

Goldman Sachs

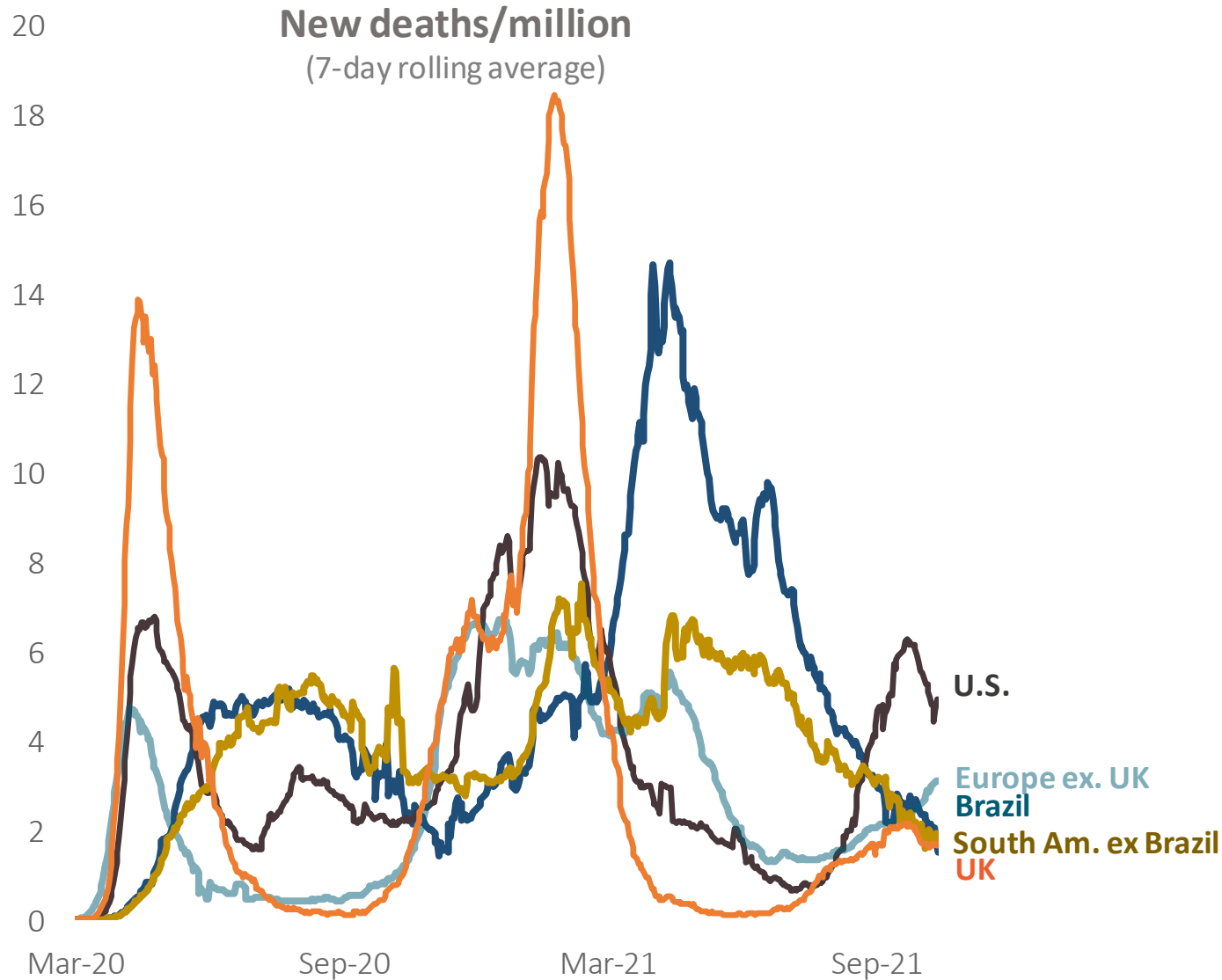
Brazil's Economic Outlook and Agenda BC#

Roberto Campos Neto
Governor of Banco Central do Brasil

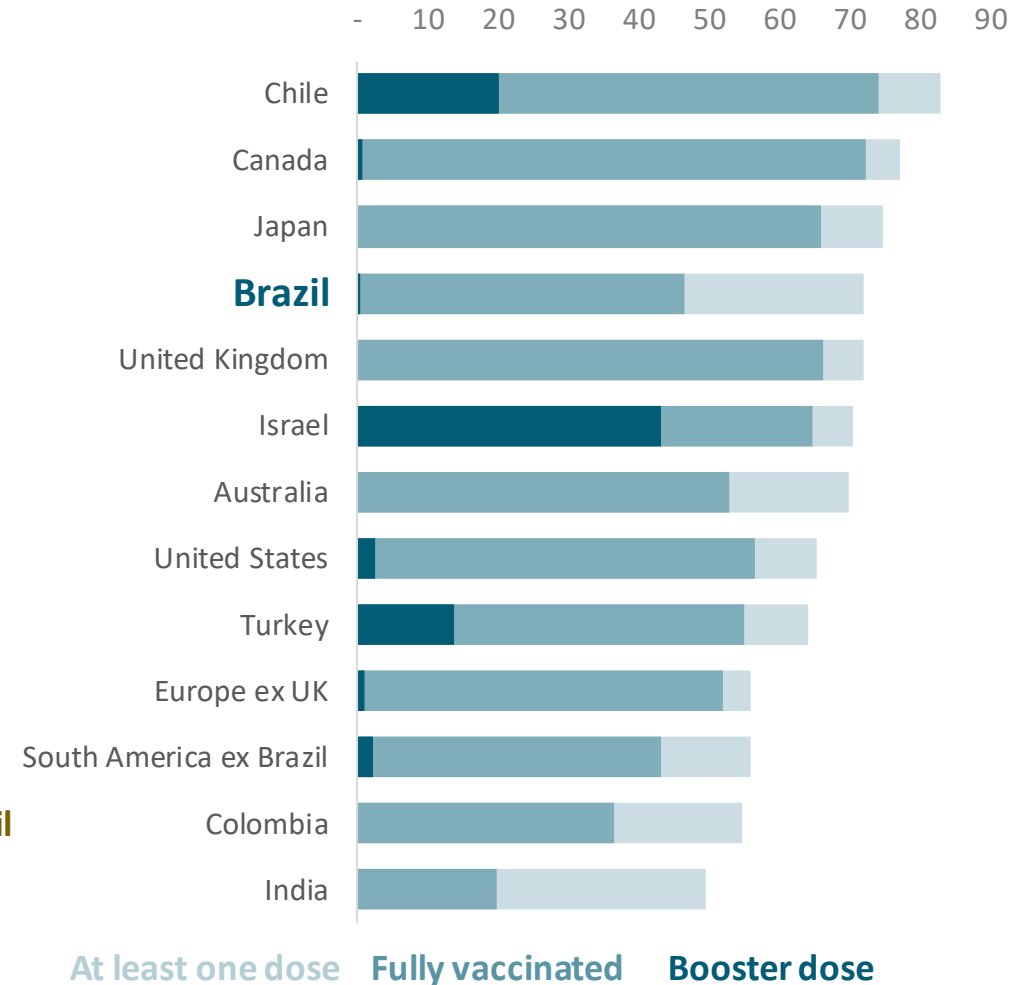
October 15, 2021

Covid-19: New deaths and vaccination

New deaths fall as vaccination advances



Share of population vaccinated
(% of population)



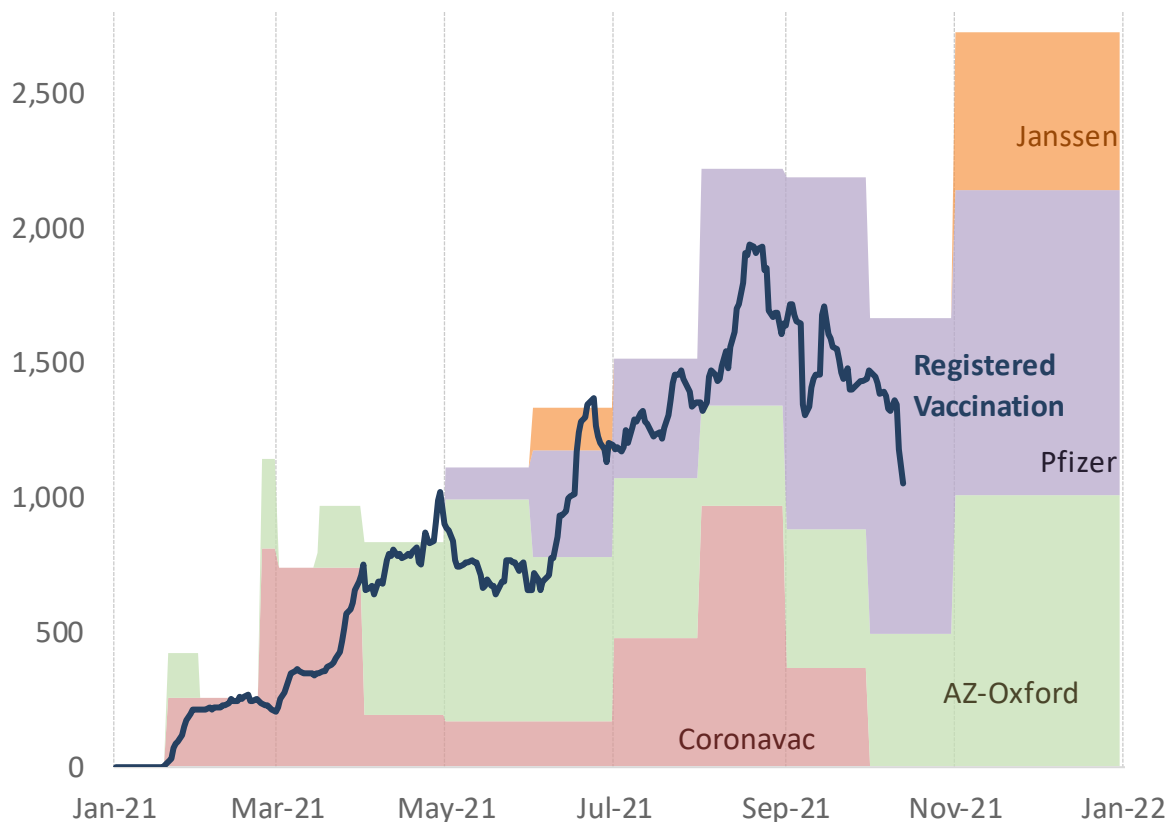
Sources: (1) Our World in Data. Last data: 13 Oct. 2021. (2) Localiza SUS for Brazilian booster doses.

Brazil: Covid-19 vaccination

Brazilian vaccination campaign has advanced.

Brazil: daily doses

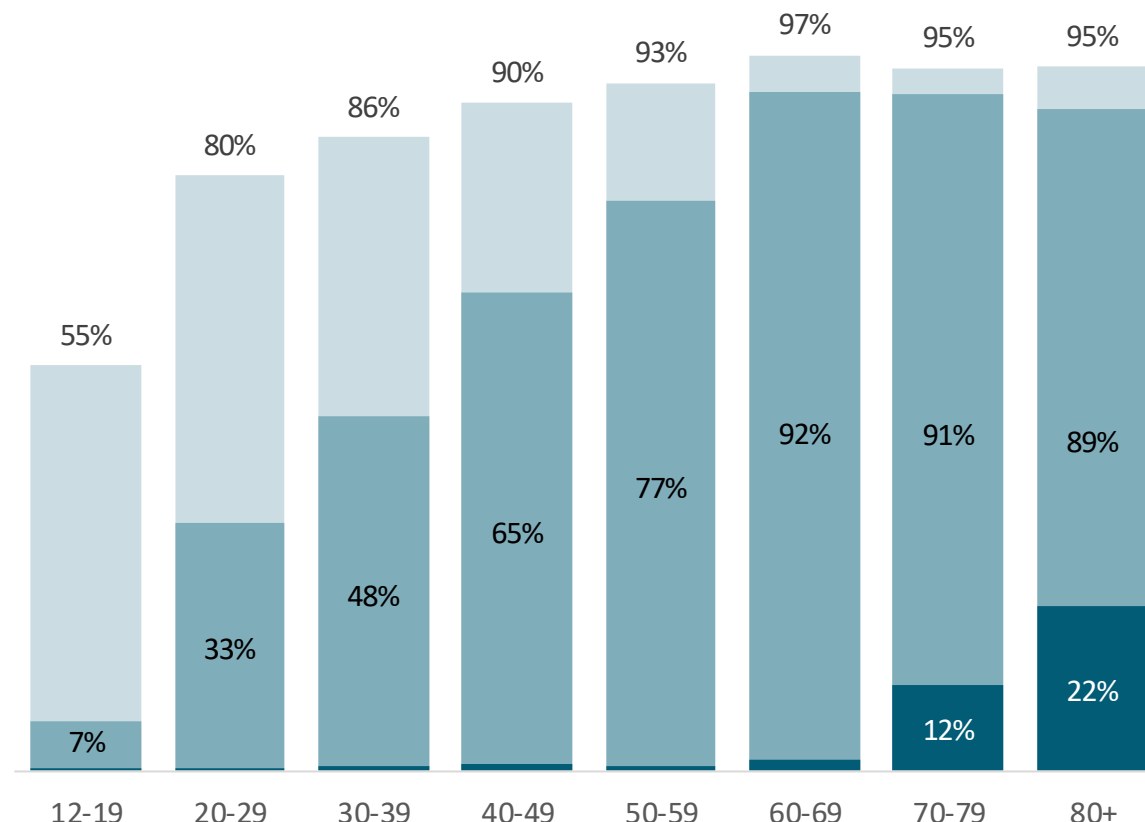
Estimated offer x registered (thousands/day)



Availability of doses based on a schedule published by the Ministry of Health on October 13th, with adjustments that reflect news published by the press. Scenario considers AstraZeneca-Oxford, Coronavac, Pfizer-BioNTech and Janssen vaccines. Dose delivery schedule subject to changes.

Updated to 10/13/2021

Brazil: vaccination by age group (%)



At least one dose

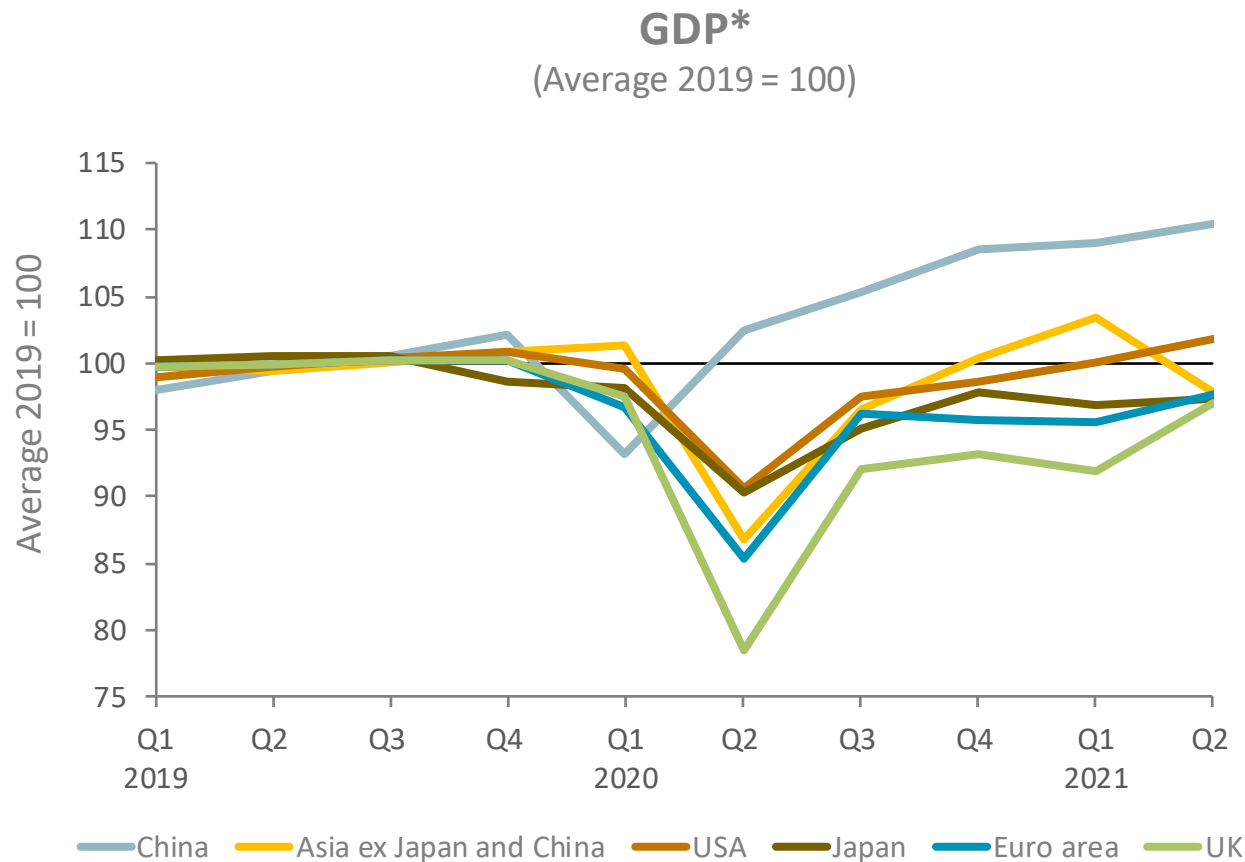
Fully vaccinated

Booster dose

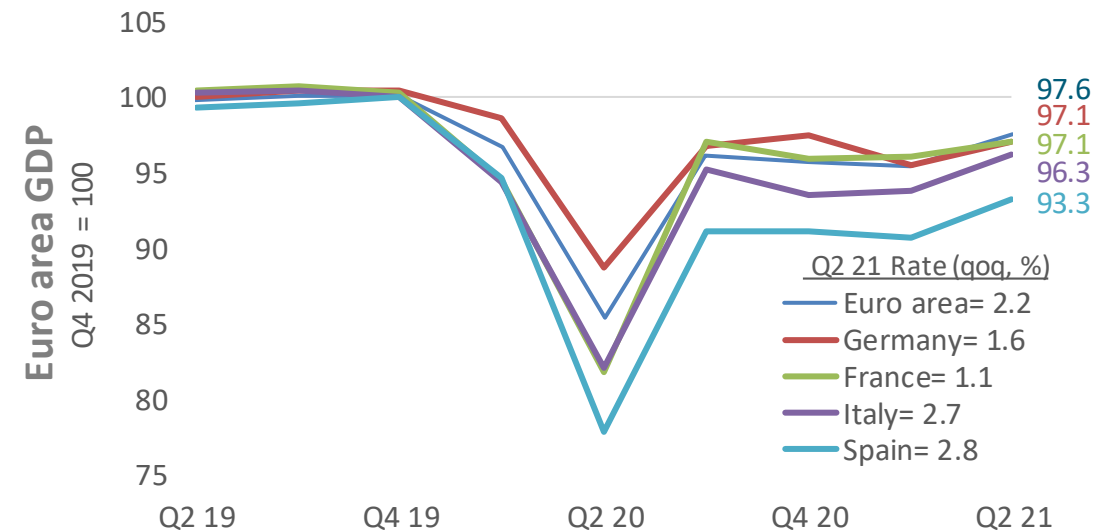
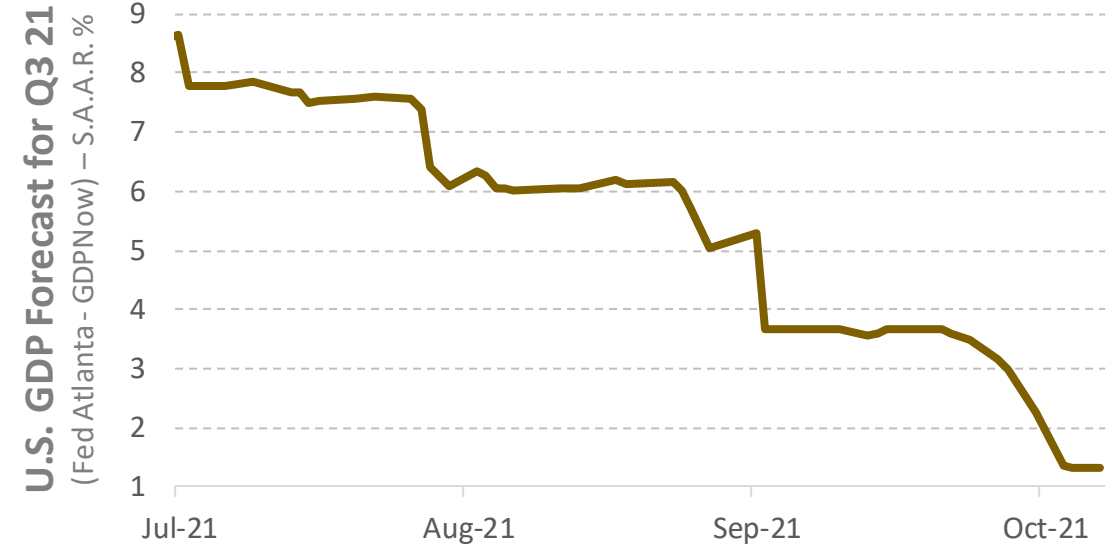
Updated to 10/10/2021

Advanced economies: economic activity

Global economic recovery continues to be directly linked to the evolution of the pandemic and the pace of vaccination.

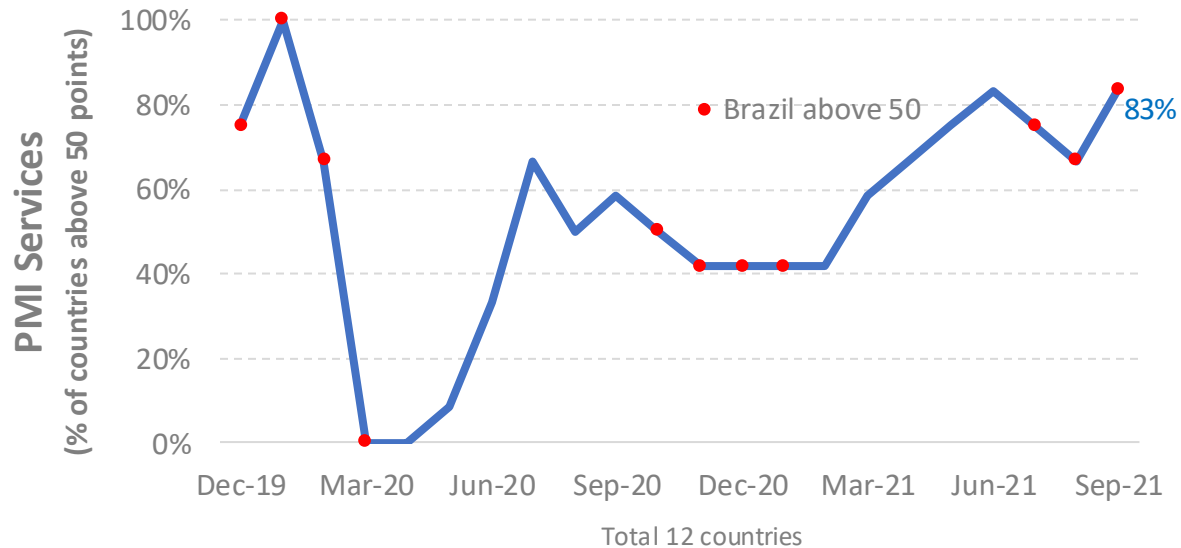
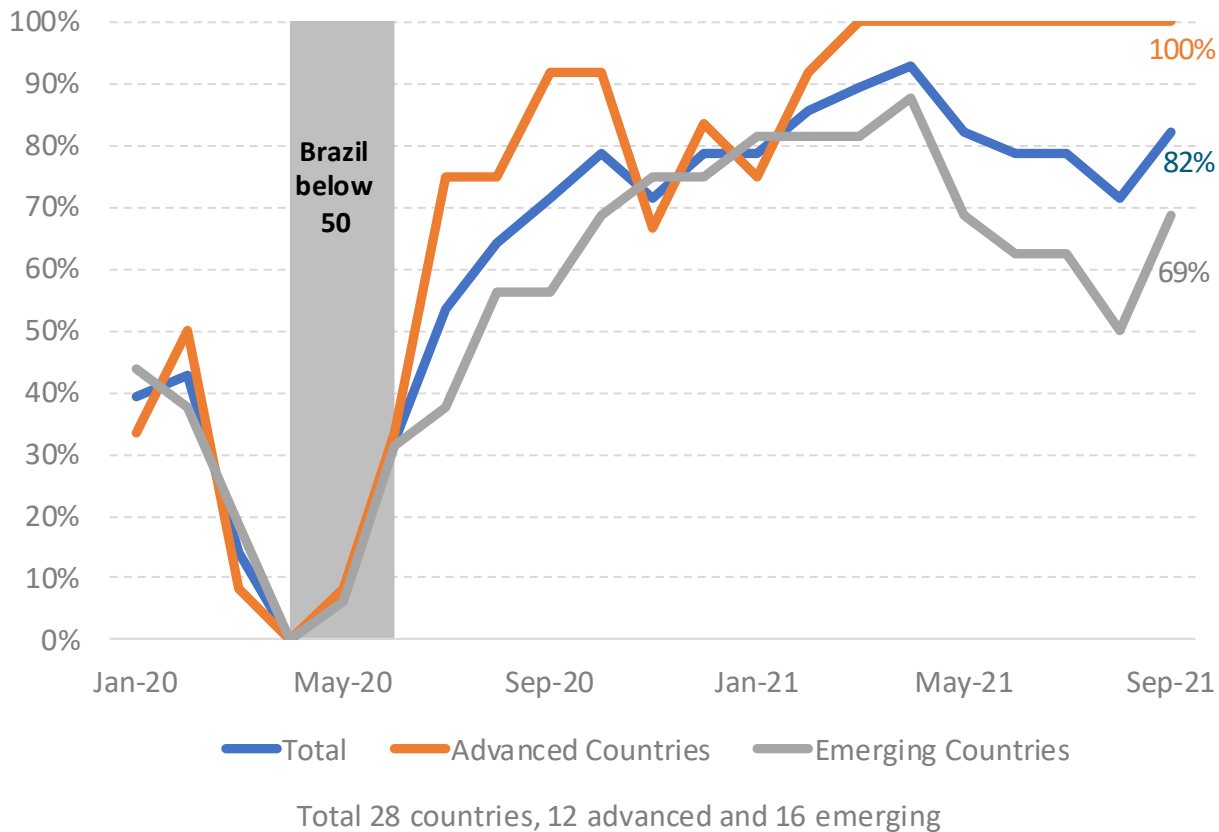


* Series at constant prices, seasonally adjusted. The series 'Asia ex. Japan and China' was calculated as a weighted average of Singapore, South Korea, Hong Kong, India, Indonesia, Philippines, Malaysia, Thailand, Taiwan and Turkey. The series of Singapore, India and Indonesia are not seasonally adjusted.



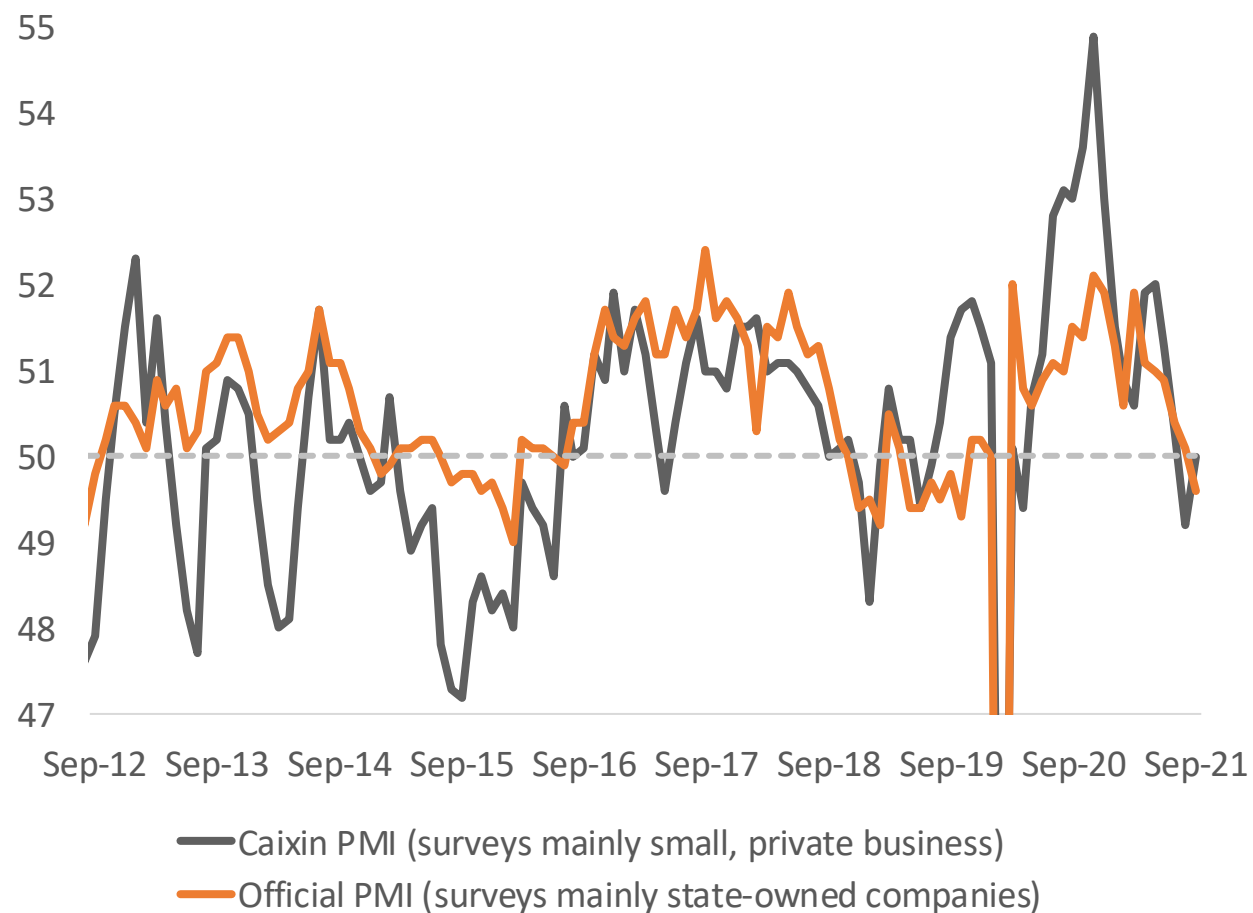
Economic activity

PMI Manufacturing: % countries above 50 points

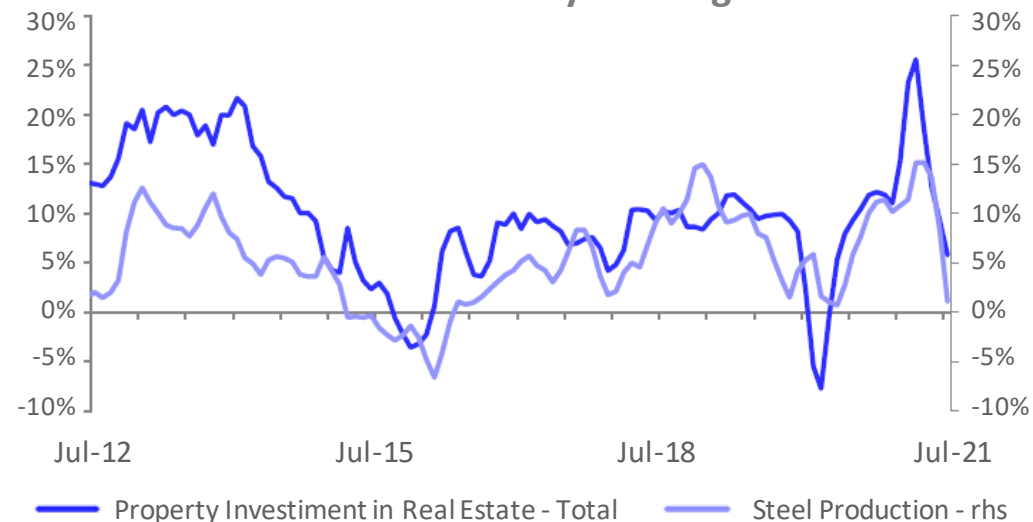


China: economic activity

PMI Manufacturing - China



Real estate activity slowing down

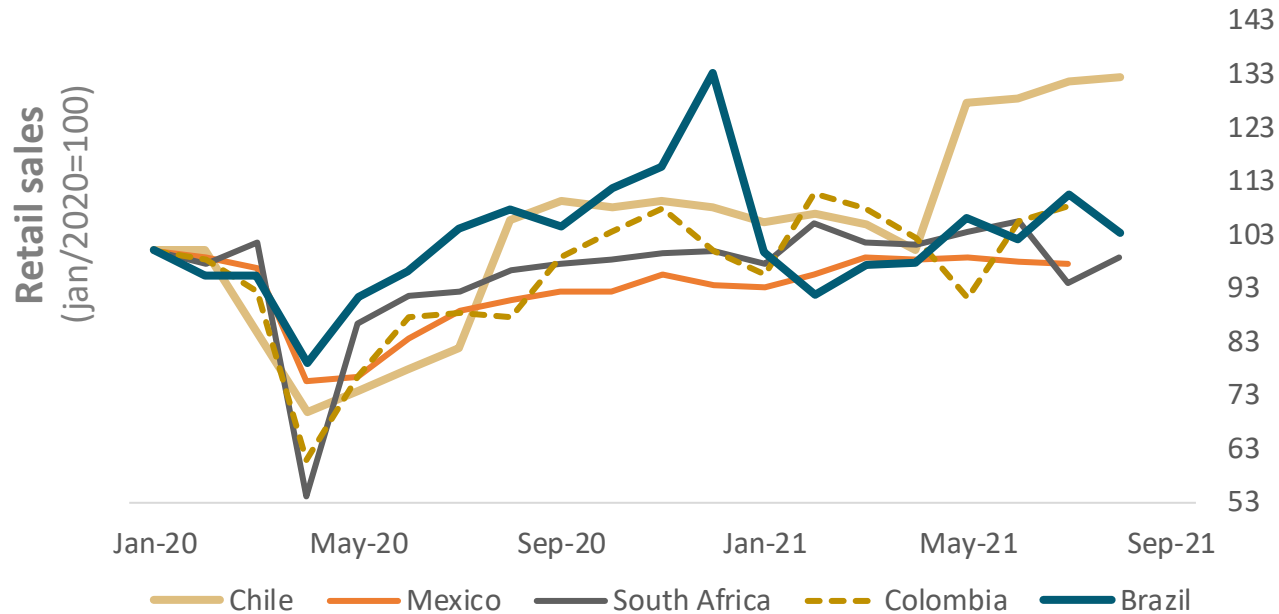
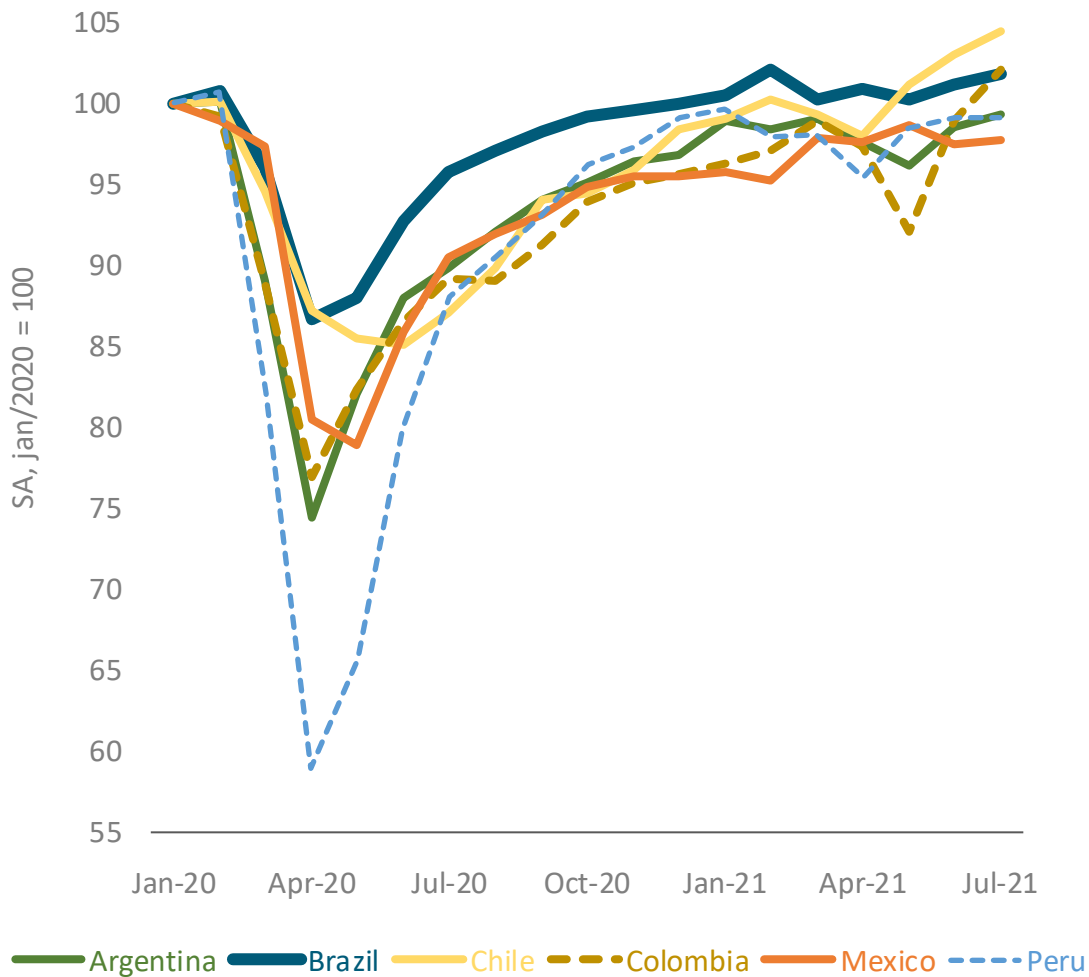


Hang Seng Properties Index

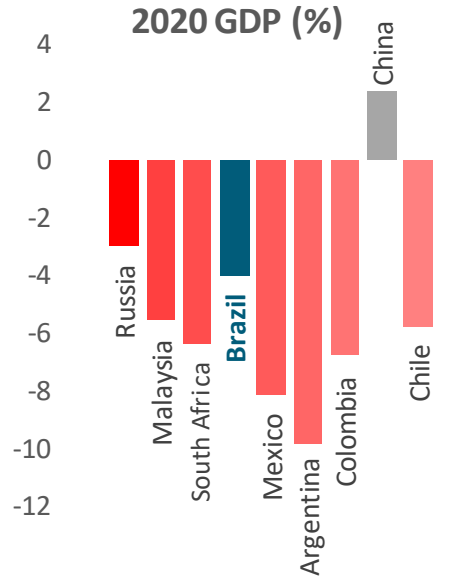


Emerging economies: economic activity

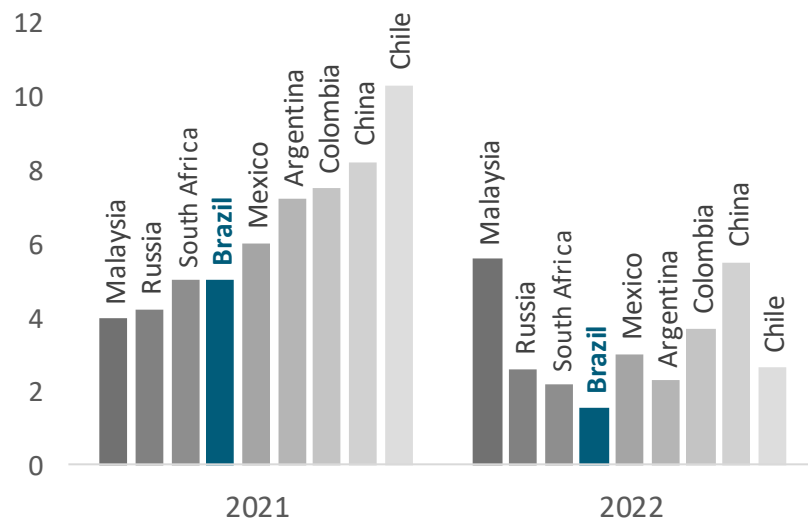
Economic Activity Index



2020 GDP (%)

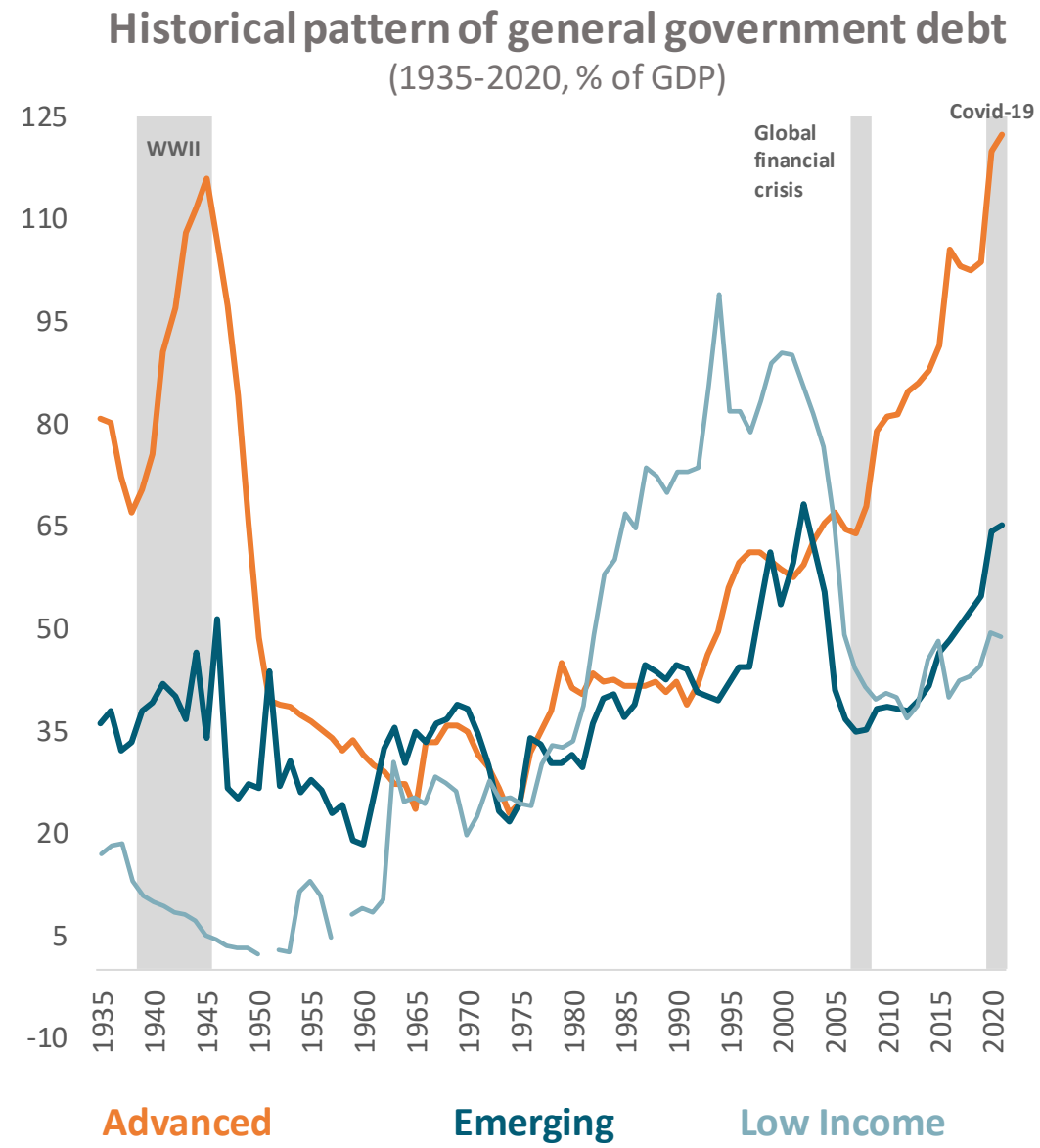
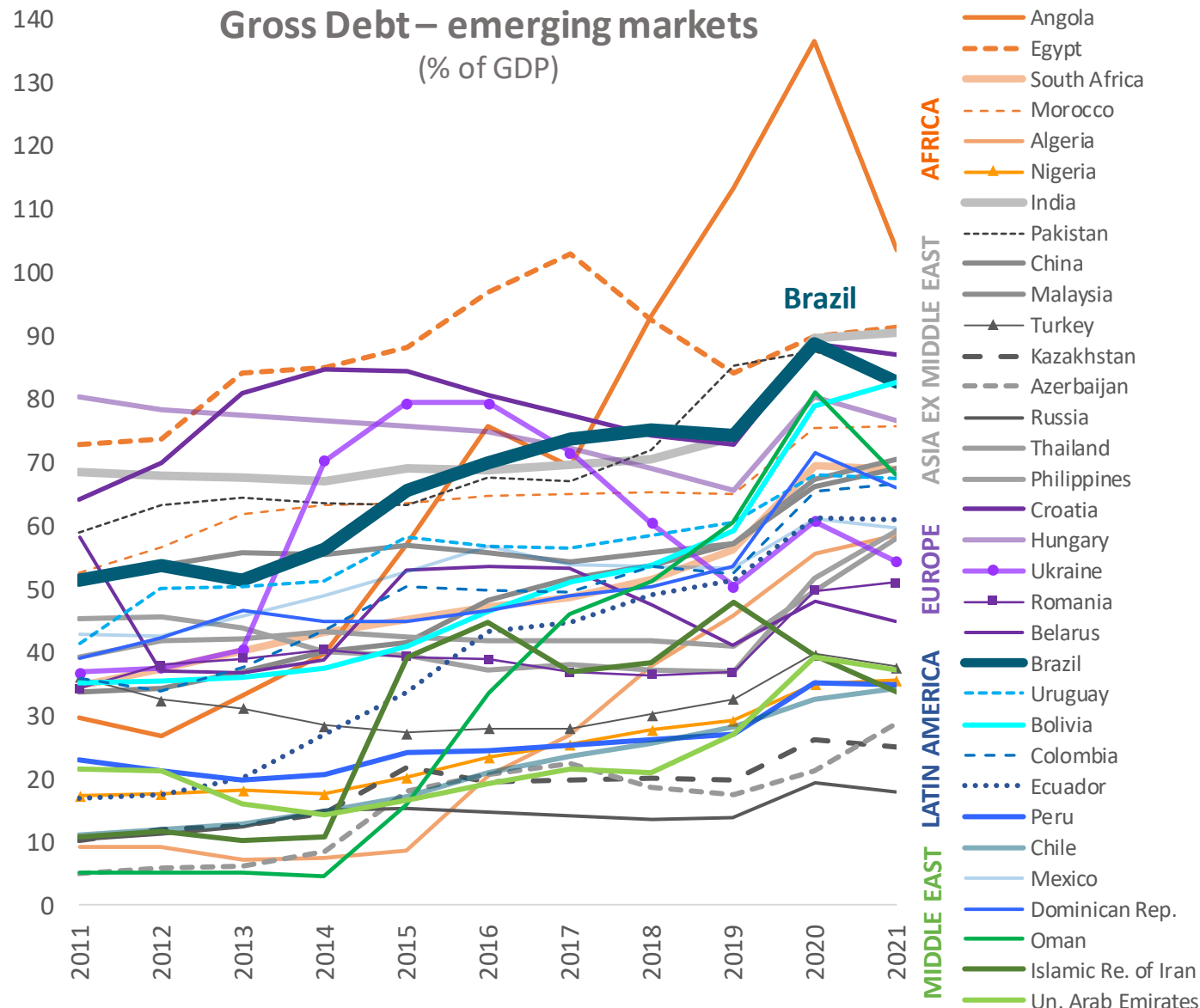


GDP forecast (%)



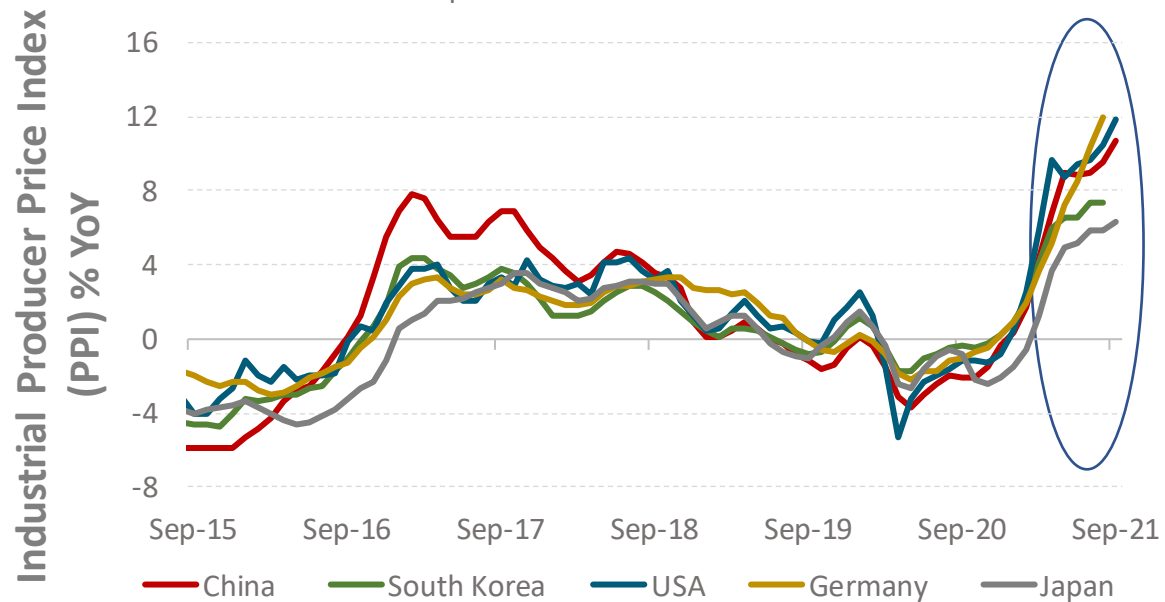
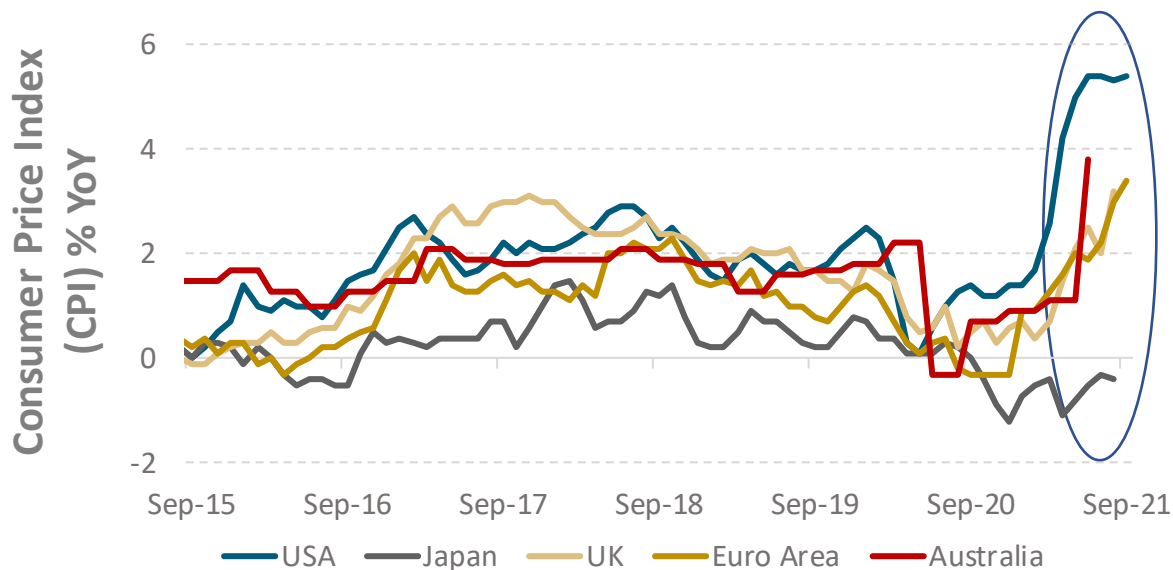
Sources: Bloomberg, IBGE and BCB (Focus Report).

Fiscal response



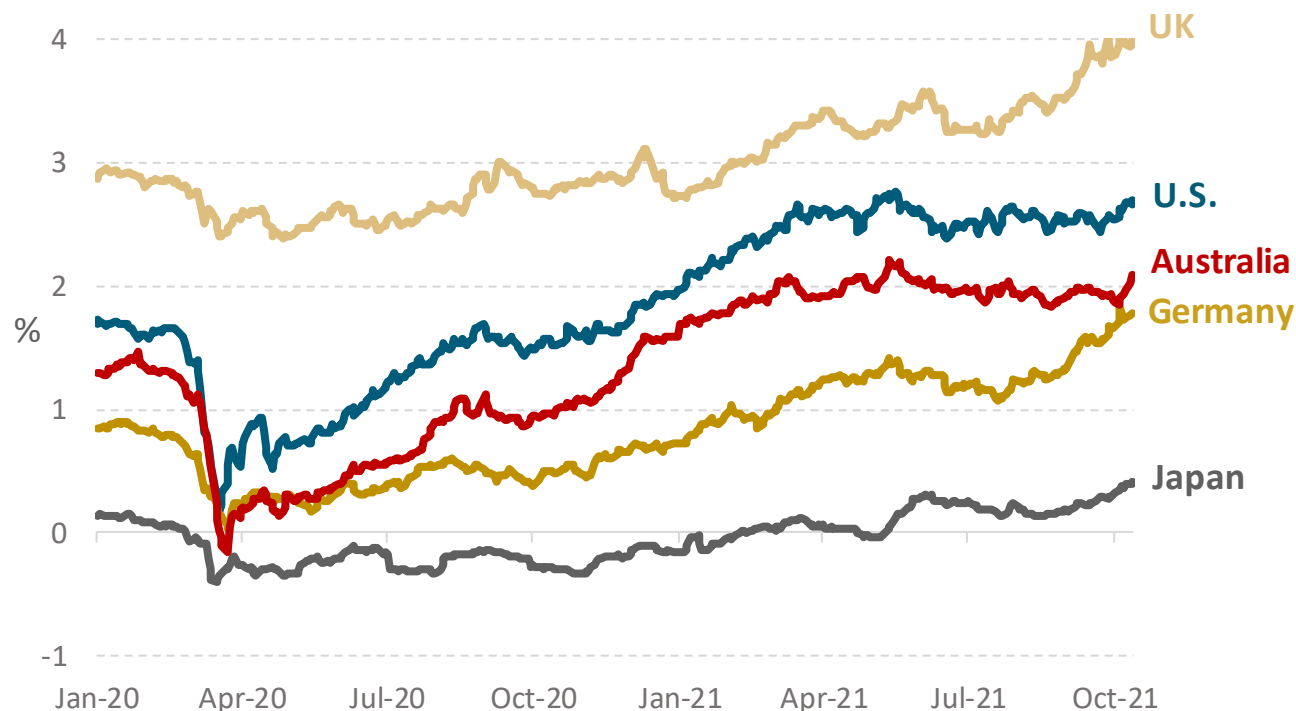
Sources: [1] IMF WEO Oct/21. For Brazil, the source is BCB. Brazil's 2021 figure refers to Aug. [2] IMF Historical Public Debt Database.

Advanced economies: inflation



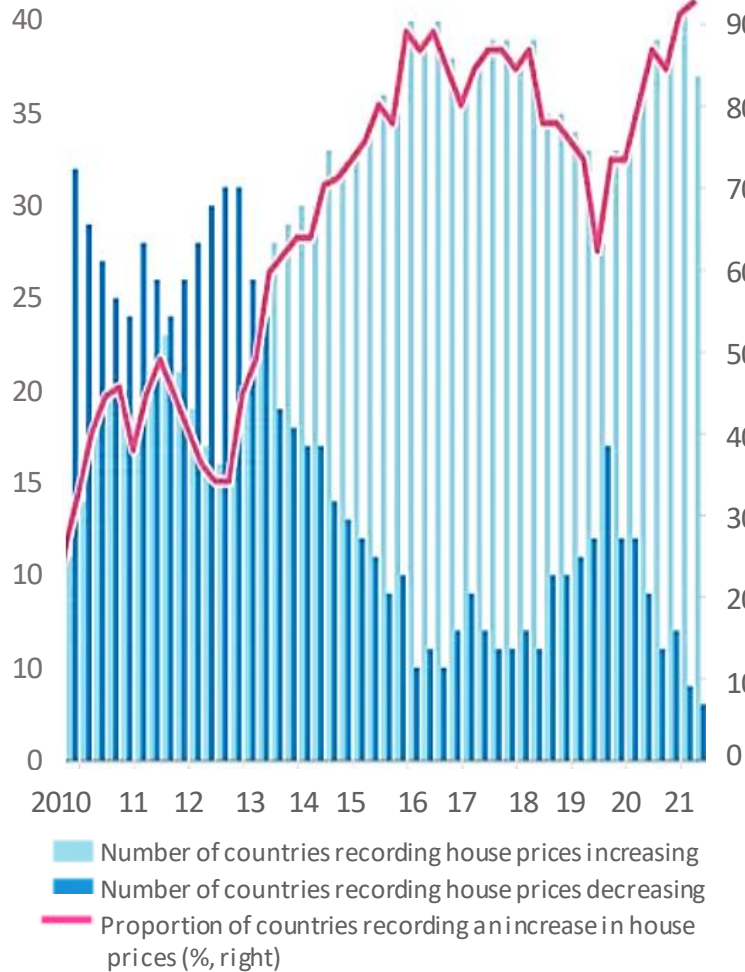
Source: Bloomberg.

Implicit inflation (5 years break-even)

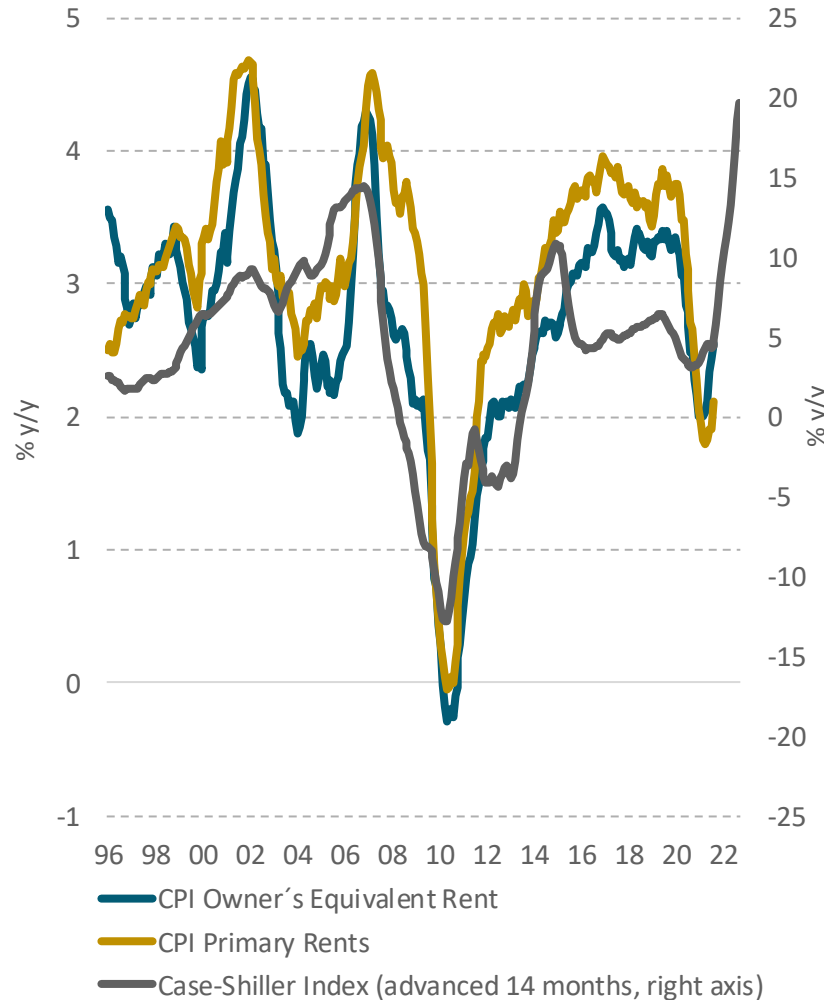


Housing prices

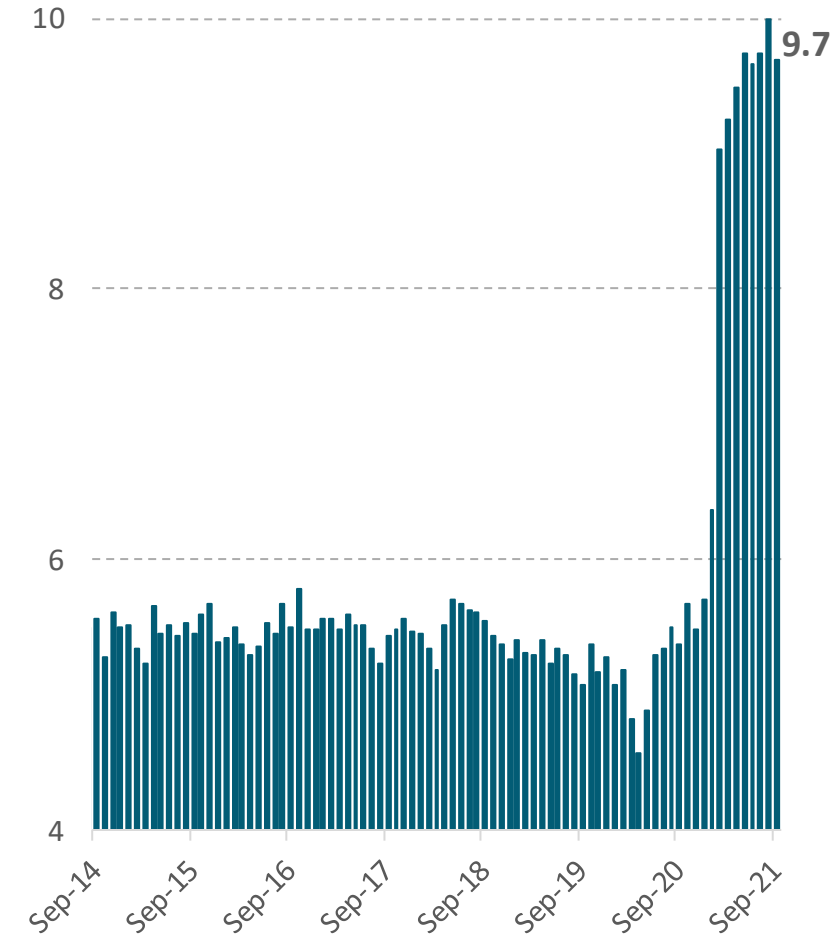
House prices - countries



U.S. Housing Components



U.S. Rent Price Expectation 1 Year Ahead (%)

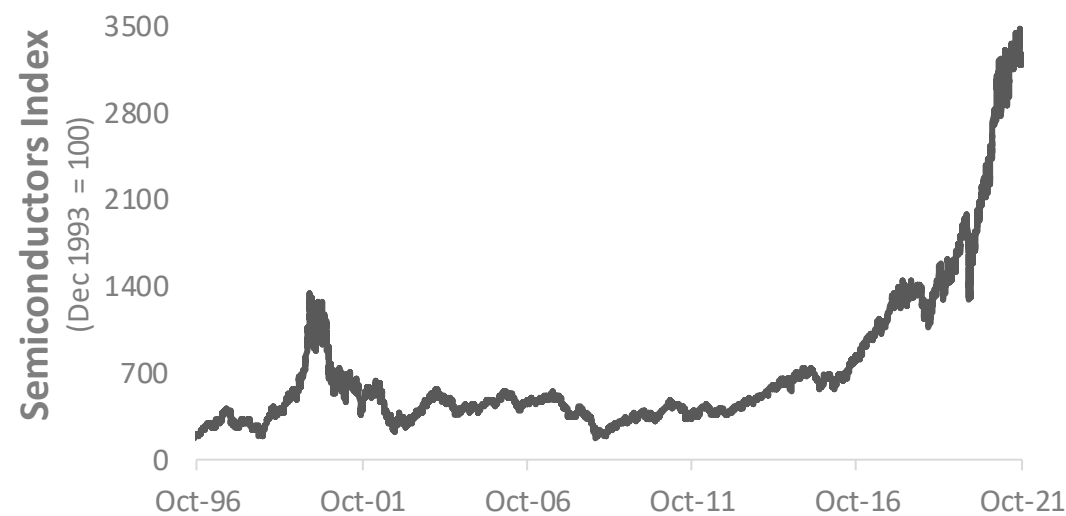
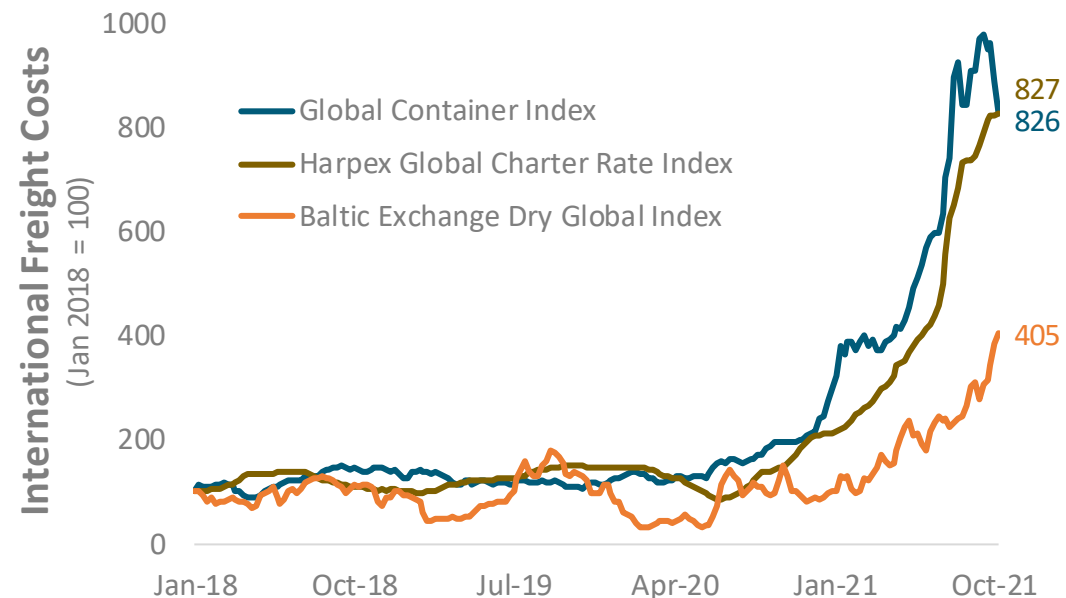
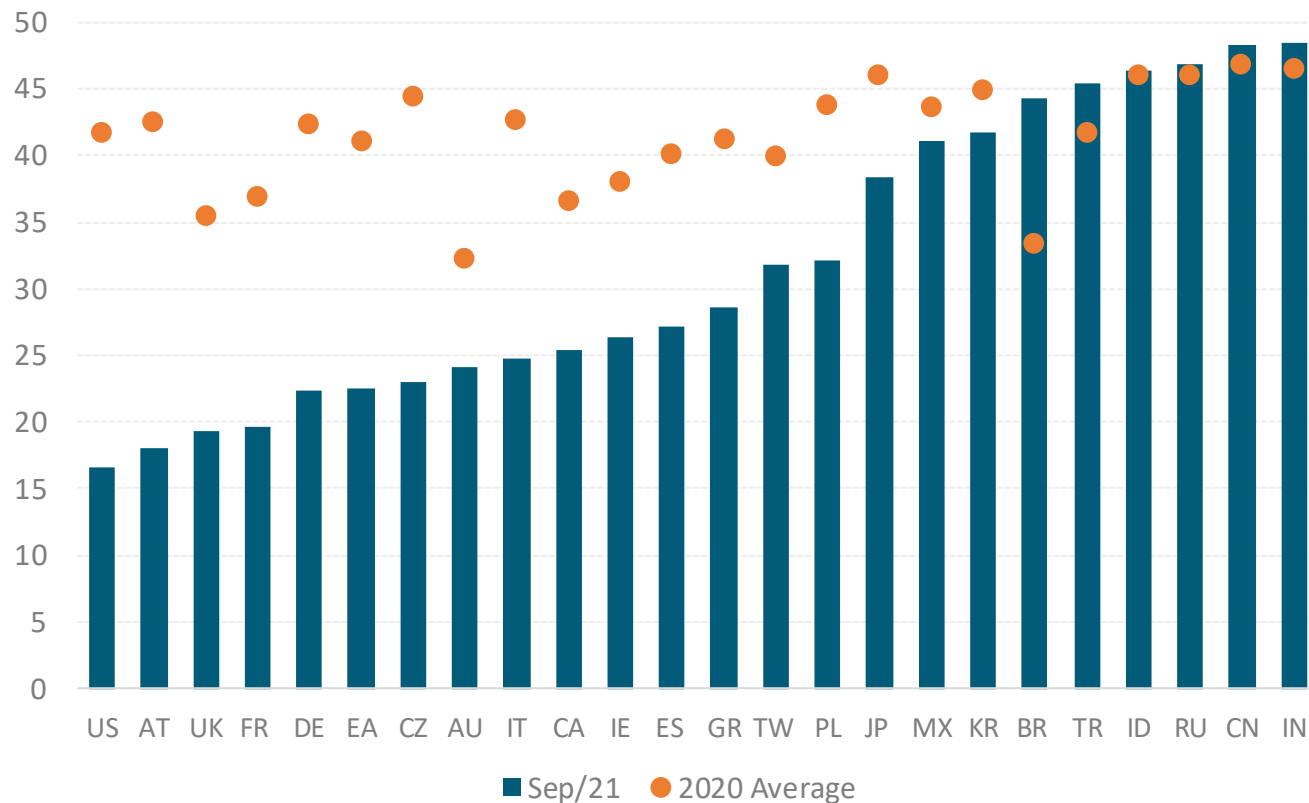


Sectoral bottlenecks

Indicators suggest bottlenecks in the global economy.

PMI Manufacturing Delivery Times

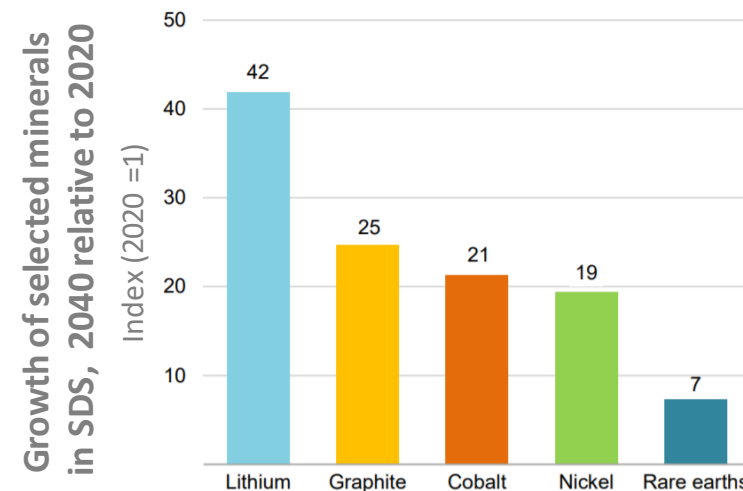
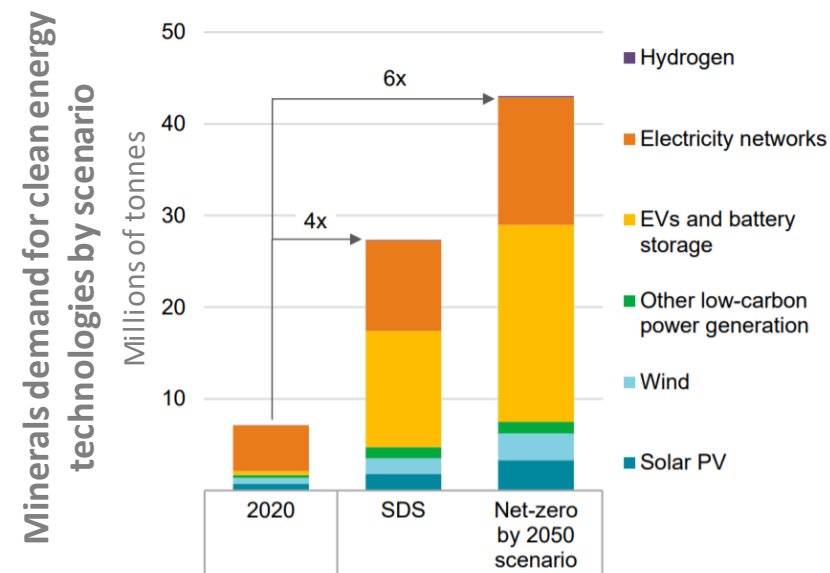
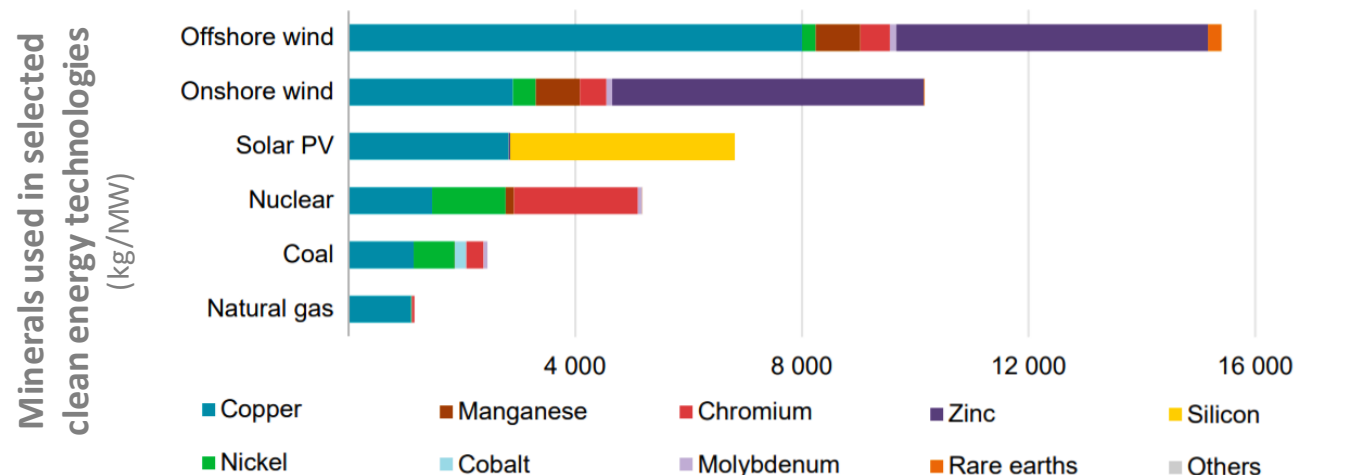
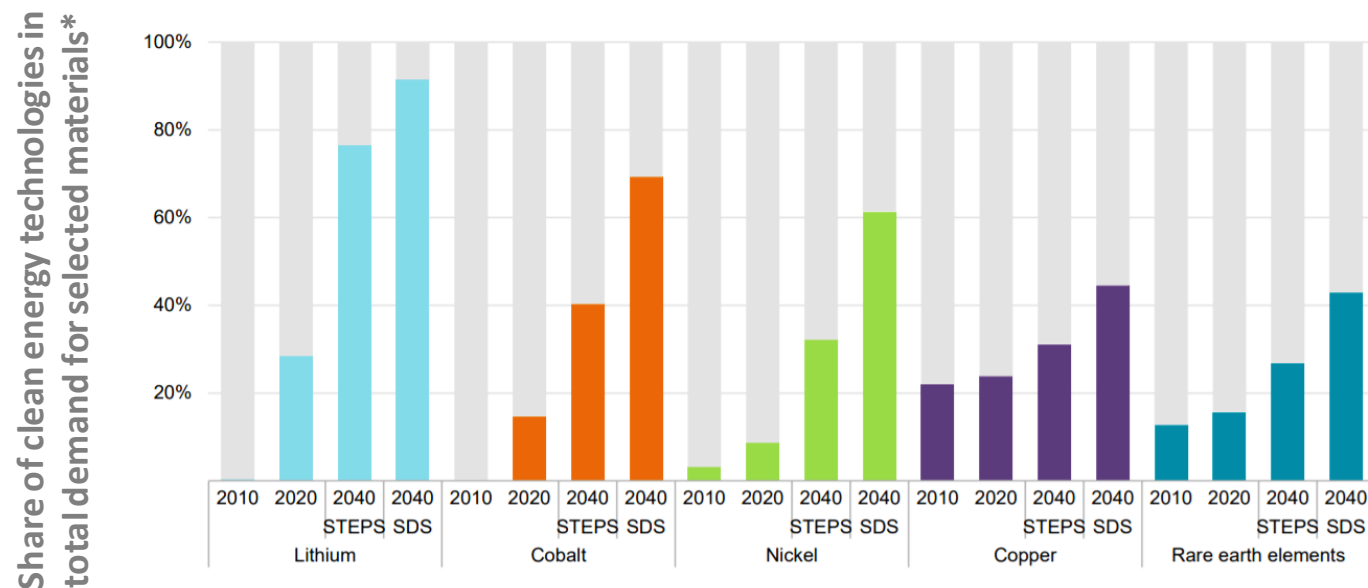
(Smaller numbers represent longer time)



Semiconductors = Philadelphia Stock Exchange Semiconductor Index

Green inflation

The transition for a greener economy is fueling a huge demand for key raw materials.



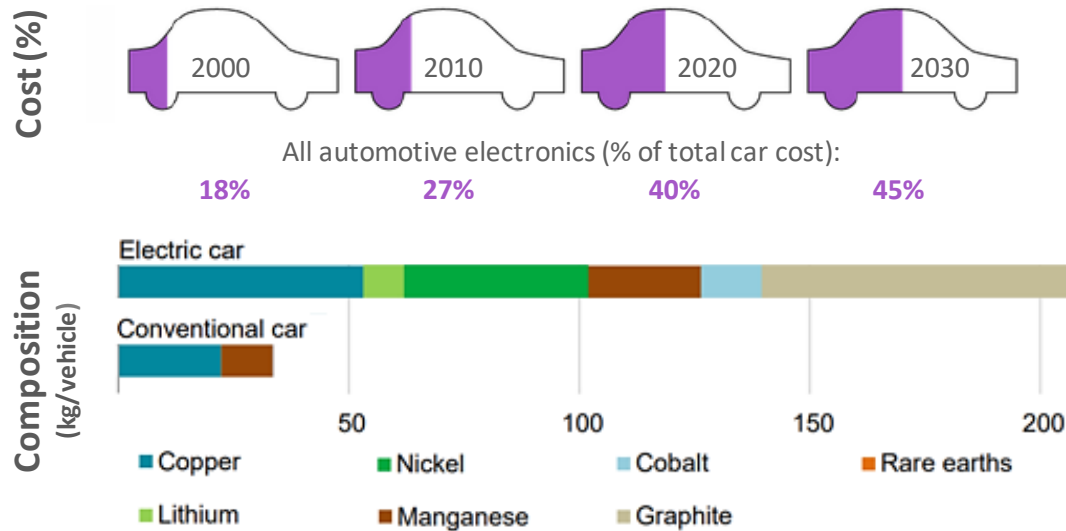
* Demand from other sectors was assessed using historical consumption, relevant activity drivers and the derived material intensity. STEPS = Stated Policies Scenario, an indication of where the energy system is heading based on a sector-by-sector analysis of today's policies and policy announcements; SDS = Sustainable Development Scenario, indicating what would be required in a trajectory consistent with meeting the Paris Agreement goals.

Green inflation (cont.)

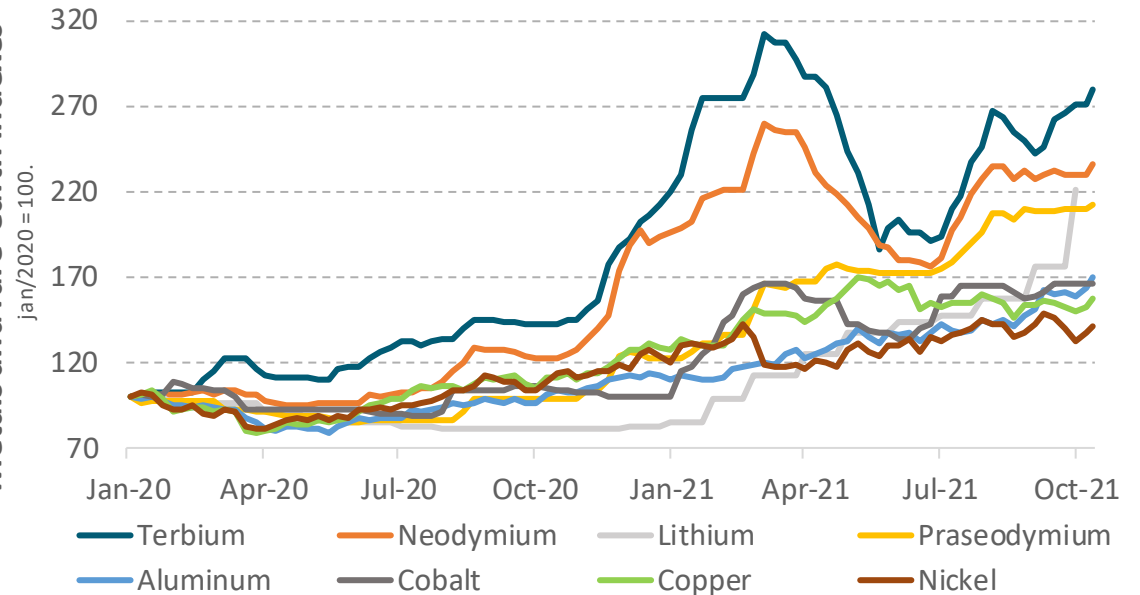
Mineral demand for clean energy technologies is increasing. The climate-change fight is adding to the global inflation.



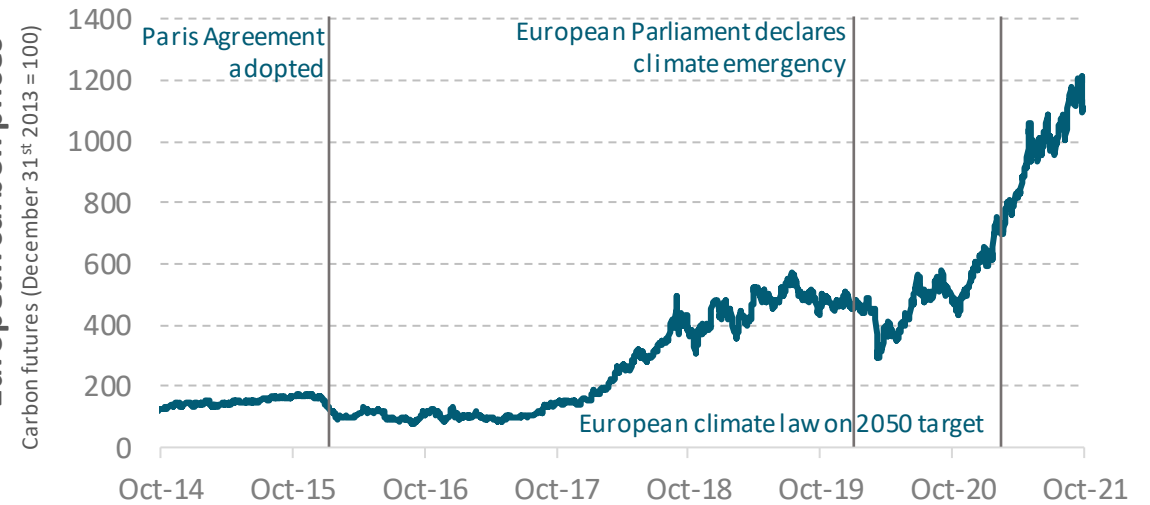
Modern cars are relying more on electronics that include semiconductors



Metals and rare-earth indexes



European carbon prices

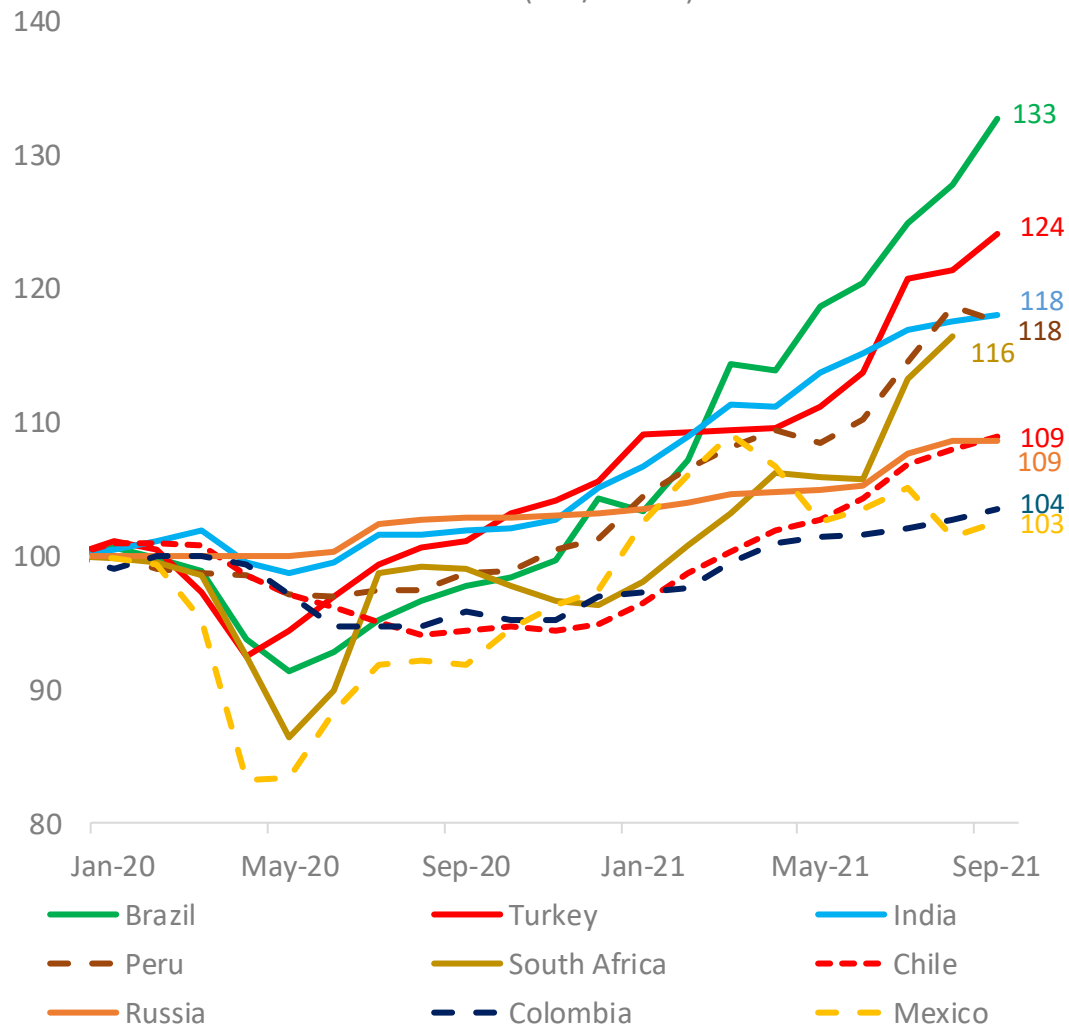


Sources: Researcher and Research (therncorp.com), CPM Group, International Energy Agency (IEA), Bloomberg.

Energy prices

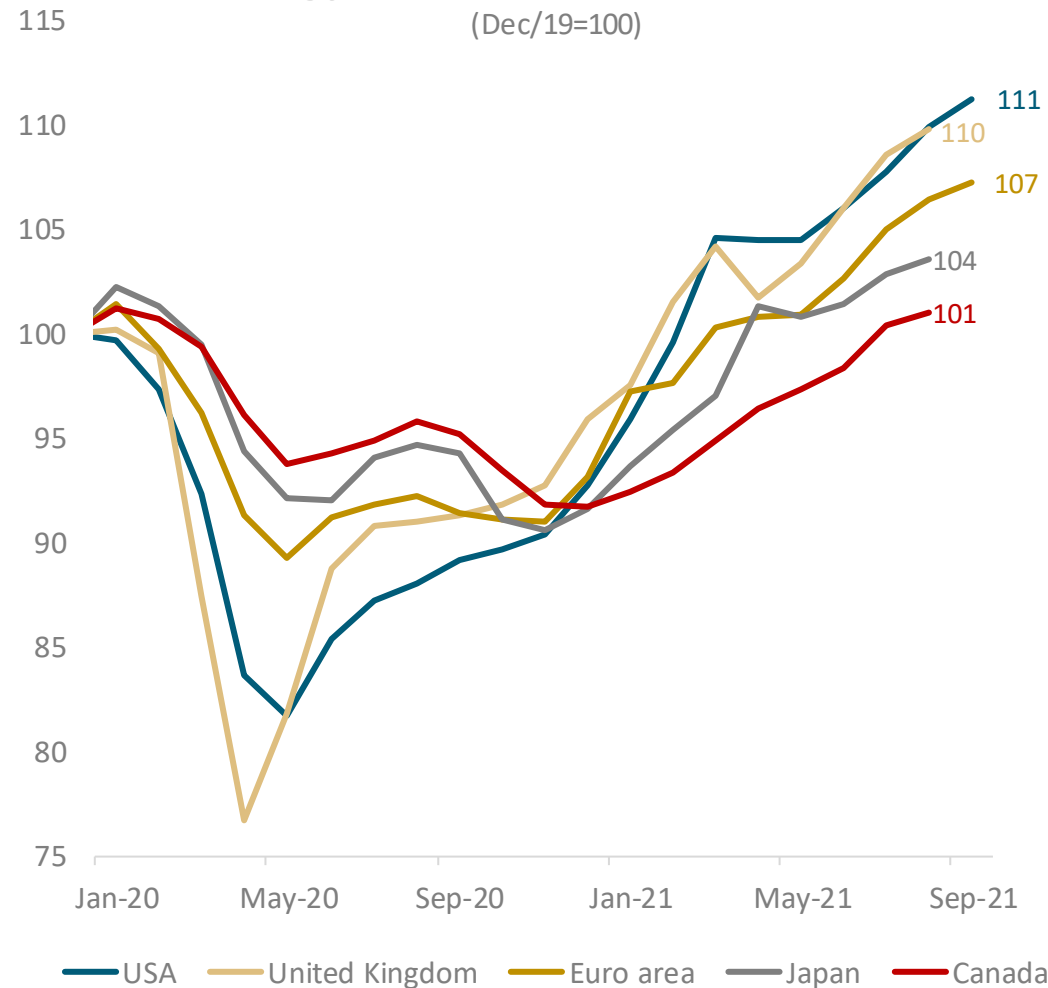
Energy Prices - Emerging countries

(Dec/19=100)



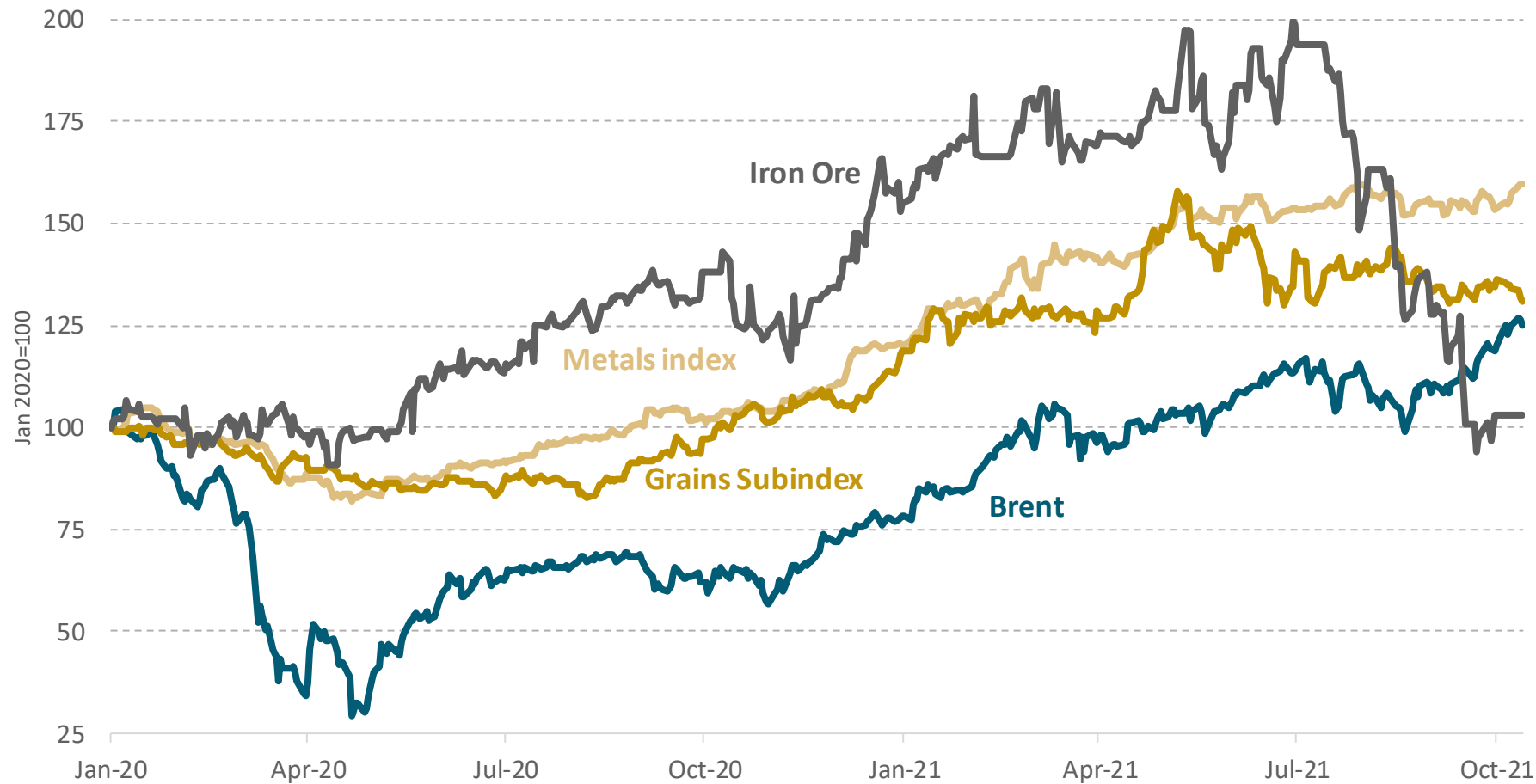
Energy Prices - Advanced countries

(Dec/19=100)



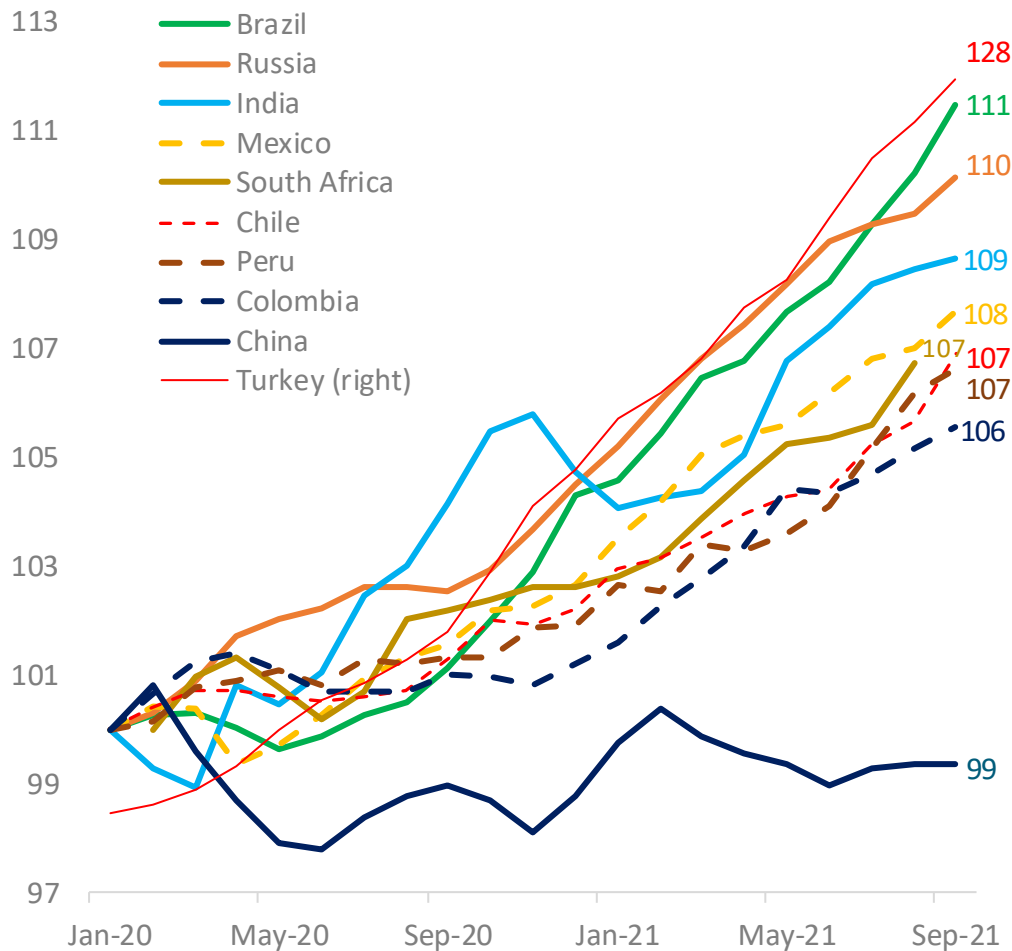
Commodity prices

Brent, metals, iron ore and grains

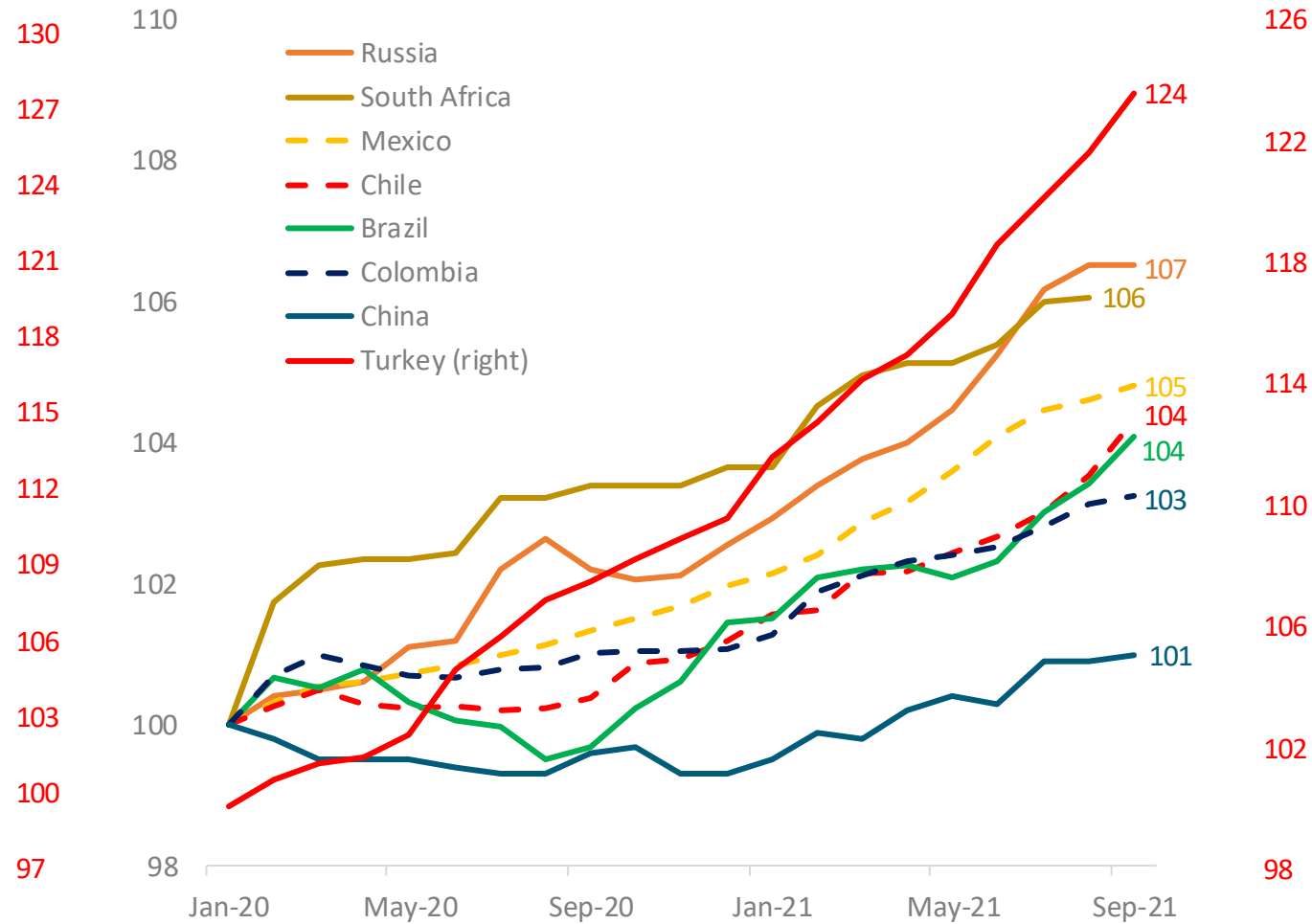


Emerging economies: inflation

CPI
(jan 2020=100)



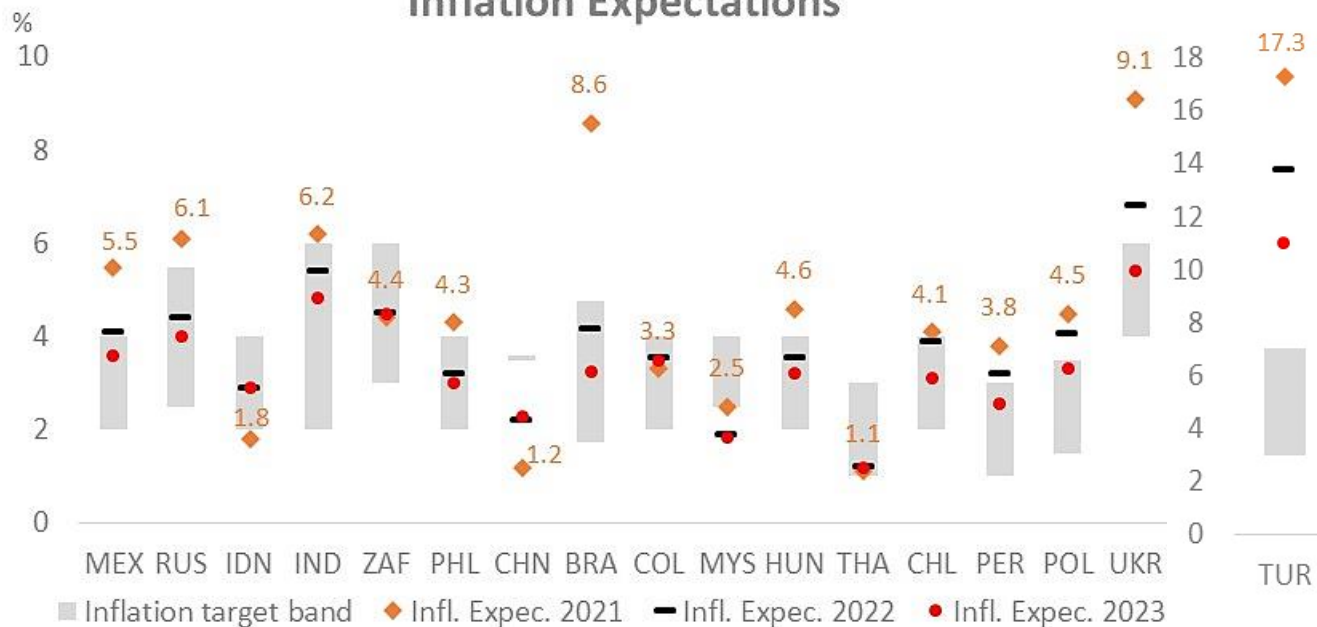
CPI Services
(jan 2020=100)



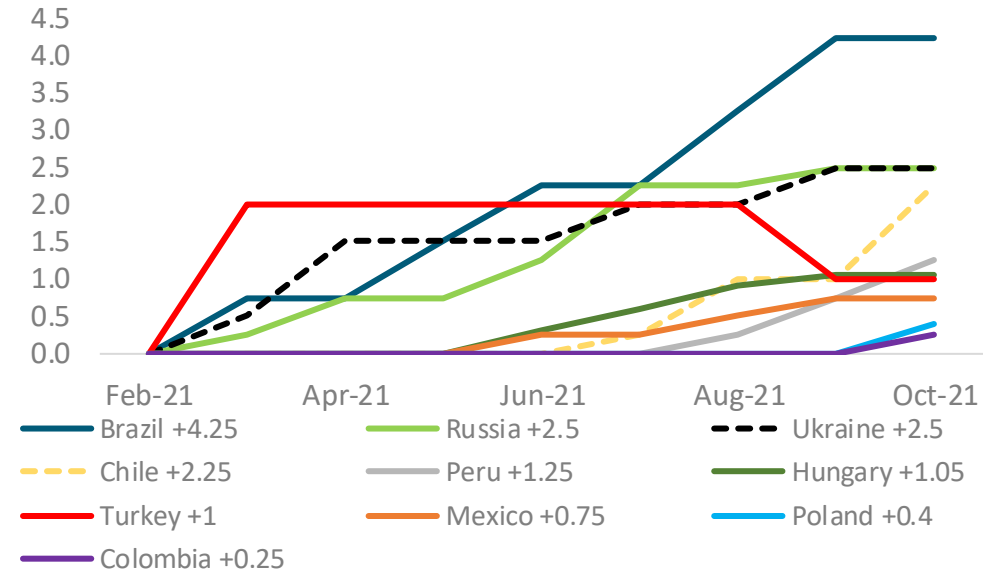
EMEs: inflation expectations and monetary policy

Several EMEs facing inflation pressures are raising interest rates. Most EMEs remain with inflation expectations anchored.

Inflation Expectations



Interest rate change since Feb/21 (% YoY)



Policy rates (%)

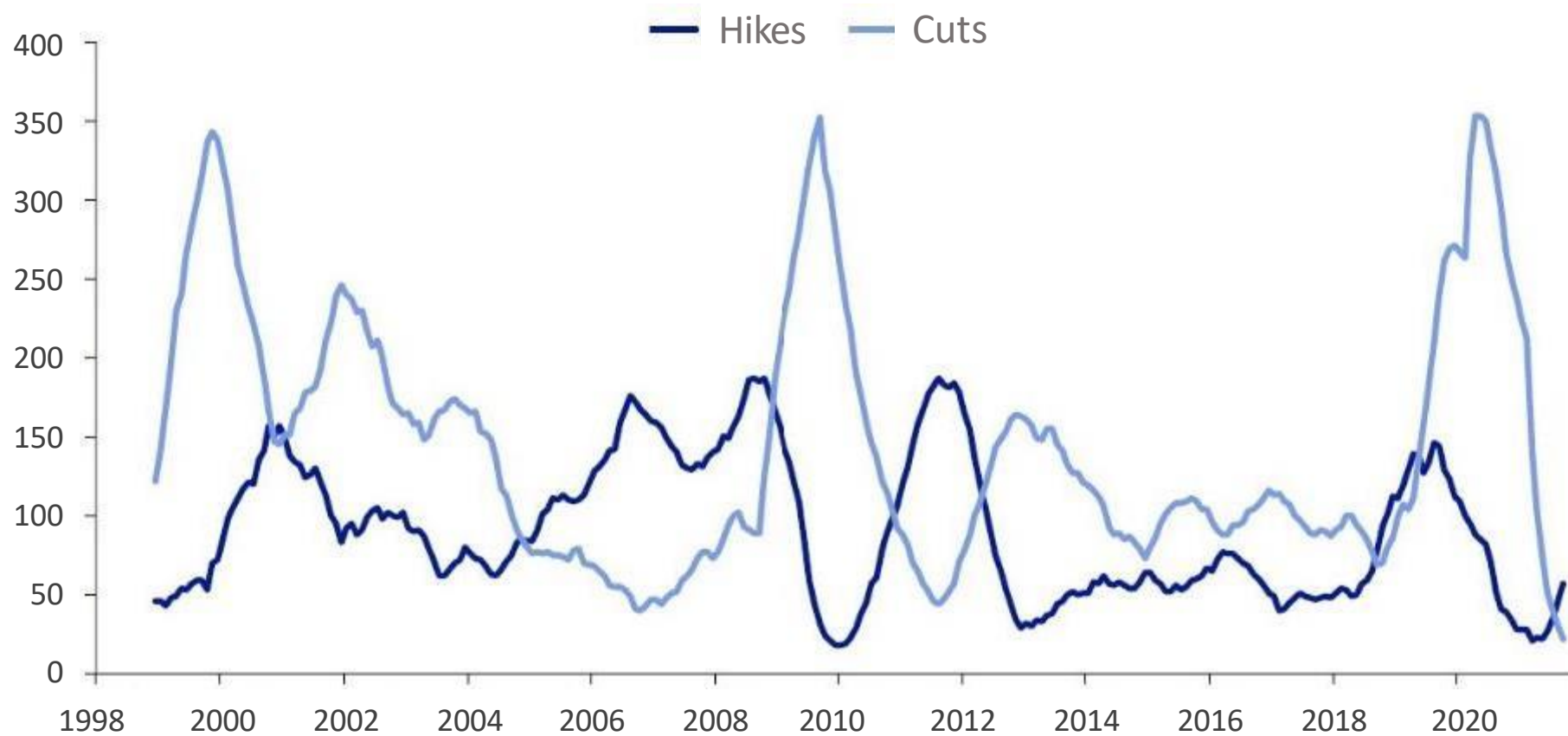


Monetary Policy

In terms of global central bank decisions of hikes exceeding cuts, we are now at the highest differential for a decade.

Number of Global Central Bank Decisions - Hikes and Cuts*

(rolling 12-month basis)

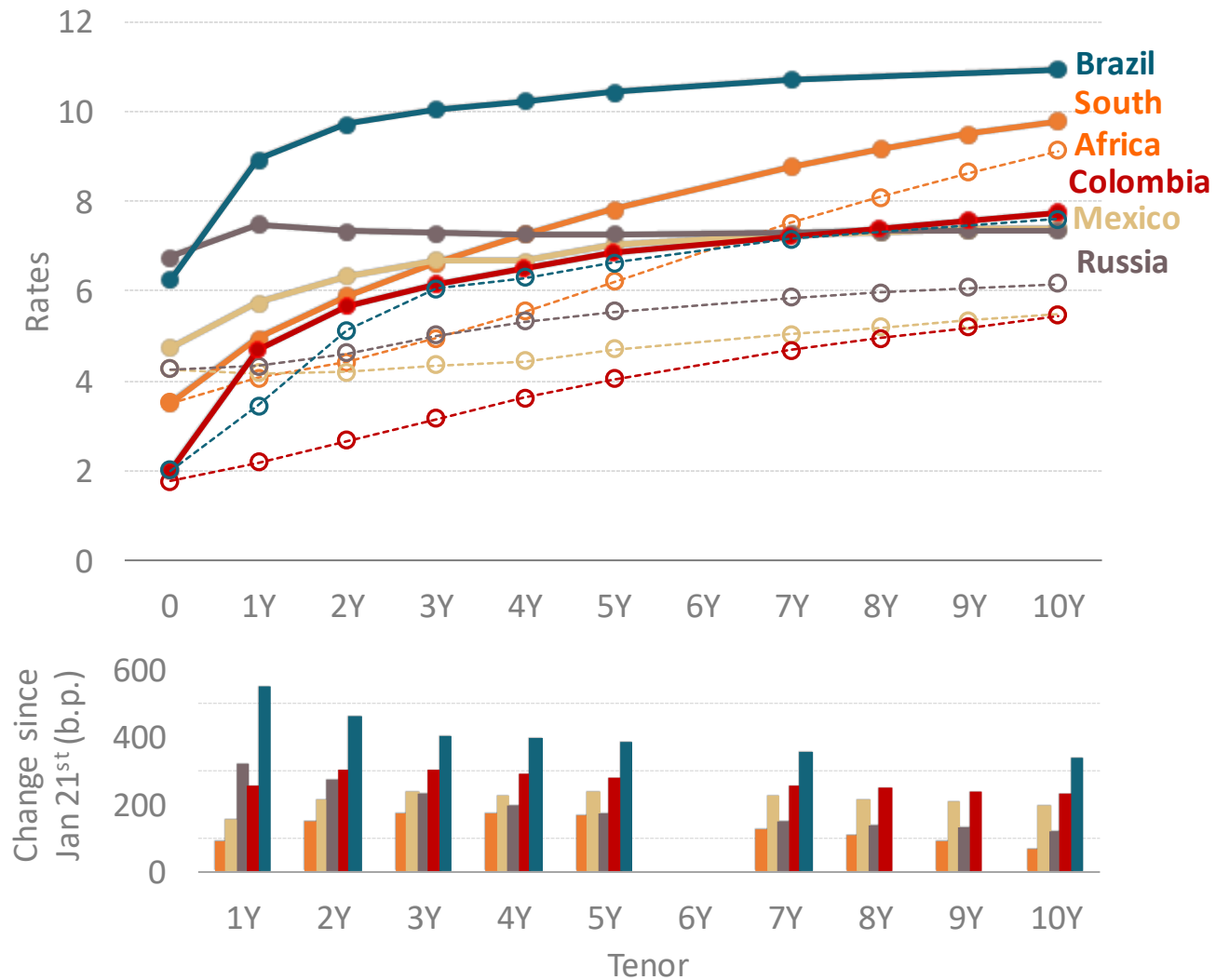


*Sample 21 countries from 1999, 50 from 2005, 60 from 2007, 70 from 2010, 79 from 2013, 80 from 2015.

EMEs: interest rates

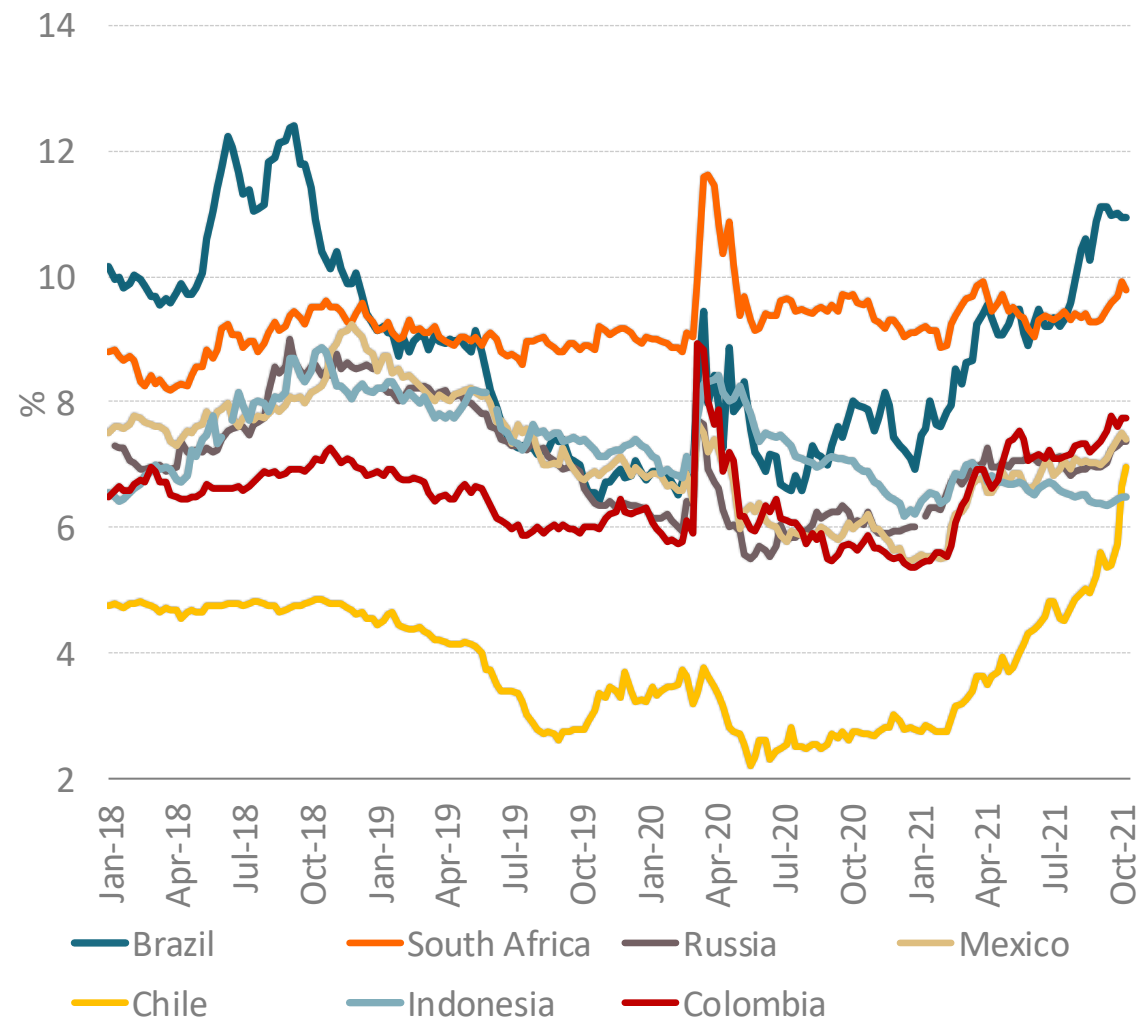
Yield curves

(Jan 20 (dashed lines) - Oct 13 (continuous line), 2021)



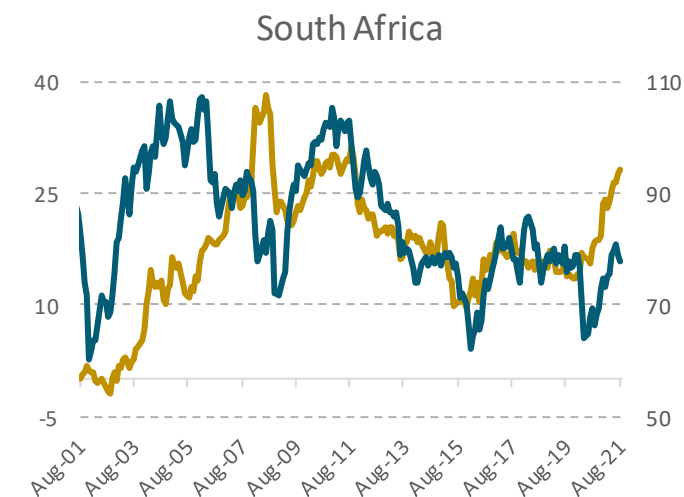
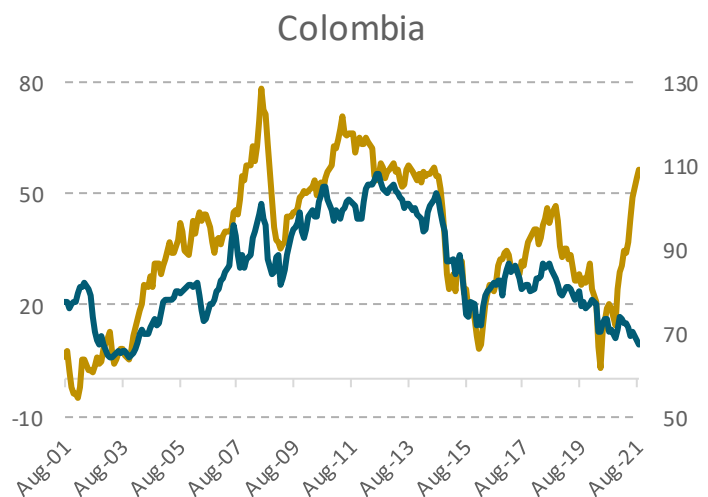
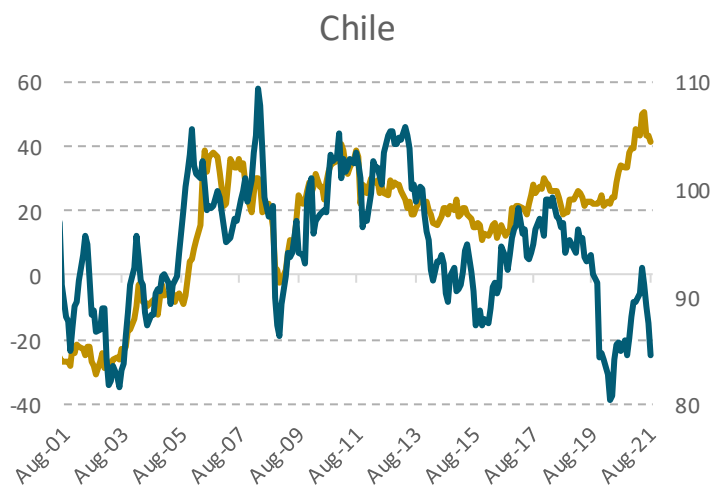
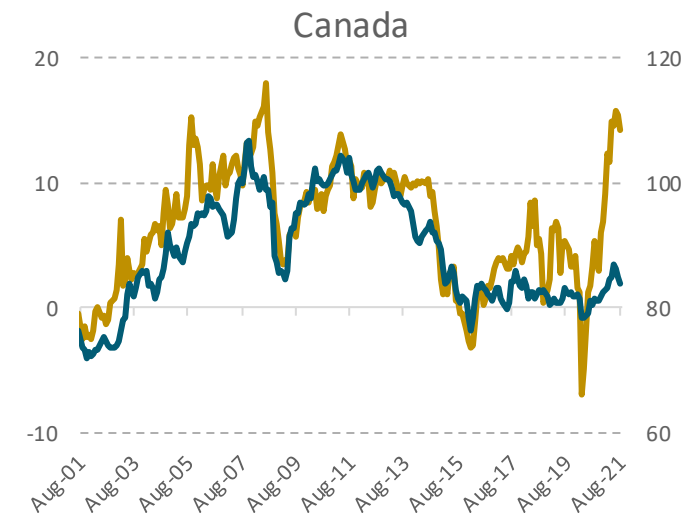
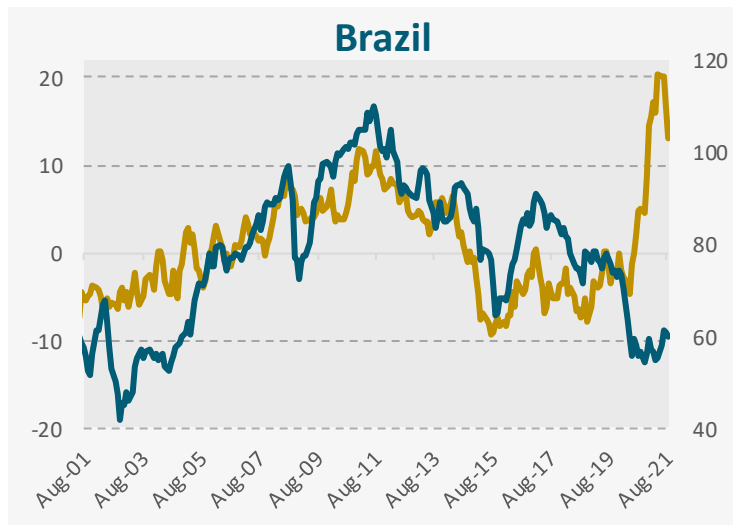
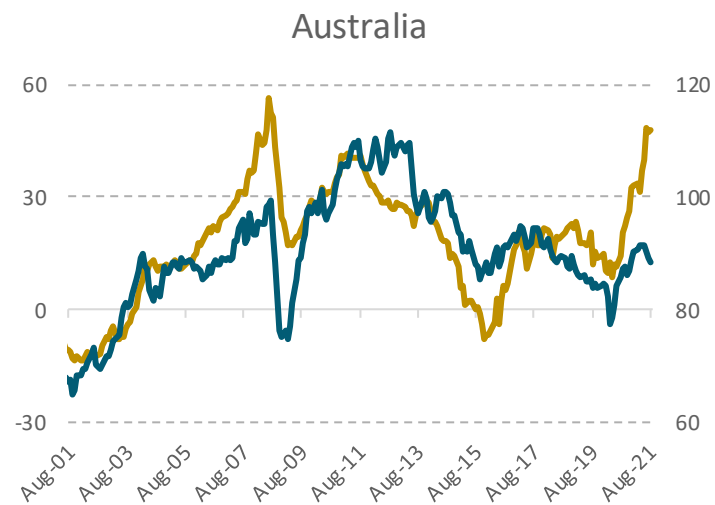
10y nominal interest rate

(%)



Real FX rate and terms of trade

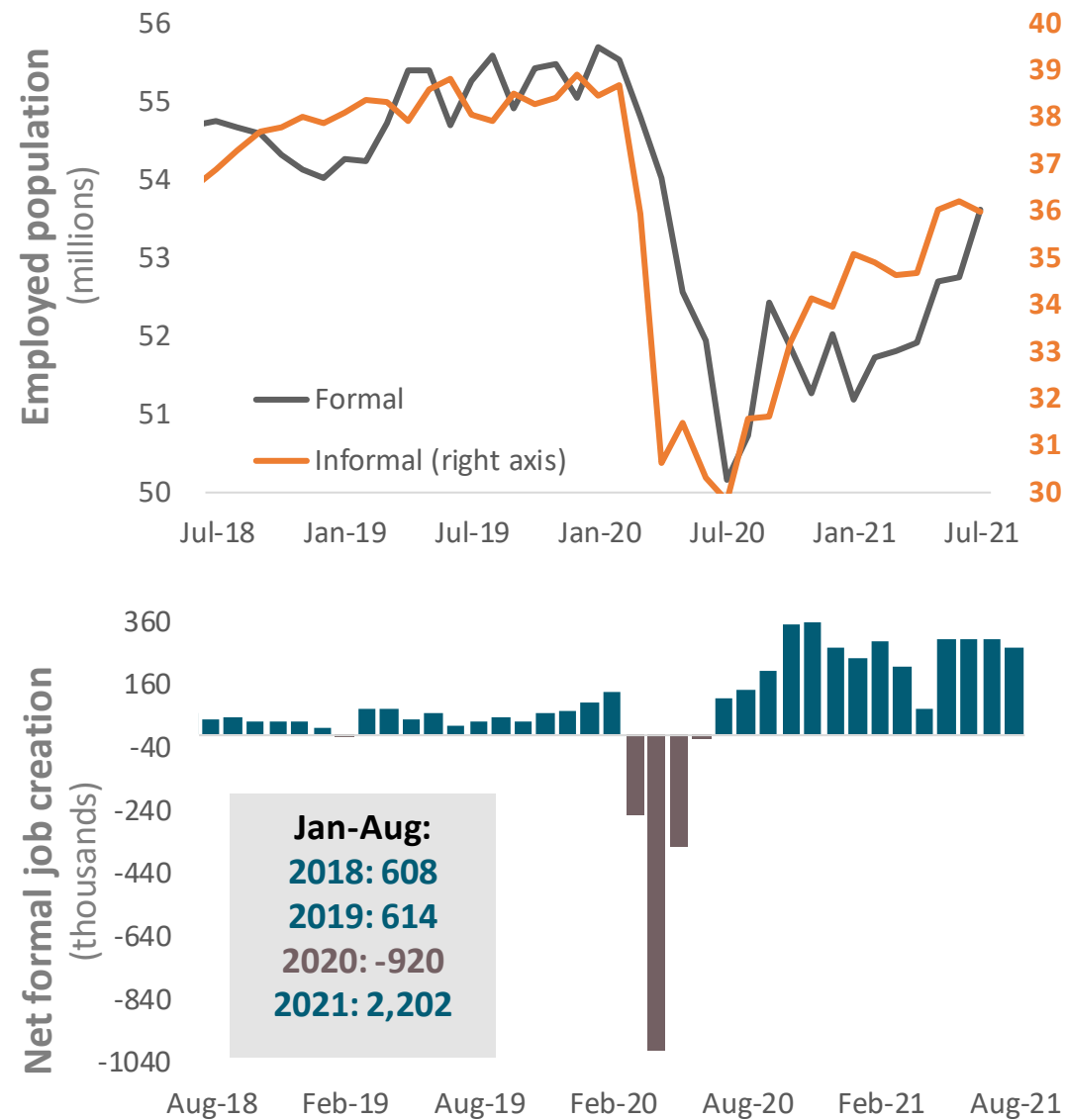
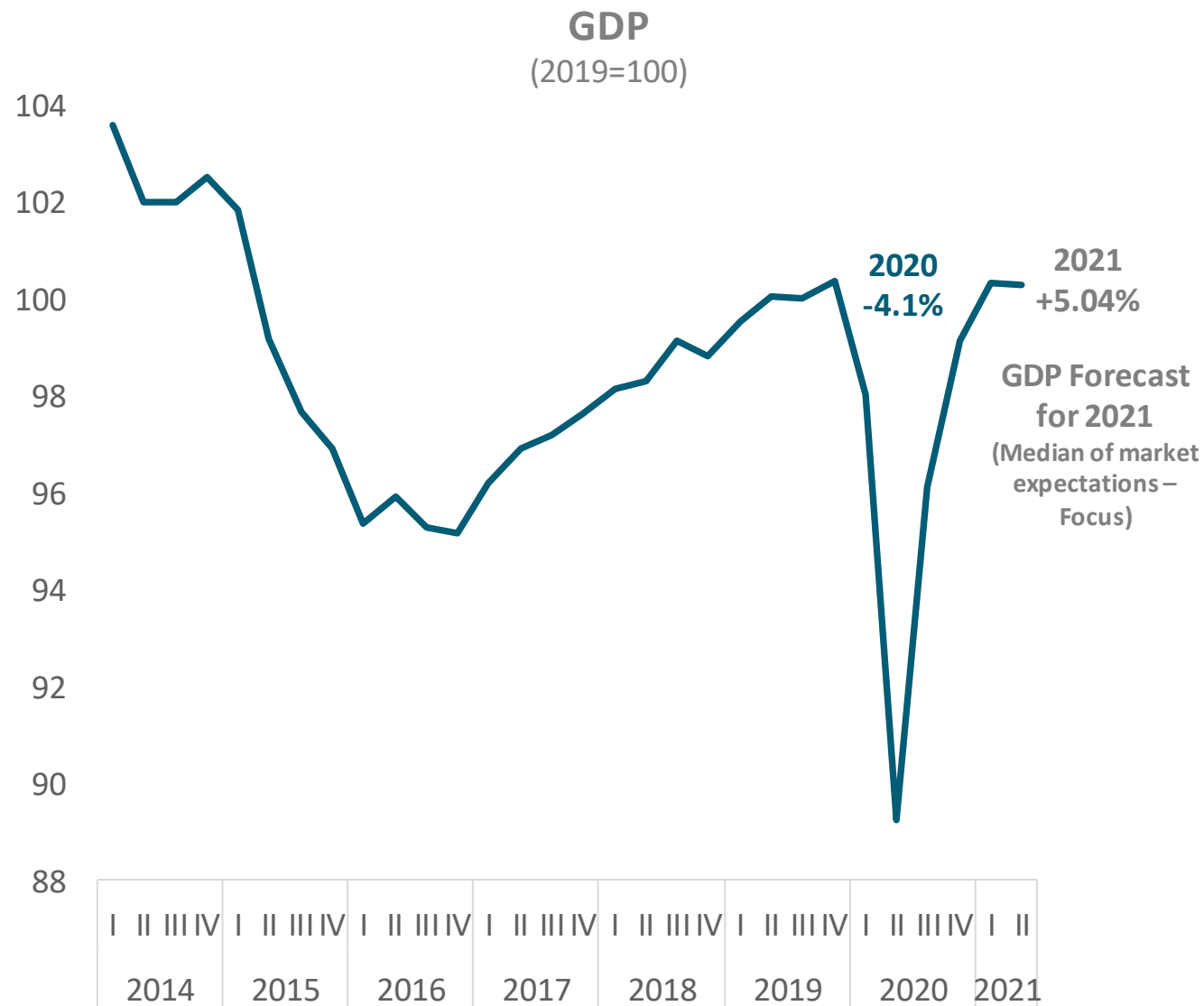
Indexes of effective foreign exchange rate and terms of trade detached



— Terms of trade — Real effective exchange rate (right)

Brazil: GDP and labor market

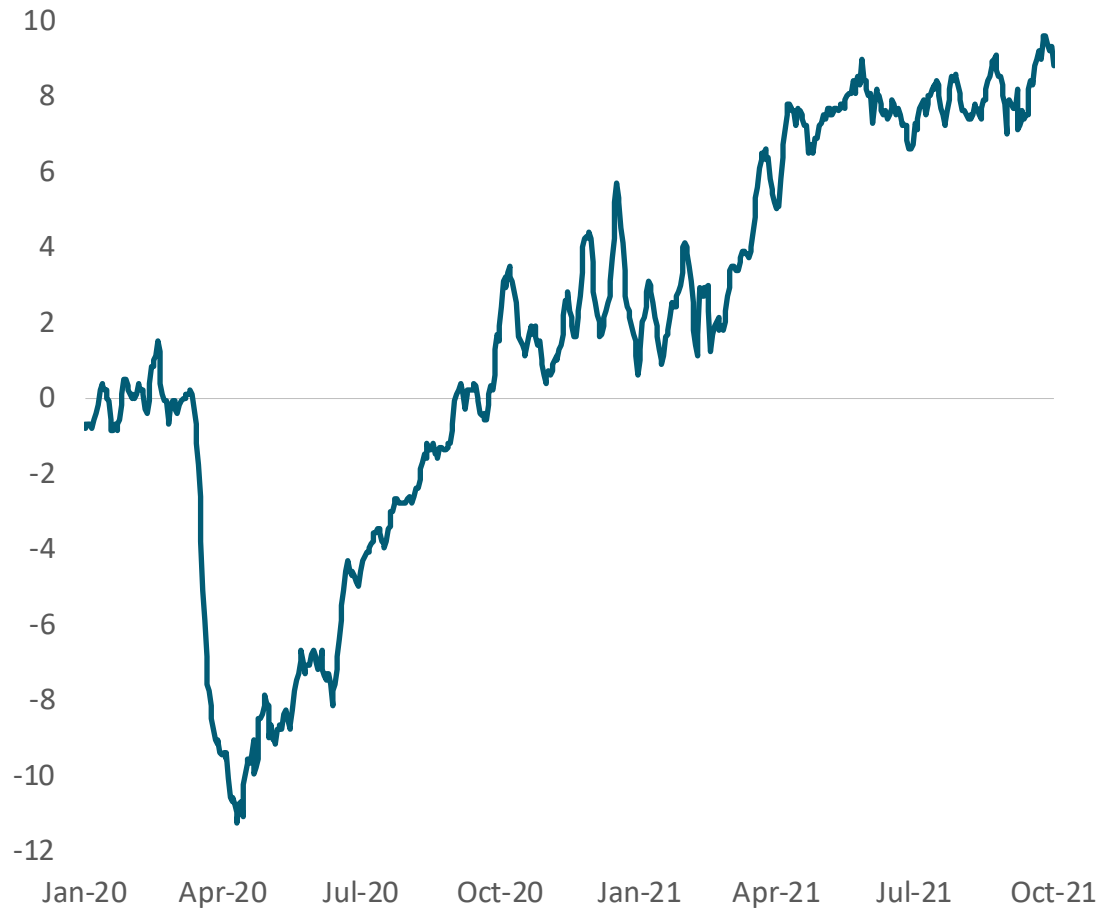
Strong recovery of GDP and jobs in 2021



High frequency indicators

Electricity demand

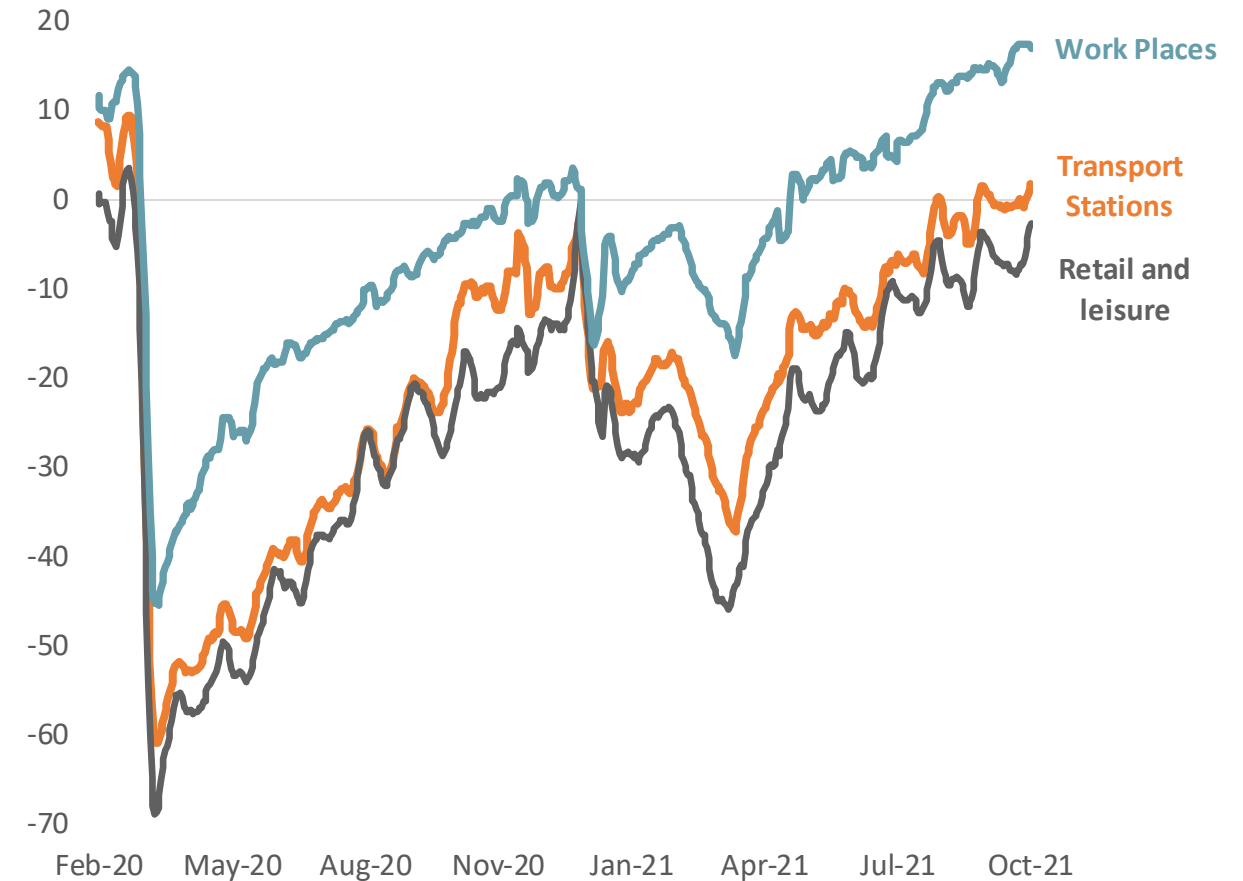
mm7d; % change compared to reference period^{1/}



1/ Reference period: 5/Jan/2020 to 22/Feb/2020

Mobility indicator

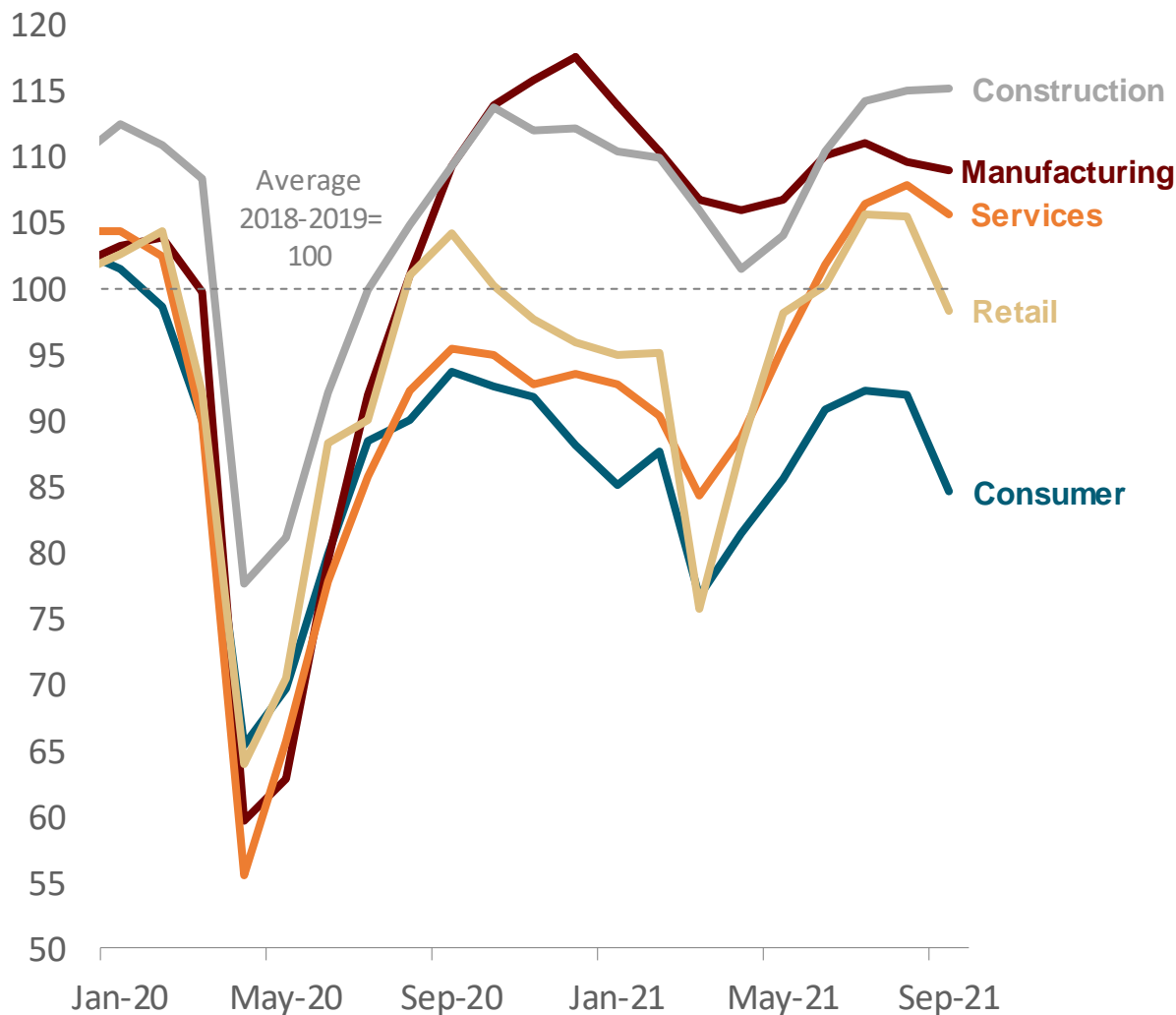
mm7d; % change compared to reference period^{2/}



2/ Google Mobility: 3/Jan/2020 to 6/Feb/2020

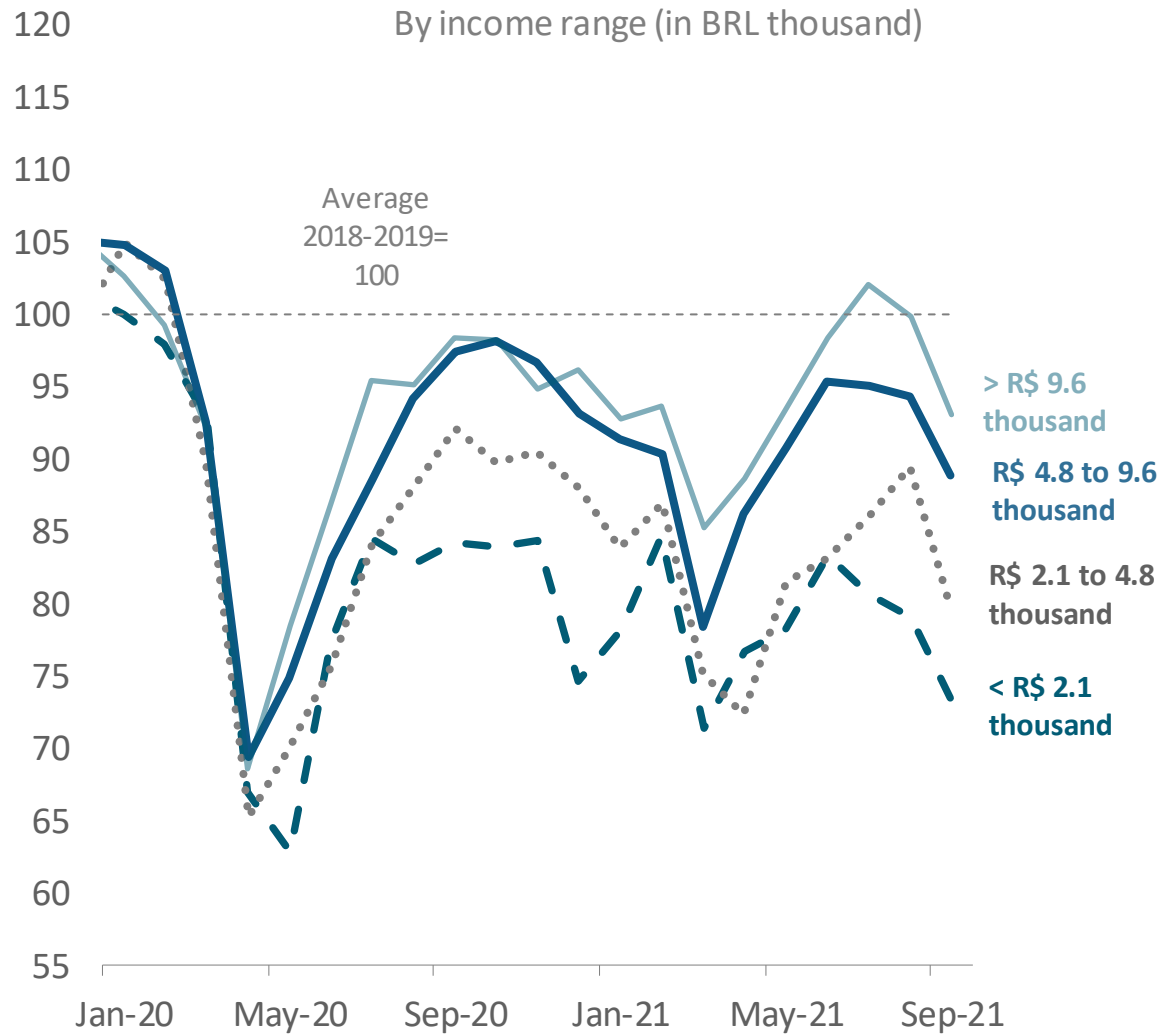
Confidence indicators

Business confidence X consumer confidence



Consumer confidence

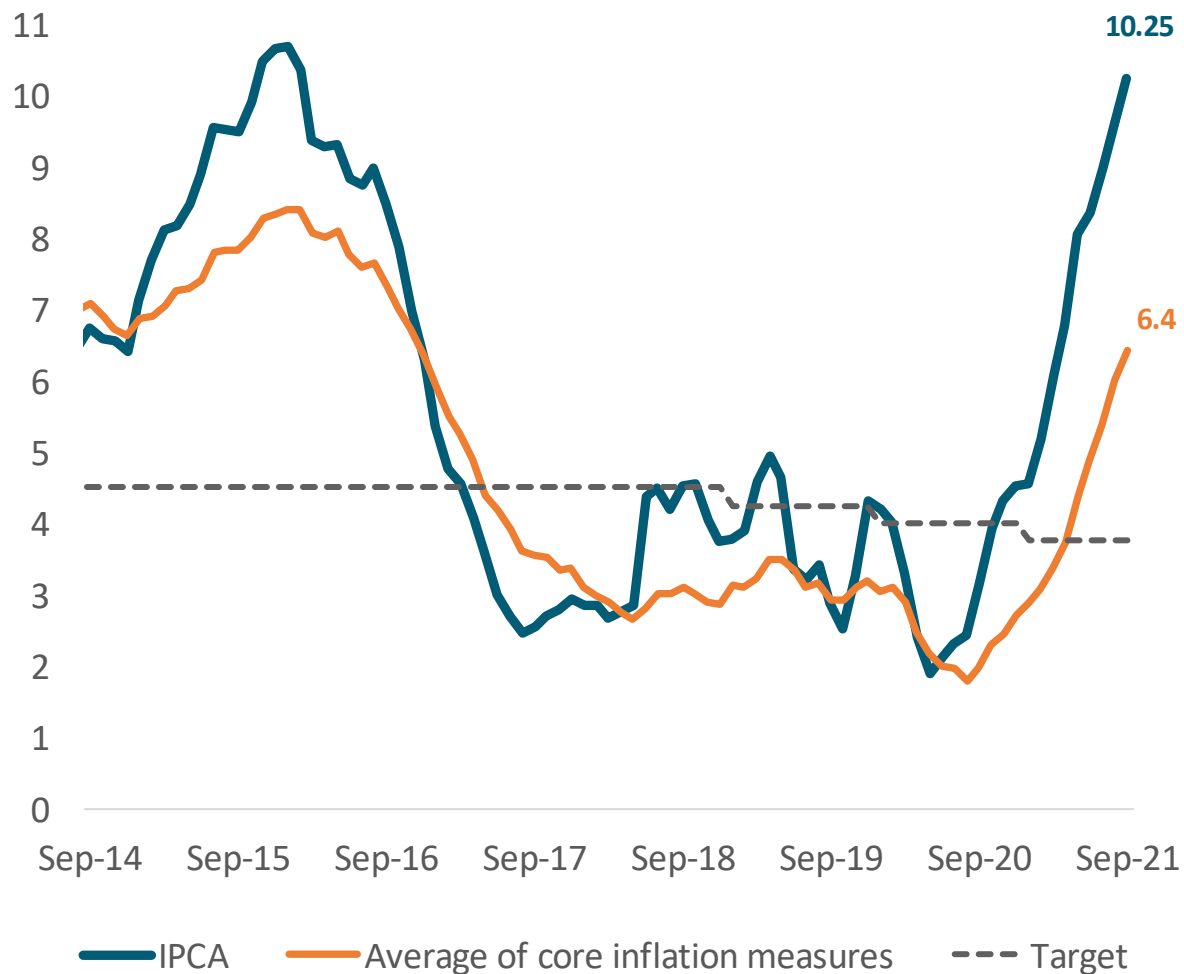
By income range (in BRL thousand)



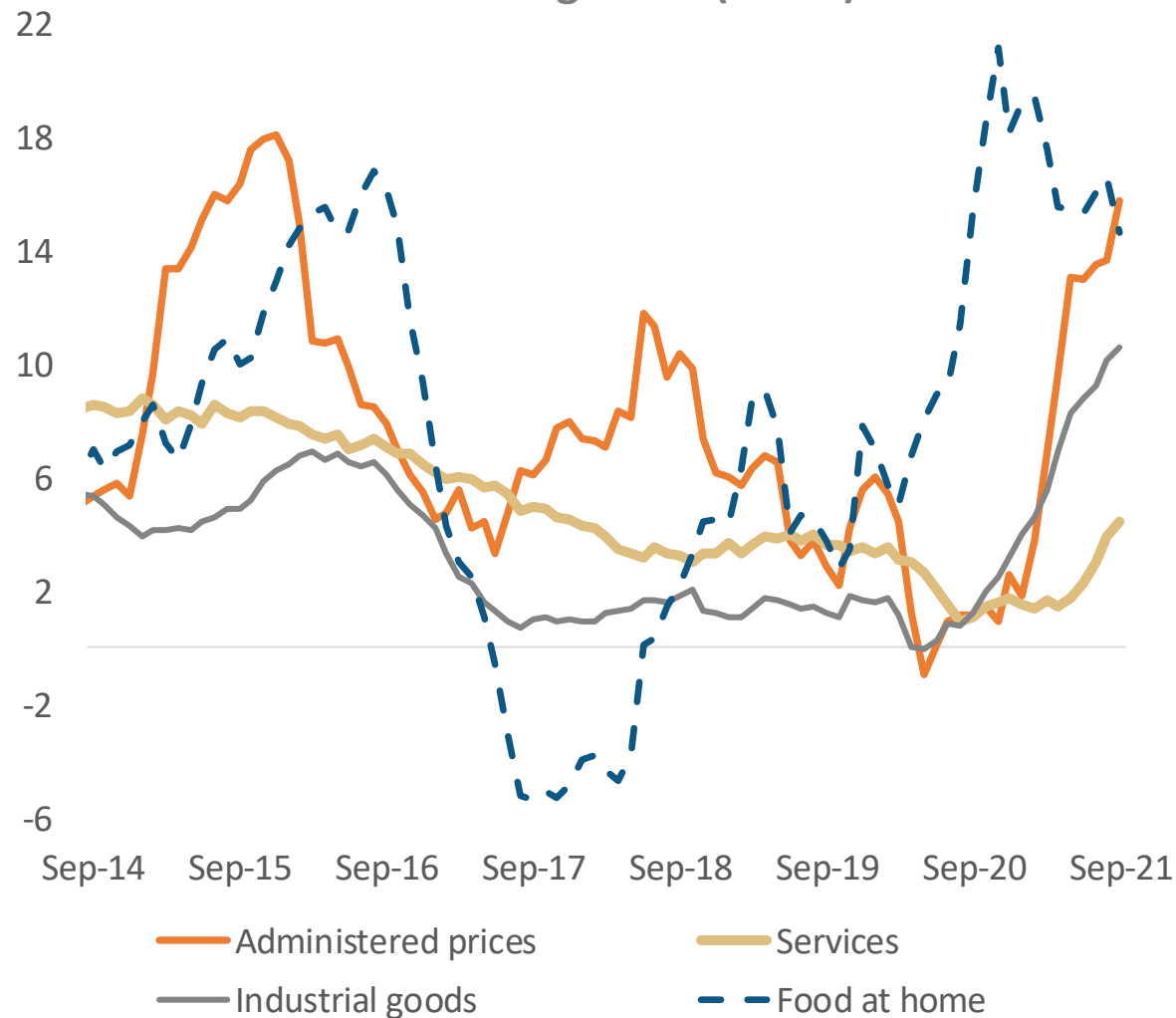
Source: FGV. Seasonally adjusted data.

Consumer inflation

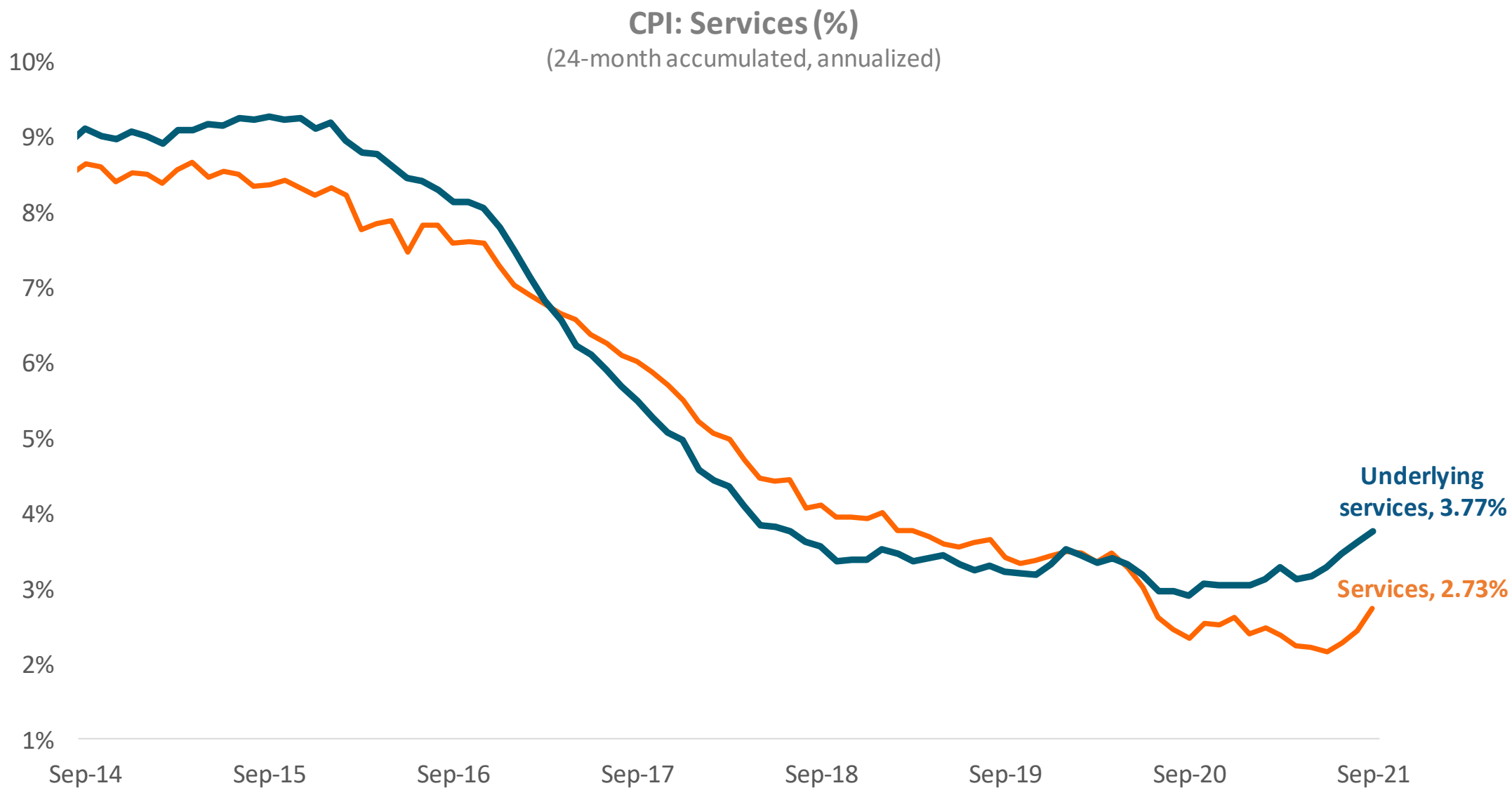
IPCA and target (% YoY)



Inflation segments (% YoY)

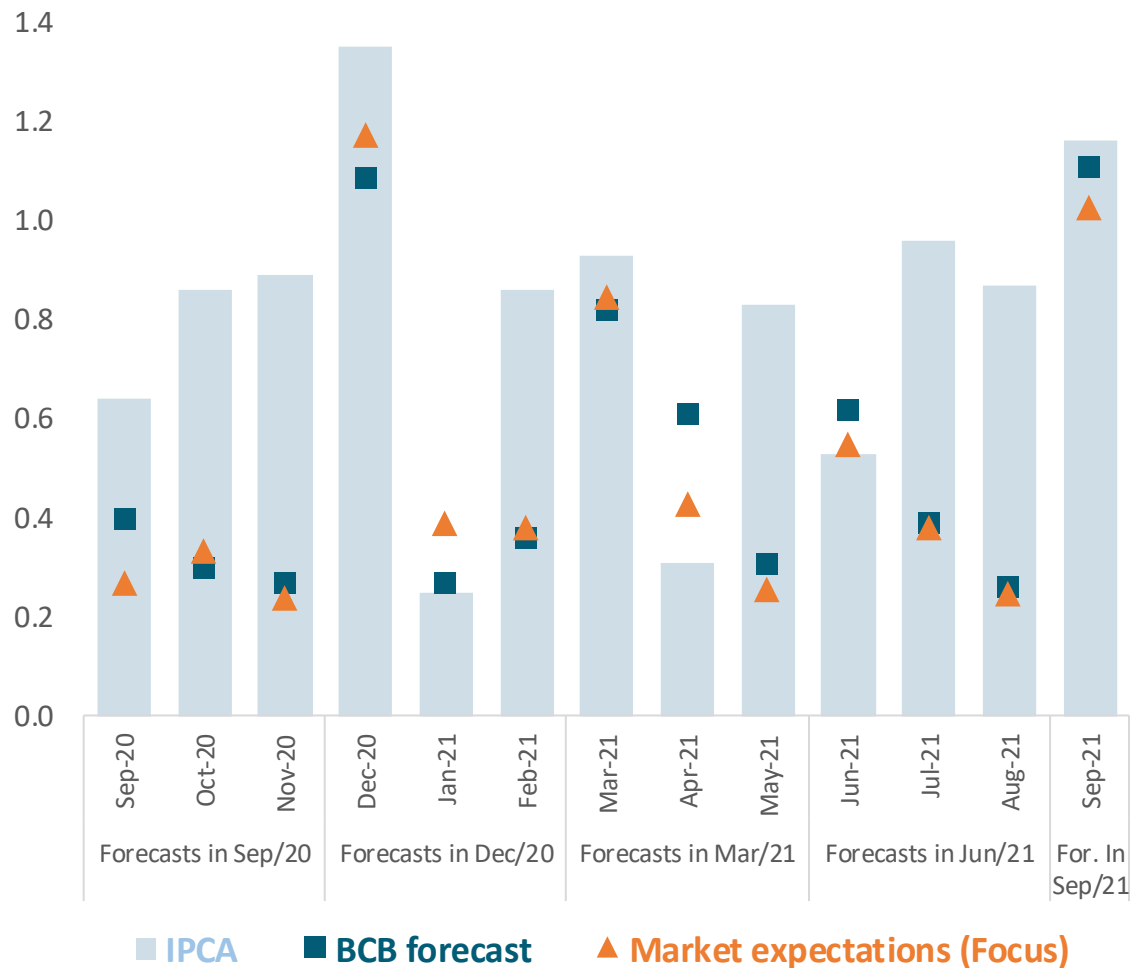


CPI: Services

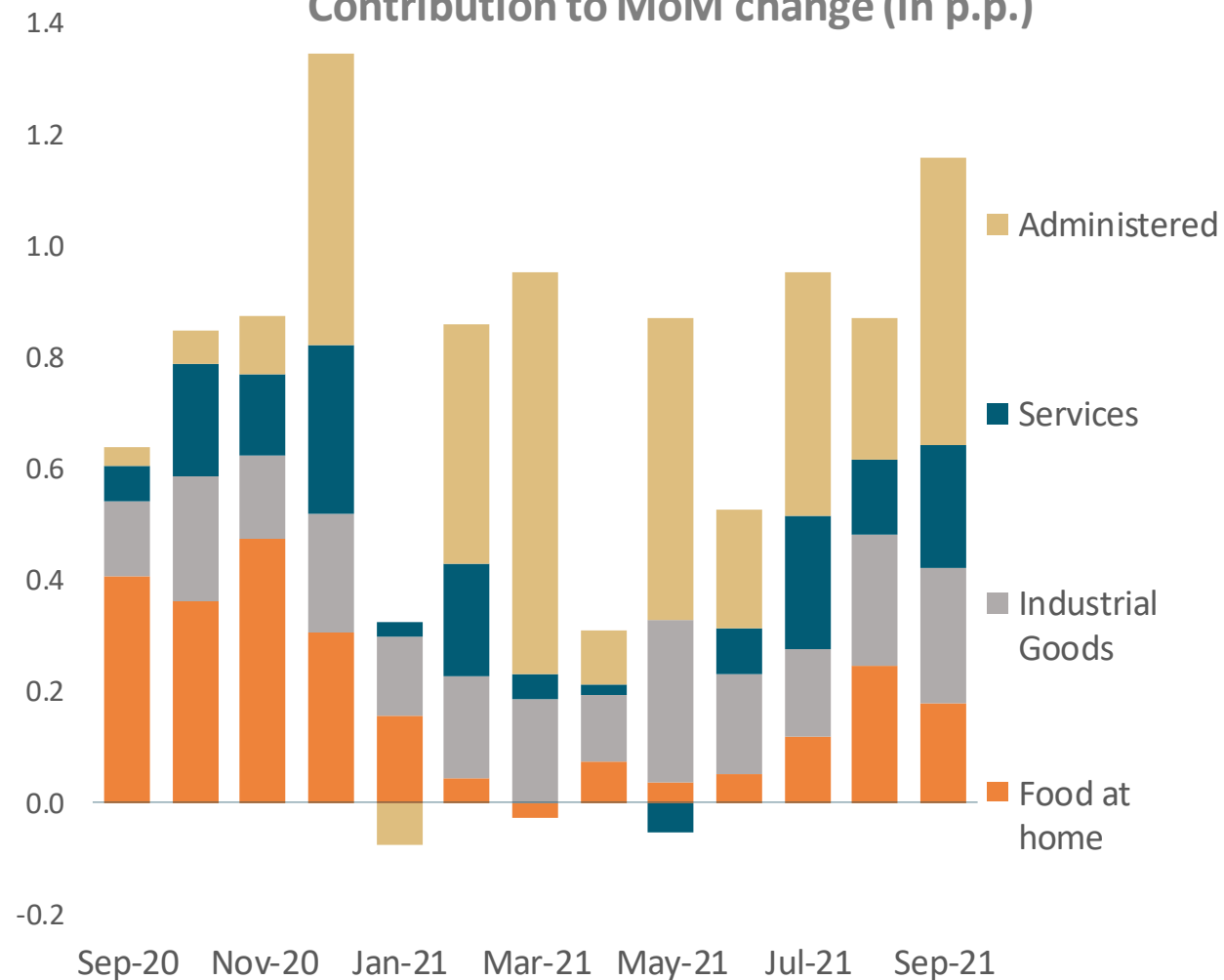


CPI: Surprises and decomposition

CPI surprises (% MoM)



Contribution to MoM change (in p.p.)

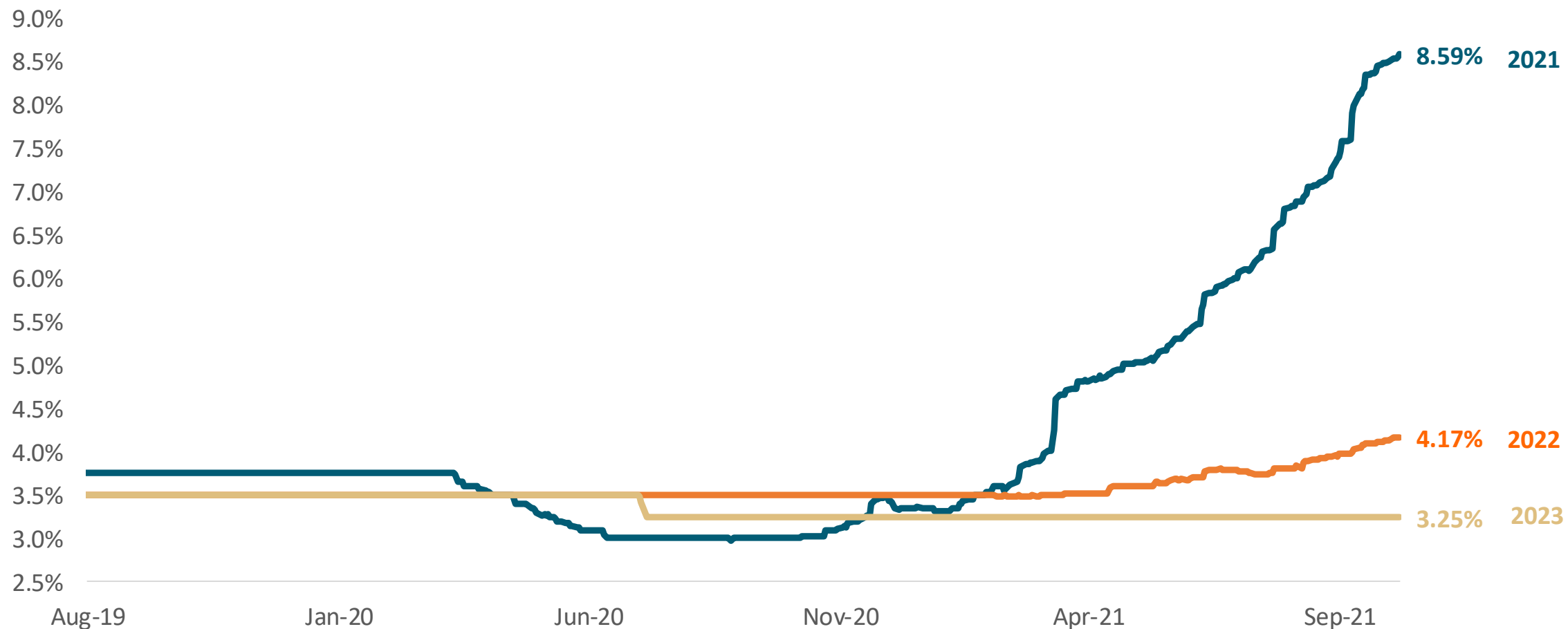


The date of the projections (in September, December, March and June) corresponds to the cutoff date of the Central Bank of Brazil Inflation Report.

Sources: IBGE, BCB.

Inflation expectations for CPI

Market expectations – Focus (% p.y.)



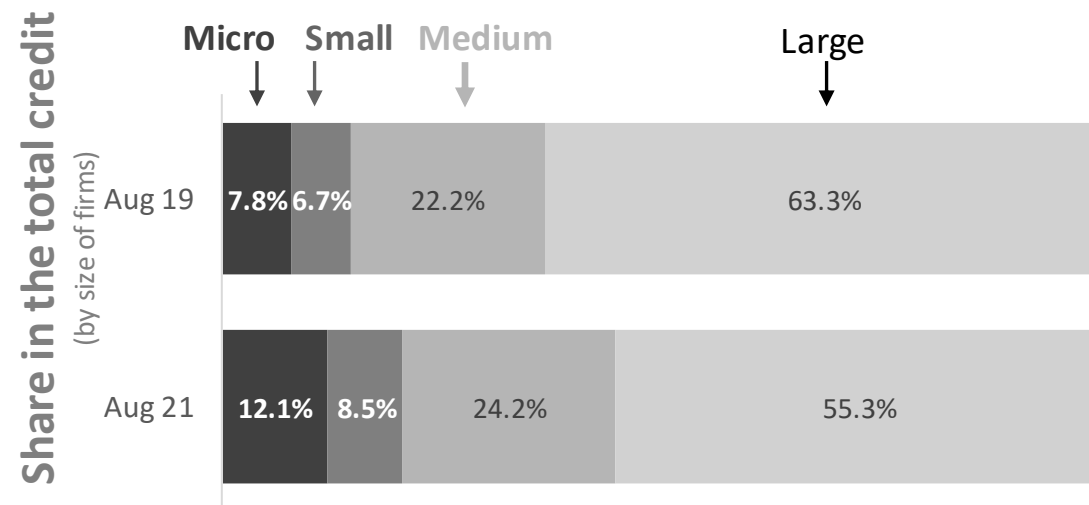
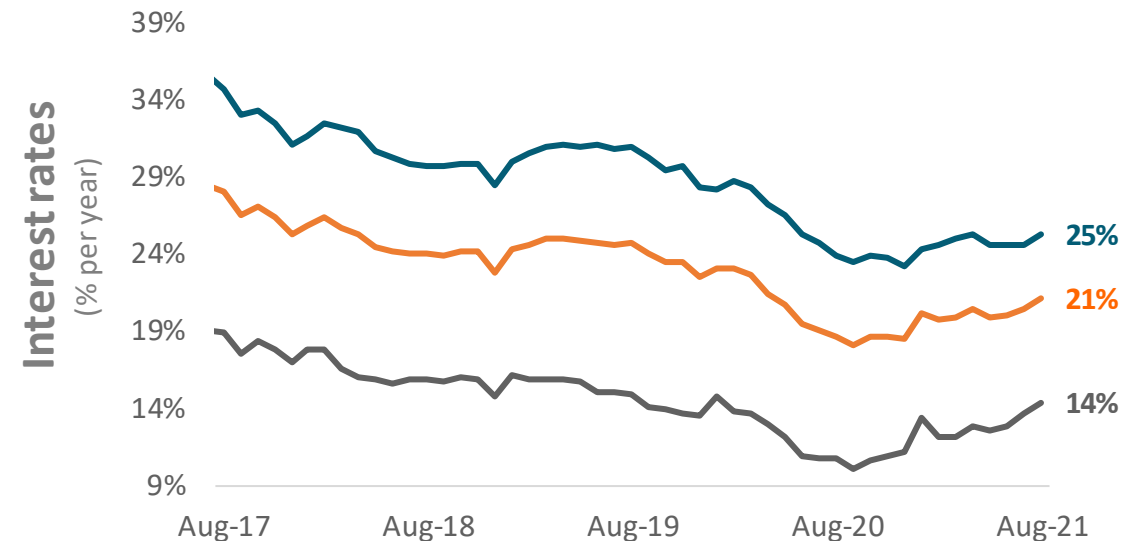
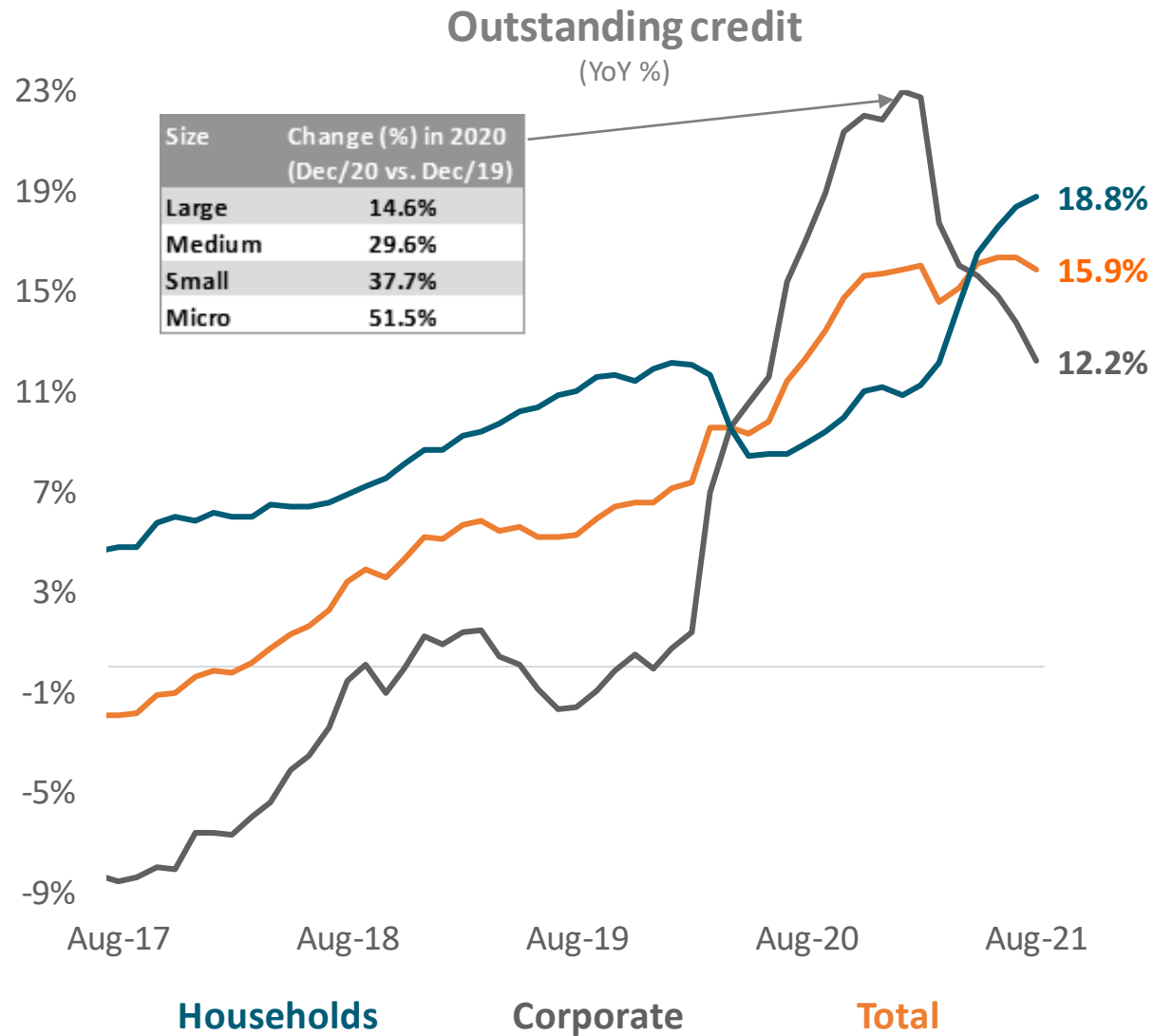
Monetary policy

241st Copom Meeting – September 2021

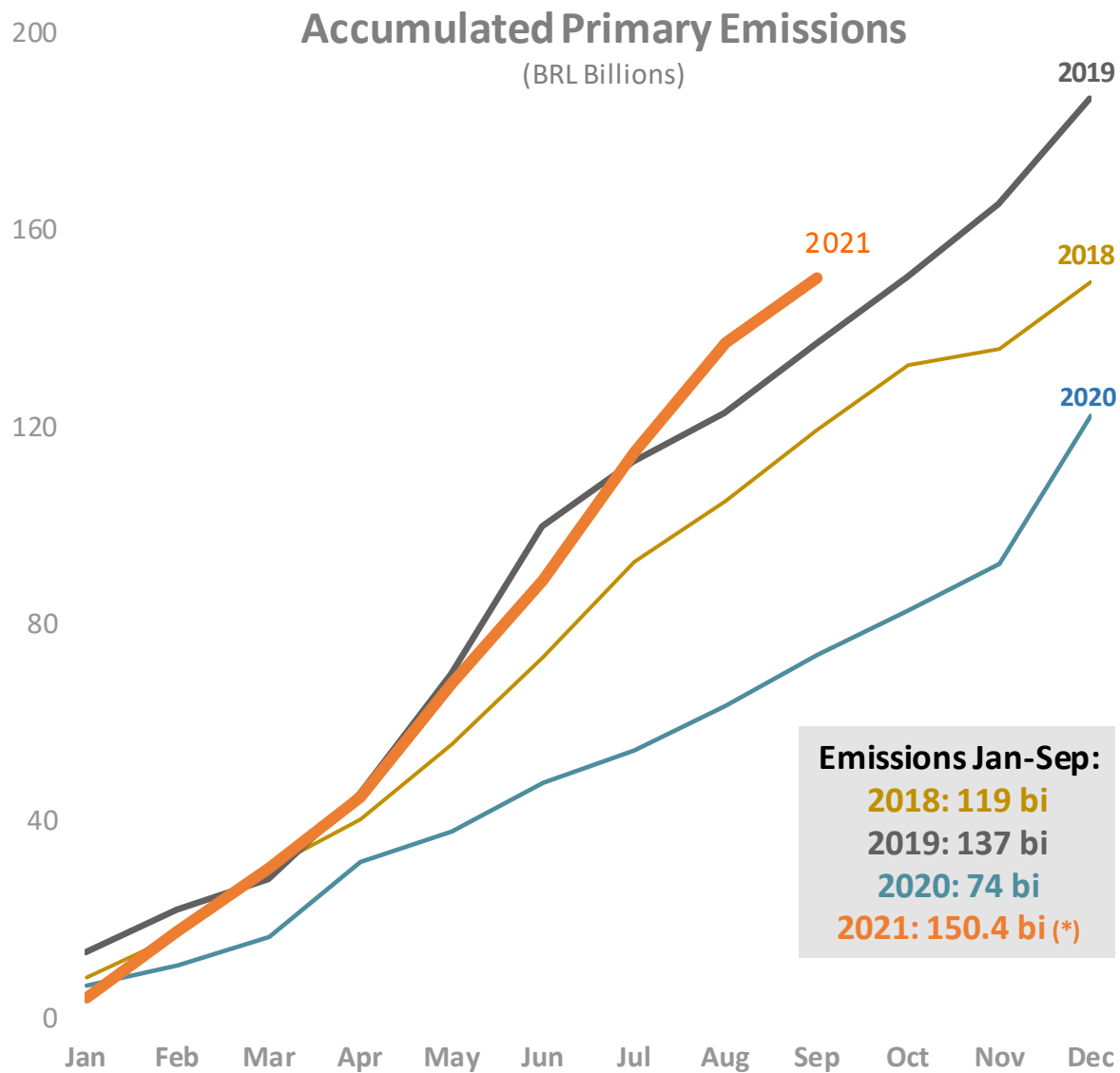
- In its 241st meeting, the Copom unanimously decided to increase the Selic rate by 1.00 p.p. to 6.25% p.a.
- The Committee judges that this decision reflects its baseline scenario for prospective inflation, a higher-than-usual variance in the balance of risks, and is consistent with the convergence of inflation to its target over the relevant horizon for monetary policy, which includes 2022 and, to a lesser extent, 2023.
- The Committee considers that, at the present stage of the tightening cycle, this pace is the most appropriate to guarantee inflation convergence to the target at the relevant horizon and, simultaneously, allow the Committee to obtain more information regarding the state of the economy and the persistence of shocks.
- At this moment, the Copom's baseline scenario and balance of risks indicate as appropriate to advance the process of monetary tightening further into the restrictive territory.
- For the next meeting, the Committee foresees another adjustment of the same magnitude. The Copom emphasizes that its future policy steps could be adjusted to ensure the achievement of the inflation target and will depend on the evolution of economic activity, on the balance of risks, and on inflation expectations and projections for the relevant horizon for monetary policy.

Credit in the National Financial System

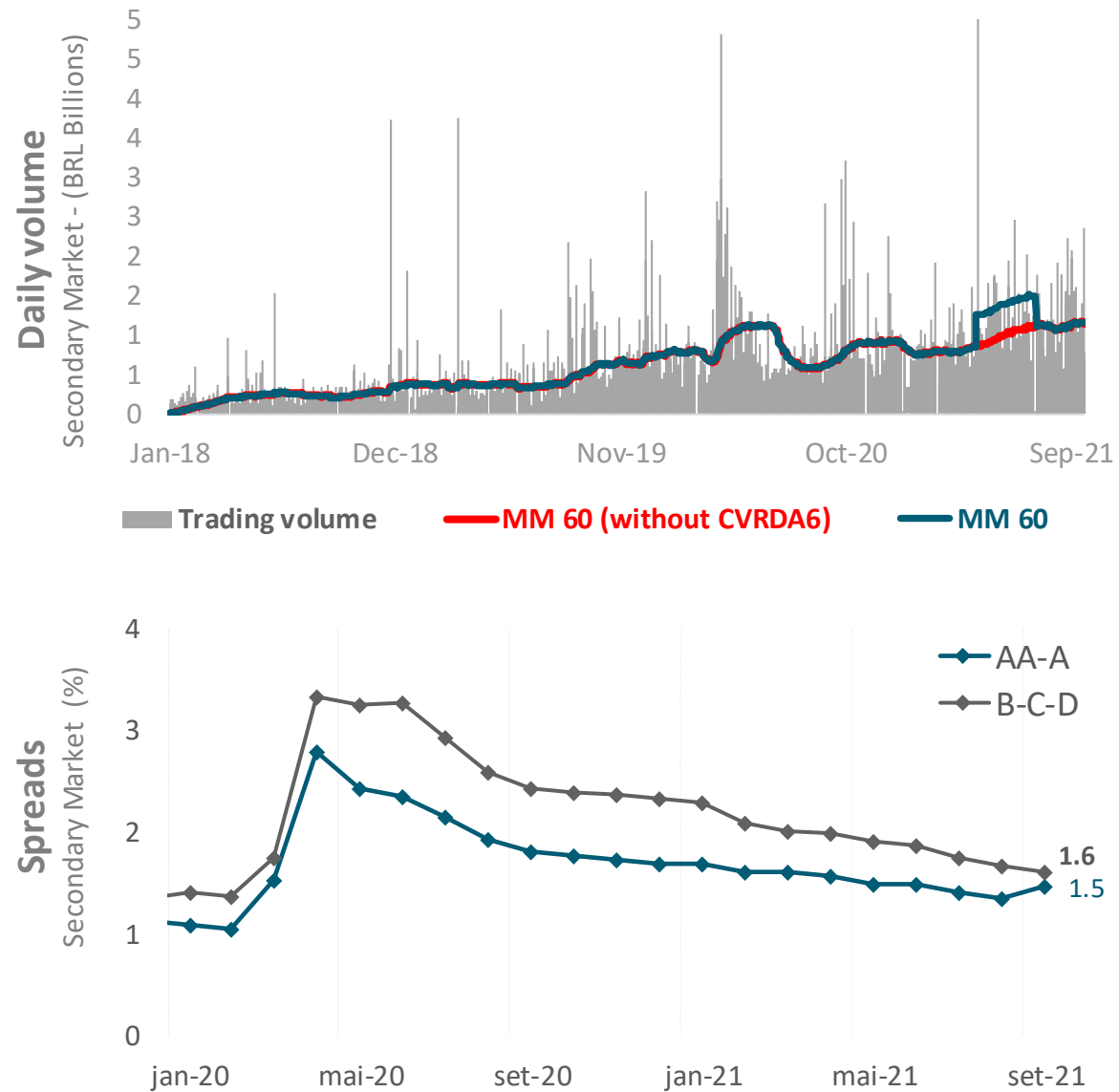
Credit continue to increase.



Corporate Credit



Source: B3. (*) until September 27th, 2021.



General Government Gross Debt (GGGD)

GGGD/GDP 2021 forecast

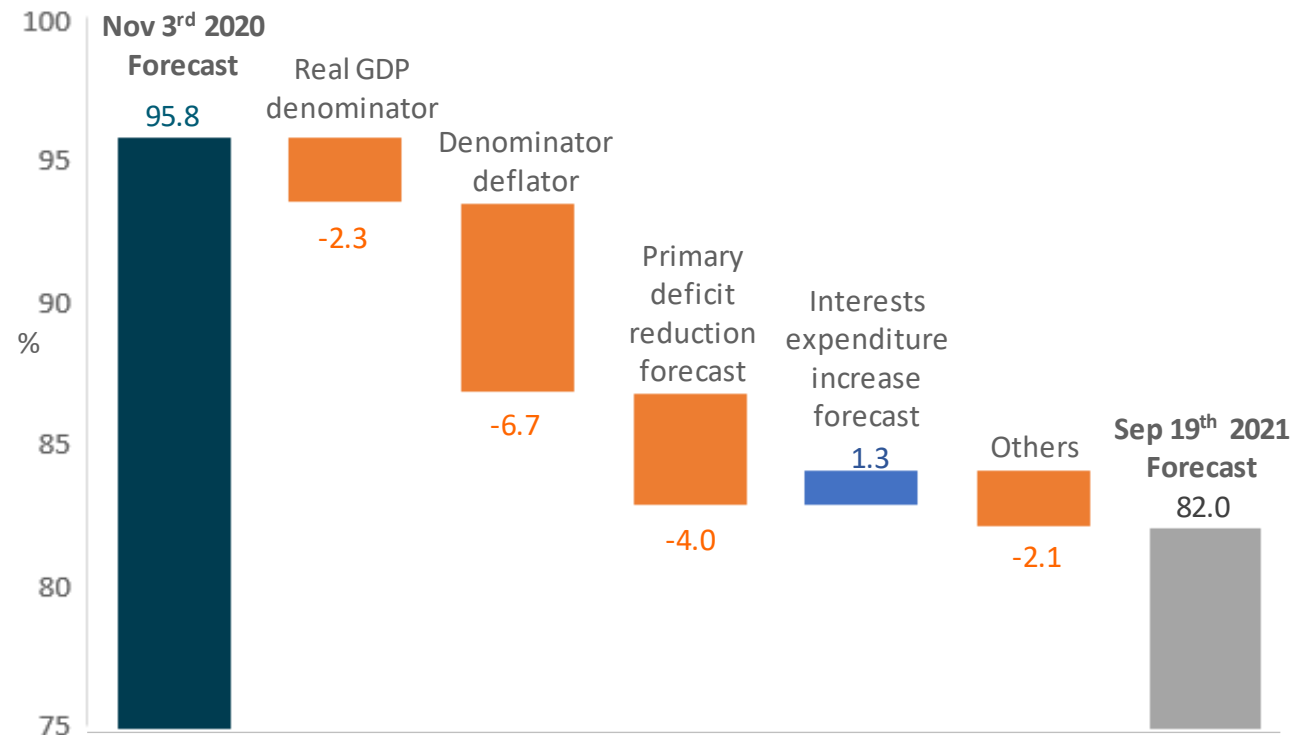
(Focus median)



Updated to 10/01/21

GGGD/GDP 2021 Focus forecast*

(disaggregated)

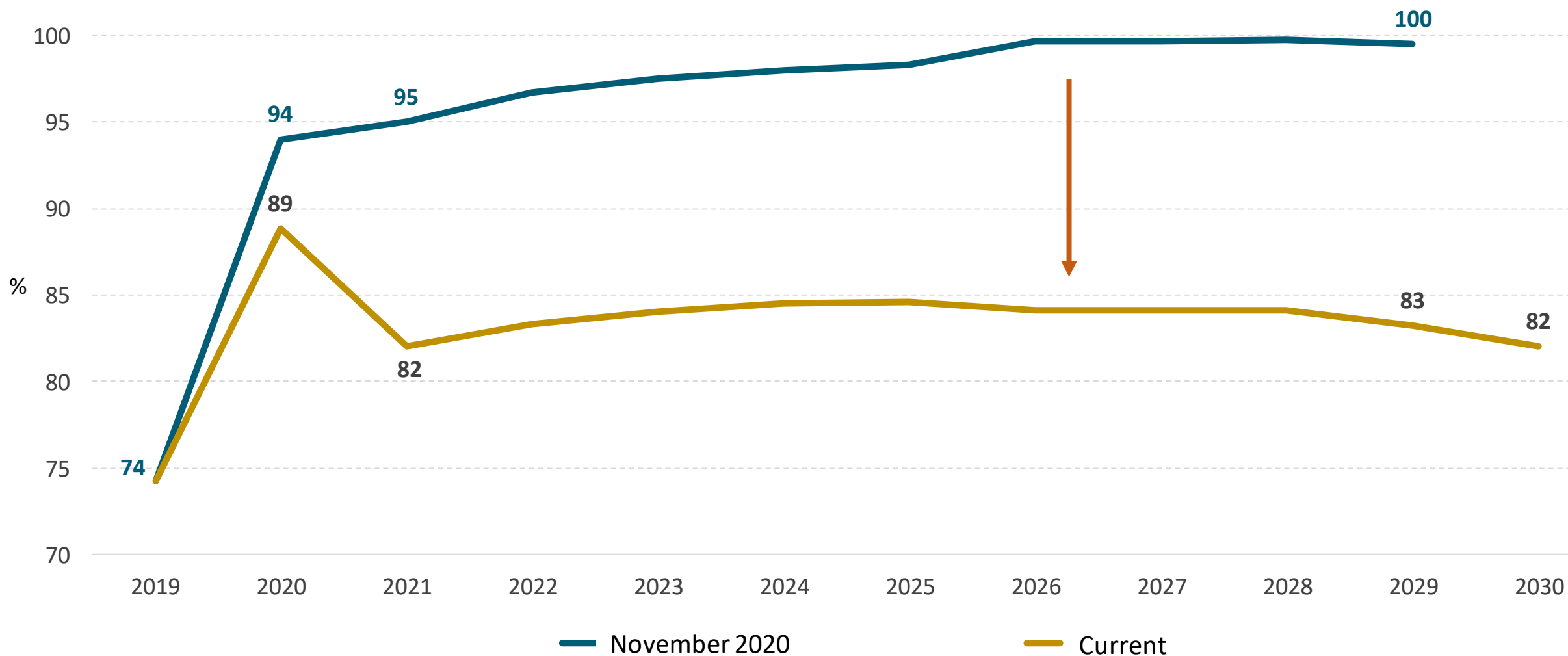


* Approximate decomposition of the Focus median forecast evolution for GGGD/GDP. Each variable median is considered separately. GDB deflator constructed from Focus CPI forecast. Interest expenditure implicitly calculated from primary and nominal fiscal results forecast. "Others" are residuals (approximations, methodological compatibility, etc.).

General Government Gross Debt (GGGD)

Evolution of GGGD/GDP forecast

(median of market analysts forecast – Focus)



 **#Inclusion**

 **#Competitiveness**

 **#Transparency**

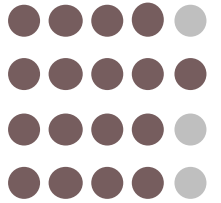
 **#Education**

 **#Sustainability**



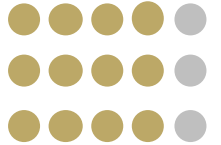
#Inclusion

Cooperative credit
Microcredit
Currency convertibility
Initiatives for capital market



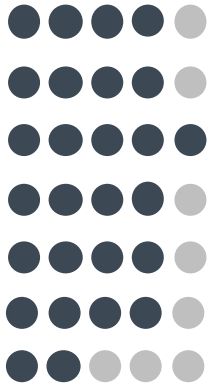
#Competitiveness

Innovation
Market efficiency
International reserves



#Transparency

Rural credit
Housing credit
Relationship with Congress
Transparency of Monetary Policy
Communication plan for BCB actions
Relationship with foreign investors
Digital Citizenship



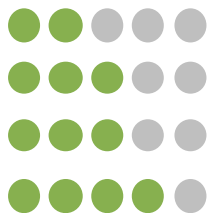
#Education

Financial education



#Sustainability

BCB's S&E responsibility
Regulation
Supervision
Partnerships





Technology Agenda

Pix gains space and becomes popular

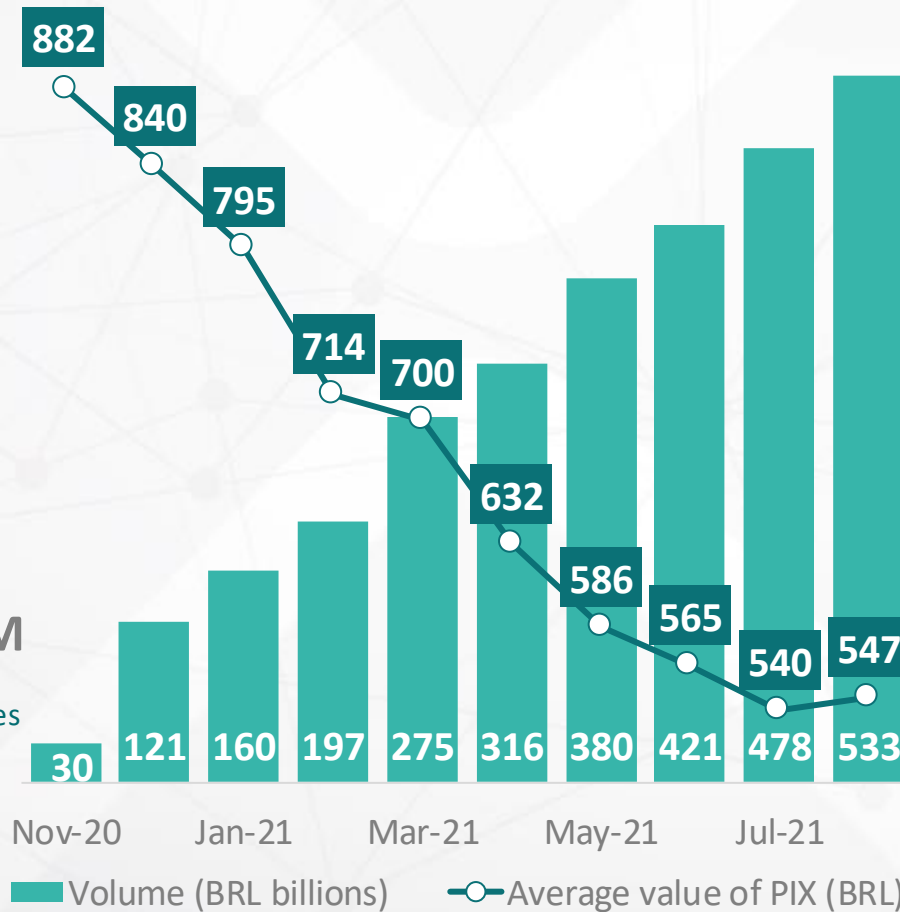
PIX keys
(in millions)

Total: 313.27 MM
in August/2021

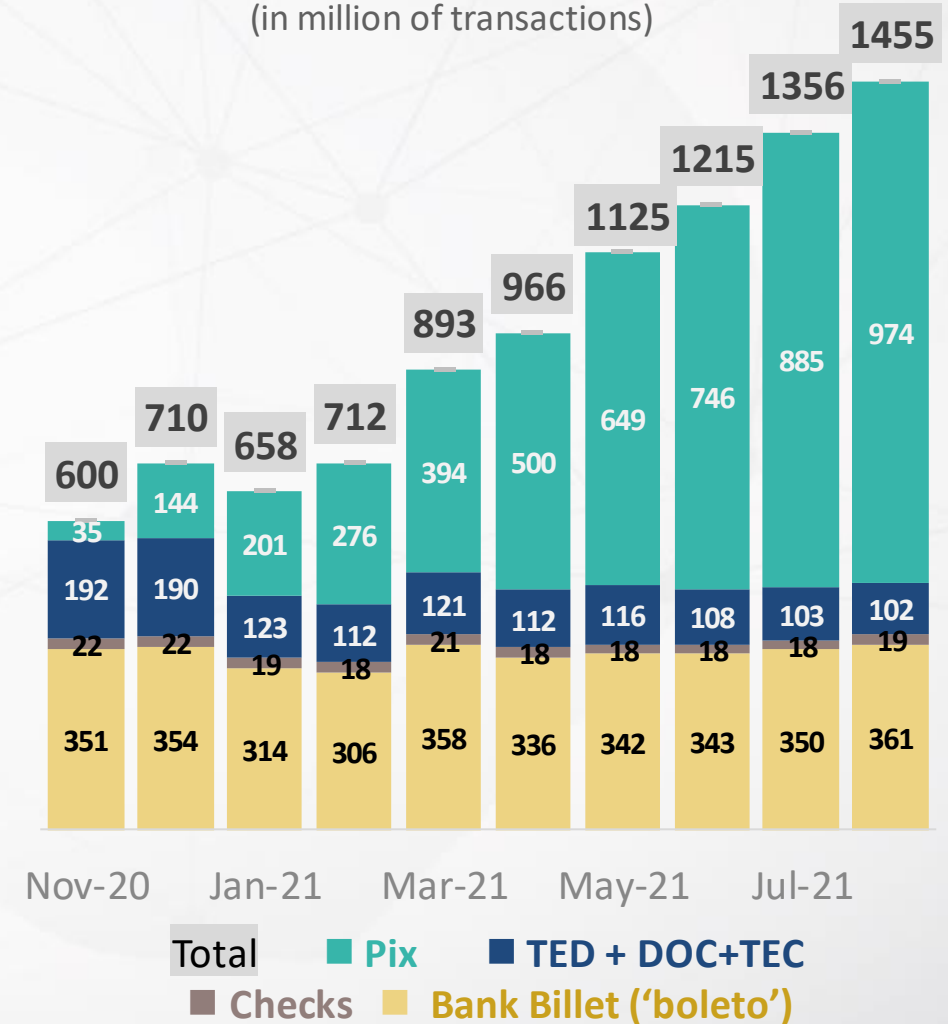
300.6 million keys
+
12.7 million keys

99.8 MM households
+
6.8 MM legal entities

Volume of transactions and average value
(in BRL billions and in BRL)



Pix versus other instruments
(in million of transactions)



Pix: Evolution Agenda



*became mandatory **linked to Open Finance ***Publication of Operating Rules by BCB, Go Live to be defined

Open Finance



- Implementation will be gradual

Goals:

- To promote **competition, efficiency and data safety**
- Proper **balanced conditions** between existing financial institutions and new players

Solutions that can be developed from Open Finance:



Devices to compare services and fees



Apps for financial advice and planning



Payment initiation in social medias



Credit marketplace

Modernization of exchange rate legislation

- **Proposal:**
 - Establishing a modern, compact, and safe legal framework for FX market.
- **Objectives:**
 - Simplify the FX legislation and improve the business environment in Brazil.
 - Ease the connections with payment systems of other countries.



Regulatory Sandbox

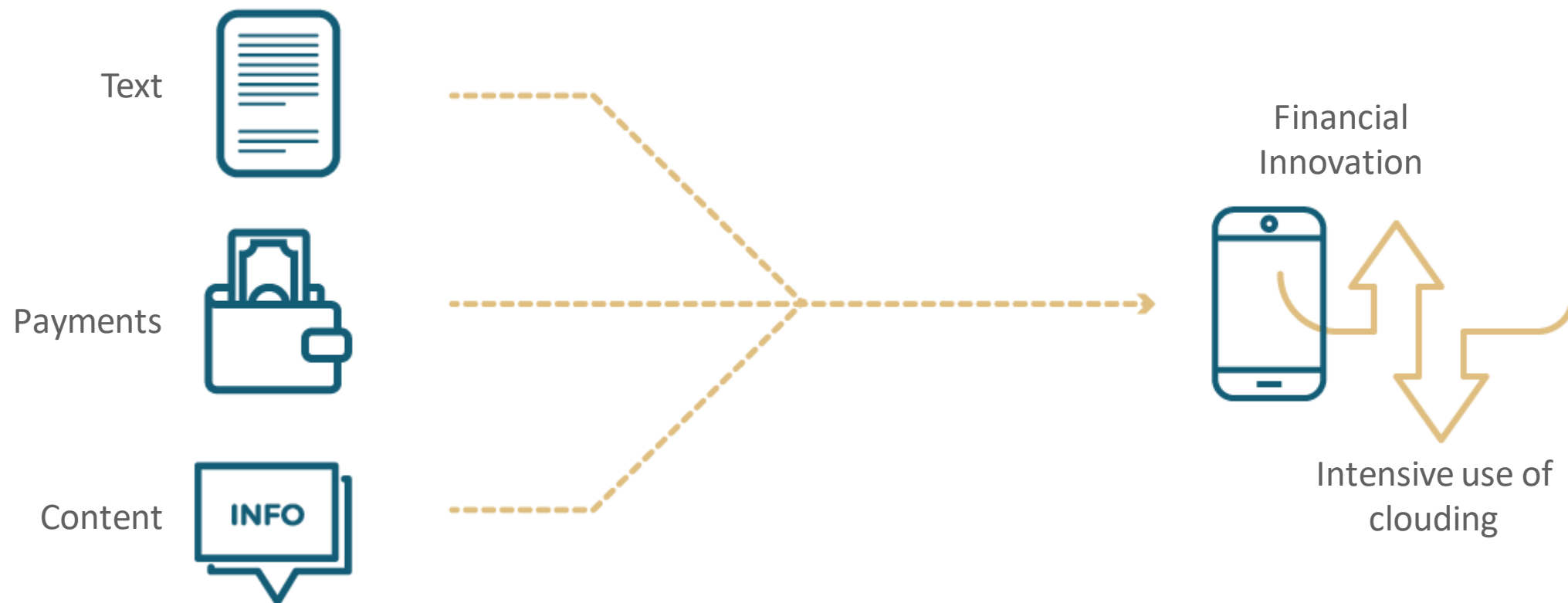
BCB's Regulatory Sandbox starts in 2021 with the Cycle 1.

TO UNDERSTAND THE REGULATORY SANDBOX

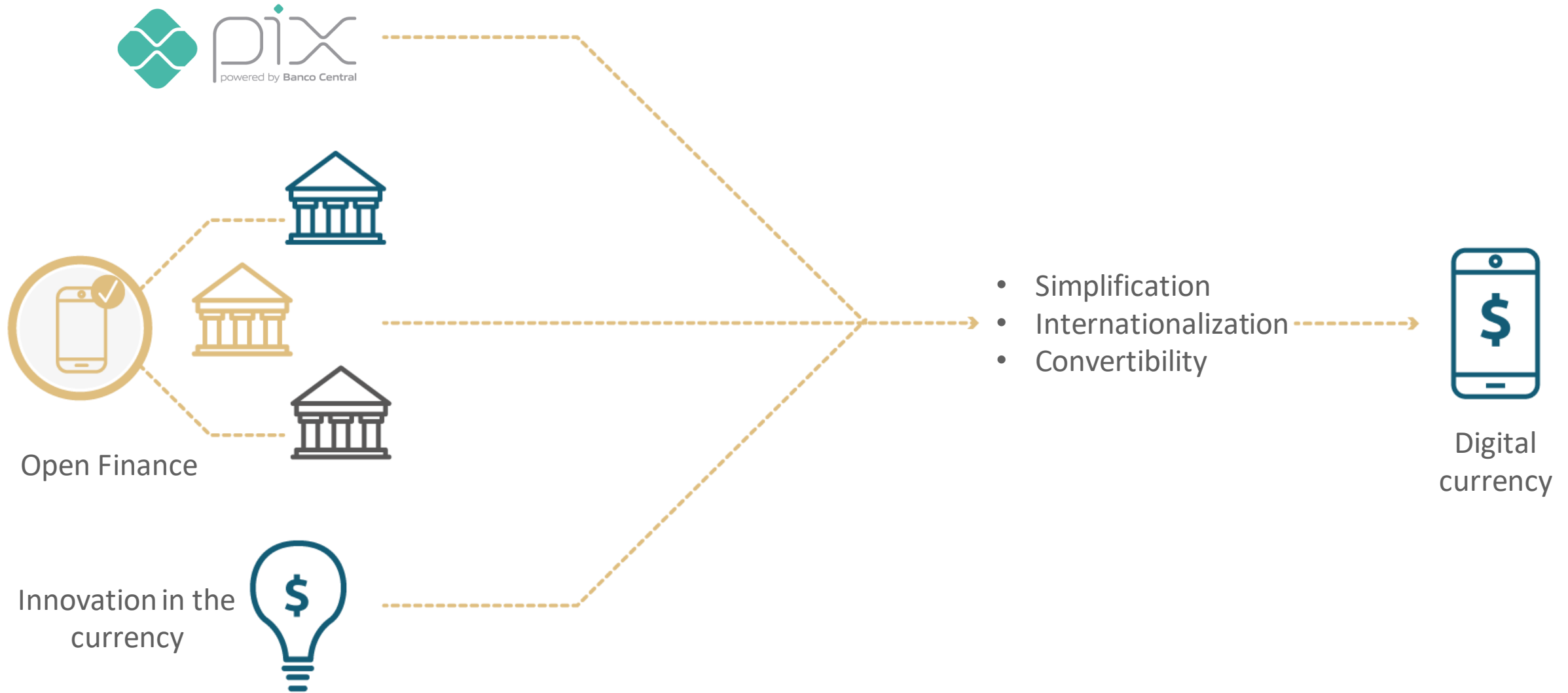


- 1 During the sandbox licensing process, BCB will assess whether the submitted projects comply with the definition of innovative project and whether their development is under the regulatory scope of BCB and CMN, among other criteria.
- 2 Legal persons, notary and registration service providers, public companies, and semi-public companies can participate, even when not yet fully licensed by BCB.
- 3 Simplified monitoring procedures will be adopted, considering the complexity and risks associated to each innovative project and, should BCB deems appropriate, additional limits and criteria may be applied.
- 4 By the end of cycle 1, participants may obtain a permanent license from BCB to operate. The projects may be a stepping stone for the improvement of the regulation issued by BCB and CMN.

Convergence



Innovation in the financial system



A CBDC for Brazil: The Digital Real



Guidelines:

- Extension of the Brazilian real
- Retail payments
- Innovative models development
- Not be interest-bearing
- Guarantee of legal certainty
- Data privacy and security
- Preventing and combating money laundering
- Interoperability and integration
- High cyber security



BCB Sustainability

Measures:

- BCB's S&E Responsibility
- Partnerships
- Policies
- Supervision
- Regulation

Vision for the future

More technology

The epidemic has accelerated technological change in medicine, education, finance, communication

Common factors in recovery

More sustainable and more inclusive growth

World trade

Changes in global value chains

Low interest rates and high liquidity in the world

There are challenges, but also opportunities to reinvent the economy with private resources

Impact of possible reflation global conditions on EMEs

Thank you!

Roberto Campos Neto

Governor of Banco Central do Brasil

October 15, 2021



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