



MACRO OUTLOOK

Cecilia Machado
Chief Economist

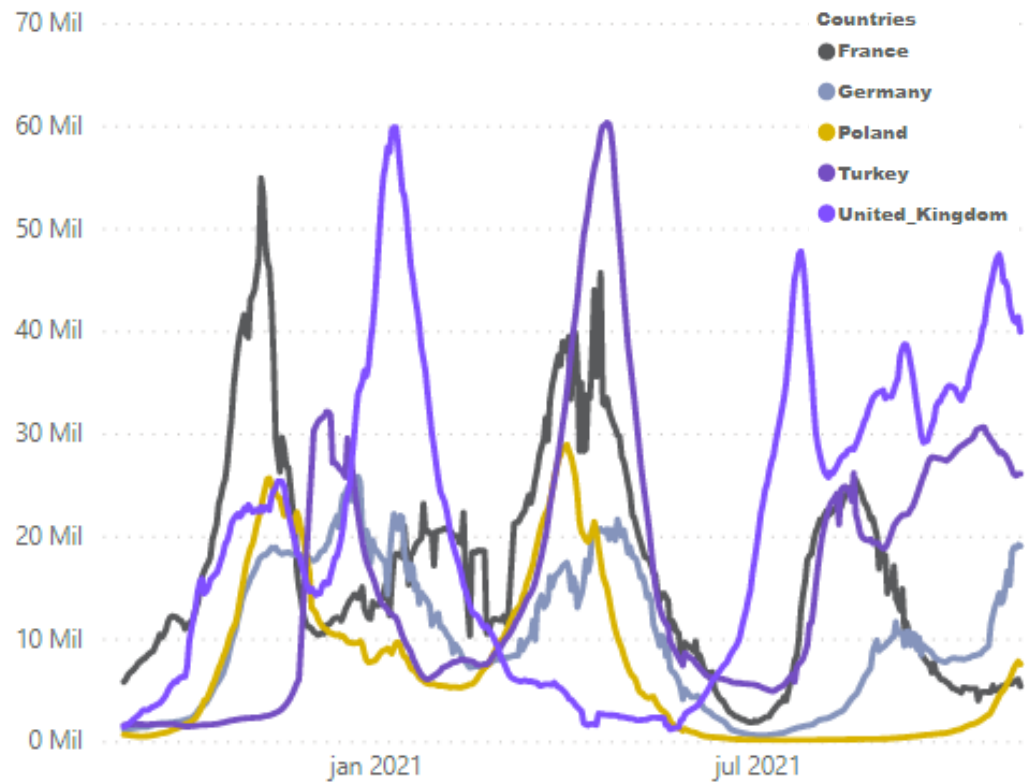
November 2021

- » Despite the vaccination campaigns advance, localized Covid-19 outbreaks, disruptions in supply chains and rising energy costs frustrate growth expectations around the world;
- » In Brazil, the epidemiological situation continued to improve, with cases and deaths decreasing;
- » As expected due to rain forecasts in October, the reservoirs level improved with the southeast/midwest subsystem reaching 18.5%, after reaching its lowest at 16.5% in the beginning of the month;
- » The economic activity slowed down with the industrial production affected by the input shortage;
- » We maintain our GDP forecast of 5.2% this year and revise down to 0.7% for 2022 due to interest rate hike cycle;
- » We revised up our inflation forecast to 9.5% in 2021 due to gasoline inflation and the last adverse reading in services inflation. In 2022, we raised our inflation forecast to 4.9% due to the hypothesis of worsening expectations and currency, after movements against the spending cap were made;
- » Our Selic rate projection was revised to 9.25% at the end of 2021 and to 11.5% at the end of 2022;
- » A higher nominal GDP and a more benign fiscal outlook in the short term have contributed to a lower debt-to-GDP ratio in 2021;
- » But, the casuistic change in the calculating rule of the ceiling cap implies credibility loss of the fiscal policy and raises doubts about possible future changes in the occurrence of an adverse event.

Covid-19

- » Despite a decrease in cases in the United States and France, new waves have been observed in several countries.

World –Covid-19 Cases, 7-day moving average



USA –Covid-19 Cases, 7-day moving average



Covid-19

- » In Brazil, both the number of cases and deaths kept their downward trend in October and are at their lowest since May 2020.

Brazil – Covid-19 Cases, 7-day moving average

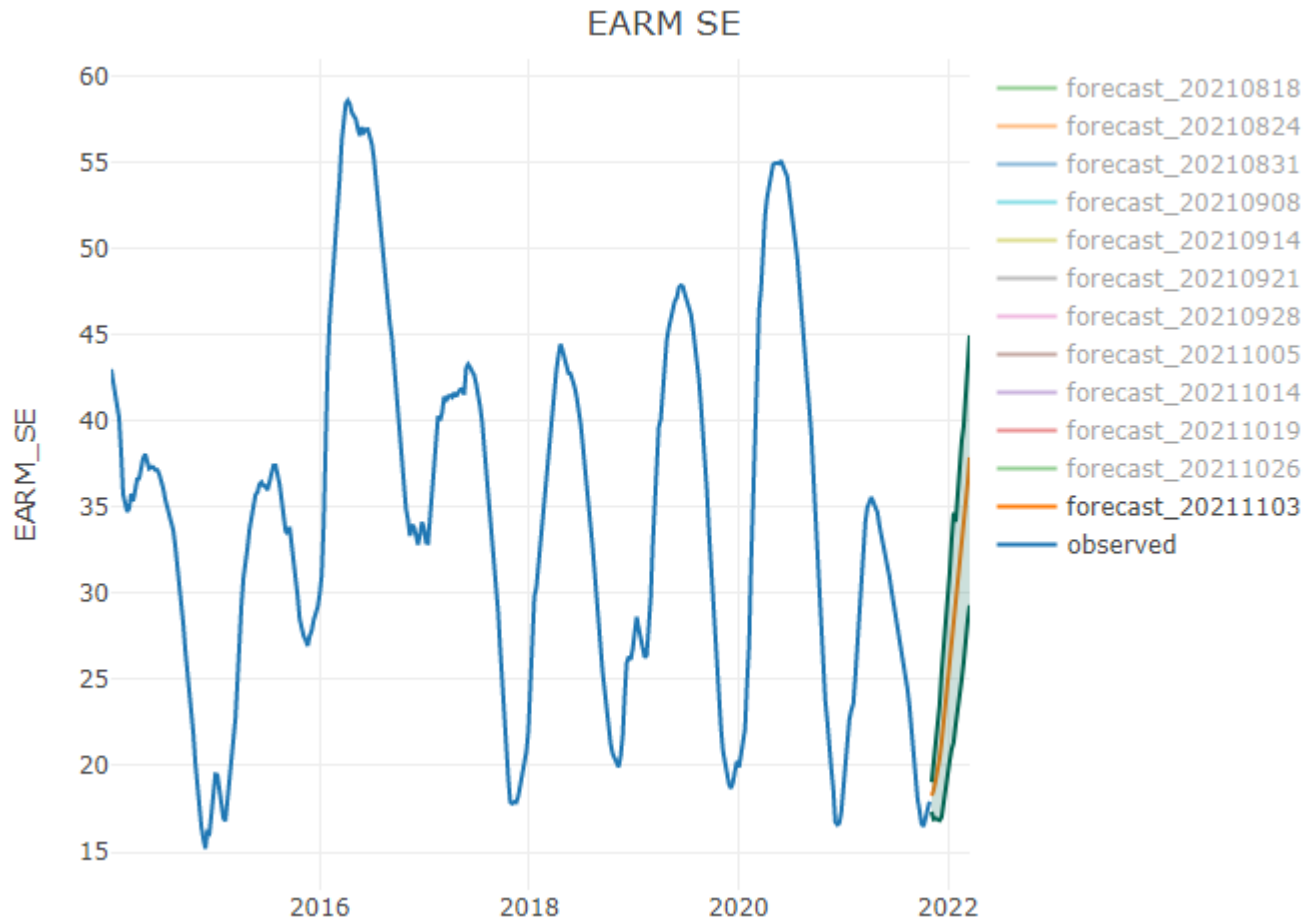


Brazil – Covid-19 Deaths, 7-day moving average



Hydrological Crisis Update

- » Model points that reservoir levels in Southeast/Midwest (SE/CO) subsystem reaches 18.5 in mid-November, a considerable increase in comparison to the previous forecasts.



Stored Energy SE/CO	
10/11/2021	18,5
17/11/2021	19,0
24/11/2021	19,5
01/12/2021	20,2
08/12/2021	21,1
15/12/2021	22,2
22/12/2021	23,4
29/12/2021	24,3
05/01/2022	25,3
12/01/2022	26,5
19/01/2022	27,6
26/01/2022	28,6
02/02/2022	29,6
09/02/2022	30,8
16/02/2022	32,0
23/02/2022	33,2
02/03/2022	34,5
09/03/2022	36,0
16/03/2022	37,5

Forecast Minimum Values	
Date Forecast was made:	
15/09/2021	7,9
22/09/2021	8,7
29/09/2021	9,9
06/10/2021	10,8
13/10/2021	13,7
20/10/2021	16,7
27/10/2021	17,6
03/11/2021	18

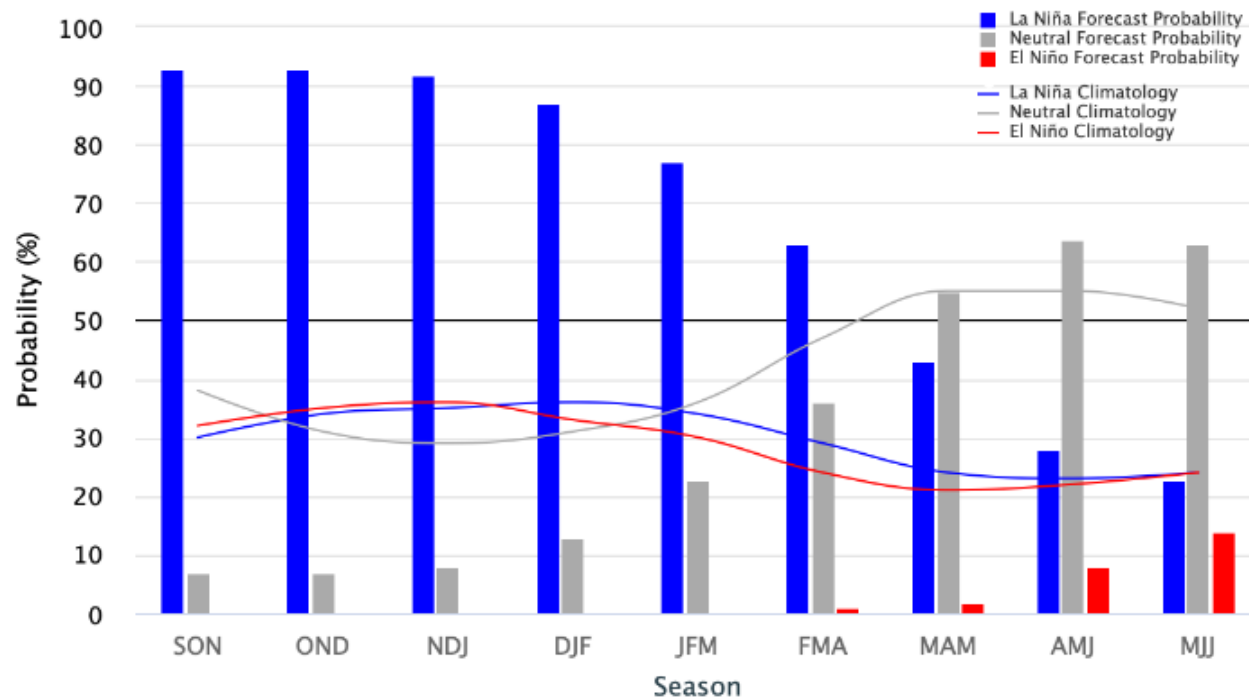
Forecast for 01/03	
Date Forecast was made:	
20/10/2021	32,1
27/10/2021	33,3
03/11/2021	34,3

Hydrological Crisis Update

- » La Niña was confirmed by NOAA and is expected to continue during this rainy season with 87% of probability. This means the region with the most important hydrological basins could suffer again with below average rains in the summer.

Early-October 2021 CPC/IRI Official Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: -0.5 °C to 0.5 °C

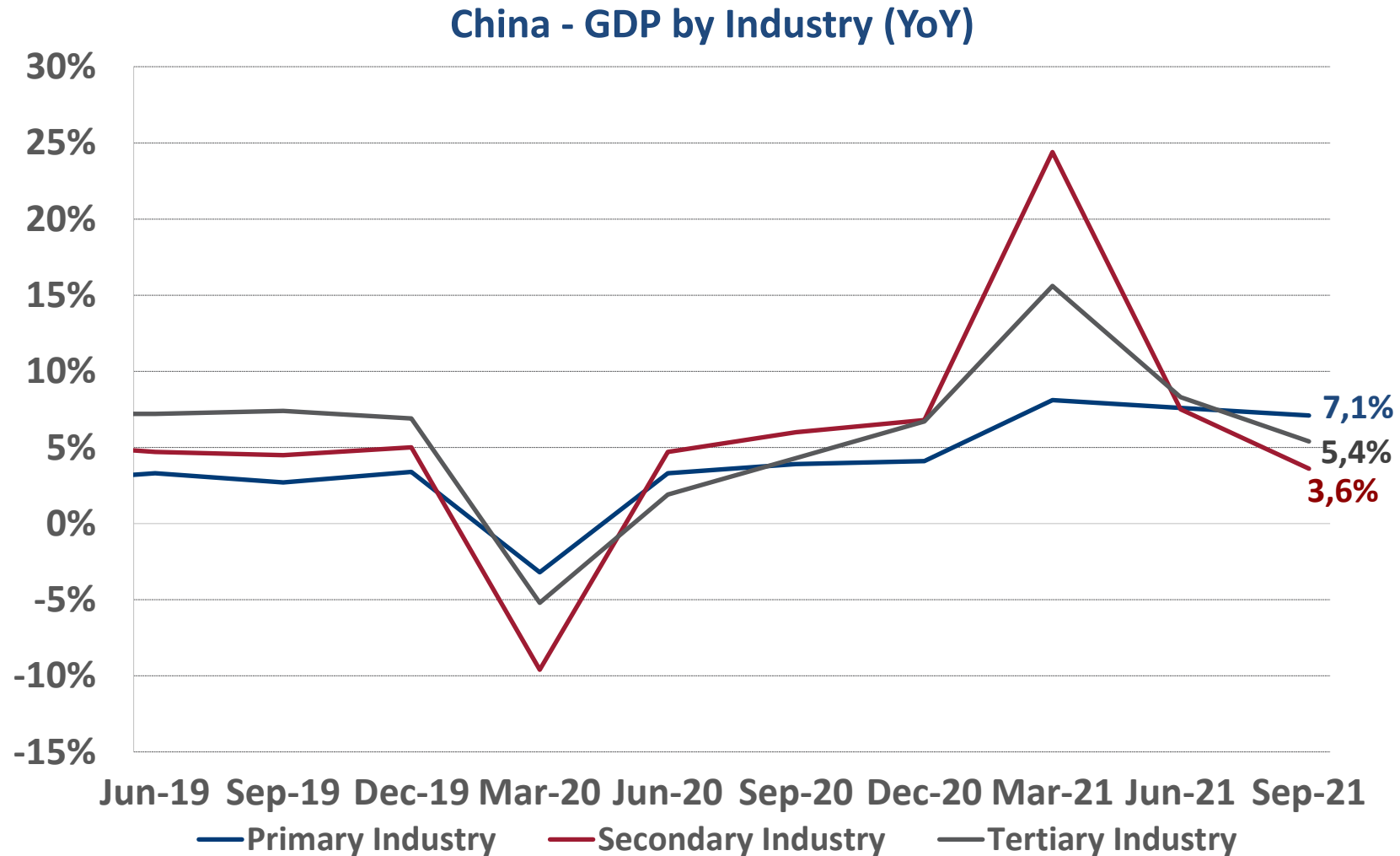


Season	La Niña	Neutral	El Niño
SON	93	7	0
OND	93	7	0
NDJ	92	8	0
DJF	87	13	0
JFM	77	23	0
FMA	63	36	1
MAM	43	55	2
AMJ	28	64	8
MJJ	23	63	14

» China GDP growth slightly below expectations in 3Q.



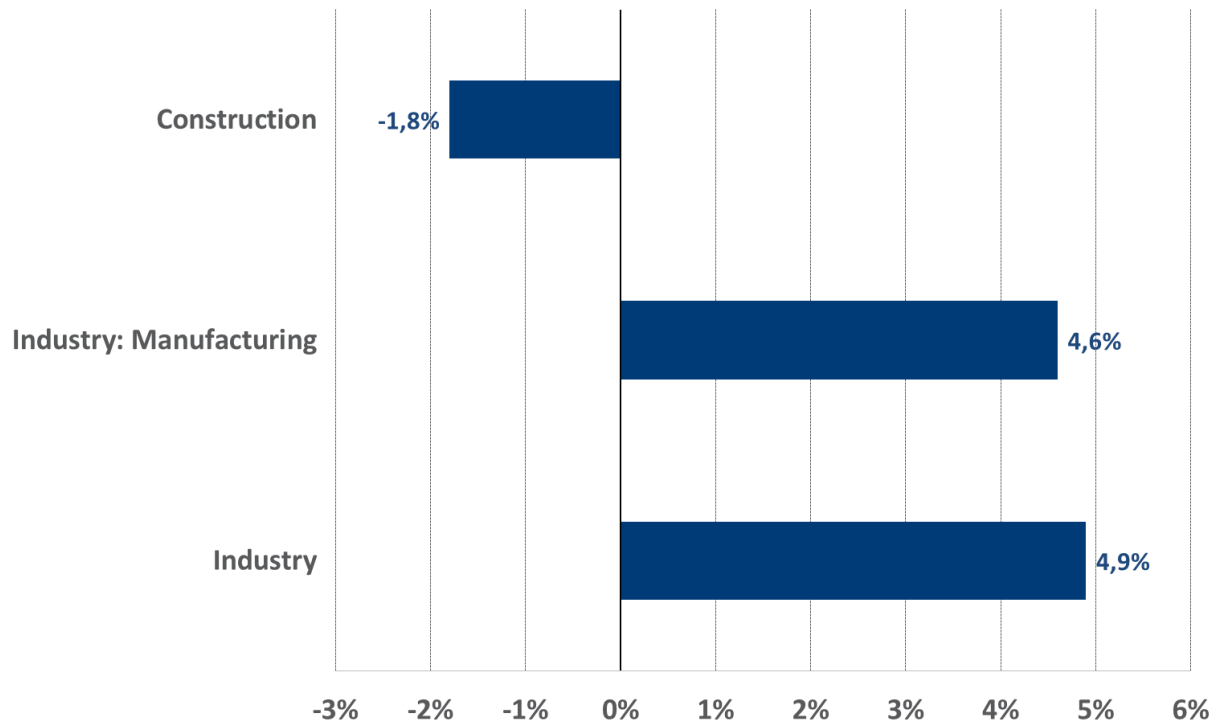
» The slow down of GDP growth in third quarter mainly comes from manufacturing industry.



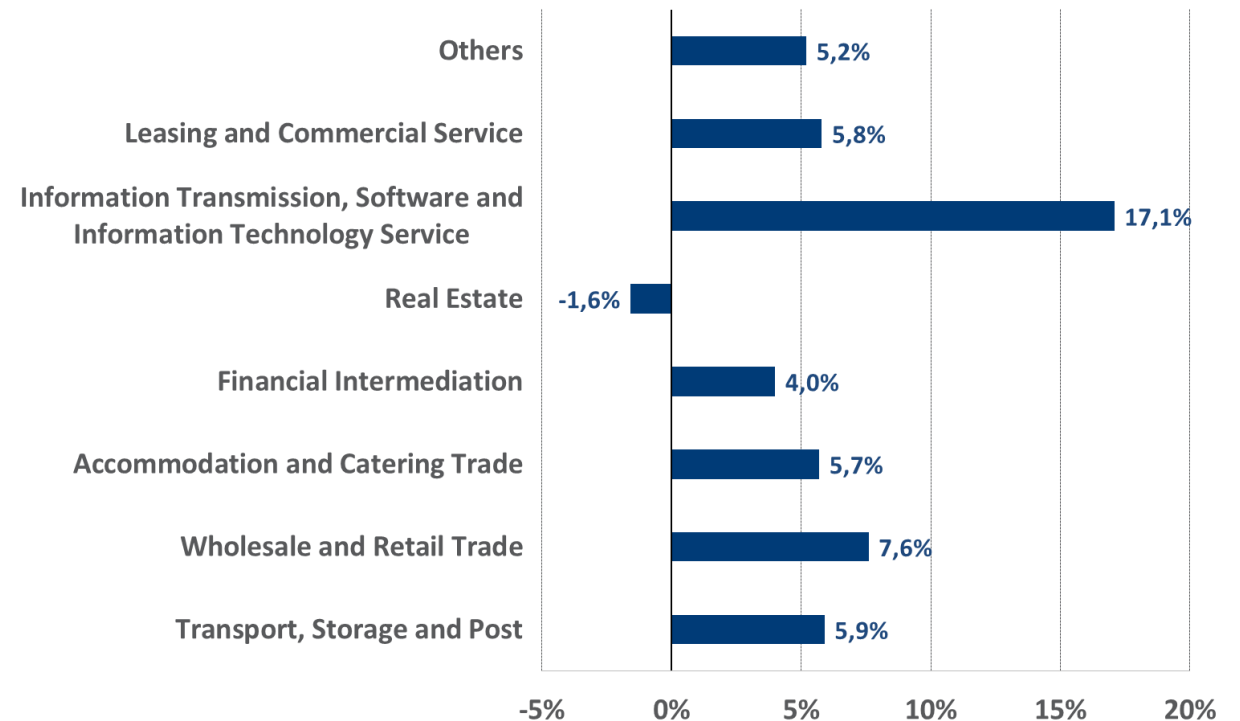
China: Activity

- » Secondary industry YoY growth disappointed with chips shortage and reduction in constructions;
- » Tertiary industry YoY growth decomposition shows weakening in Real State.

Secondary Industry (YoY)

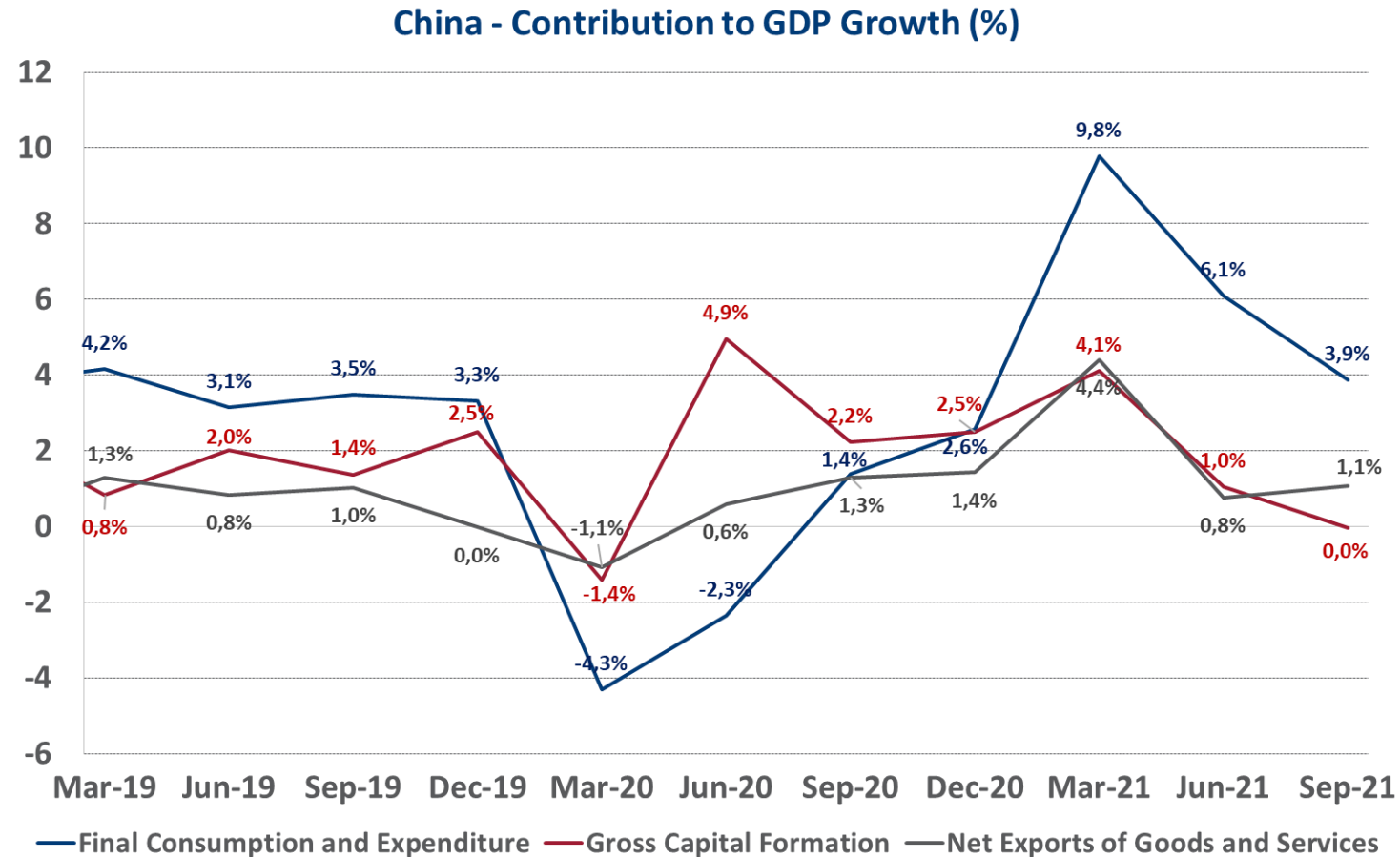


Tertiary Industry (YoY)



China: Activity

- » Consumption and Expenditure accelerated in the 1st half of the year;
- » Exports expanded their contribution in GDP growth.



China: Activity

» Recent data point to a slowdown in industry but a recover of retail sales.

China - Industrial Production (YoY)



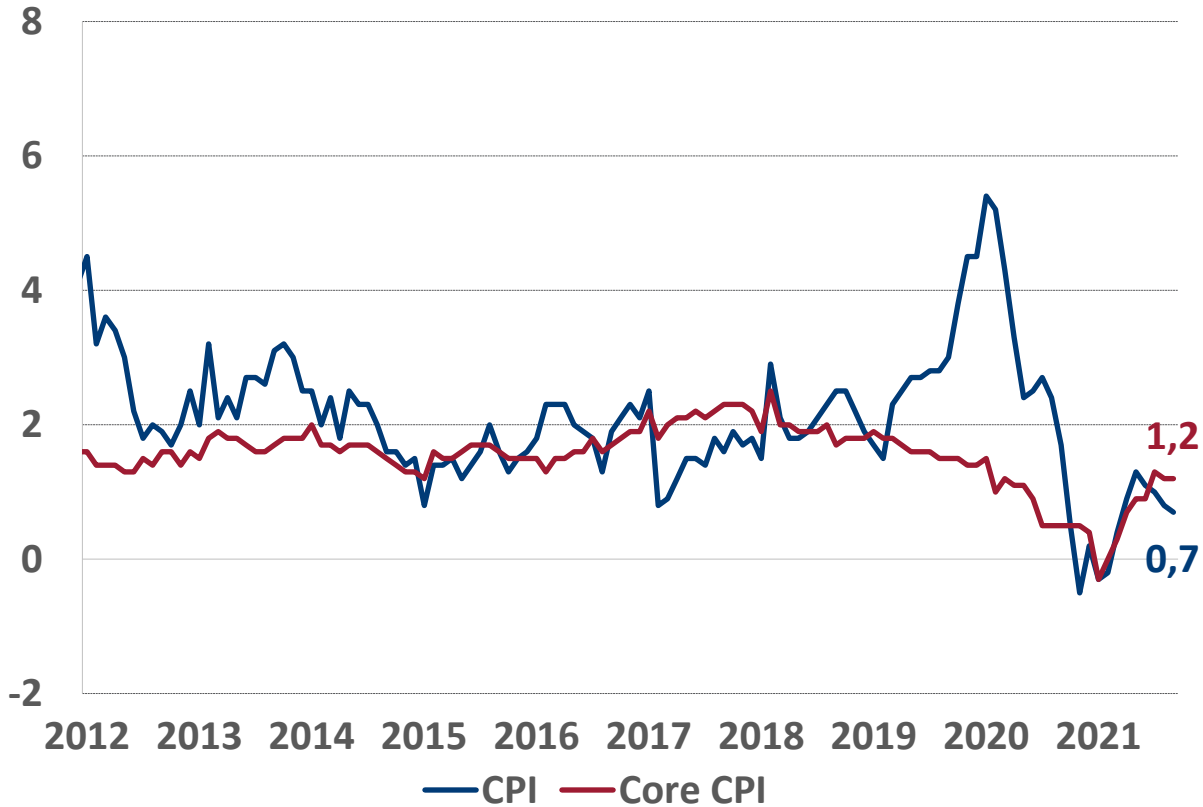
China - Retail Sales: Consumer Goods (YoY)



China: Inflation

- » YoY CPI has fallen in September, with core CPI remaining at 1,2%;
- » The PPI continues to rise, and it is above 10% YoY, pressured by supply shortage and energy.

China - CPI (YoY)

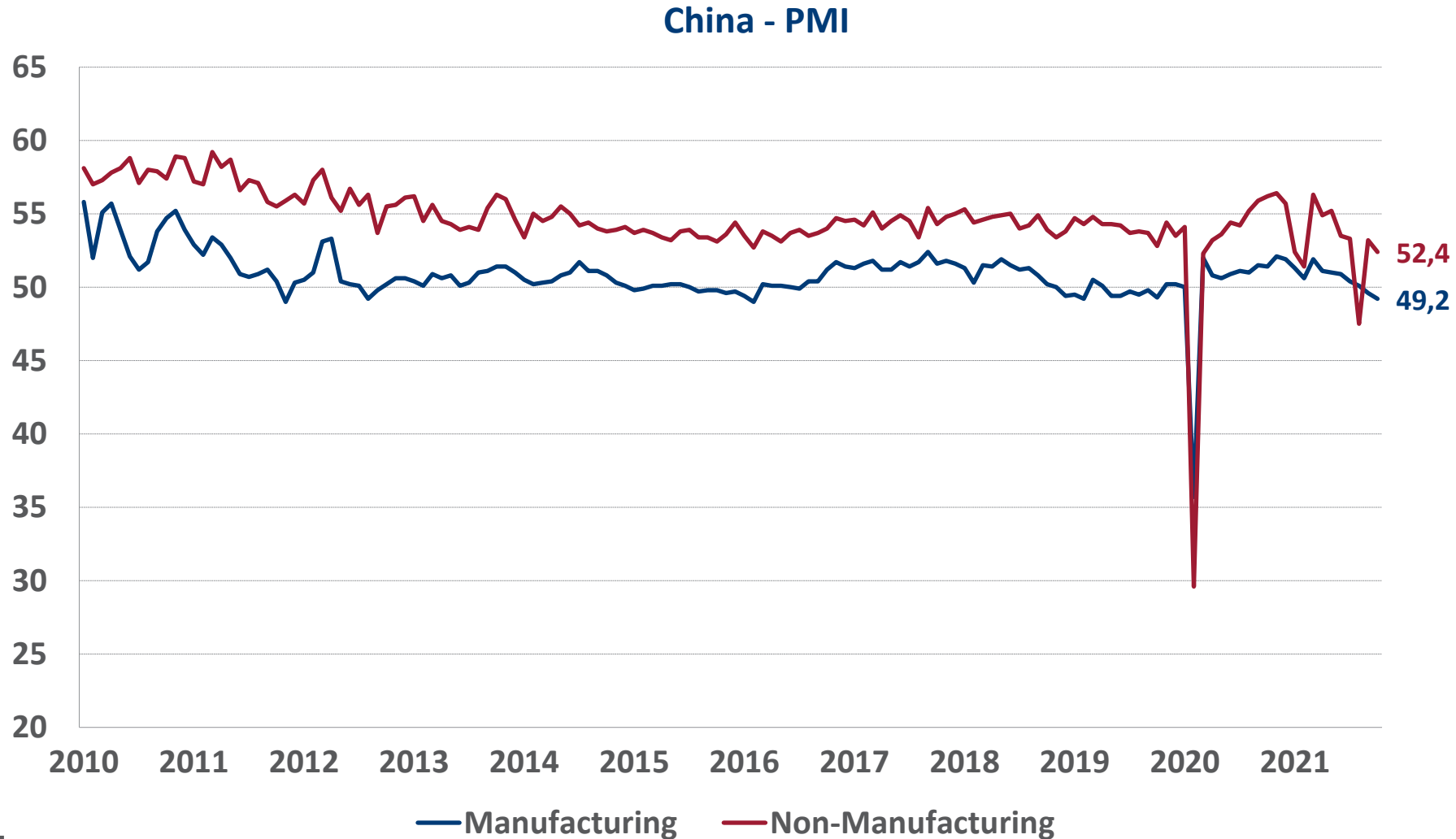


China – Producer Price Index (YoY)



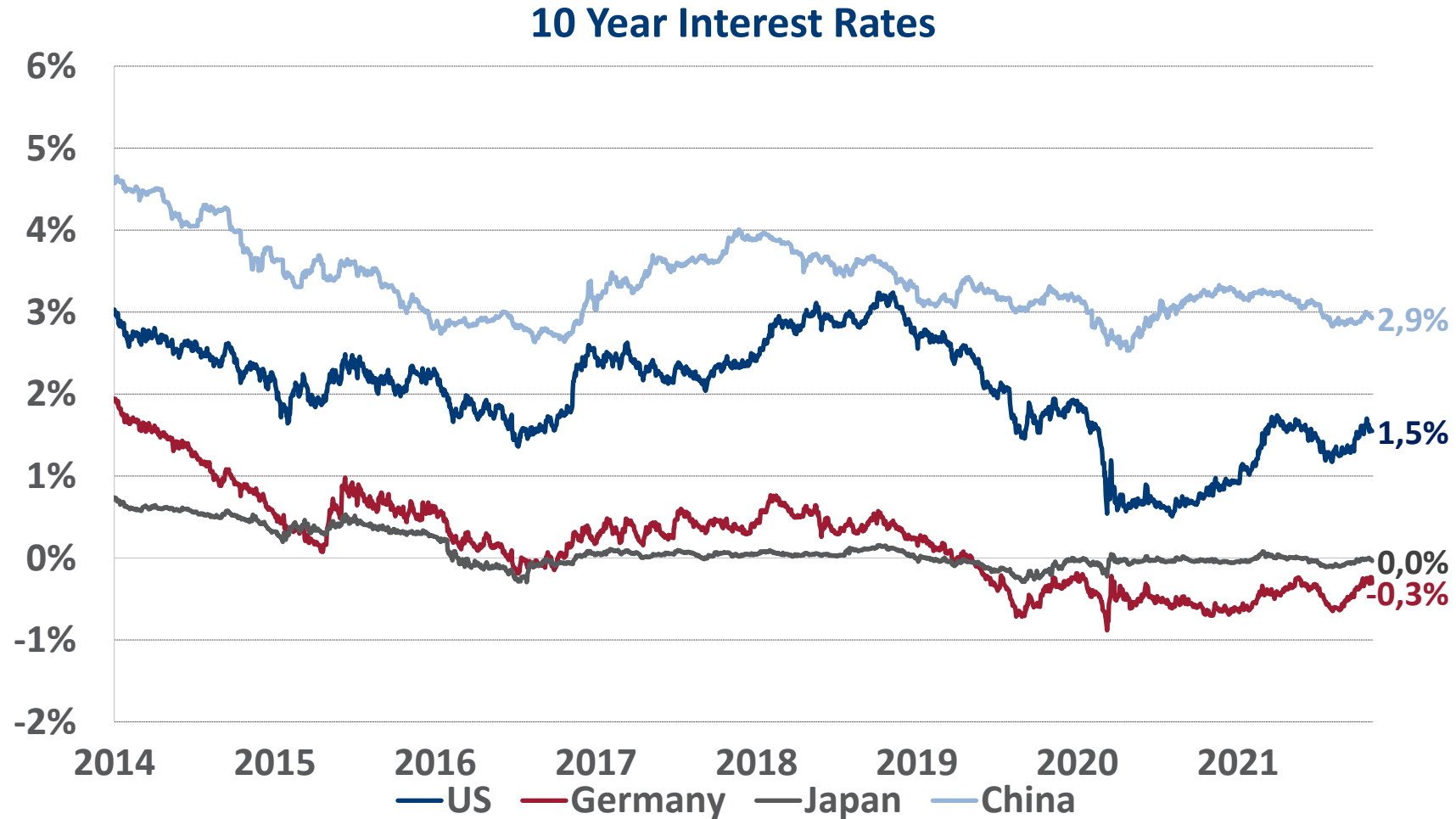
China: PMI

- » Manufacturing PMI continued to drop below threshold for the second time since the pandemic improved;
- » Non-manufacturing PMI decreased related to last month's data.



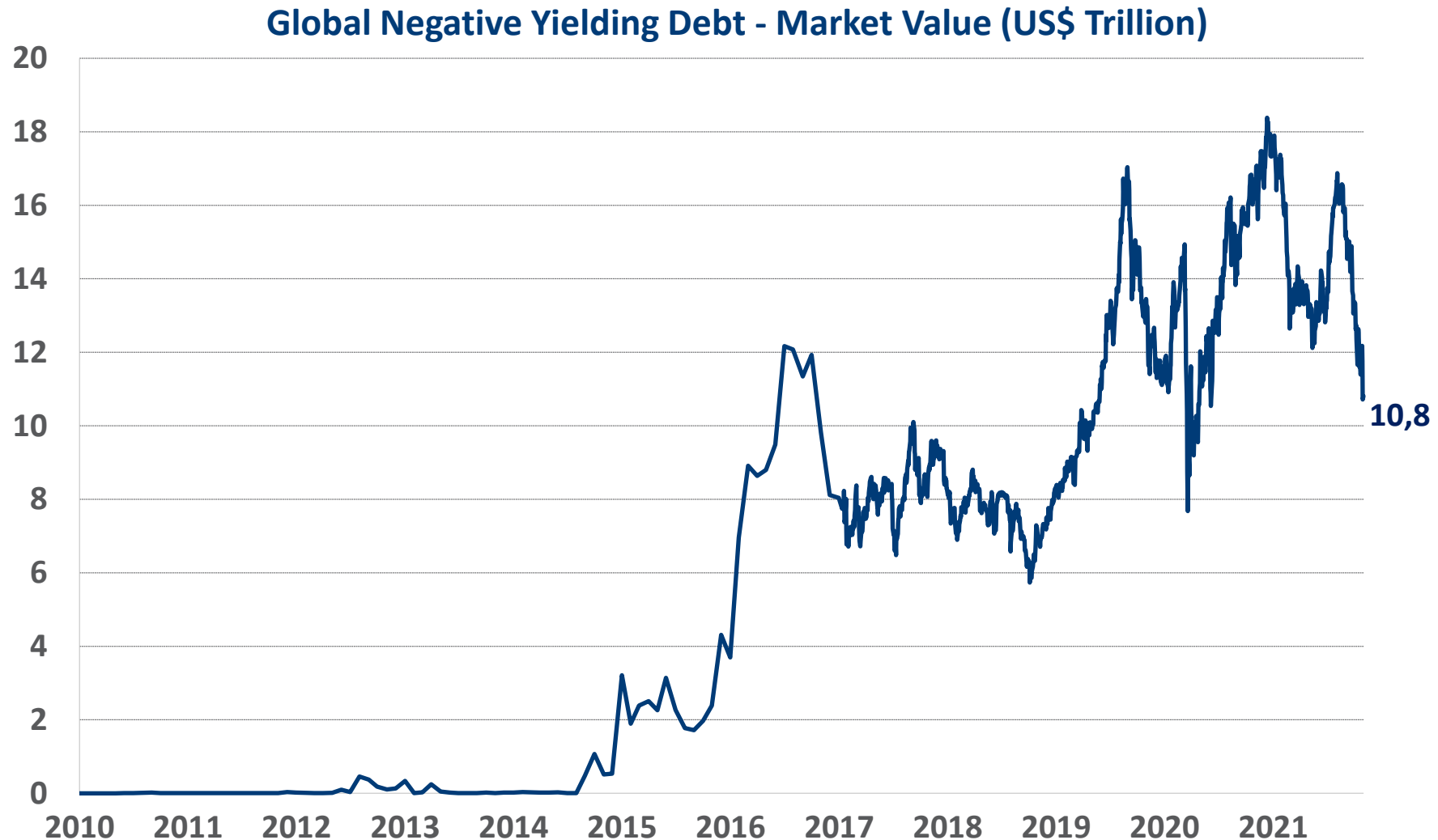
Global Interest Rates

» Changes in monetary policy of the principal Central Banks affects long term interest rates, increasing it.



Global: Negative Interest Rates

- » The market expectation over a gradual reduction of monetary stimulus and interest rate hike has dragged down the volume of negative-yielding debt.



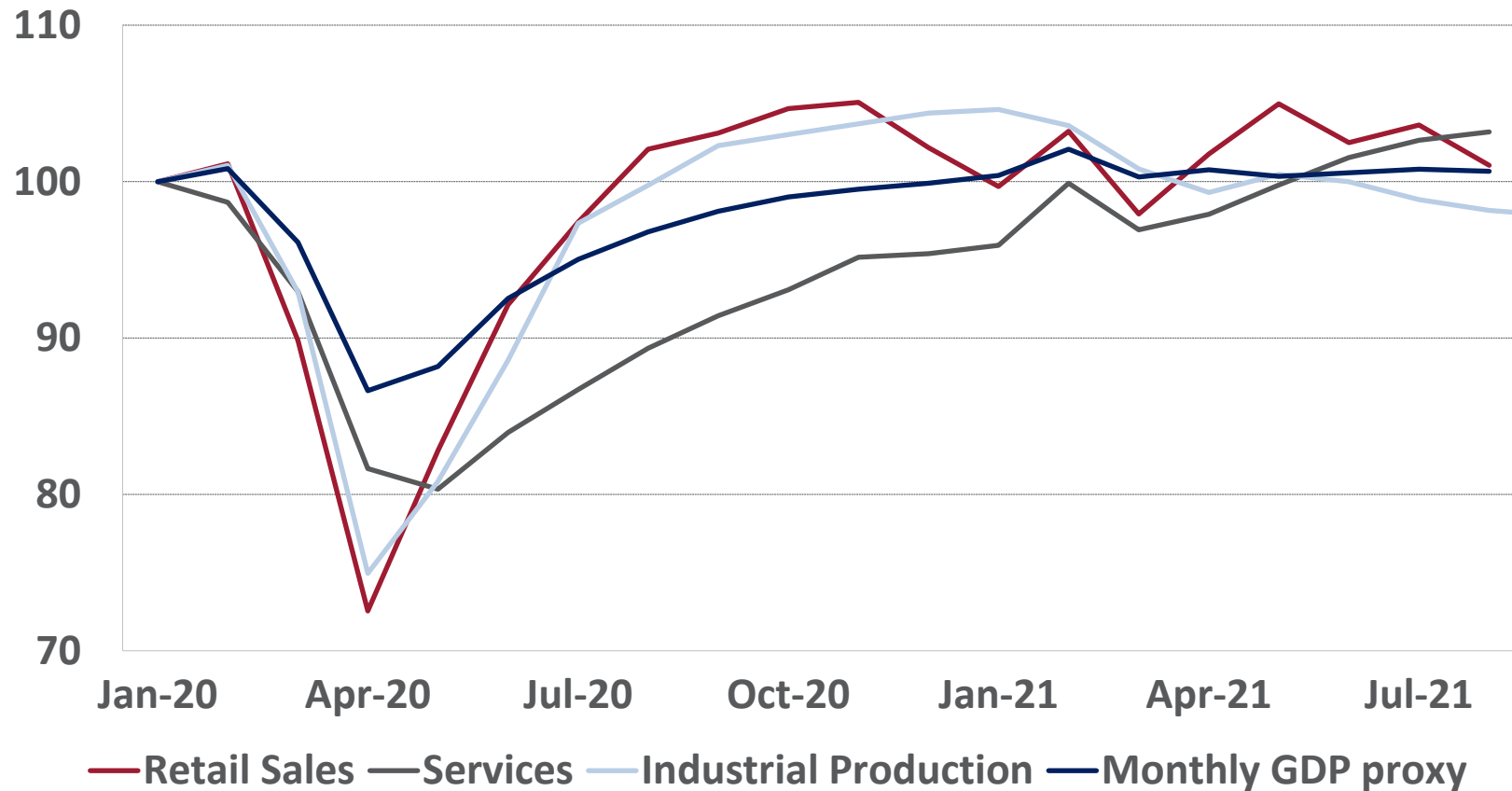
Brazil: Forecasts

ECONOMIC FORECASTS	2018	2019	2020	2021F	2022F
GDP Growth (%)	1,3%	1,1%	-4,1%	5,2%	0,7%
Inflation (%)	3,7%	4,3%	4,5%	9,5%	4,9%
Unemployment Rate, SA (eoy ,%)	12,2%	11,7%	13,9%	13,0%	12,5%
Policy Rate (eoy, %)	6,50%	4,50%	2,00%	9,25%	11,5%
External Accounts					
Trade Balance (US\$ bn)	53	48	51	69	46
Current Account Balance (US\$ bn)	-42	-51	-13	-14	-15
Current Account Balance (% of GDP)	-2,2%	-2,8%	-0,9%	-0,9%	-0,9%
Fiscal Policy					
Fiscal Primary Balance (% of GDP)	-1,7%	-1,2%	-10,0%	-1,8%	-1,2%
Government Gross Debt (% of GDP)	75,3%	74,3%	88,8%	80,6%	83,0%

Brazil: Activity

- » The industry has been a limiting factor to the economic activity;
- » Signs of slowdown in activity start to be evident.

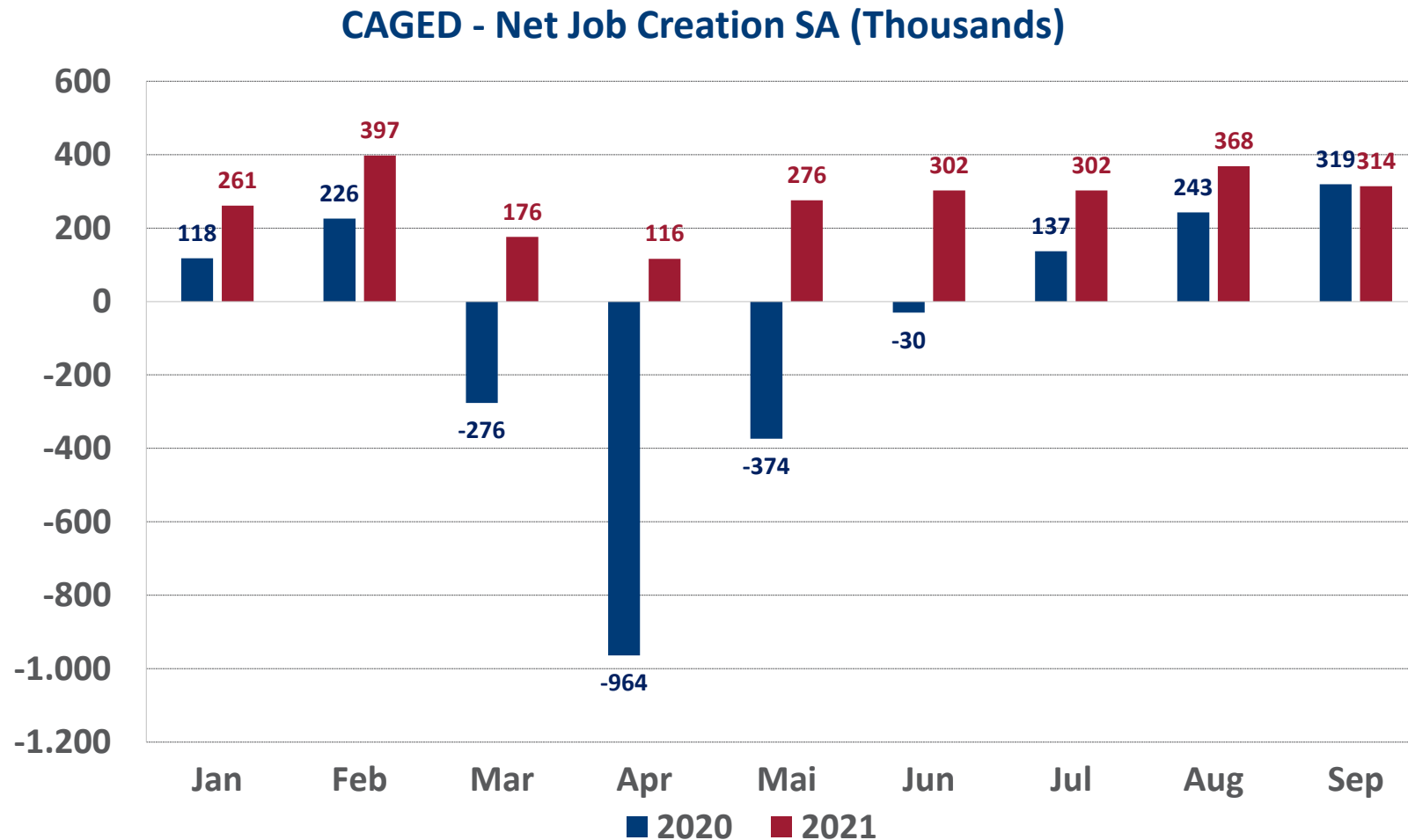
Brazil - Economic Activity Indicators (Jan/20=100)



—Retail Sales —Services —Industrial Production —Monthly GDP proxy

Brazil: Labor Market

- » The formal net jobs creation remains consistent with more jobs created in sectors which took benefit from the flexibilization and the vaccination process.



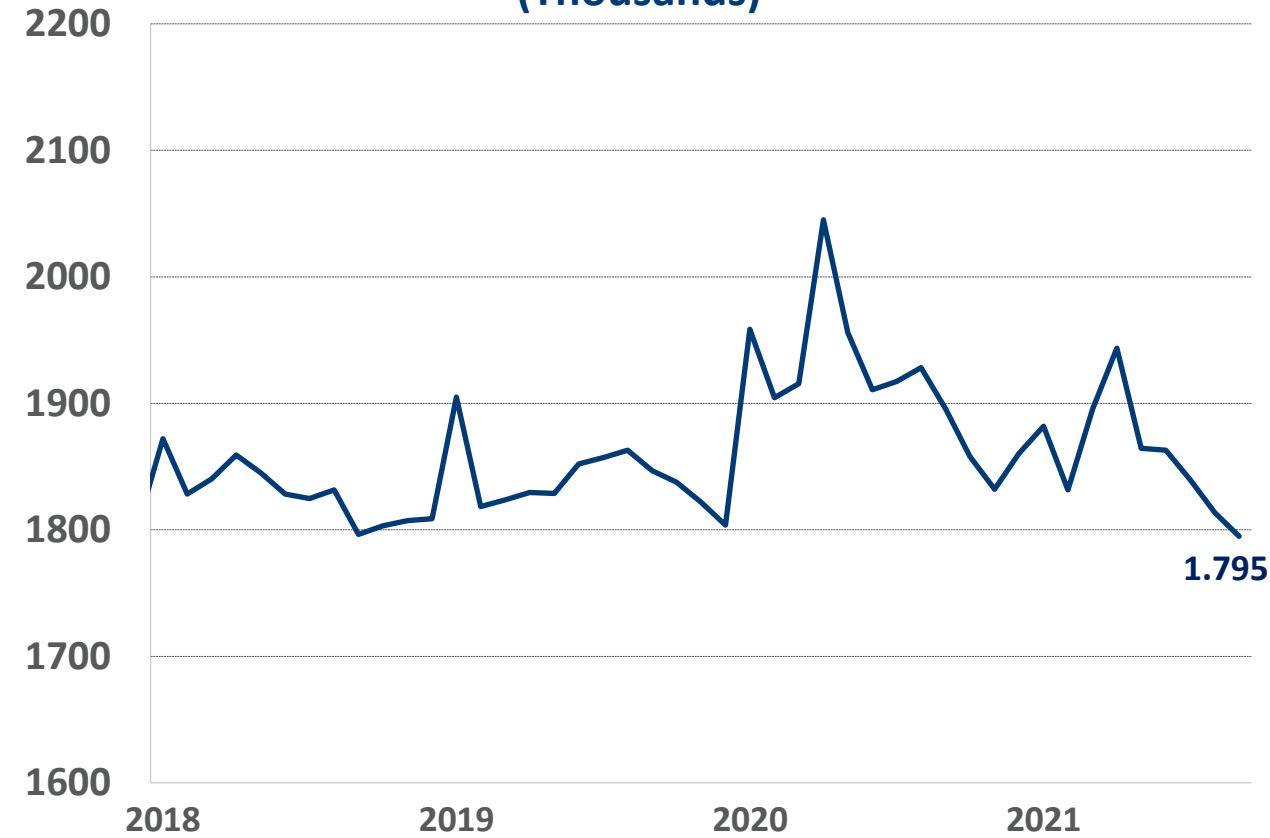
Brazil: Labor Market

» The recovery of the labor market continues with the unemployment rate decreasing (13,2%) but the income measures are falling amid inflation pressures.

PNAD - Real Wage SA (Thousands)



CAGED - Real Average Income of Hirings NSA (Thousands)



Brazil: Inflation

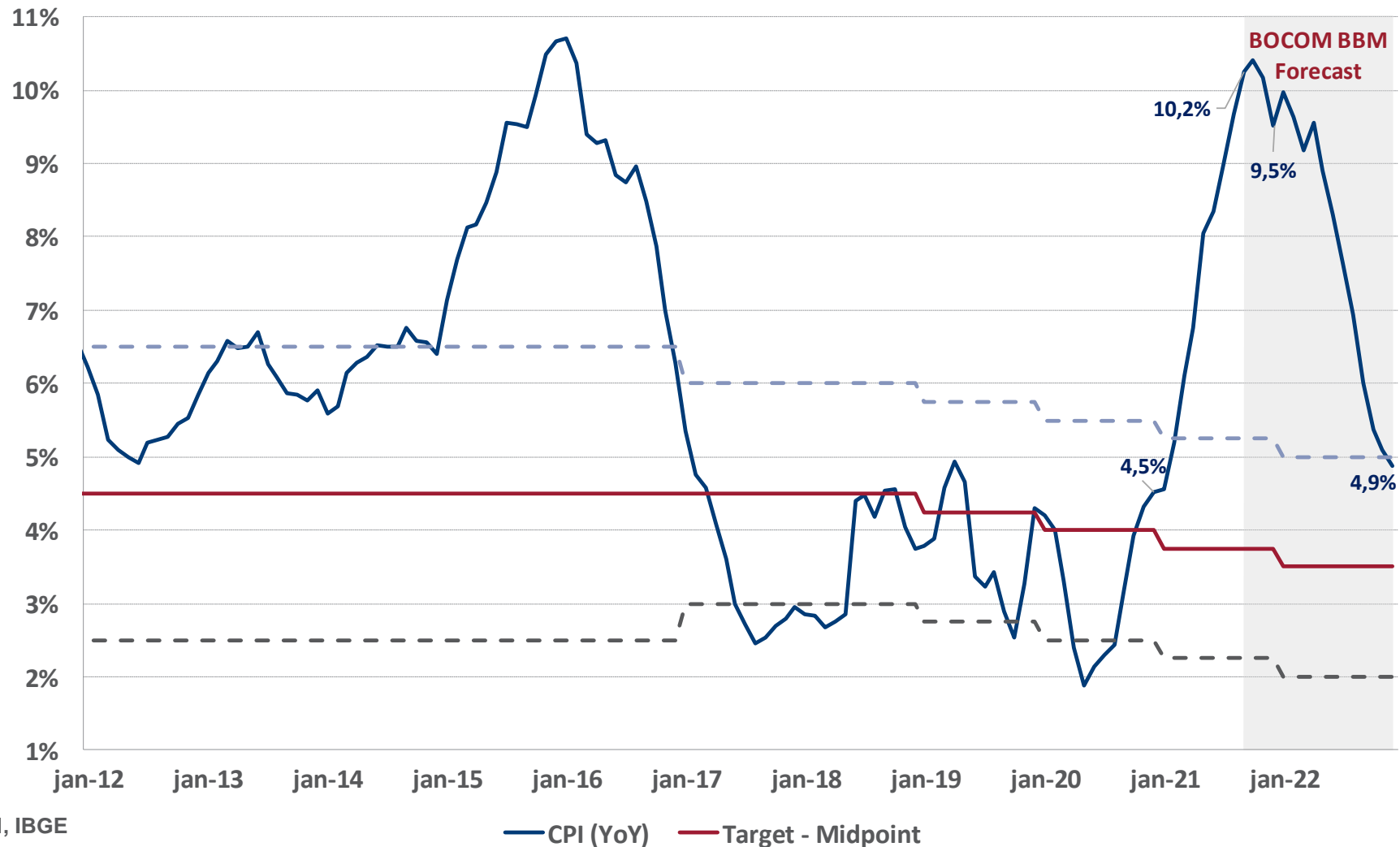
- » The industrial goods inflation shock, stronger services, non processed food inflation, new electric energy flag tariffs and gasoline are adding pressure to 2021 CPI.
- » Inflation in 2021 reached 10,2% in September.

Baseline Scenario (YoY)						
	IPCA	Regulated	Non-Regulated	Services	Food-at-Home	Industrial Products
19 Q4	4,3%	5,5%	3,9%	3,5%	7,8%	1,7%
20 Q1	3,3%	4,8%	2,9%	3,1%	5,1%	1,2%
20 Q2	2,1%	2,6%	2,8%	2,1%	9,0%	0,2%
20 Q3	3,1%	2,1%	3,8%	1,1%	15,4%	1,3%
20 Q4	4,5%	2,6%	5,5%	1,7%	18,2%	3,2%
21 Q1	6,1%	7,0%	6,1%	1,6%	17,6%	5,5%
21 Q2	8,3%	13,0%	7,0%	2,2%	15,3%	8,8%
21 Q3	10,2%	15,8%	8,5%	4,4%	14,7%	10,6%
21 Q4	9,5%	16,0%	7,3%	5,0%	8,2%	10,2%
22 Q1	9,2%	12,6%	8,0%	6,3%	9,0%	9,7%
22 Q2	8,3%	9,0%	8,1%	7,2%	8,9%	8,7%
22 Q3	6,0%	6,0%	6,0%	6,3%	4,4%	6,6%
22 Q4	4,9%	4,6%	5,0%	4,9%	4,5%	5,3%

Brazil: Inflation

- » Inflation forecast revised to 9.5% in 2021, considerably above the target's upper limit;
- » In 2022, our forecast is close to the target upper limit, which is 5%.

Brazil - CPI and Inflation Targets



» Inflation forecast is at 9.5% and the principal factors accountable for the CPI above upper limit are:

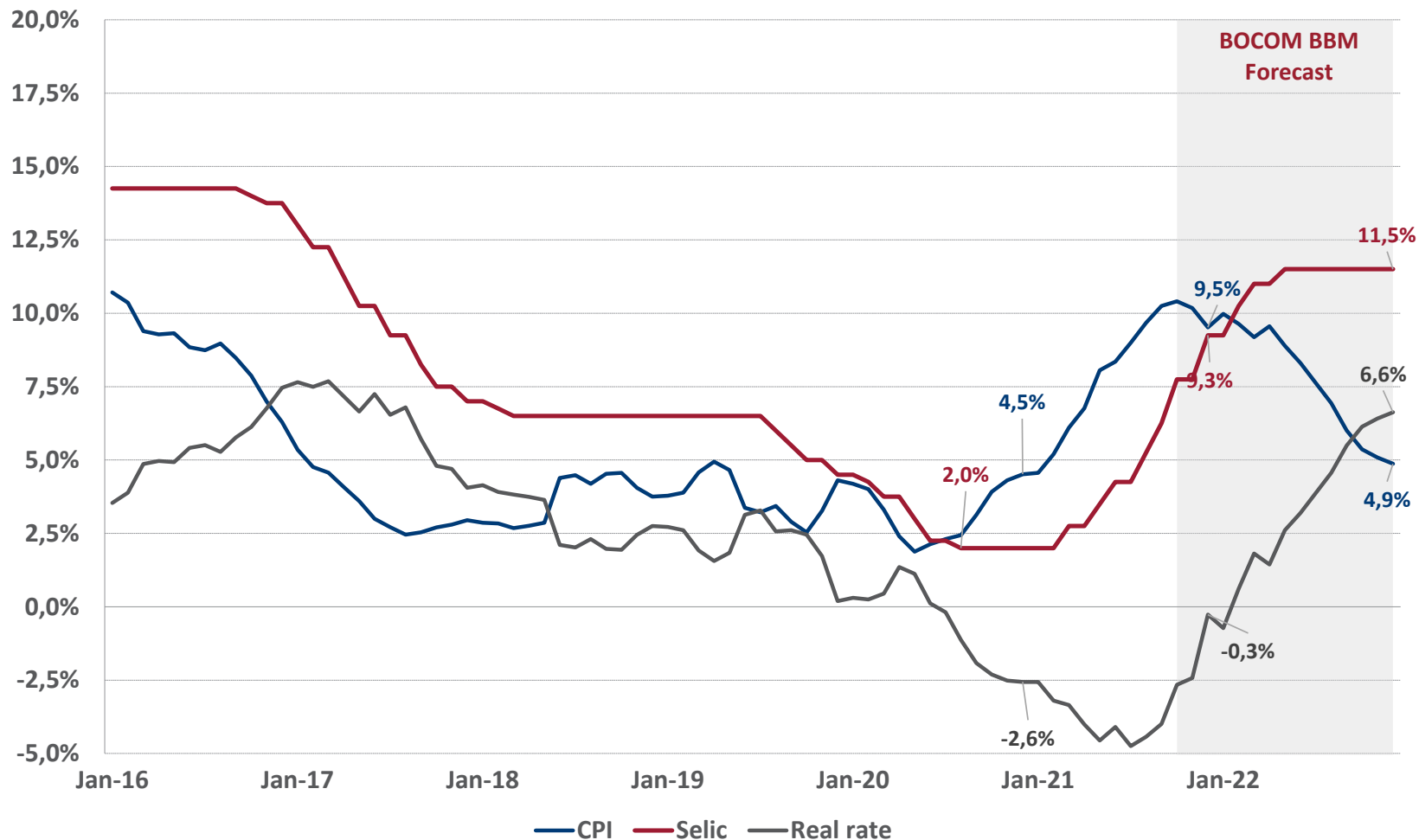
1. Wholesale inflation passthrough to industrial goods still very elevated;
2. Stronger recovery of the services sector;
3. Gasoline inflation;
4. Hydrological scarcity flag in December.

» In 2022, the upward revision was caused by the casuistic change in the ceiling cap rule made by the government, which impacted projection through expectations channel as well as the currency channel, since currency depreciation is a direct consequence of higher fiscal risk.

Brazil: Monetary Policy

- » We revised our Selic rate projection to 9.25% at the end of 2021 with the cycle's end in 2022.
- » In 2022, we expect a hike of 100 bps in the first meeting, followed by two hikes, the first of 75 bps and the second of 50 bps, with the interest rate reaching 11.5% by the end of the cycle.

Brazil - CPI, Selic Rate and Real Ex-post Interest Rate



» Government's PEC (PEC 23/2021):

» **Sub-cap:** limit to court-ordered debts (2016 inflation corrected values: ~BRL 40 billion)

» **Outside the cap:** many possible solutions

- “Encontro de contas”: negotiation of debts owed to Federal Gov't – private and gov't spheres
- Municipalities (~BRL 10 billion): requested to postpone debts owed to INSS
- Single installment with a 40% discount: creditors who do not immediately receive the payment
- Remaining unsettled debt: 2023 budget, with cap limit

» New:

» **Spending cap calculation:** change in index period → opens fiscal space

» **Extra spending in 2021 & 2022**

»» Payment Rules

- »» RPVs (small value requisitions): fully paid in 2022
- »» 'superprecatórios' (> BRL 66 Billion): renegotiation attempt
- »» others: queued in chronological order of payment and prioritized in following years
- »» debt correction: Selic (before IPCA + 6%)

Scenario: PEC 23/2021 approved; BRL Billions

Debt distribution	Due to 2022	Paid in 2022	Exceeding amount
RPVs	19.90	19.90	0.00
Others	69.22	22.07	47.15
Total	89.12	41.97	47.15

Source: Informativo PLOA 2022, BOCOM BBM

New Spending Cap

»» Readjustment Index:

»» From IPCA Jun 12M to IPCA Dez 12M

»» exception: 7.2 in 2016 defined in the spending cap PEC.

»» Space in 2021

»» + BRL 38 bn in spending cap;

»» but **BRL 15 bn limit** to extra spending (vaccination and socioeconomic actions).

»» Space in 2022

»» + **BRL 59 bn w/ new cap** and **BRL 47 bn w/ precatórios** = **BRL 106 bn**

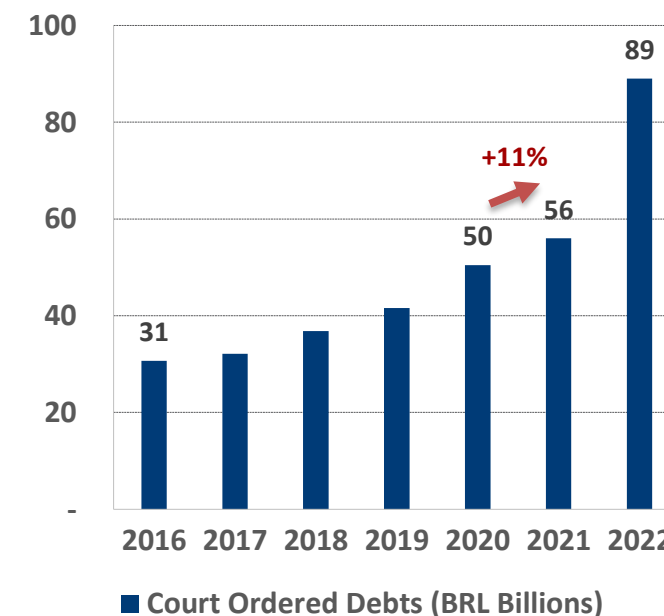
»» + **BRL 2 bn precatório sub-cap: 42-40**

BRL Billions	2016	2017	2018	2019	2020	2021	2022
IPCA 12M Jun (%)		7.2	3.0	4.4	3.4	2.1	8.4
Original cap [A]	1,221	1,309	1,348	1,407	1,454	1,485	1,610
IPCA 12M Dec (%)		7.2	3.0	3.8	4.3	4.5	9.5
New cap [B]	1,221	1,309	1,347	1,398	1,458	1,524	1,669
Difference [C = B - A]						38	59
Court-ordered debts subcap							
Original subcap [D]	31	33	34	35	37	37	40
New subcap [E]	31	33	34	35	37	38	42
Due to 2022 [G]							89
Outside cap [H = G - E]							47

Court-Ordered Debts: 2023 scenarios

- » 2023 sub-cap: **BRL 43 bn**;
- » [1] If 2023 values are back to 2021 values with a 11% growth: **BRL 62 bn**;
- » + **BRL 47 bn from 2022**;
- » Snowball Effect: **BRL -66 bn rolled over to 2024**.

Scenarios	[1] Baseline	[2] 40% discount on 10% of debt	[3] "Encontro de Contas"	[4] [2 + 3]	[5] 40% discount on 100% of debt
2022					
Debt due to 2022 [A]	89	89	89	89	89
Inside cap [B]	42	42	42	42	42
Discount/Deduction [C]	0	3	10	12	28
Outside cap [D = A - B]	47	44	37	35	19
New debt [E = B + D]	89	86	79	77	61
2023					
Inside cap (3.5 IPCA) [F]	43	43	43	43	43
Space in subcap [G = F - D]	-4	-1	6	9	25
Debt due to 2023 [H]	62	62	62	62	62
Outside cap [I = G - H]	-66	-63	-56	-54	-38



- » Each +1 p.p. INPC equals + BRL 7.9 billion in expenditures;
- » BRL 87 bn in fiscal space in 2022;
- » BRL 80 bn: net space.

BRL 89 bn in court-ordered debts due to 2022

		BRL Billions
Original spending cap	[A]	1,610
Expenditures subject to spending cap	[B]	1,603
Original fiscal space (6.2% INPC)	[C = A - B]	7
New spending cap	[D]	1,669
Court-ordered debts payment limit	[E]	42
Expenditures w/ court-ordered debts adjustment	[F = B - 89 + E]	1,556
New fiscal space (6.2% INPC)	[G = D - F]	113
Net new fiscal space (6.2% INPC)	[H = G - C]	106
Impact of INPC 9.5% in expenditures	[I]	26
Original fiscal space (9.5% INPC)	[J = C - I]	-19
New fiscal space (9.5% INPC)	[K = G - I]	87
Net new fiscal space (9.5% INPC)	[L = K - C]	80

»» Extra benefit “inside” the spending cap

- »» ASAP 1: Emergency Aid (*Auxílio Emergencial*) ends in October;
- »» ASAP 2: *Auxílio Brasil* is due to start in November.

»» New social benefit proposal

- »» Average benefit (BRL 400);
- »» 17 million families;
- »» Possibility of including more beneficiaries: + 750.000 autonomous truck drivers.

»» Today: Bolsa Família

- »» Average benefit: BRL 190
- »» 14.6 million families

Auxílio Brasil: Fiscal Impact

» New cap rule makes room for more spending:

» Auxílio Brasil fits inside the new cap;

» further risks outside the cap.

Auxílio Brasil BRL 400 Counterfactual to 17 million families		
[A] Spending cap	1,610	1,669
[B] Expenditures subject to cap	1,603	1,556
[C] Court-ordered debts	89	42
[D] Bolsa Família	35	35
[E = A - B] Fiscal Space w/ INPC 6.2%	7	113
[F] Auxílio Brasil		82
[G = F - D] Extra spending w/ social program		47
[I] Impact of INPC correction in expenses	26	26
[J = E - I] Fiscal space w/ INPC 9.5%	-19	87
[K = J - G] Space w/ Auxílio Brasil inside cap		40

Possible use of fiscal space		BRL Billions
Vale gás	[a]	6
Emendas do relator	[b]	20
Auxílio Brasil to truck drivers	[c]	4
Payroll tax exemption	[d]	8
Auxílio Brasil extra 100 BRL	[e]	20
Auxílio Brasil to informal workers	[f]	36
Scenario 1		
Extra expenditures [G + a + b + c + d]		85
Inside cap [Expenditures]		85
Outside cap		0
Scenario 2		
Extra expenditures [Scenario 1 + e]	[g]	105
Inside cap [J]	[h]	87
Outside cap [g - h]	[i]	17
Scenario 3		
Extra expenditures [Scenario 2 + f]	[j]	141
Inside cap [J]	[k]	87
Outside cap [j - k]	[l]	53

- »» Further risks outside the cap:
 - »» Benefits to informal workers and Auxílio Brasil of BRL 500.
- »» Fiscal risk:
 - »» Credibility of fiscal rules;
 - »» Permanent expenditure;
 - »» Uncertainty regarding budget.

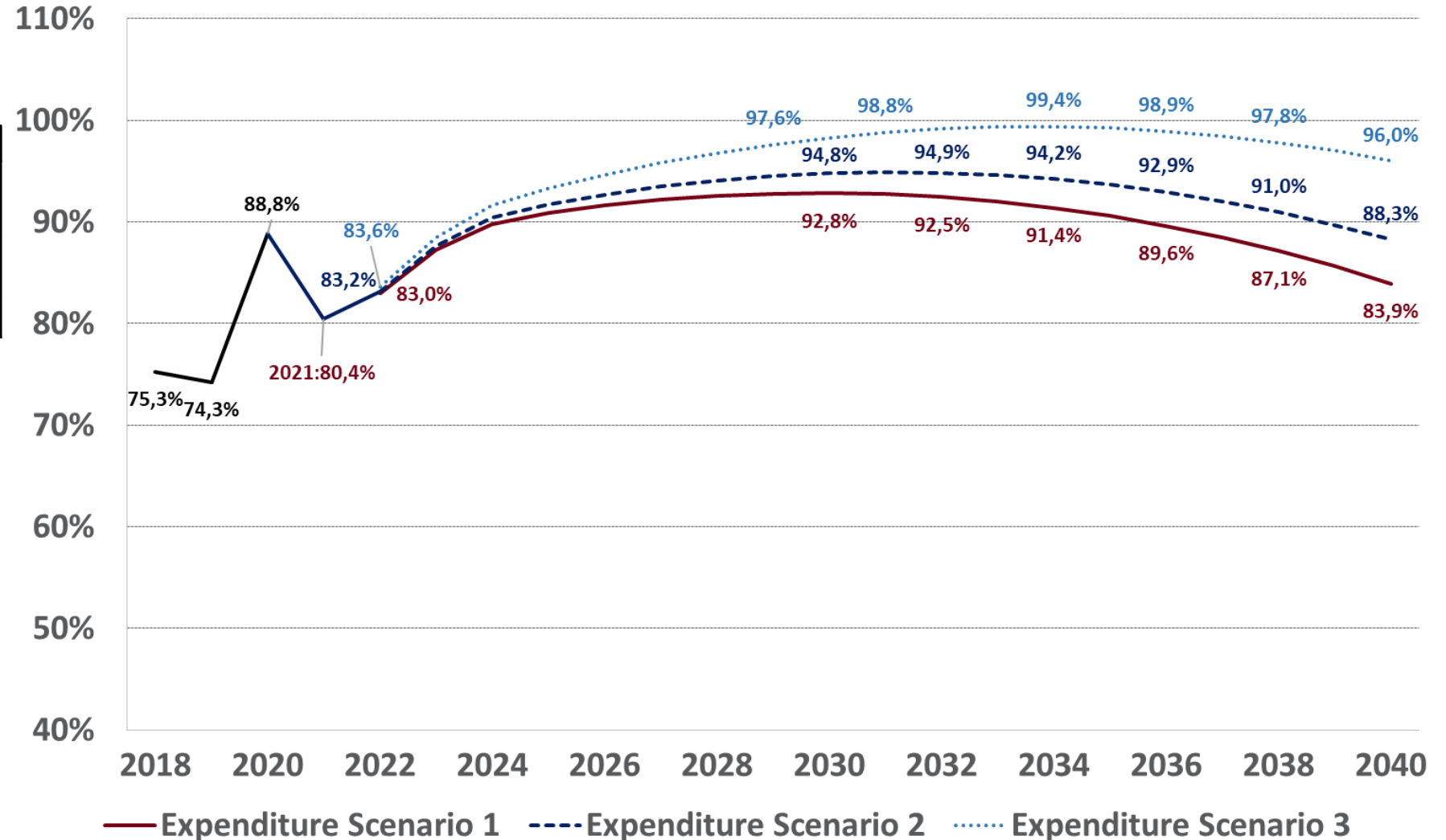
	Counterfactual	Scenario 1	Scenario 2	Scenario 3
Expenditures [A]	1,610	1,666	1,686	1,722
Outside cap [B]				
Court-ordered debts		47	47	47
Extra BRL 100 benefit			20	20
Benefit to informal workers				36
Exceptions to spending cap	36	36	36	36
Primary expenses [C = A + B]	1,646	1,749	1,789	1,861

Fiscal Impact: Auxílio Brasil

» Considering only a break of the ceiling cap in 2022 and it being respected afterwards; Selic 7%.

Debt to GDP Ratio - Different Expenditures in 2022

Other Hypothesis:	
Potential GDP	2.2%
Increase Spending Cap 2023 to 2026	0%
Increase Spending Cap after 2026	2%
GDP Deflator	3.4%
Long Term CPI	3%

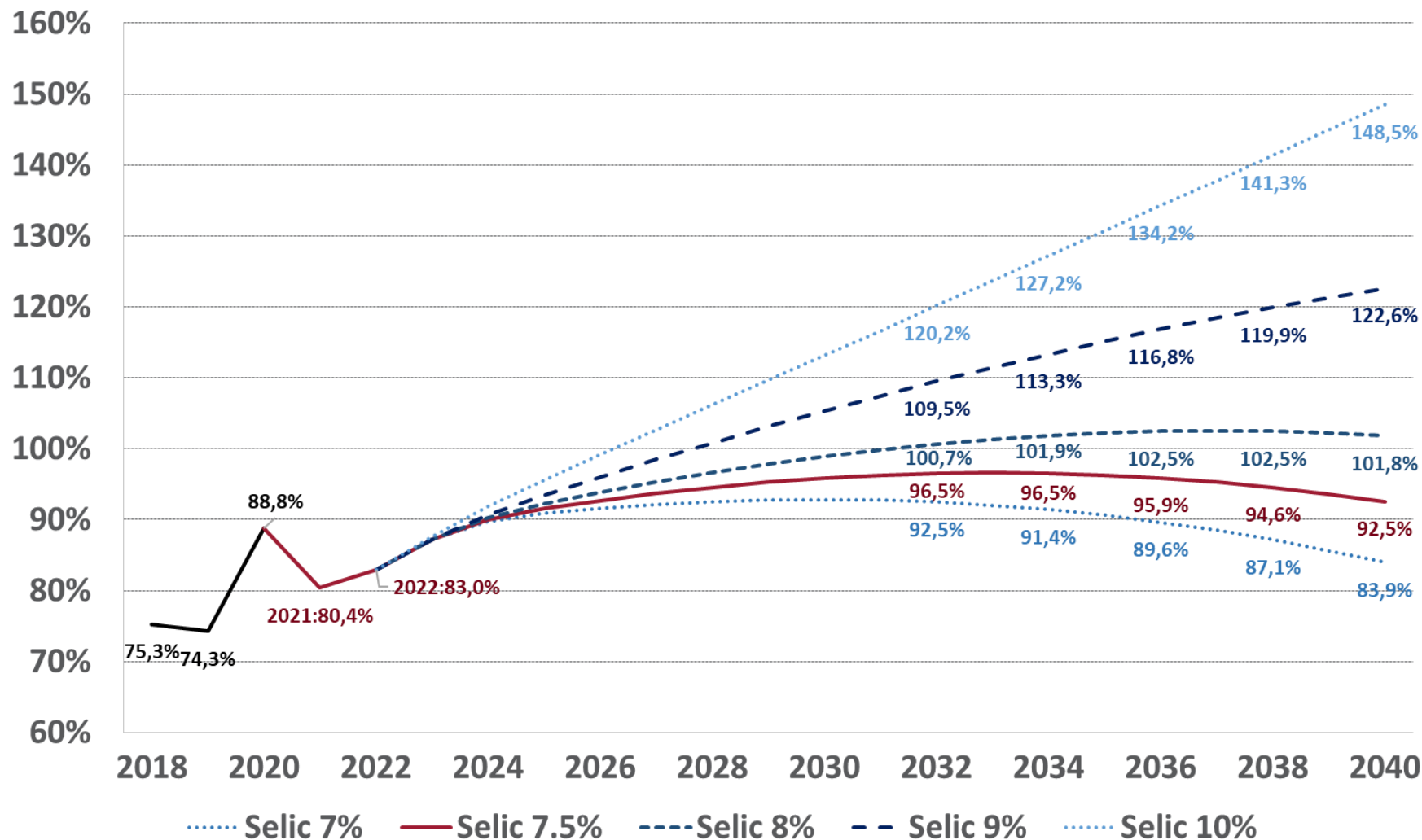


Fiscal Impact: Auxílio Brasil

» Considering only a break of the ceiling cap in 2022 and it being respected afterwards.

Debt to GDP - Different Selic Scenarios

Other Hypothesis:	
Potential GDP	2.2%
Increase Spending Cap 2023 to 2026	0%
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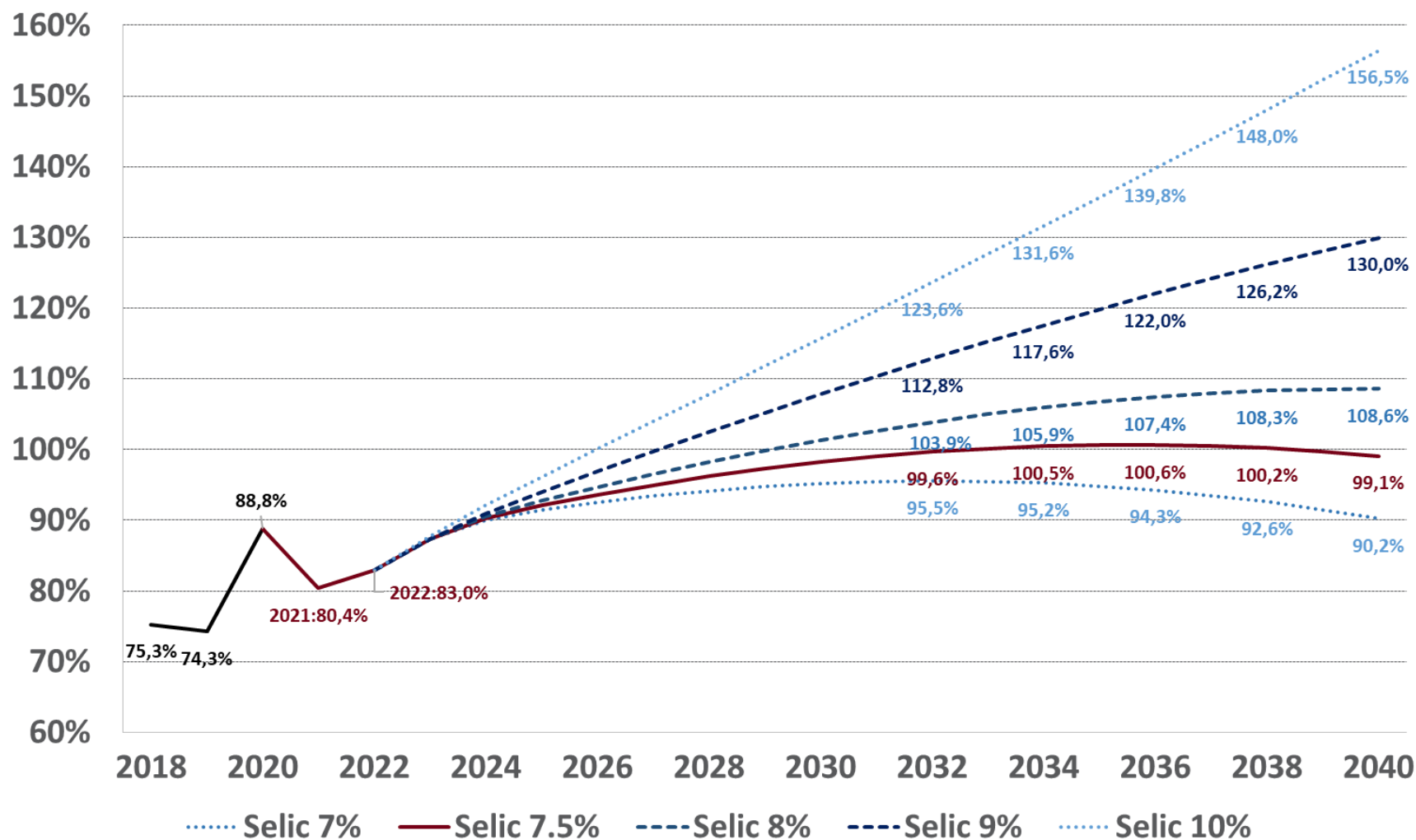


Fiscal Impact: Auxílio Brasil

» Ceiling Cap being disrespected in 2022 and reajusted by inflation +0.5% from 2023 onwards.

Debt/GDP - Different Selic Rates with Spending Cap Readjustment

Other Hypothesis:	
Potential GDP	2.2%
Increase Spending Cap 2023 to 2026	0.5%
Increase Spending Cap after 2026	2%
GDP Deflator	3.4%
Long Term CPI	3%

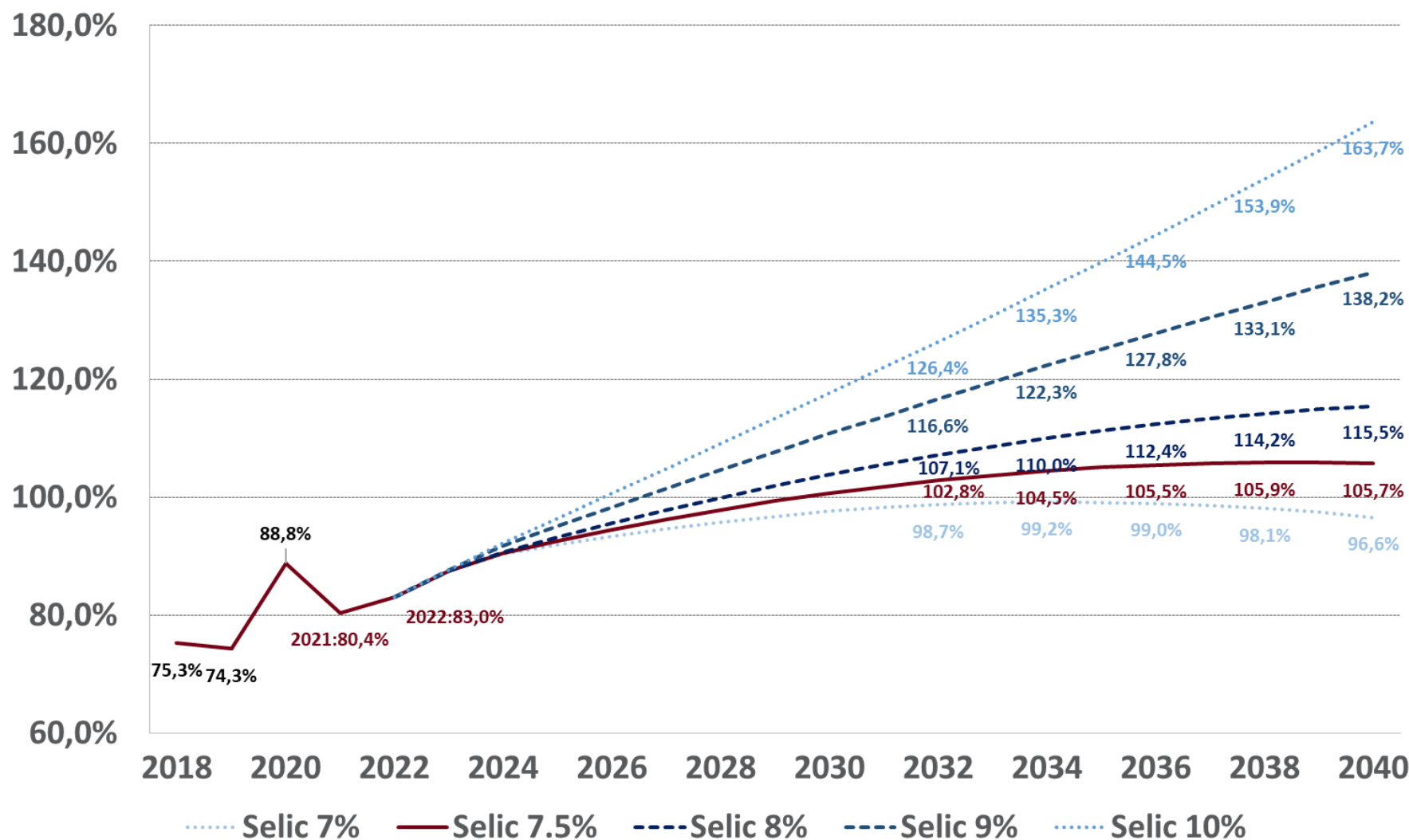


Fiscal Impact: Auxílio Brasil

» Ceiling Cap being disrespected in 2022 and reajusted by inflation +1% from 2023 onwards.

Debt/GDP - Different Selic Rates with Spending Cap Readjustment

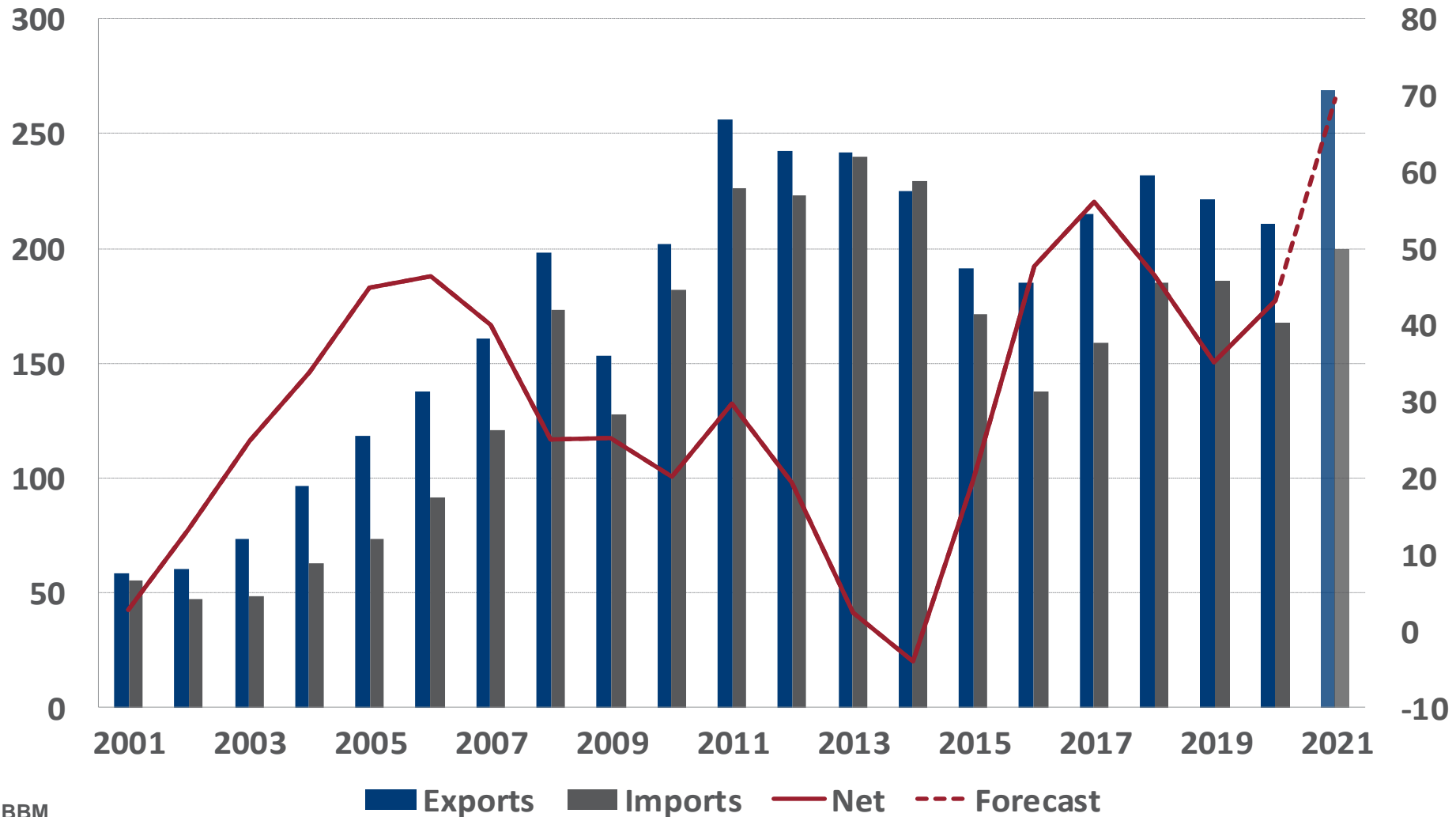
Other Hypothesis:	
Potential GDP	2.2%
Increase Spending Cap 2023 to 2026	1%
Increase Spending Cap after 2026	2%
GDP Deflator	3.4%
Long Term CPI	3%



Brazil: Trade Balance

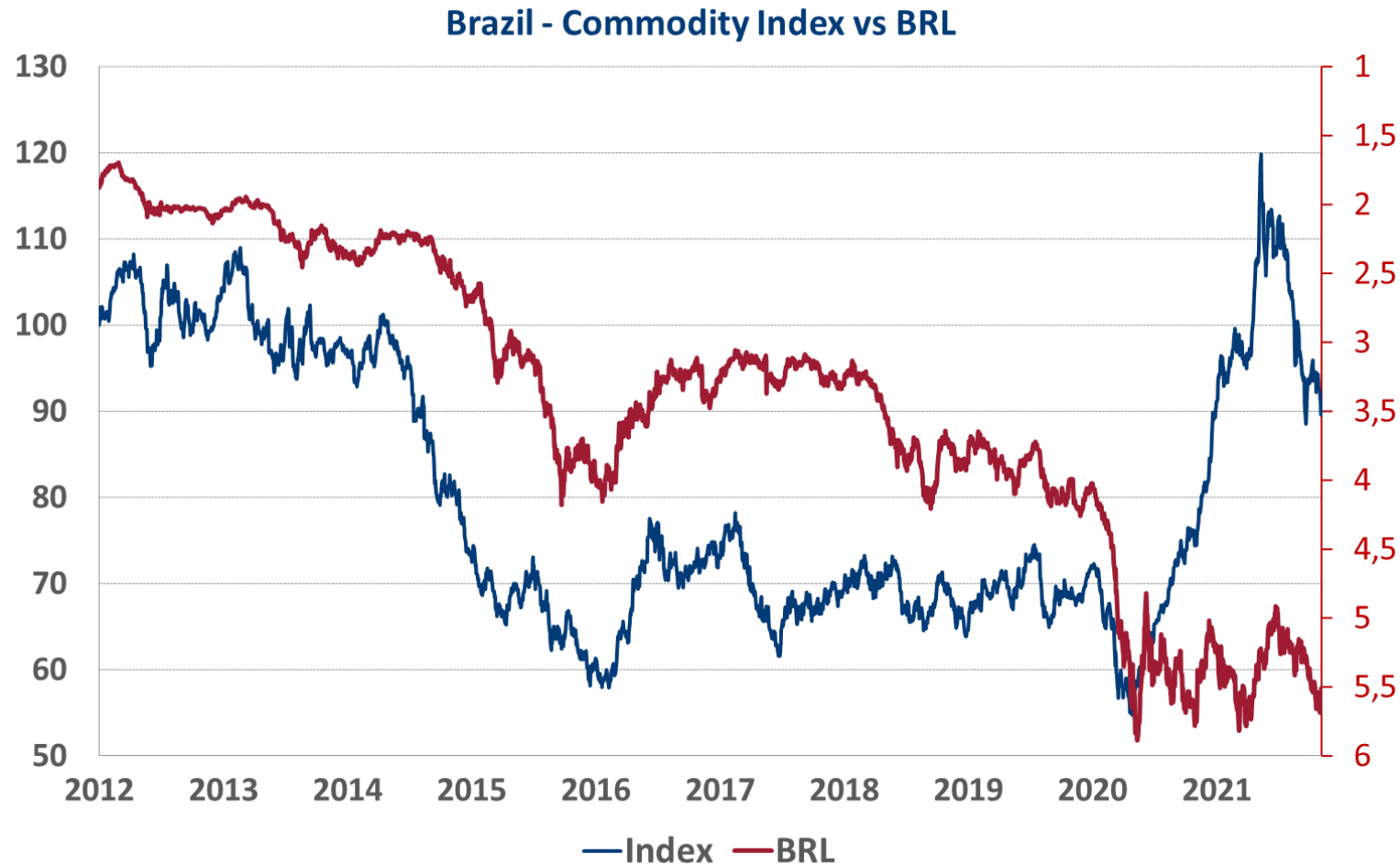
» In October, the trade balance registered another surplus.

Brazil - Trade Balance (US\$ Bi - 12m)



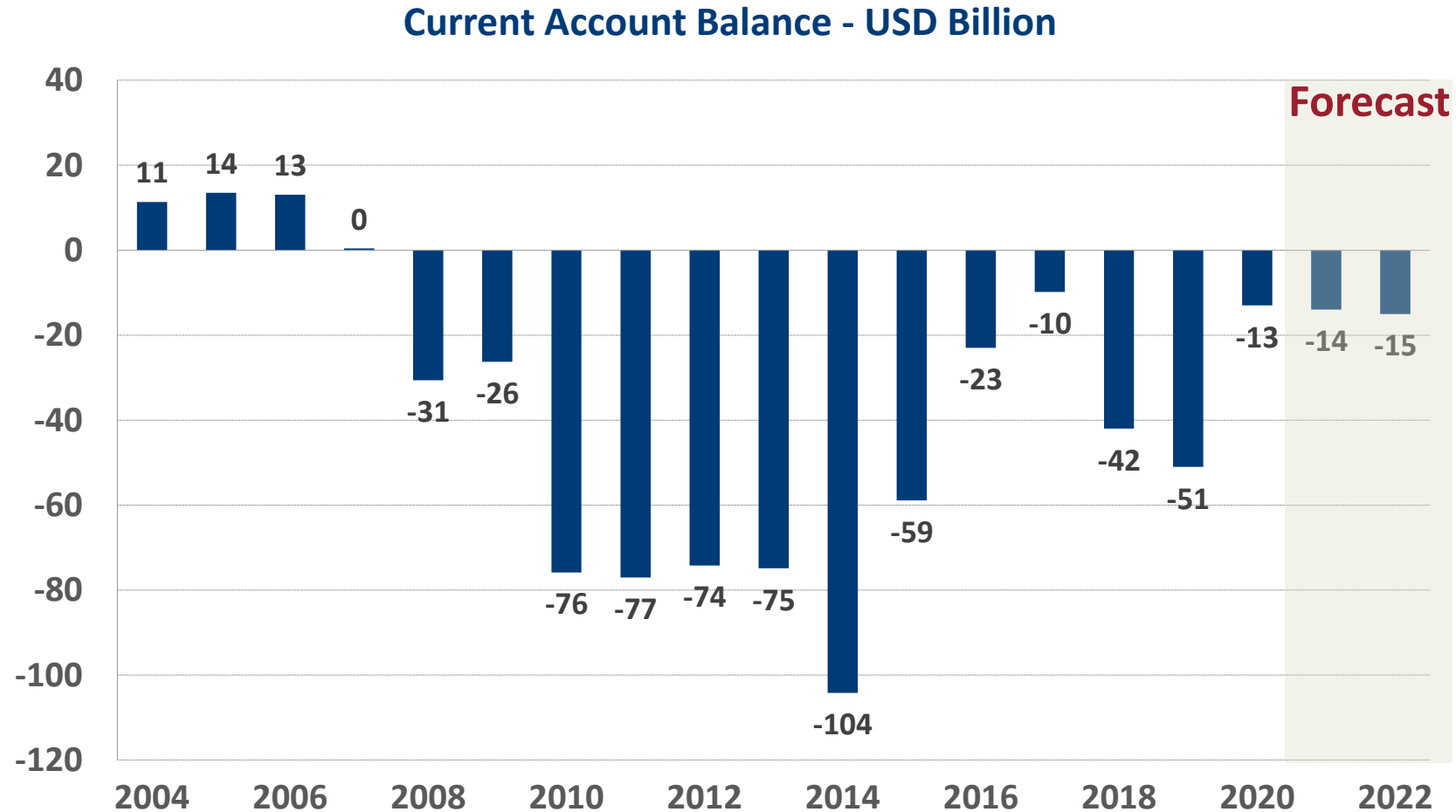
Brazil: Trade Balance

- » The slowdown in China and new restrictions on Iron production in the county had a considerable impact on the demand for the commodity, driving the commodity index down.



Brazil: Balance of Payments

» The trade balance is the main driver of the current account improvement in 2021.



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