep-20	oct-20	nov-20	dic-20	ene-21	feb-21	...
↓ $1300 a gasolina	13 abr: ↓ IVA planes celular 15 abr: ↓ IVA aseo e higiene 15 abr: ↓ IVA pasajes aéreos (5%) 15 abr: Arriendos	21 may: ↓ Imp. consumo	↓ Un día sin IVA 4 jun: ↓ IVA turismo y hoteles	↓ Un día sin IVA Arriendos	↑ IVA planes celular (1) ↑ Devolución algunos rubros día sin IVA	↑ IVA planes celular (2) ↑ Devolución algunos rubros día sin IVA	↑ Devolución algunos rubros día sin IVA	↓ Un día sin IVA	↑ Devolución algunos rubros día sin IVA	↑ Devolución algunos rubros día sin IVA	↑ Devolución algunos rubros día sin IVA	

oct-21	nov-21	dic-21	ene-22	feb-22	mar-22	abr-22	may-22	jun-22	jul-22	ago-22	sep-22	...	dic-22	ene-23
↓ Un día sin IVA	↓ Un día sin IVA	↓ Un día sin IVA	↑ Devolución algunos rubros día sin IVA ↑ PARCIAL Imp. consumo	↑ Devolución algunos rubros día sin IVA	↑ Devolución algunos rubros día sin IVA ↓ Un día sin IVA	↑ Devolución algunos rubros día sin IVA	↑ Devolución algunos rubros día sin IVA	↓ Un día sin IVA ↑ Devolución algunos rubros día sin IVA	↑ IVA aseo e higiene (emergencia sanitaria) ↑ Devolución algunos rubros día sin IVA	↑ Devolución algunos rubros día sin IVA	↑ Devolución algunos rubros día sin IVA			↑ IVA pasajes aéreos (19%) ↑ Imp. consumo ↑ IVA turismo y hoteles

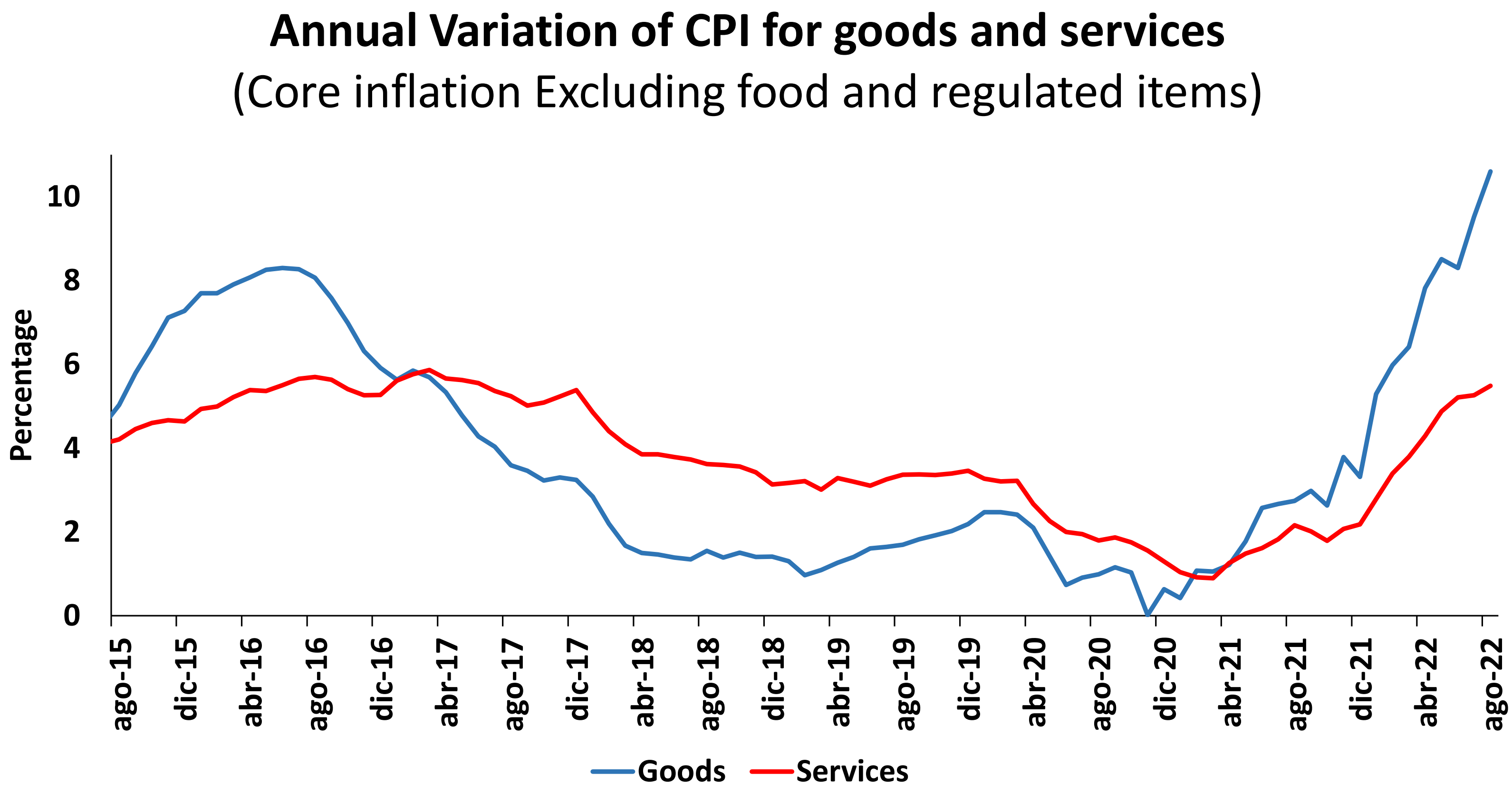
Now core inflation and headline inflation are well above target and increasing

- Food items have led the increase inflation

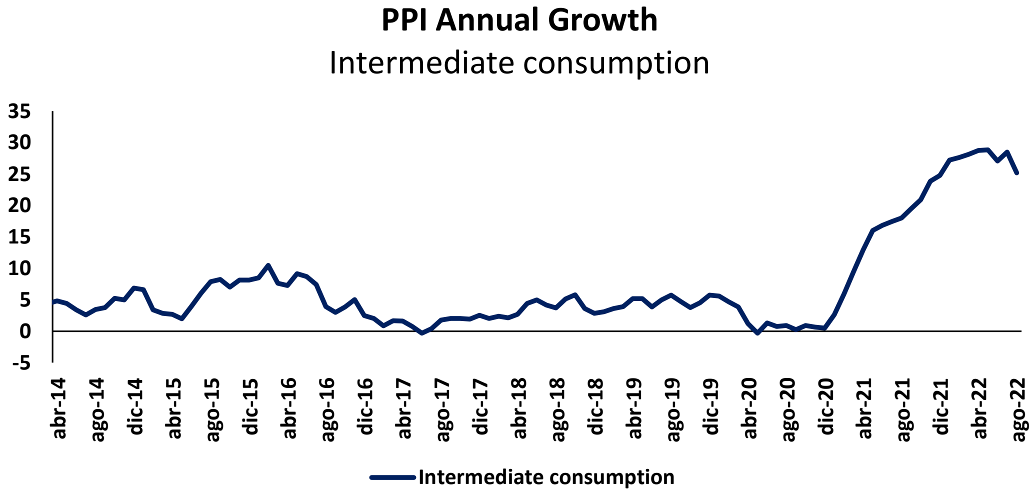


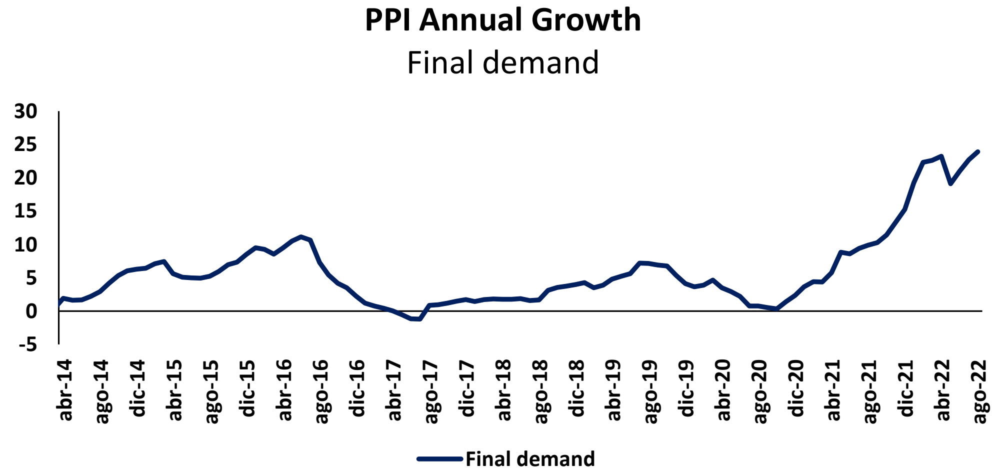
Goods prices explain more of the increase in core inflation

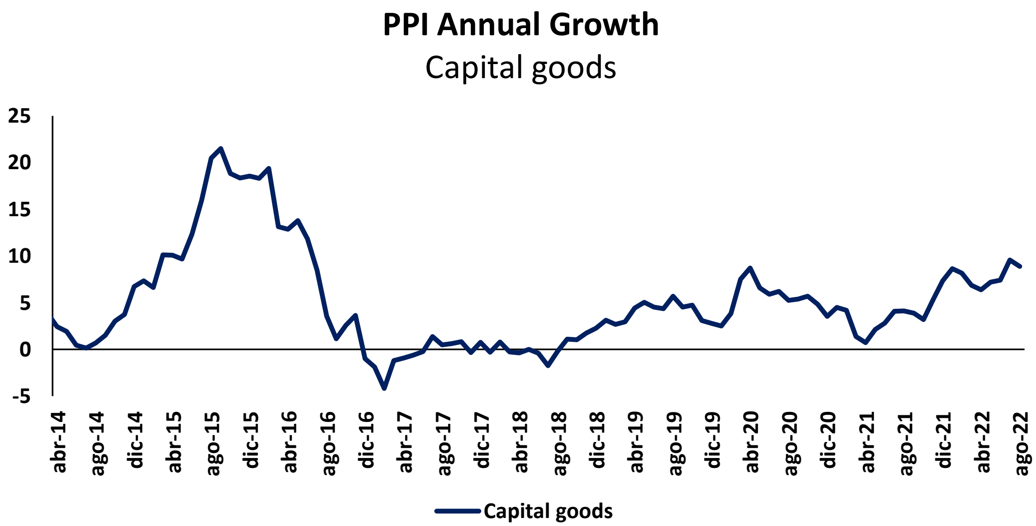
- Result of global shocks (supply chain disruptions) and exchange rate pass-through
- Services are gaining momentum but have also been affected by food prices through the food away from home category

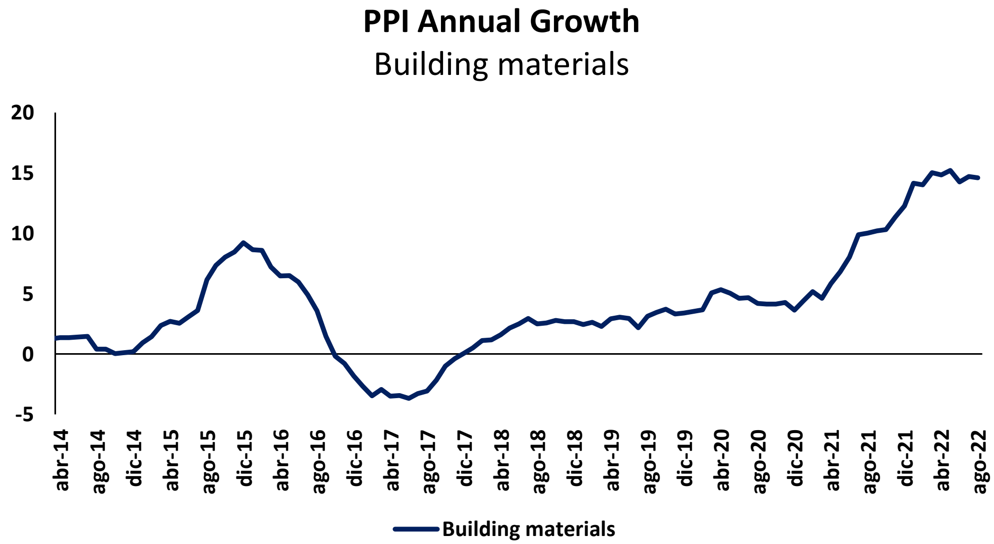


Cost pressures have been widespread



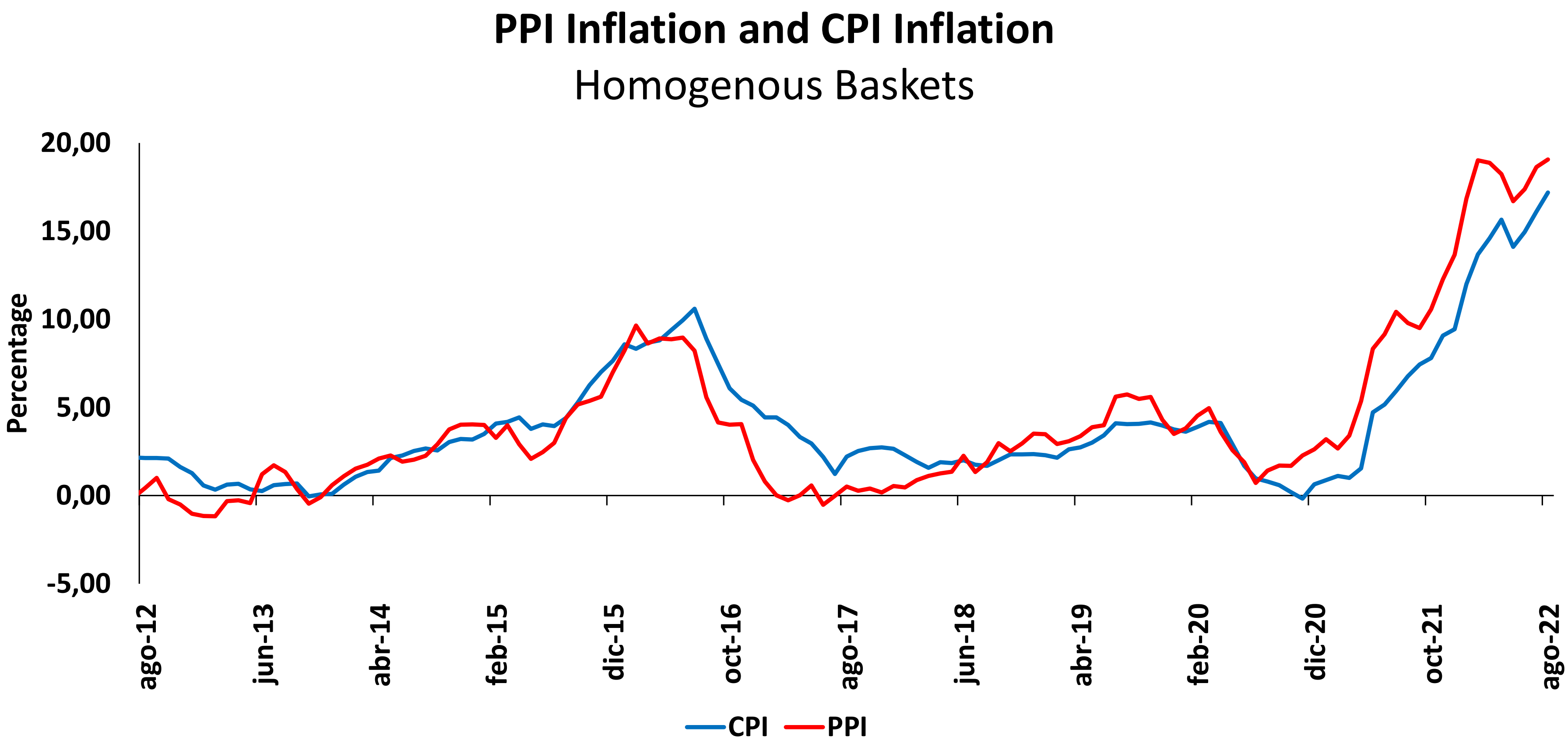






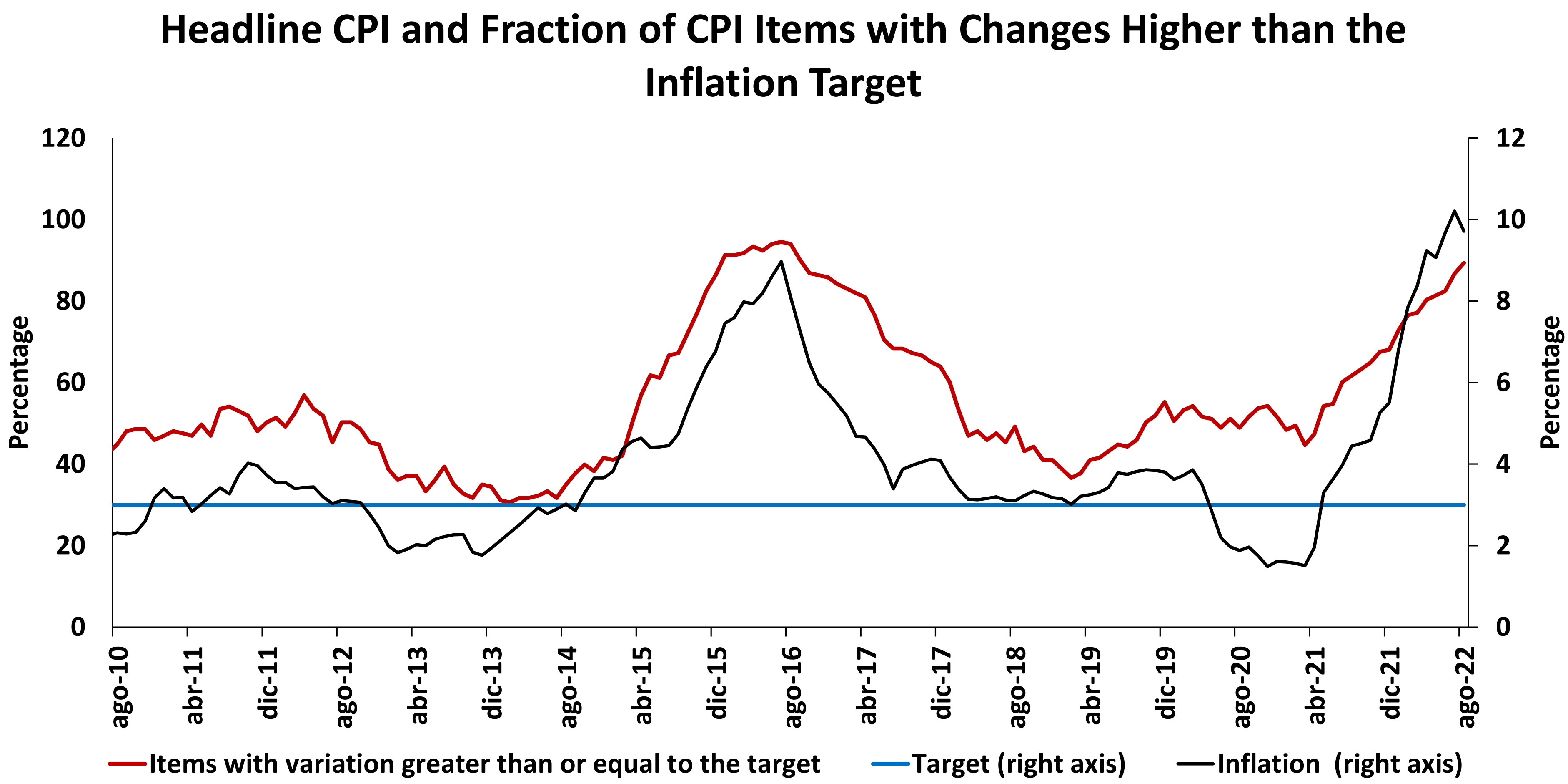
Cost pressures have been passed thorugh to consumer prices

- Margins are under pressure
- There may still be some CPI increases ahead



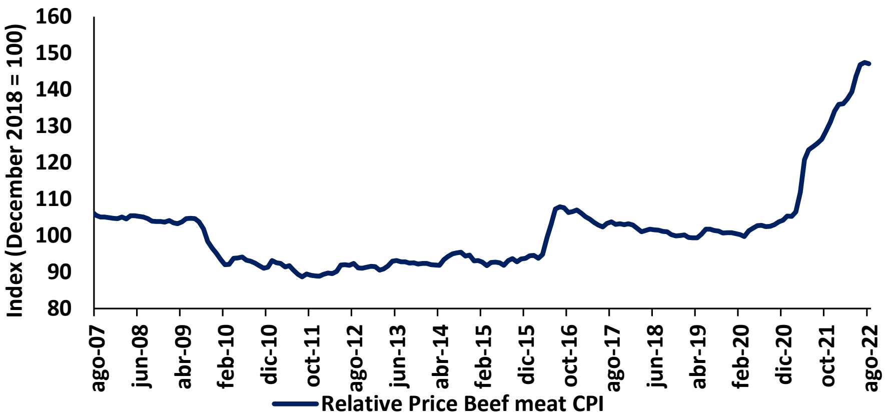
Consumer prices increases are also widespread

- More tan 85% of ítems in the CPI are registering annual variations larger than the inflation target

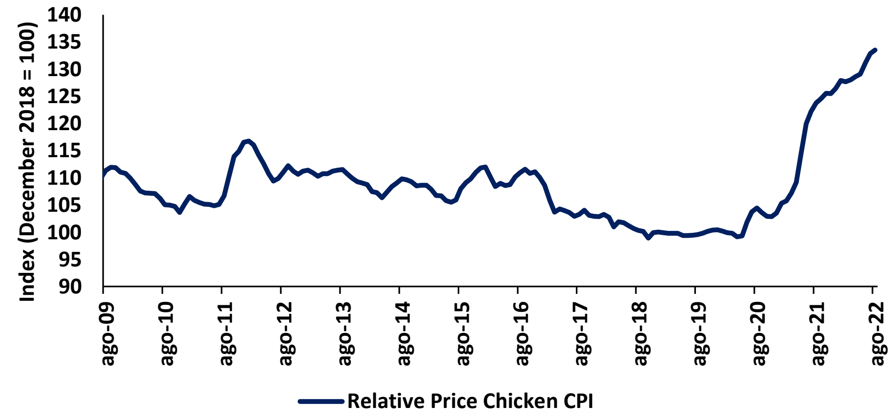


By far food inflation has been leading the increase in inflation despite favorable weather conditions

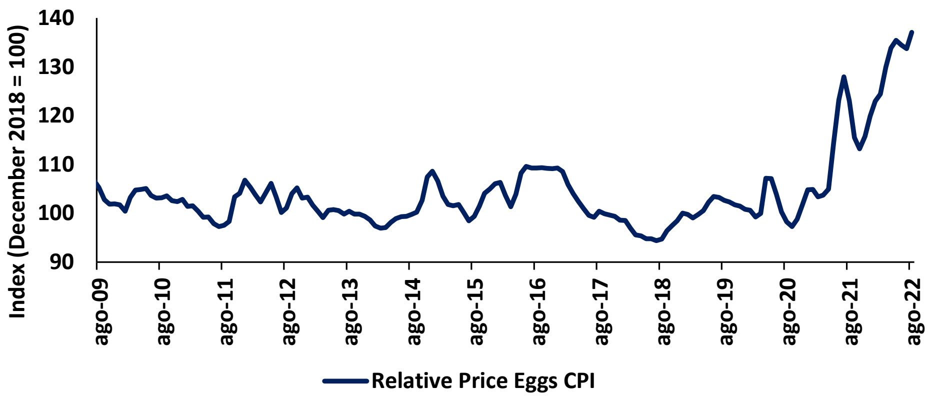
Relative Price Beef meat CPI
(CPI Beef meat / CPI excluding foods)



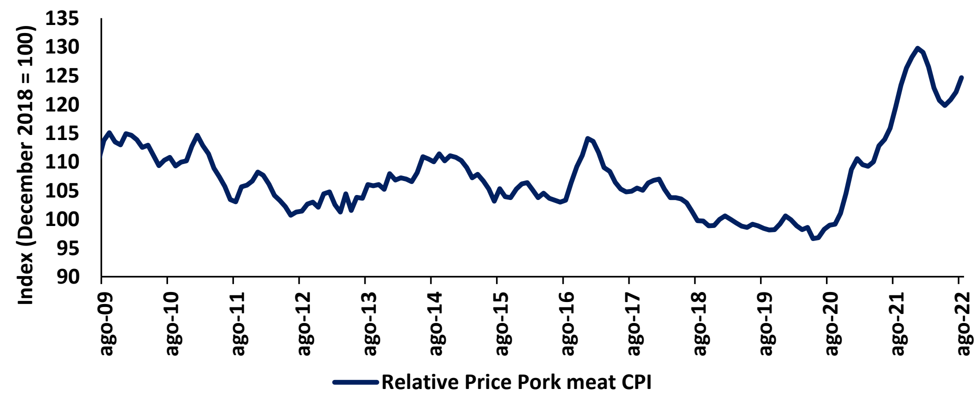
Relative Price Chicken CPI
(CPI Chicken / CPI excluding foods)



Relative Price Eggs CPI
(CPI Eggs / CPI excluding foods)



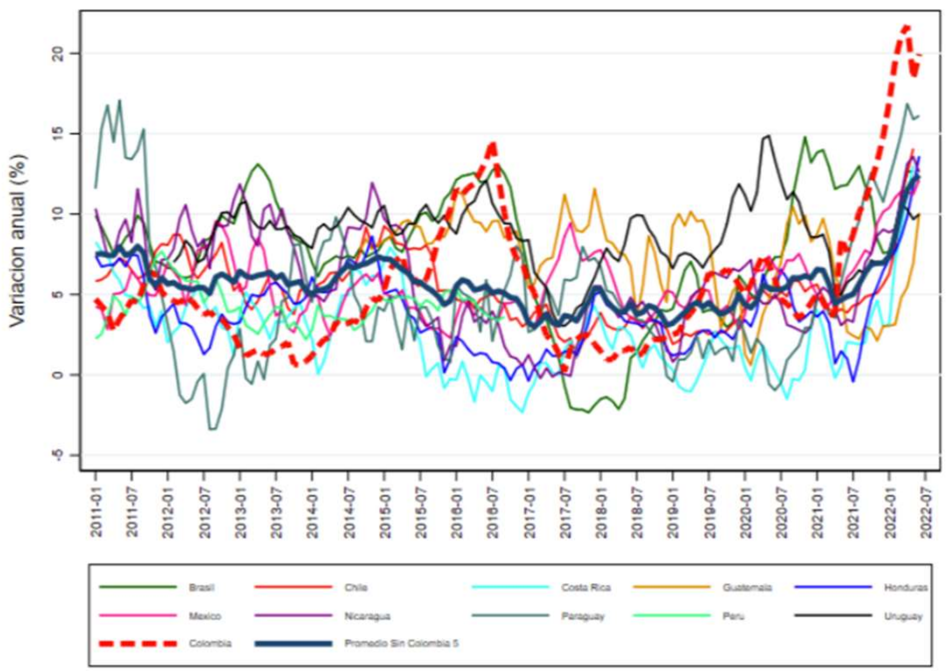
Relative Price Pork meat CPI
(CPI Pork meat / CPI excluding foods)



Food inflation has been remarkably high in Colombia since May 2021

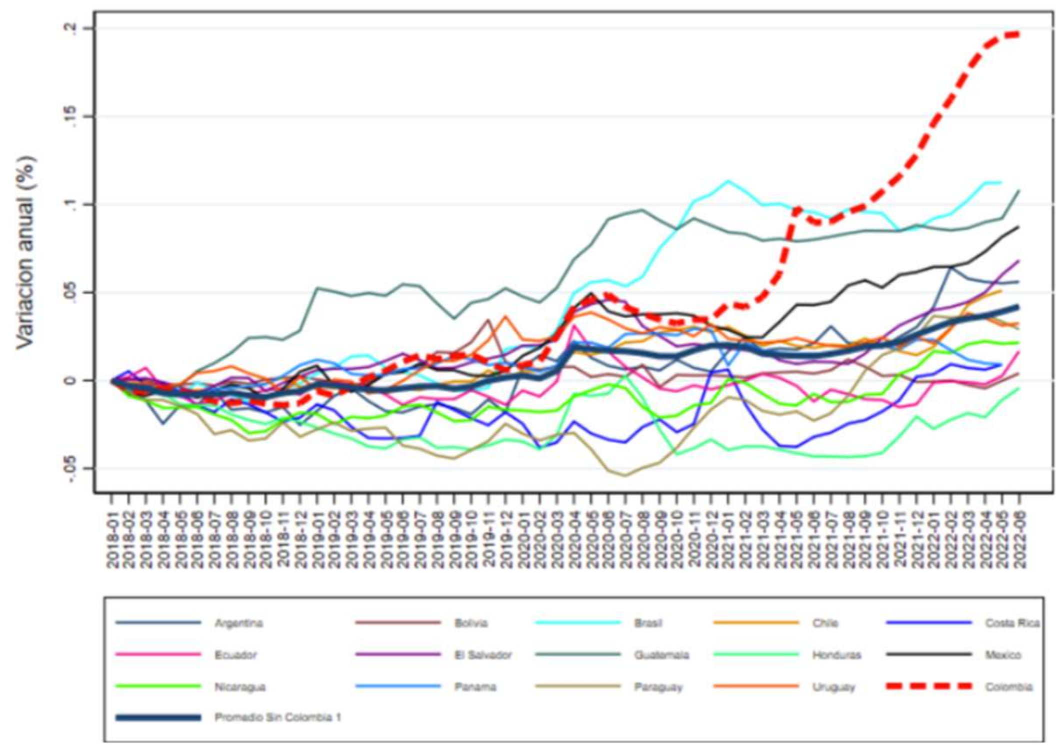
- Food relative prices have risen more than in most countries
- Food inflation has been 7 percentage points higher than Latam average and 10 pp higher than OECD average

Food CPI Annual Variation for selected Countries in Latin America



Brasil, Chile, Costa Rica, Guatemala, Honduras, México, Nicaragua, Paraguay, Perú, Uruguay.

Food CPI / CPI by Country in LATAM (Annual Variation)

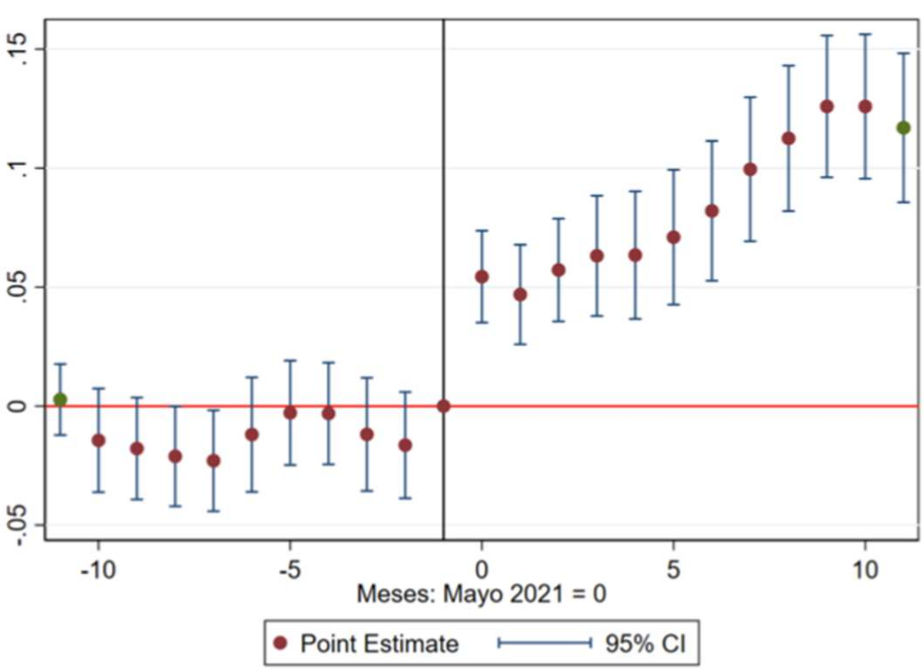


Argentina, Bolivia, Brasil, Chile, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, México, Nicaragua, Panamá, Paraguay, Uruguay.

An event study conducted by the Central Bank found that the effect of a 60-day-long national strike and blockades had very persistent effects

- A baseline estimation found that food inflation has been on average 7.8 pp higher than in the control Group due to the strike
- The effect does not go away when controlling for rain conditions, exchange rate movements, posible differential exposure to global shocks (e.g. fertilizer prices), exports or imports

Difference in Food Inflation After Strike

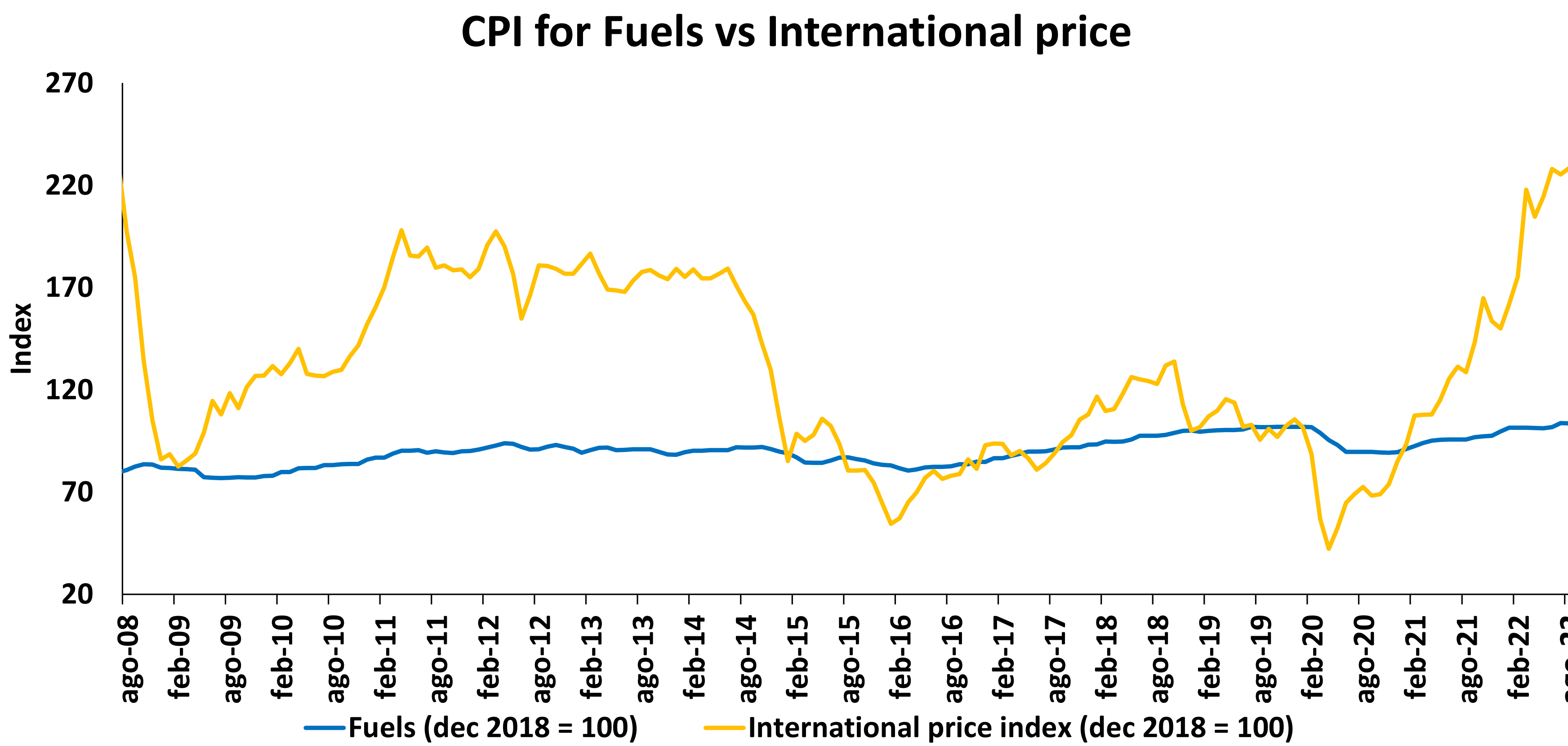


	(1)	(2)	(3)
COL = 1 × Afterparo = 1	0.0745***	0.0788***	0.0835***
	(0.00920)	(0.00911)	(0.00861)
Choque escasez de lluvia		0.0288***	0.0258***
		(0.00824)	(0.00684)
Choque exceso de lluvia		-0.0138	-0.0120
		(0.0105)	(0.00908)
Efecto acumulado tasa de cambio			0.310
SE			0.0170
Rezagos tasa de cambio			12
R2	0.478	0.489	0.652
Observaciones	1204	1204	1204
Países	11	11	11

Nota: Errores robustos en paréntesis * $p<0.10$, ** $p<0.05$, *** $p<0.01$.
Grupo de control: Brasil, Chile, Costa Rica, Guatemala, Honduras, México, Nicaragua, Paraguay, Perú, Uruguay.
Inflación promedio grupo de control abril 2021 4.45 %, Colombia 3.79 %.

All these inflationary pressures have materilized without increases in gasoline prices

- Gas prices are regulated by the government
- Diferences between domestic prices and international prices are managed through a price stabilization fund



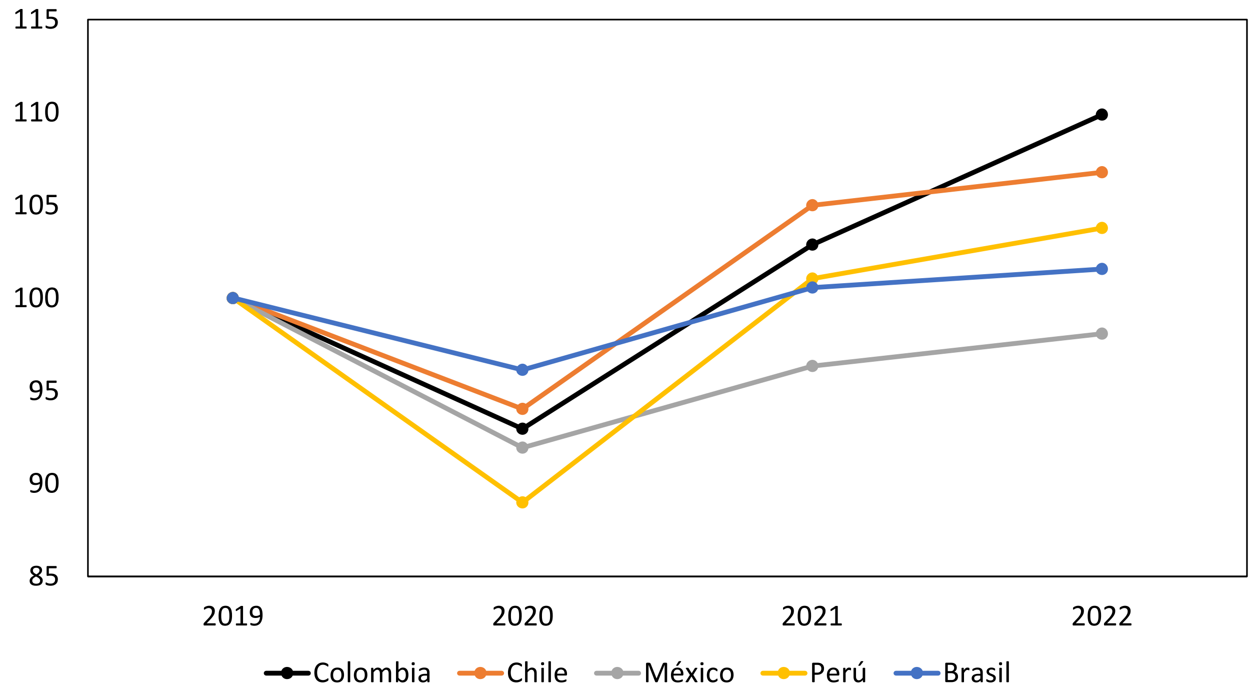
Sources: DANE and World Bank; calculations by Banco de la República.

After the Covid-19 shock gdp growth has been strong

- Since the beginning of 2021 all quarters have posted positive surprises, with economic activity reaching its pre-pandemic level by 2021.Q3
- Better than most economies in the region

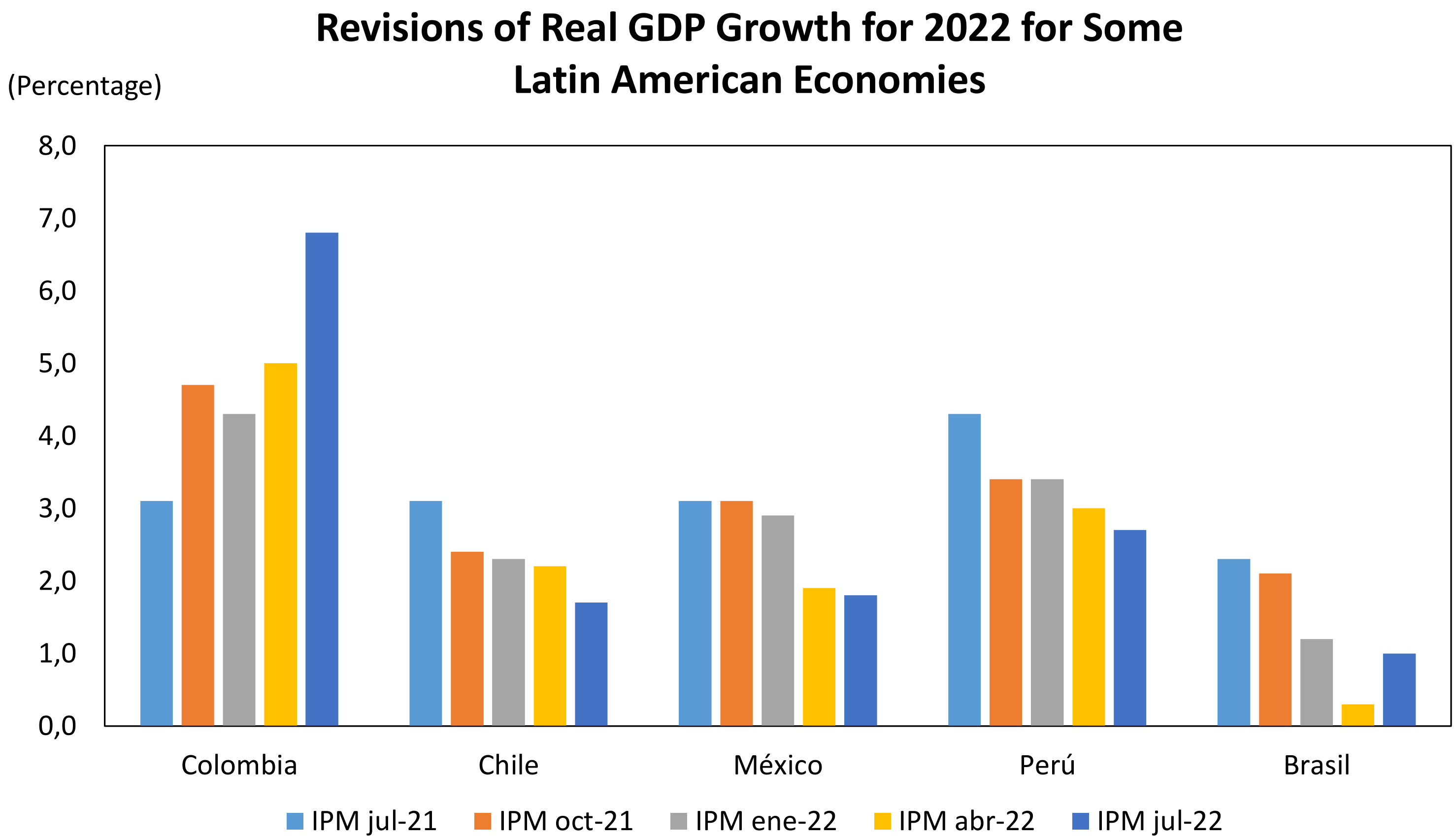
Real GDP for Some Latin American Economies

(2019=100)



Source: Focus Economics. Banco de la Republica’s calculations and projections for the July 2022 Monetary Policy Report

While growth projections for 2022 have been revised down for most countries, we have systematically revised up our growth forecasts for Colombia

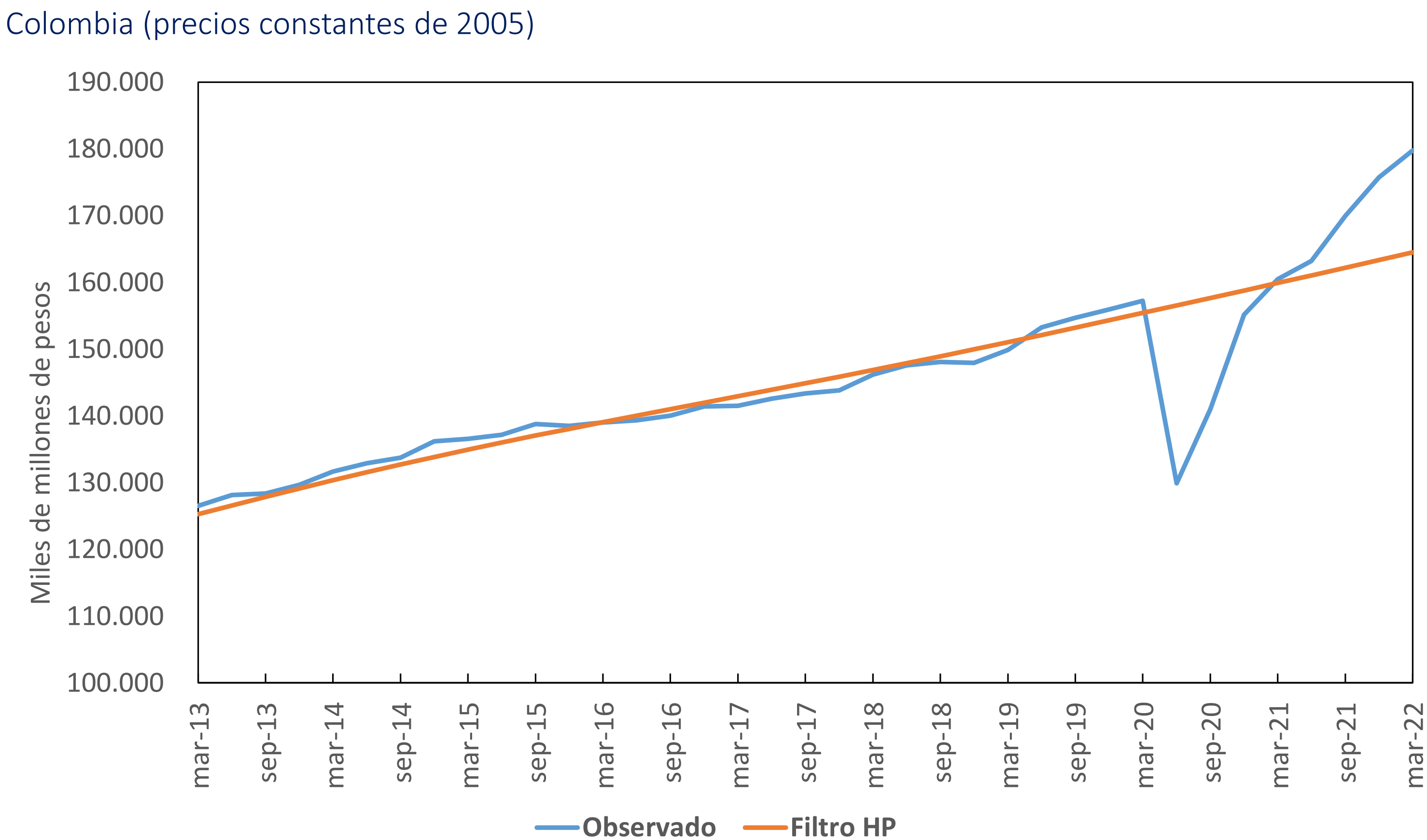


Source: Banco de la República´s forecasts.

The recovery has been driven by strong aggregate demand, especially private consumption

- Private consumption is well above pre-pandemic trend levels

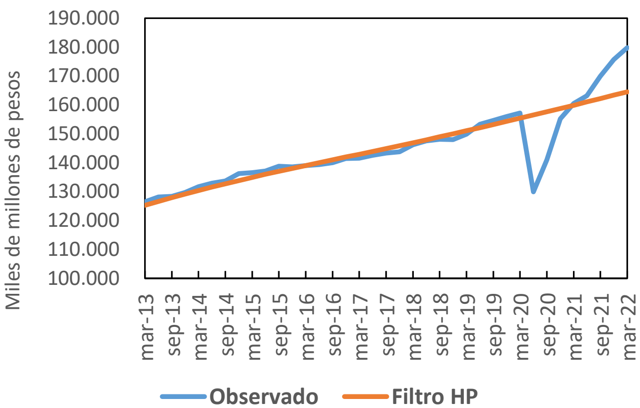
Real Private Consumption (2005 COP thousands of millons)



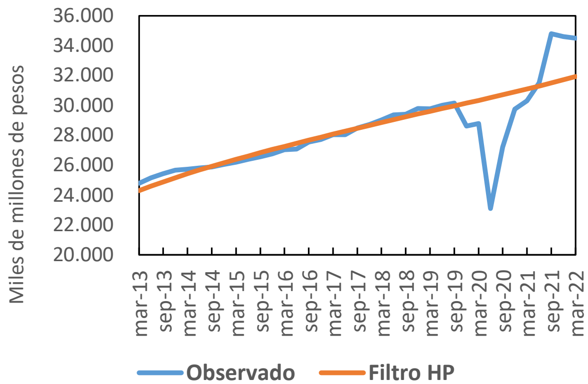
Only Chile exhibits a similar pattern, maybe for different reasons (e.g. pension fund withdrawals)

Real Private Consumption for Selected Countries

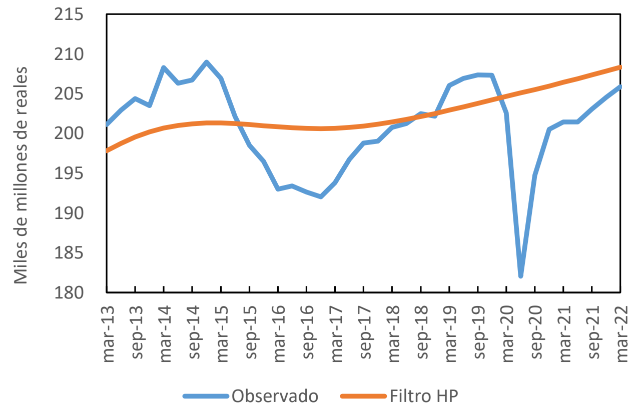
Colombia (precios constantes de 2005)



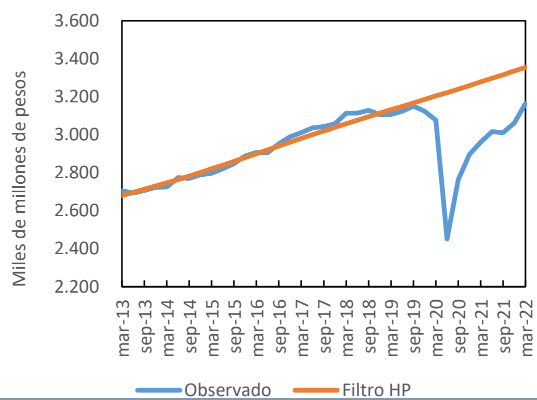
Chile (precios constantes de 2018)



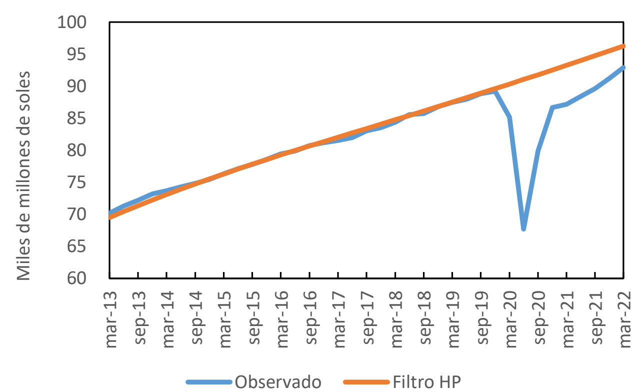
Brasil (precios constantes de 1995)



México (precios constantes de 2013)

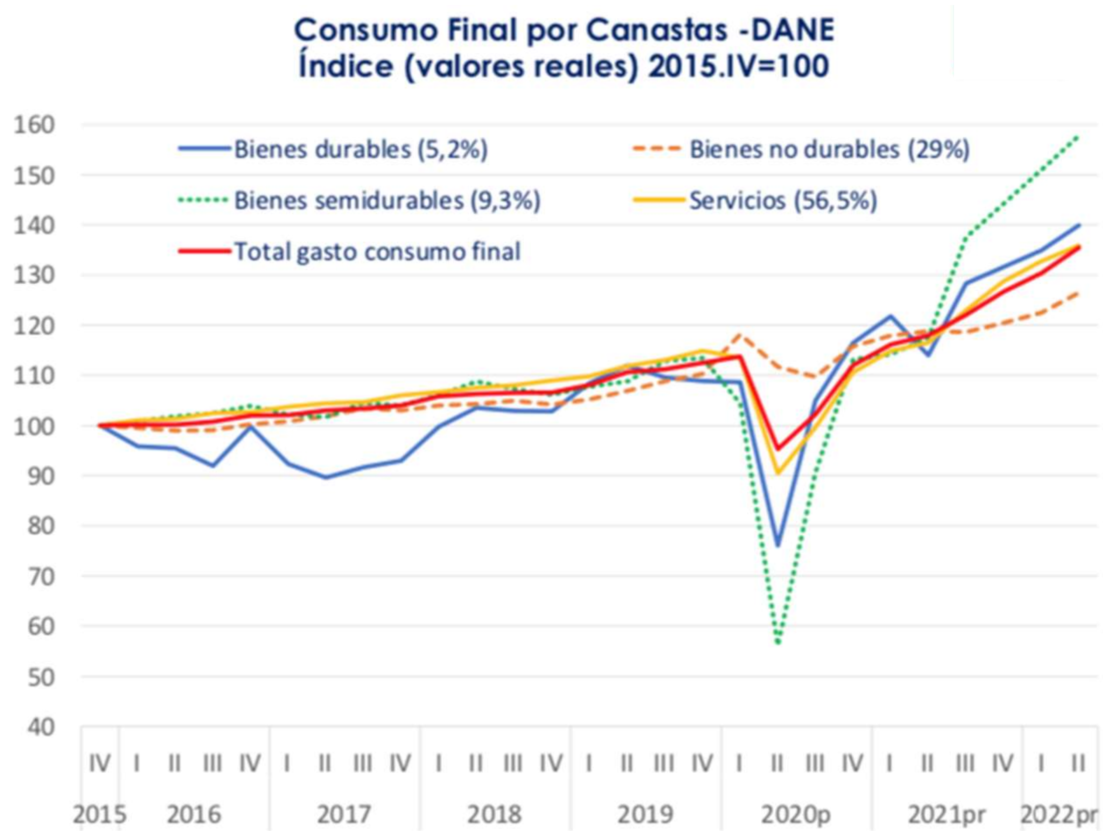


Perú (precios constantes de 2007)



Most private consumption categories (services, durables, semidurables) exhibit levels above trend

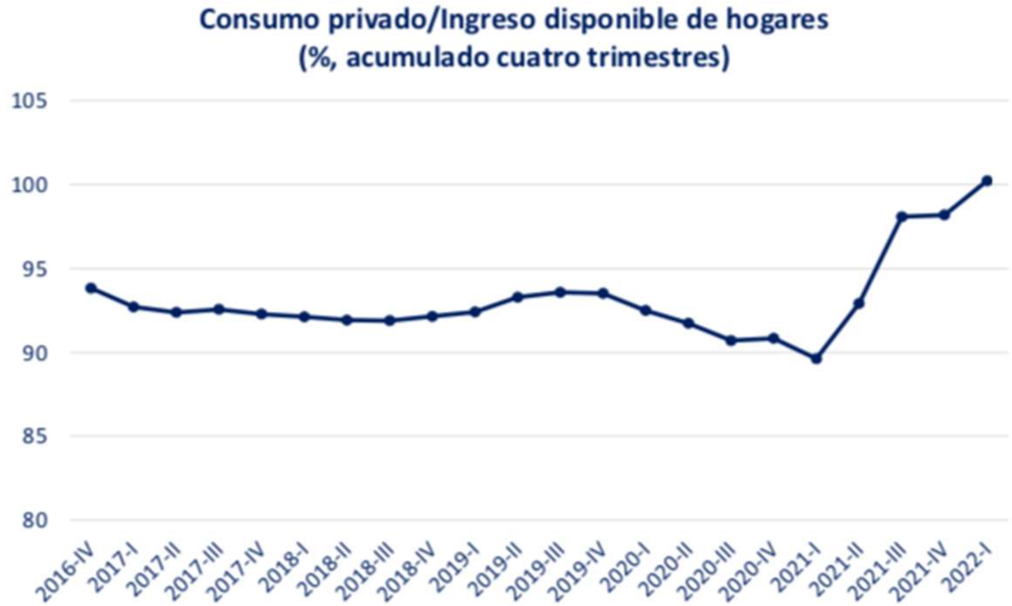
Real Private Consumption by Type of Good



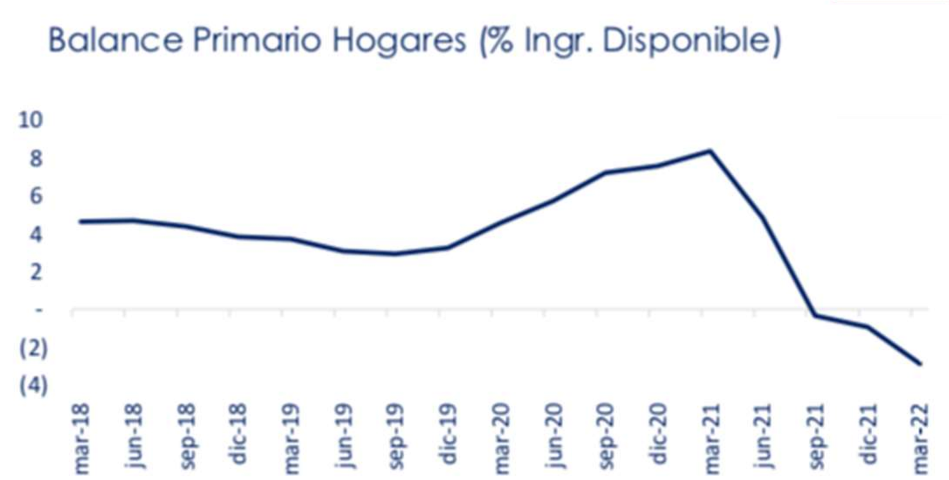
Households appear to be consuming all their disposable income

- Consumption now represents 75% of GDP, up from 69% before the pandemic
- Households saved during the pandemic, now they are dissaving, which may help explain consumption dynamism

Private Consumption / Disposable Income for Households
(%, 4 quarters cumulative)



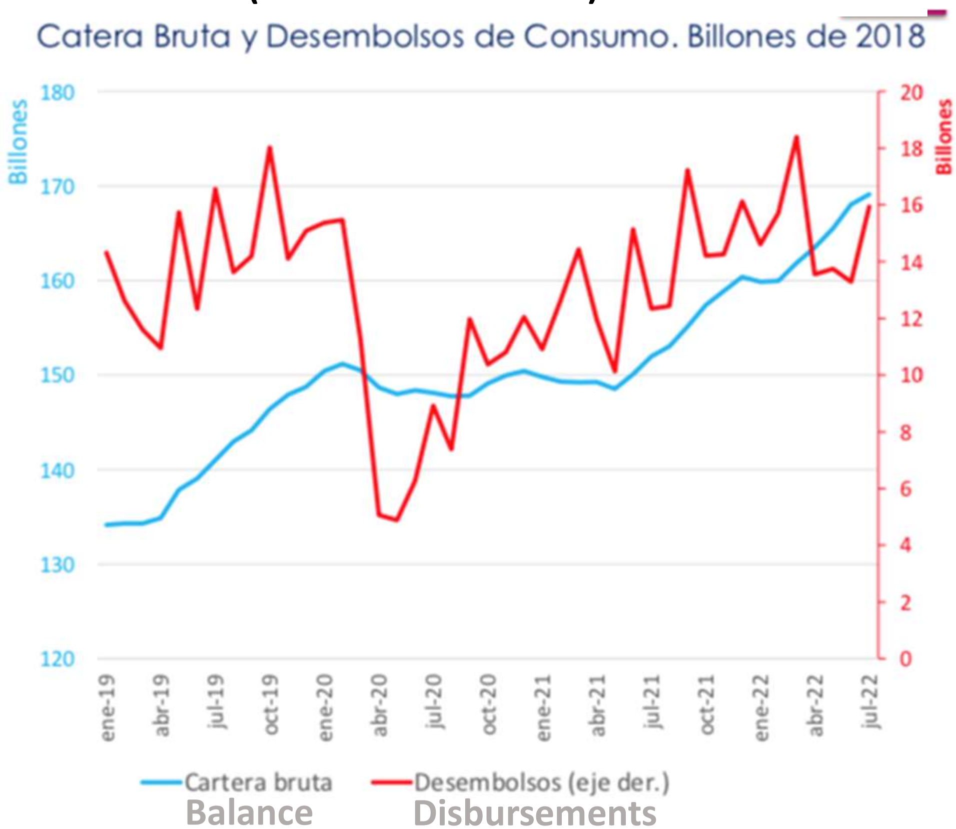
Households Primary Balance
(Income minus expenses without interest payments)
(as % of disposable income)



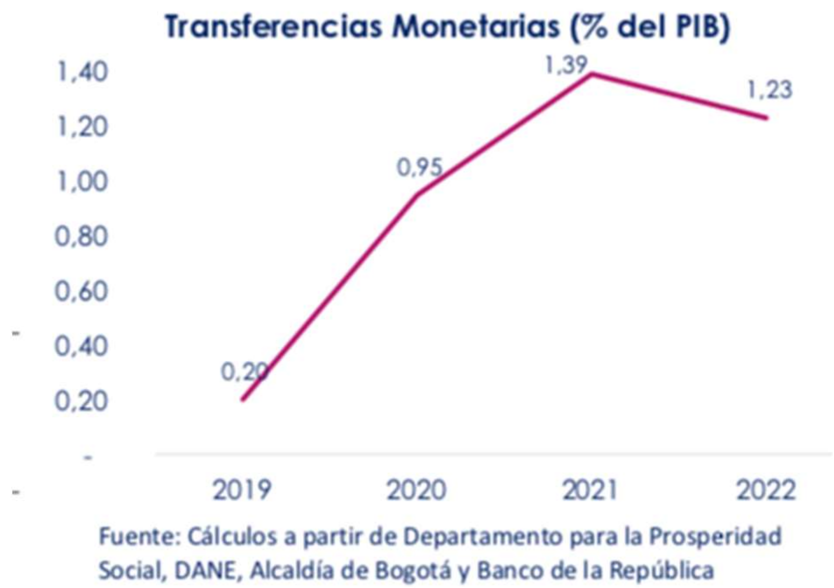
Consumer credit and government monetary transfers to households may also be part of the explanation

- Also remittances grew in 2021 by about 30% with respect to 2020

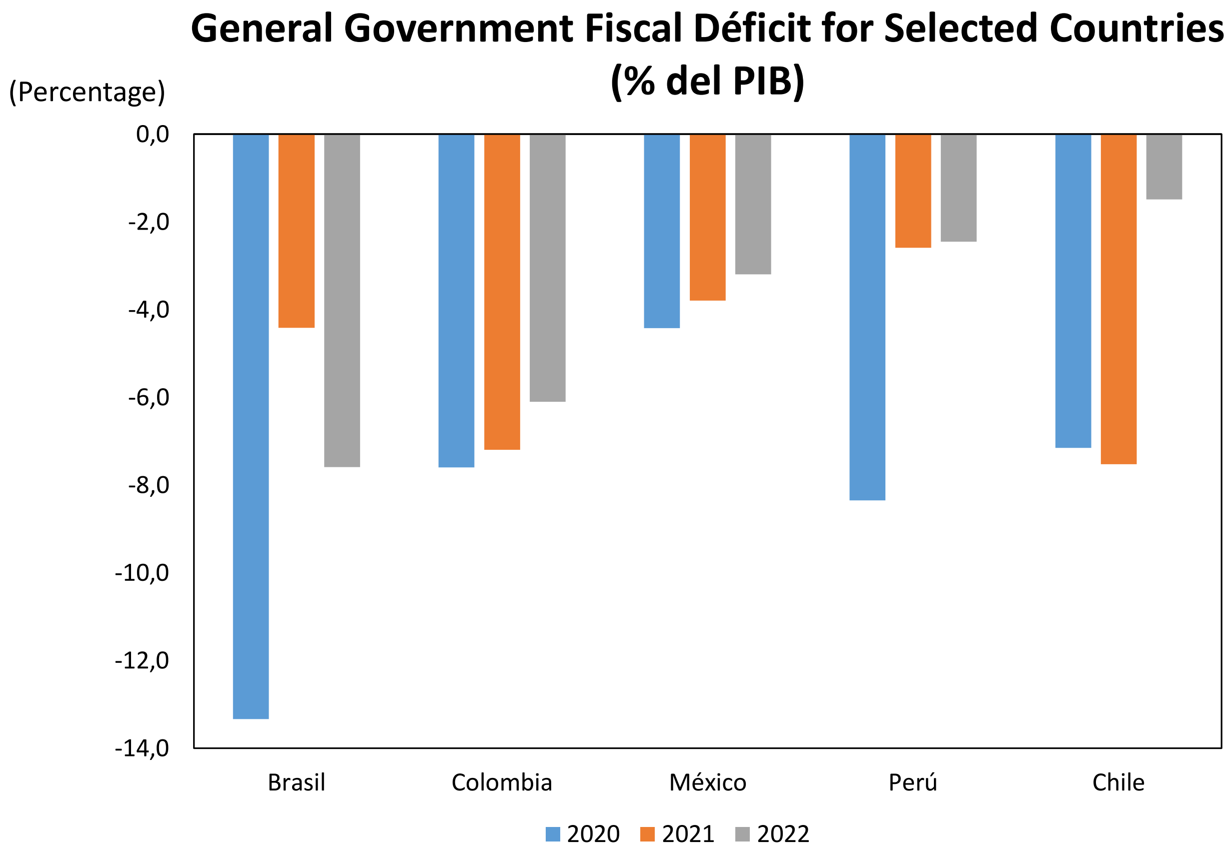
Consumer credit outstanding balance and disbursements (COP billions of 2018)



Monetary Transfers to Households (% of GDP)



Fiscal policy has been expansionary and the fiscal déficit correction has been slower than in other countries

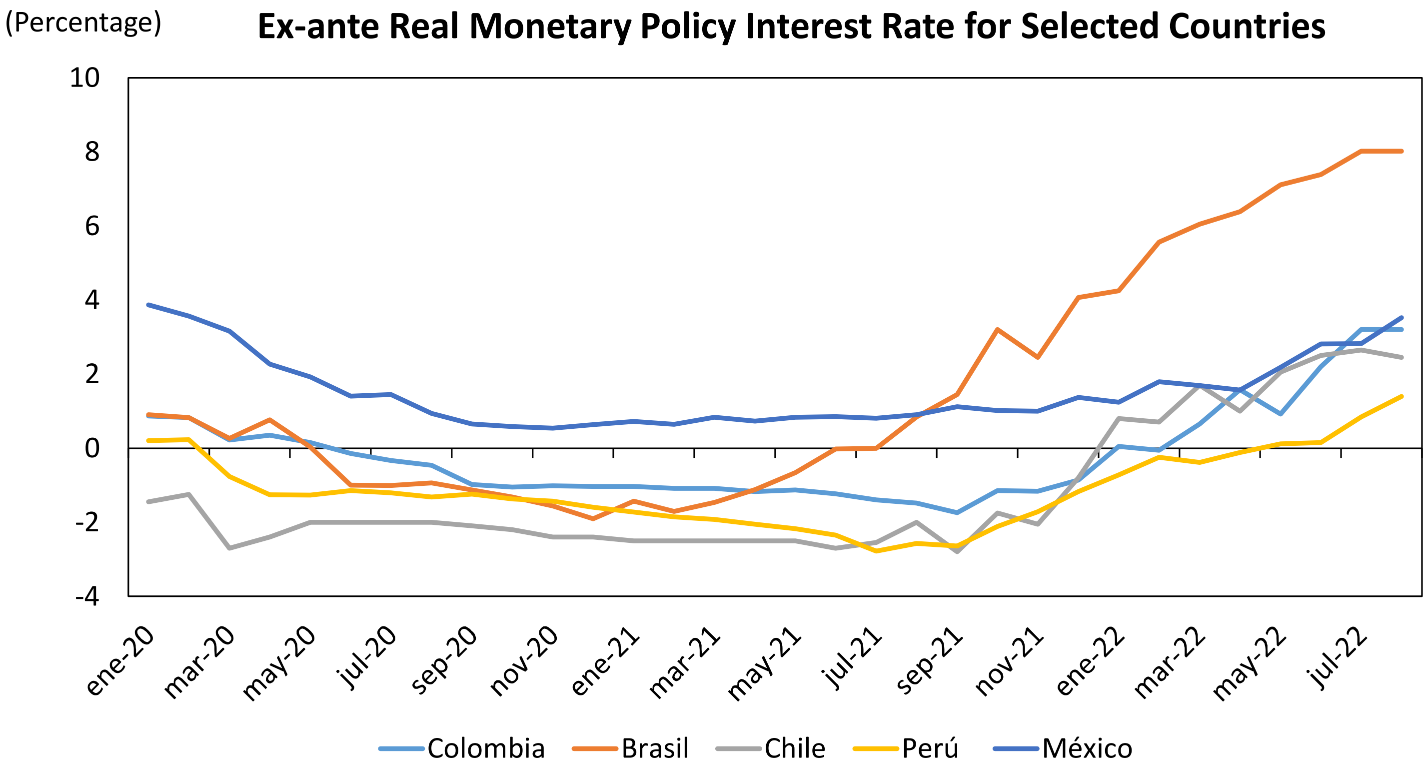


Note: Data for Colombia corresponds to information in the 2022 Medium Term Fiscal Framework

Source: Fiscal Monitor International Monetary Fund.

Monetary policy has also been expansionary, at least until recently

- Real exante policy rates at levels of Chile and Mexico, which may have lower real neutral rates



Note: For the calculation of the real rates we use 12-month ahead inflation expetations
Source**:** Bloomberg and central Banks of each country; Calculations by Banco de la República.

Agenda

STRONG RECOVERY AND SUPPLY SHOCKS

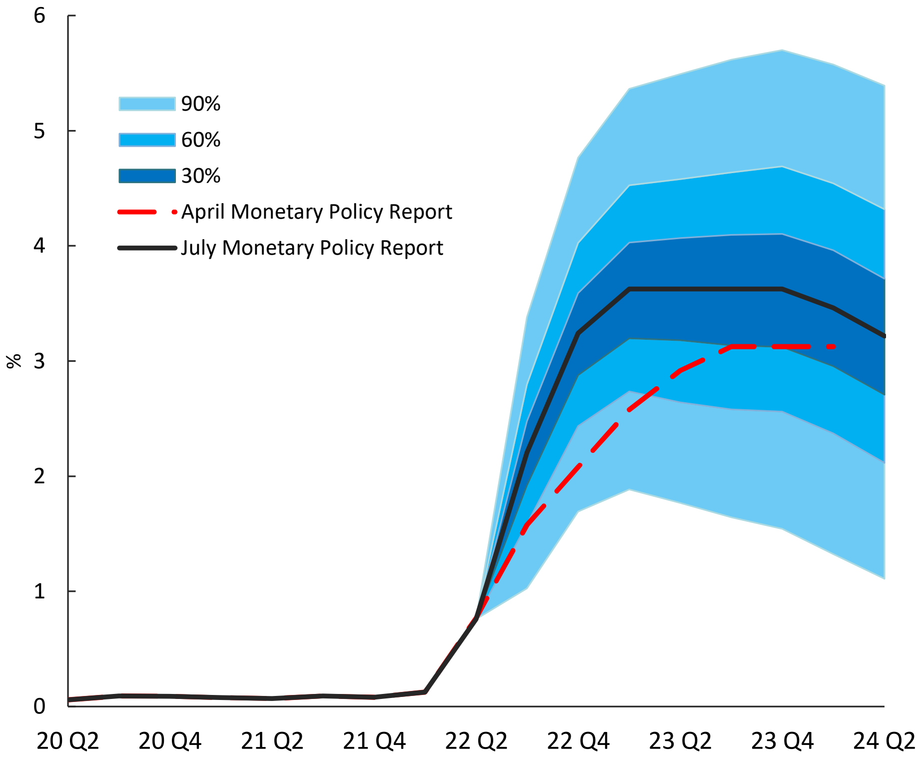
OUTLOOK AND MONETARY POLICY

RISKS AND CHALLENGES GOING FORWARD: MACRO IMBALANCES

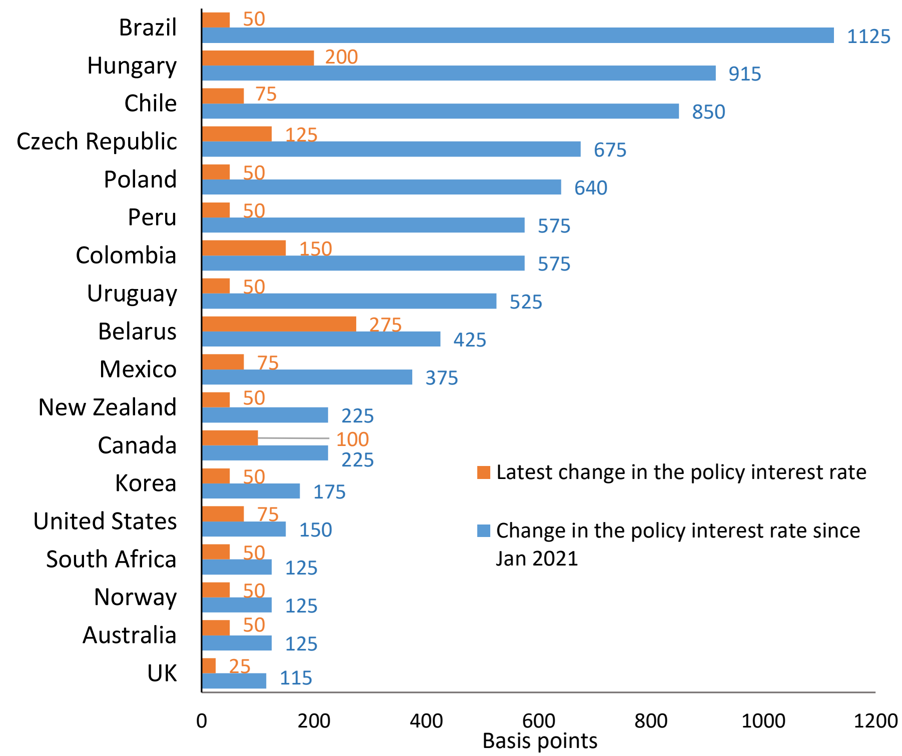
Global financial conditions are worsening

- **The ongoing tightening of monetary policy in advanced economies is faster than previously expected.**
- There is uncertainty regarding the speed and terminal rates of this cycle of global monetary tightening.

Forecast for the interest rate of the Federal Reserve

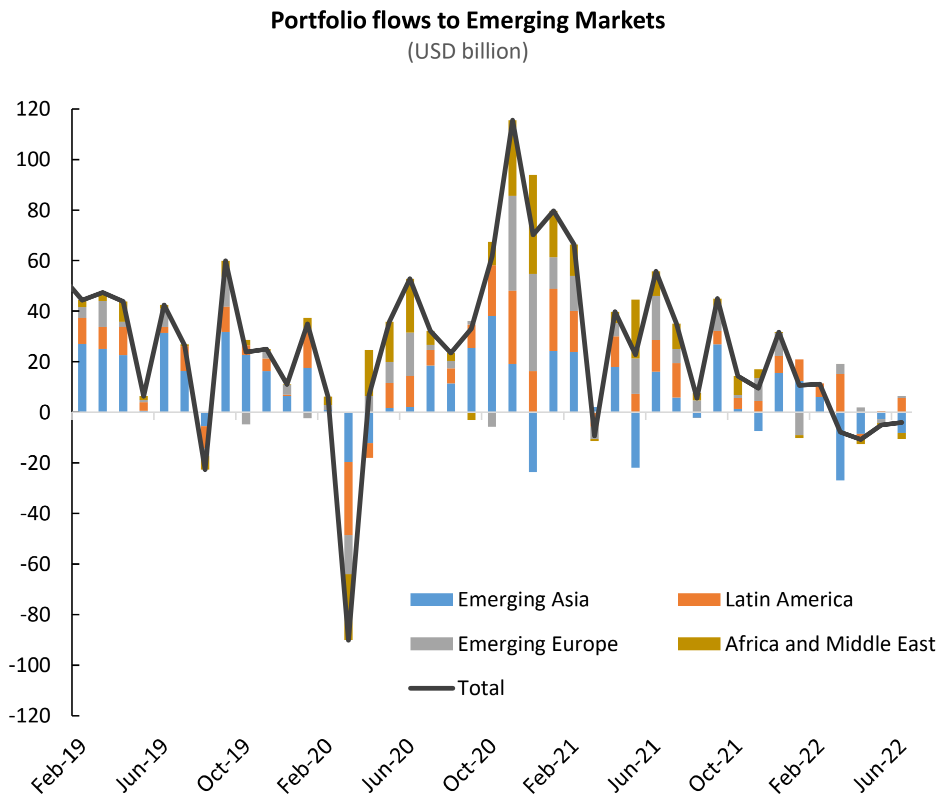


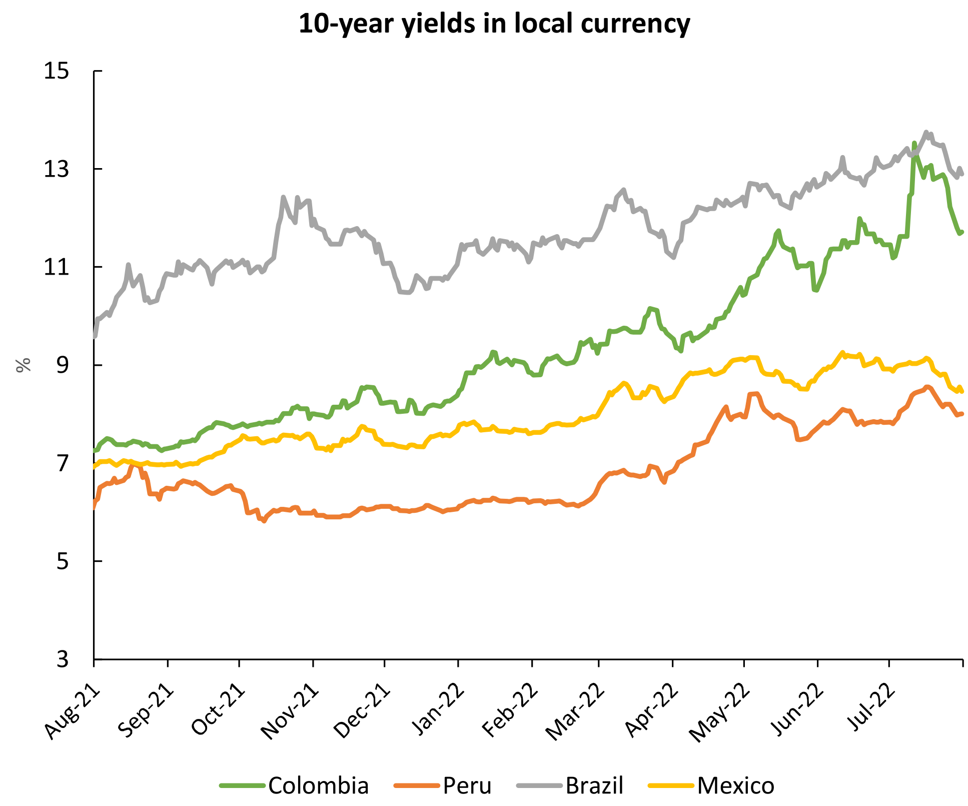
Change in the policy interest rate



Source: Central Banks and Banco de la República – July Monetary Policy Report

Against this backdrop of tighter international financial conditions, portfolio flows to emerging markets are decreasing and long-term yields have risen.

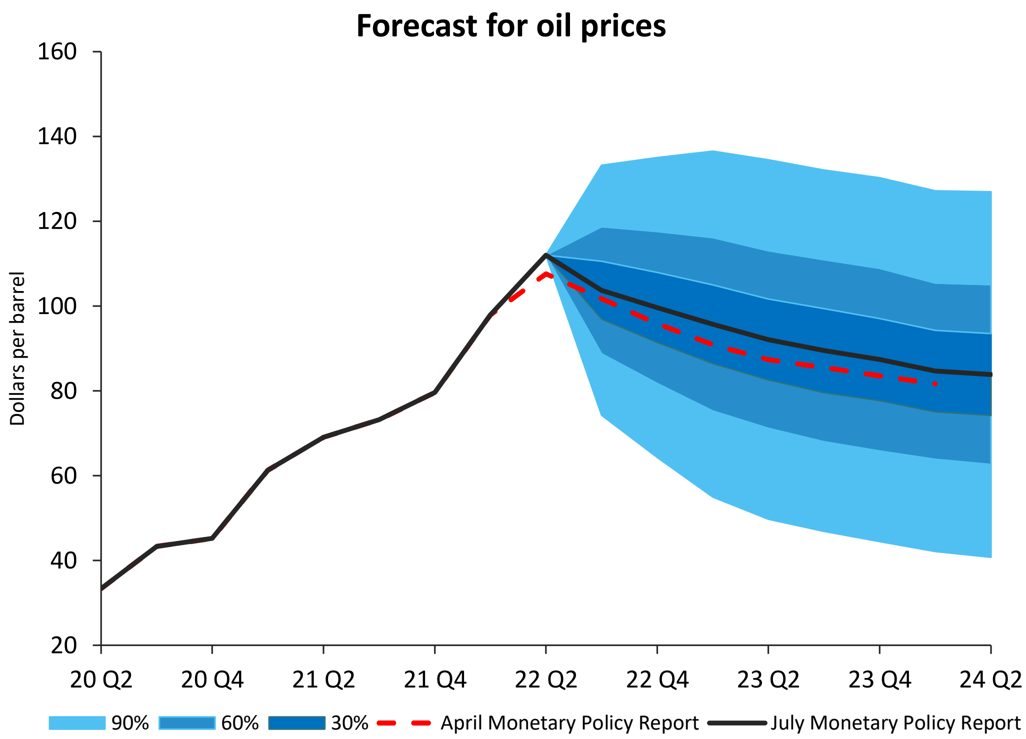


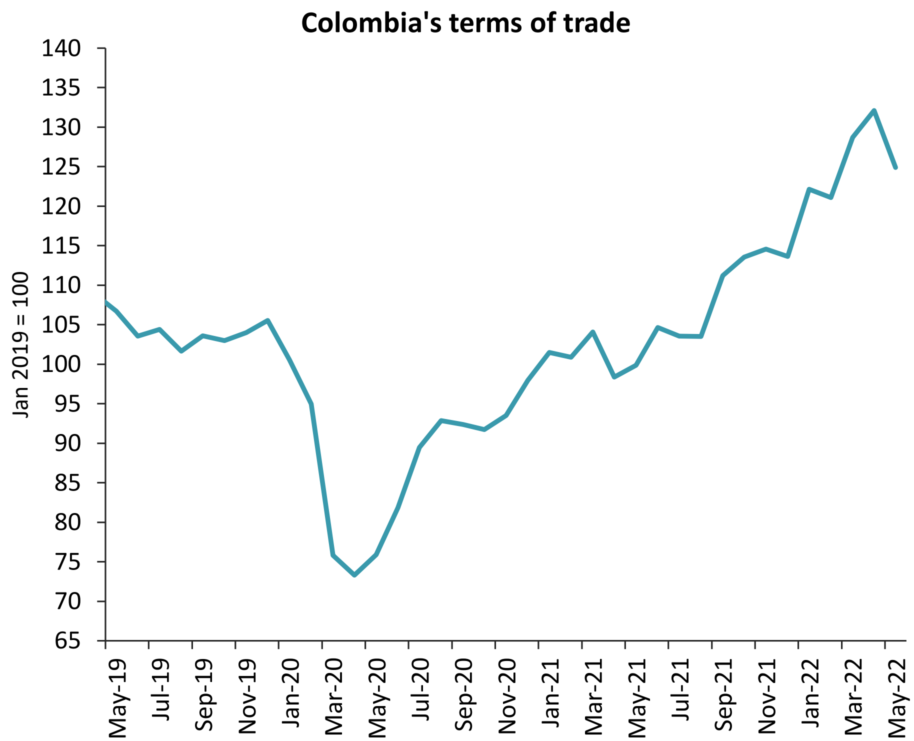


- Source: IIF and Banco de la República

The duration of the conflict in Ukraine has added uncertainty to the macroeconomic outlook through an increase in global risk aversion, trade disruptions, and commodity prices, which were already above pre-pandemic levels.

- The unknown duration of a scenario of high oil prices increases the uncertainty in the macroeconomic outlook.
- Thanks to the price of oil and other commodities, Colombia's terms-of-trade are above the December 2019 levels despite a simultaneous increase in the price of imports. For 2022 the CB staff expects better terms of trade compared to 2021.





Source: Banco de la República – July Monetary Policy Report

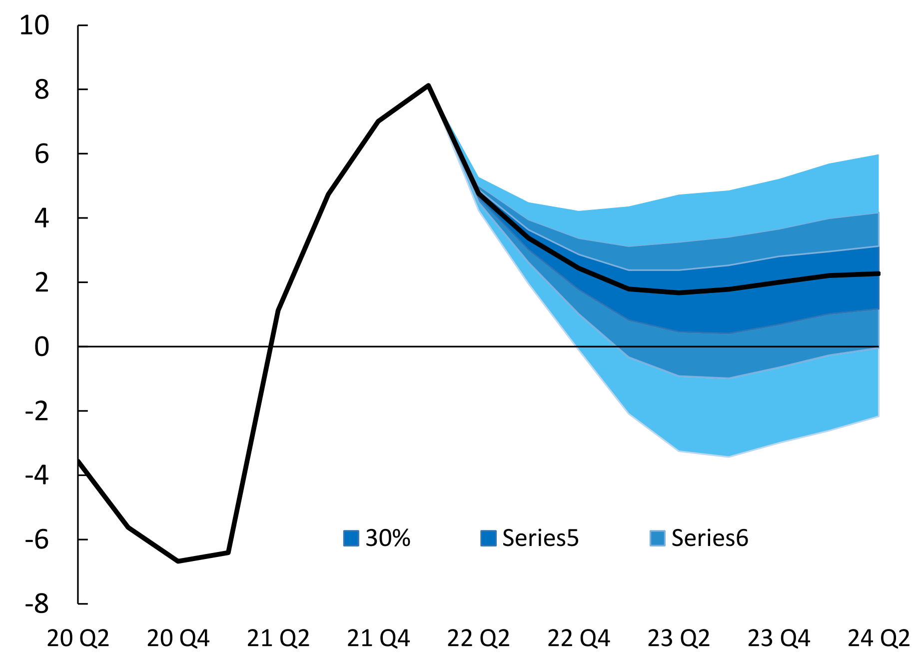
Global growth forecasts have decreased amid increasing concerns of stagflation

- In this context external demand is expected to deteriorate.

IMF Growth Forecast for 2023

	Oct 2021	Jan 2022	Apr 2022	Jul 2022
World	**4.9**	**3.8**	**3.6**	**2.9**
United States	5.2	2.6	2.3	1.0
Eurozone	4.3	2.5	2.3	1.2
UK	5.0	2.3	1.2	0.5
China	5.6	5.2	5.1	4.6
India	8.5	7.1	6.9	6.1
Brazil	1.5	1.6	1.4	1.1

Trading Partners' Annual Growth Rate

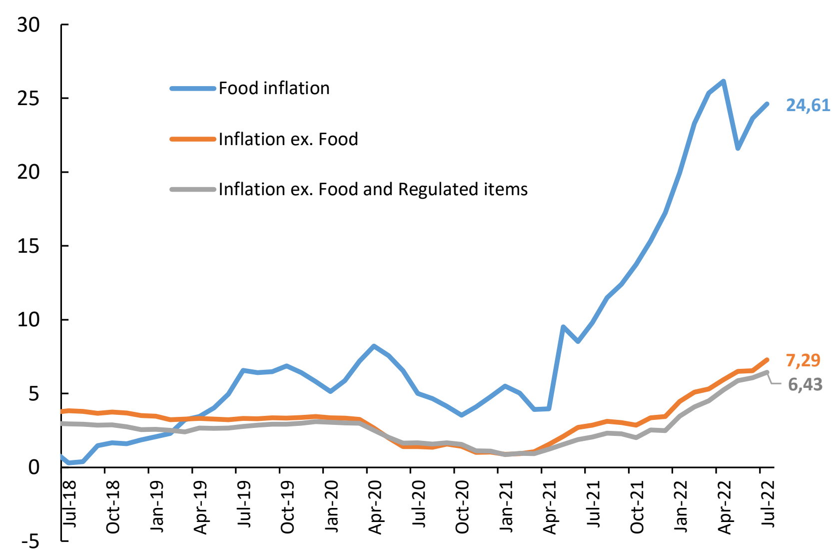


- Source: IMF and Banco de la República – July Monetary Policy Report

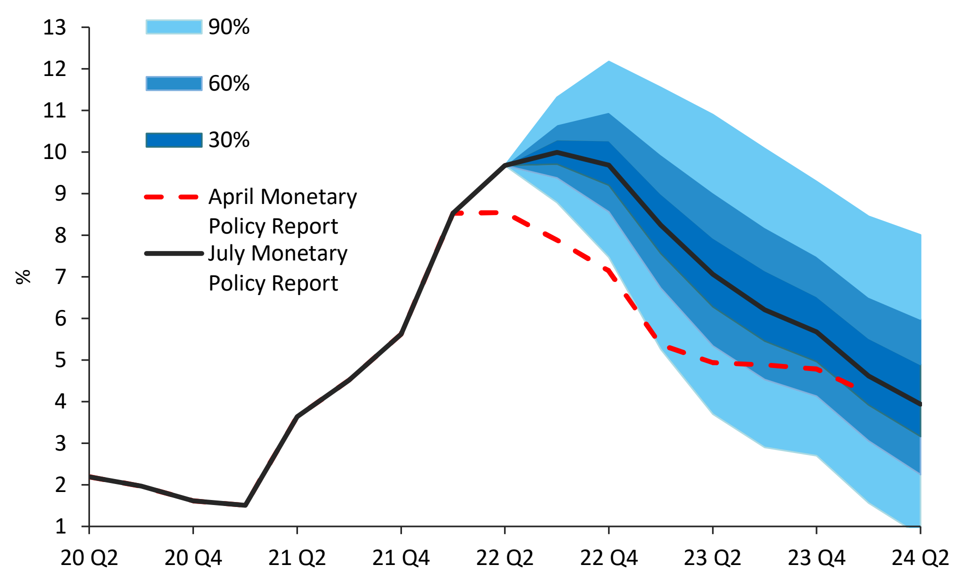
Inflation forecast: 9,7% for 2022 and 5,7% for 2023. Likely to be revised upwards

- **Inflation has jumped mainly due to the price of food, more persistent cost shocks, and a continuously strong domestic demand. The latter and the reversion of price relief measures have pushed core inflation upwards.**
- Headline inflation is expected to begin a declining path starting in 2022Q4-2023Q1. Increases in domestic fuel prices, persistently high inflation expectations and indexation mechanisms are risks to the inflation outlook.
- The core inflation forecast has been revised upwards due to the strength of domestic demand and exchange rate pressures. But it would begin to decline in 2023 thanks to the reduction of demand pressures and inflation expectations amid tighter monetary policy.

Inflation measures



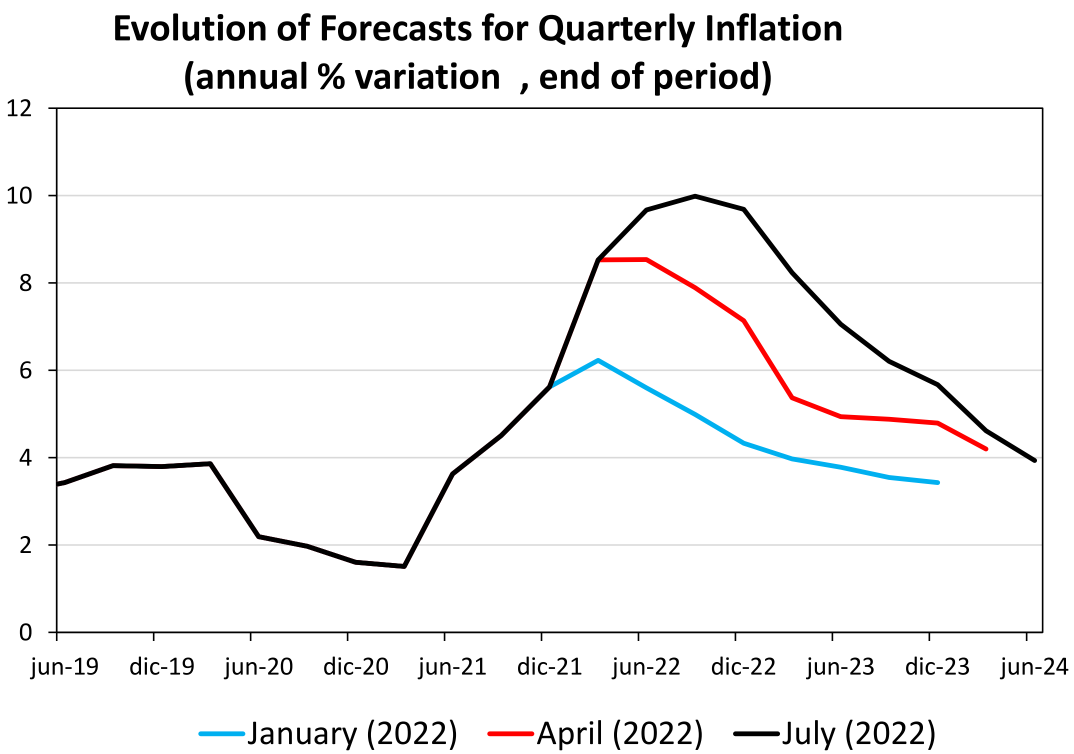
Headline inflation Forecast

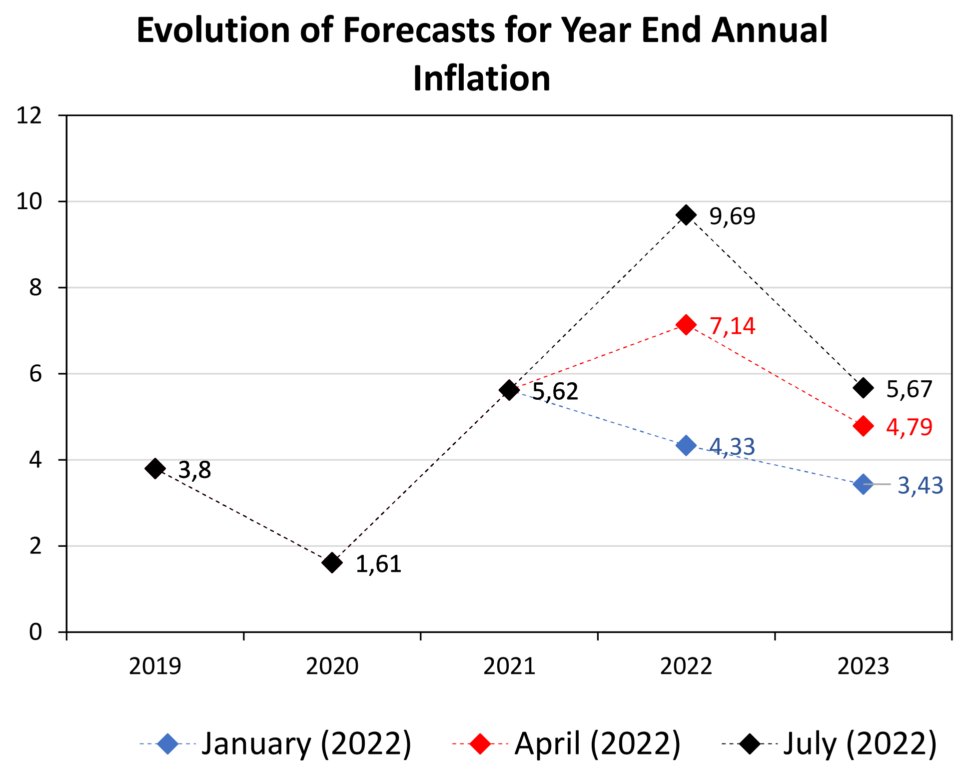


- Source: DANE and *Banco de la República - July Monetary Policy Report.*

Inflation has systematically surprised to the upside, forecasts have been significantly higher over time

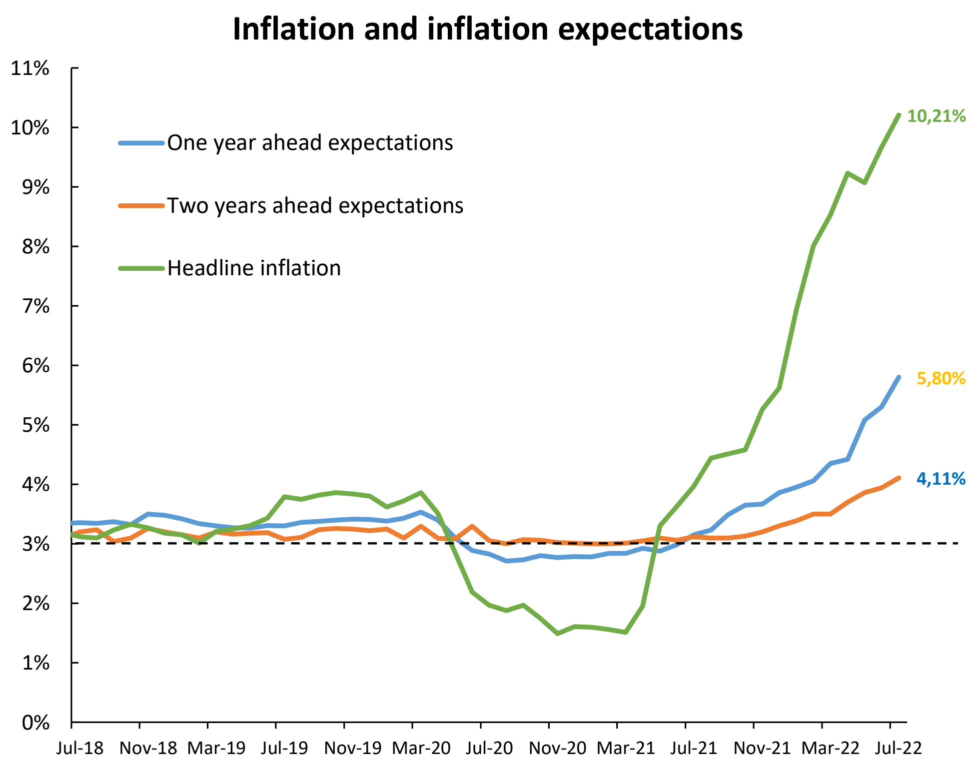
- The latest figures have surprised to the upside and are explained by supply shocks of uncertain duration. Food inflation was the highest contributor to the inflationary surprise due to more persistent external and domestic supply shocks.

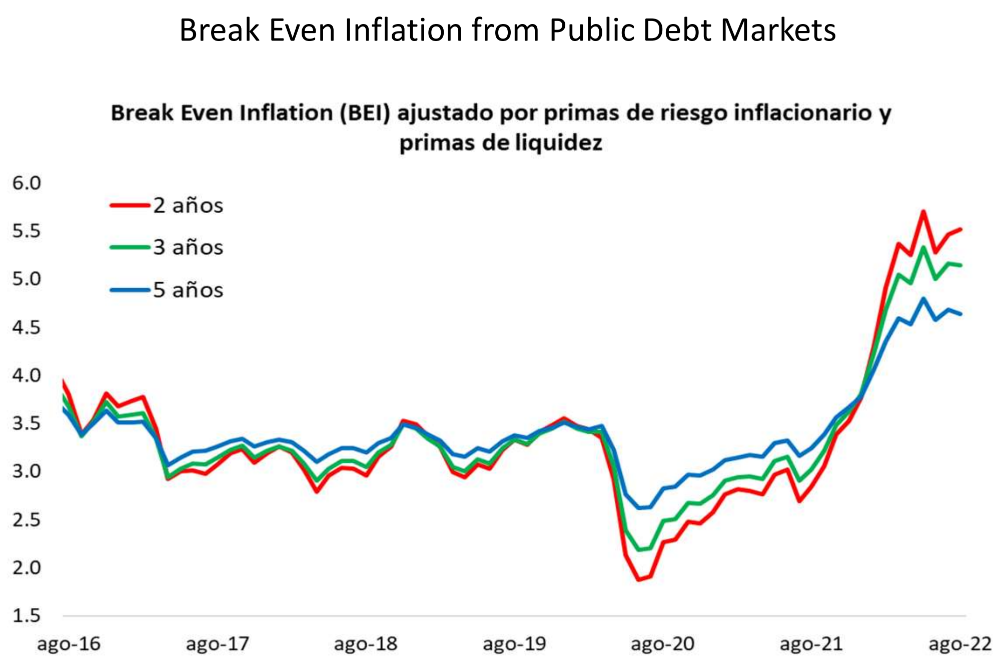




Inflation expectations are above the 3% inflation target and are at risk of de-anchoring.

- Persistently high inflation, together with indexation mechanisms, could keep inflation above target for longer further raising inflation expectations.

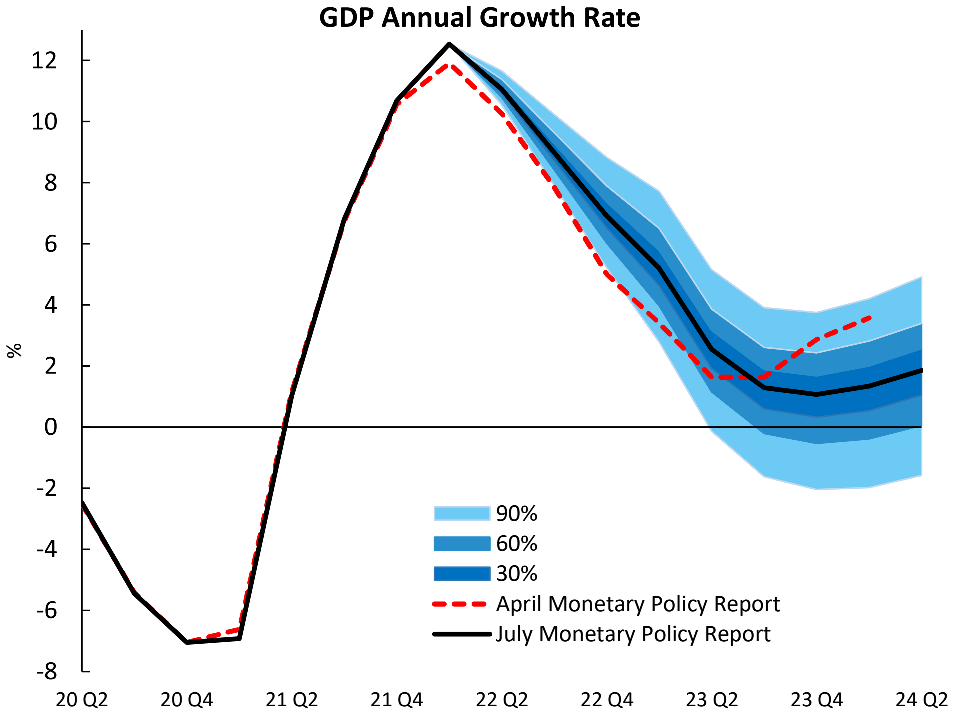


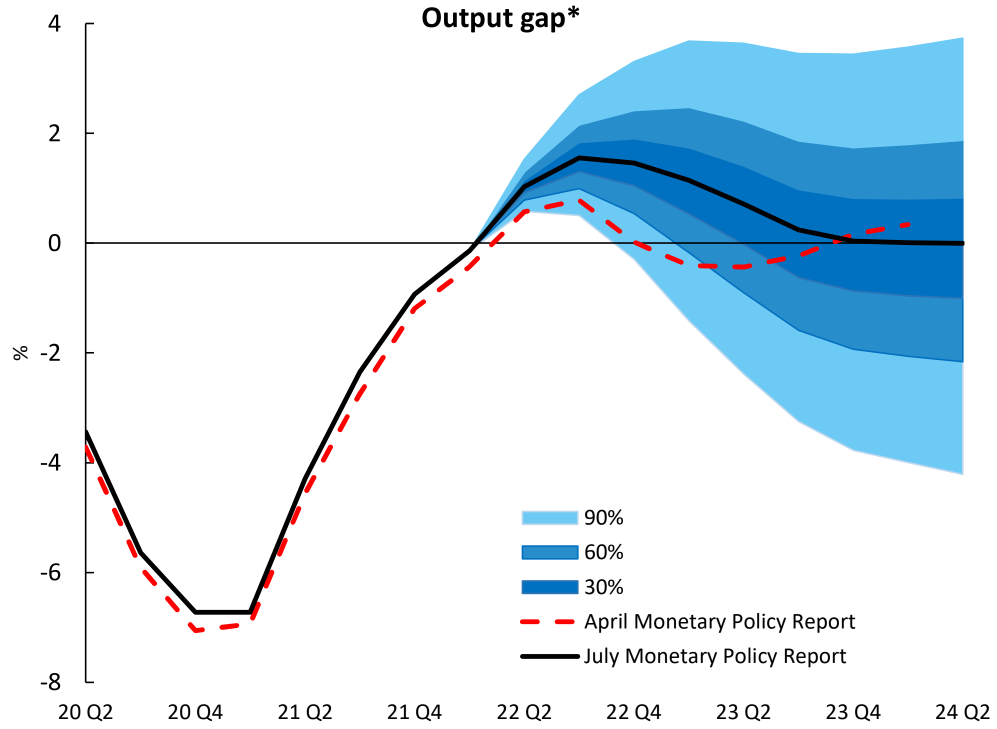


- Source: *Banco de la República – Monthly expectations survey (June 2022) and* DANE.

GDP growth forecast: 6,9% (up from 5%) for 2022 and 1,1% for 2023 (down from 2,9%)

- **The high growth rates forecasted for the remainder of the year are largely driven by strong private consumption.**
- The output gap will remain positive for the remainder of the year and is larger than previously estimated.
- Growth in 2023 will decrease due to base effects in 2022 and an expected adjustment in private consumption
- Growth is likely to be revised upwards for 2022 and downwards for 2023

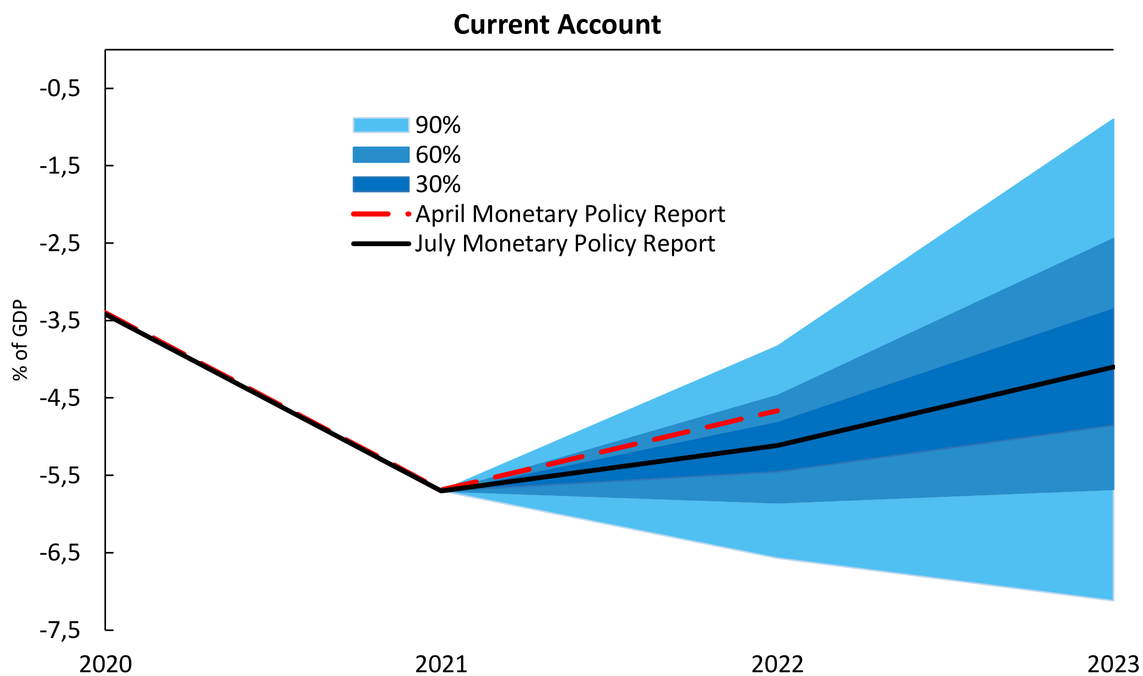




Source: *Banco de la República – July Monetary Policy Report.* *Difference between the observed GDP and potential GDP obtained from the 4GM model

The current account deficit forecast was revised upwards and remains high due to the strong domestic demand growth and greater transportation costs.

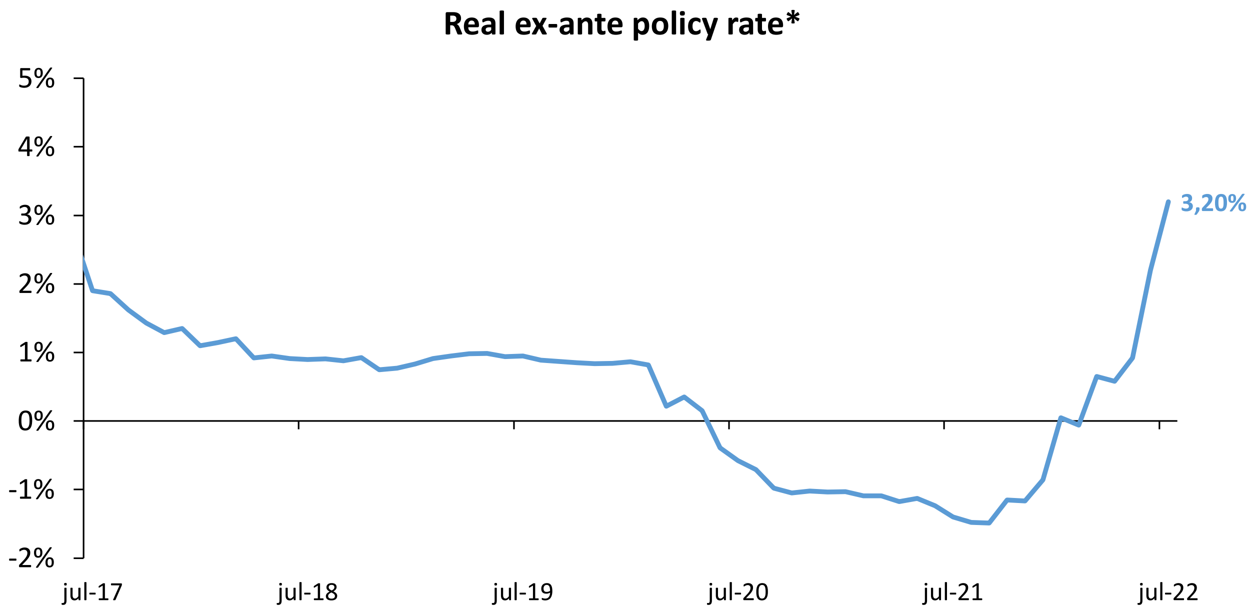
- During 2022, the current account deficit is expected to narrow to 5,1% of GDP from 5.7% in 2021 thanks to higher commodity prices and greater exports (e.g. tourism).
- The correction shown could be limited by larger imports due to a strong domestic demand, higher transportation and financing costs, higher input prices, and profit outflows from foreign-based companies.
- The deficit for 2023 is expected to fall to 4,1% of GDP following the expectd adjustment in domestic demand.



Source: *Banco de la República – July Monetary Policy Report.*

In response to a higher inflation outlook and improved, strong economic activity, the Central Bank began a process of monetary policy normalization in September 2021.

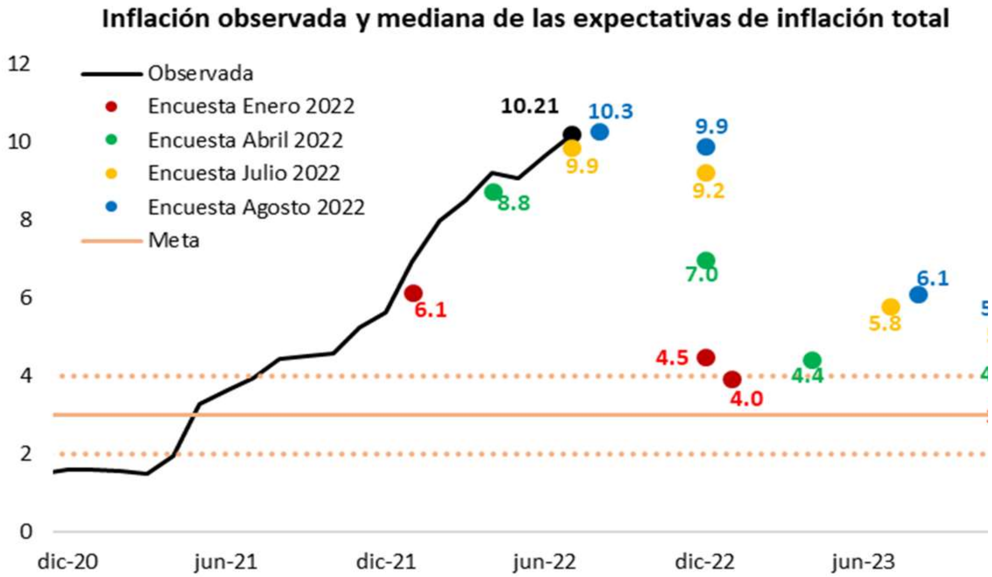
- A positive output gap and high inflation, with forecasts and expectations above target, call for a contractionary monetary policy stance that prevents a persistent de-anchoring of inflation expectations.
- **Hence, the policy interest rate has been raised by 725 bp, bringing it to its current 9% level.** The pace of adjustment of the policy interest rate has gone up from 25 bps in September 2021 to 150 bps in the latest meetings of the Board.



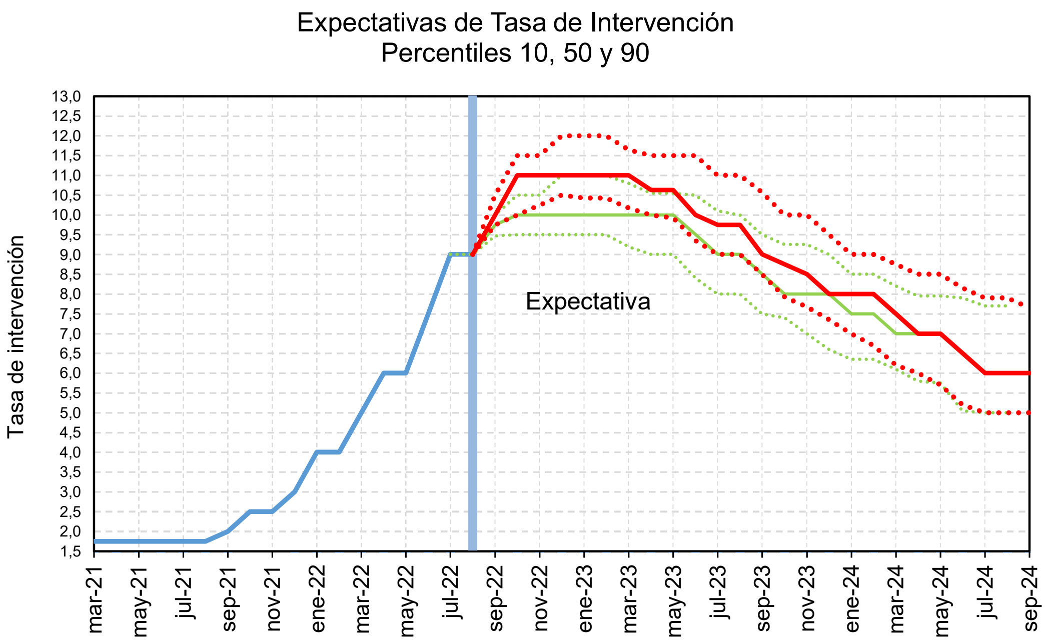
- Source: *Banco de la República.* *Real ex-ante interest rate is calculated using one-year ahead inflation expectations from BanRep's survey.

Inflation surprises have been accompanied by an increase in inflation expectations and expectations of a higher path for the monetary policy rate

Monthly Survey – Analysts' Inflation Expectation



Monthly Survey – Analysts' Expectation for Monetary Policy Rate



September survey
August Survey

Agenda

Strong Recovery and Supply Shocks

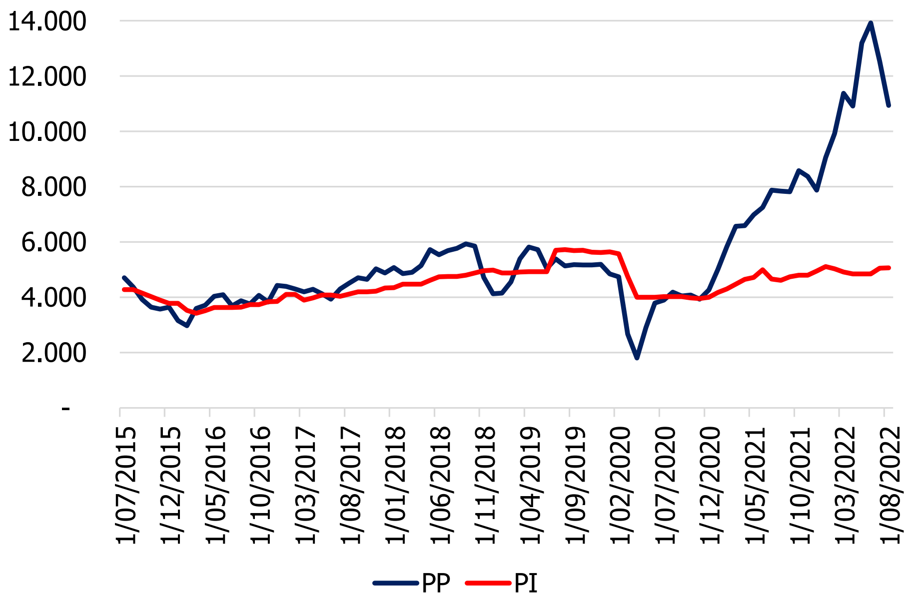
Outlook and Monetary Policy

Risks and Challenges Going Forward: Macro Imbalances

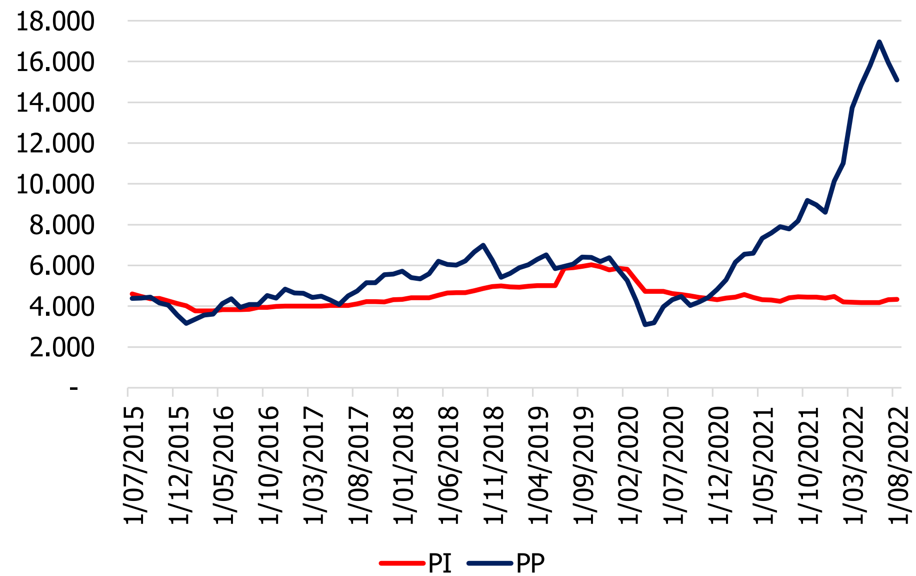
Macro Imbalance 1: Gas prices are well below international prices

- Gasoline is subsidized, so higher oil prices are not improving fiscal accounts as they should
- But inflation would be significantly higher (some estimates say about 6 pp) thorugh impacts in food, goods, some services, and regulated items baskets

Producer's Income and Parity Price
Monthly Average - Gasoline
(colombian pesos)
2015 M7 – 2022 M8



Producer's Income and Parity Price
Monthly Average – Motor Fuel Oil
(colombian pesos)
2015 M7 – 2022 M8

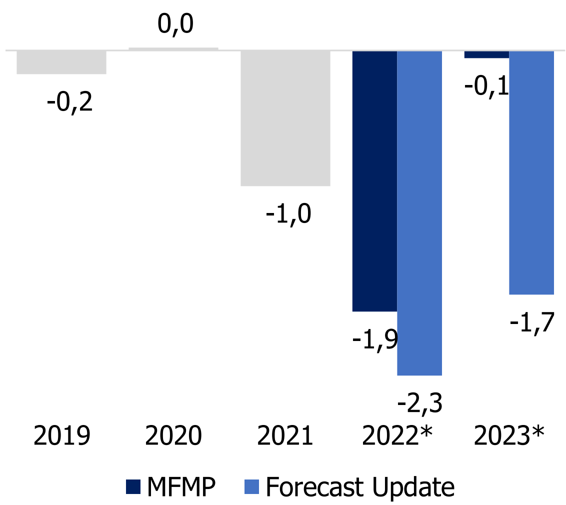


PP = Parity Price; PI = Producer's income Price paid by consumer
Source: Ministry of Mines and Enery

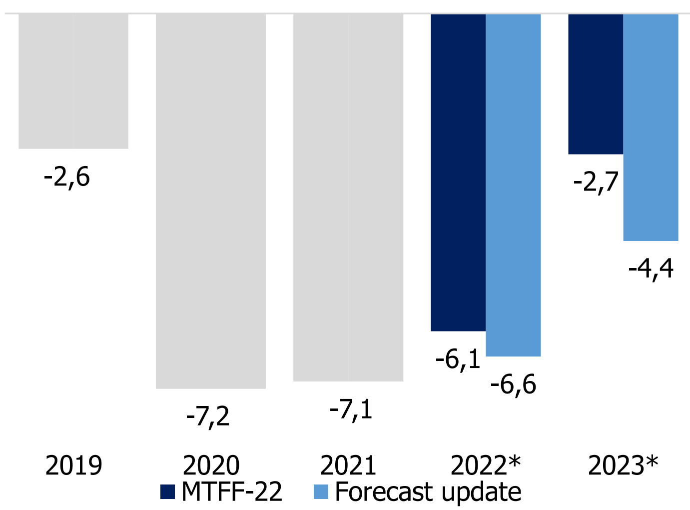
Macro Imbalance 1: Gas prices are well below international prices

- The impact on fiscal accounts and public debt is significant
- Now prices are projected to go up. Risk: higher and more persistent inflation

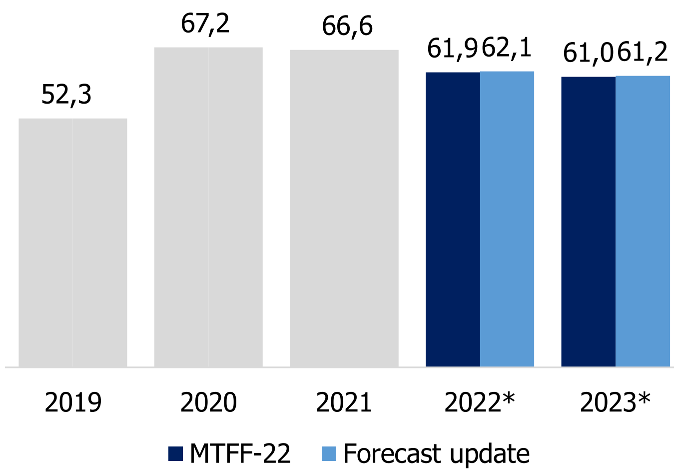
FEPC Déficit
(% of GDP)
2019 - 2023



General Government Fiscal Balance
(% of GDP)
2021 – 2023



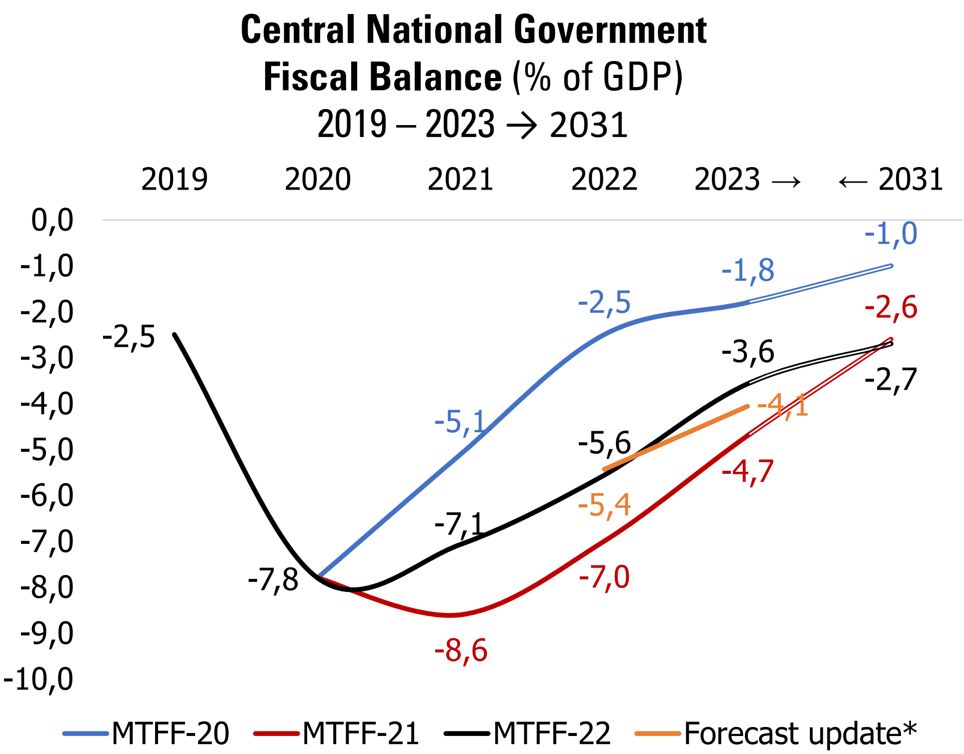
General Government Aggregate Debt**
(% of GDP)
2019 – 2023

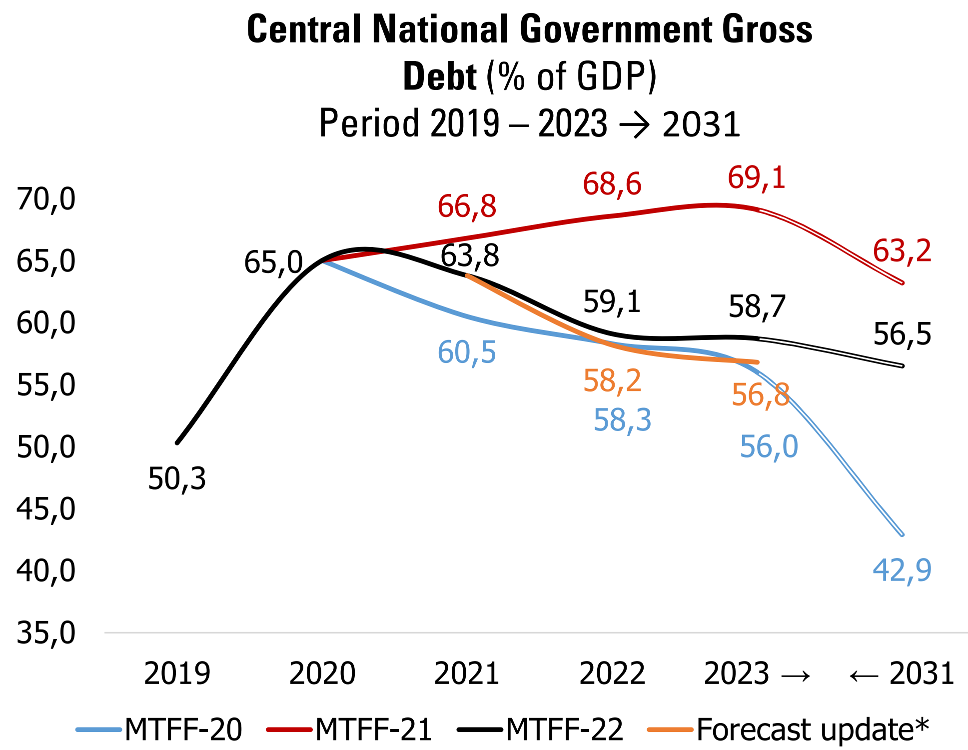


* Forecast. Updated on Spetember 26, 2022
** The aggregate debt corresponds to the sum of all debts recorded by each subsector inside the general government.
Source: MHCP - Banco de la República estimates

Macro Imbalance 2: Public debt is still high, fiscal consolidation is required

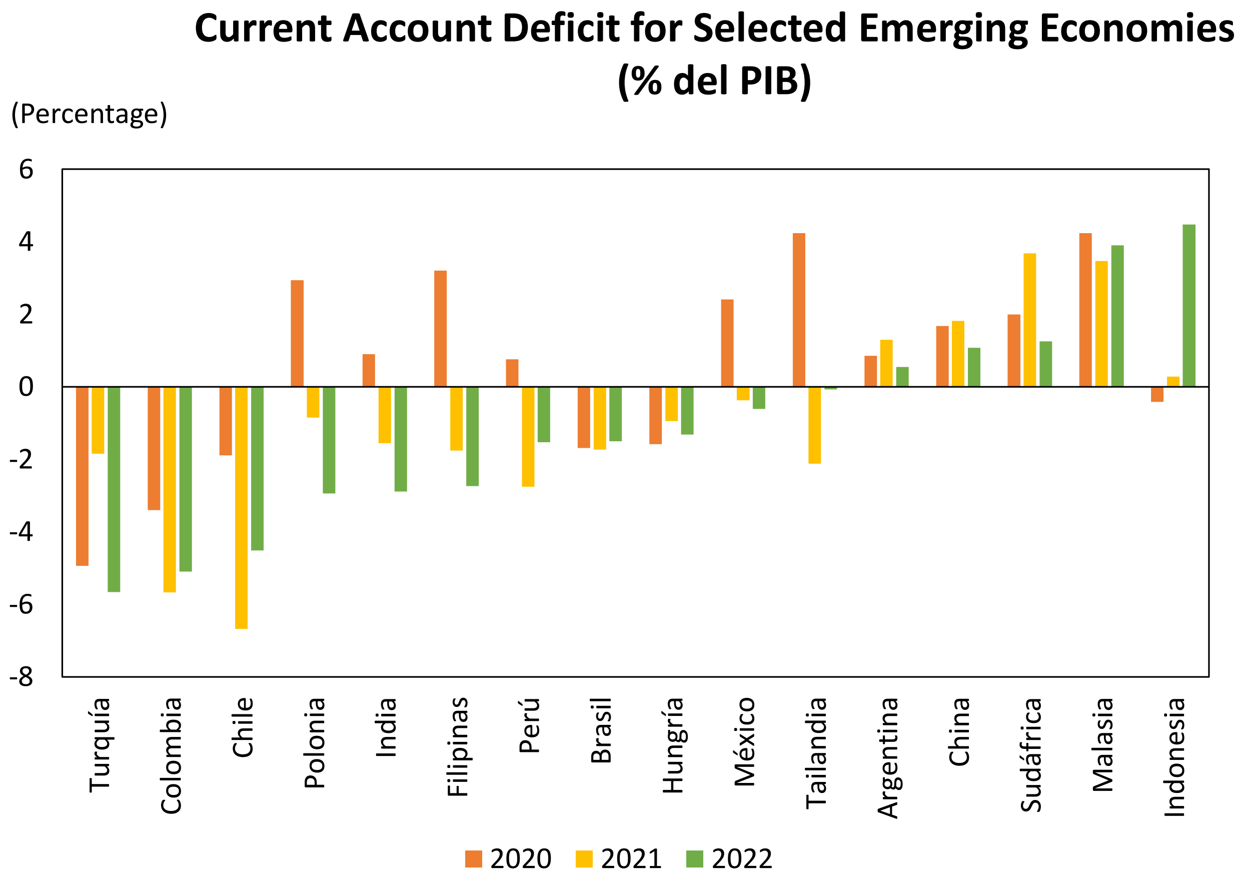
- A strong economic recovery improved the outlook for public finances.
- Changes approved in the 2021 Fiscal Consolidation Law helped to improve the fiscal outlook
  a. Taxes were changed to increase revenues starting in 2023 and tax collection was improved.
  b. The Fiscal Rule is now defined around public debt and not the deficit.
- New spending needs and higher interest payments would push for a higher-tan-forecasted deficit in 2023, although a new tax reform is in Congress.





Macro Imbalance 3: High current account deficit

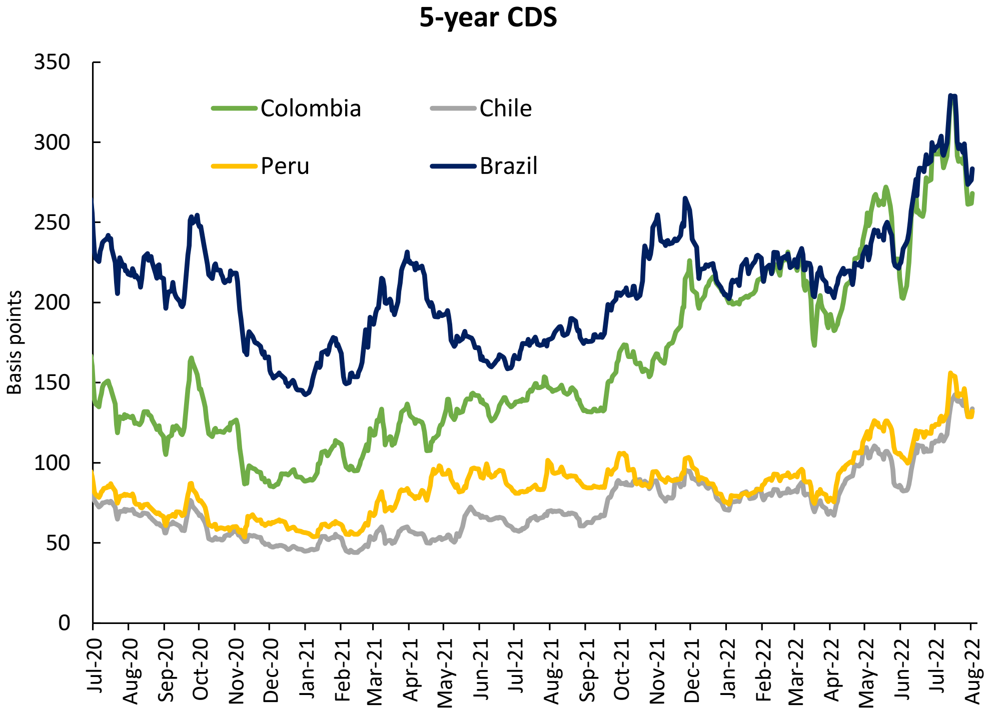
- The strong recovery, led by strong internal private demand amid large public deficits is reflected in large current account deficits
- This is happening despite high prices for main exports including coffee, coal and oil

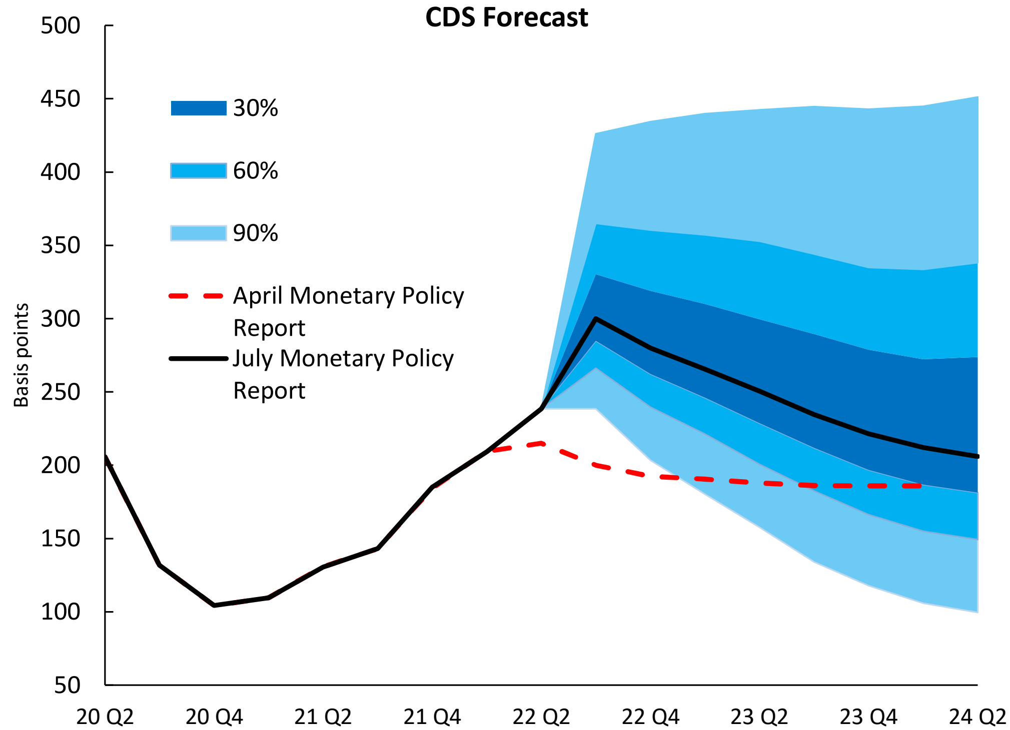


Note: The data for Colombia corresponds to the forecast in the Monetary Policy Report of July 2022.
Source: WEO IMF (April 2022) and Banco de la República.

Risk: Large financing needs (fiscal and current account) as international financial conditions deteriorate

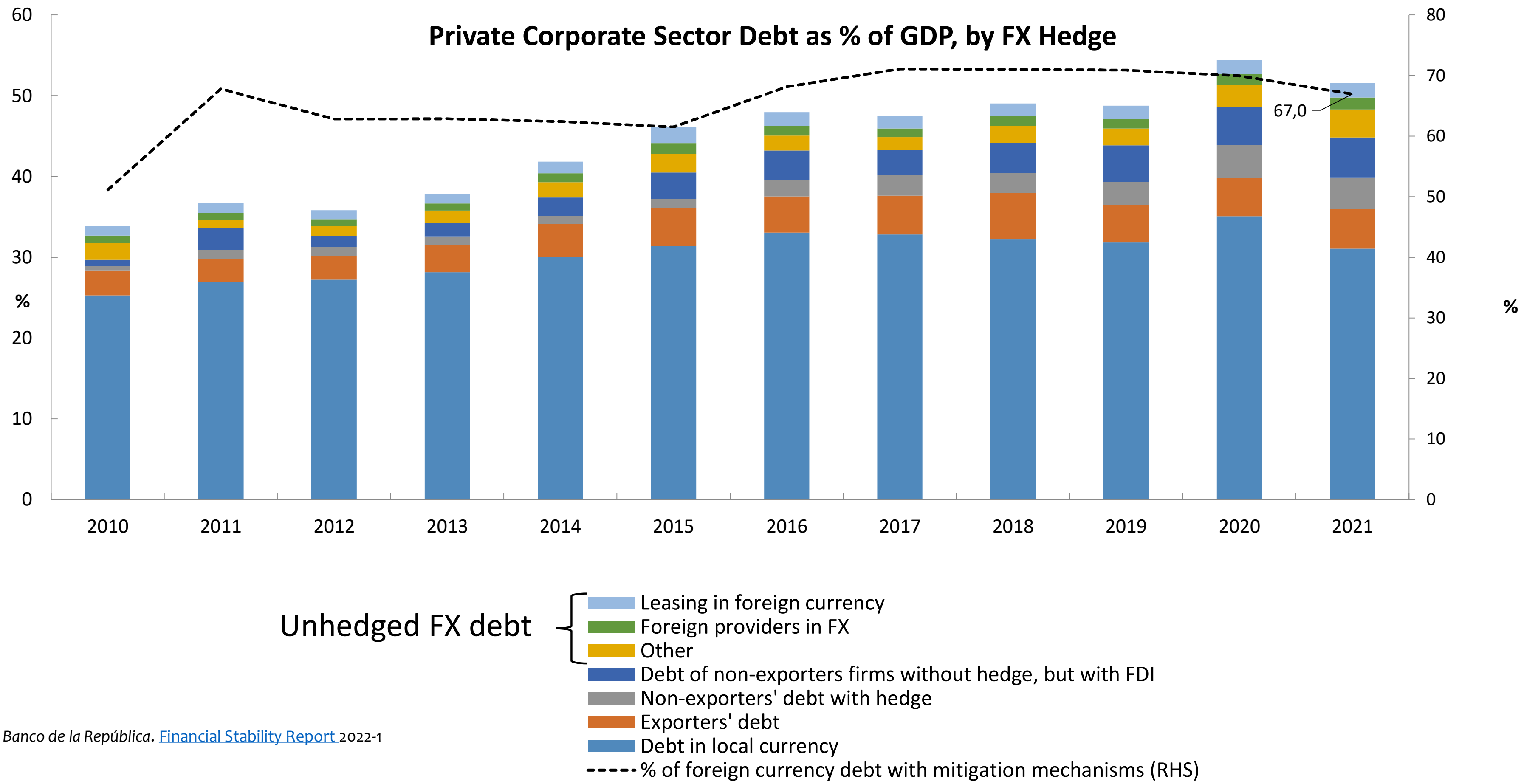
- **The speed of monetary policy normalization in advanced economies is a source of risk,** particularly in a scenario of high local fiscal and external imbalances.
- **Sovereign risk premia have risen relative to other countries in the region in recent months,** due to political and fiscal uncertainty.





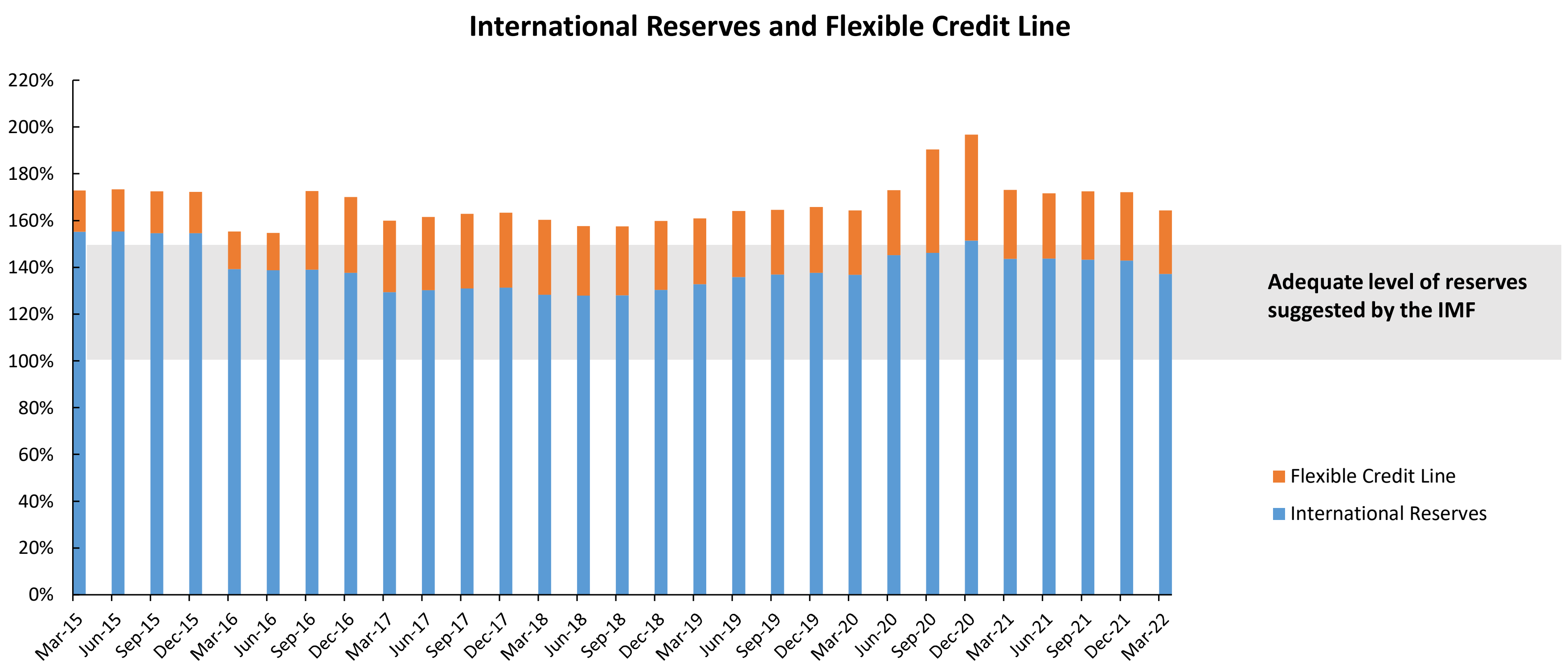
- Source: Banco de la República - *April Monetary Policy Report.* * *Latam average* = average for Mexico, Bra

Good news: Currency mismatches are low, allowing the **exchange rate to be the first line of defense** against external shocks without creating concerns on financial stability and providing **independence of monetary policy.**



Source: *Banco de la República*. Financial Stability Report 2022-1

Good news: External liquidity levels are adequate

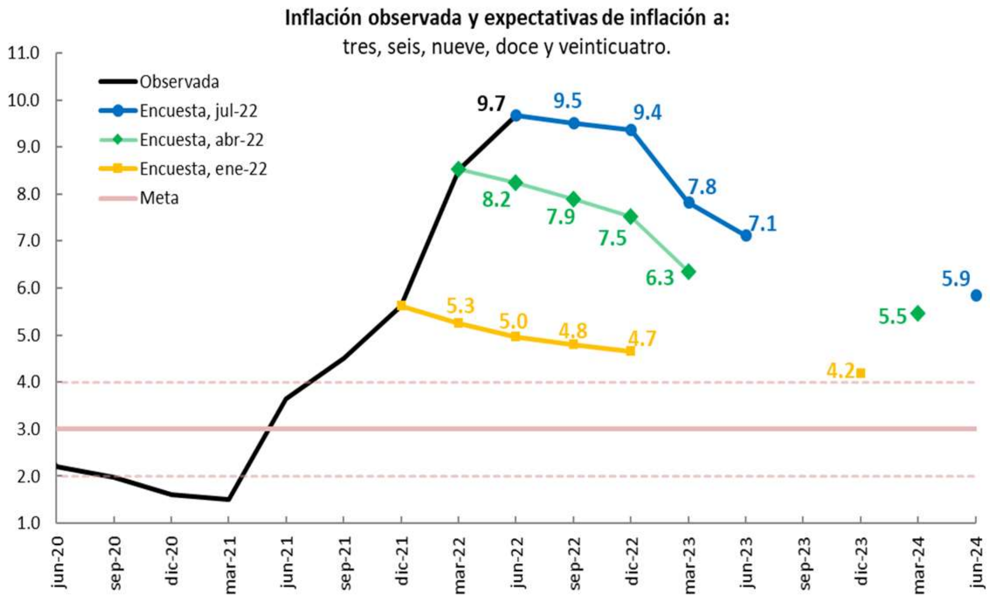


- Source: *Banco de la República and* FMI.

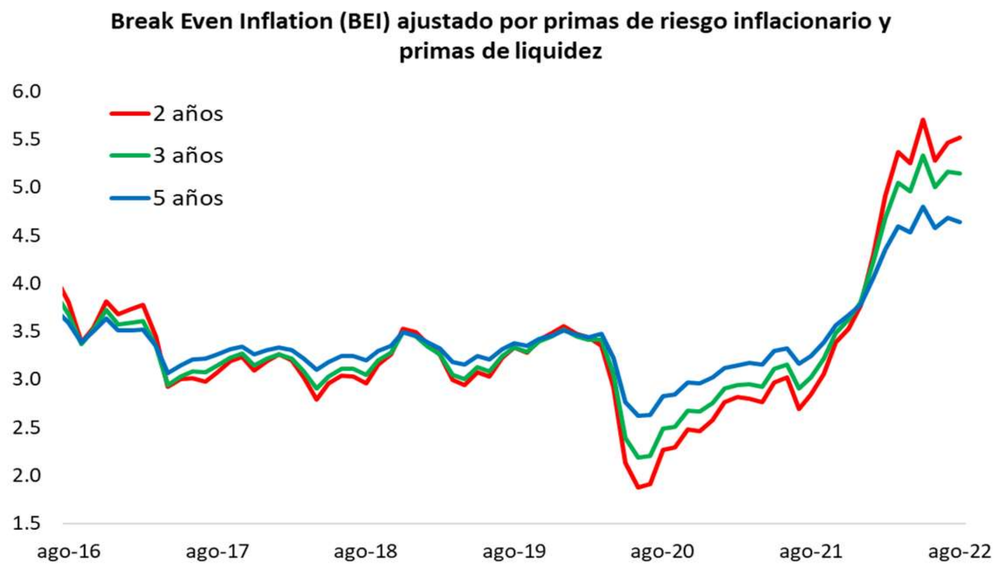
Macro Imbalance 4: Inflation and inflation expectations keep rising

- Risk: More persistent deviations from target for a longer period of time
- Risk: loss of credibility of the Central Bank
- Risk: need to have higher rates for a longer period of time, with costs in economic activity and employment

Quarterly Survey – Business inflation expectations



Break Even Inflation from Public Debt Markets

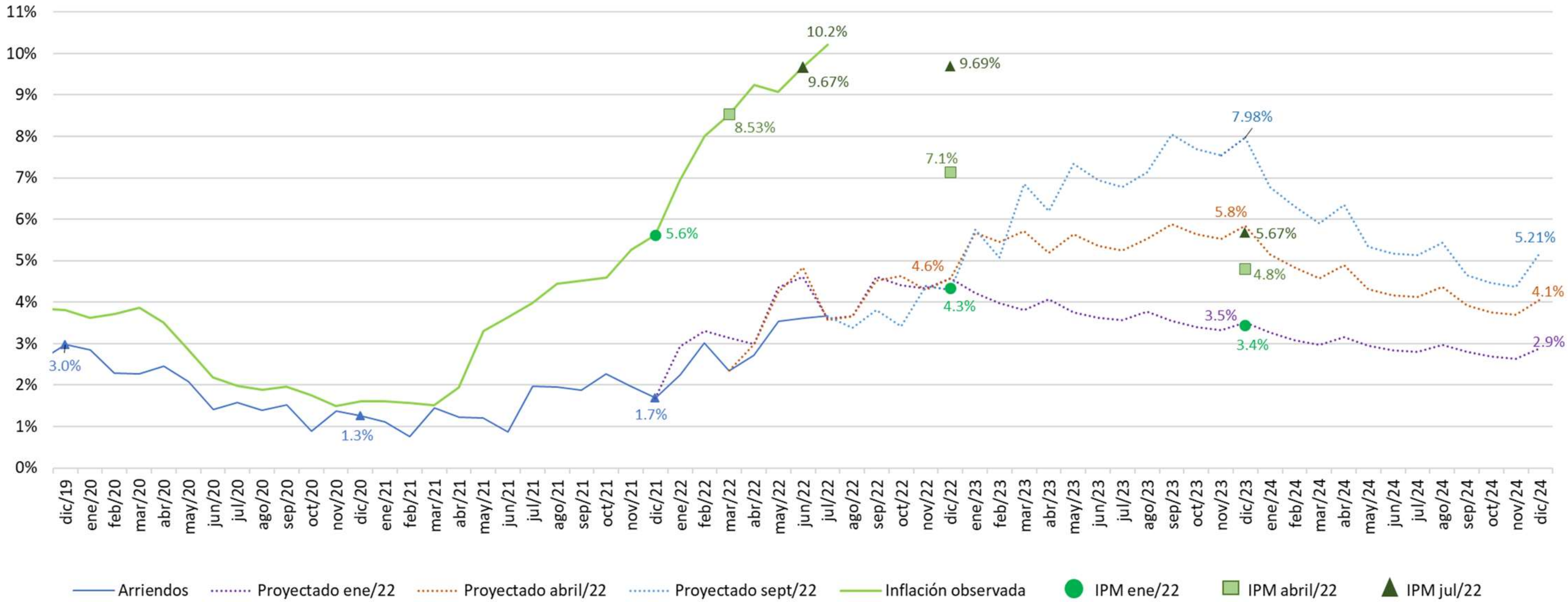


Fuente: Encuesta trimestral de expectativas económicas (ETE), cálculos Banco de la República.

Risk: higher degree of indexation at higher levels of inflation can make inflation more persistent

- Rent prices have a weight of 25% in the CPI and the law allows to index changes in a given year with the inflation result of the previous calendar year

Headline inflation* vs. Changes in rent prices**
Projection using forecasts as of January/22, April/22 and September/22



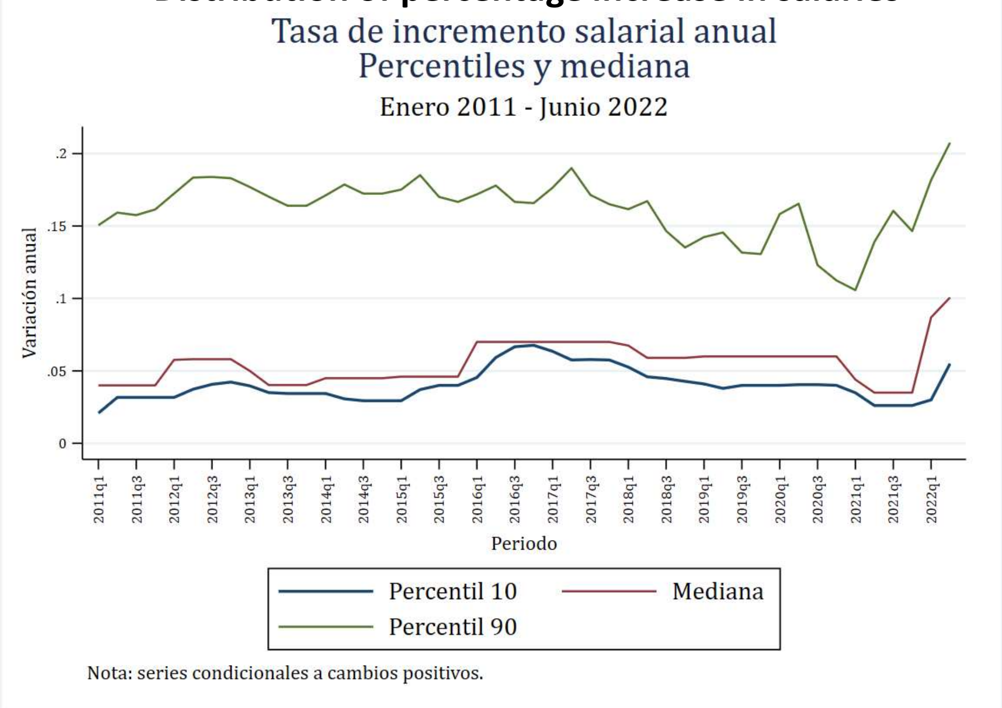
* Inflation data from Monetary Policy Report

** Rent prices annual variation porjected using the average fraction of contracts that change prices calculated between 2017 and 2019

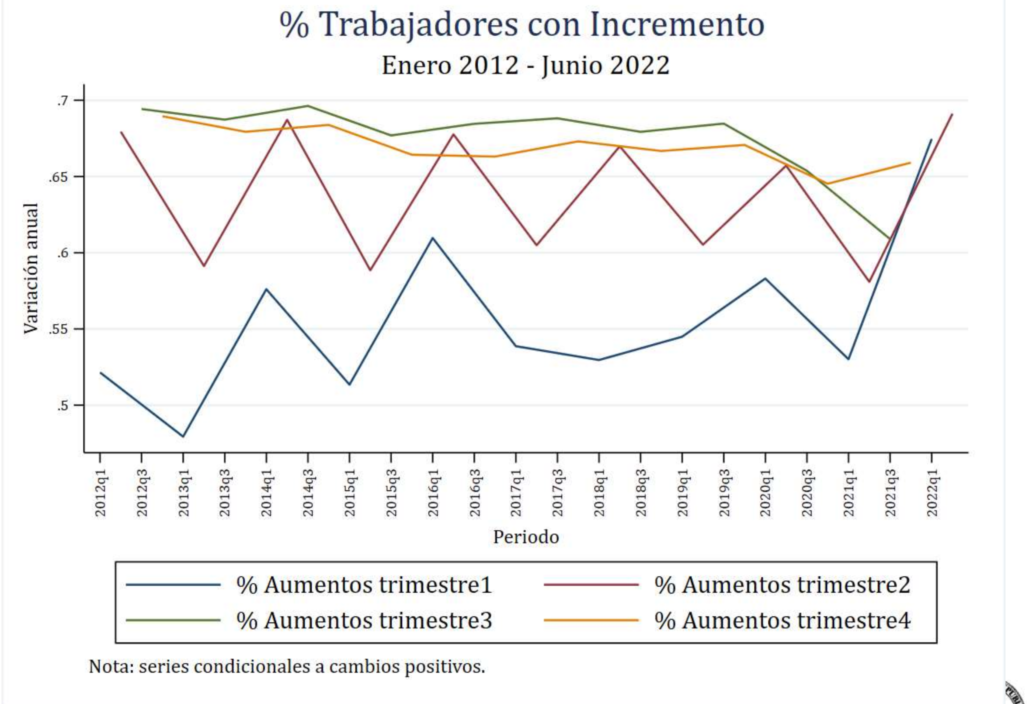
Risk: higher degree of indexation at higher levels of inflation can make inflation more persistent

- Although in 2021 inflation was 5,6%, the mínimum wage was increased by 10%
- In 2022, 50% of wages are changing by 10% or more and 70% of workers have had salary increases in the first two quarters, more than in previous years
- Risk: large increase in the minimum real wage that pushes up costs for businesses that eventually are passed thorugh to consumer prices

Distribution of percentage increase in salaries

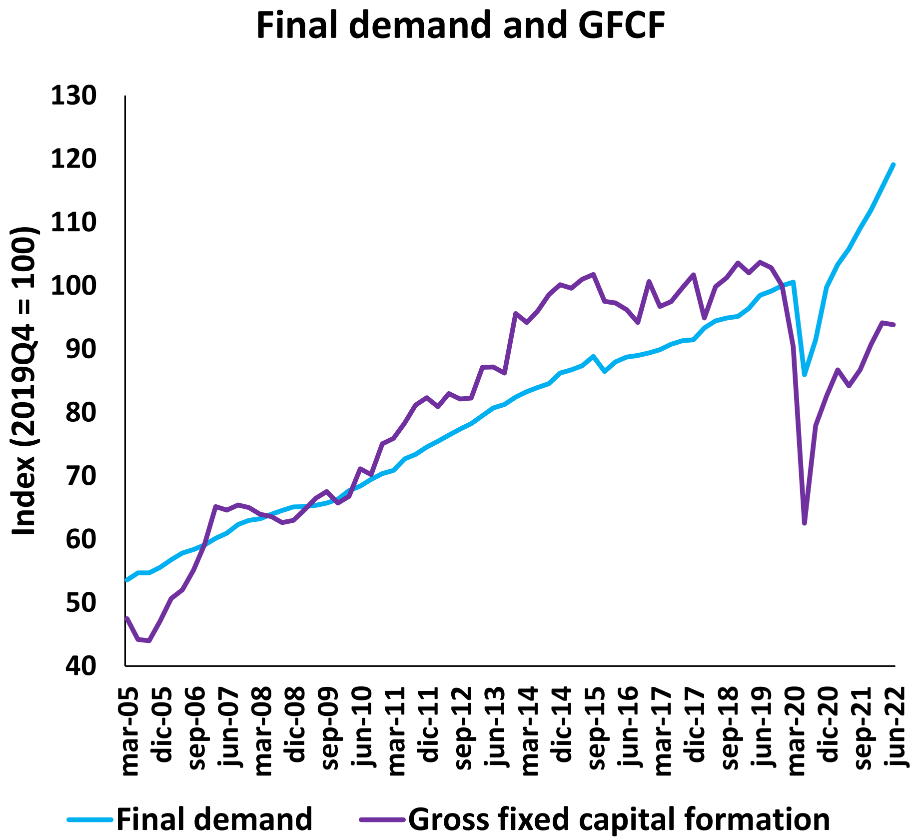


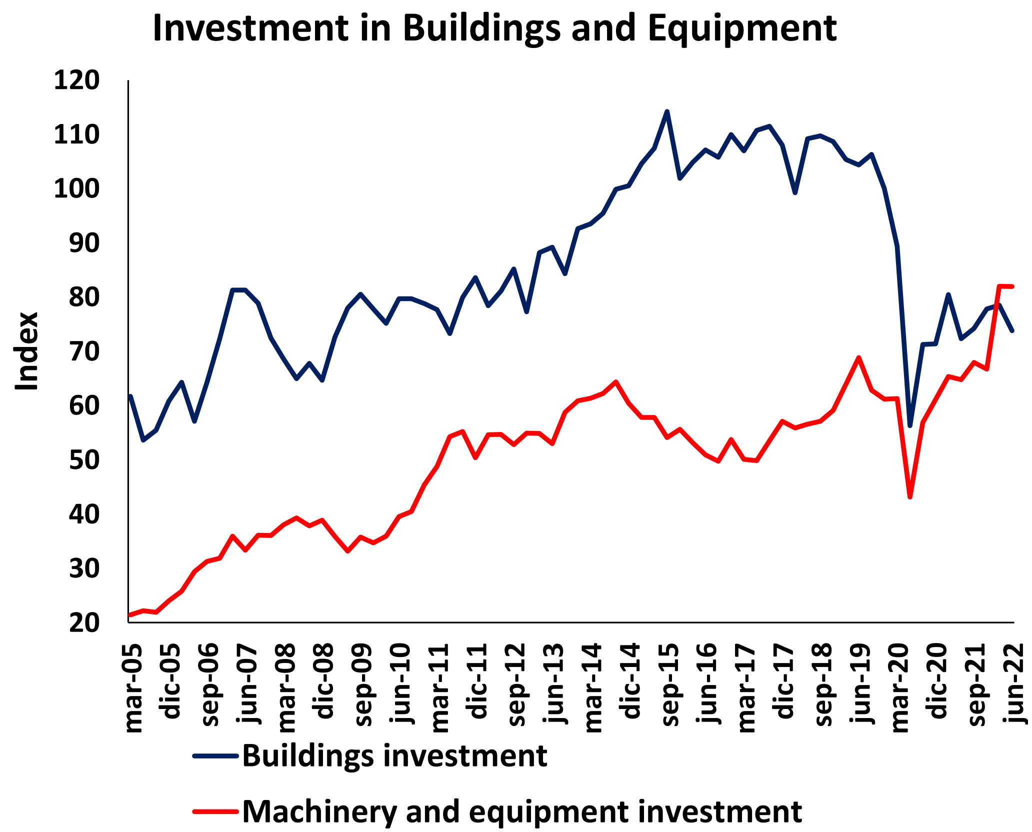
% of workers with salary increases by quarter in a year



Macro Imbalance 5: growth components

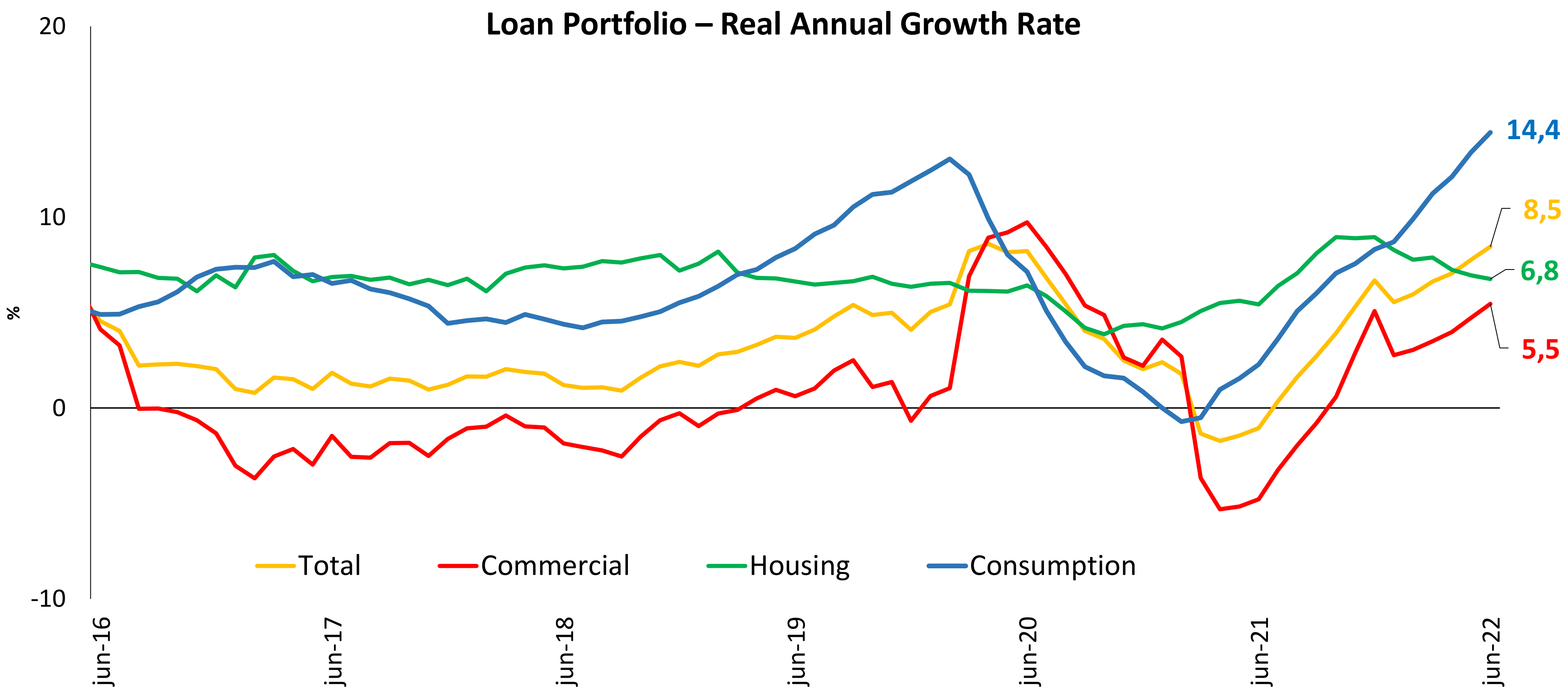
- Risk: unsustainable consumption
- Risk: lower potential GDP





Macro Imbalance 5: growth components

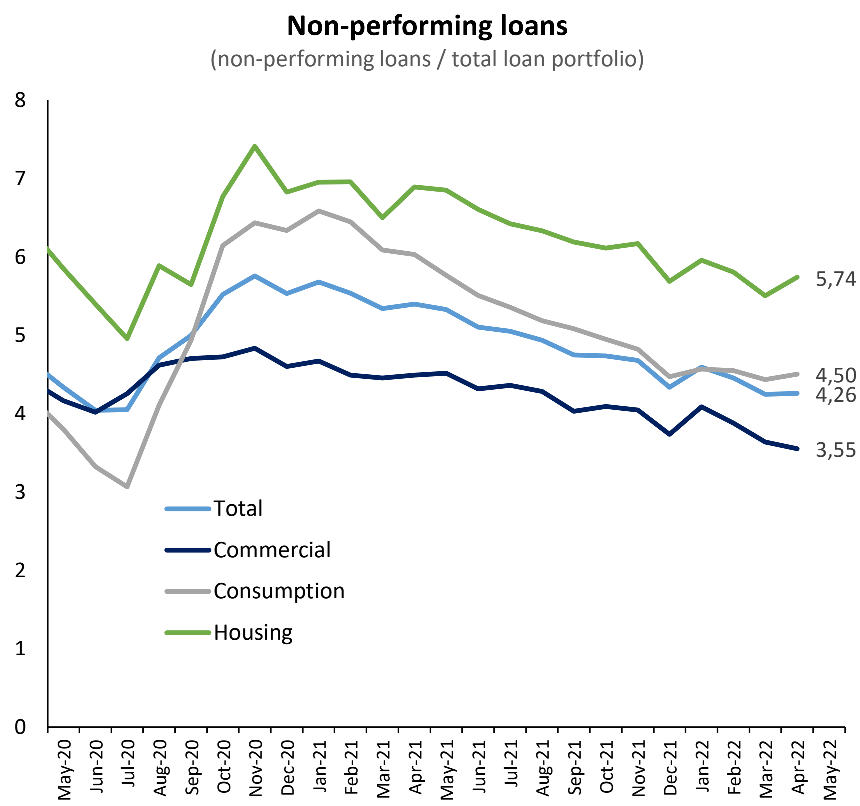
- **Growth of the loan portfolio remains strong, particularly for consumption loans, consistent with the strength of domestic demand.**
- Credit growth should slowdown as real interest rates increase.

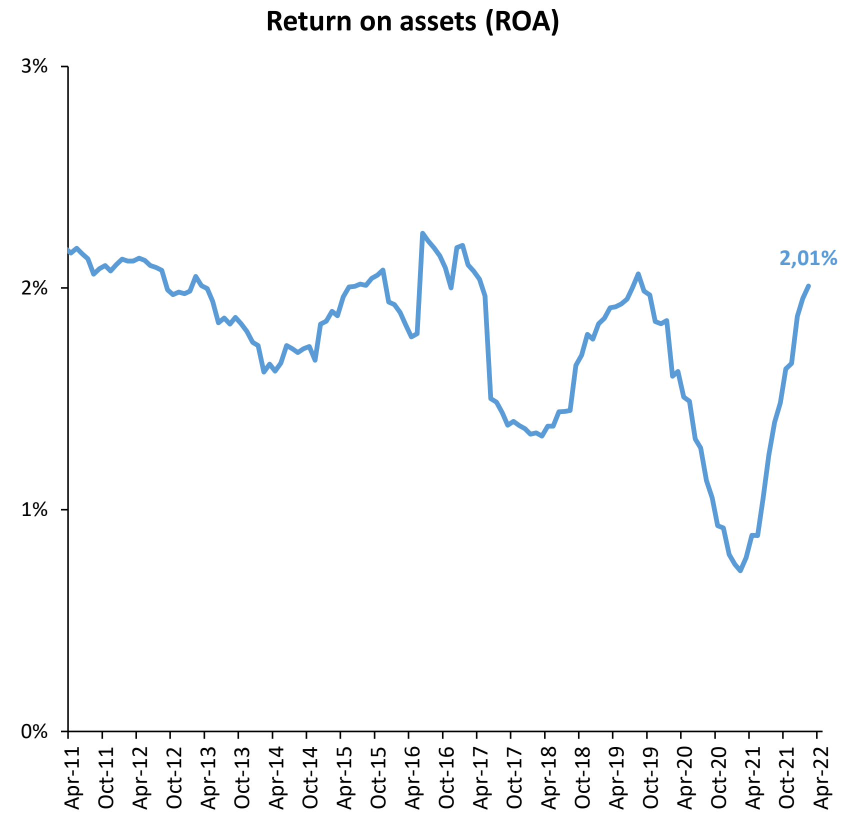


- Source: Office of the Financial Superintendence. Calculations by Banco de la República, real growth rate is calculated using CPI ex. Food

Good news: The **quality of the loan portfolio and the profitability of credit institutions are improving.**

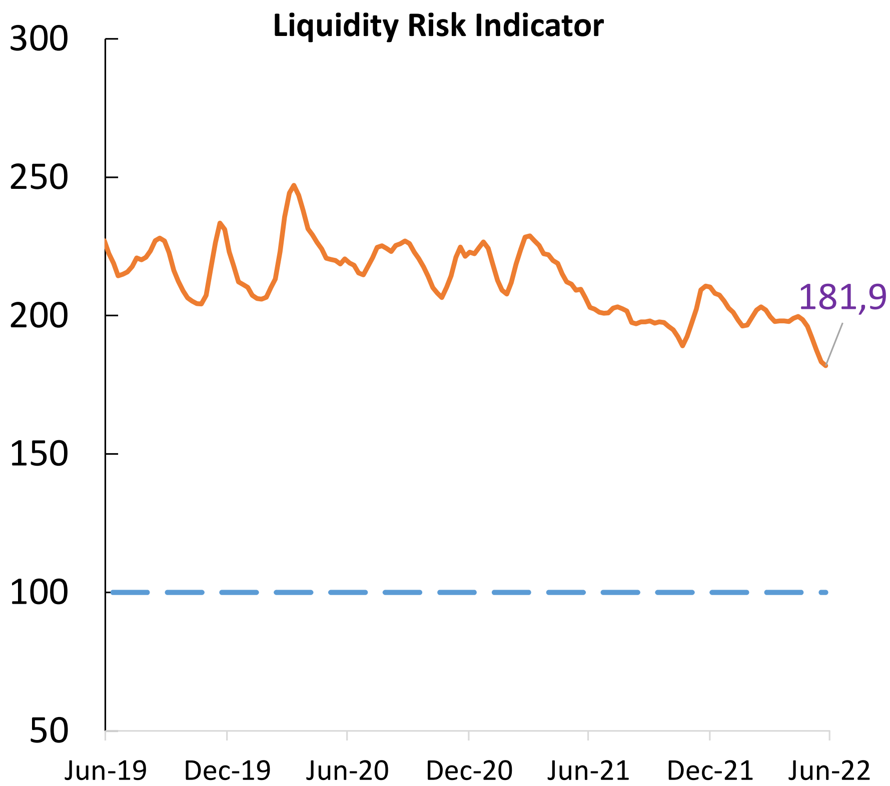
- At the margin there is some credit quality deterioration

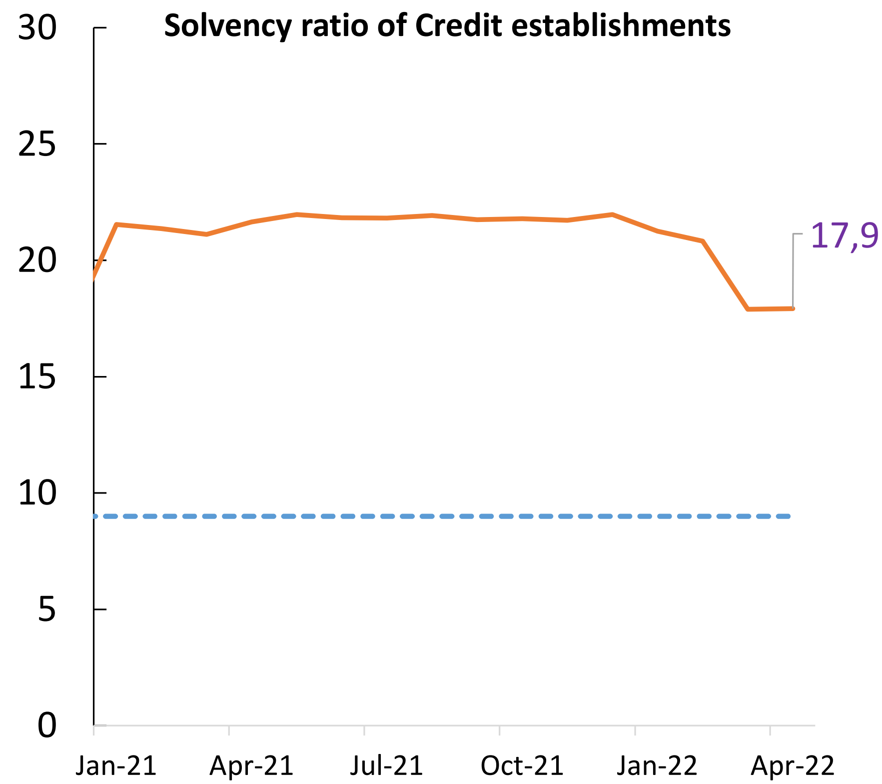




Source: Office of the Financial Superintendent; calculations by *Banco de la República*.

Good news: Liquidity and solvency of financial intermediaries remain well above regulatory limits.





Source: Office of the Financial Superintendent; calculations by *Banco de la República*.

Monetary Policy Post COVID in Colombia: Strong Recovery, Supply Shocks, and Macro Imbalances

XVIII Monetary Policy Managers Meeting
Session I

Juan José Ospina Tejeiro

September 26, 2022