

Live da UBS

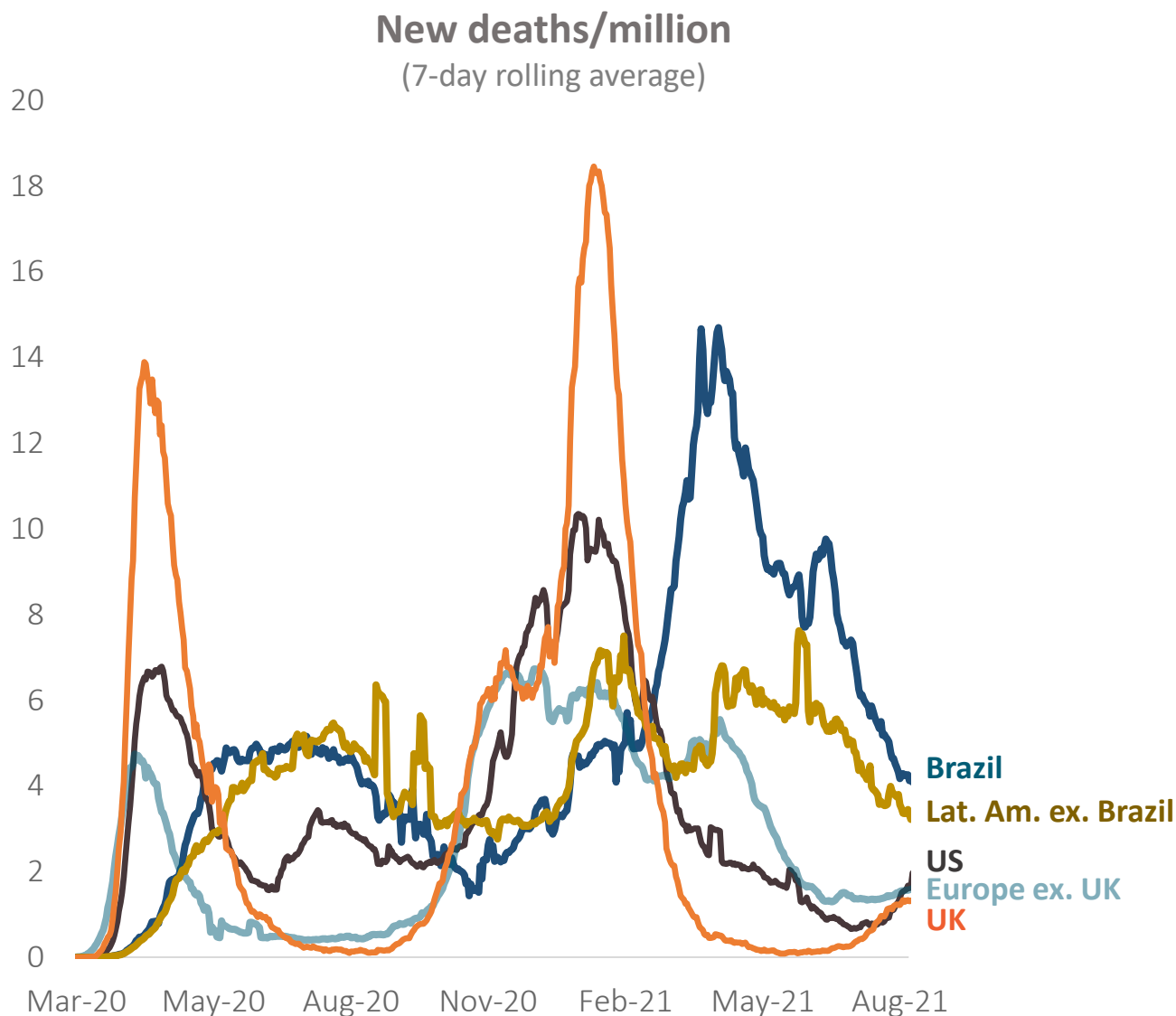
Brazil's Economic Outlook and Agenda BC#

Roberto Campos Neto
Governor of Banco Central do Brasil

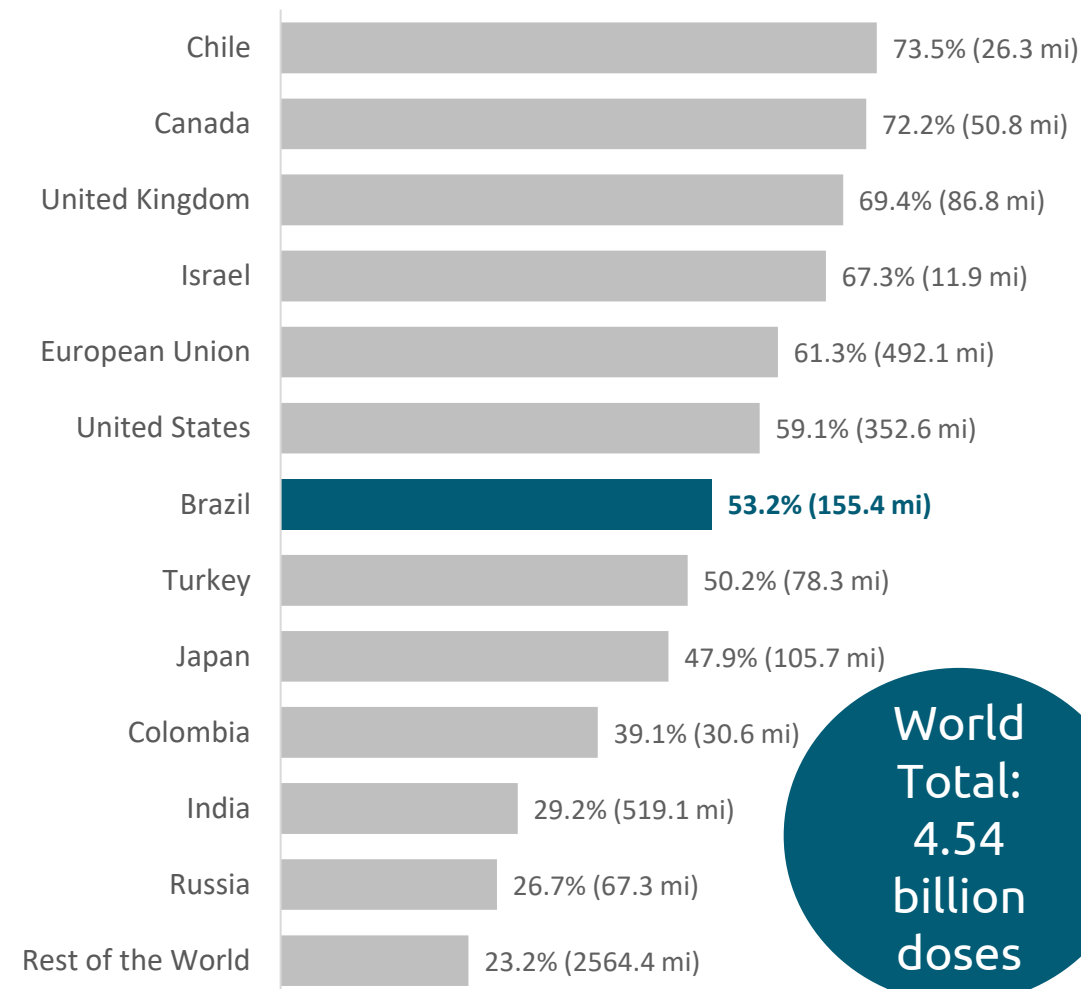
August 12, 2021

Covid-19: New deaths and vaccination

New deaths are falling as vaccination progresses, but uncertainties regarding the Delta variant remain.



Share of population with at least one dose
(% of population and total doses administered, in millions)

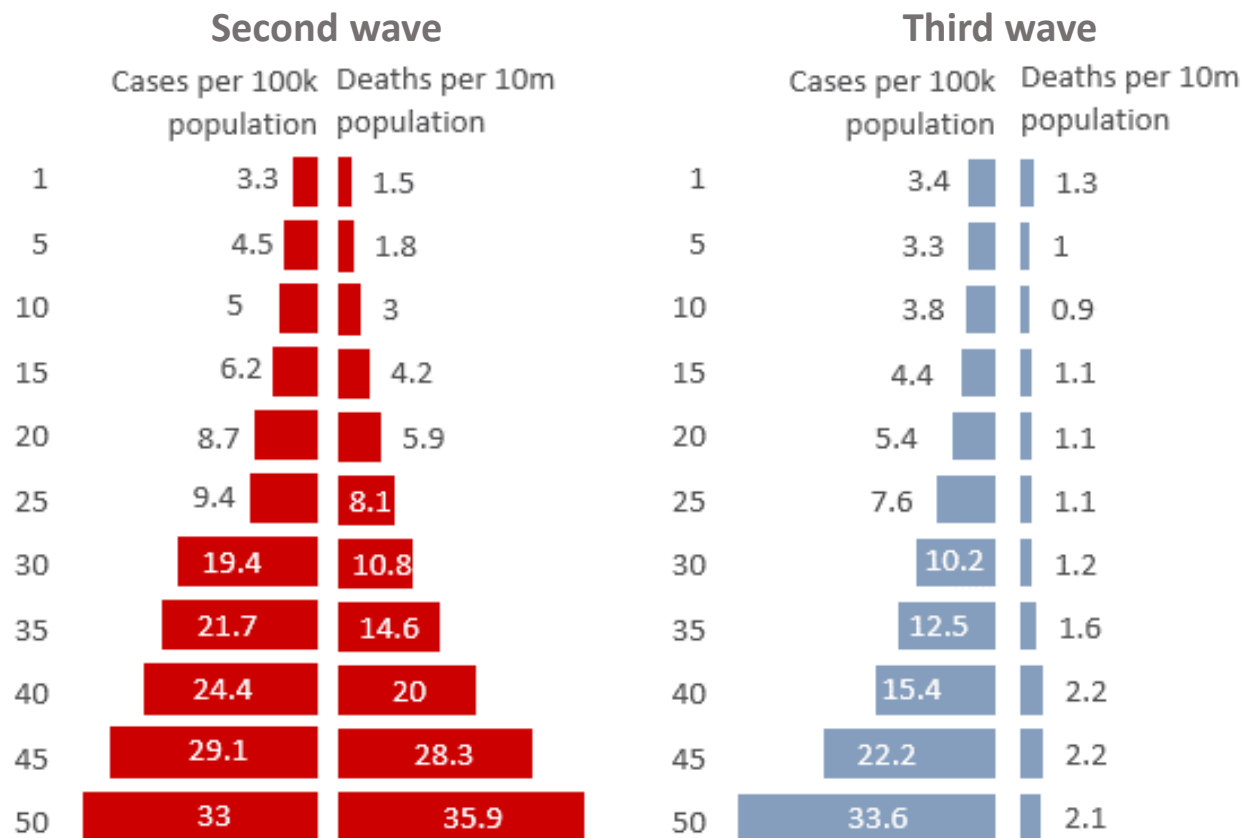


Note: Data on the share of population with at least one dose is not available for China. Therefore, "rest of the world" does not include China.

Covid-19: Vaccines efficacy

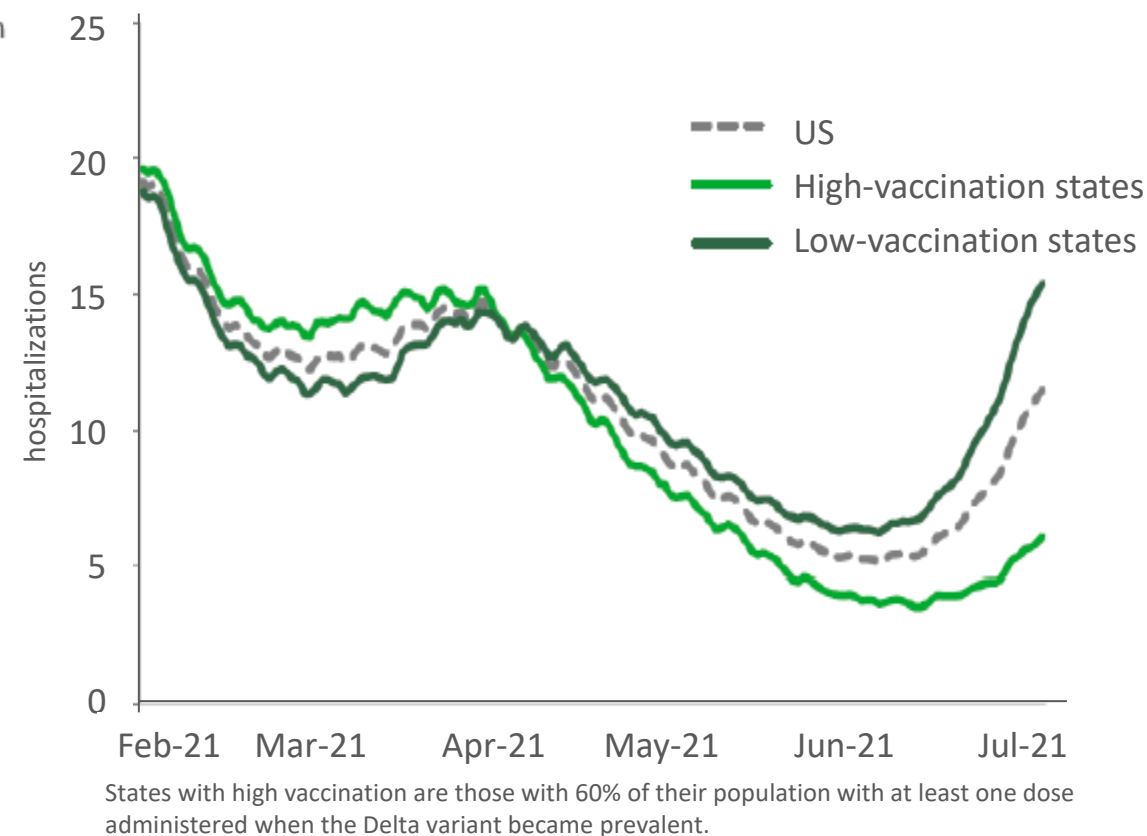
Vaccination in the UK has reduced the number of deaths. In the U.S. hospitalization has increased more in low-vaccination states.

Cases vs. deaths over days 1-50 of UK's second and third Covid waves



Hospitalizations in U.S.

(per 100k population)

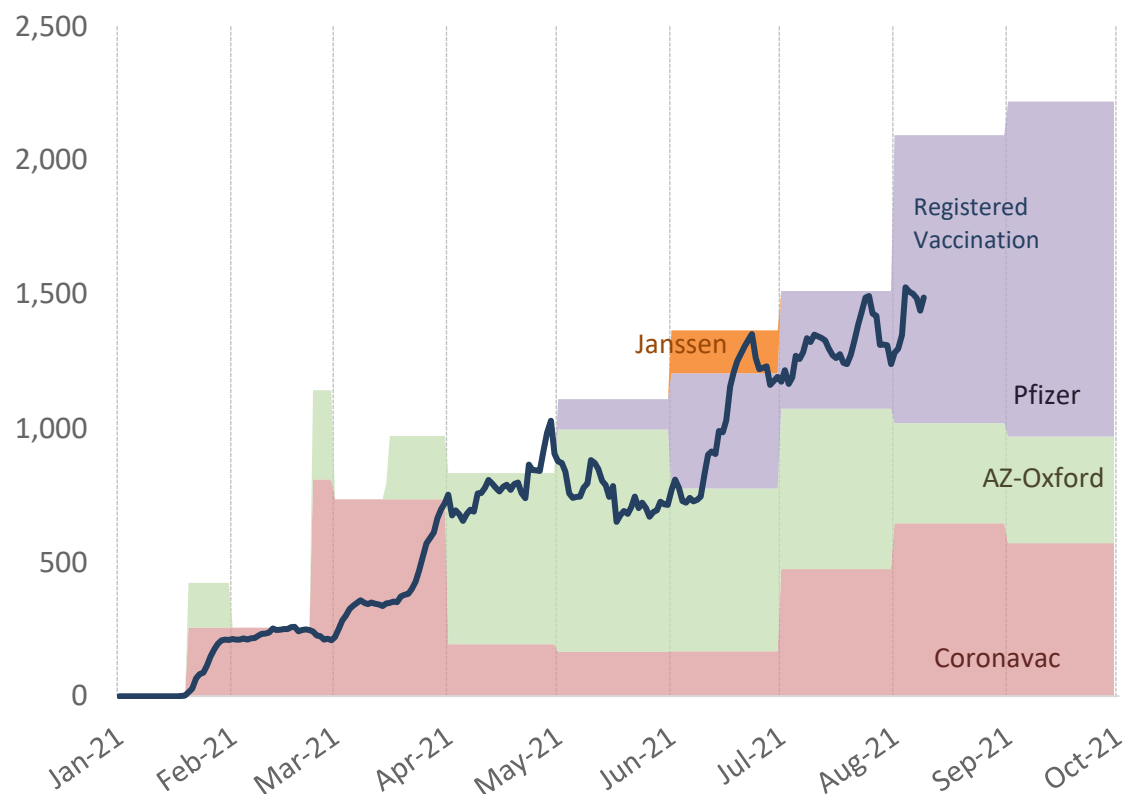


Brazil: Covid-19 vaccination

Brazilian vaccination campaign is advancing.

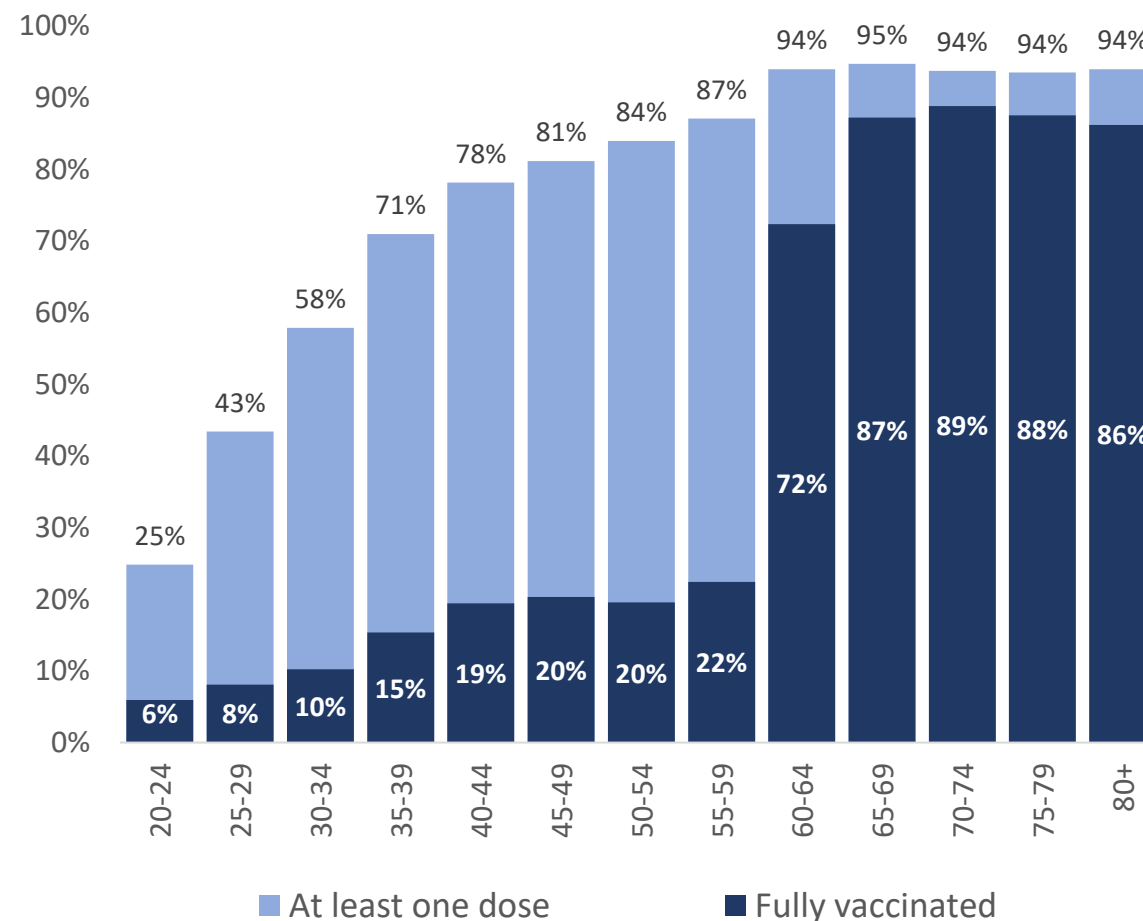
Brazil: daily doses

Estimated offer x registered (thousands/day)



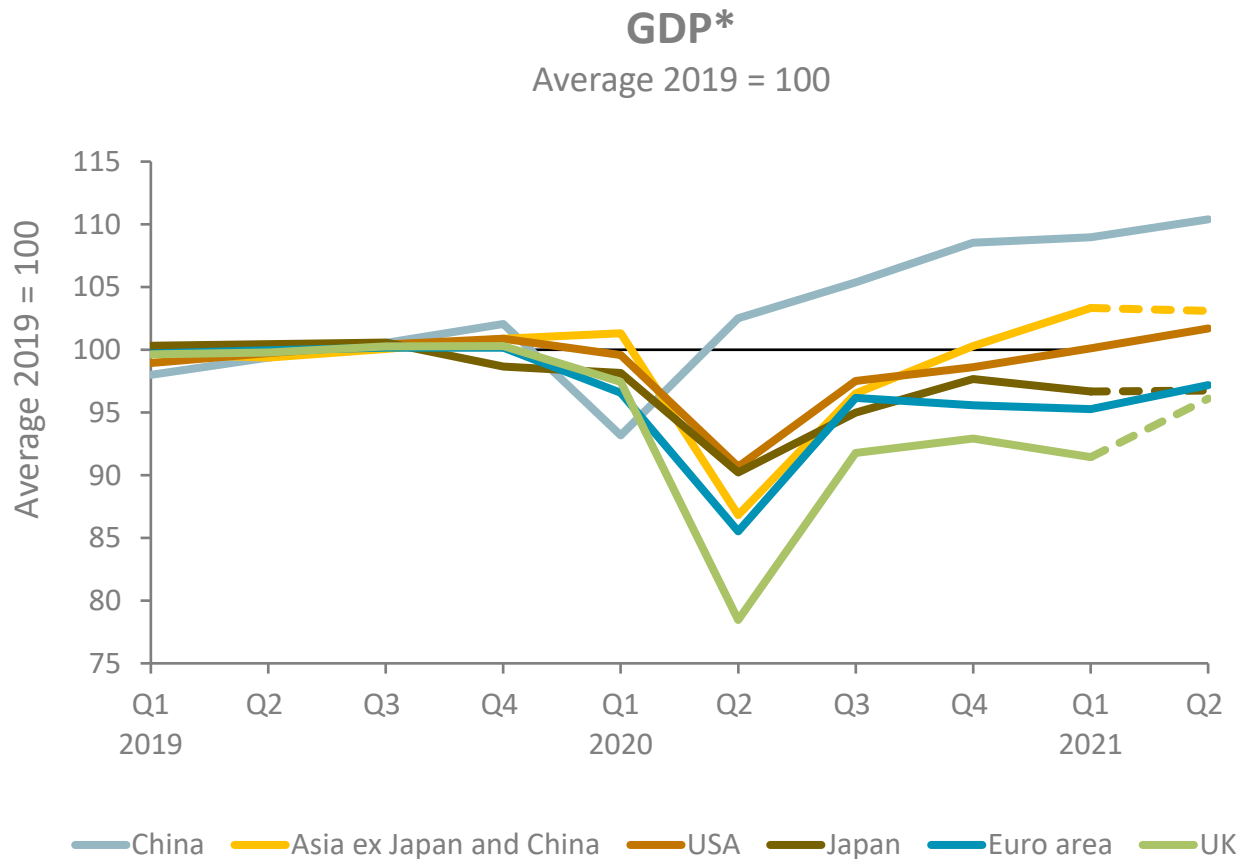
Availability of doses based on a schedule published by the Ministry of Health on July 1st, with adjustments that reflect news published by the press. Scenario considers AstraZeneca-Oxford, Coronavac, Pfizer-BioNTech and Janssen vaccines. Dose delivery schedule subject to changes.

Brazil: vaccination by age group

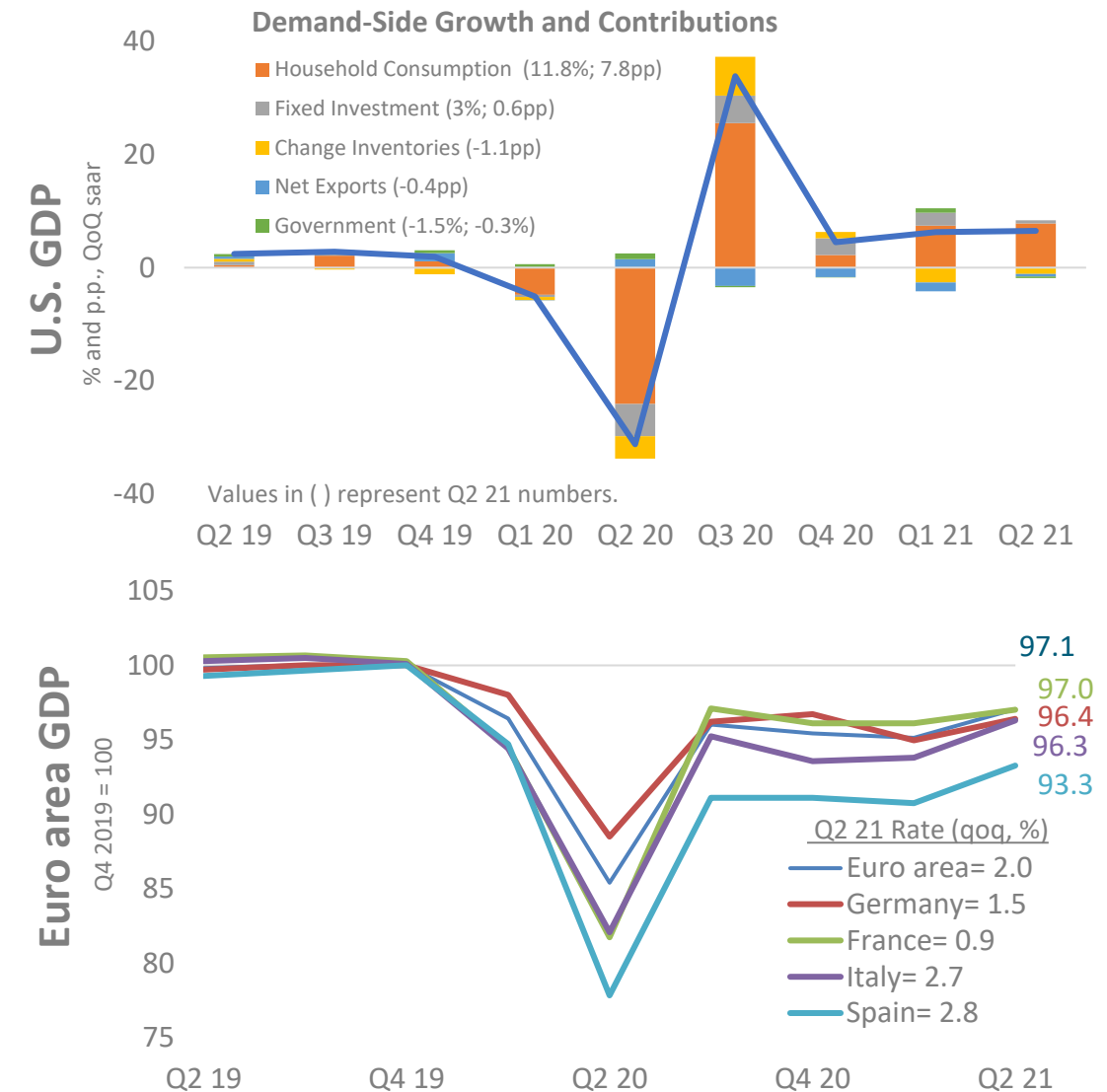


AEs: Economic activity

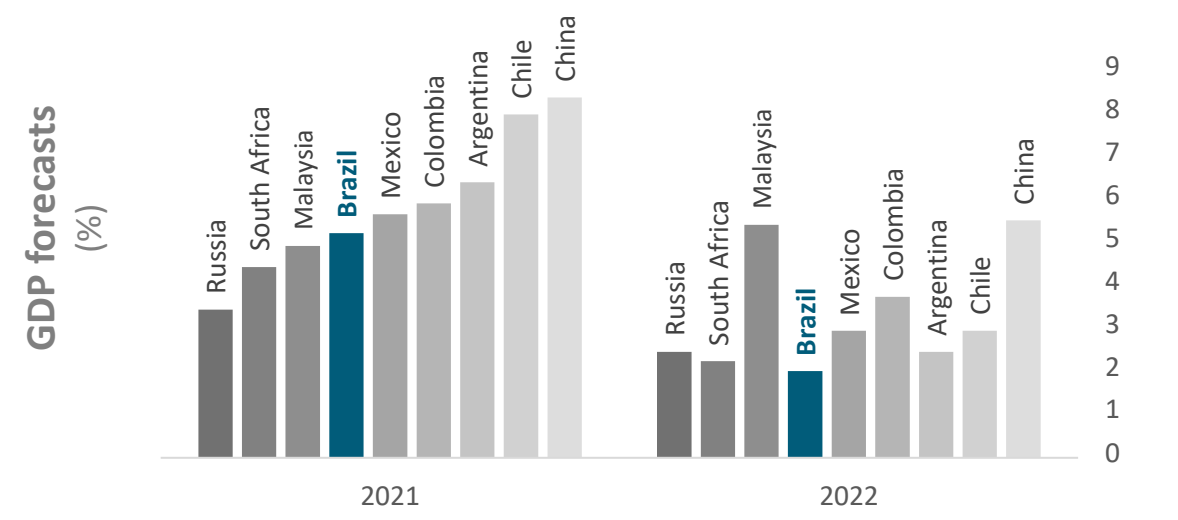
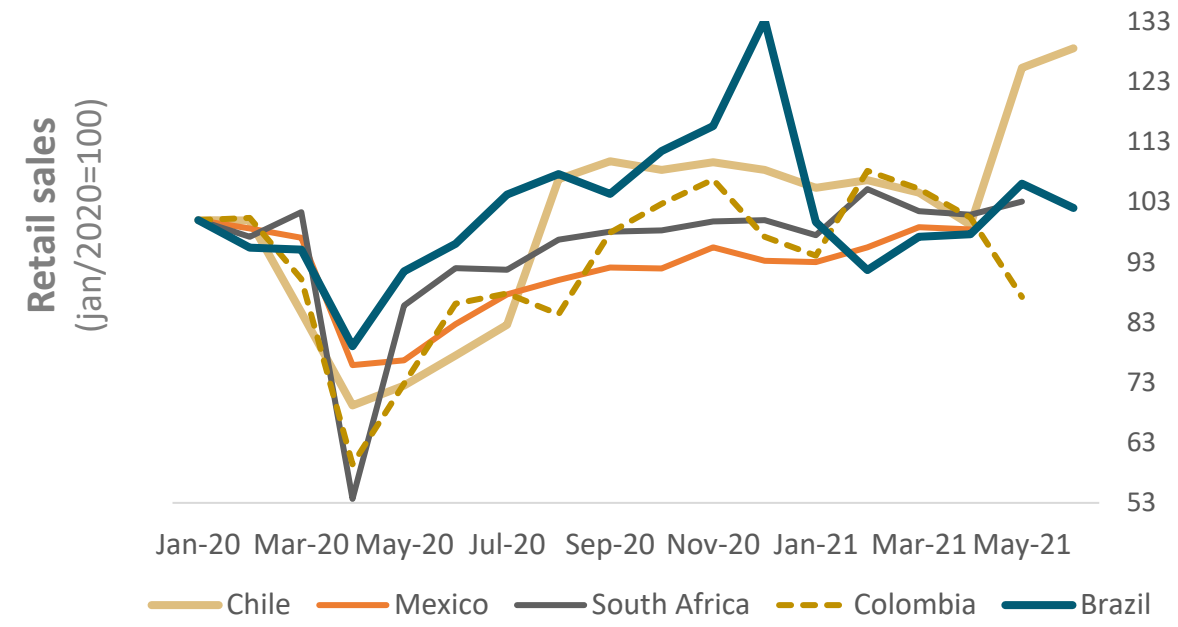
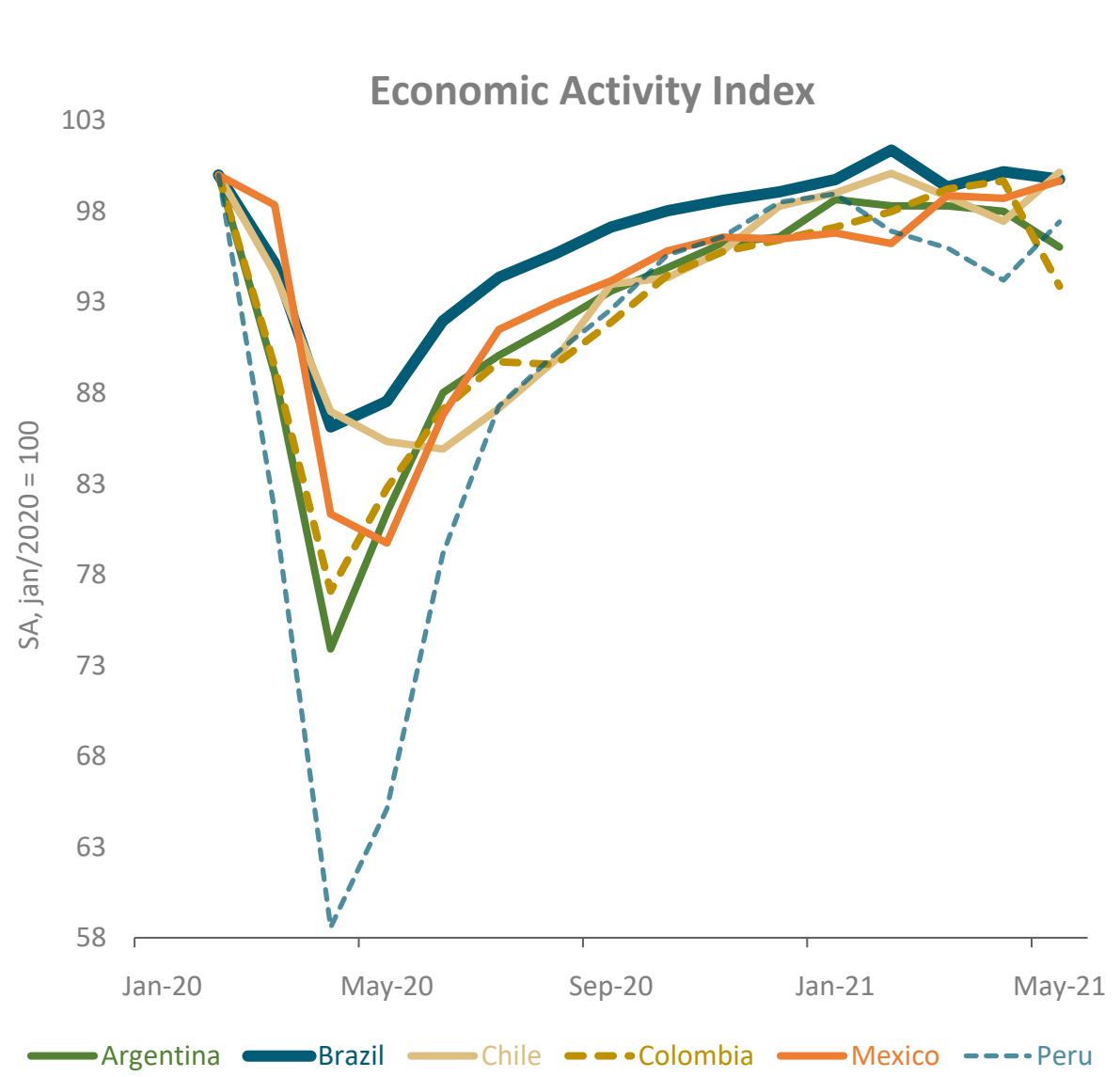
Global economic recovery continues to be directly linked to the evolution of the pandemic and the pace of vaccination.



*Series with dotted lines in Q2 2021 are Bloomberg forecasts. 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, Indonesia and Hong Kong are not seasonally adjusted.

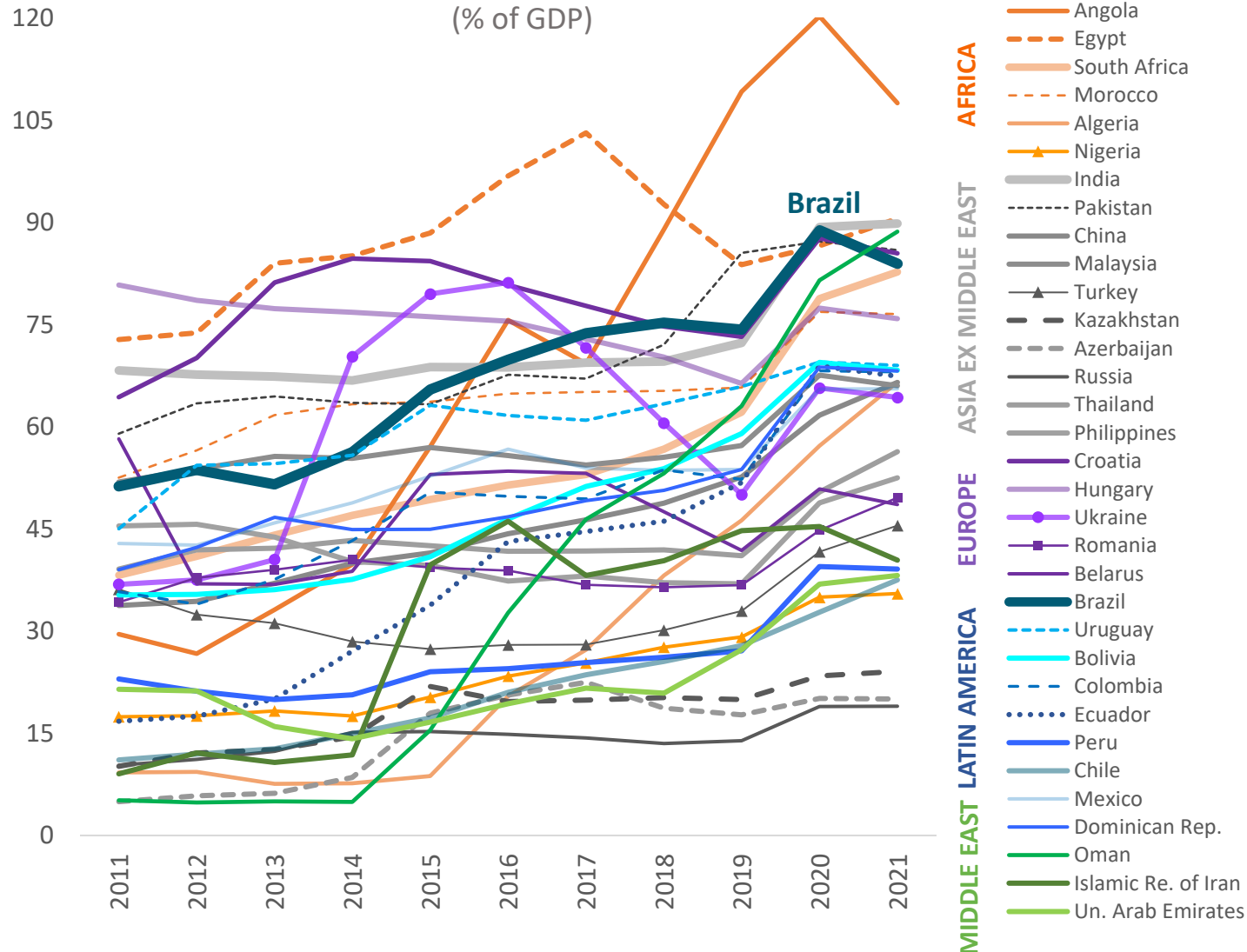


EMEs: Economic activity

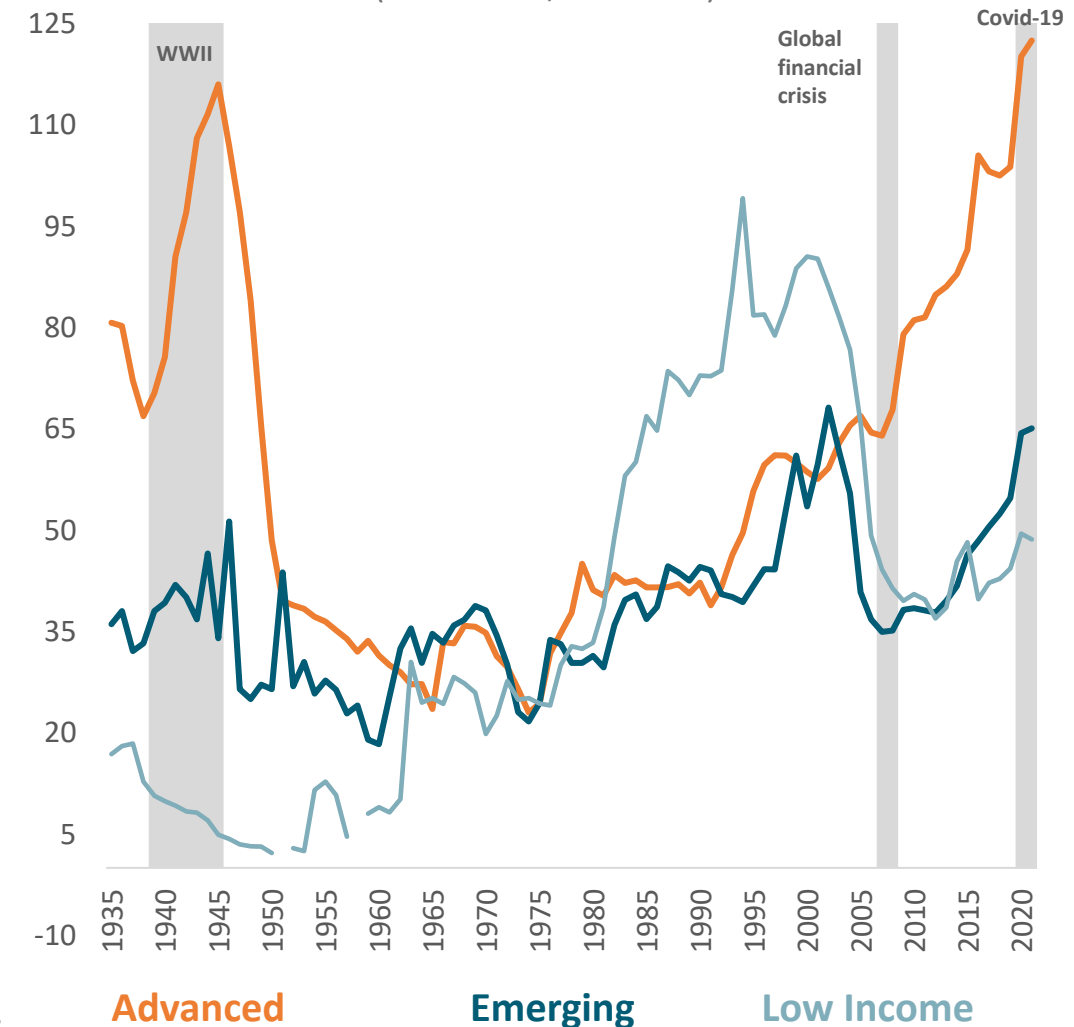


Fiscal response

Gross Debt – emerging markets
(% of GDP)



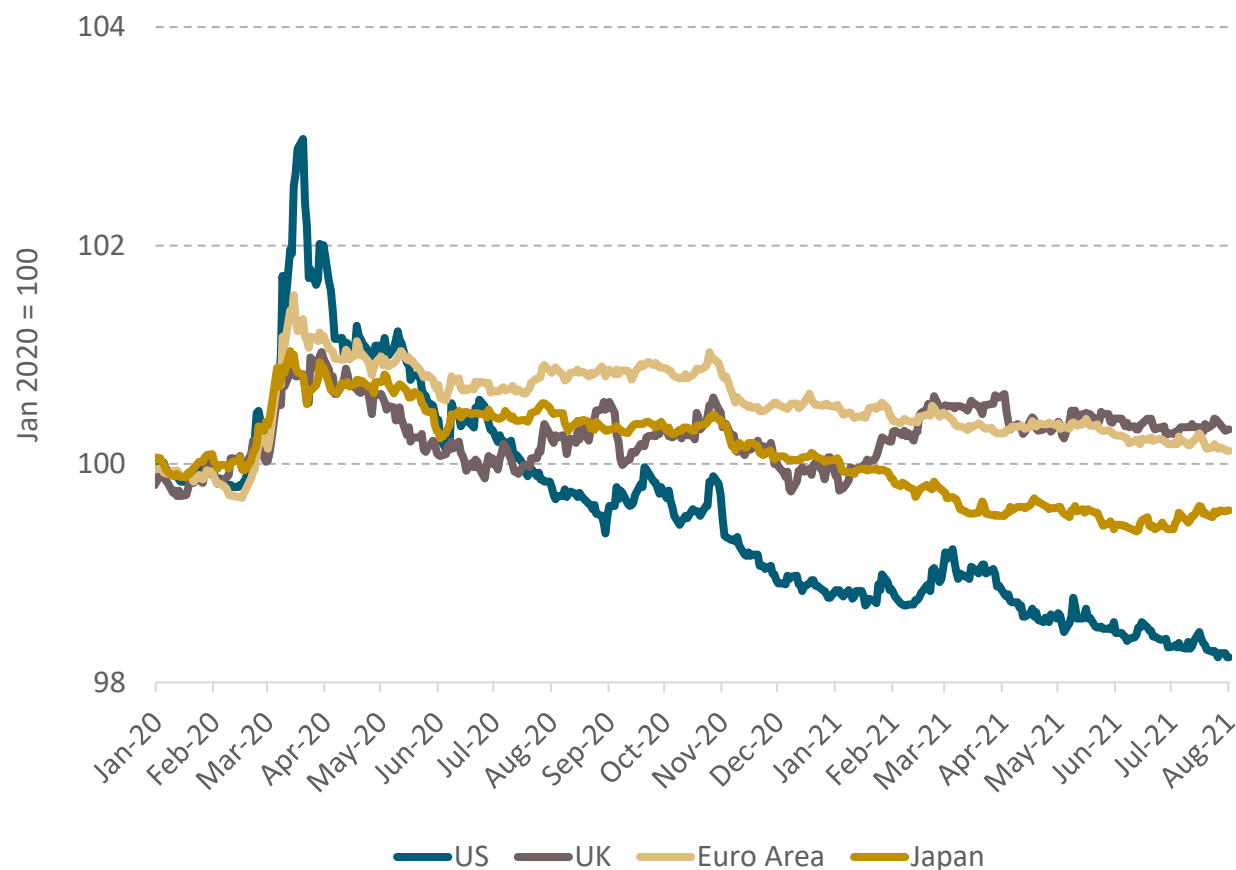
Historical pattern of general government debt
(1935-2020, % of GDP)



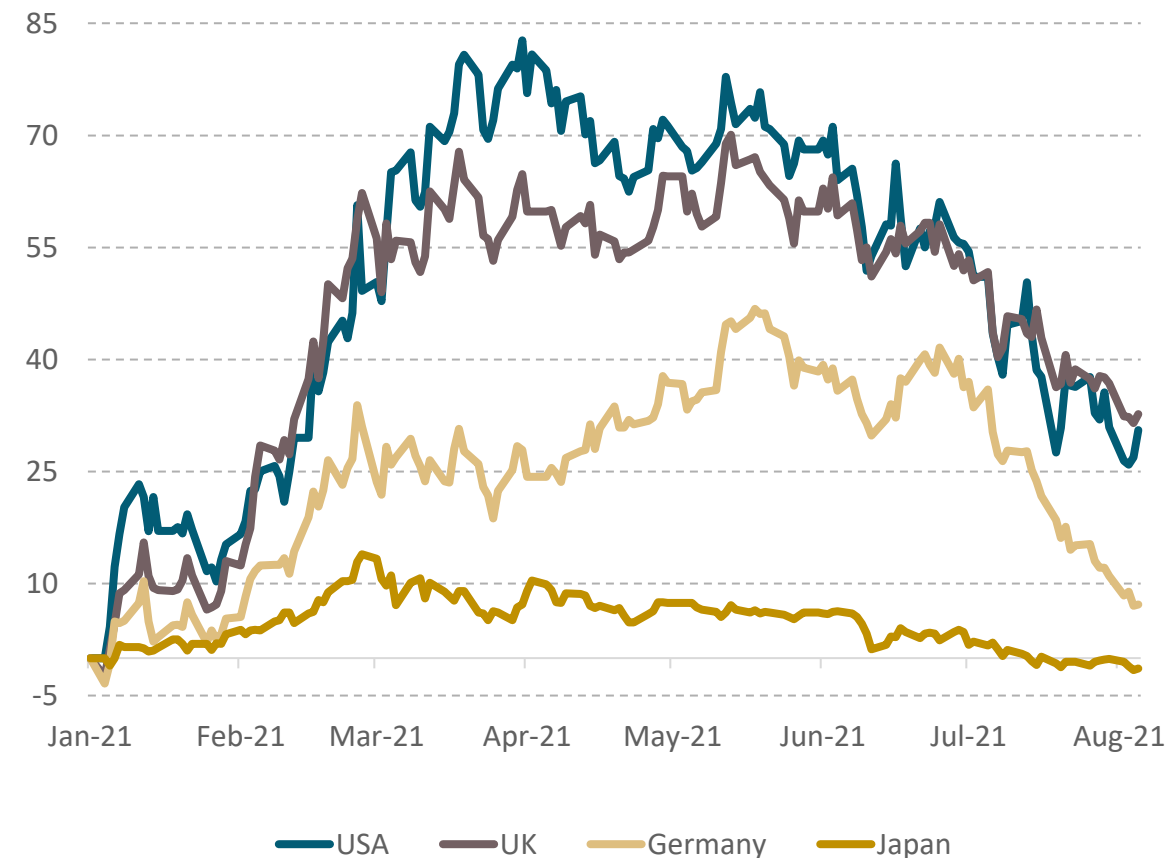
AEs: Financial conditions and yields

Financial conditions more stimulative in the U.S. and decrease in long-term yields recently.

GS Financial Conditions Index

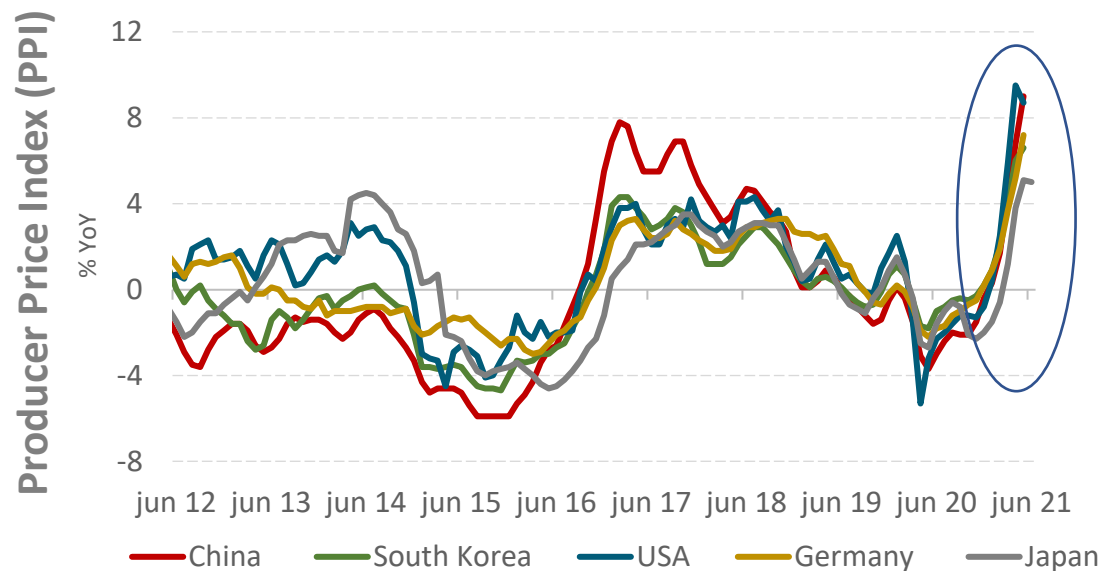
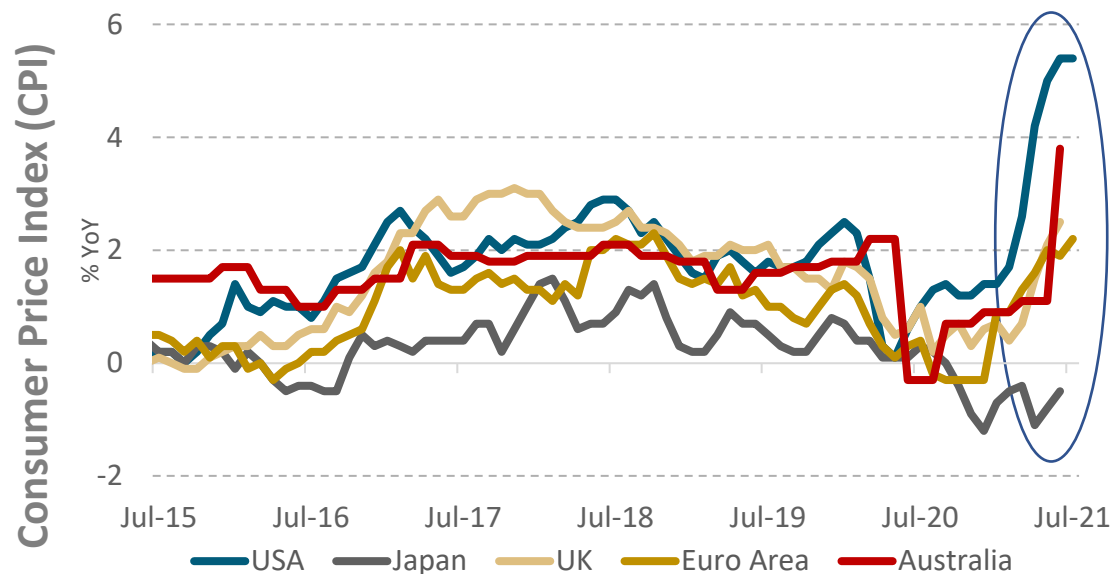


Change in 10-year yield* (YTD b.p.)

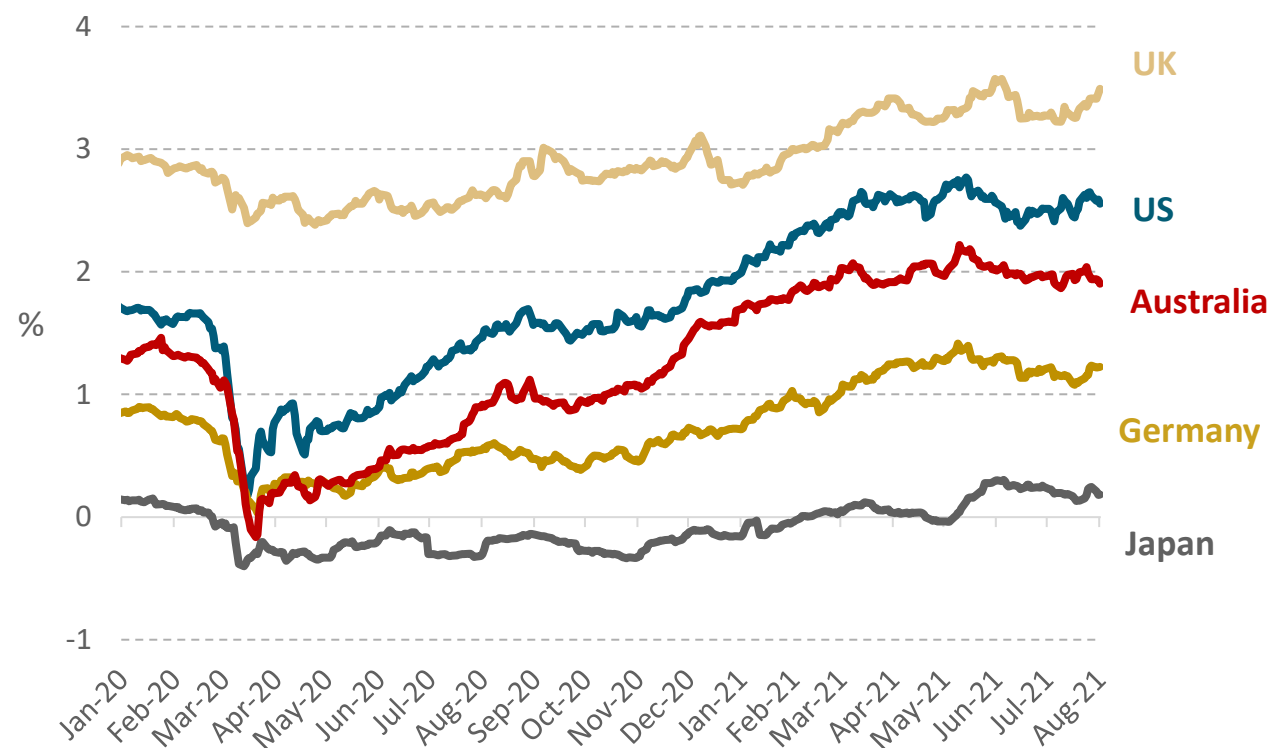


*Accumulated change since January 1st, 2021.

AEs: Inflation



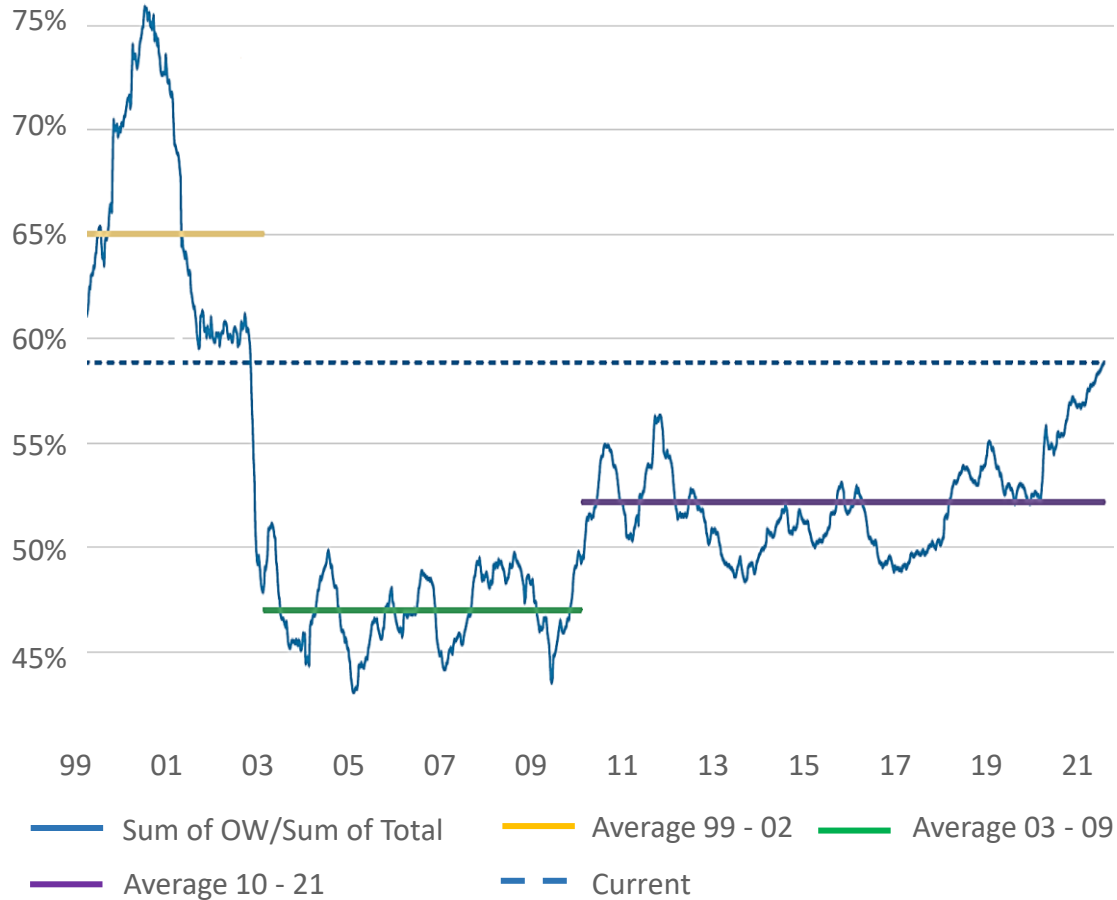
Implicit inflation (5-years break-even)



U.S. Stock market

Analysts are as optimistic as they have been in 20 years. Stock indexes rising.

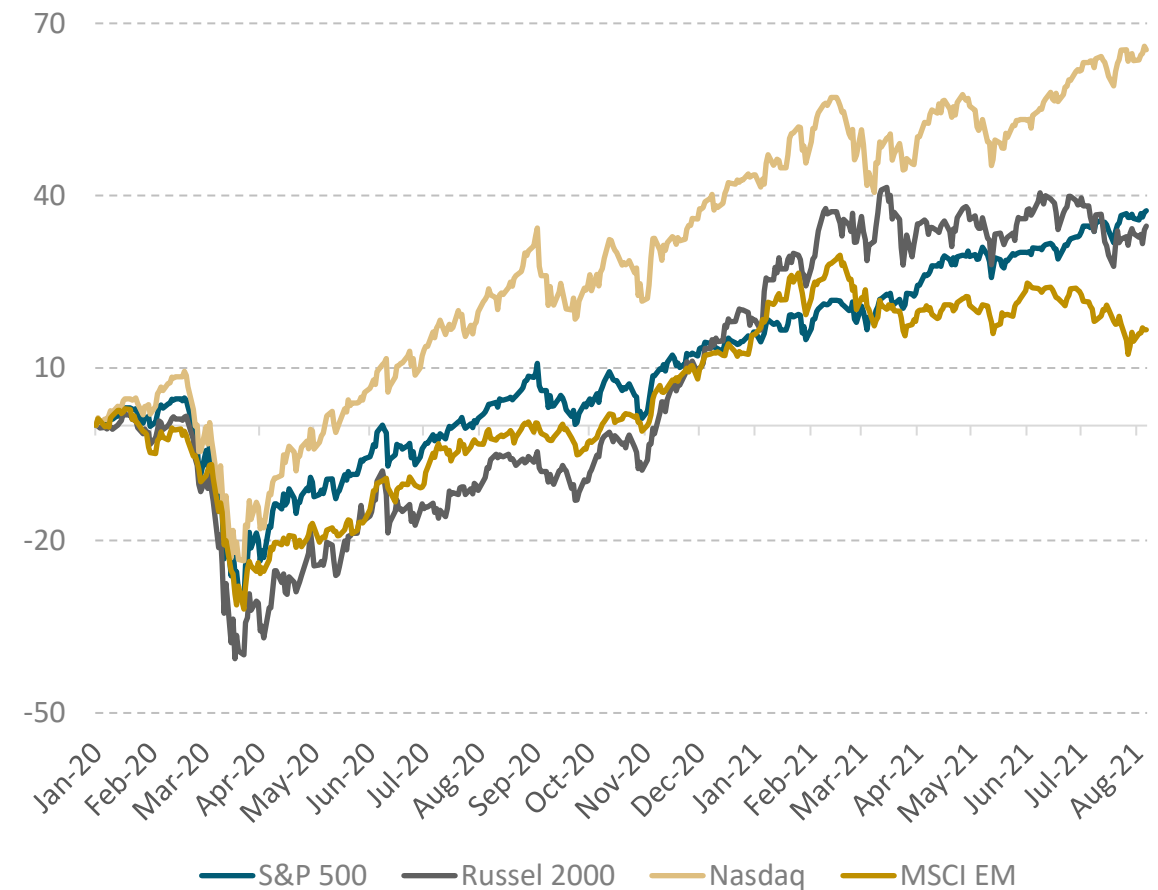
Sell side positive ratings*



* Note: The index is the % of all sell side ratings that were OWs or Buys among all ratings, using the top 1000 U.S. stocks by market cap.

Sources: Morgan Stanley, Bloomberg.

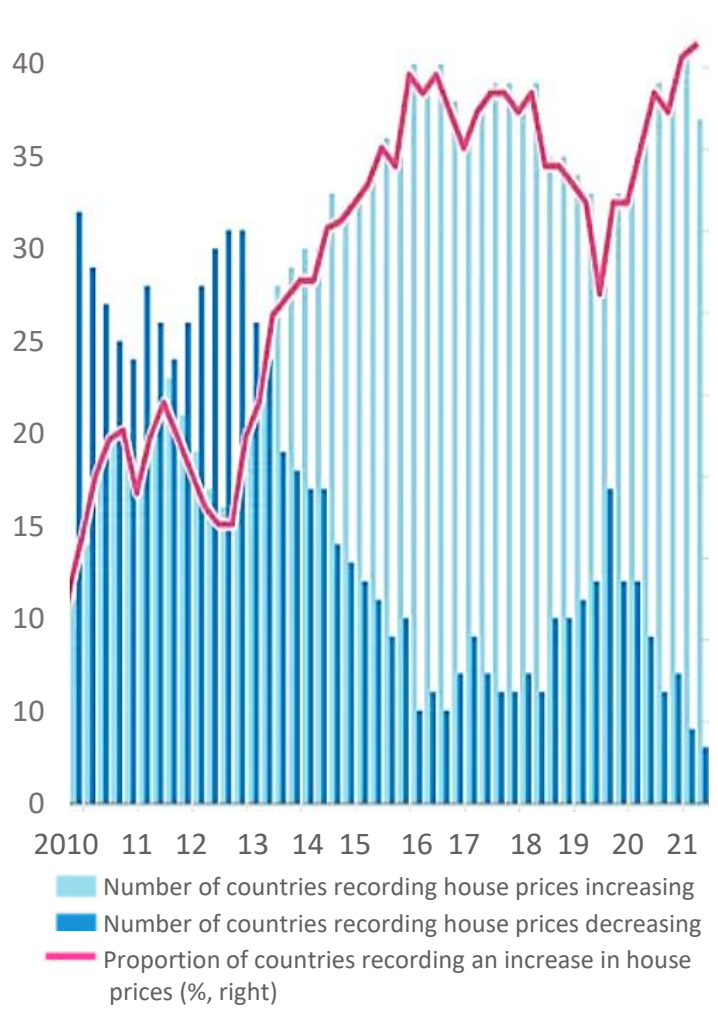
Stock indexes



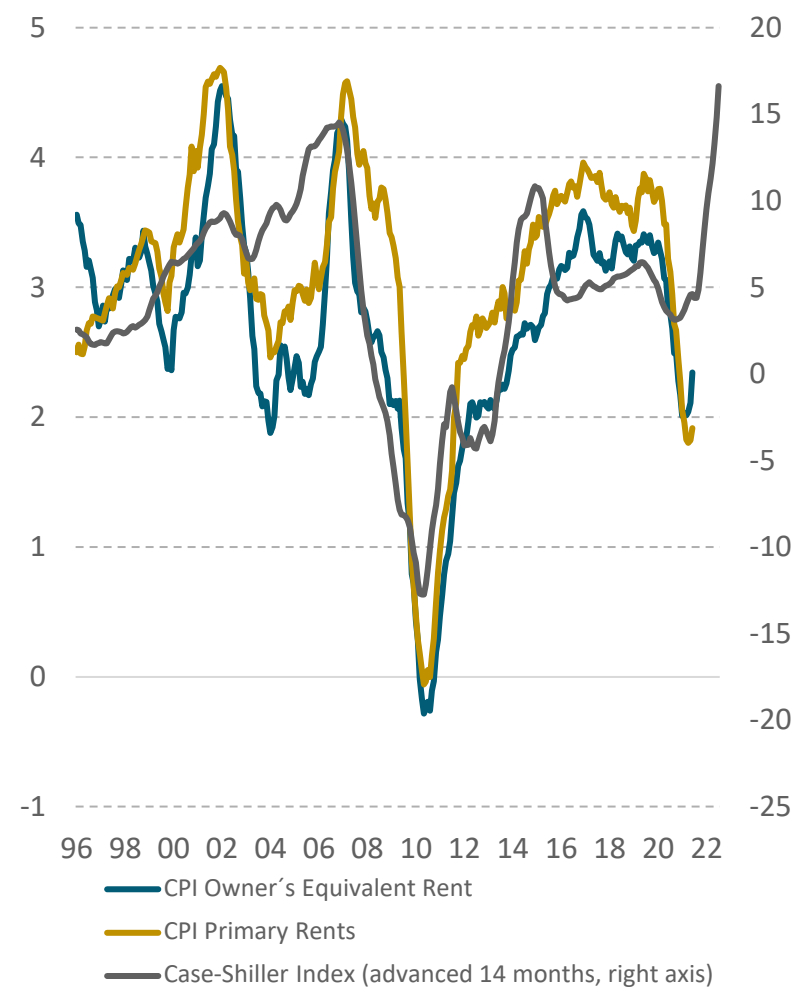
January 1st 2020 = 100.

Housing prices

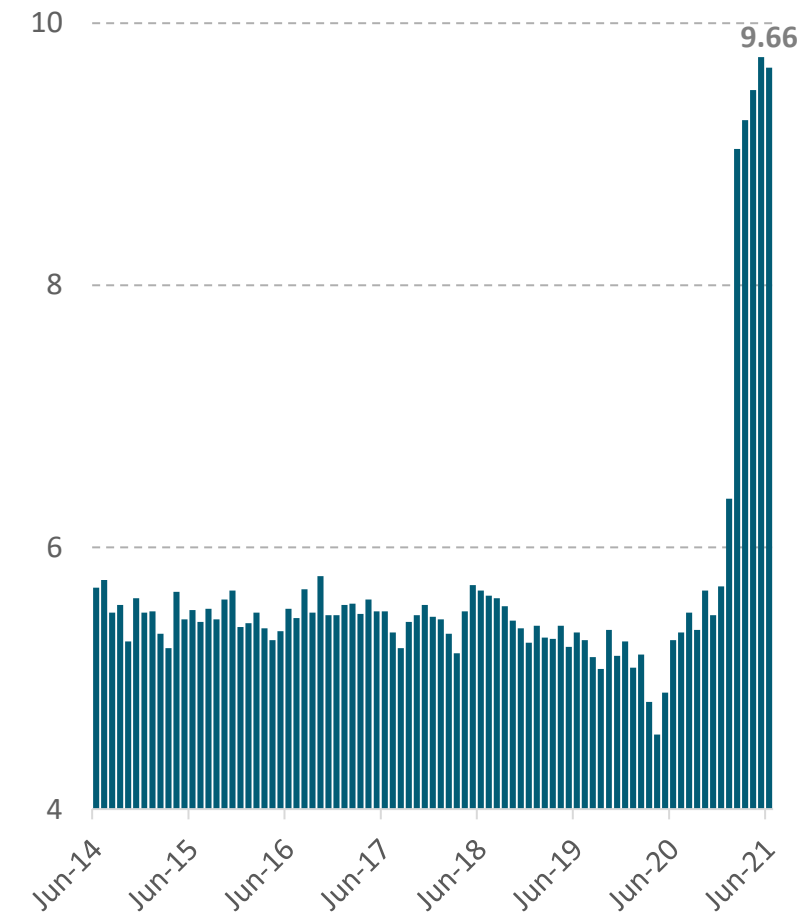
House prices - countries



U.S. Housing Components

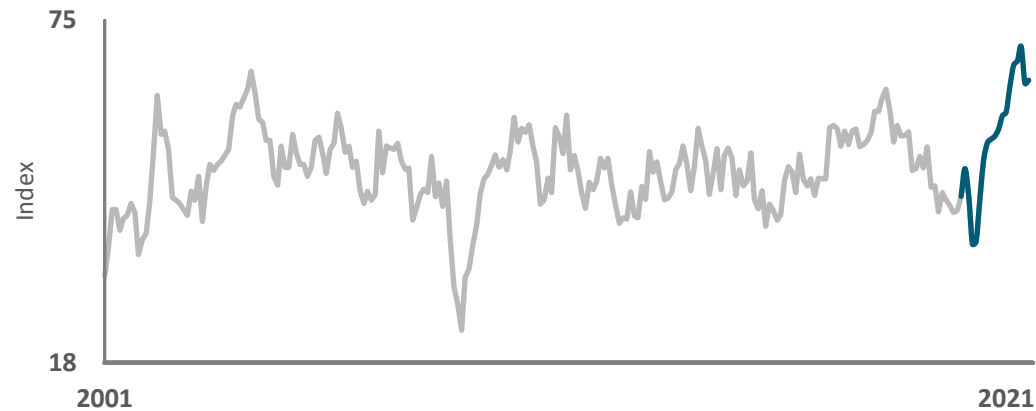


U.S. Rent Price Expectation 1 Year Ahead

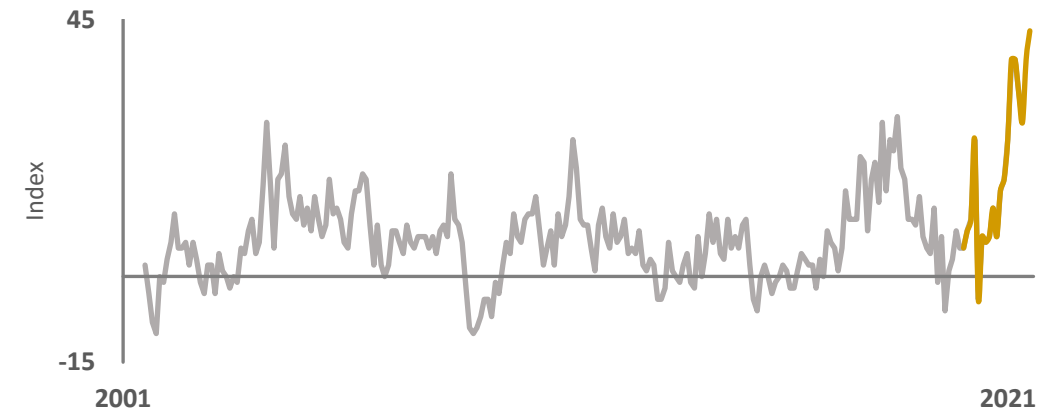


U.S. manufacturing indicators

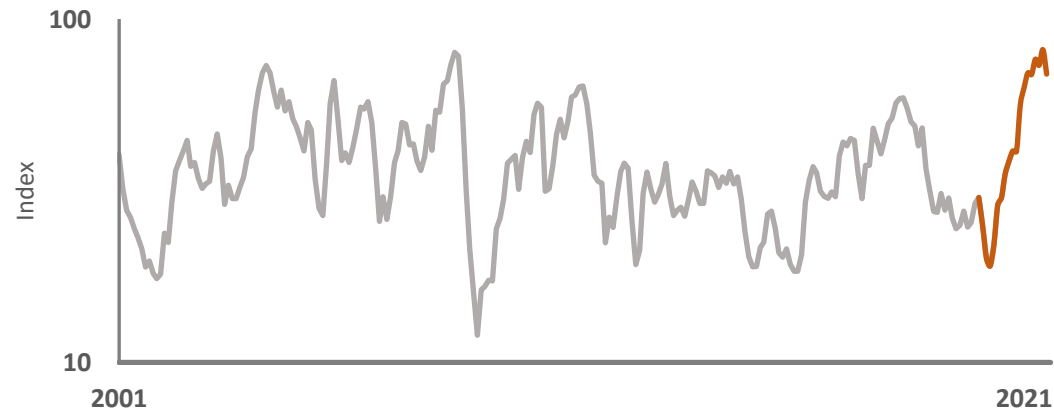
Order backlogs rising



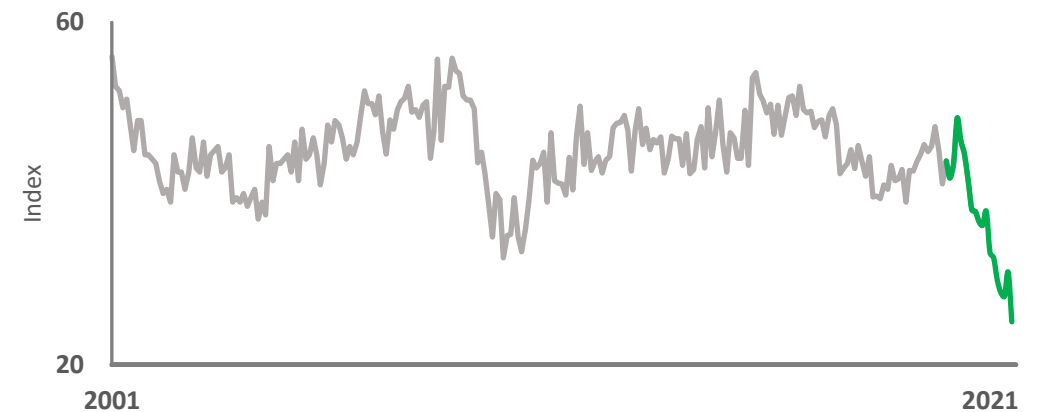
Longer delivery time



Higher prices paid



Low inventories



Note: Order backlogs rising index: ISM Manufacturing Report on Business Backlog of Orders NSA. Higher prices paid index: ISM Manufacturing Report on Business Prices Index NSA. For both, neutral level = 50 .

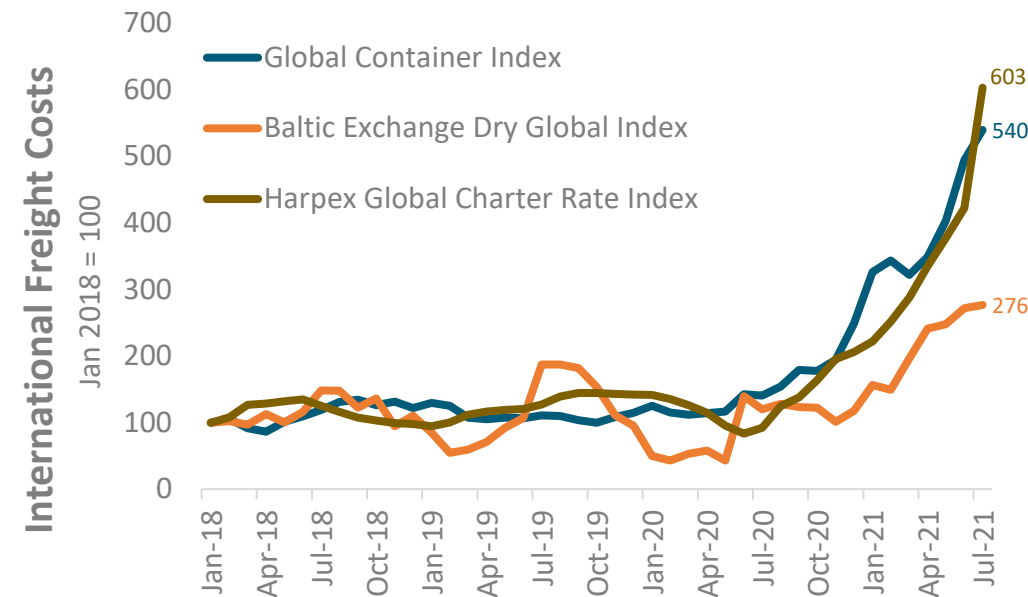
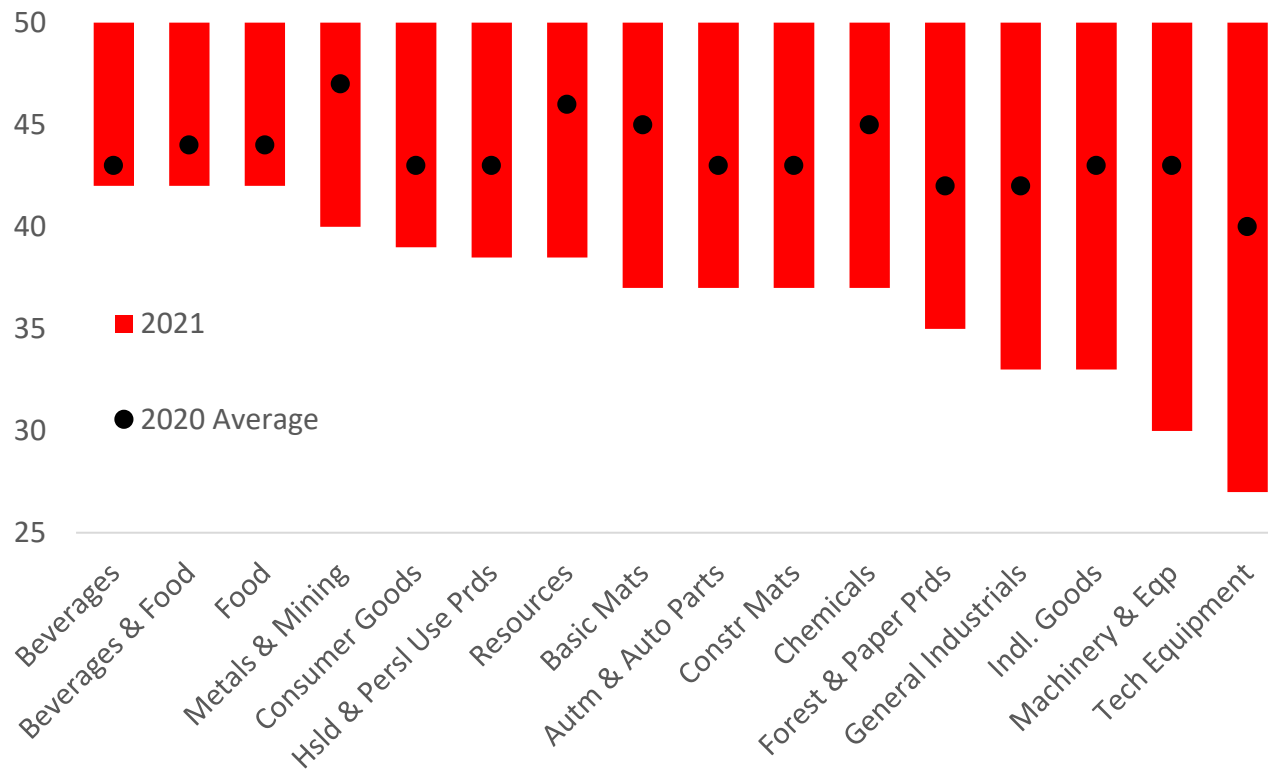
Note: Longer delivery times index: Kansas City Fed Monthly Manufacturing Survey NSA Supplier Delivery Time. Low inventories index: ISM Manufacturing Report on Business Customers' Inventories NSA. For both, neutral level = 50.

Sectoral bottlenecks

Indicators suggest some bottlenecks in the global economy.

Global PMI - Delivery Times

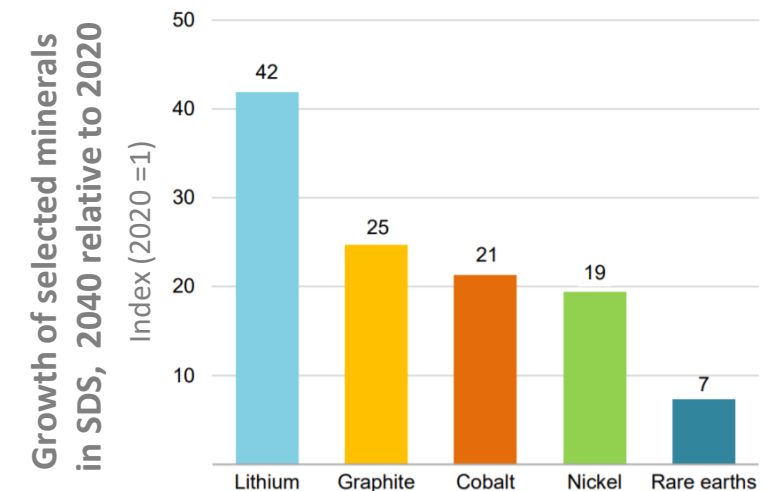
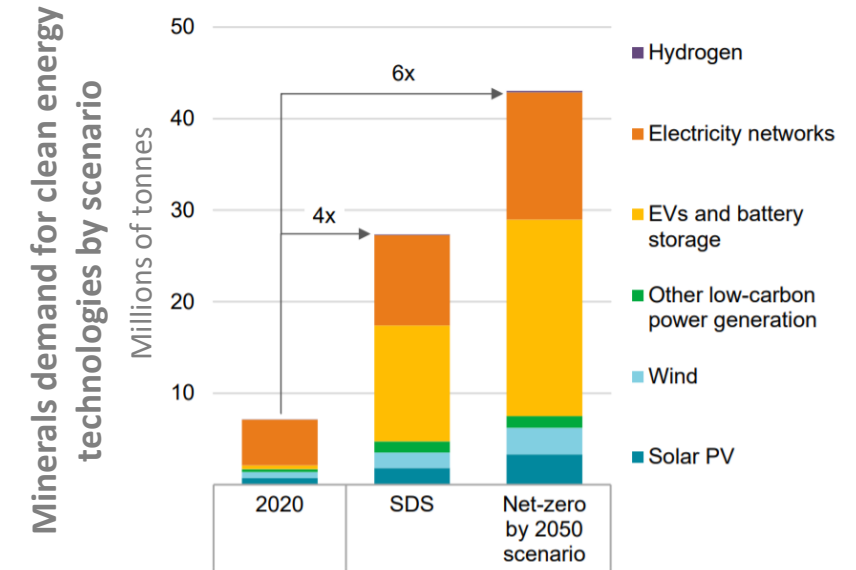
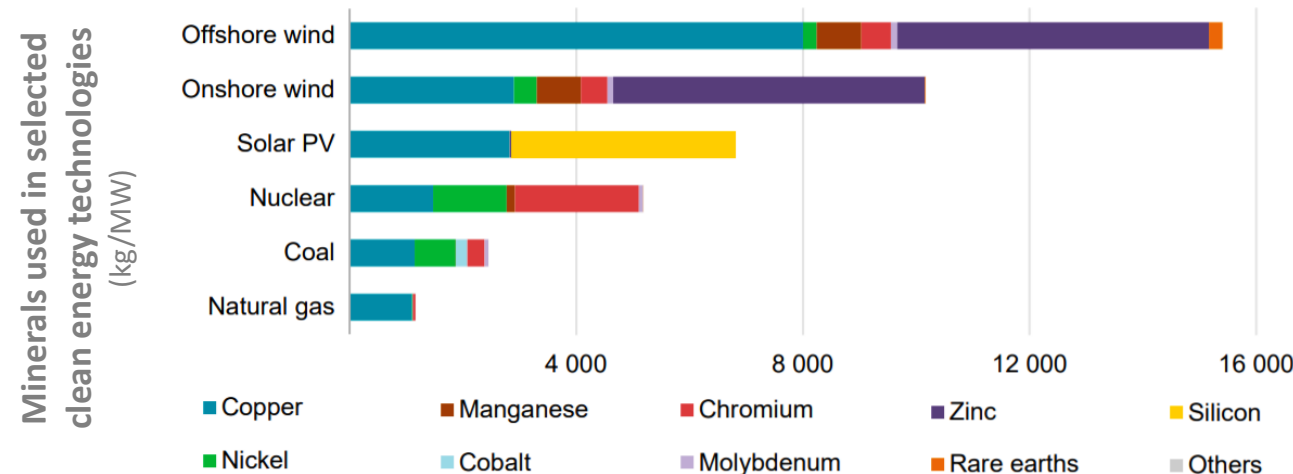
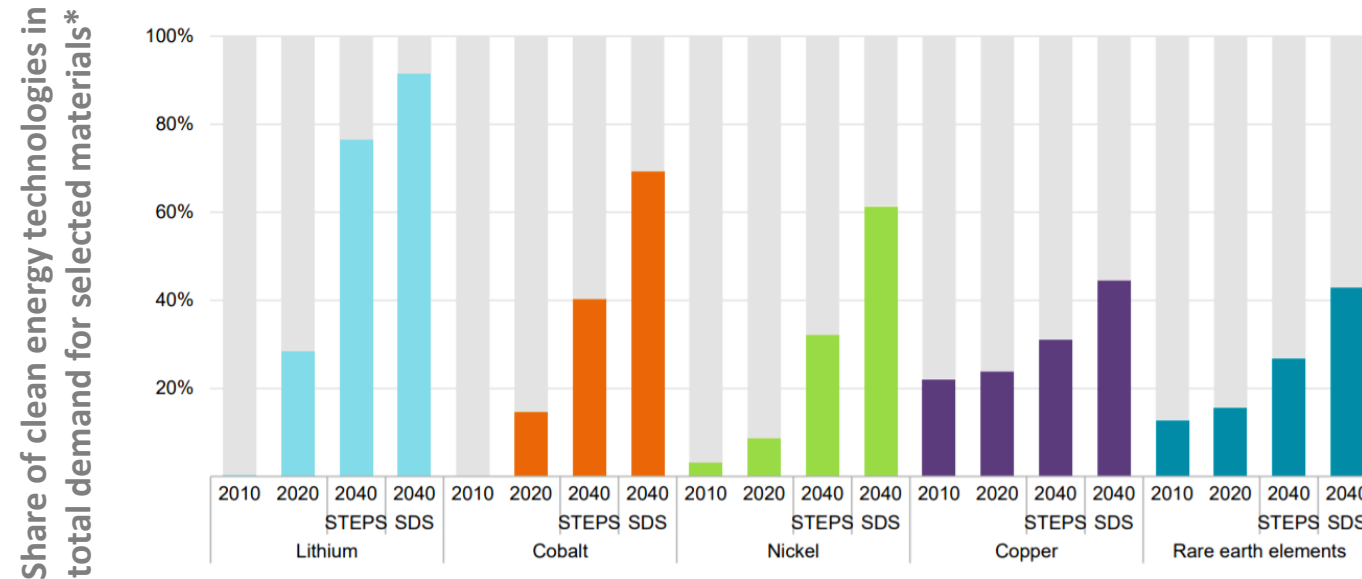
(Smaller numbers represent longer time)



Semiconductors = Philadelphia Stock Exchange Semiconductor Index

Green inflation

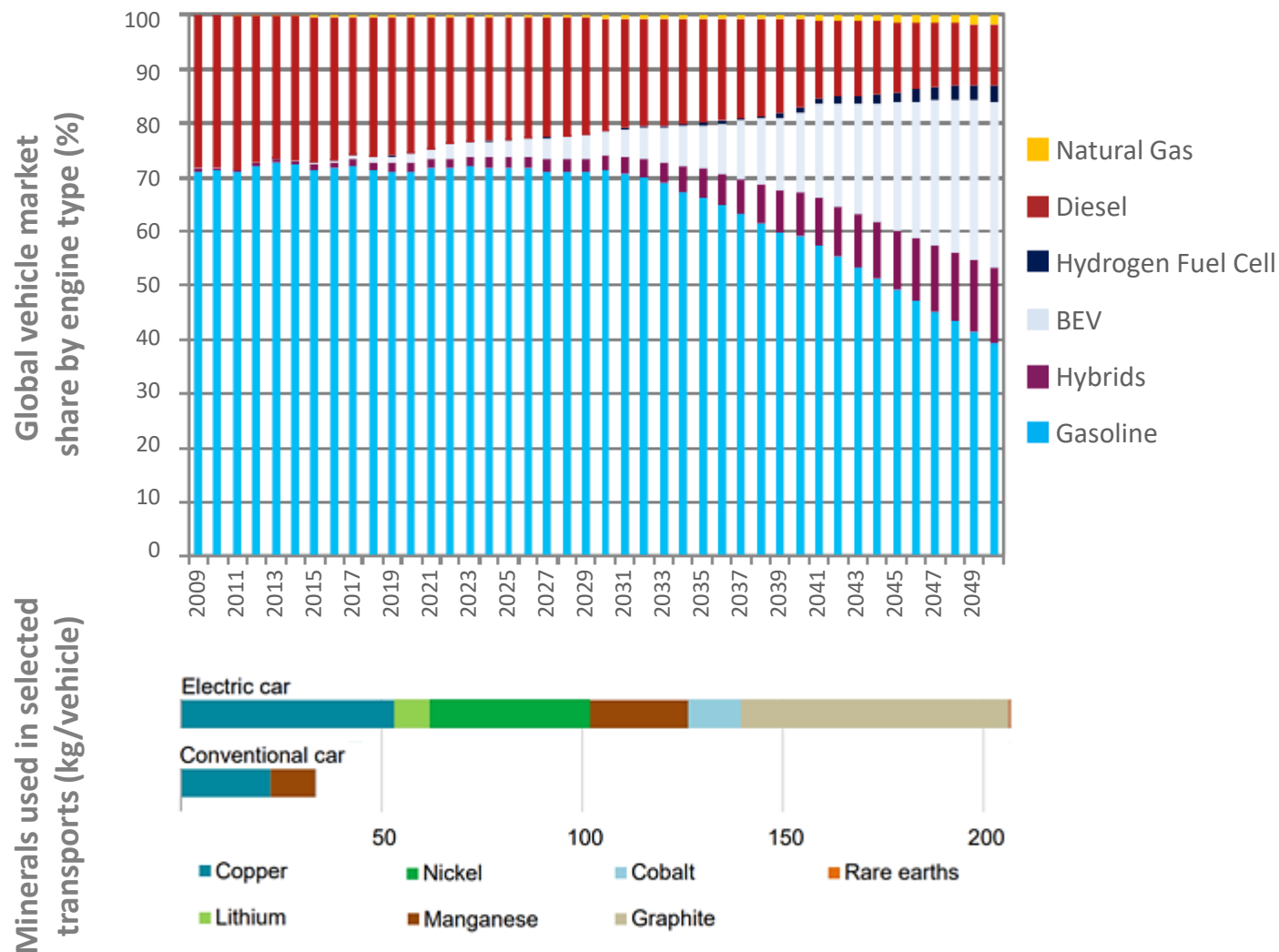
The transition for a greener economy is fueling a huge demand for key raw materials.



* 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.

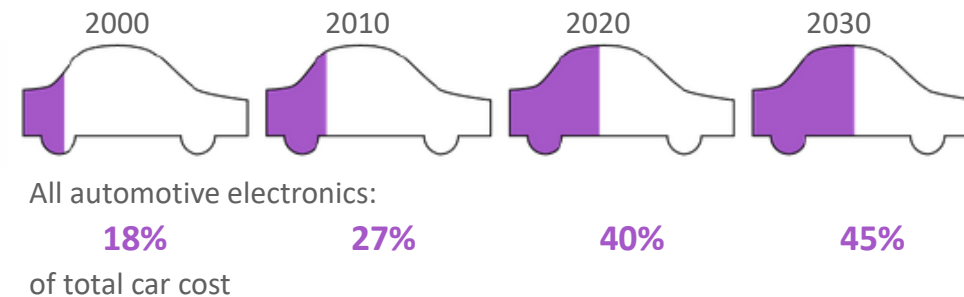
Green inflation (continued)

Mineral demand for clean energy technologies is increasing, with particularly high growth for EV-related minerals.

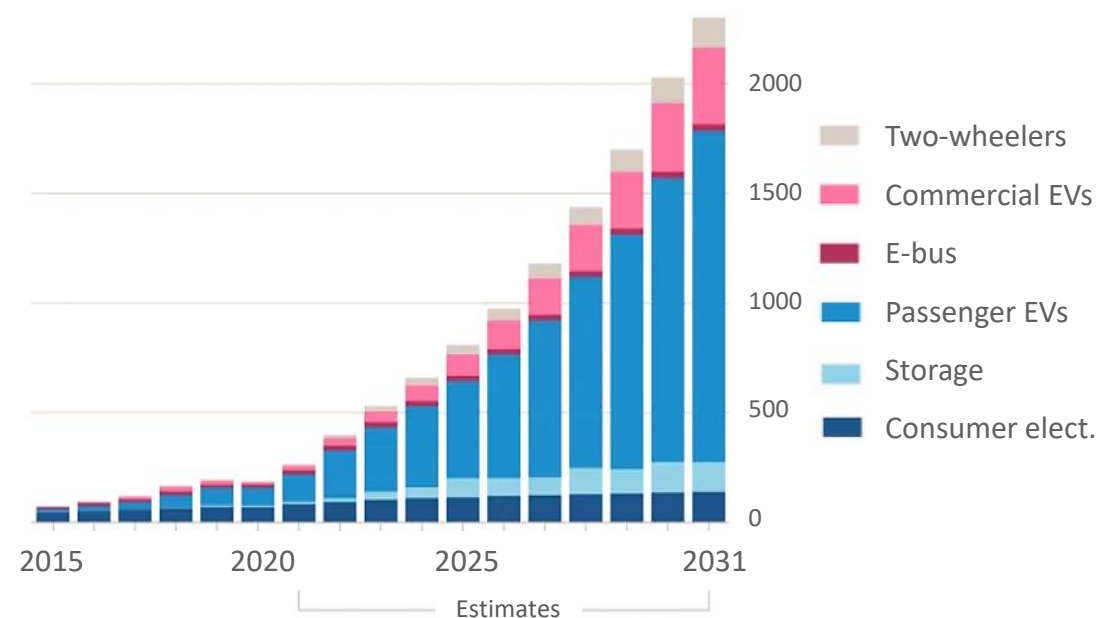


From horsepower to Chip Power

Modern cars are relying more on electronics that include semiconductors



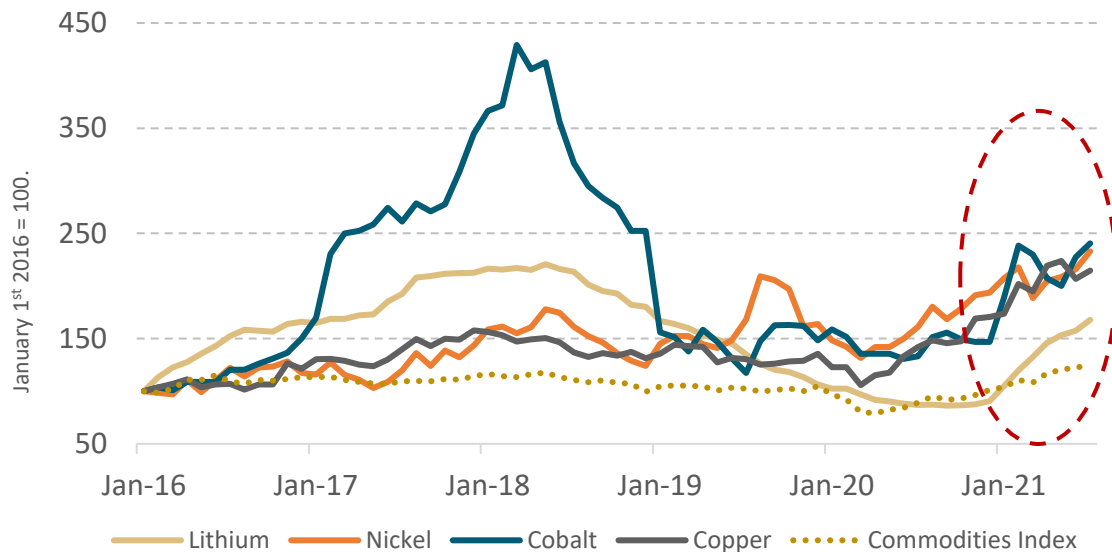
Demand for lithium batteries (GWh)



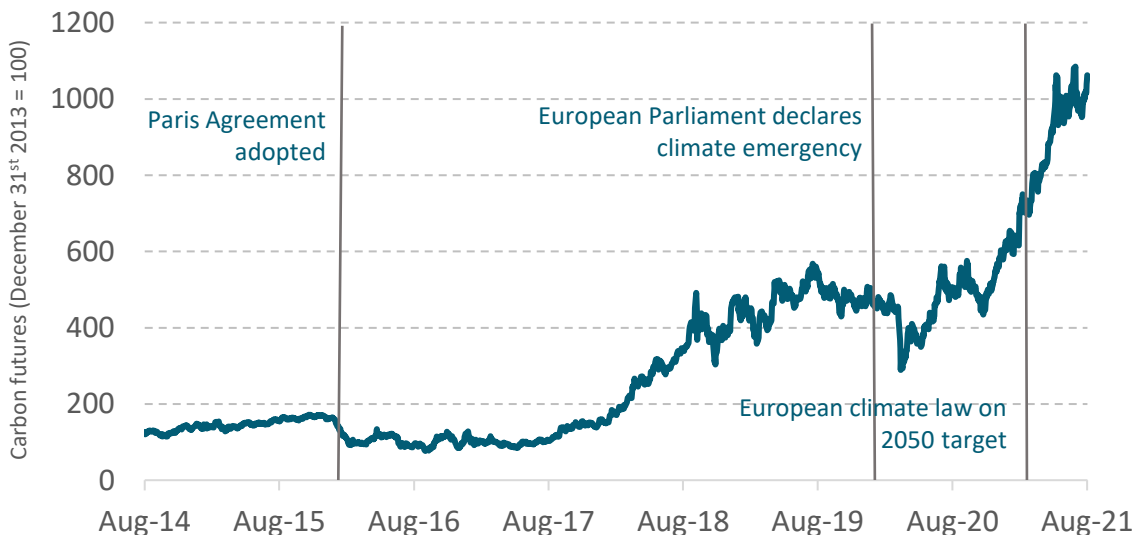
Green inflation (continued)

The climate-change fight is adding to the global inflation.

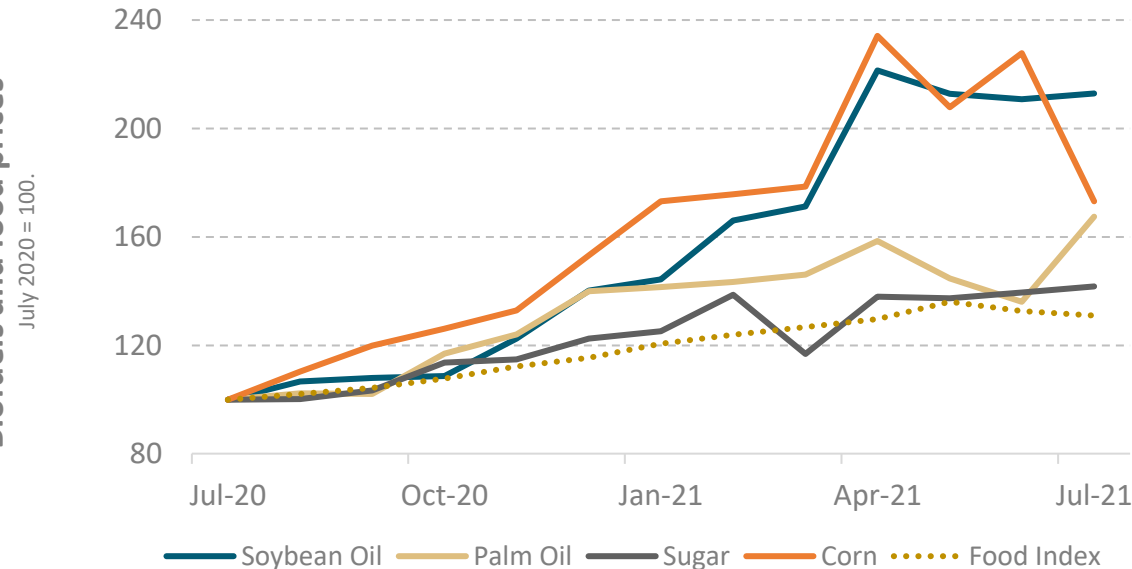
Metals and commodities indexes



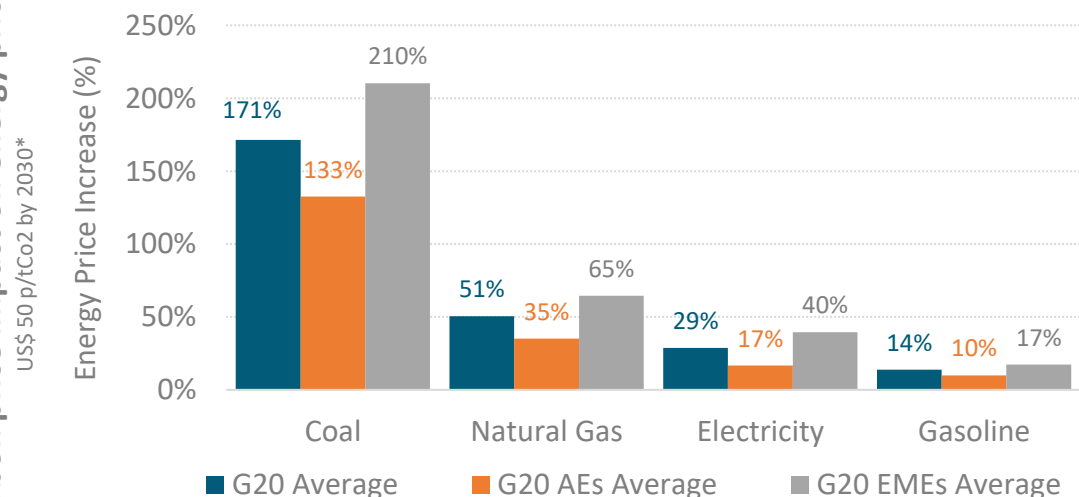
European carbon prices



Biofuels and food prices



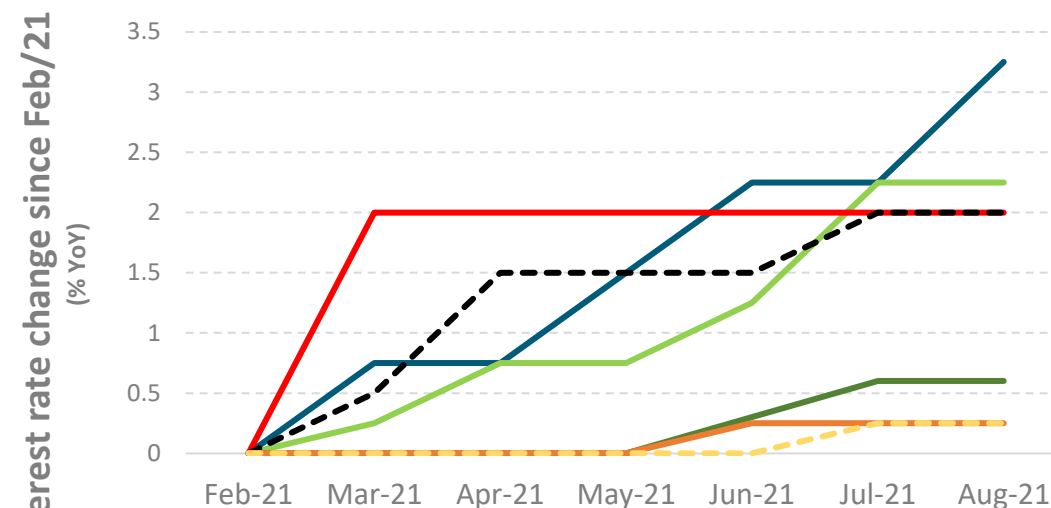
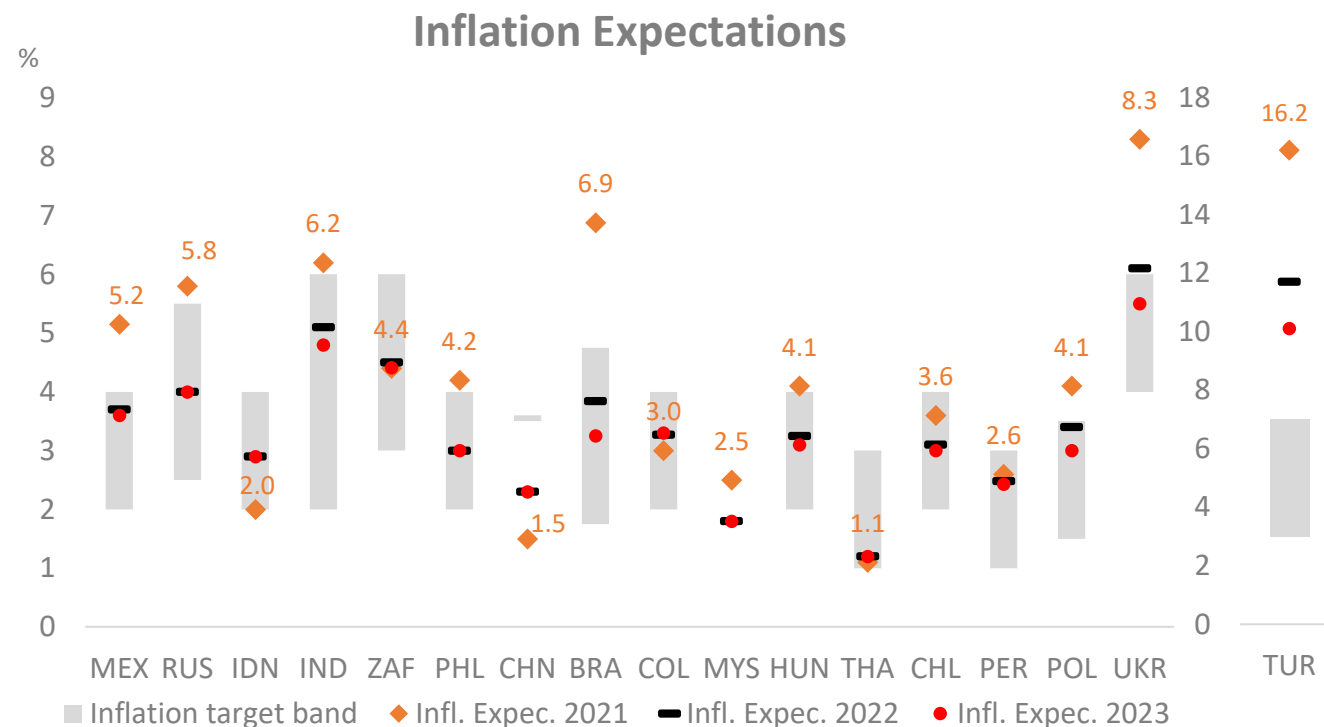
Carbon price impact on energy prices



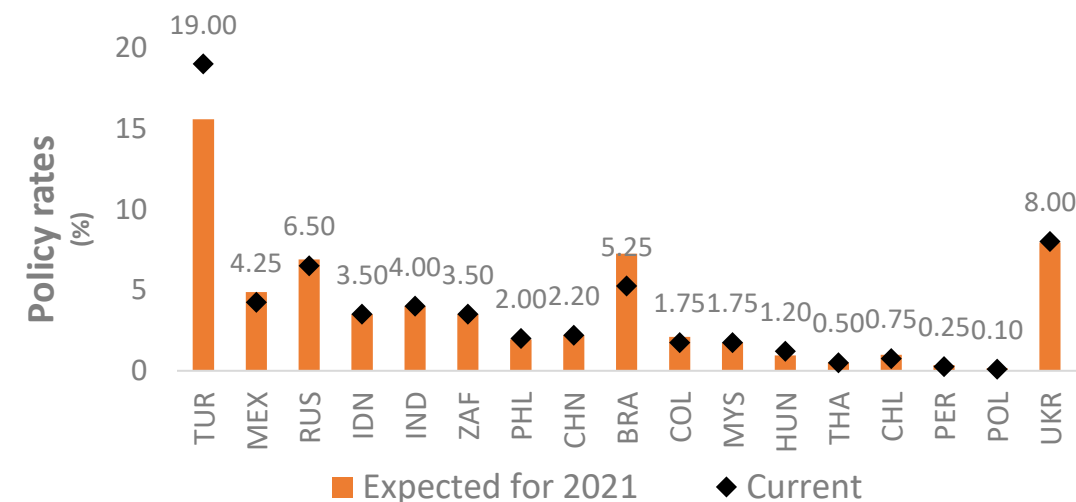
*According to IMF Staff Proposal for an International Carbon Price Floor among Large Emitters, a 75/50/25 US\$/ton carbon price floor for advanced/emerging/ low-income countries by 2030 would be needed to reduce emissions by 23% and keep global warming below 2°C. Current international carbon prices are around 3 US\$/ton.

Inflation expectations and monetary policy in EMEs

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



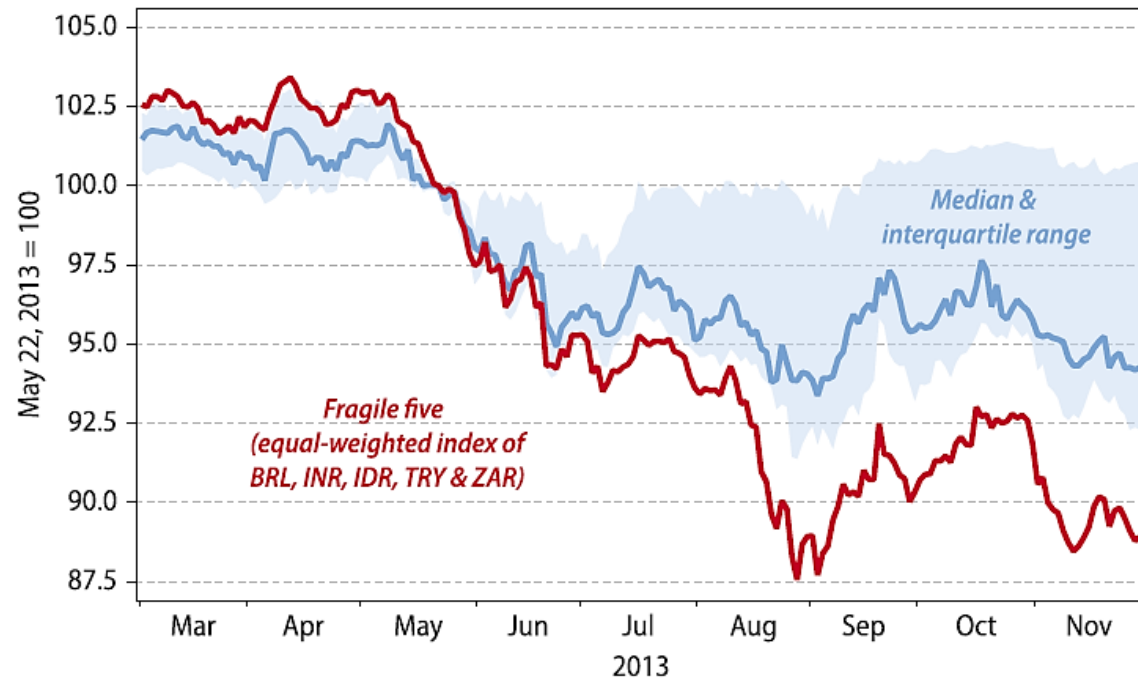
Legend for Interest rate change since Feb/21 (% YoY):
 — Brazil +3.25
 — Russia +2.25
 — Turkey +2
 — Ukraine +2
 — Hungary +0.6
 — Chile +0.25
 — Mexico +0.25



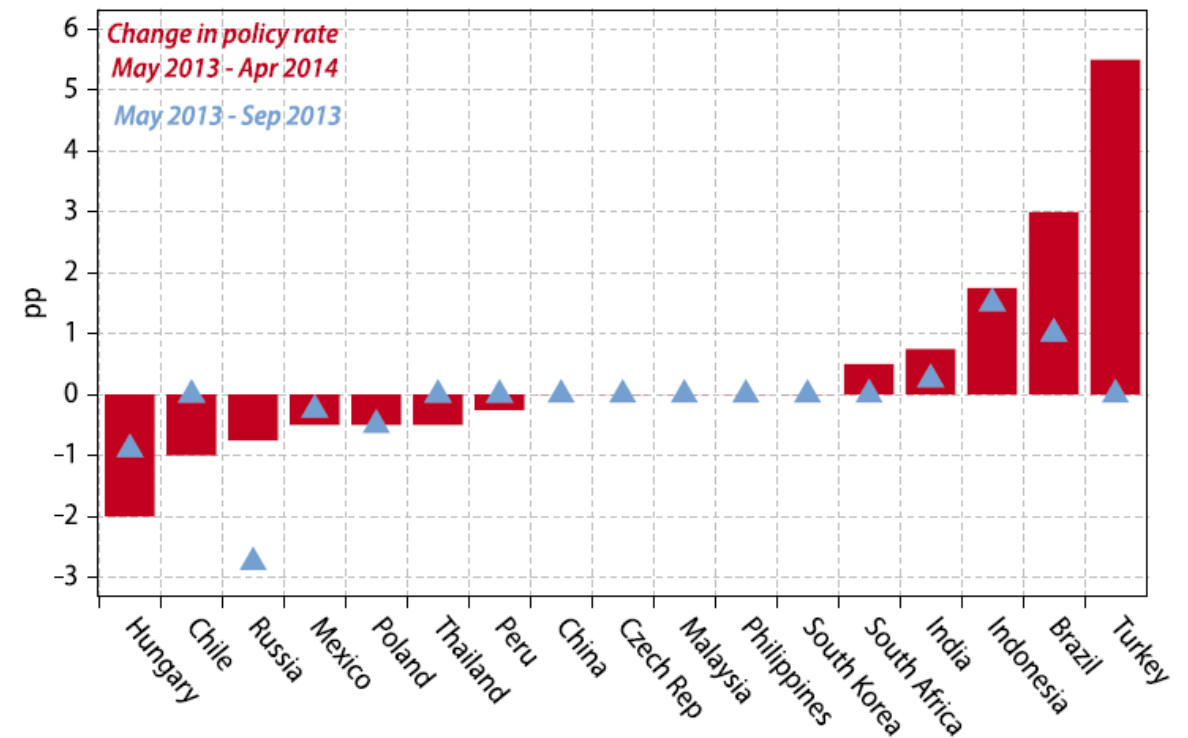
Taper Tantrum and economic fragilities

EMEs with weaker fundamentals suffered the worst of the market sell-off, and made the higher increases in policy rates.

Performance of EMEs currencies against the dollar

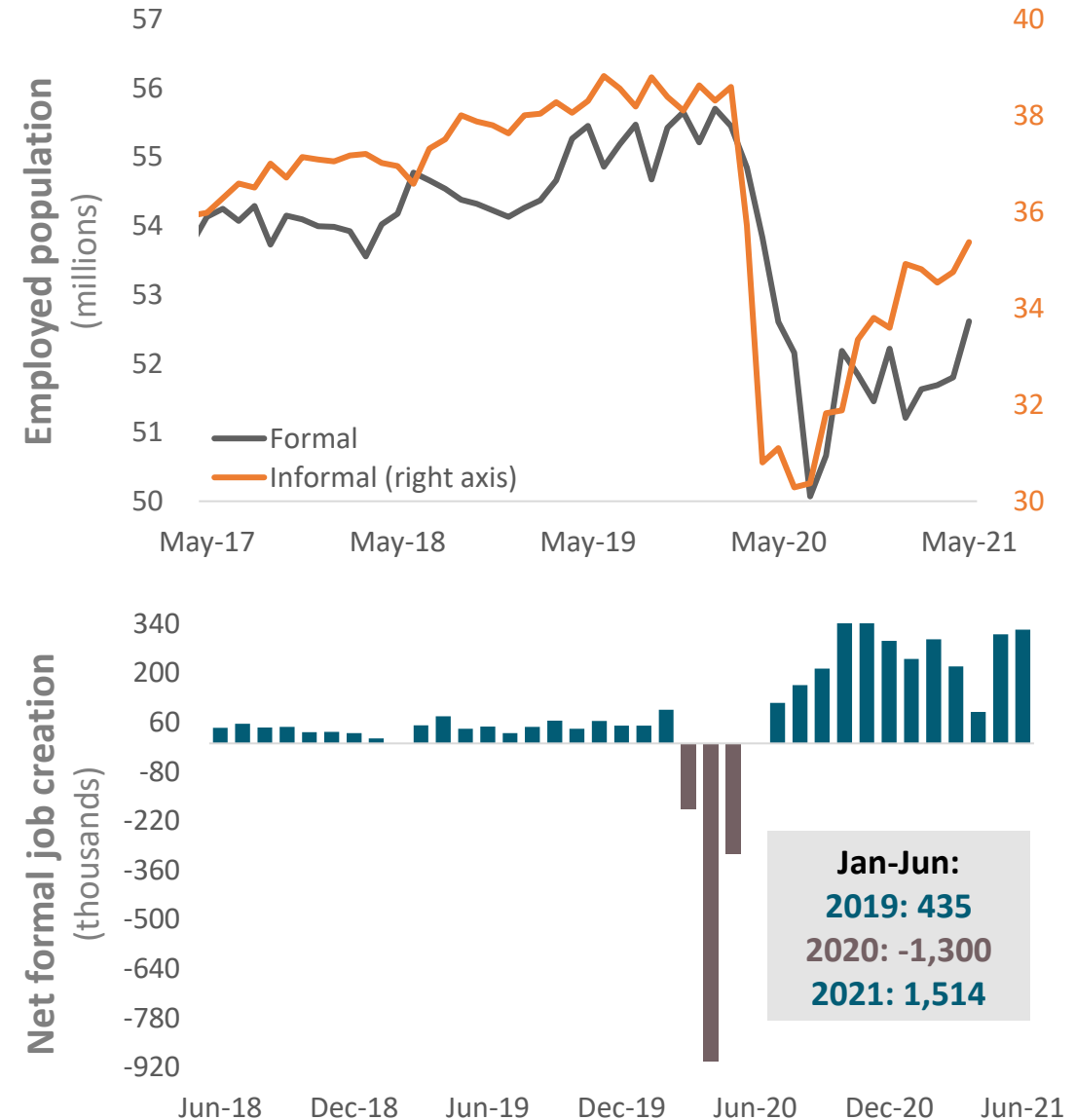
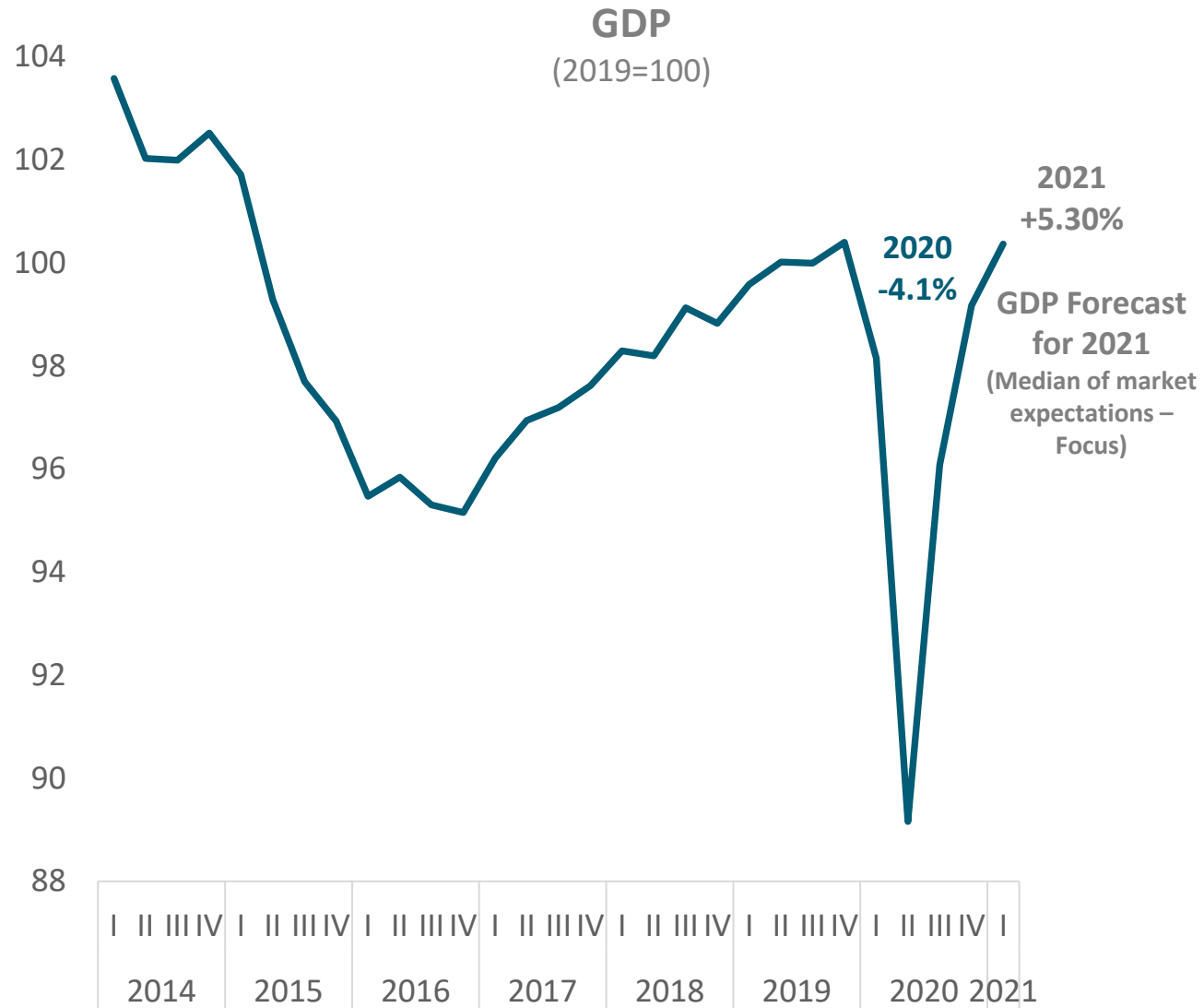


Change in EMEs policy rates



Brazil: GDP and labor market

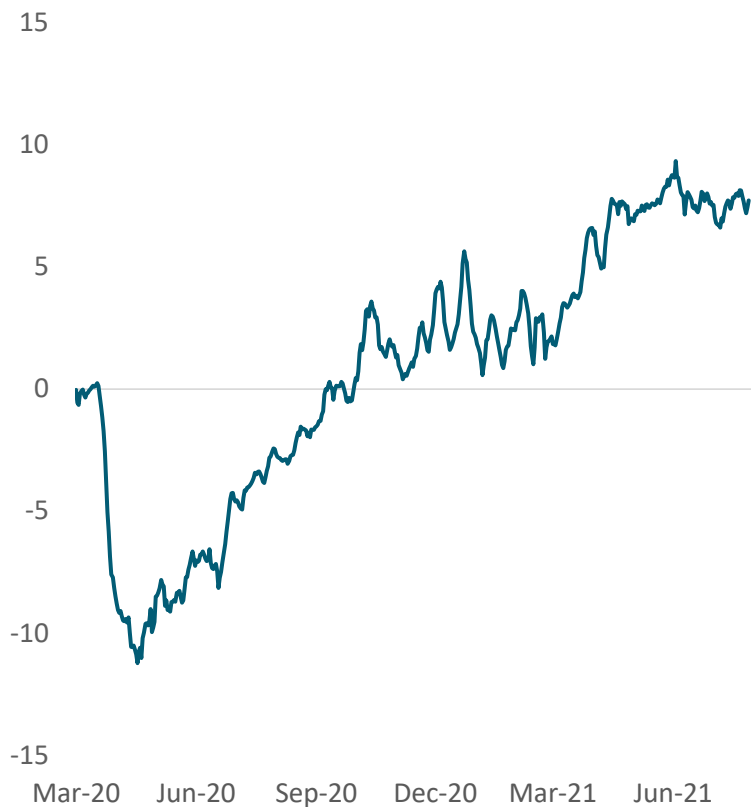
Strong recovery of GDP and jobs in 2021



High frequency indicators

Electricity demand

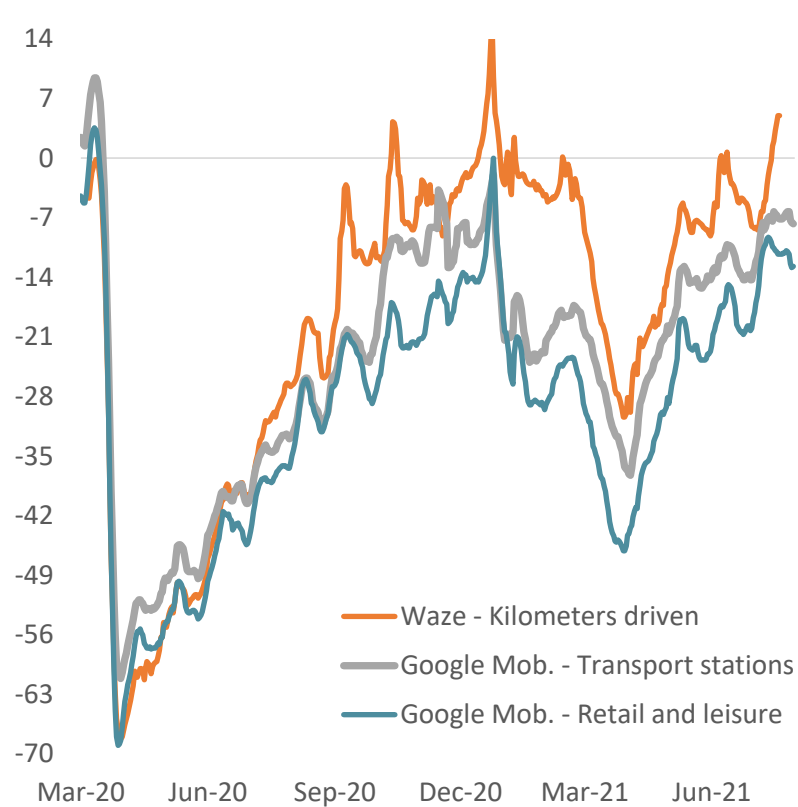
mm7d; % change compared to reference period^{1/}



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

Mobility indicator

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



2/ Reference periods:
Waze: 11-15/Feb/2020
Google Mobility: 3/Jan/2020 to 6/Feb/2020

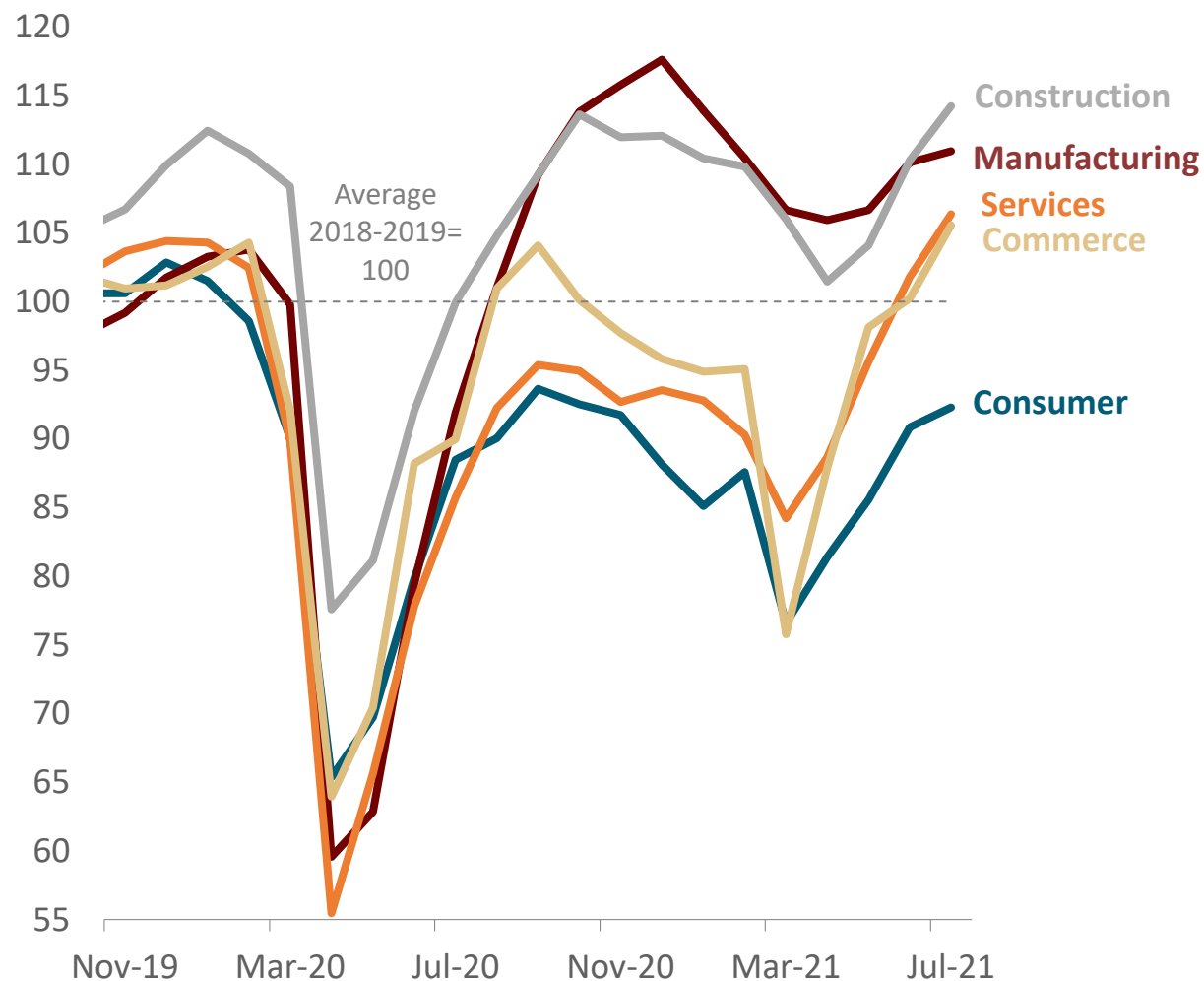
Debit card sales

mm7d; Nominal values (BRL millions)



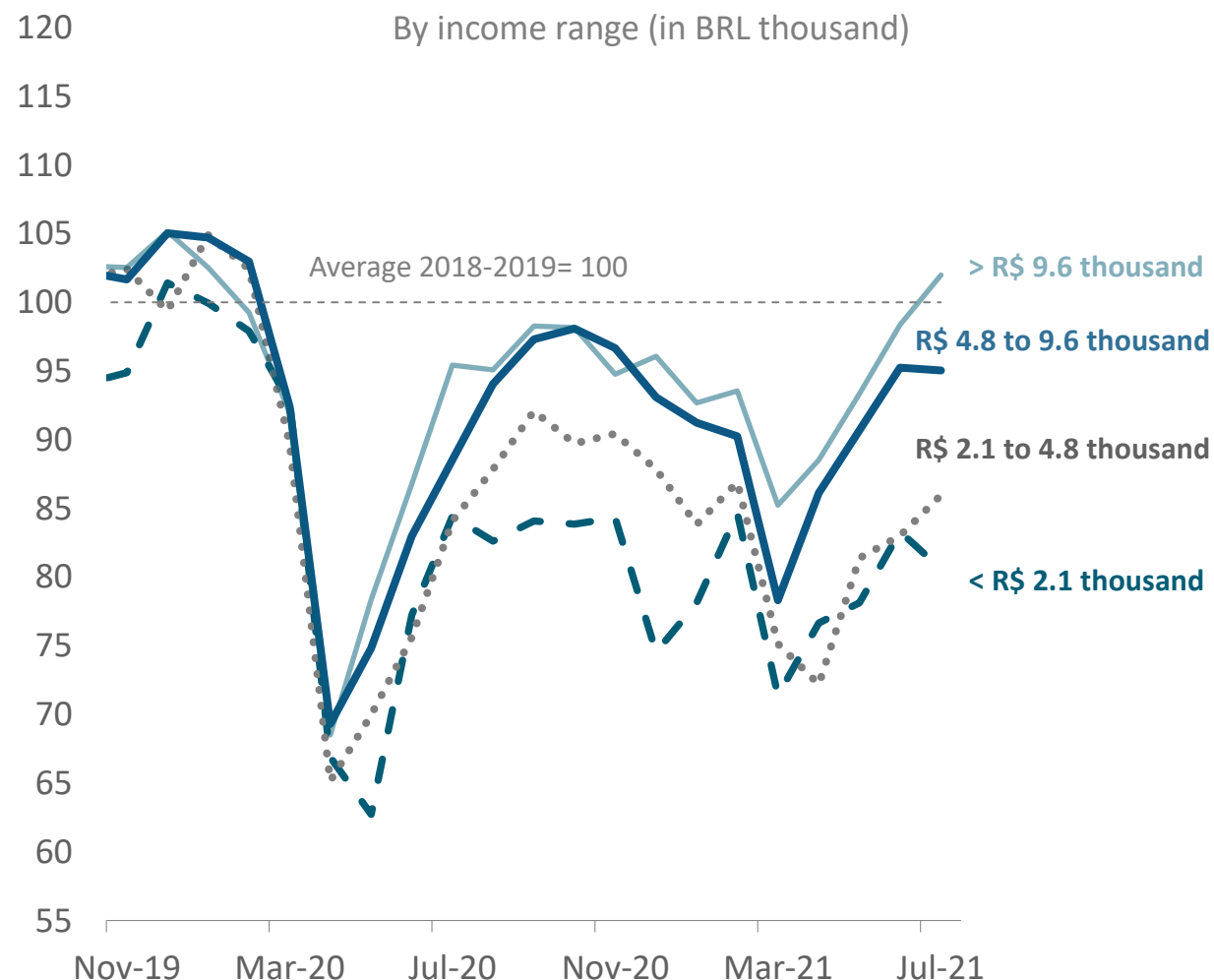
Confidence indicators

Business confidence X consumer confidence



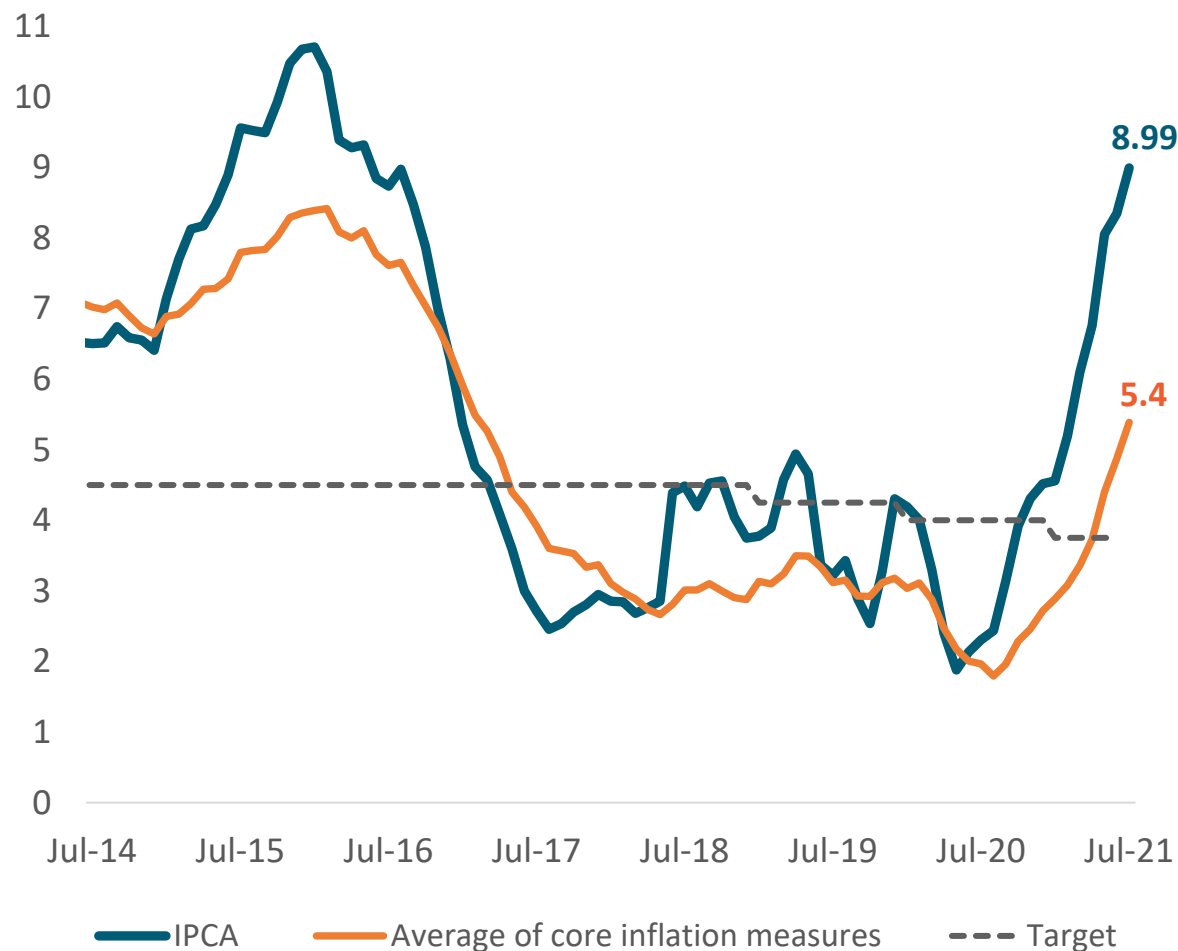
Consumer confidence

By income range (in BRL thousand)

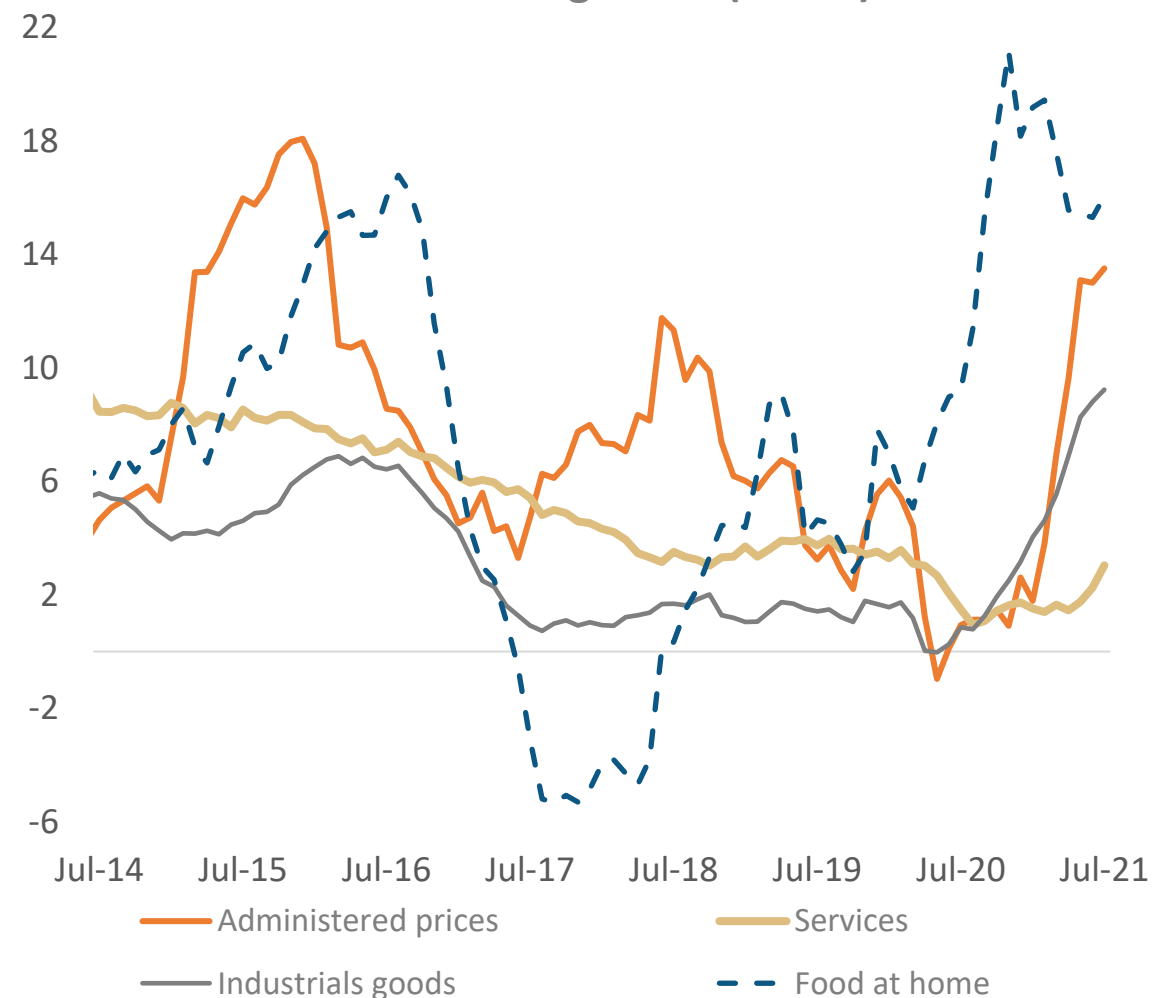


Consumer inflation

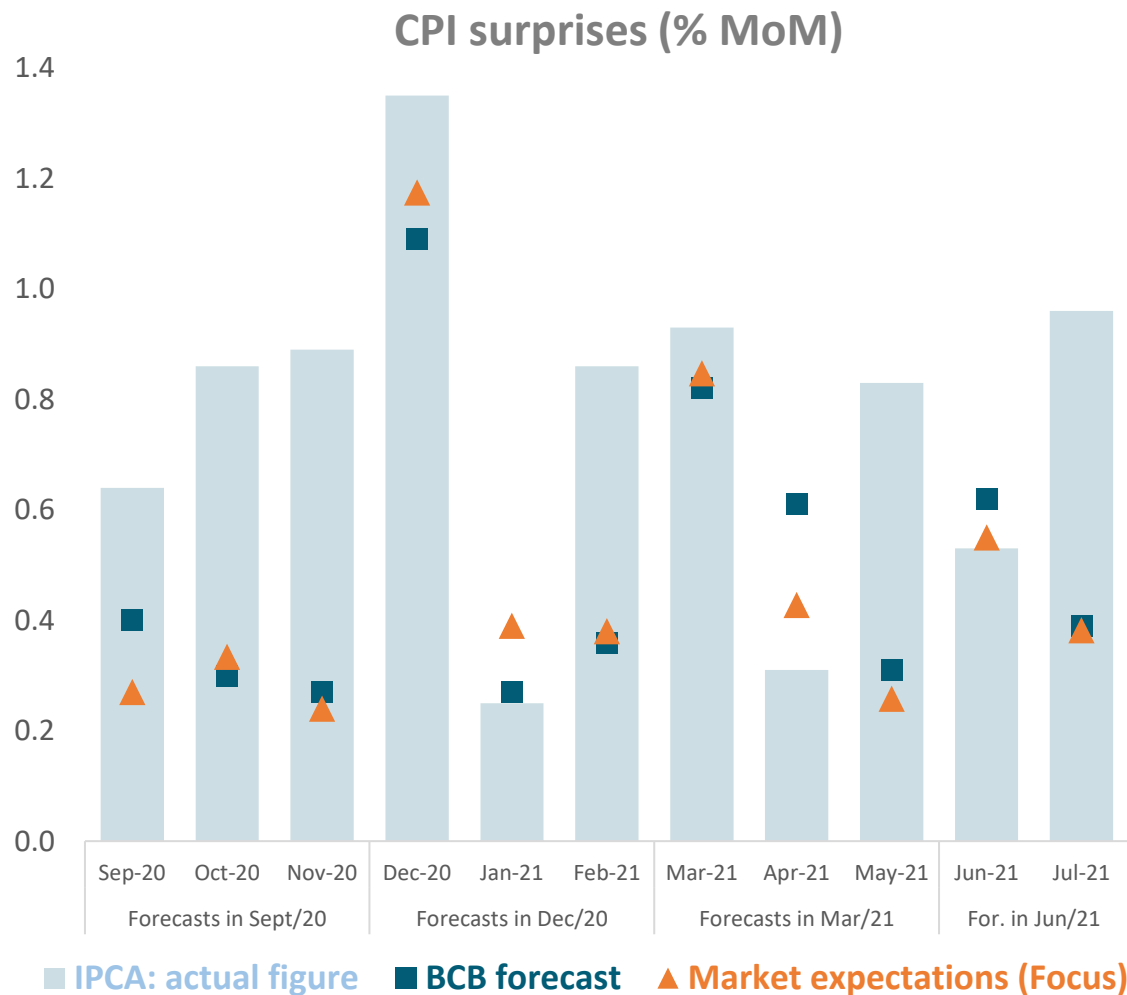
IPCA and target - (% YoY)



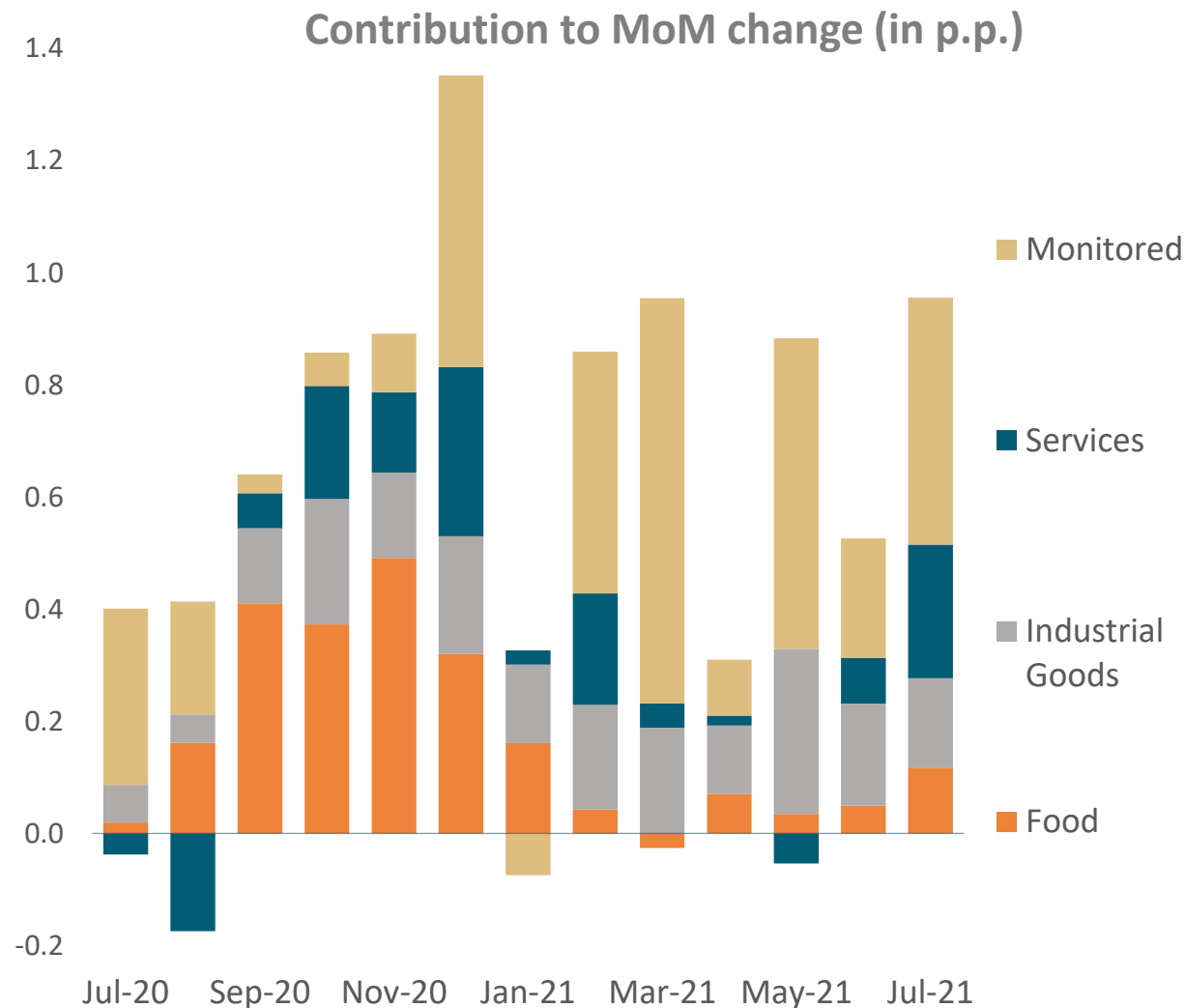
Inflation segments (% YoY)



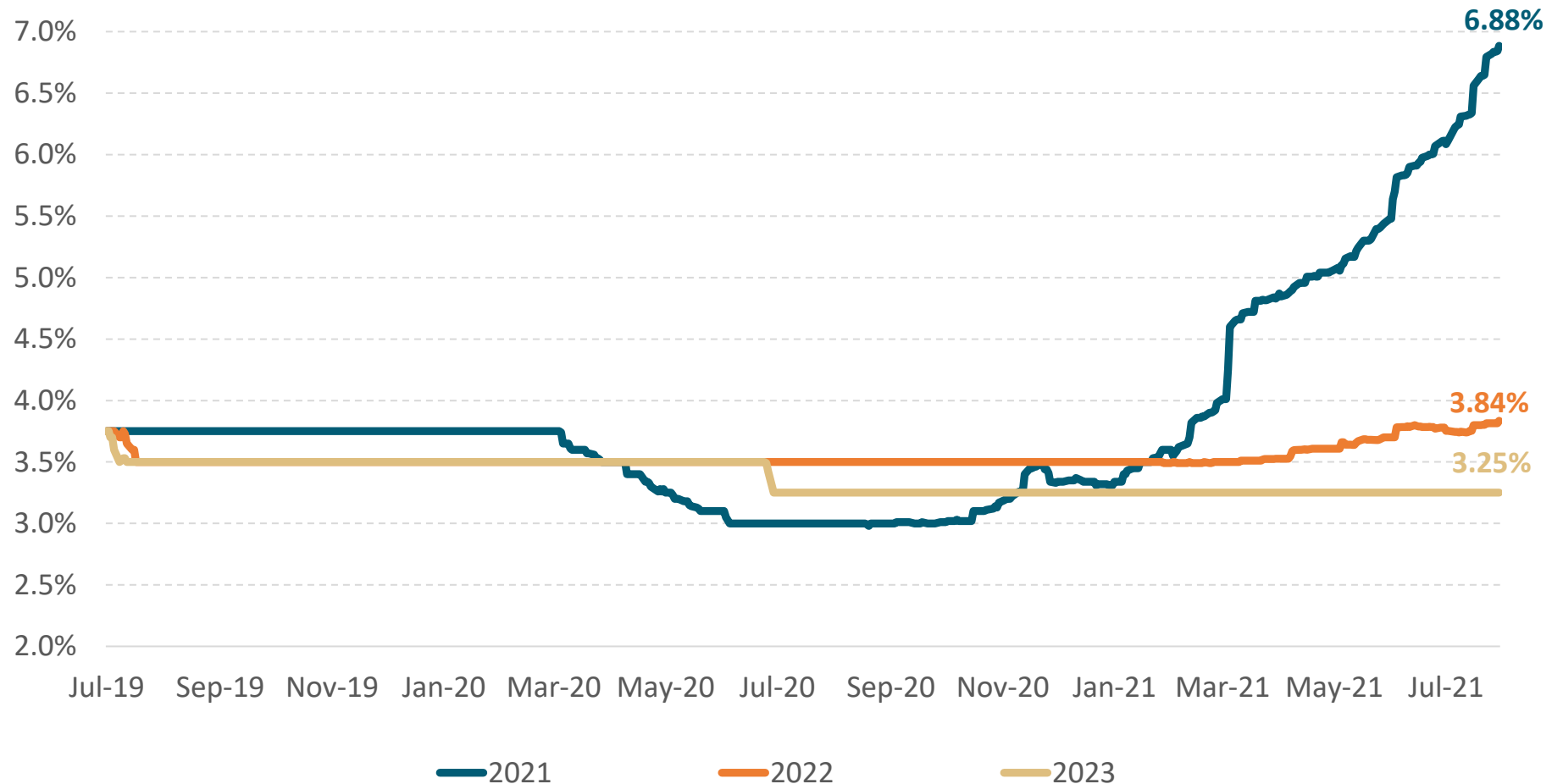
CPI: Surprises and decomposition



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



Market expectations – Focus (% p.y.)



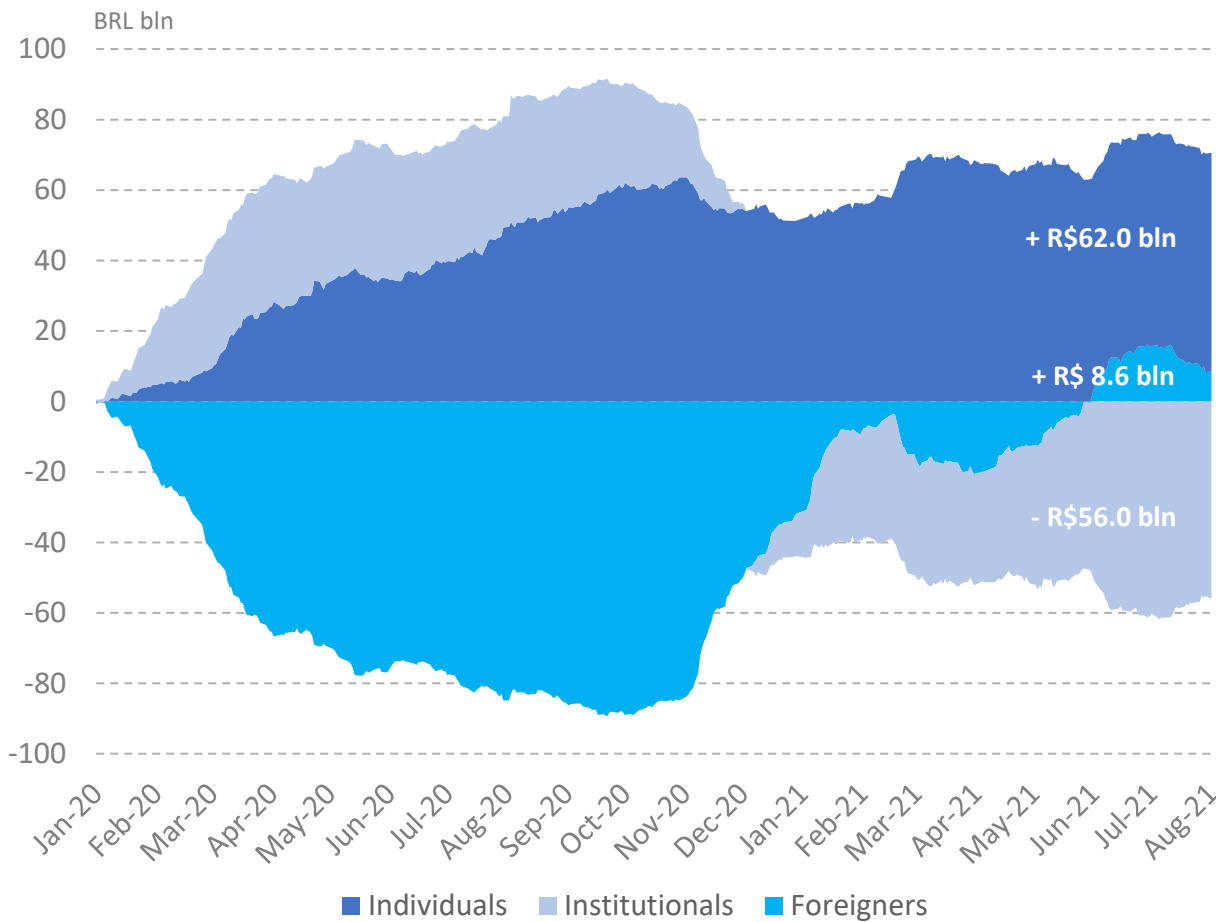
Monetary policy

240th Copom meeting – August 2021

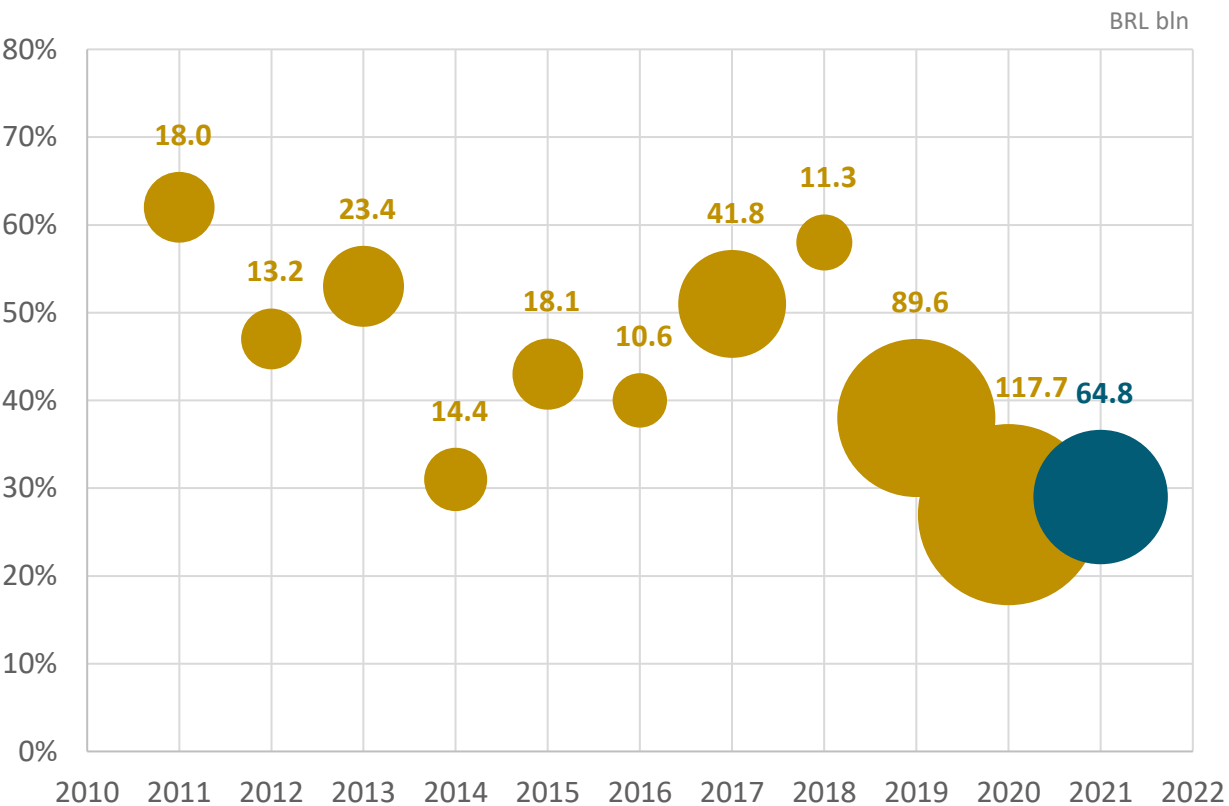
- In its 240th meeting, the Copom unanimously decided to increase the Selic rate by 1.00 p.p. to 5.25% p.a.
- The Committee judges that this decision reflects its baseline scenario for prospective inflation, a higher-than-usual variance in the balance of risks, and is consistent with the convergence of inflation to its target over the relevant horizon for monetary policy, which includes 2022 and, to a lesser extent, 2023 .
- The adjustment also reflects the Committee's perception that the recent deterioration of inertial components of inflation, in a moment of reopening of the service sector, could result in an additional deterioration of inflation expectations. The Committee understands that, at this moment, the strategy of a quicker monetary adjustment is the most appropriate to guarantee the anchoring of inflation expectations.
- At this moment, the Copom's baseline scenario and balance of risk indicate as appropriate a tightening cycle of the policy rate to a level above the neutral.
- 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 .

Stock markets

Accumulated flows into the stock market



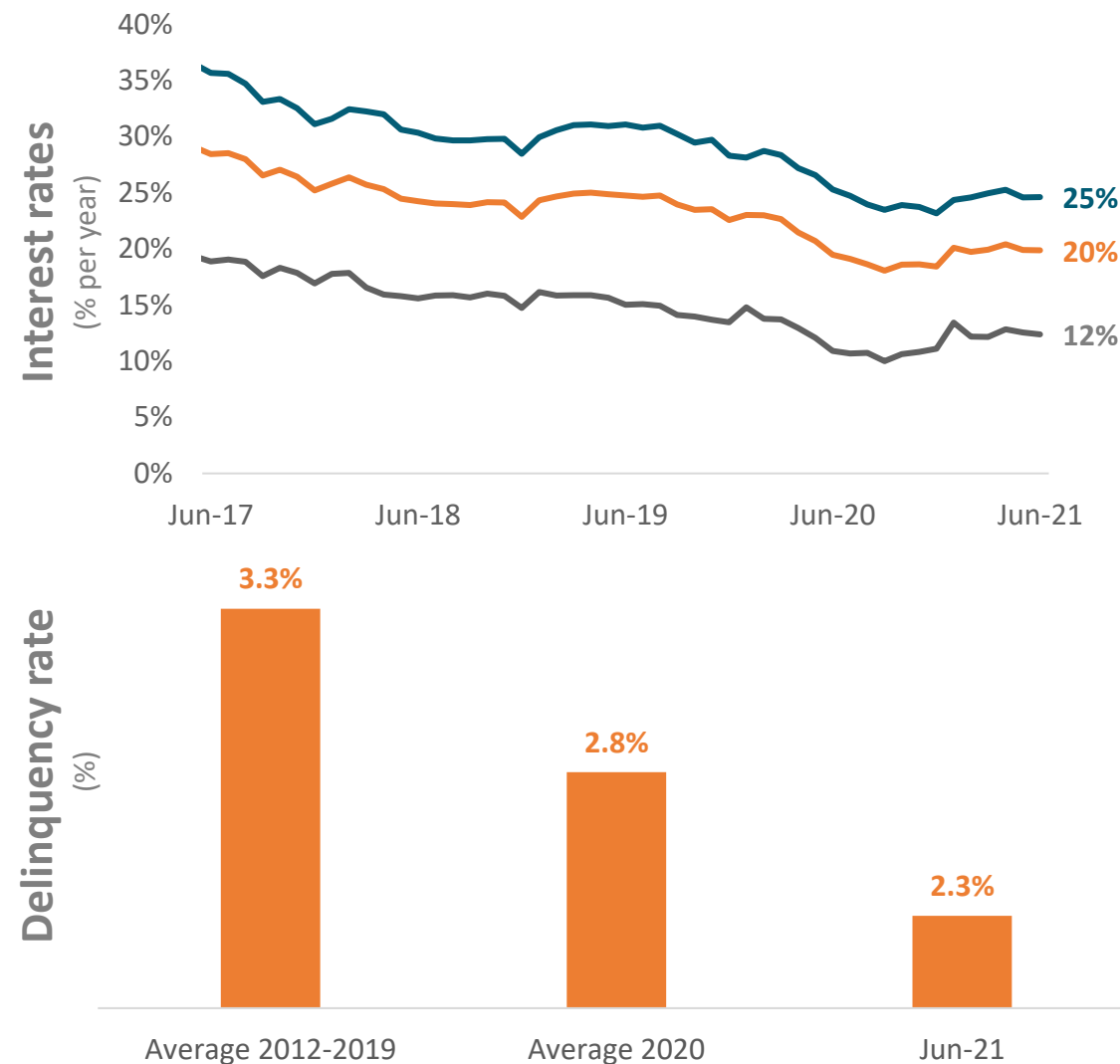
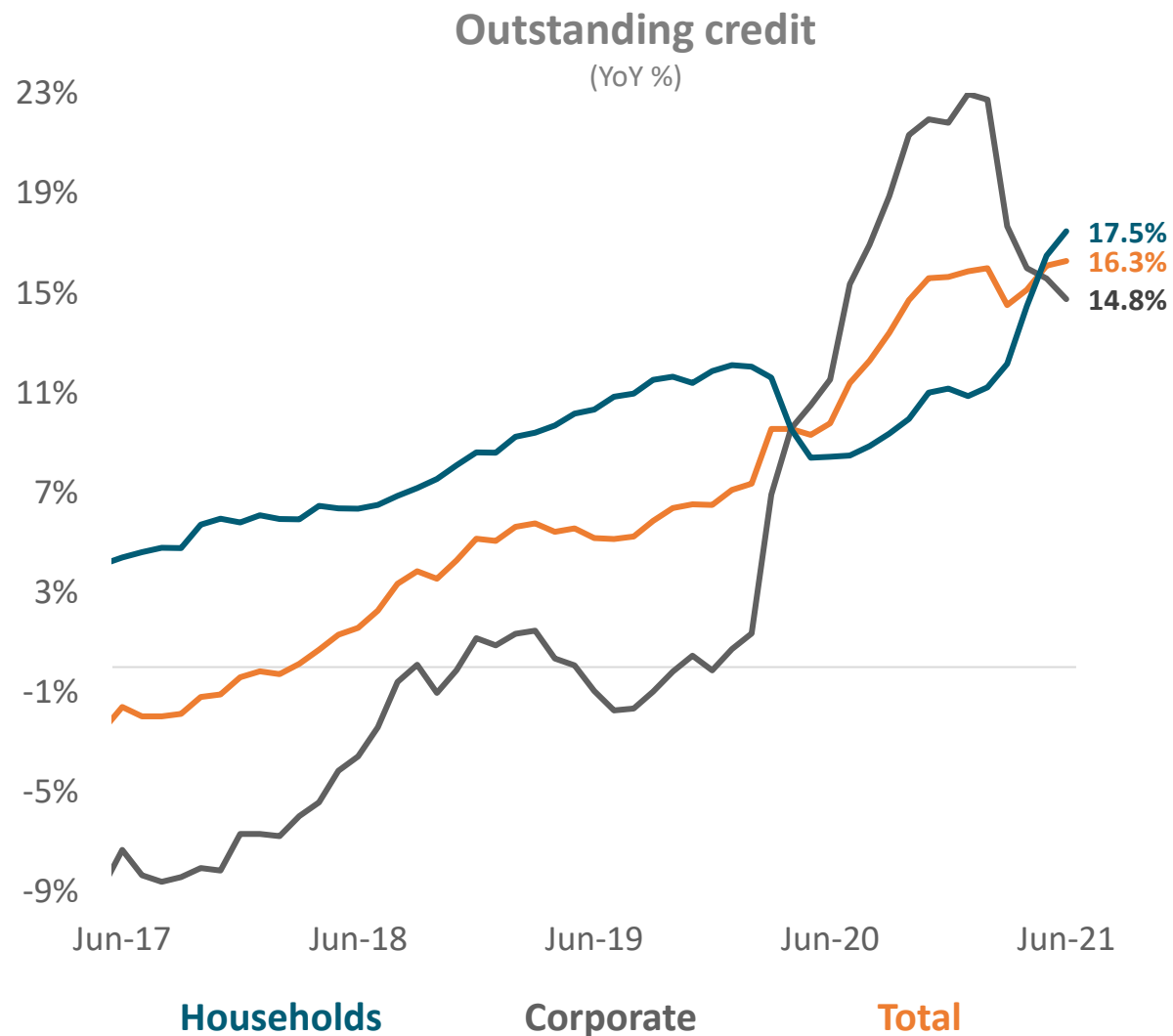
IPO/Follow on – Foreign investor's participation (%)



*Data until June 30th 2021.

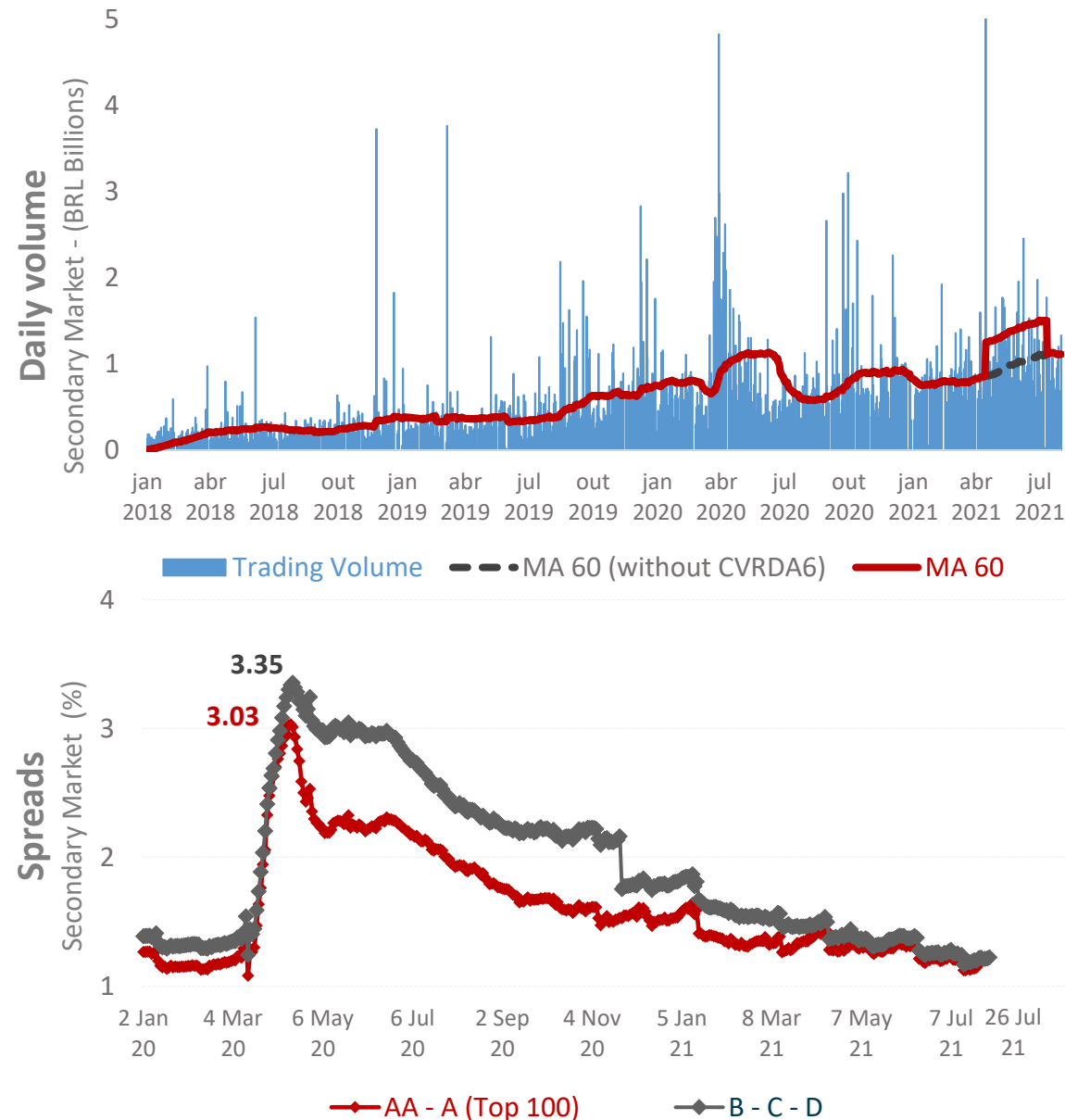
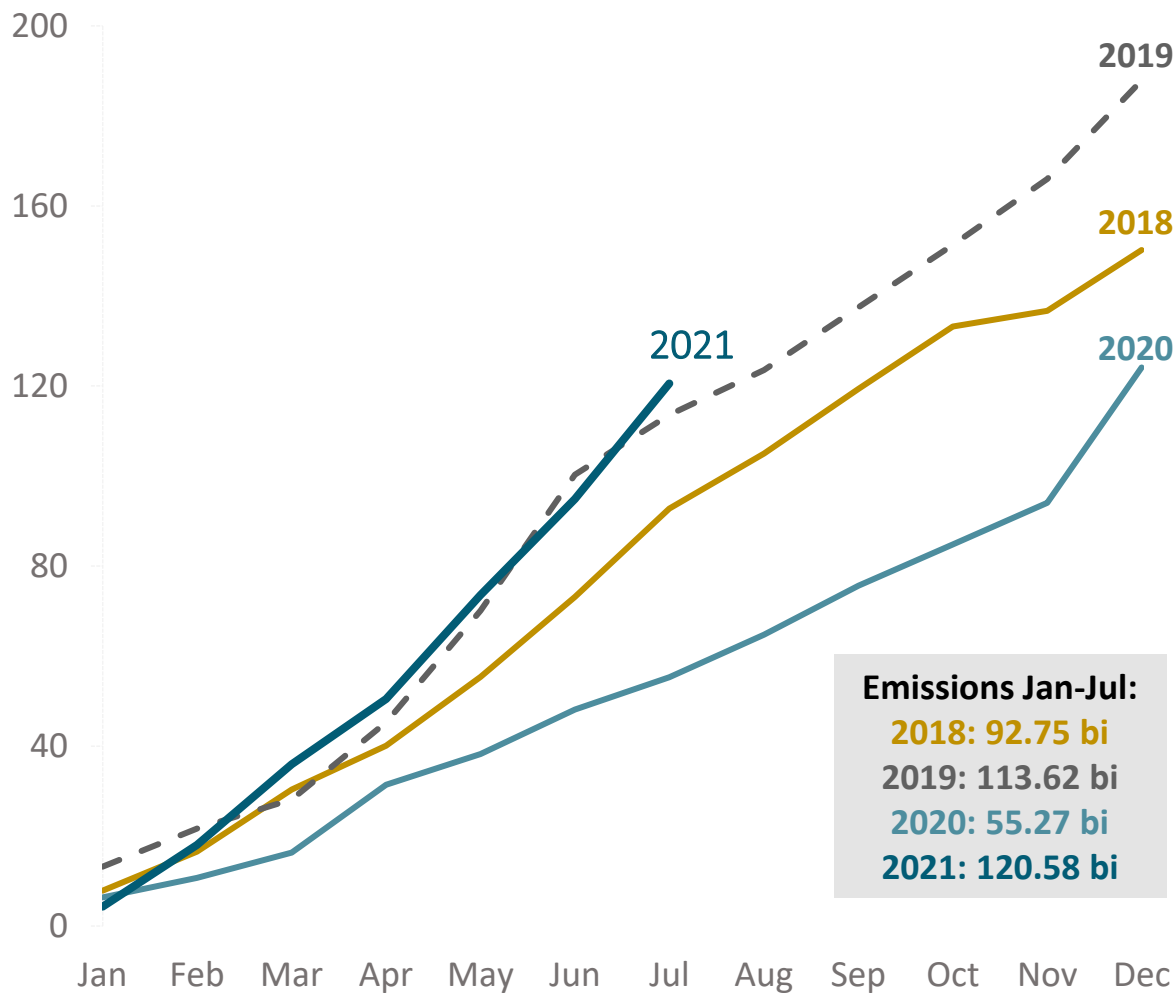
Credit in the National Financial System

Credit continue to increase. Interest rates close to historically low levels.



Corporate credit

Accumulated Primary Emissions
(BRL Billions)



Firms: Financial flows

Financial flows

Percentual change in financial inflows (quarterly average current year x quarterly average previous year)

Sector	Micro and small								Medium								Corporate							
	2020				2021				2020				2021				2020				2021			
	Mar	Jun	Sep	Dec	Mar	Jun	Jul ¹	Jul ²	Mar	Jun	Sep	Dec	Mar	Jun	Jul ¹	Jul ²	Mar	Jun	Sep	Dec	Mar	Jun	Jul ¹	Jul ²
Public Adm and NGOs	9%	-4%	-2%	2%	0%	9%	40%	29%	1%	-11%	3%	5%	8%	18%	14%	14%	14%	-2%	3%	15%	0%	12%	66%	63%
Agriculture	22%	28%	40%	38%	56%	36%	36%	87%	18%	22%	25%	23%	39%	33%	36%	65%	30%	33%	17%	21%	40%	31%	37%	69%
Food	22%	14%	27%	31%	36%	31%	38%	66%	8%	10%	17%	21%	32%	23%	29%	44%	14%	16%	15%	24%	27%	21%	26%	44%
Automotive	11%	-7%	23%	37%	46%	45%	45%	64%	2%	-30%	-4%	17%	29%	48%	58%	30%	-2%	-50%	-21%	3%	27%	58%	80%	15%
Beverage and Tobacco	28%	13%	34%	45%	51%	43%	55%	86%	5%	0%	15%	18%	15%	22%	15%	25%	-10%	-13%	15%	12%	16%	24%	12%	13%
Const, wood and furnit.	17%	3%	24%	35%	40%	39%	46%	70%	9%	-6%	9%	22%	31%	36%	41%	42%	1%	-13%	16%	31%	44%	41%	41%	39%
Animal husbandry	27%	24%	46%	50%	51%	35%	46%	98%	12%	9%	24%	33%	39%	30%	44%	65%	14%	8%	19%	32%	27%	23%	19%	54%
Electronics	16%	1%	26%	33%	38%	38%	30%	58%	0%	-10%	5%	21%	35%	35%	45%	39%	12%	-10%	29%	59%	34%	39%	27%	30%
Energy	2%	-10%	-11%	17%	47%	31%	56%	81%	23%	-4%	18%	35%	37%	31%	52%	74%	13%	-5%	25%	18%	26%	24%	-6%	33%
Mach. And equipment	12%	-4%	10%	26%	41%	37%	58%	61%	11%	-5%	7%	35%	37%	35%	49%	50%	18%	4%	19%	33%	41%	43%	54%	62%
Media and leisure	13%	-38%	-22%	-1%	3%	41%	81%	21%	-1%	-47%	-41%	-19%	-11%	26%	71%	-11%	9%	-37%	-36%	-20%	-16%	24%	65%	-3%
Paper and cellulose	13%	-4%	16%	37%	81%	59%	82%	98%	-1%	-14%	-2%	27%	53%	49%	82%	61%	-4%	-26%	-17%	7%	28%	23%	53%	7%
Petrochemicals	20%	-9%	12%	24%	37%	46%	74%	72%	11%	-20%	-1%	14%	27%	41%	65%	47%	5%	-33%	-9%	0%	24%	41%	56%	36%
Chem., pharma and hygiene	17%	14%	22%	27%	31%	21%	24%	47%	8%	3%	11%	21%	32%	24%	33%	34%	12%	6%	5%	10%	20%	17%	23%	24%
Health, sanitation and educ.	18%	-2%	2%	8%	18%	25%	42%	38%	8%	1%	1%	8%	19%	20%	27%	26%	2%	-8%	-11%	0%	17%	22%	31%	12%
Services	16%	-9%	11%	21%	33%	42%	48%	57%	11%	-5%	4%	10%	15%	22%	23%	24%	21%	15%	36%	33%	35%	26%	13%	57%
Steel and metallurgy	7%	-3%	23%	41%	84%	58%	78%	104%	1%	-14%	8%	31%	78%	61%	119%	104%	-3%	-29%	1%	18%	85%	63%	107%	69%
Sugar and alcohol	14%	-9%	47%	22%	36%	17%	54%	47%	31%	8%	19%	10%	27%	43%	37%	53%	15%	-15%	4%	-1%	8%	22%	37%	35%
Telecom	35%	34%	40%	46%	53%	32%	46%	99%	15%	13%	28%	19%	30%	18%	69%	102%	21%	-26%	-20%	-5%	-16%	10%	16%	-8%
Textile and others	9%	-26%	-5%	12%	18%	44%	68%	39%	2%	-34%	-19%	6%	20%	44%	70%	19%	2%	-44%	-27%	1%	12%	50%	77%	10%
Transports	7%	-5%	9%	19%	34%	34%	44%	47%	6%	-9%	-2%	7%	20%	29%	34%	26%	8%	-22%	-20%	-14%	2%	22%	36%	7%
Retail	22%	17%	32%	39%	39%	31%	38%	70%	19%	20%	22%	27%	27%	19%	22%	42%	13%	8%	17%	18%	17%	14%	14%	34%
Others	5%	-11%	3%	46%	42%	38%	35%	62%	15%	-4%	16%	27%	23%	43%	45%	52%	4%	-4%	24%	17%	25%	32%	22%	43%

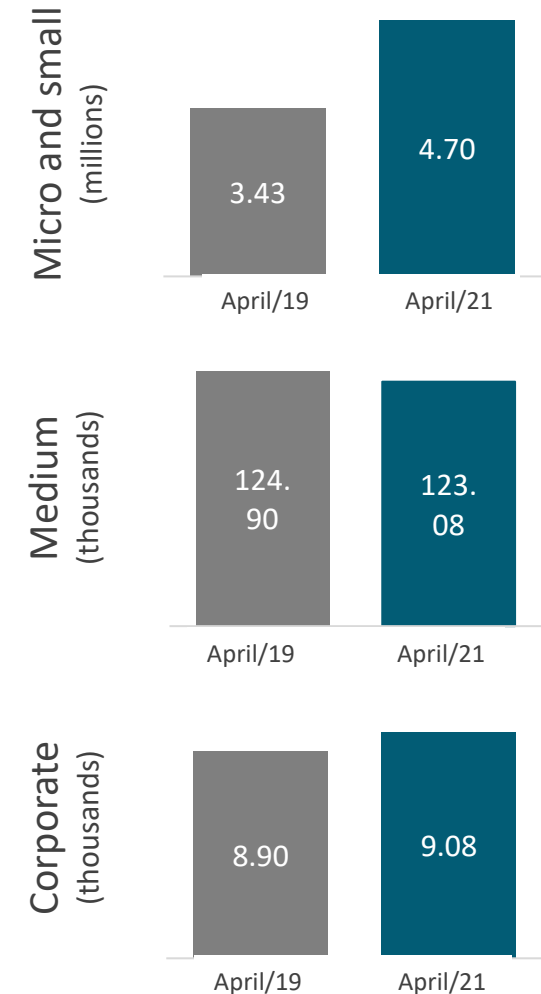
¹ Change between Jul/21 and Jul/20

² Change between Jul/21 and Jul/19

Source: BCB

Quantity of Firms

with financial transactions in the National Financial System (SFN)



#Inclusion

#Competitiveness

#Transparency

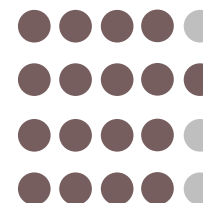
#Education

#Sustainability



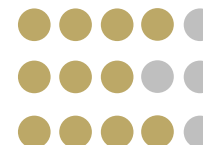
#Inclusion

Cooperative credit
Microcredit
Currency convertibility
Initiatives for capital market



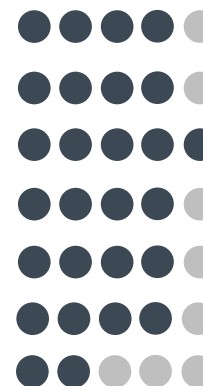
#Competitiveness

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



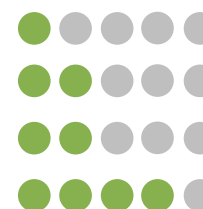
#Education

Financial education



#Sustainability

BCB's S&E responsibility
Regulation
Supervision
Partnerships





Technology Agenda

PIX gains space and becomes popular

PIX keys (in millions)

Total : **294.15 mi**
in July/2021



282.2

million keys



11.9

million keys

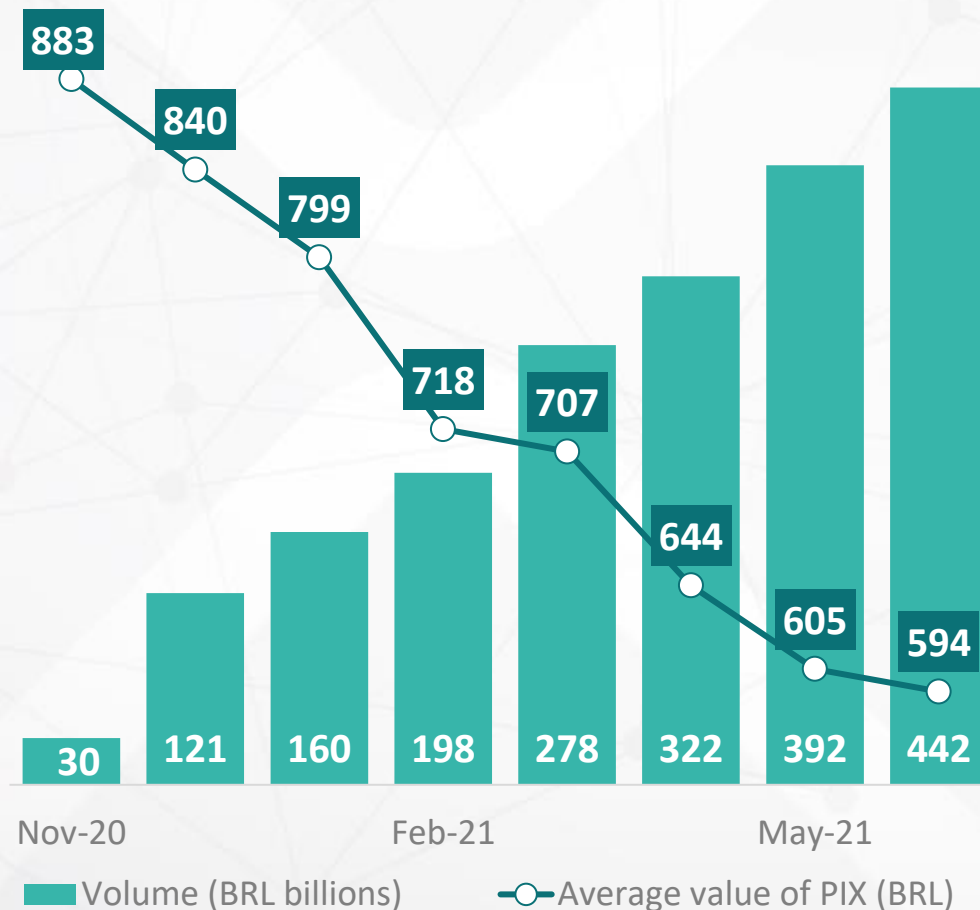
96.3 mi

households

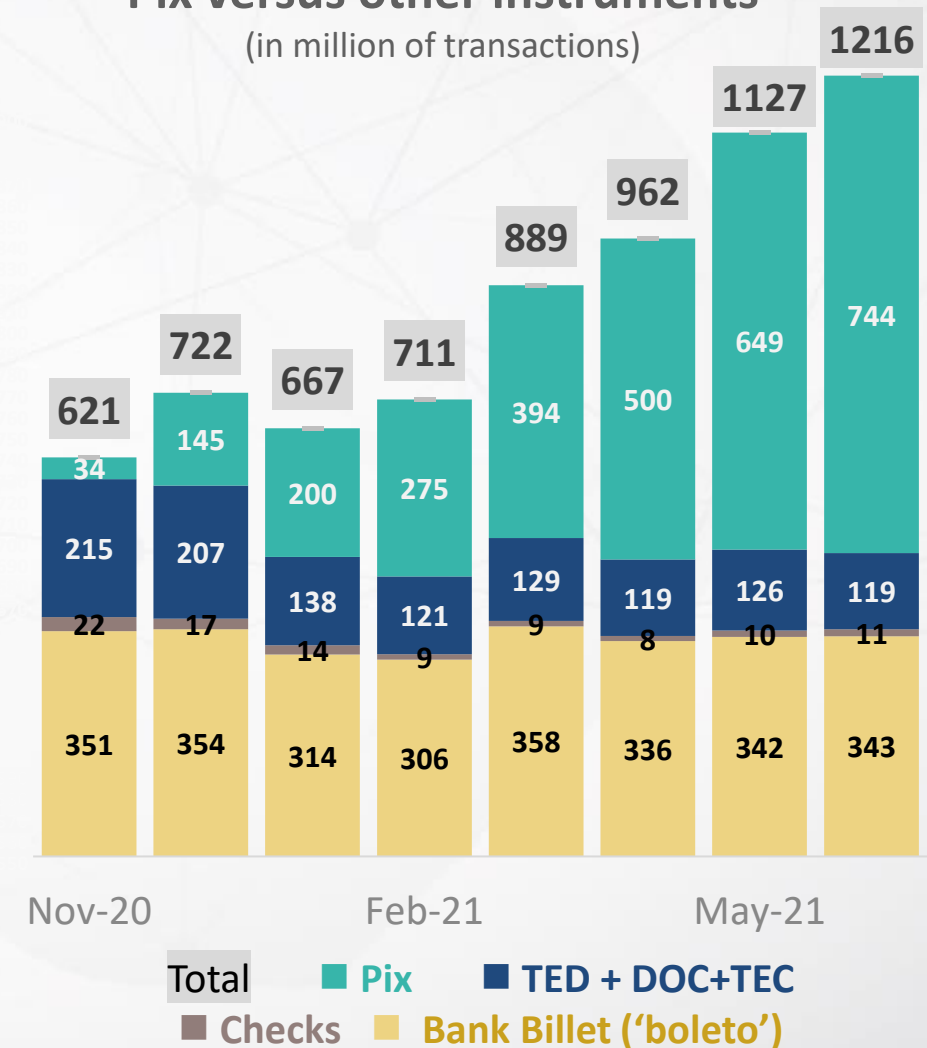
6.4 mi

legal entities

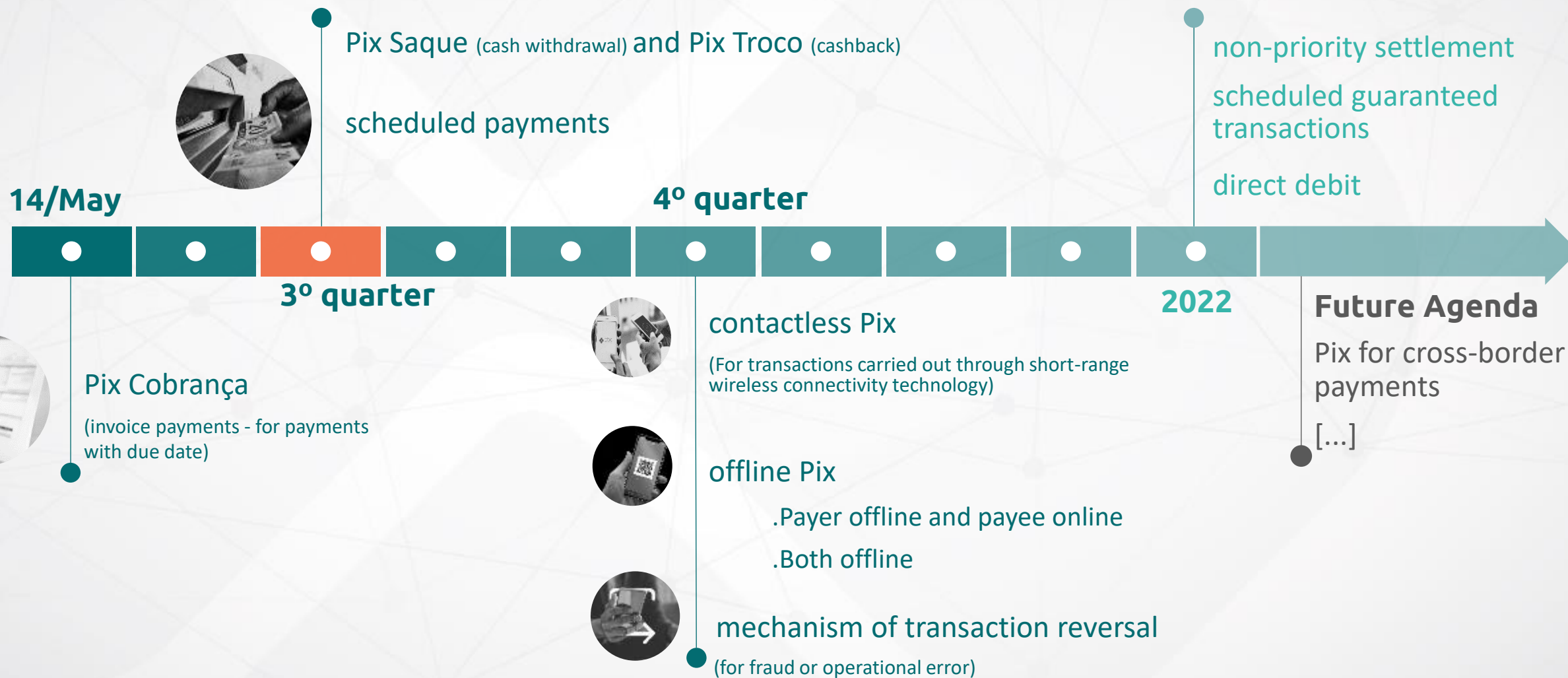
Volume of transactions and average value (in BRL billions and in BRL)



Pix versus other instruments (in million of transactions)



PIX Evolution Agenda



***Linked to Open Finance: Payment initiator at Pix**

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



Payments 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.



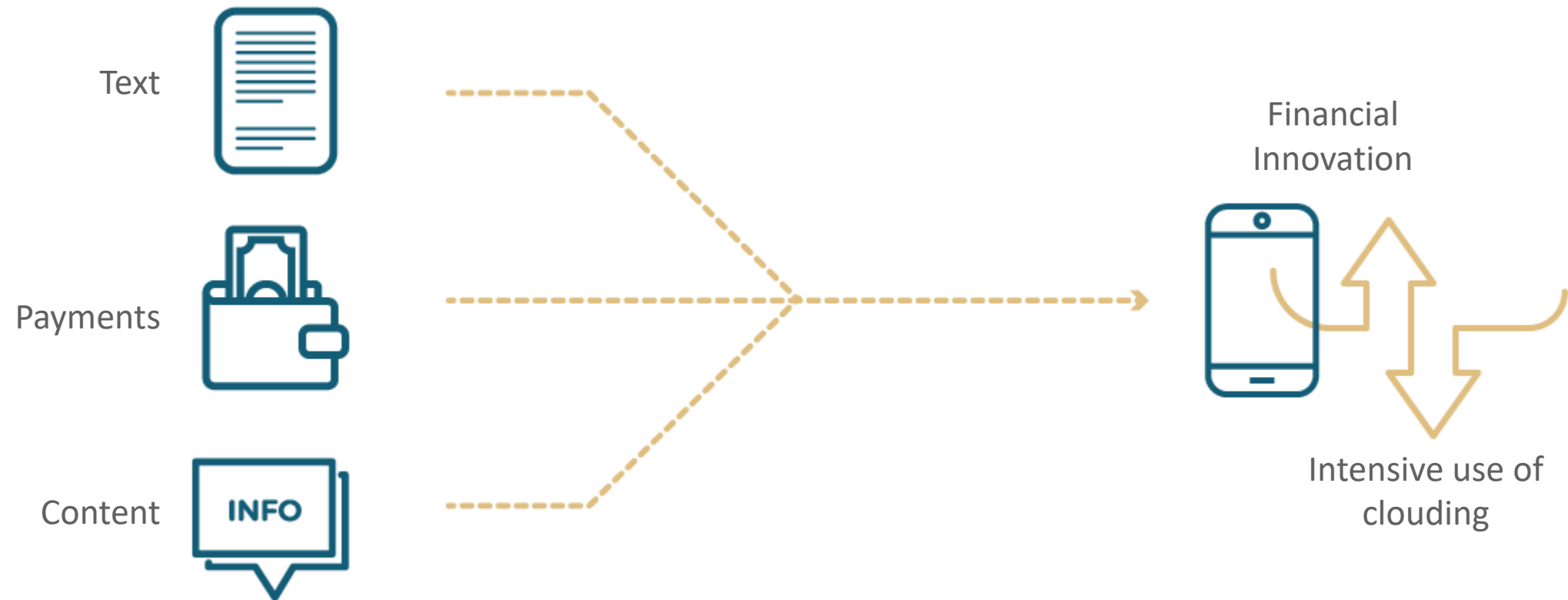
Regulatory Sandbox

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

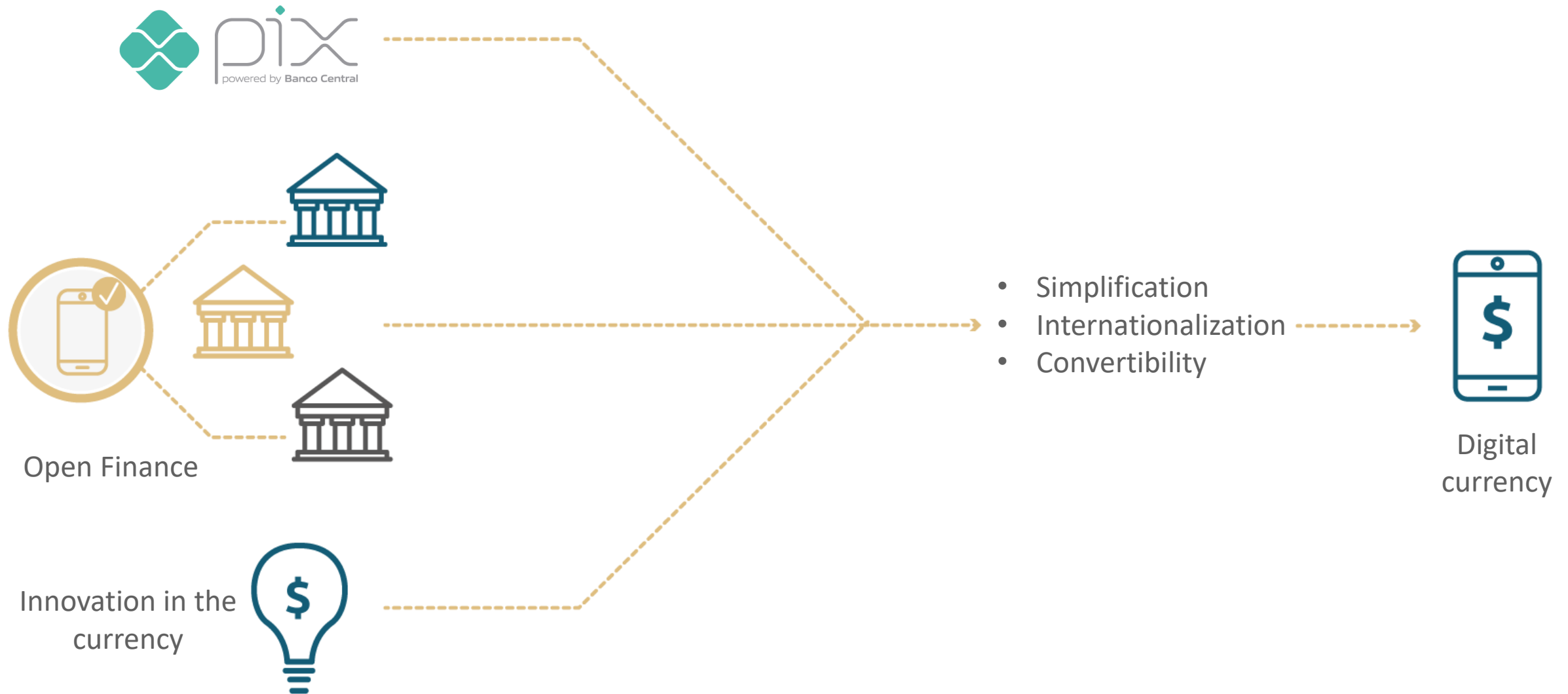
TO UNDERSTAND THE REGULATORY SANDBOX



- 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.



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

Next step:

Open discussion with society

BC# Sustainability

Measures:

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

Regulation – public consultations

- Definition of sustainability criteria applicable to new rural credit transactions (Public Consultation #82).
 - Government data base integration.
 - Better risk management.
 - Access to new funding sources - Open Finance.

Regulation – public consultations

- Improvement of the rules related to the management of social, environmental and climate policy risks by financial institutions, as well as requirements to be observed by them in the establishment of their Social, Environmental and Climate Responsibility Policy (Public Consultation #85).
- Rules for the disclosure of information about social risk, environmental risk, and climate-related risk management by financial institutions (Public Consultation #86).



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

August 12, 2021



**BANCO CENTRAL
DO BRASIL**

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