

Macroeconomic Outlook

November 2022

11/17/2022

MINISTRY OF
ECONOMY



Macroeconomic Outlook is a report prepared by the Office of Economic Policy (SPE) of the Ministry of Economy with the most relevant economic data and forecasting about Brazil.

This report is entirely descriptive and it does not imply or suggests policy decisions neither does it limit the operational scope of the Ministry of Economy.

Data valid up to the date of the report.

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Highlights

Macroeconomic Parameters					
Year	Gross Domestic Product				
	Nominal		Real		Deflator
	<i>BRL million</i>	<i>Chg. %</i>	<i>Chg. %</i>	<i>Per Capita chg. %</i>	<i>Chg. %</i>
2016	6,269,328	4.56	-3.28	-4.07	8.07
2017	6,585,479	5.04	1.32	0.52	3.66
2018	7,004,142	6.36	1.78	0.96	4.49
2019	7,389,131	5.50	1.22	0.43	4.21
2020	7,467,615	1.06	-3.88	-4.61	5.14
2021	8,679,490	16.23	4.62	3.85	11.10
2022	9,639,053	11.06	2.70	1.98	8.12
2023	10,403,618	7.93	2.10	1.41	5.69
2024	11,173,854	7.40	2.50	1.84	4.77
2025	11,953,293	6.98	2.50	1.87	4.35
2026	12,719,805	6.41	2.23	1.63	4.07

Source: SPE/ME. Macroeconomic Parameters, November-2022.

Macroeconomic Parameters						
Year	Industrial Activity - Annual chg. %					
	Manufacturing		Beverages		Vehicles	
	Production				Domestic Wholesale	
	Price	Quantity	Price	Quantity	Price	Quantity
2016	8.06	-5.98	7.60	-3.09	6.10	-17.53
2017	1.76	2.23	4.34	0.78	4.26	12.31
2018	8.35	1.11	2.67	0.87	3.30	13.05
2019	4.31	0.19	2.86	4.25	2.97	10.38
2020	9.13	-4.60	0.87	-0.19	4.15	-25.84
2021	31.85	4.32	4.14	0.28	12.62	1.04
2022	17.77	-0.47	9.76	3.84	12.64	-3.75
2023	1.50	0.21	7.40	2.62	4.02	9.19
2024	3.23	1.92	6.02	3.63	3.21	12.45
2025	4.37	2.08	5.97	3.39	2.73	8.50
2026	4.62	1.76	5.97	2.92	2.45	7.66

Source: SPE/ME. Macroeconomic Parameters, November-2022.

Macroeconomic Parameters						
Year	Labor Force	Formal Jobs in Private Sector				
		Employed Population	Earnings		Wage Bill	
			Nominal	Real	Nominal	Real
	Chg. % accum. In 4-trimesters					
2016	1.32	-4.28	7.65	-1.03	3.04	-5.26
2017	1.70	-2.76	5.90	2.36	2.99	-0.46
2018	1.20	-0.58	3.43	-0.22	2.84	-0.79
2019	1.77	1.43	3.35	-0.37	4.83	1.06
2020	-5.88	-6.91	5.84	2.54	-1.51	-4.56
2021	4.35	2.56	2.70	-5.10	5.37	-2.75
2022	3.42	9.38	8.61	-0.71	18.86	8.74
2023	2.69	4.40	6.54	2.04	11.18	6.50
2024	2.02	2.54	4.62	1.01	7.27	3.58
2025	2.17	2.47	4.06	1.03	6.63	3.53
2026	2.29	2.86	4.39	1.36	7.37	4.25

Source: SPE/ME. Macroeconomic Parameters, November-2022.

Macroeconomic Parameters						
Year	Inflation					
	IPCA		INPC		IGP-DI	
	Annual Average	Annual Accum.	Annual Average	Annual Accum.	Annual Average	Annual Accum.
	Chg. %					
2016	8.74	6.29	9.32	6.58	10.19	7.18
2017	3.45	2.95	2.97	2.07	0.96	-0.42
2018	3.66	3.75	2.87	3.43	5.81	7.10
2019	3.73	4.31	3.75	4.48	6.05	7.70
2020	3.21	4.52	3.61	5.45	13.05	23.08
2021	8.30	10.06	8.99	10.16	27.30	17.74
2022	9.29	5.85	9.44	6.00	10.44	6.11
2023	4.42	4.60	4.65	4.90	2.74	4.55
2024	3.57	3.00	3.67	3.00	4.35	4.19
2025	3.00	3.00	3.00	3.00	4.06	3.98
2026	3.00	3.00	3.00	3.00	3.85	3.71

Source: SPE/ME. Macroeconomic Parameters, November-2022.

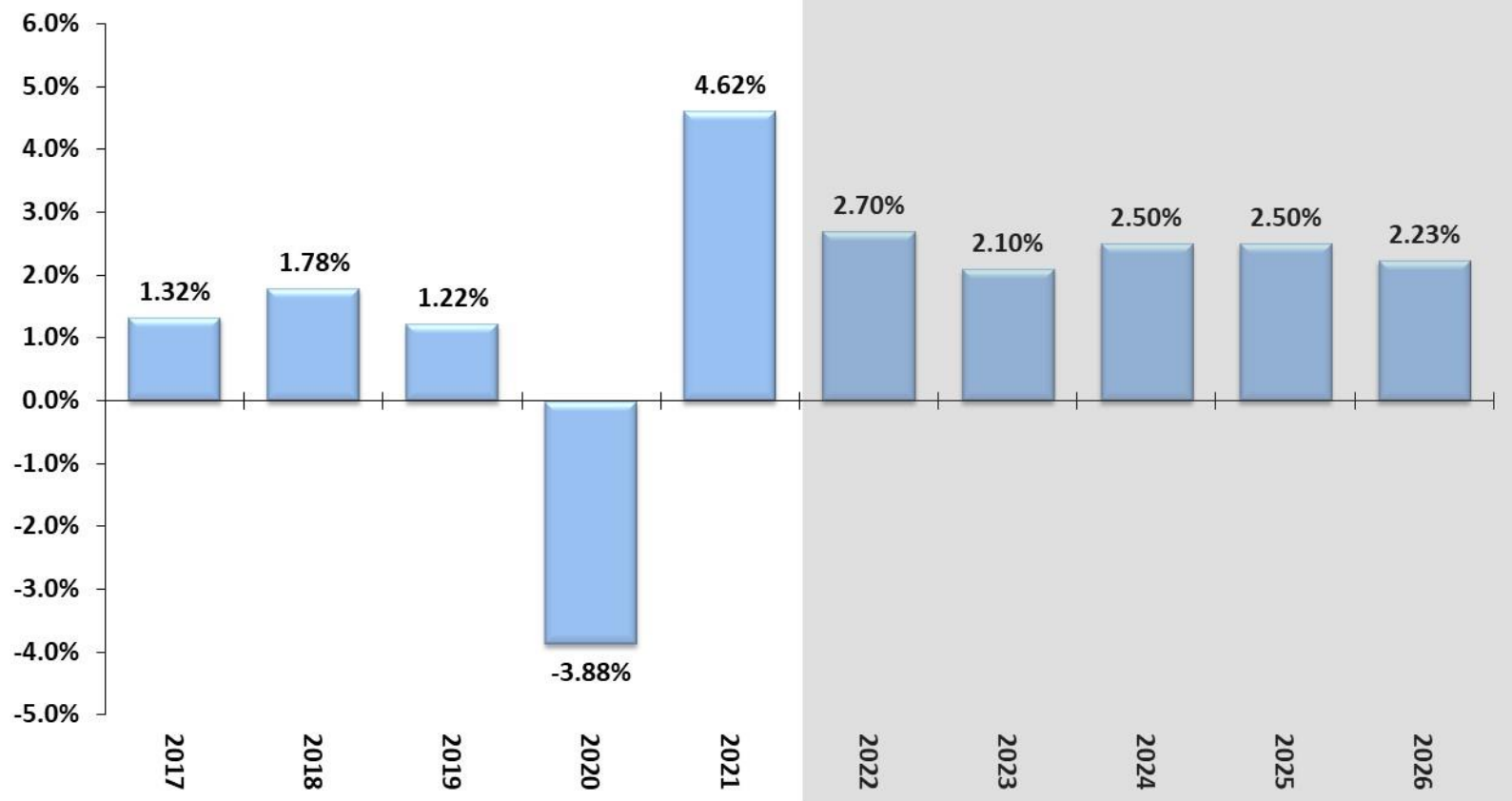
Macroeconomic Parameters								
Year	Financial Indicators							
	Selic market rate			Long term rate TJLP		Referential rate TR	Financial Savings	
	Annual Average	December	Real chg.	Annual Average	December	Annual Average	Annual Average	
	Annual chg. %						BRL million	Annual chg. %
2016	14.08	13.65	7.33	7.50	7.50	2.01	4,566,852	13.89
2017	9.87	7.00	6.72	7.12	7.00	0.60	4,992,423	9.32
2018	6.48	6.40	2.64	6.72	6.98	0.00	5,346,678	7.10
2019	5.90	4.59	1.53	6.18	5.57	0.00	5,744,064	7.43
2020	2.64	1.90	-1.80	4.87	4.55	0.00	6,367,887	10.86
2021	3.91	8.76	-5.59	4.79	5.32	0.05	7,334,662	15.18
2022	12.34	13.65	6.13	6.76	7.20	1.66	8,514,539	16.09
2023	12.82	11.15	7.86	7.10	6.90	1.84	9,469,209	11.21
2024	9.07	7.90	5.90	6.60	6.42	0.48	10,344,152	9.24
2025	7.90	7.90	4.76	6.18	6.09	0.04	11,193,095	8.21
2026	7.83	7.78	4.70	5.82	5.68	0.01	12,041,335	7.58

Source: SPE/ME. Macroeconomic Parameters, November-2022.

Macroeconomic Parameters				
Year	External Sector			
	Exchange Rate			
	Annual Average	December	Average chg. %	Annual chg. %
	Exchange Rate BRL/USD			
2016	3.5	3.3	4.8	-13.4
2017	3.2	3.3	-8.5	-1.8
2018	3.7	3.9	14.5	18.0
2019	3.95	4.03	7.95	5.78
2020	5.16	5.20	30.69	25.21
2021	5.40	5.58	4.64	9.83
2022	5.16	5.20	-4.40	-7.99
2023	5.19	5.20	0.68	-0.05
2024	5.13	5.10	-1.18	-2.12
2025	5.14	5.18	0.17	1.75
2026	5.19	5.20	0.97	0.43

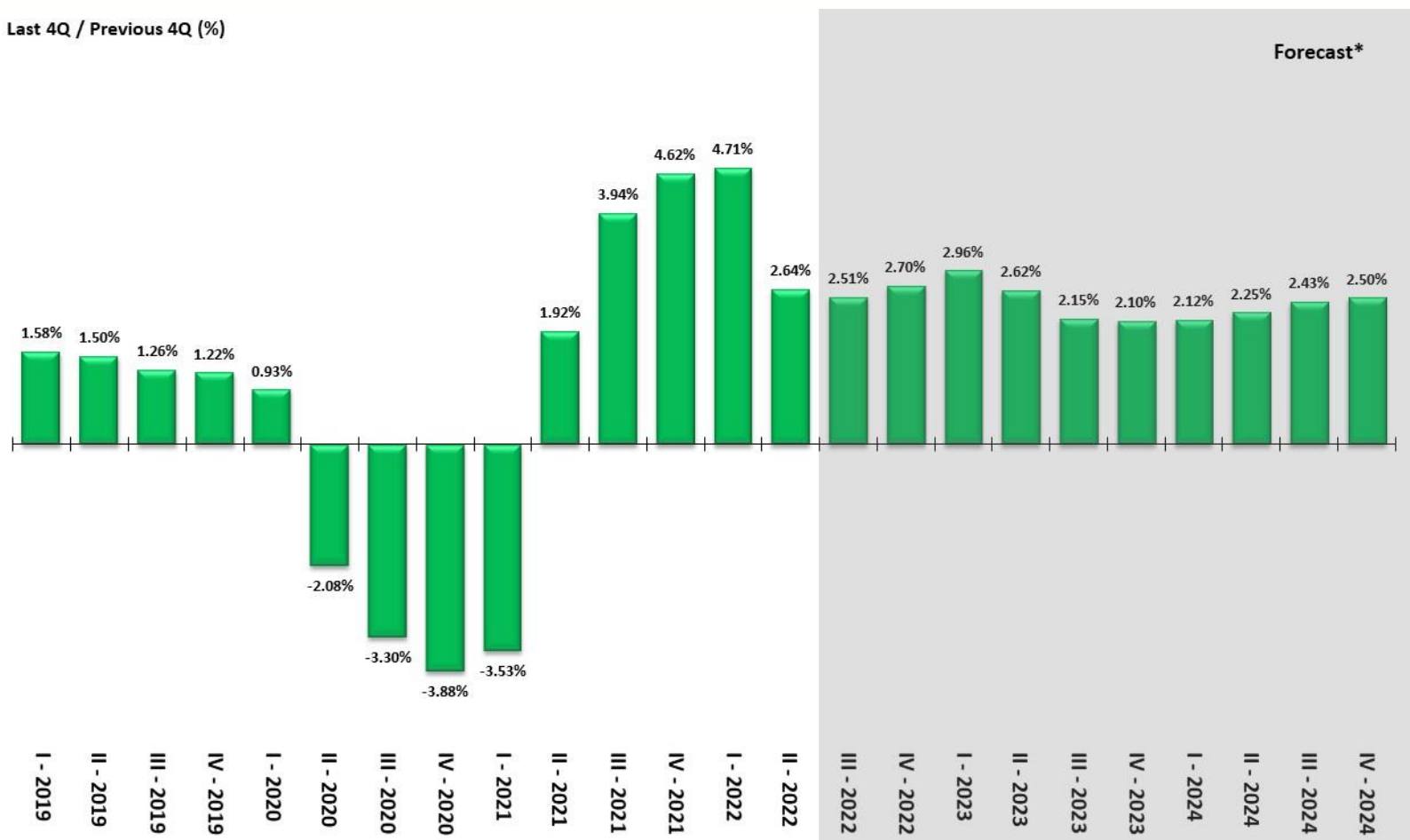
Source: SPE/ME. Macroeconomic Parameters, November-2022.

Last 4Q / Previous 4Q (%)



Source: IBGE, Quarterly National Accounts Series *Forecast: Macroeconomic Parameters, November-2022.

Last 4Q / Previous 4Q (%)



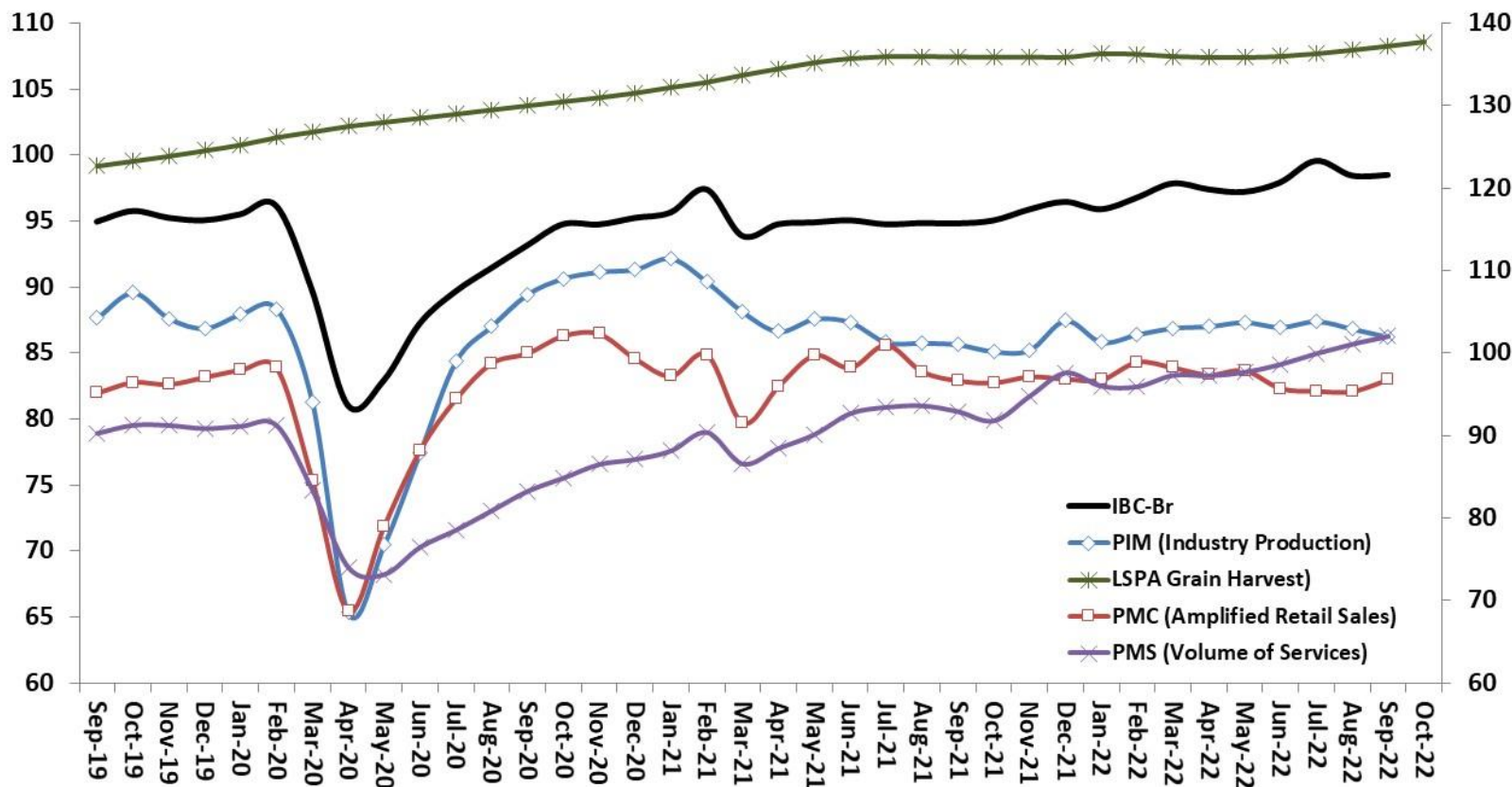
Source: IBGE, Quarterly National Accounts Series *Forecast: Macroeconomic Parameters, November-2022.

Major Monthly Economic Activity Indicators

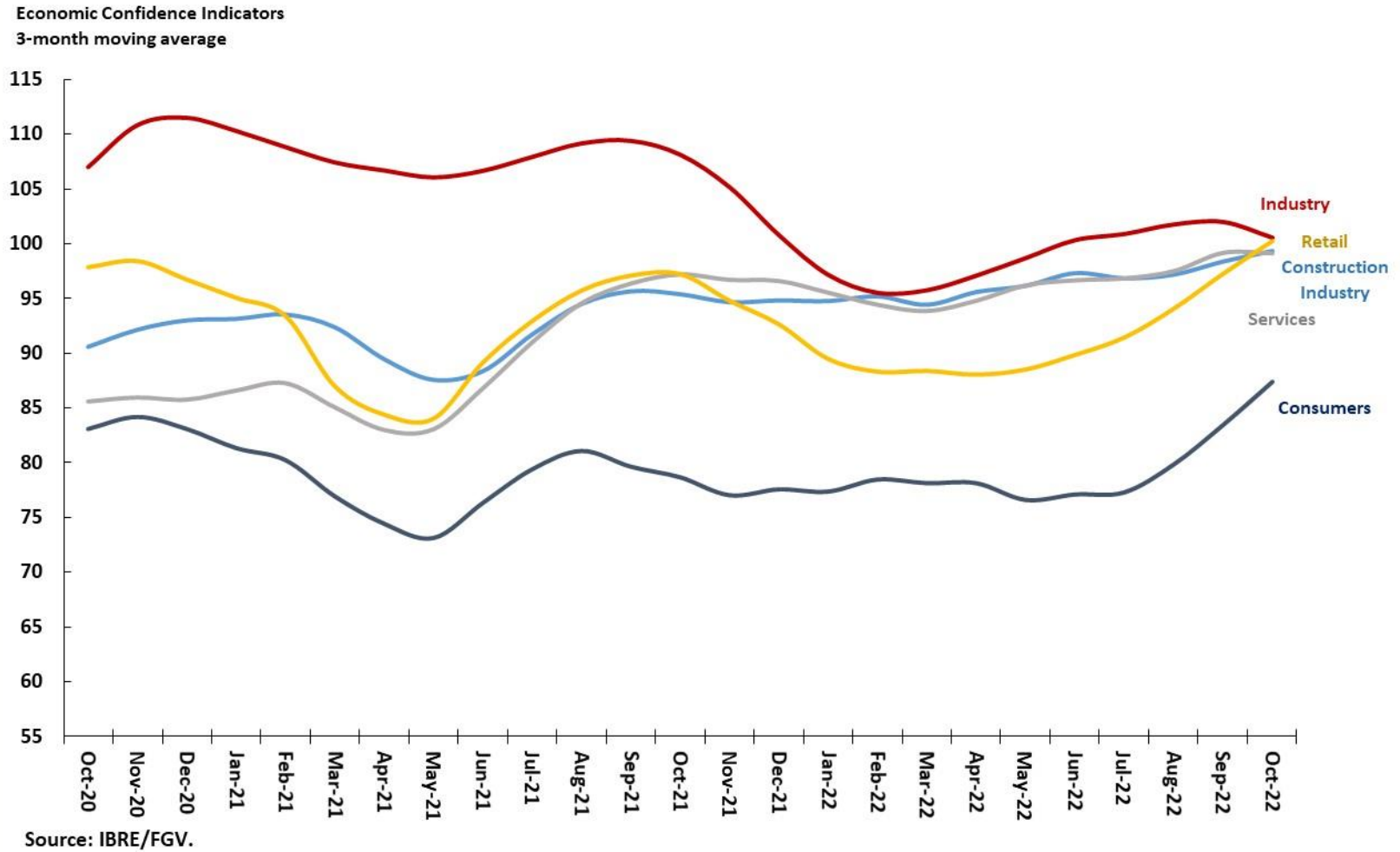
HIGHLIGHTS

IBC-Br, Grain Harvest (12-mo MA) and Industry Production
Seasonally Adjusted Index (2014 = 100)

Amplified Retail Sales and Volume of Services
Seasonally Adjusted Index (2014 = 100)



Sources: Central Bank of Brazil and IBGE: Systematic Survey of Agricultural Production (LSPA), Monthly Survey of Industry (PIM), Monthly Survey of Trade (PMC), and Monthly Survey of Services (PMS).

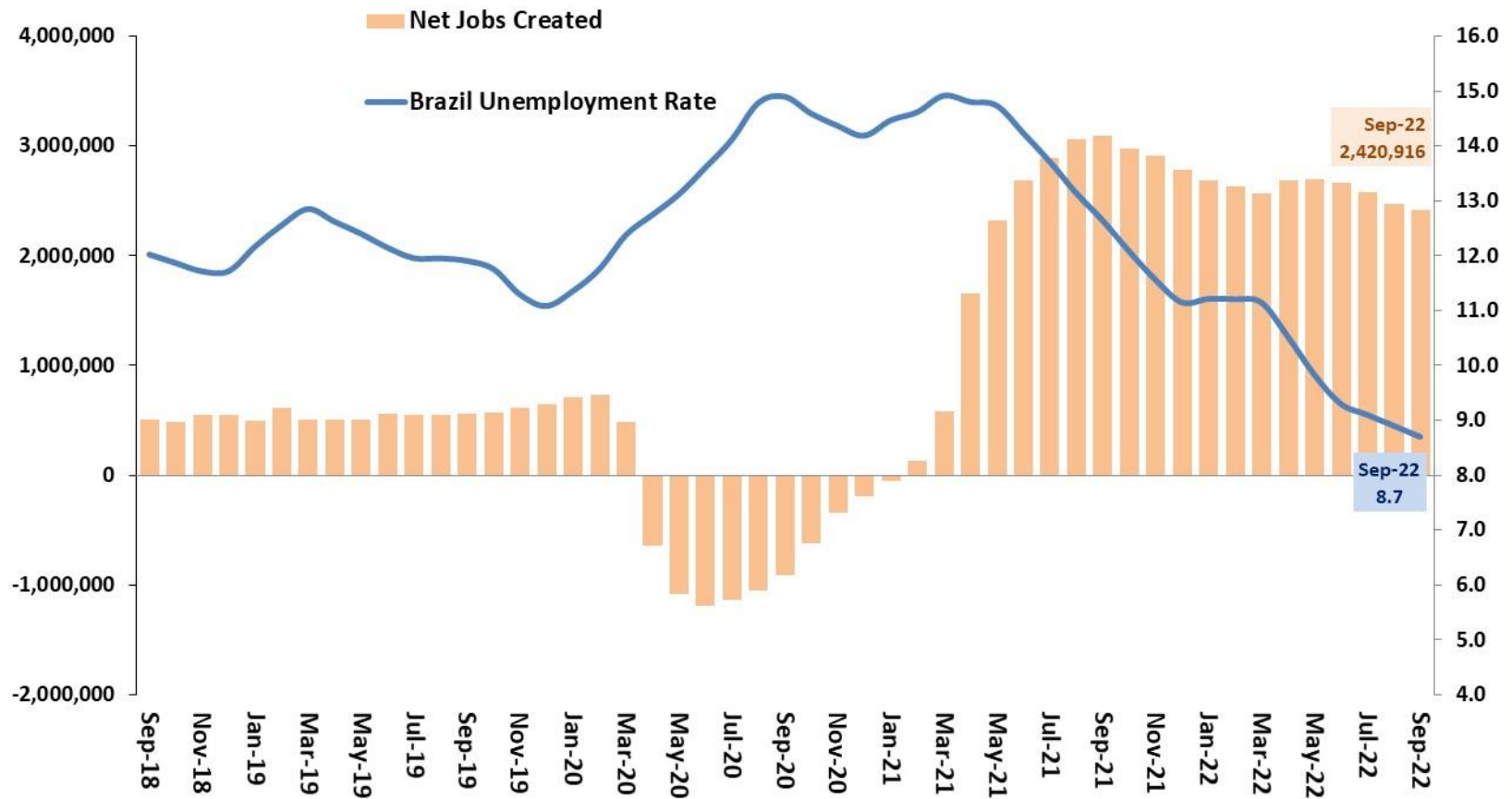


Unemployment Rate and Net Formal Job Creation

HIGHLIGHTS

Net Formal Jobs Creation
12-Month Accumulated Figures

Brazil Unemployment Rate
% of Labor Force



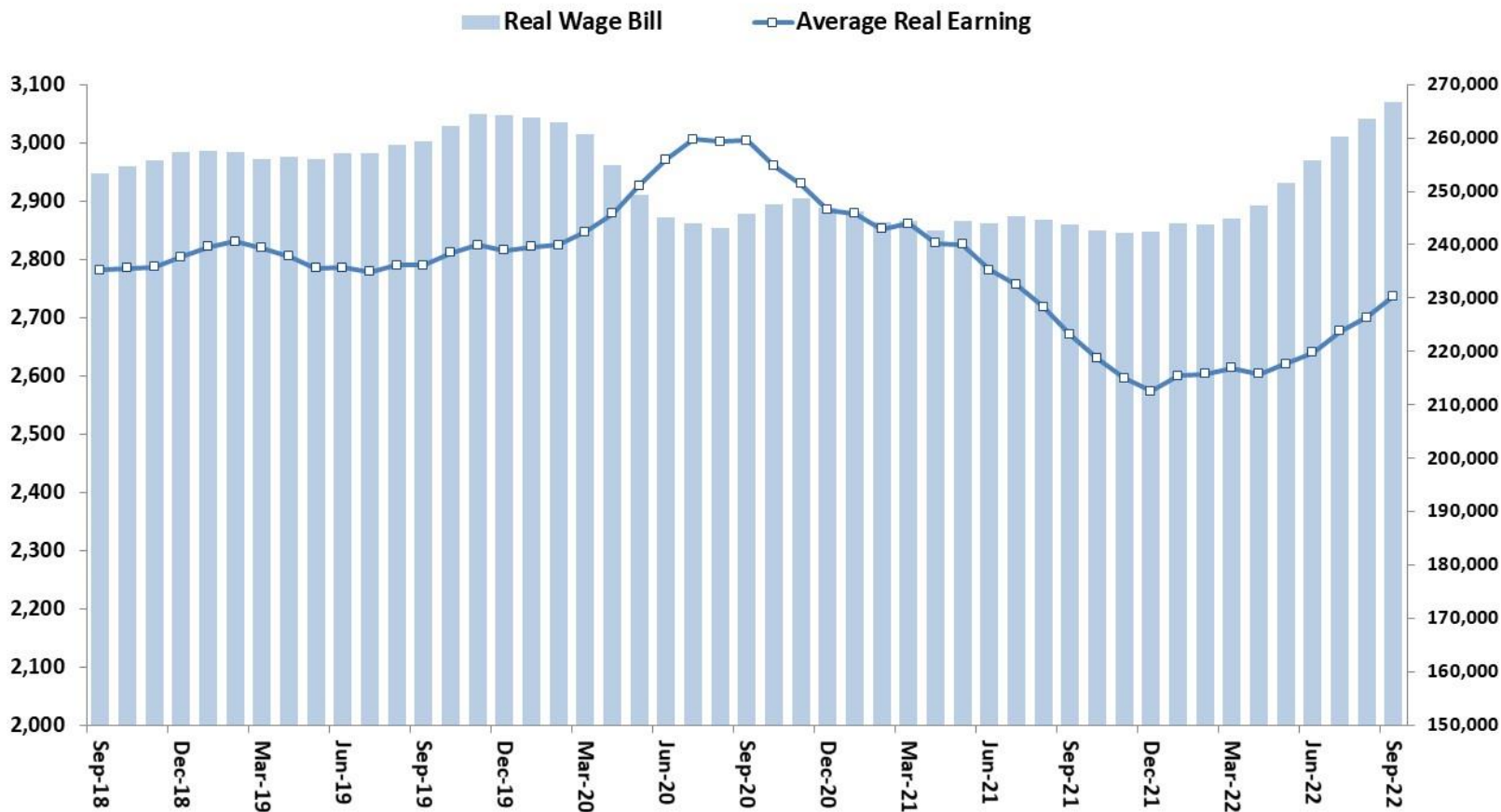
Sources: IBGE - PNADC and ME-CAGED (adjusted data).

Real Wage Bill and Average Real Earning

HIGHLIGHTS

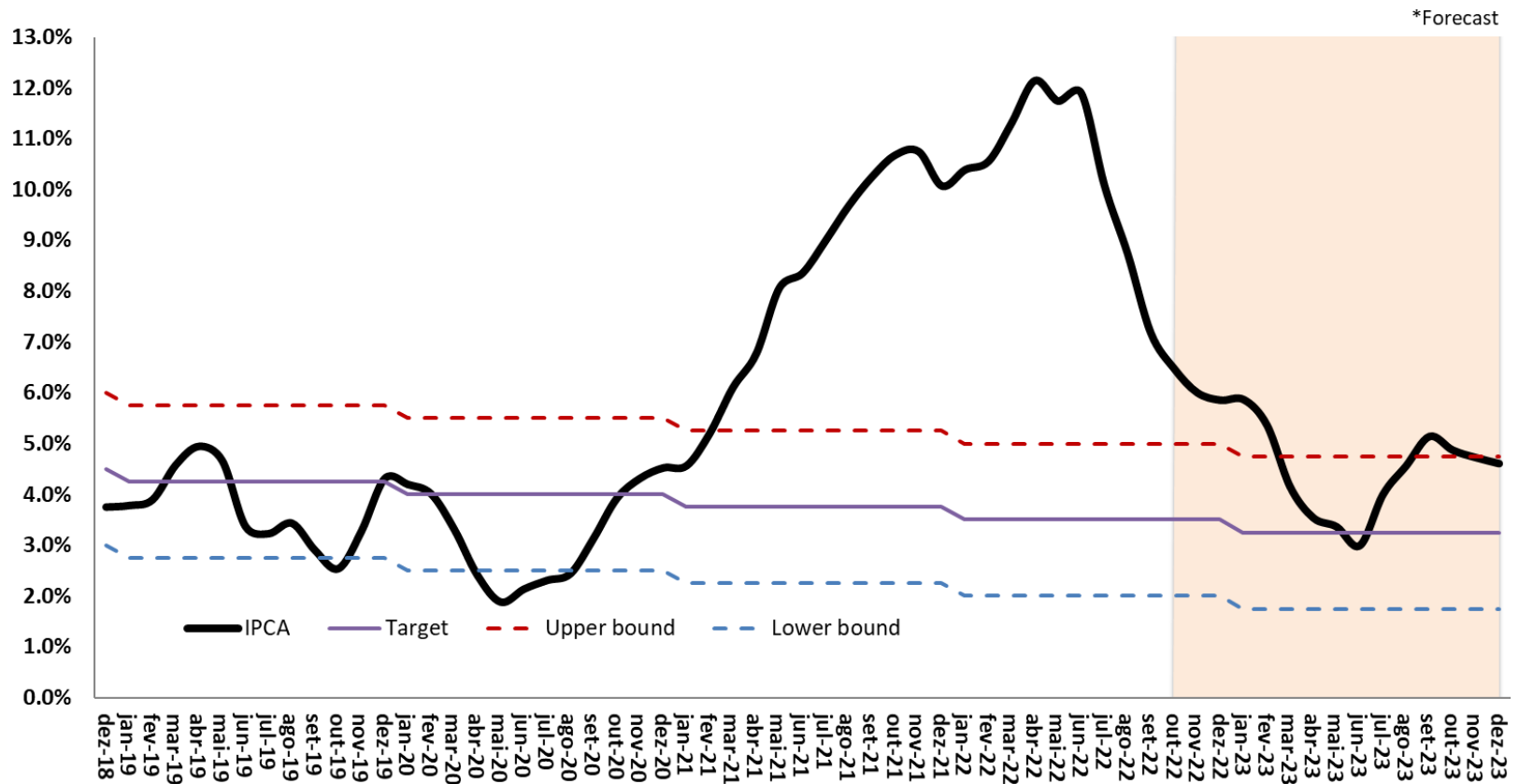
Average Real Earning
R\$ of last month

Real Wage Bill
R\$ millions of last month



Source: IBGE - PNADC.

IPCA and Inflation Targeting
12-month accumulated rate (%)

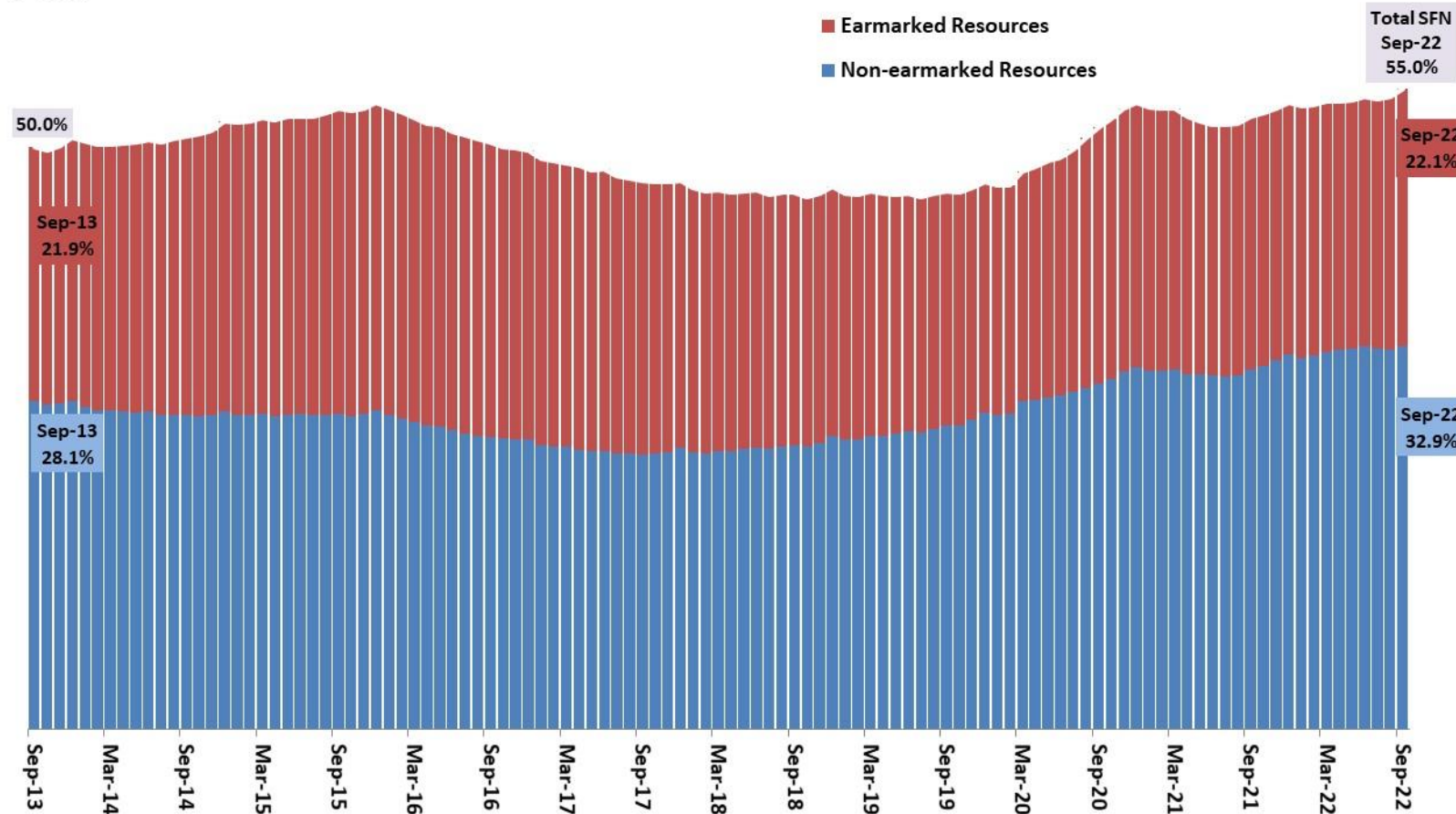


Source: IBGE and Central Bank of Brazil. *Forecast: Macroeconomic Parameters, November-2022.

Total Credit: Earmarked and Non-earmarked Resources

CREDIT MARKET

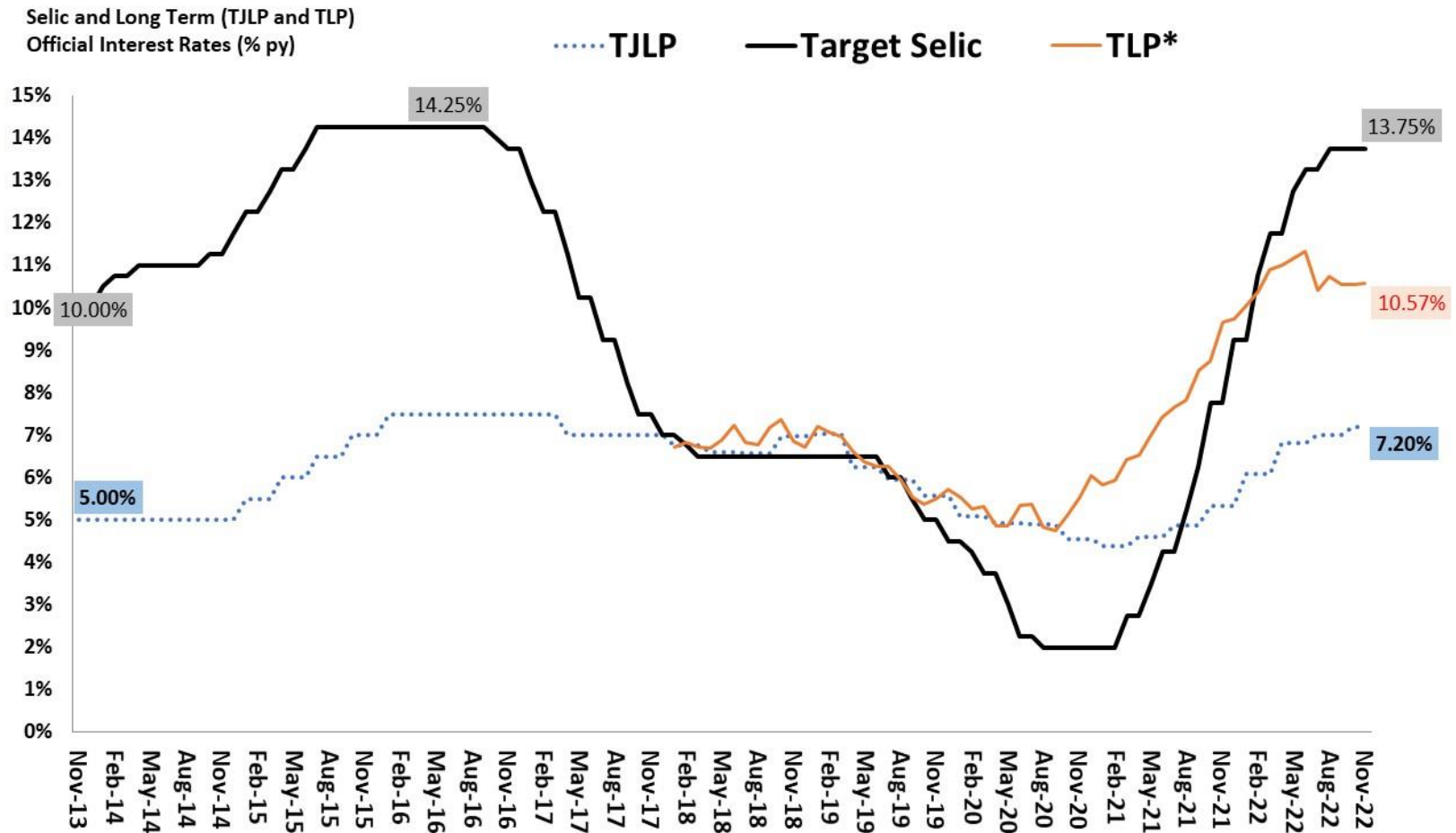
Total Outstanding Credit in National Financial System (SFN)
% of GDP



Source: Central Bank of Brazil.

Official Interest Rates Evolution (Target Selic and TJLP)

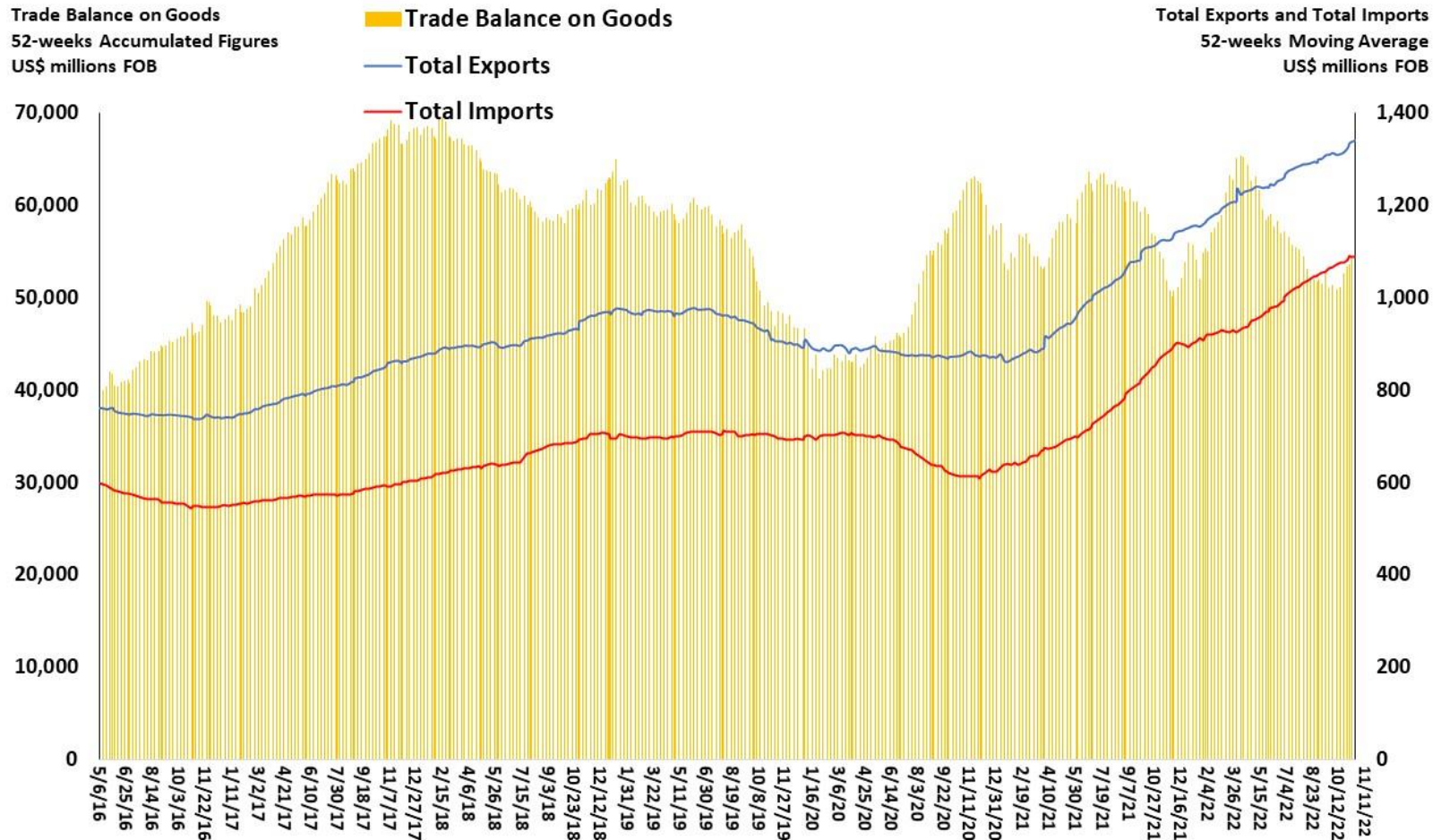
HIGHLIGHTS



Source: Central Bank of Brazil. *TLP is 3-Month average of 5-Year NTN-B bonds plus IPCA Market Expectation (Focus Survey by BCB).

Trade Balance on Goods (52 weeks daily average)

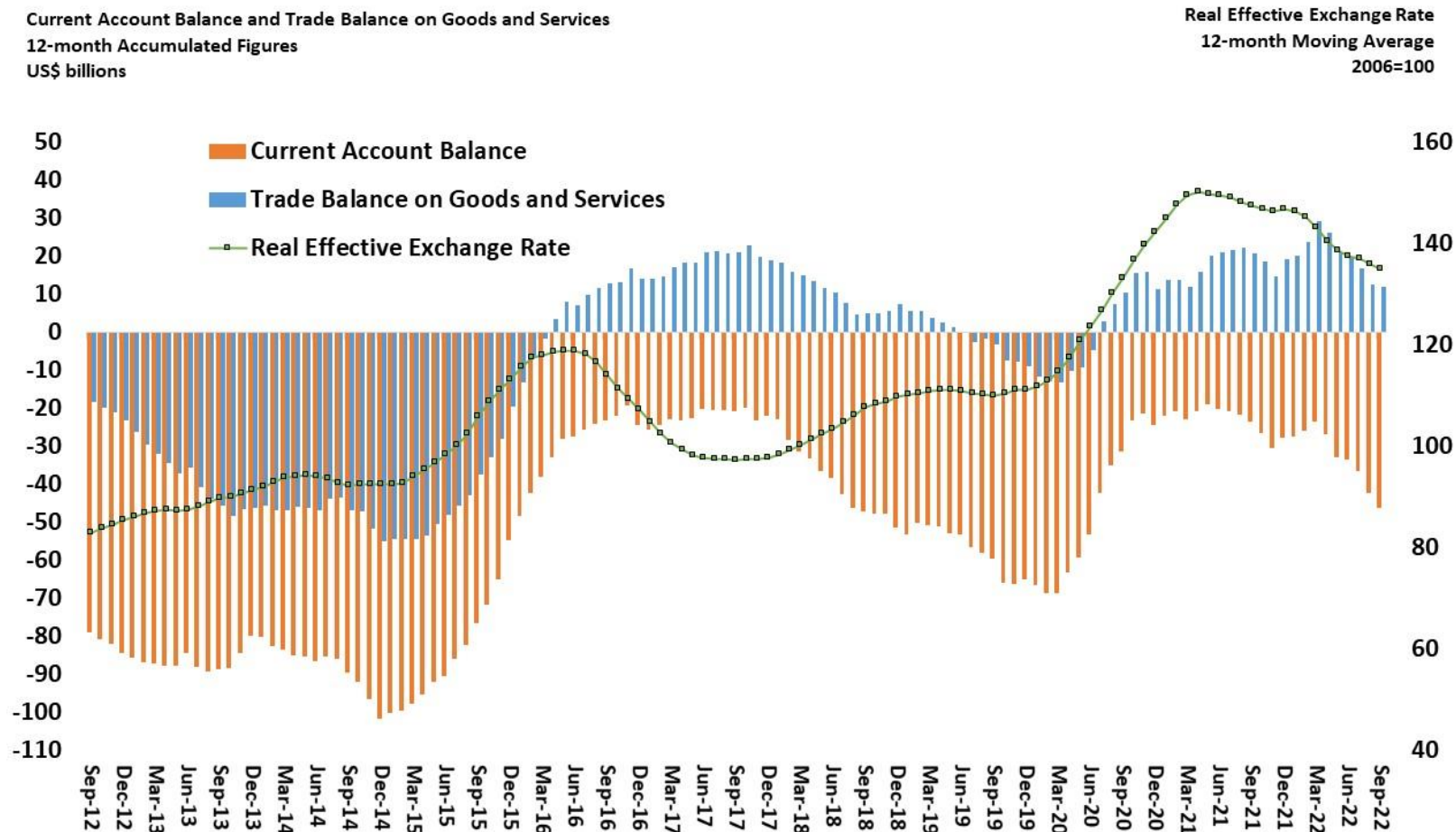
HIGHLIGHTS



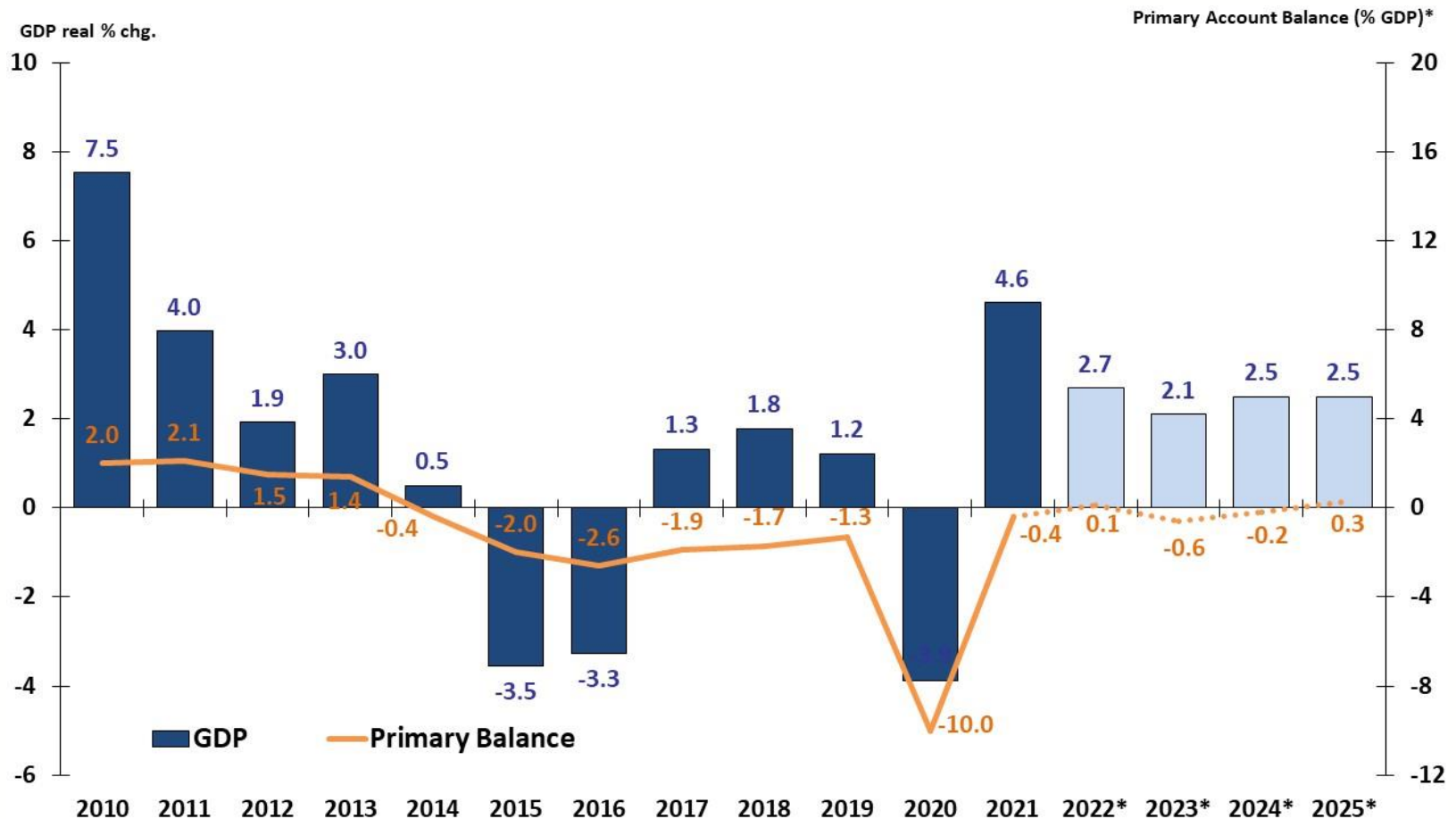
Source: SECEX.

Brazil: Real Exchange Rate and External Sector Adjustment

EXTERNAL SECTOR



Source: Central Bank of Brazil.

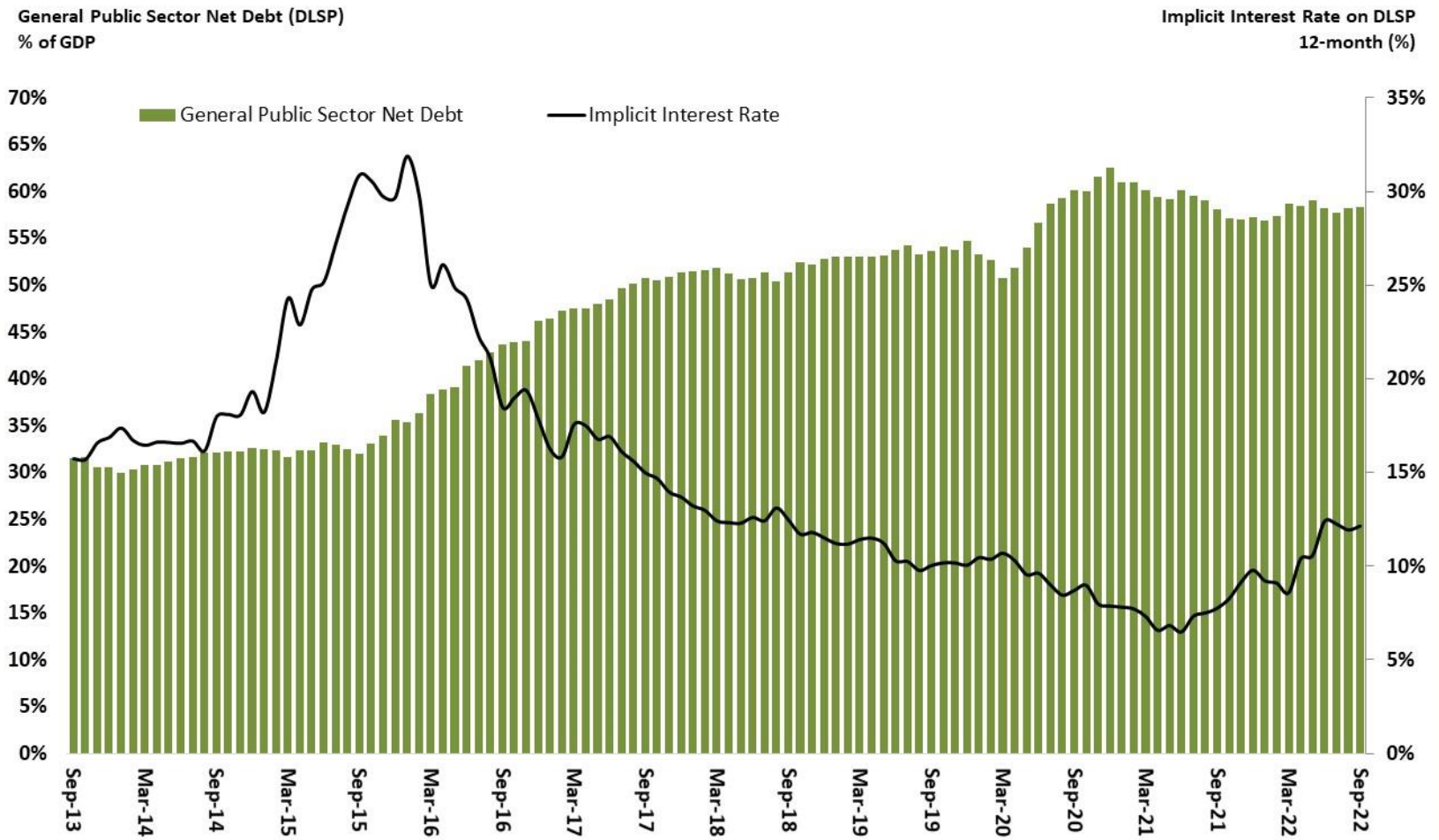


Source: IBGE, STN and Central Bank of Brazil. Primary Account Balance of Federal Government.

* Annex-Fiscal Targets of Budgetary Guidelines Bill - PLDO 2023; and Macroeconomic Projections from SPE, novembro/yyyy.

Public Sector Net Debt (as % GDP)

HIGHLIGHTS

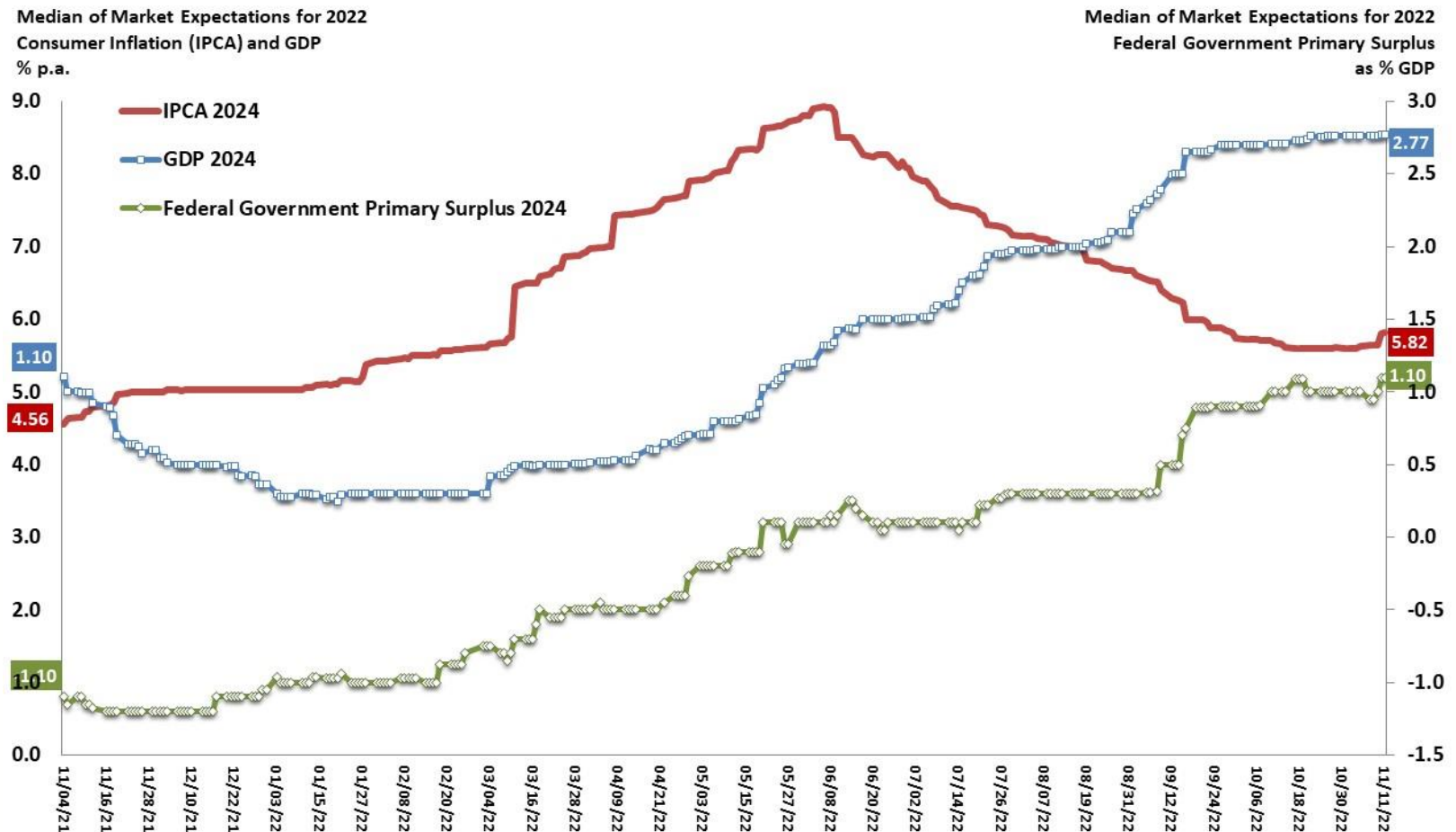


Source: Central Bank of Brazil.

Market Expectations

Market Expectations for 2022

MARKET EXPECTATIONS

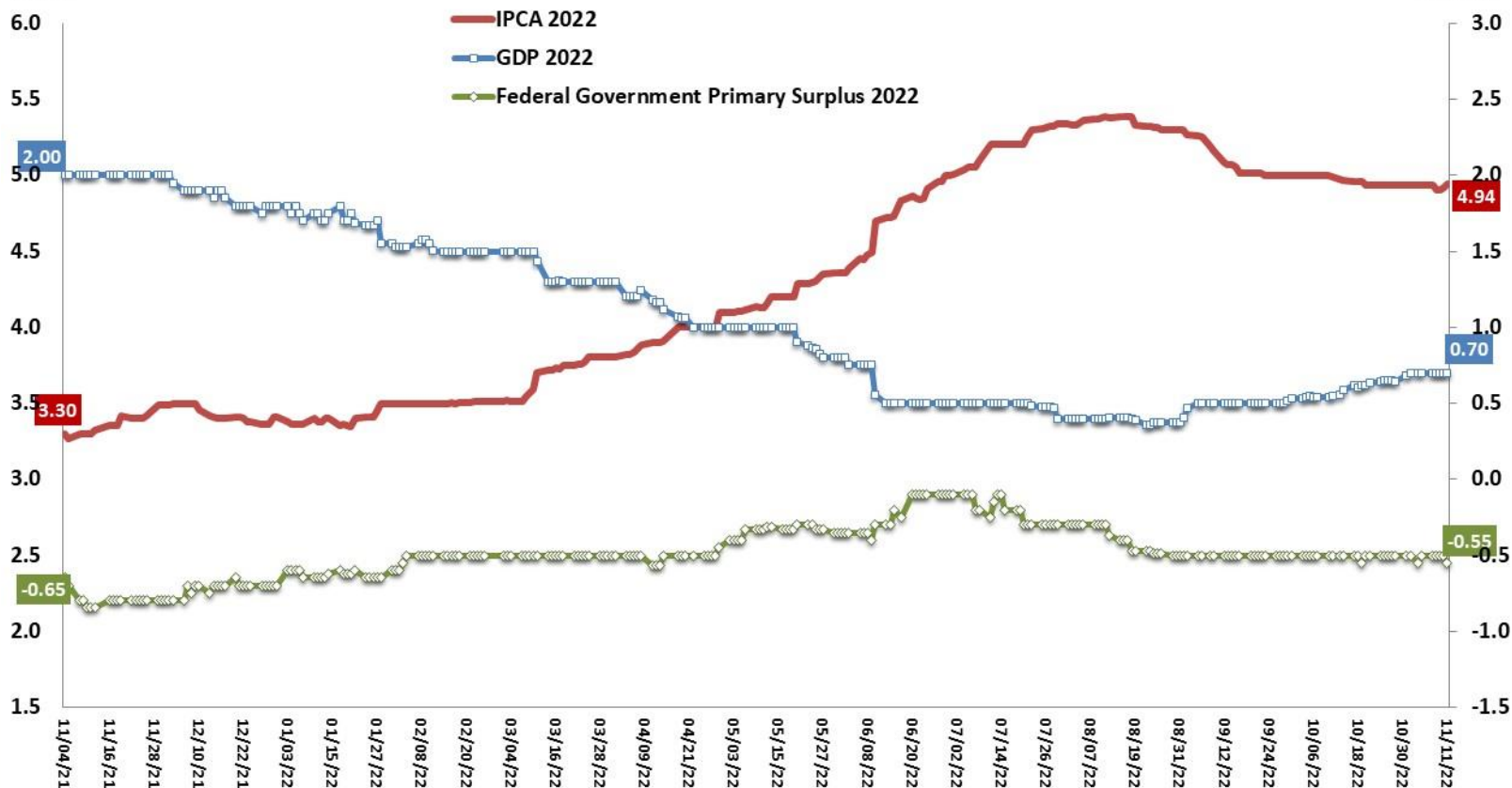


Source: Focus Survey, Central Bank of Brazil.

Market Expectations for 2023

MARKET EXPECTATIONS

Median of Market Expectations for 2023
Consumer Inflation (IPCA) and GDP
% p.a.



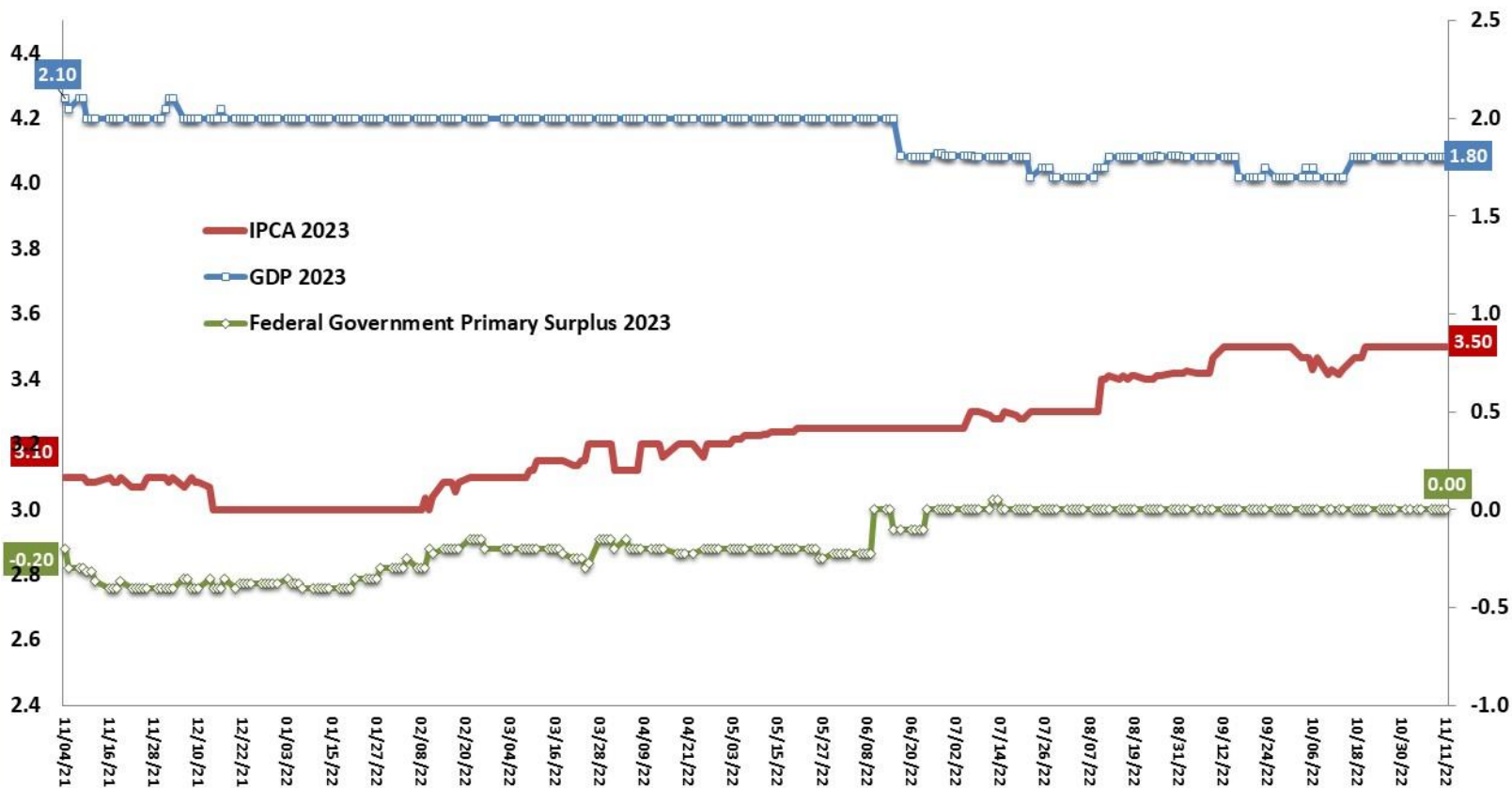
Source: Focus Survey, Central Bank of Brazil.

Market Expectations for 2024

MARKET EXPECTATIONS

Median of Market Expectations for 2024
Consumer Inflation (IPCA) and GDP
% p.a.

Median of Market Expectations for 2024
Federal Government Primary Surplus
as % GDP

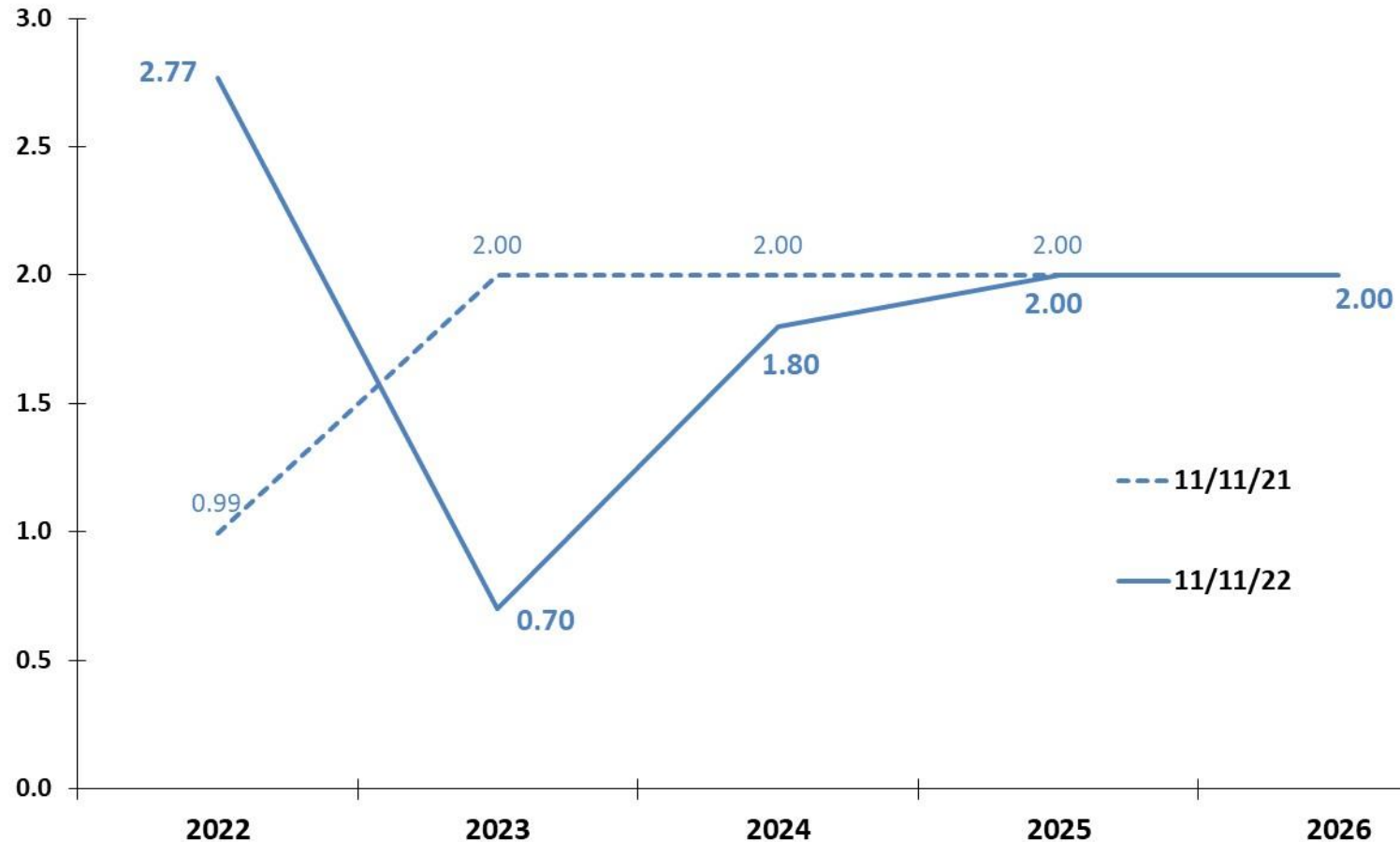


Source: Focus Survey, Central Bank of Brazil.

GDP: Median of Market Expectations

MARKET EXPECTATIONS

Real GDP chg. (%) - Median of Market Expectations

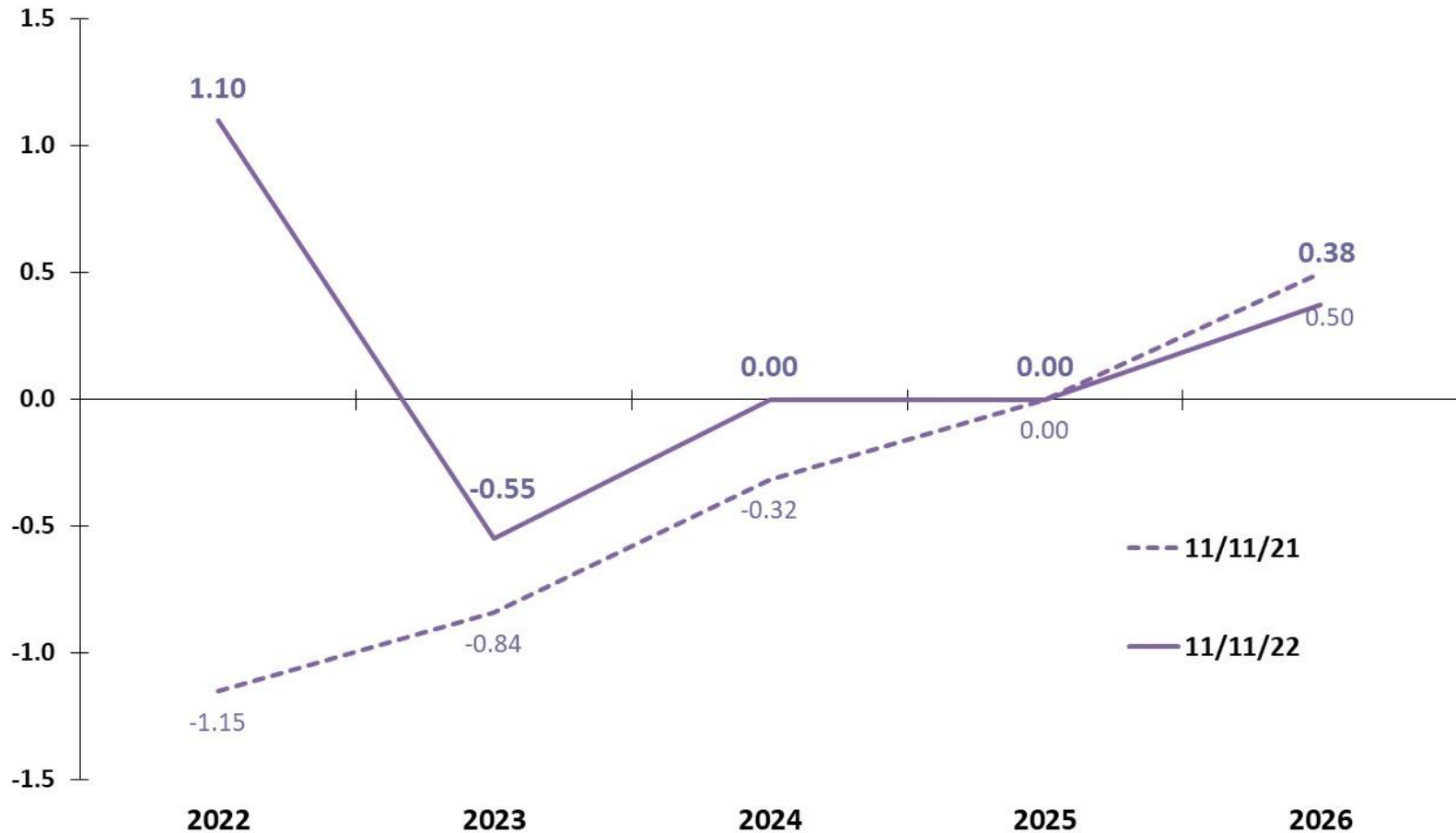


Source: Focus Survey, Central Bank of Brazil.

Primary Surplus: Median of Market Expectations

MARKET EXPECTATIONS

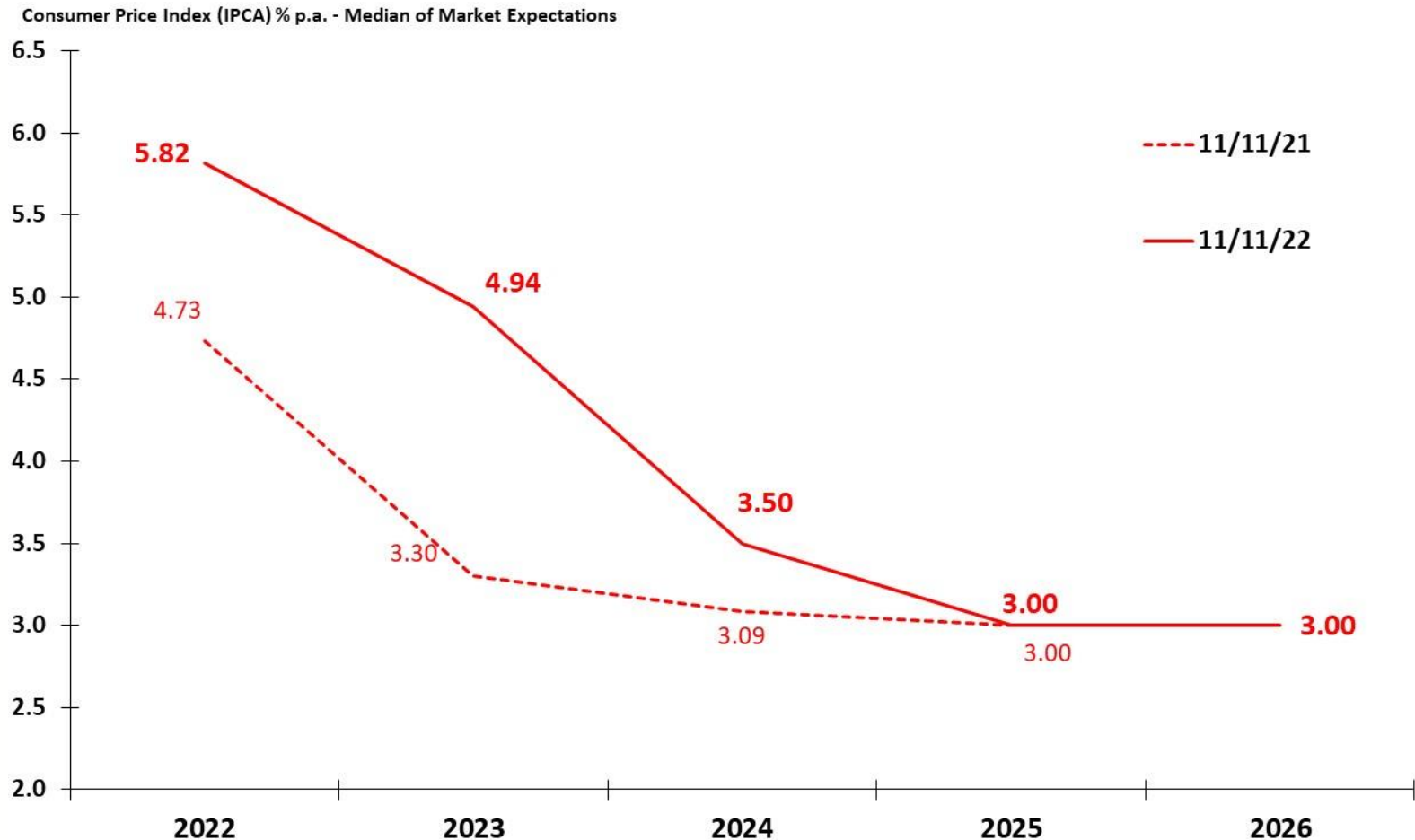
Federal Government Primary Surplus (%) - Median of Market Expectations



Source: Focus Survey, Central Bank of Brazil.

Consumer Price Index (IPCA): Median of Market Expectations

MARKET EXPECTATIONS

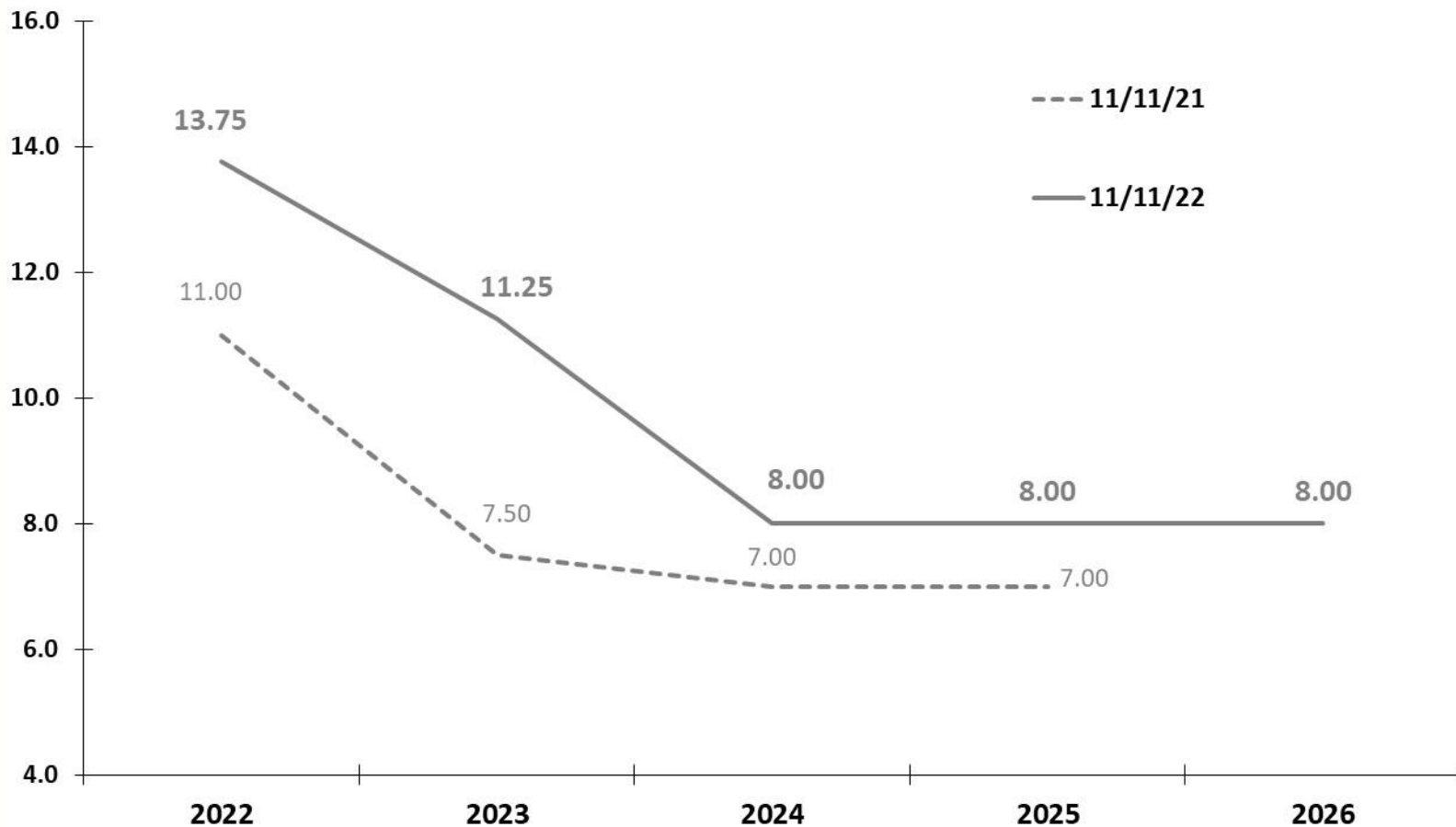


Source: Focus Survey, Central Bank of Brazil.

Main Interest Rate (Selic target): Median of Market Expectations

MARKET EXPECTATIONS

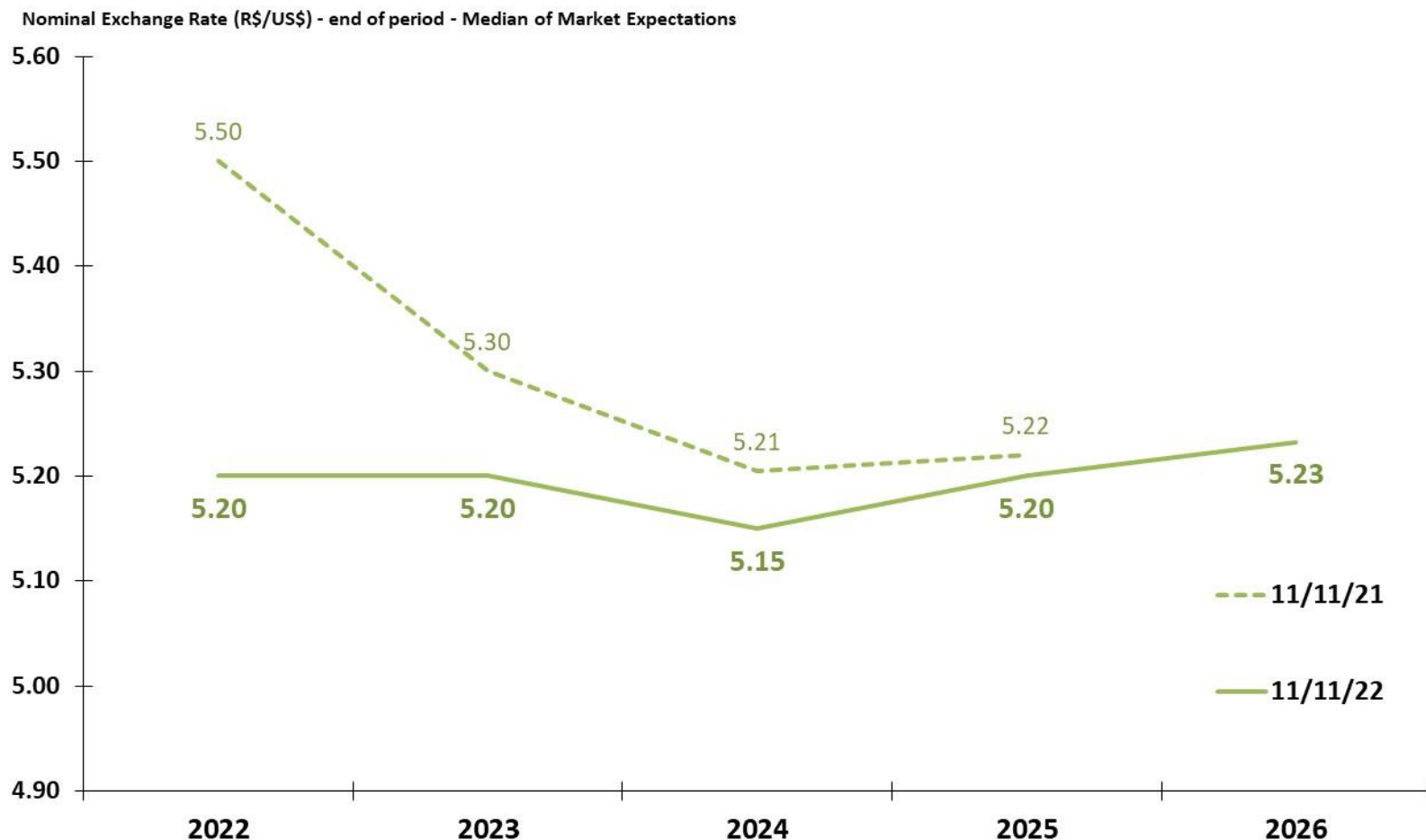
Main Interest Rate (Selic target) - % p.a. end of period - Median of Market Expectations



Source: Focus Survey, Central Bank of Brazil.

Nominal Exchange Rate: Median of Market Expectations

MARKET EXPECTATIONS



Source: Focus Survey, Central Bank of Brazil.

Economic activity

GDP and Quarterly Economic Activity

ECONOMIC ACTIVITY

												BCB/Focus: 11/11/22		
Gross Domestic Product (IBGE)	Q2 2022													
	% change	2020	2021	Q1 2022 / Q1 2021	Q2 2022 / Q2 2021	Q1 2022 / Q4 2021 (seasonally adjusted)	Q2 2022 / Q1 2022 (seasonally adjusted)	Year-To-Date	Q1 2022 accum. in 4-quarters	Q2 2022 accum. in 4-quarters	carry-over 2022	2022	2023	2024
Agriculture		3.8%	-0.2%	-8.0%	-2.5%	-0.9%	0.5%	-5.4%	-4.8%	-5.5%	-1.7%	-0.25%	3.00%	2.50%
Industry		-3.4%	4.5%	-1.5%	1.9%	0.6%	2.2%	0.2%	3.3%	0.1%	1.3%	1.40%	0.10%	1.70%
Services		-4.3%	4.7%	3.7%	4.5%	1.1%	1.3%	4.1%	5.8%	4.3%	3.4%	3.50%	0.73%	1.70%
GDP (market prices)		-3.9%	4.6%	1.7%	3.2%	1.1%	1.2%	2.5%	4.7%	2.6%	2.4%	2.77%	0.70%	1.80%
Household Expenditure		-5.4%	3.6%	2.2%	5.3%	0.5%	2.6%	3.7%	4.6%	3.4%	3.7%	0.80%	1.20%	2.00%
Government Expenditure		-4.5%	2.0%	3.3%	0.7%	-0.1%	-0.9%	2.0%	3.8%	2.5%	0.7%	1.40%	0.70%	1.30%
Gross Fixed Capital Formation		-0.5%	17.2%	-7.2%	1.5%	-3.0%	4.8%	-2.9%	10.1%	3.5%	-0.7%	-1.55%	1.00%	3.10%
Exports of Goods and Services		-1.8%	5.8%	8.1%	-4.8%	5.7%	-2.5%	0.9%	7.4%	2.3%	1.6%	2.95%	2.70%	3.00%
Imports of Goods and Services (-)		-9.8%	12.4%	-11.0%	-1.1%	-4.0%	7.6%	-6.2%	7.0%	2.0%	-1.6%	1.60%	3.30%	4.50%
Economic Activity Indicators (BCB and IBGE)	Q3 2022													
	% change	2020	2021	Q2 2022 / Q2 2021	Q3 2022 / Q3 2021	Q2 2022 / Q1 2022 (seasonally adjusted)	Q3 2022 / Q2 2022 (seasonally adjusted)	Year-To-Date	Q2 2022 accum. in 4-quarters	Q3 2022 accum. in 4-quarters	carry-over 2022			
IBC-Br Economic Activity Index*		-4.0%	4.5%	2.9%	4.3%	0.7%	1.4%	1.6%	2.1%	2.3%	2.9%			
LSPA: Grain Harvest		4.8%	-0.1%	-0.1%	0.3%	-0.2%	4.7%	4.4%	-0.1%	0.3%	2.0%			
PIM: Industrial Production		-4.5%	3.9%	-7.8%	-0.1%	0.5%	0.8%	-4.6%	0.9%	-3.6%	-0.6%			
PMC: Amplified Retail Sales		-1.4%	4.5%	1.4%	-0.8%	1.2%	-1.0%	-1.4%	4.5%	-0.8%	-0.7%			
PMS: Volume of Services		-7.8%	10.9%	9.5%	8.3%	1.8%	1.5%	9.1%	13.6%	10.5%	8.0%			

LSPA: Systematic Survey of Agricultural Production (IBGE)

PIM: Monthly Survey of Industry (IBGE)

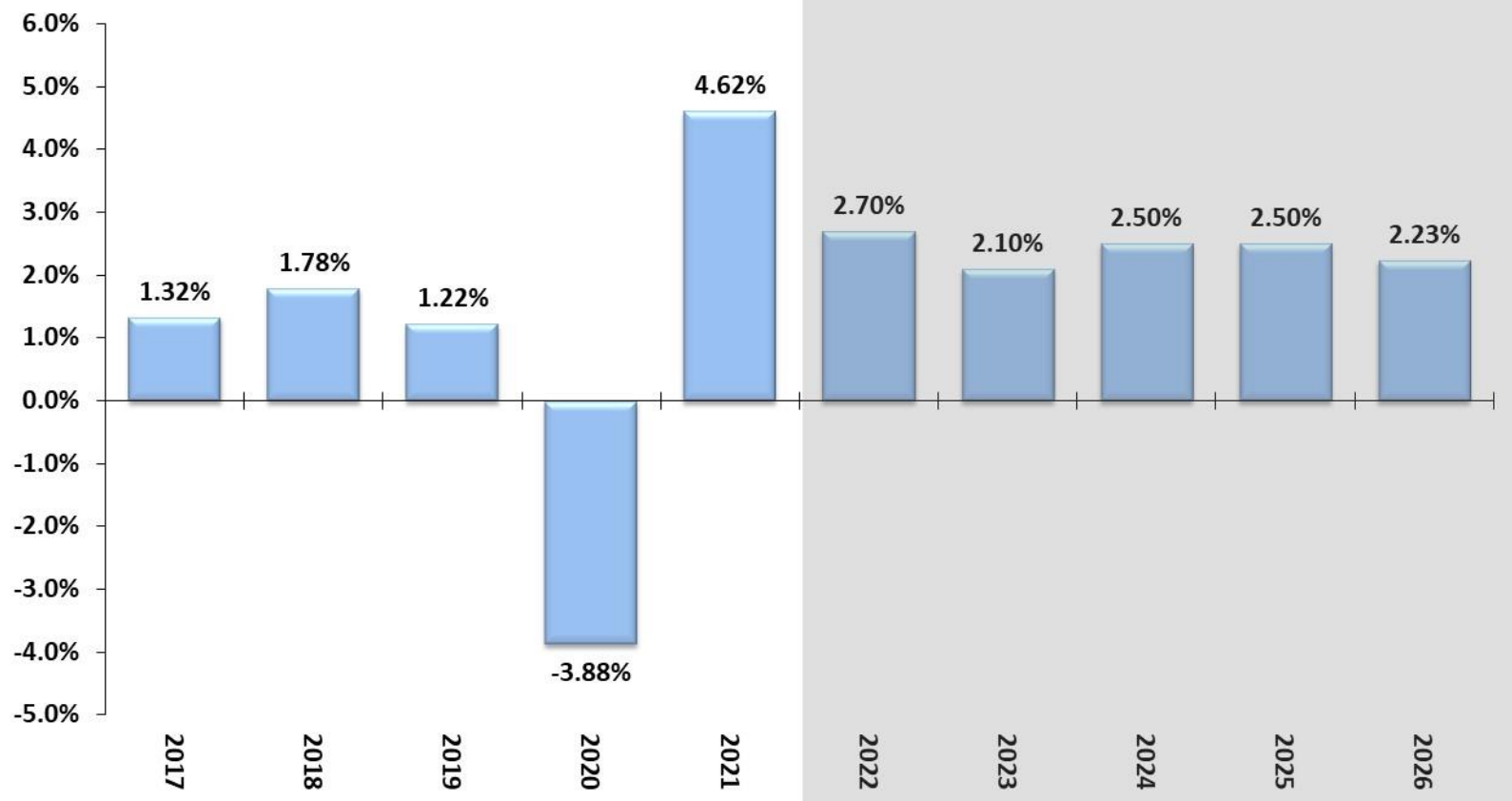
PMC: Monthly Survey of Trade (IBGE)

PMS: Monthly Survey of Services (IBGE)

Macroeconomic Parameters					
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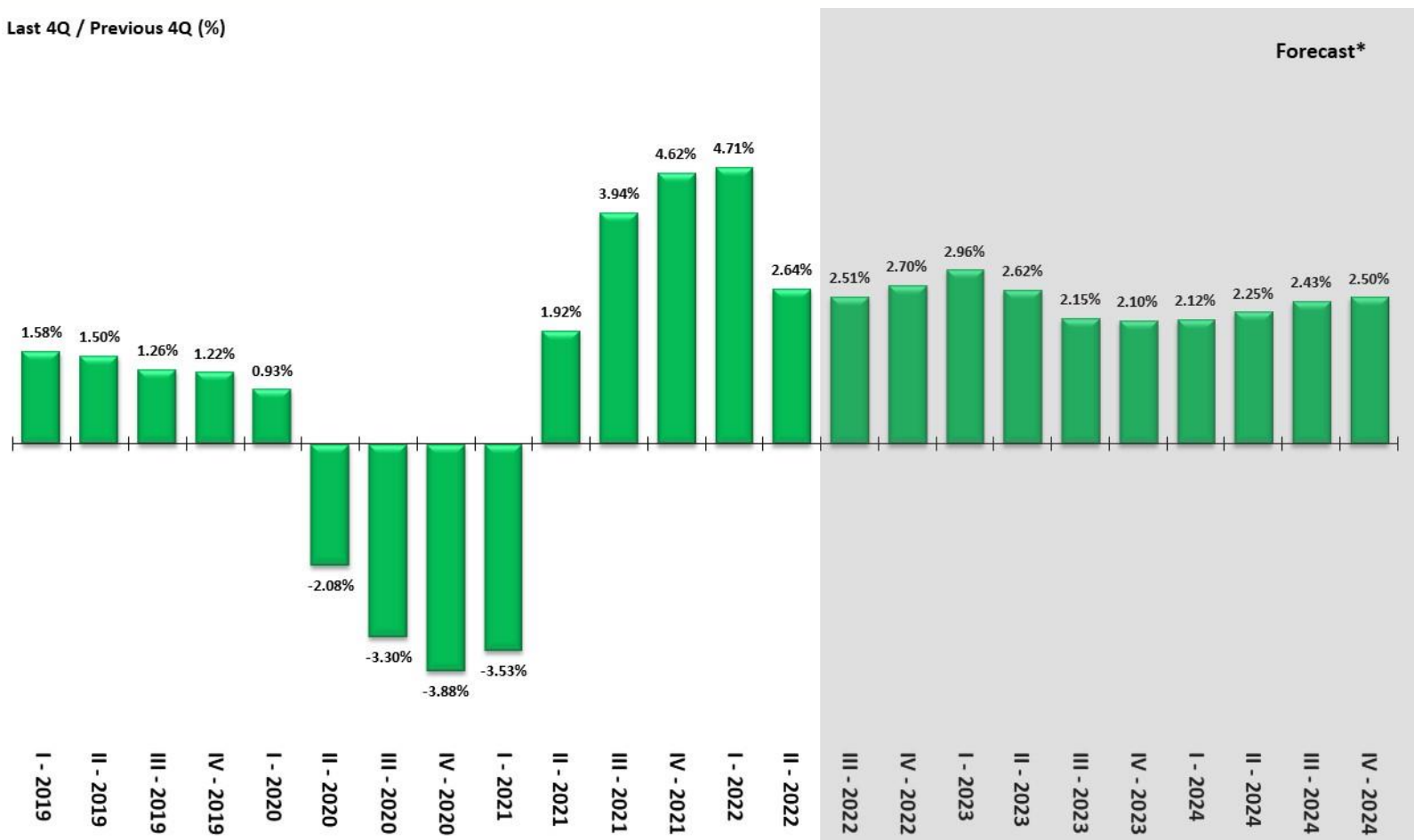
Source: SPE/ME. Macroeconomic Parameters, November-2022.

Last 4Q / Previous 4Q (%)



Source: IBGE, Quarterly National Accounts Series *Forecast: Macroeconomic Parameters, November-2022.

Last 4Q / Previous 4Q (%)

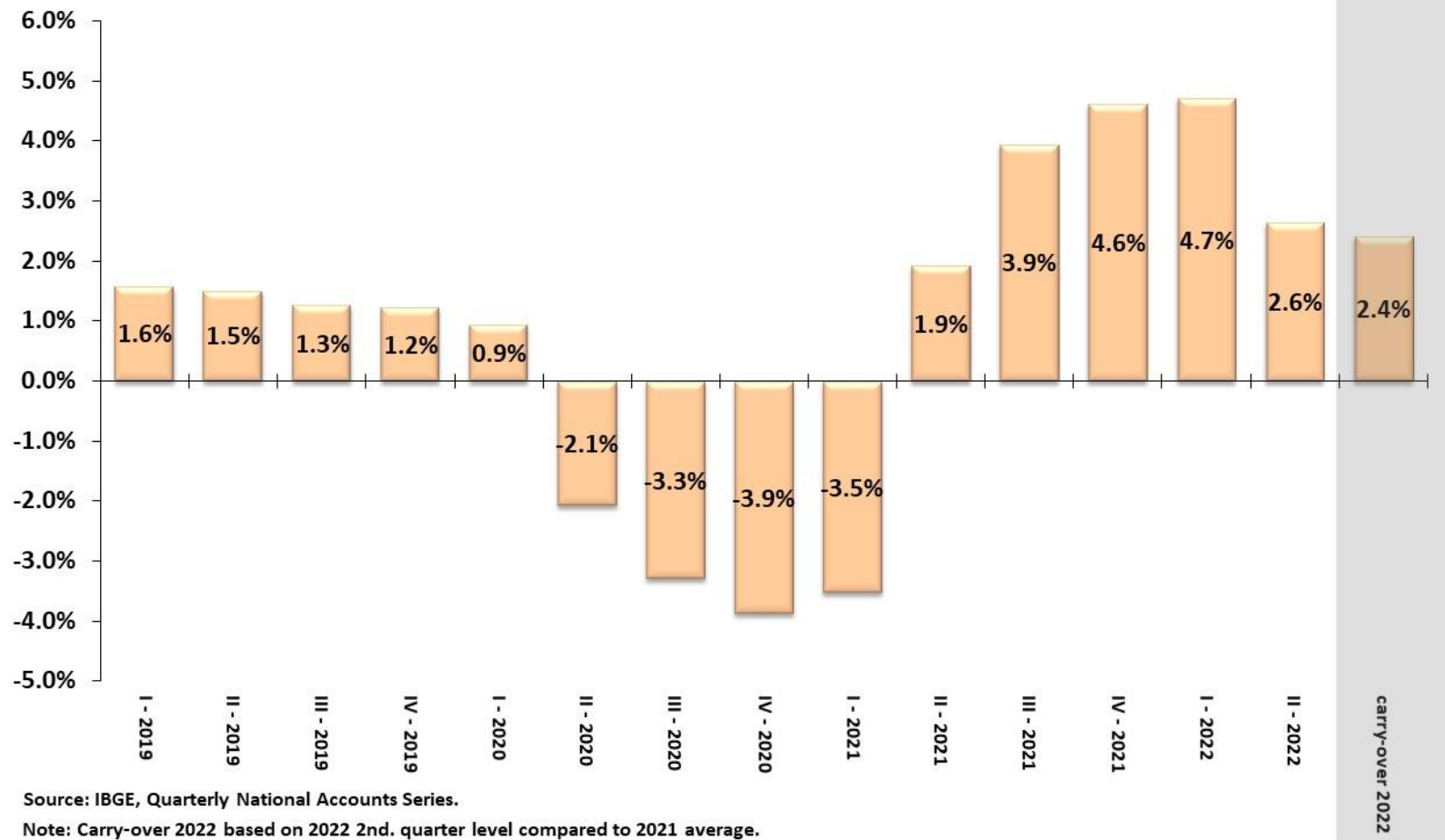


Source: IBGE, Quarterly National Accounts Series *Forecast: Macroeconomic Parameters, November-2022.

Quarterly GDP

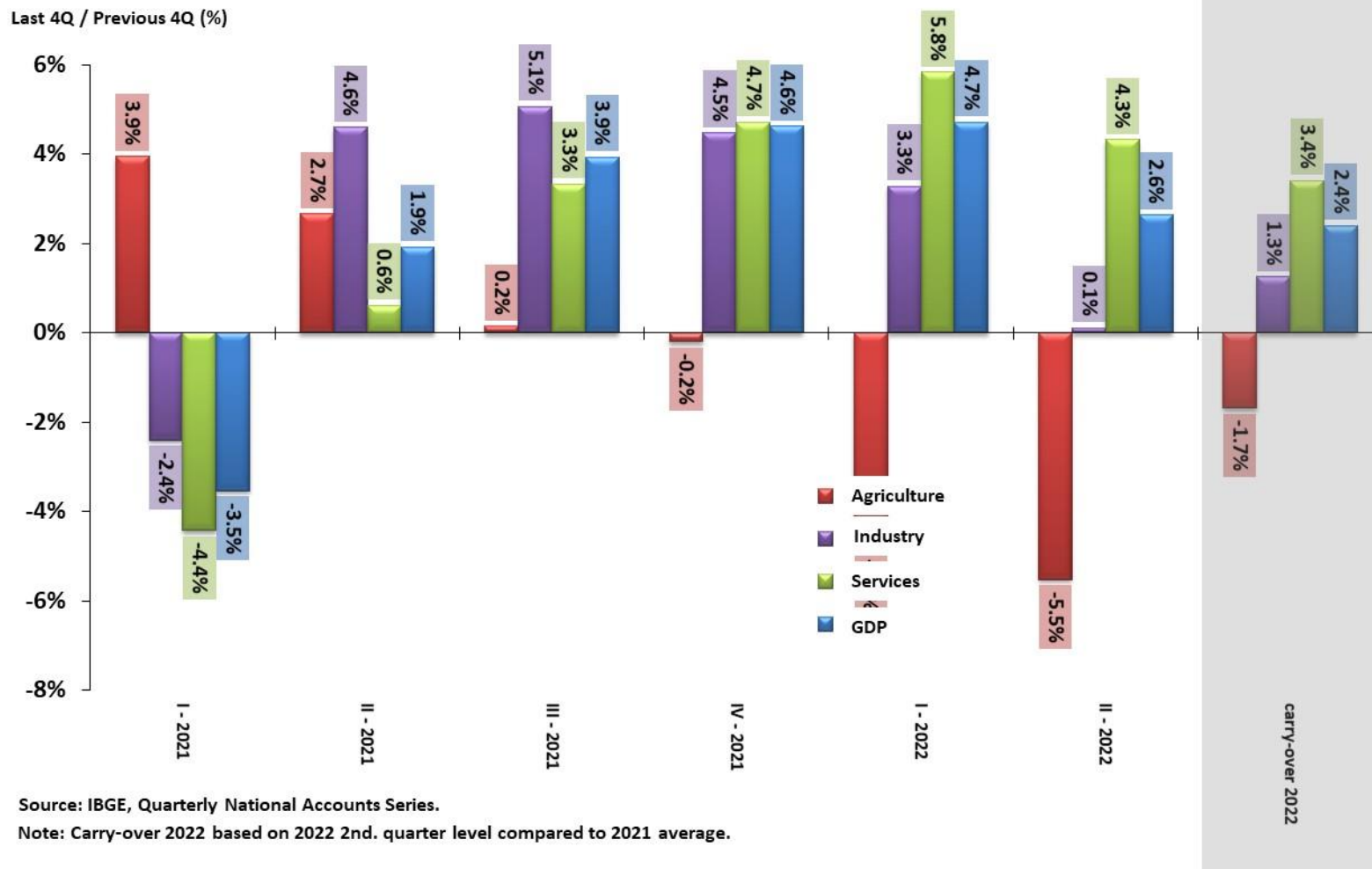
ECONOMIC ACTIVITY

Last 4Q / Previous 4Q (%)



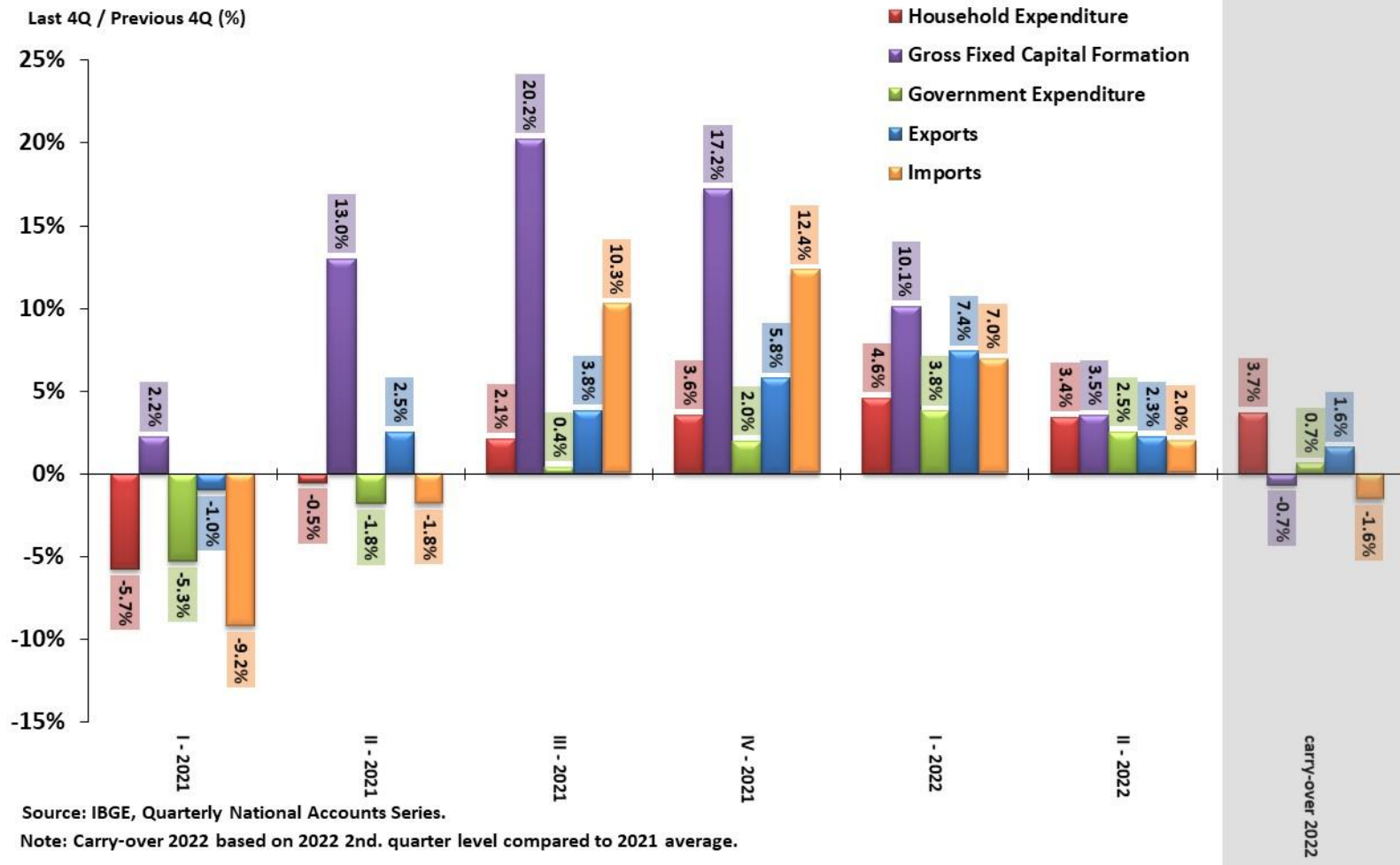
Quarterly GDP by Activity Sector

ECONOMIC ACTIVITY



Quarterly GDP by Expenditure

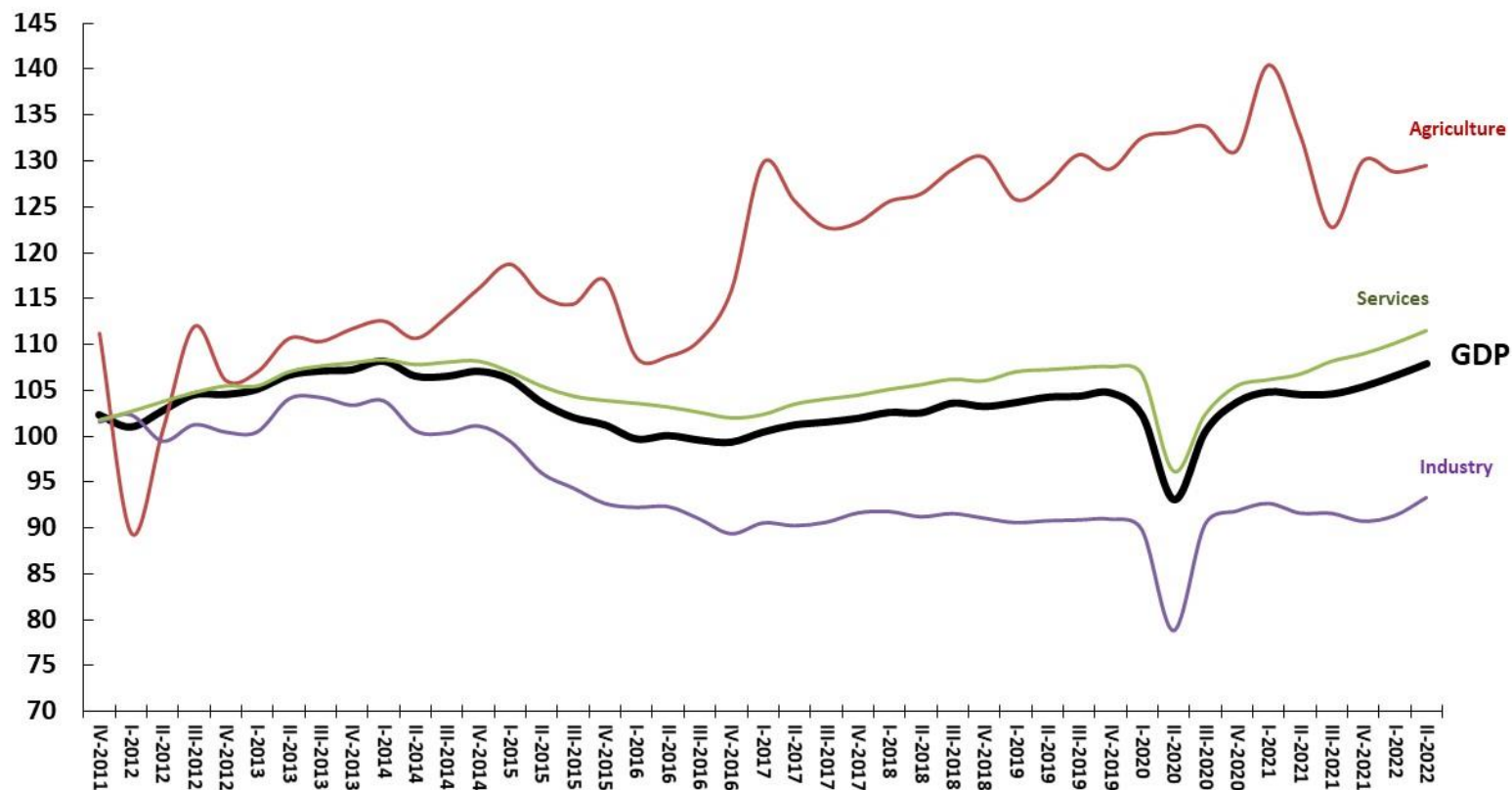
ECONOMIC ACTIVITY



Quarterly GDP by Activity Sector

ECONOMIC ACTIVITY

GDP and Economic Sectors Quarterly Volume Indicator
Chained Series of the Seasonally Adjusted Index: 2007=100

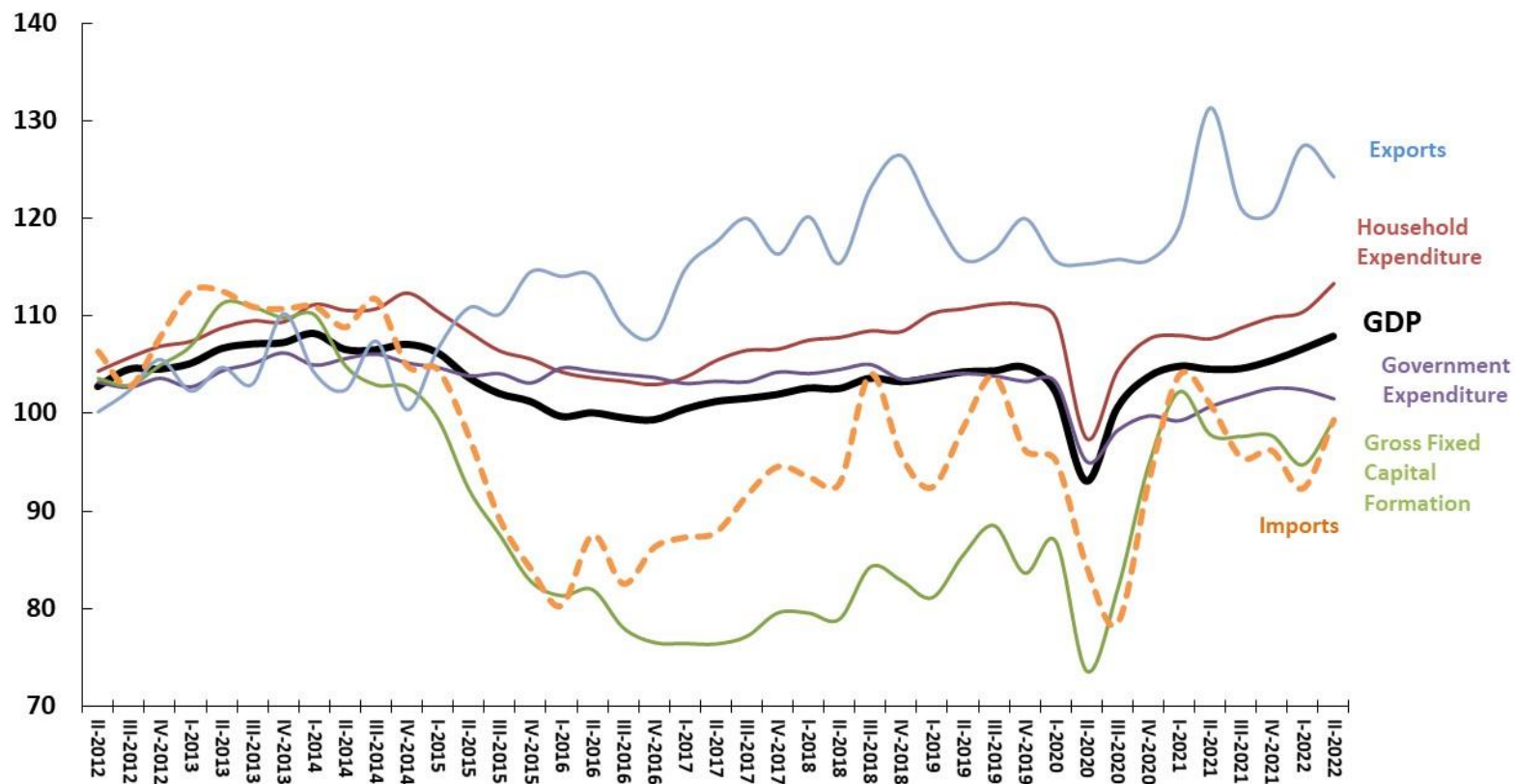


Source: IBGE, Quarterly National Accounts Series.

Quarterly GDP by Expenditure

ECONOMIC ACTIVITY

GDP and Demand Categories Quarterly Volume Indicator
Chained Series of the Seasonally Adjusted Index: 2007=100

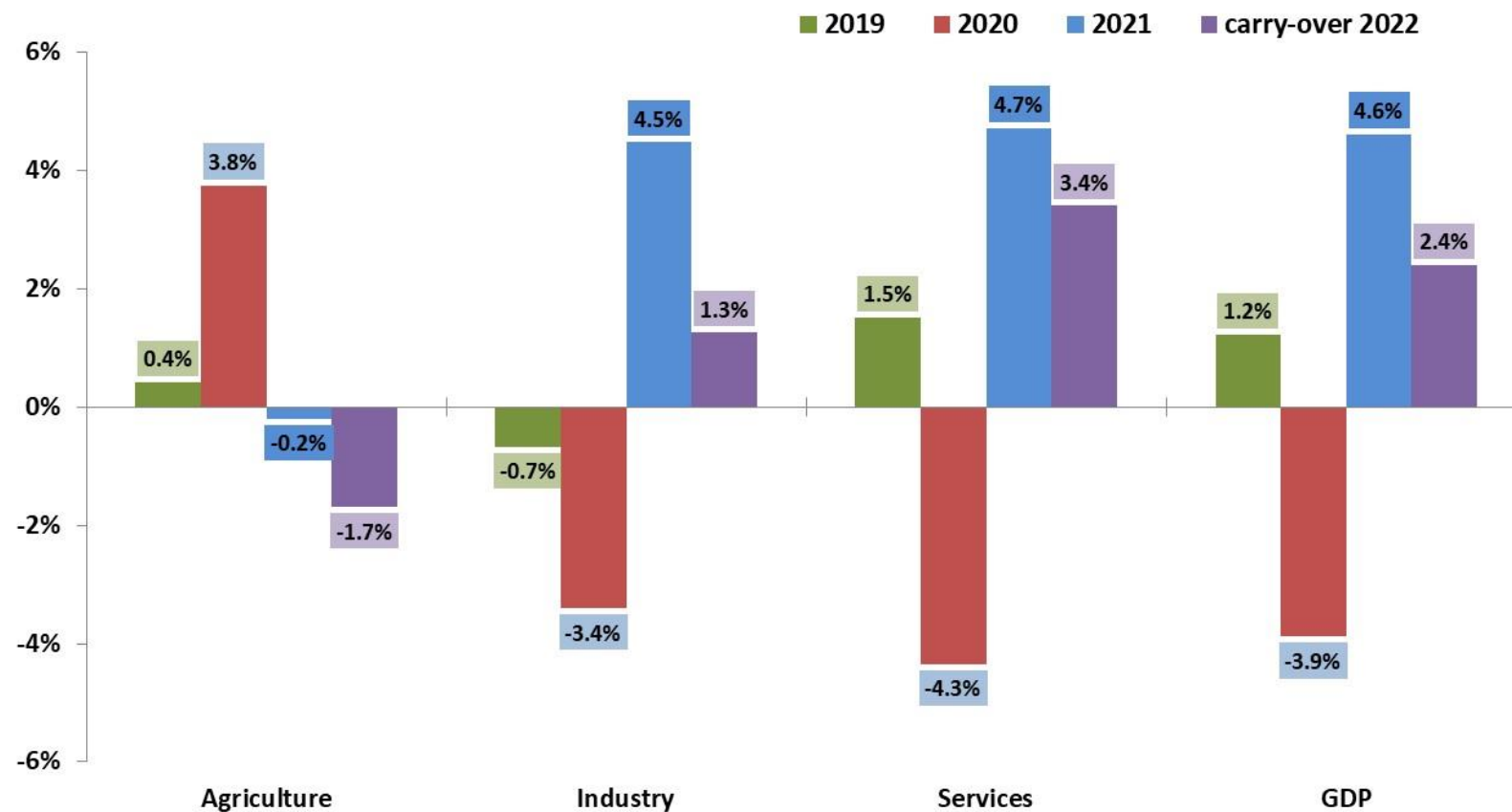


Source: IBGE, Quarterly National Accounts Series.

Annual GDP Real Growth by Activity Sector

ECONOMIC ACTIVITY

Annual % of Change



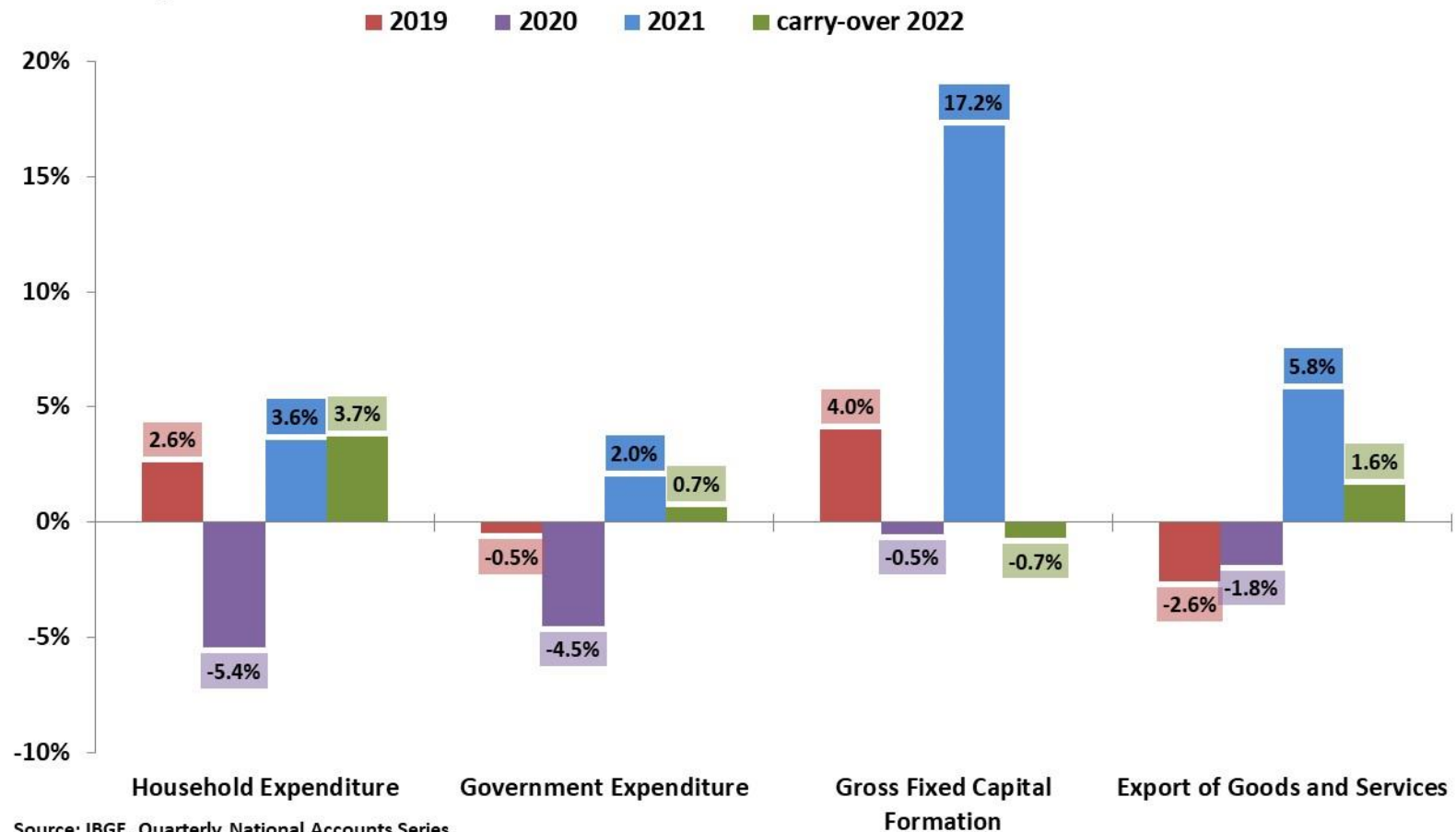
Source: IBGE, Quarterly National Accounts Series.

Note: Carry-over 2022 based on 2022 2nd. quarter level compared to 2021 average.

Annual GDP Real Growth by Expenditure

ECONOMIC ACTIVITY

Annual % of Change

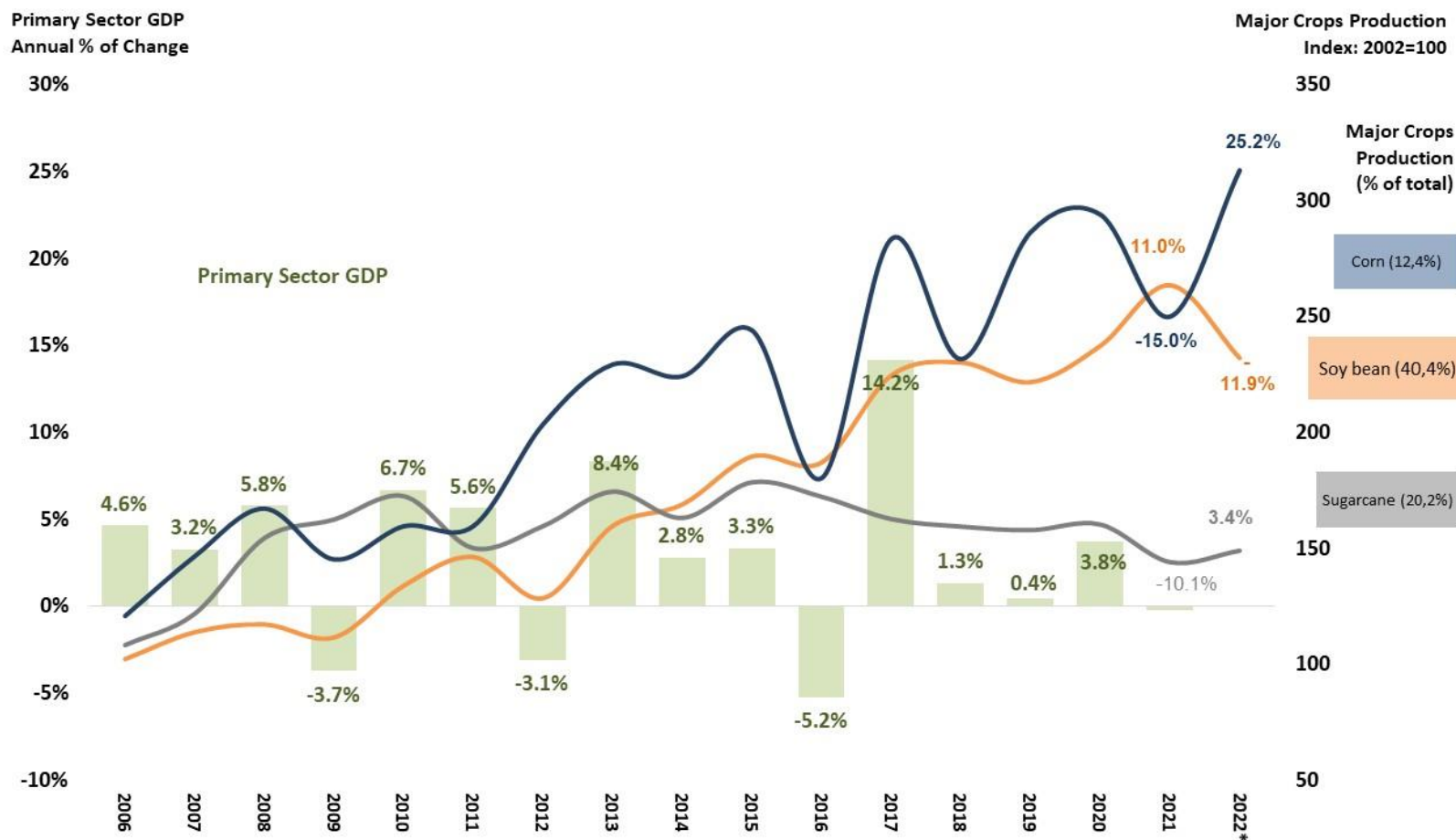


Source: IBGE, Quarterly National Accounts Series.

Note: Carry-over 2022 based on 2022 2nd. quarter level compared to 2021 average.

Primary Sector Performance by Major Crops

ECONOMIC ACTIVITY



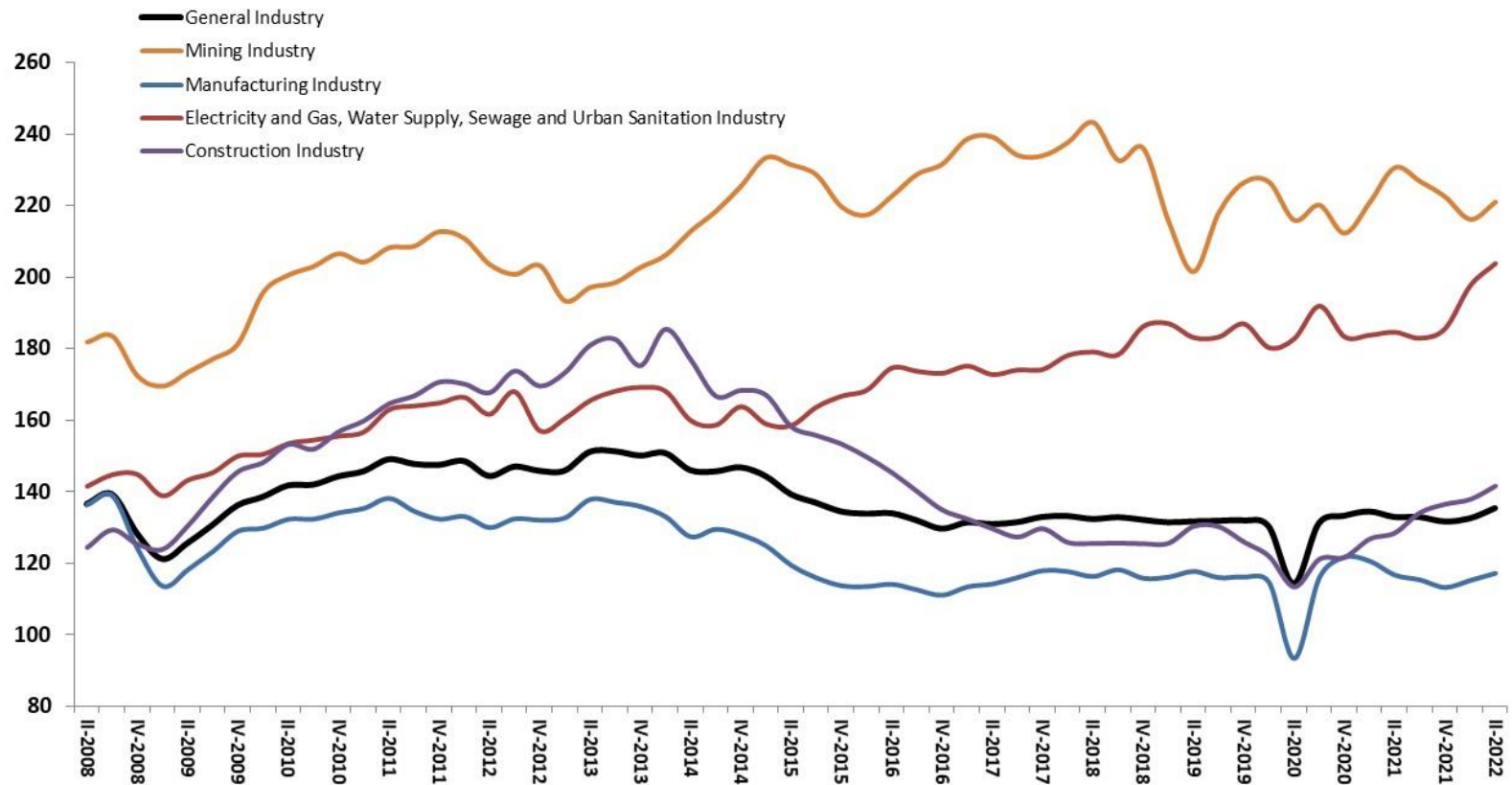
Source: IBGE, Systematic Survey of Agricultural Production (LSPA) - October/2022.

Industry Performance by Subsectors

ECONOMIC ACTIVITY

Industrial Production Indicators

Chained Series of the Seasonally Adjusted Index: 1995=100



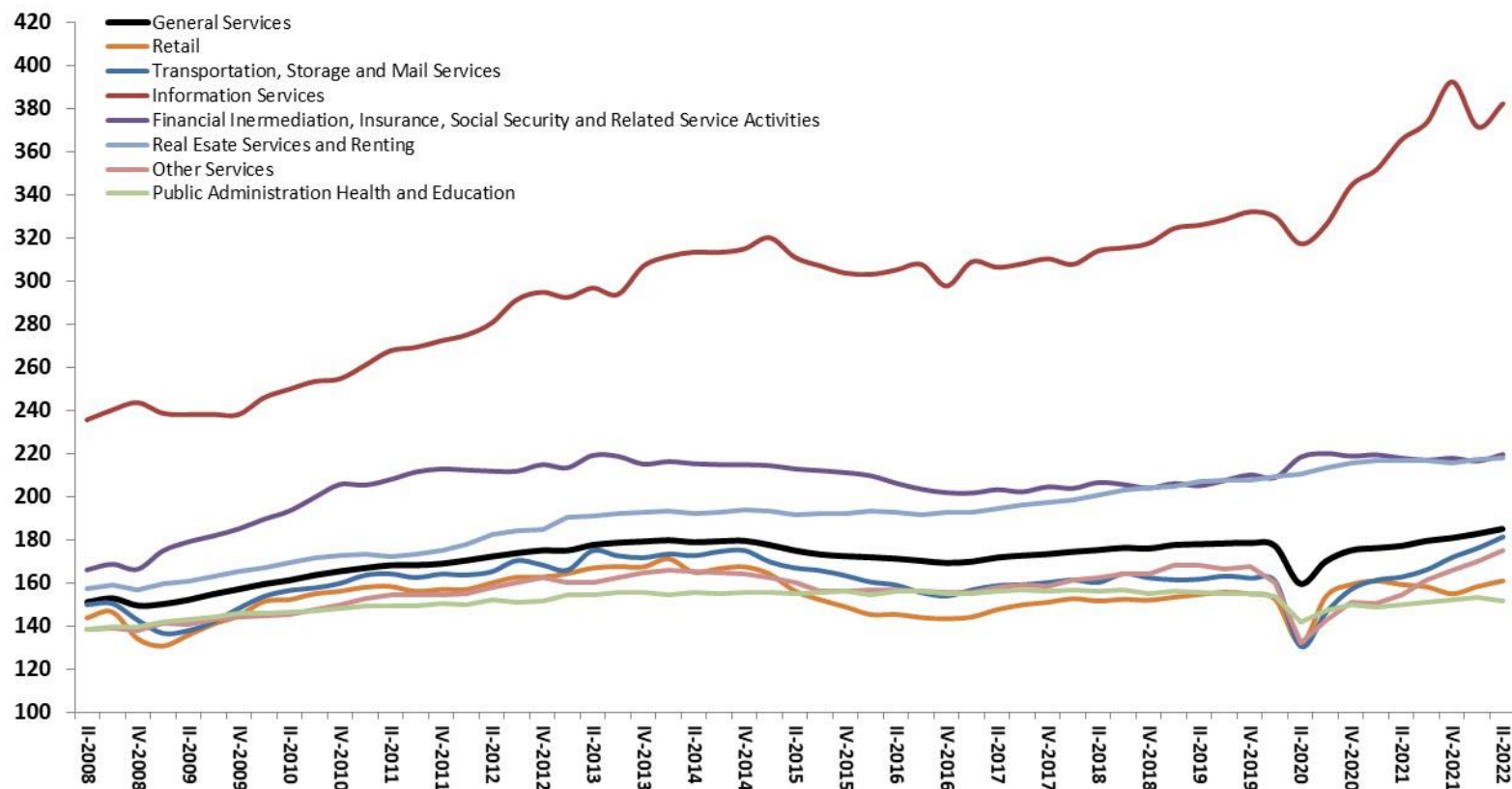
Source: IBGE, Quarterly National Accounts Series.

Services Performance by Subsectors

ECONOMIC ACTIVITY

Services Provision Indicators

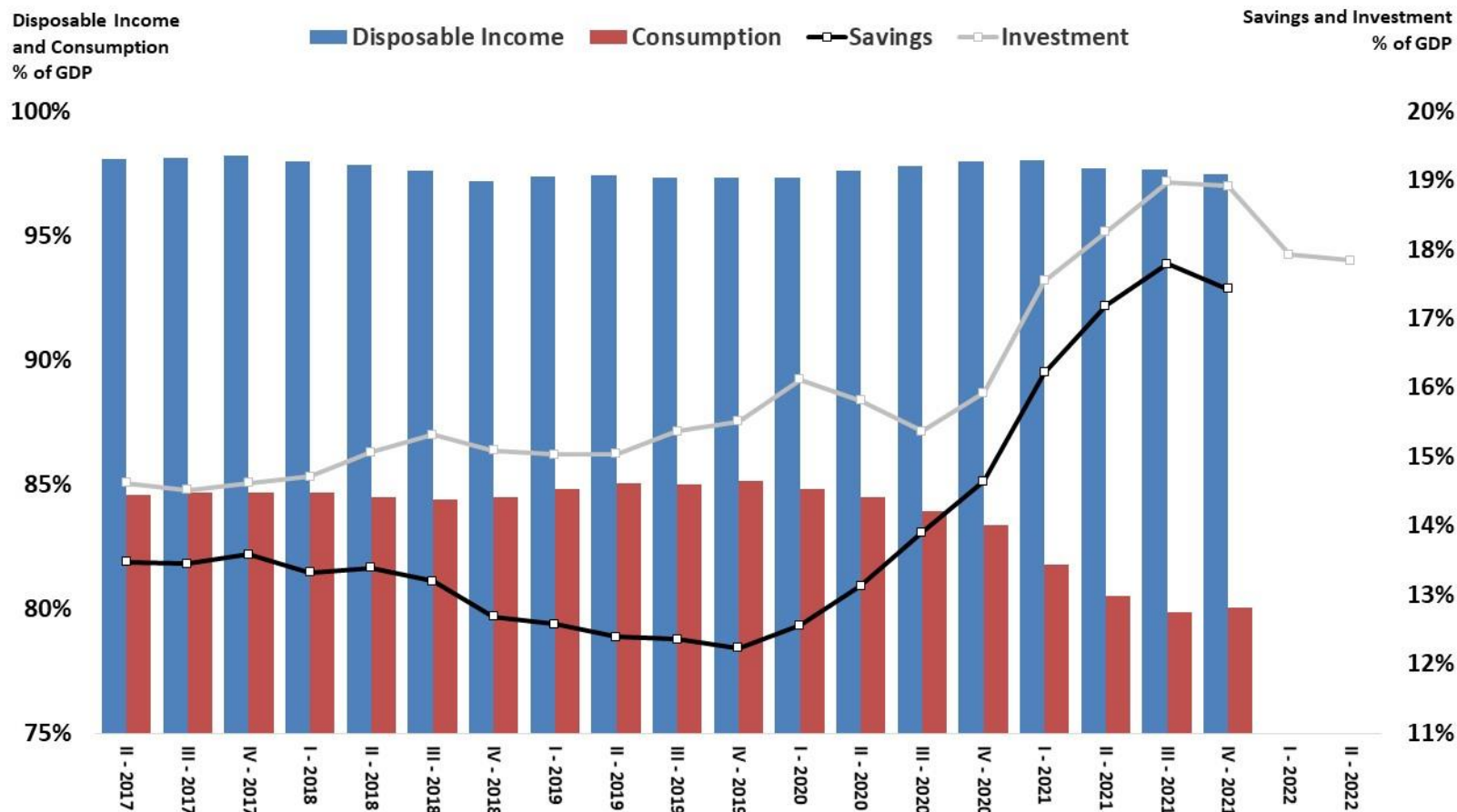
Chained Series of the Seasonally Adjusted Index: 1995=100



Source: IBGE, Quarterly National Accounts Series.

Disposable Income, Consumption, Savings and Investment

ECONOMIC ACTIVITY



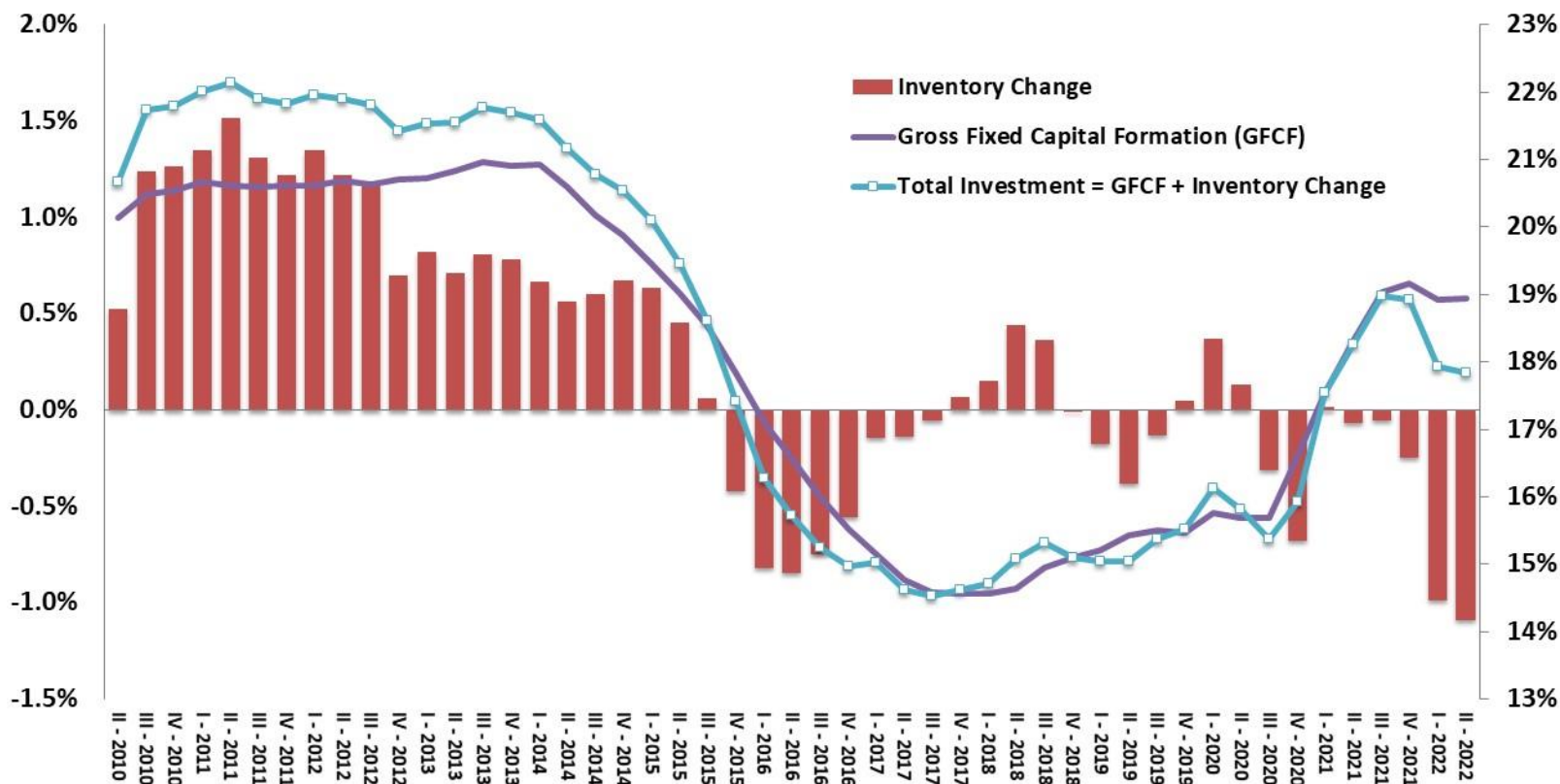
Source: IBGE, Quarterly National Accounts Series. Values accumulated in 4 quarters.

Inventory Change and Gross Fixed Capital Formation

ECONOMIC ACTIVITY

Inventory Change (% of GDP)
Accumulated in 4 quarters

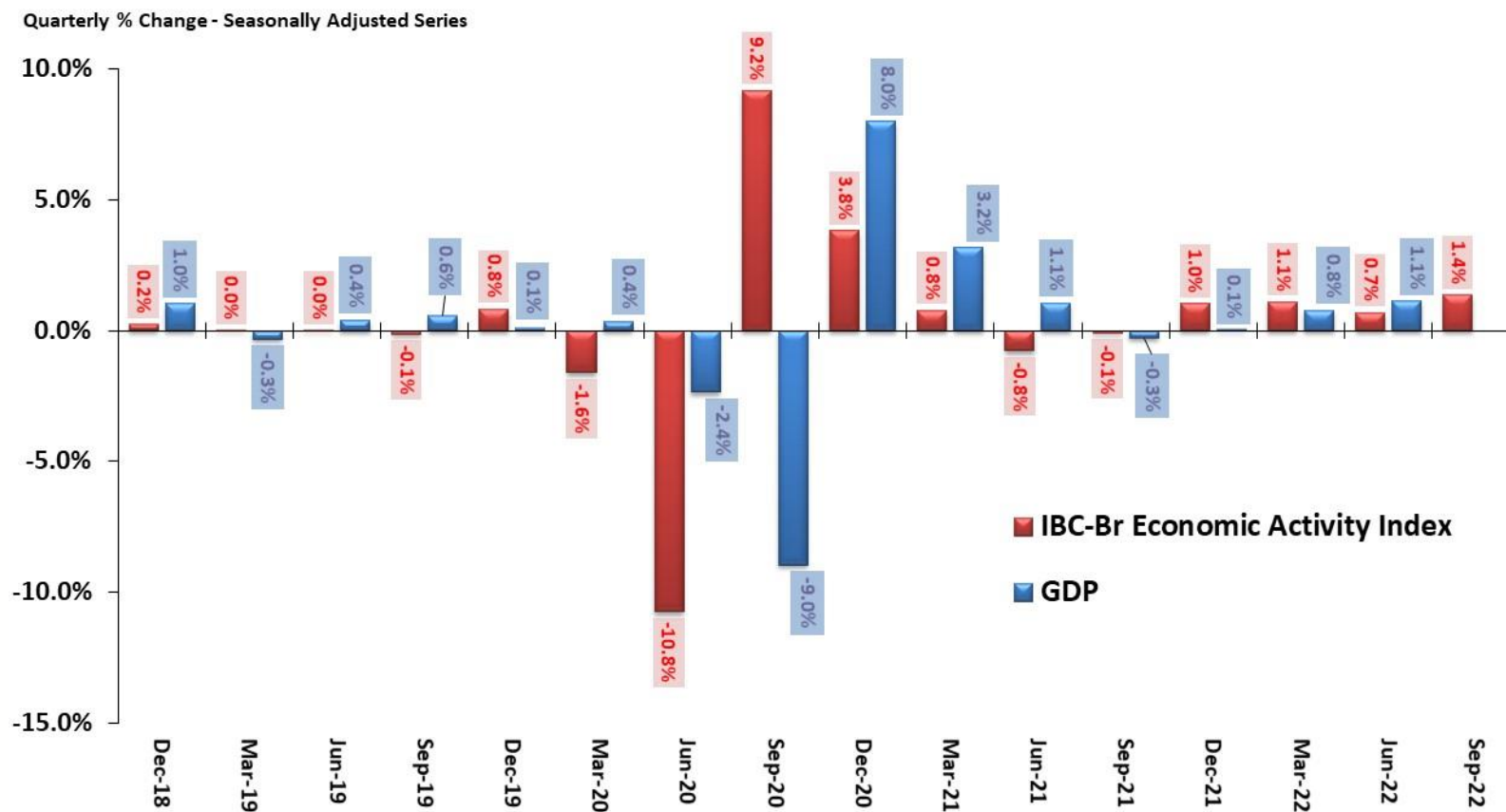
GFCF and Total Investment (% of GDP)
Accumulated in 4 quarters



Source: IBGE, Quarterly National Accounts Series.

Quarterly GDP Growth and IBC-Br Economic Activity Index

ECONOMIC ACTIVITY



Sources: IBGE and Central Bank of Brazil.

Monthly Economic Activity

ECONOMIC ACTIVITY

IBC-Br Economic Activity Index	September-22										
% change	2020	2021	ago/yy- ago/yy	set/yy- set/yy	ago/yy - jul/yy (seasonally adjusted)	set/yy - ago/yy (seasonally adjusted)	Year-To-Date	ago/yy accum. in 12-months	set/yy accum. in 12-months	carry-over 2022	
IBC-Br Economic Activity Index	-4.0%	4.54%	5.0%	4.0%	-1.1%	0.0%	2.9%	2.1%	2.3%	2.8%	
Systematic Survey of Agricultural Production (IBGE)	October-22										
% change	2020	2021	set/yy- set/yy	out/yy- out/yy	set/yy - ago/yy (seasonally adjusted)	out/yy - set/yy (seasonally adjusted)	Year-To-Date	set/yy accum. in 12-months	out/yy accum. in 12-months	carry-over 2022	
Grain Harvest	5.6%	3.3%	4.4%	4.6%	0.1%	0.3%	4.6%	4.4%	4.6%	2.0%	
Industry Production (IBGE)	September-22										
% change	2020	2021	ago/yy- ago/yy	set/yy- set/yy	ago/yy - jul/yy (seasonally adjusted)	set/yy - ago/yy (seasonally adjusted)	Year-To-Date	ago/yy accum. in 12-months	set/yy accum. in 12-months	carry-over 2022	
General Industry	-4.5%	3.9%	2.8%	0.4%	-0.7%	-0.7%	-0.9%	-2.6%	-2.2%	-0.7%	
Mining Industry (weight 11,2%)	-3.4%	1.0%	-7.3%	-5.7%	-3.1%	1.8%	-4.0%	-2.1%	-2.9%	-2.9%	
Manufacturing Industry (weight 88,8%)	-4.6%	4.3%	4.1%	1.2%	-0.3%	-1.3%	-0.7%	-2.8%	-2.2%	-0.4%	
Food (weight 13,9%)	4.2%	-8.2%	3.2%	-0.1%	-3.3%	-2.9%	0.7%	-3.2%	-1.9%	0.7%	
Petroleum refinement and alcohol production (weight 10,3%)	4.4%	-0.7%	5.0%	0.6%	-4.4%	-2.6%	8.3%	6.2%	6.8%	5.7%	
Motor vehicles (weight 10,1%)	-27.9%	20.1%	19.3%	20.3%	11.8%	-0.1%	0.7%	-4.8%	-2.6%	4.0%	
Capital Goods	-9.6%	27.8%	4.0%	4.6%	5.8%	-0.5%	-0.5%	1.7%	0.9%	0.5%	
Intermediate Goods	-1.0%	3.3%	2.1%	-0.3%	-1.7%	-1.1%	-1.0%	-2.2%	-1.9%	-0.7%	
Durable Consumer Goods	-19.8%	2.0%	13.6%	10.5%	6.2%	-0.2%	-5.3%	-12.9%	-10.1%	-1.9%	
Semi and Non-Durable Consumer Goods	-6.0%	-0.4%	1.9%	-1.4%	-1.9%	-1.4%	-0.7%	-3.0%	-2.6%	-0.6%	
Typical Construction Inputs	3.7%	-12.9%	-4.3%	-5.3%	2.8%	-4.7%	-7.4%	-7.9%	-8.0%	-15.0%	
Retail Sales (IBGE)	September-22										
% change	2020	2021	ago/yy- ago/yy	set/yy- set/yy	ago/yy - jul/yy (seasonally adjusted)	set/yy - ago/yy (seasonally adjusted)	Year-To-Date	ago/yy accum. in 12-months	set/yy accum. in 12-months	carry-over 2022	
Retail Sales	1.2%	1.4%	1.6%	3.2%	0.1%	1.1%	0.8%	-1.4%	-0.7%	1.4%	
Amplified Retail Sales	-1.4%	4.5%	-0.7%	1.0%	0.0%	1.5%	-0.6%	-2.0%	-1.6%	-0.5%	
Vehicles, Motorcycles, Parts and Accessories	-13.6%	14.9%	-4.1%	-1.2%	4.9%	-0.1%	-1.4%	-0.9%	-1.2%	-1.5%	
Construction Material	10.8%	4.4%	-7.0%	-7.9%	-0.6%	0.0%	-8.1%	-8.6%	-8.4%	-7.9%	
Fuel and Lubricants	-9.7%	0.3%	30.3%	34.8%	3.8%	1.3%	12.7%	4.4%	7.6%	18.0%	
Hypermarkets, Supermarkets, Food, Beverage and Tobacco	4.8%	-2.6%	1.4%	3.8%	0.3%	1.2%	0.9%	-0.4%	0.1%	1.3%	
Textiles, Apparel and Footwear	-22.5%	13.7%	-5.5%	-9.5%	9.3%	0.7%	6.4%	4.2%	3.5%	2.7%	
Furniture and Household Appliances	10.6%	-7.0%	-8.7%	-5.9%	0.9%	-0.1%	-9.5%	-14.3%	-13.0%	-8.3%	
Volume of Services (IBGE)	September-22										
% change	2020	2021	ago/yy- ago/yy	set/yy- set/yy	ago/yy - jul/yy (seasonally adjusted)	set/yy - ago/yy (seasonally adjusted)	Year-To-Date	ago/yy accum. in 12-months	set/yy accum. in 12-months	carry-over 2022	
Volume of Services	-7.8%	10.9%	8.7%	9.7%	1.1%	0.9%	8.6%	9.0%	8.9%	8.3%	
Services Rendered to Families	-35.6%	18.2%	21.8%	17.8%	1.0%	1.0%	30.3%	29.5%	28.2%	24.7%	
Information and Communication Services	-1.6%	9.5%	3.1%	6.0%	0.8%	2.0%	3.2%	5.1%	4.8%	3.4%	
Professional, Administrative and Complementary Services	-11.4%	7.4%	7.6%	6.9%	0.1%	0.2%	7.6%	7.5%	7.3%	7.5%	
Transportation, Support Activities for Transportation and Mailing Activities	-7.6%	15.2%	15.3%	15.3%	1.0%	-0.1%	14.1%	13.8%	13.9%	13.8%	
Other Services	6.8%	5.0%	-2.3%	2.6%	7.7%	-0.3%	-4.1%	-4.6%	-4.2%	-2.0%	

Macroeconomic Parameters						
Year	Industrial Activity - Annual chg. %					
	Manufacturing		Beverages		Vehicles	
	Production				Domestic Wholesale	
	Price	Quantity	Price	Quantity	Price	Quantity
2016	8.06	-5.98	7.60	-3.09	6.10	-17.53
2017	1.76	2.23	4.34	0.78	4.26	12.31
2018	8.35	1.11	2.67	0.87	3.30	13.05
2019	4.31	0.19	2.86	4.25	2.97	10.38
2020	9.13	-4.60	0.87	-0.19	4.15	-25.84
2021	31.85	4.32	4.14	0.28	12.62	1.04
2022	17.77	-0.47	9.76	3.84	12.64	-3.75
2023	1.50	0.21	7.40	2.62	4.02	9.19
2024	3.23	1.92	6.02	3.63	3.21	12.45
2025	4.37	2.08	5.97	3.39	2.73	8.50
2026	4.62	1.76	5.97	2.92	2.45	7.66

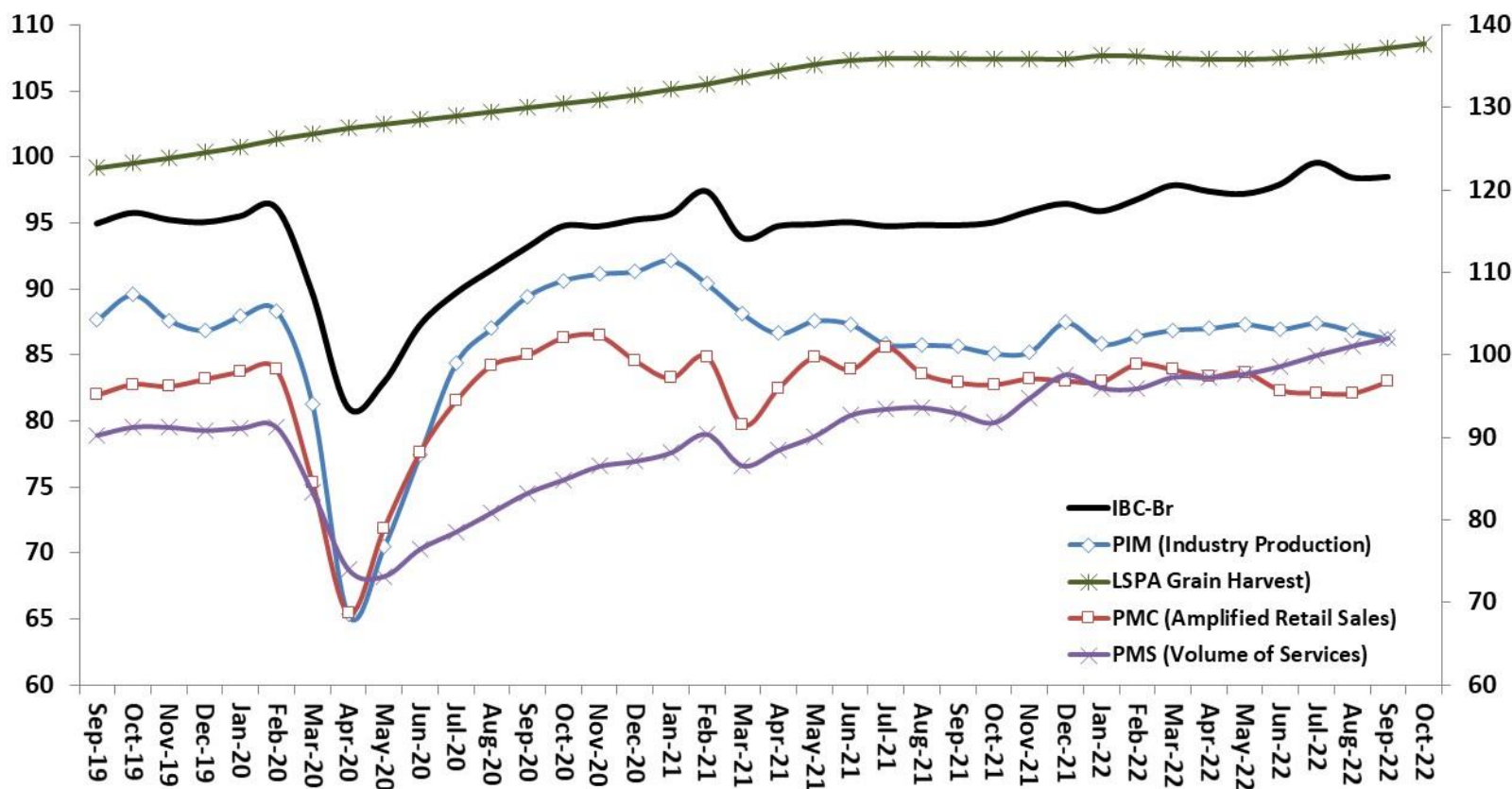
Source: SPE/ME. Macroeconomic Parameters, November-2022.

Major Monthly Economic Activity Indicators

ECONOMIC ACTIVITY

IBC-Br, Grain Harvest (12-mo MA) and Industry Production
Seasonally Adjusted Index (2014 = 100)

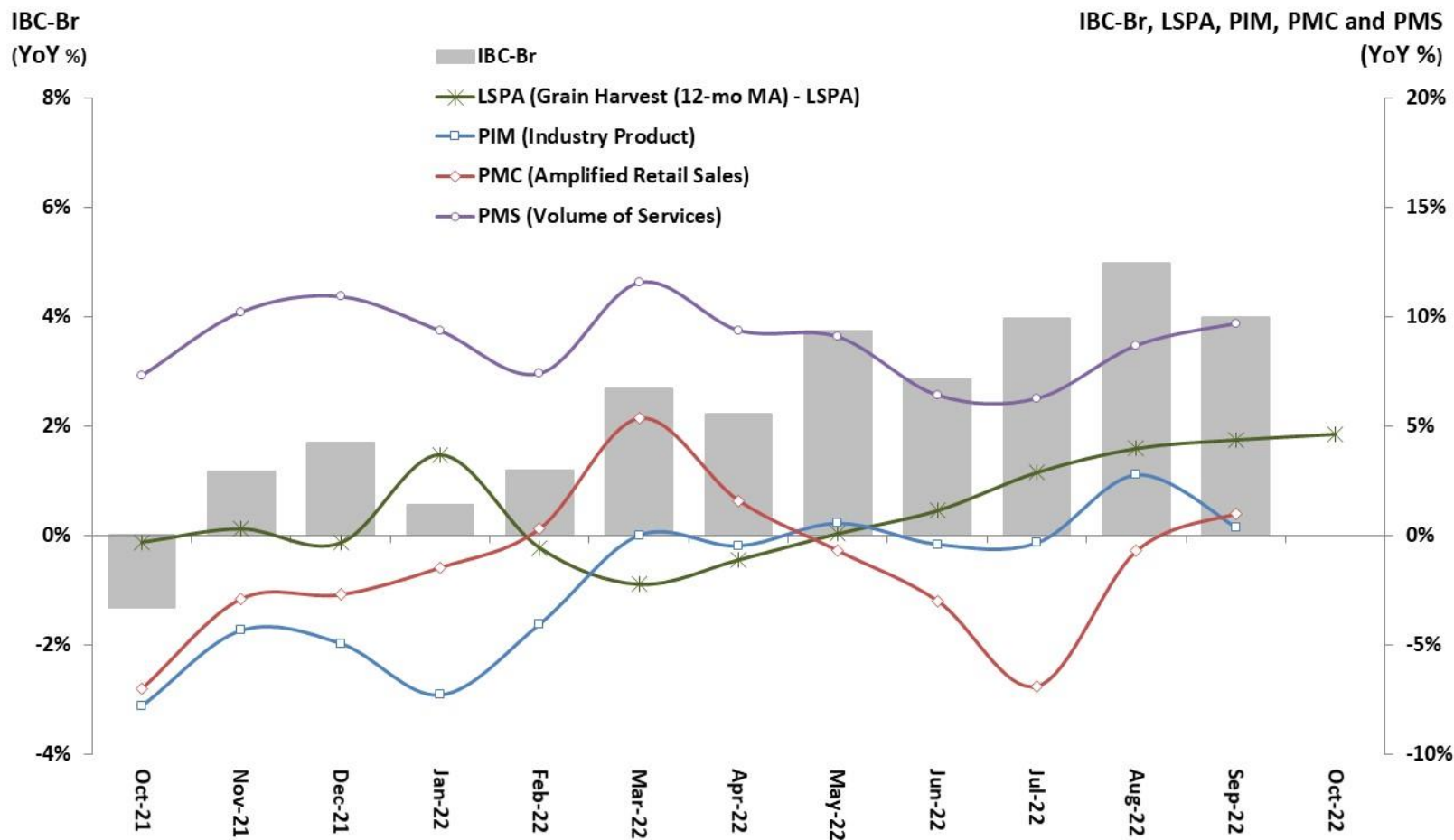
Amplified Retail Sales and Volume of Services
Seasonally Adjusted Index (2014 = 100)



Sources: Central Bank of Brazil and IBGE: Systematic Survey of Agricultural Production (LSPA), Monthly Survey of Industry (PIM), Monthly Survey of Trade (PMC), and Monthly Survey of Services (PMS).

Major Monthly Economic Activity Indicators

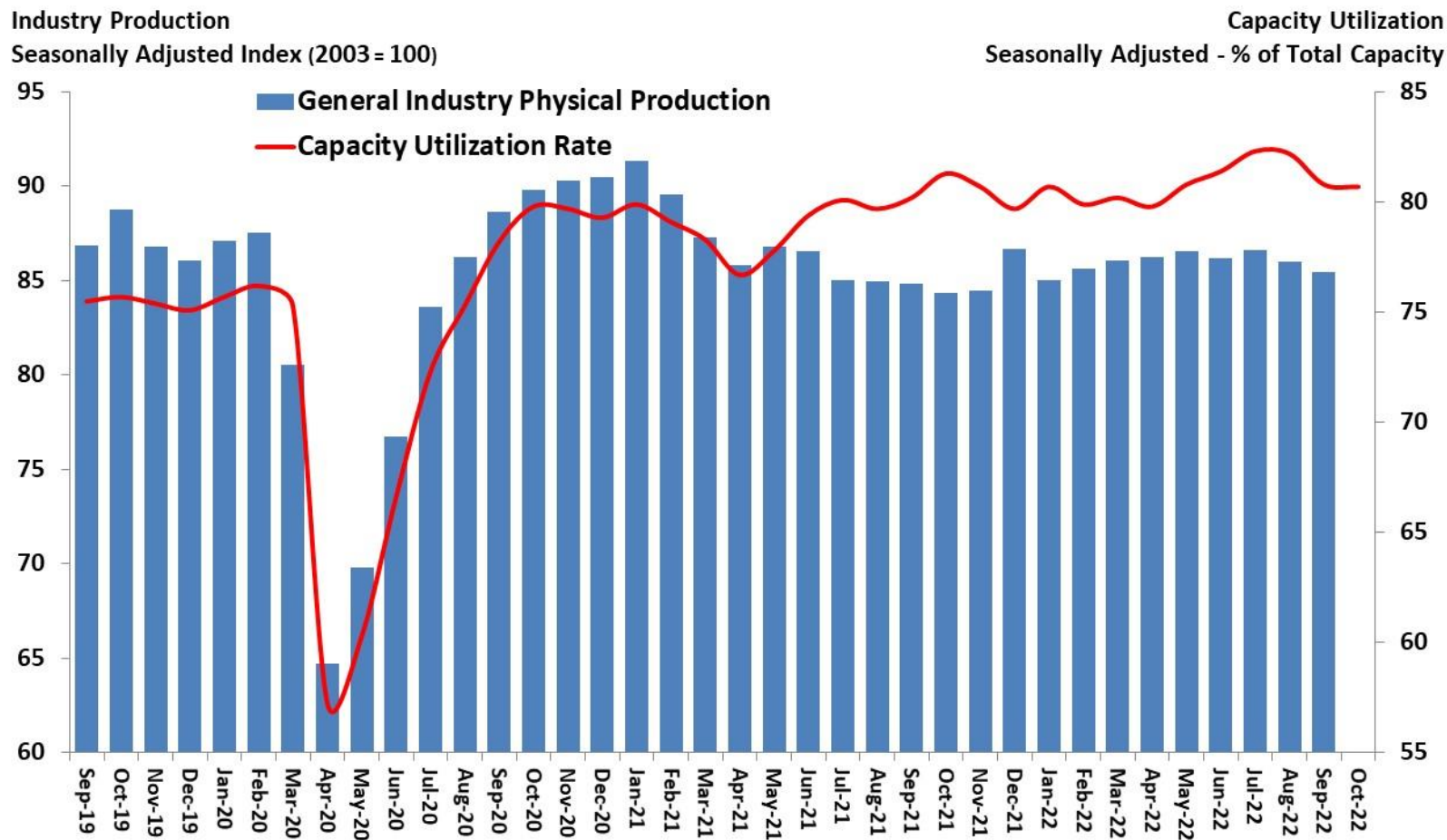
ECONOMIC ACTIVITY



Sources: Central Bank of Brazil and IBGE: Systematic Survey of Agricultural Production (LSPA), Monthly Survey of Industry (PIM), Monthly Survey of Trade (PMC), and Monthly Survey of Services (PMS).

Industrial Production and Capacity Utilization

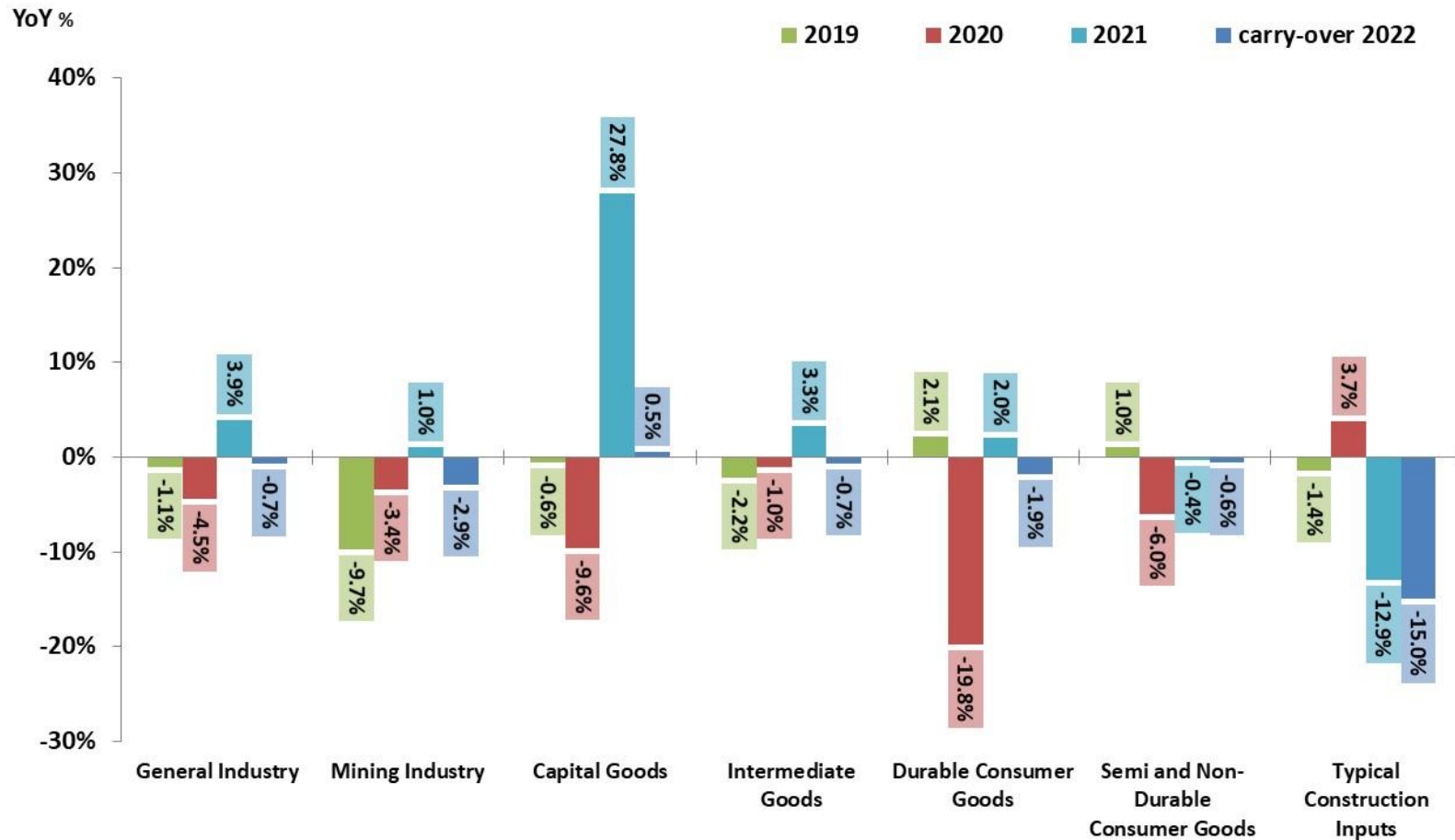
ECONOMIC ACTIVITY



Sources: IBGE and FGV.

Total Industrial Production and Economic Categories

ECONOMIC ACTIVITY

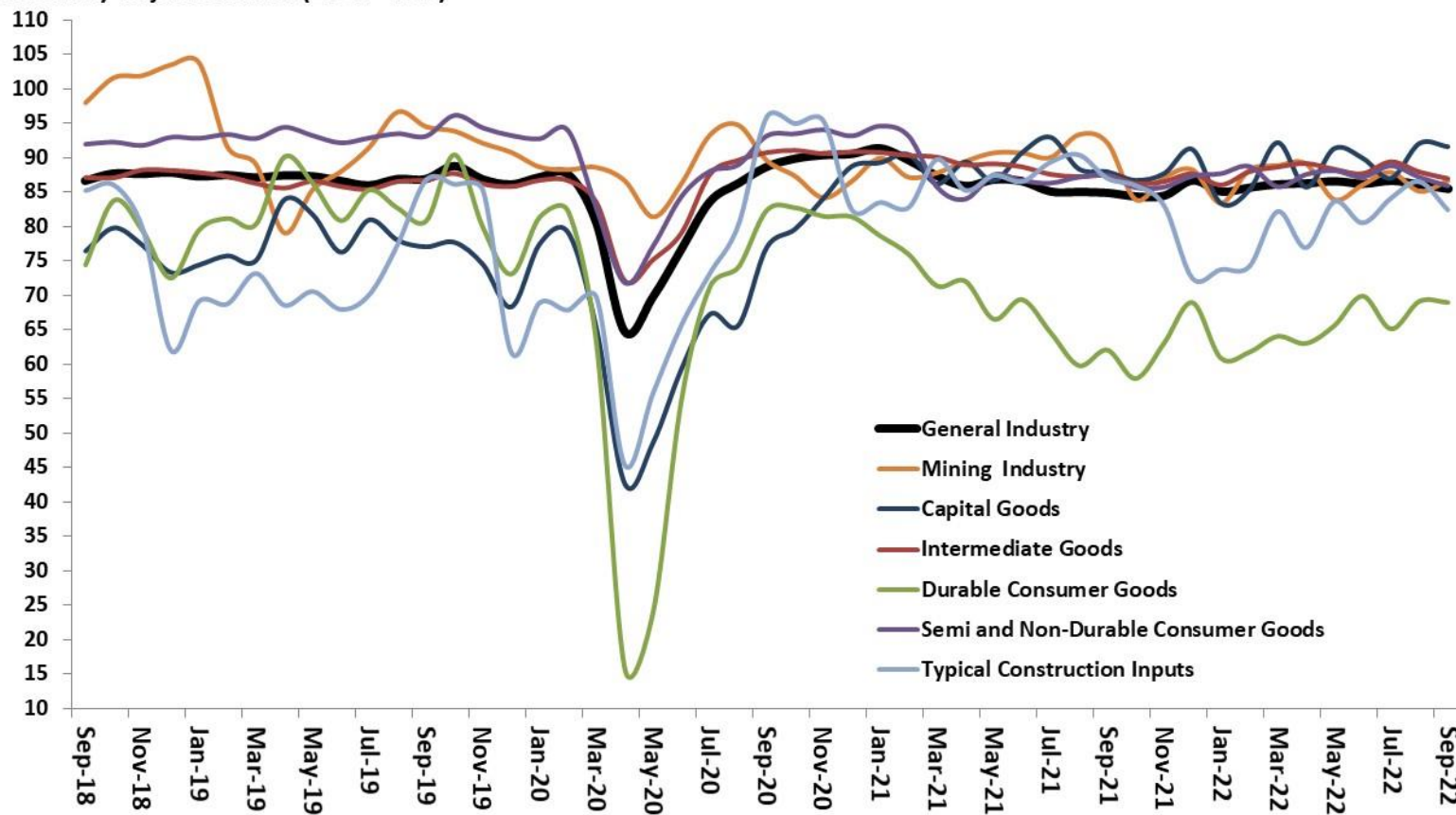


Source: IBGE, Monthly Survey of Industry (PIM). Note: Carry over 2022: based on Sep/2022 compared to 2021 average.

Total Industrial Production and Economic Categories

ECONOMIC ACTIVITY

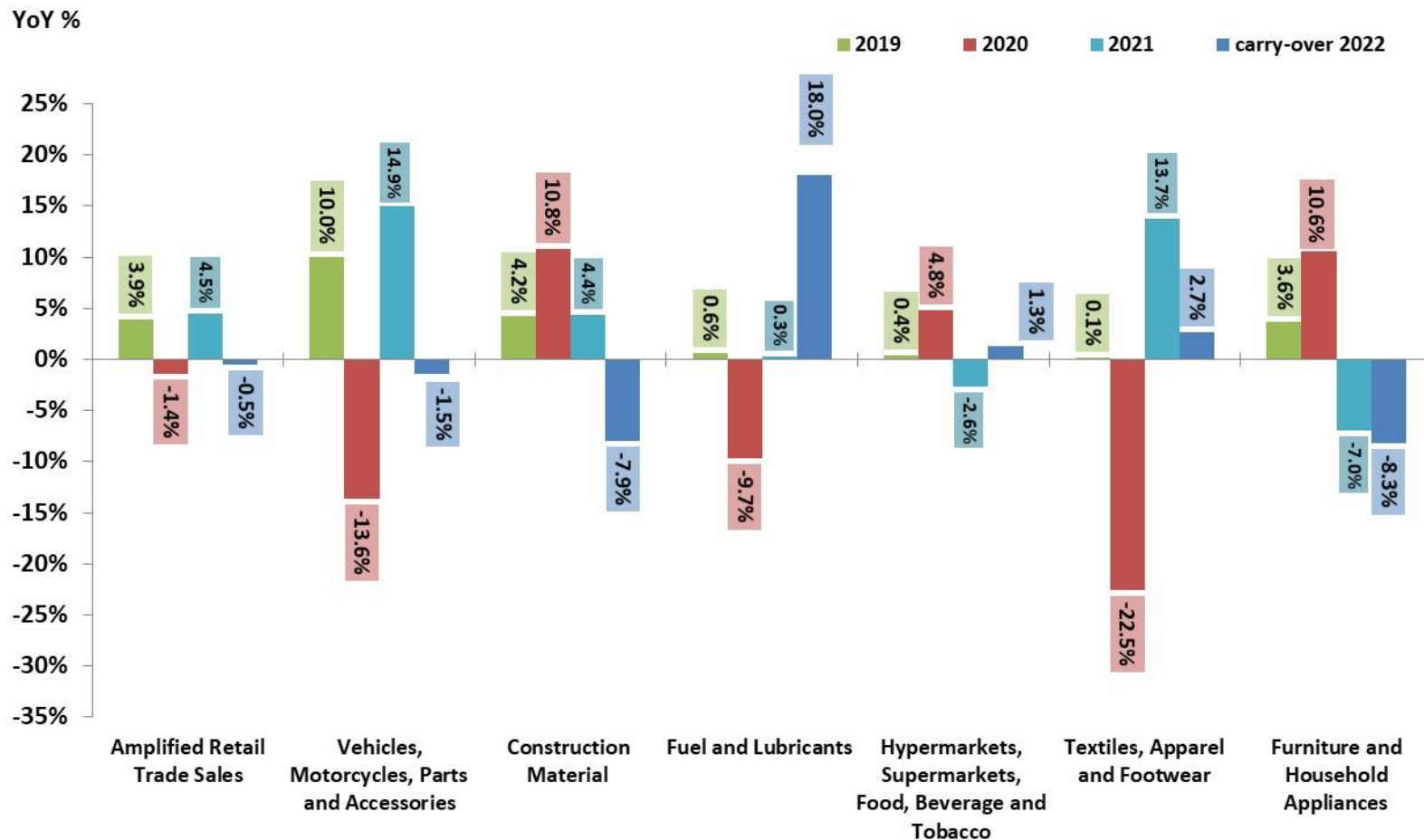
Industry Physical Production by Economic Category
Seasonally Adjusted Index (2012 = 100)



Source: IBGE

Total Retail Sales and Subsectors

ECONOMIC ACTIVITY



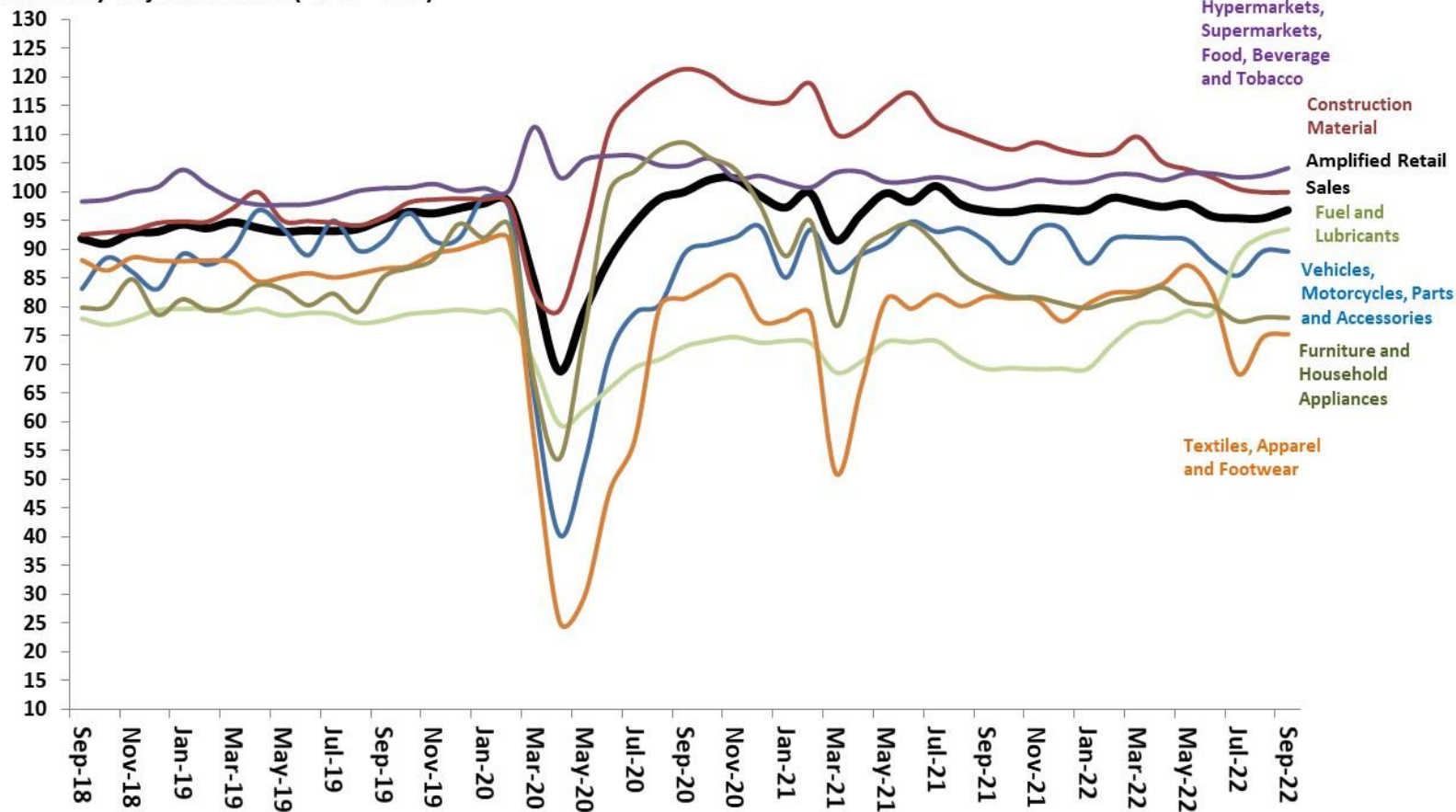
Source: IBGE, Monthly Survey of Trade (PMC). Note: Carry over 2022: based on Sep/2022 compared to 2021 average.

Total Retail Sales and Subsectors

ECONOMIC ACTIVITY

Retail Sales by Subsector

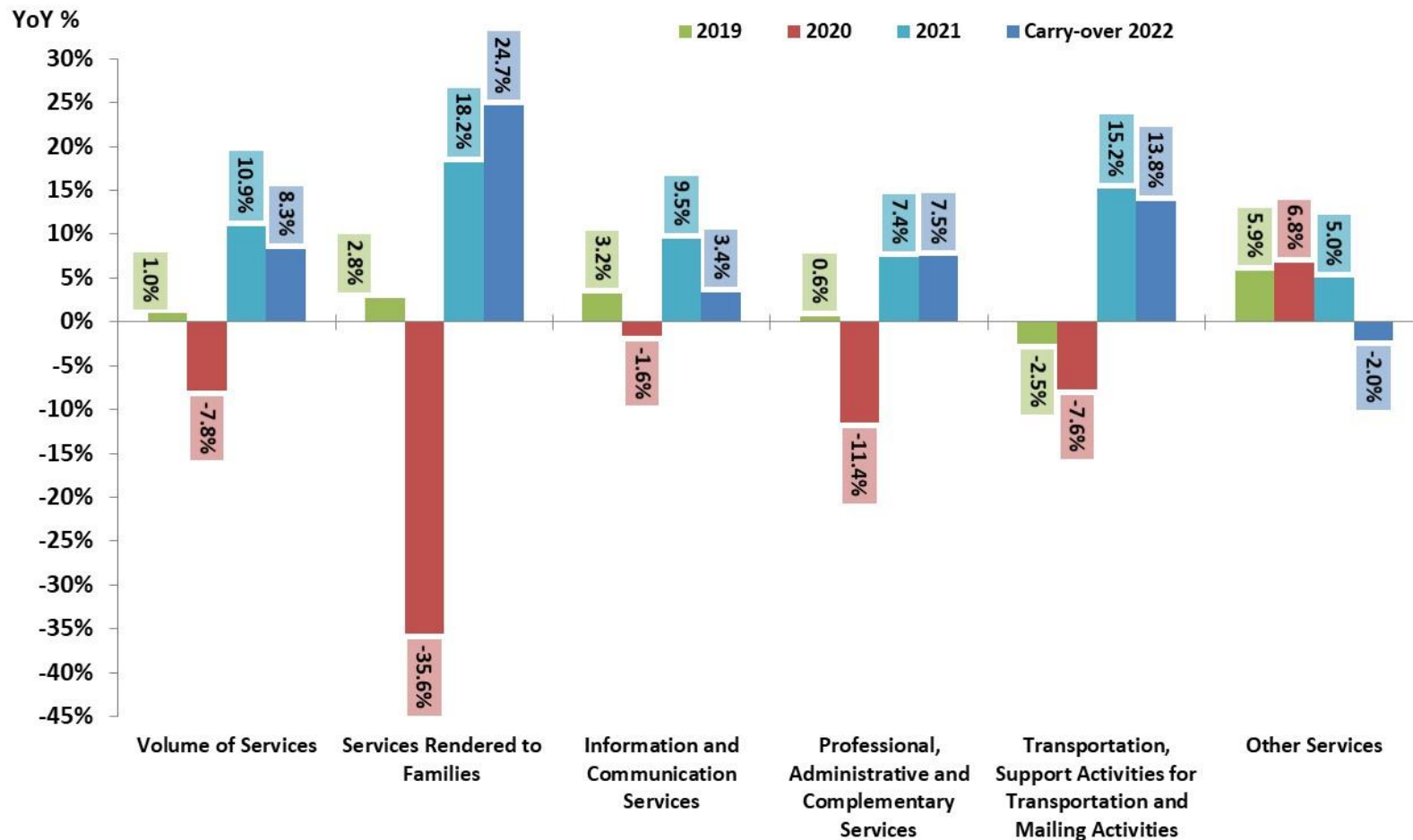
Seasonally Adjusted Index (2014 = 100)



Source: IBGE, Monthly Survey of Trade (PMC).

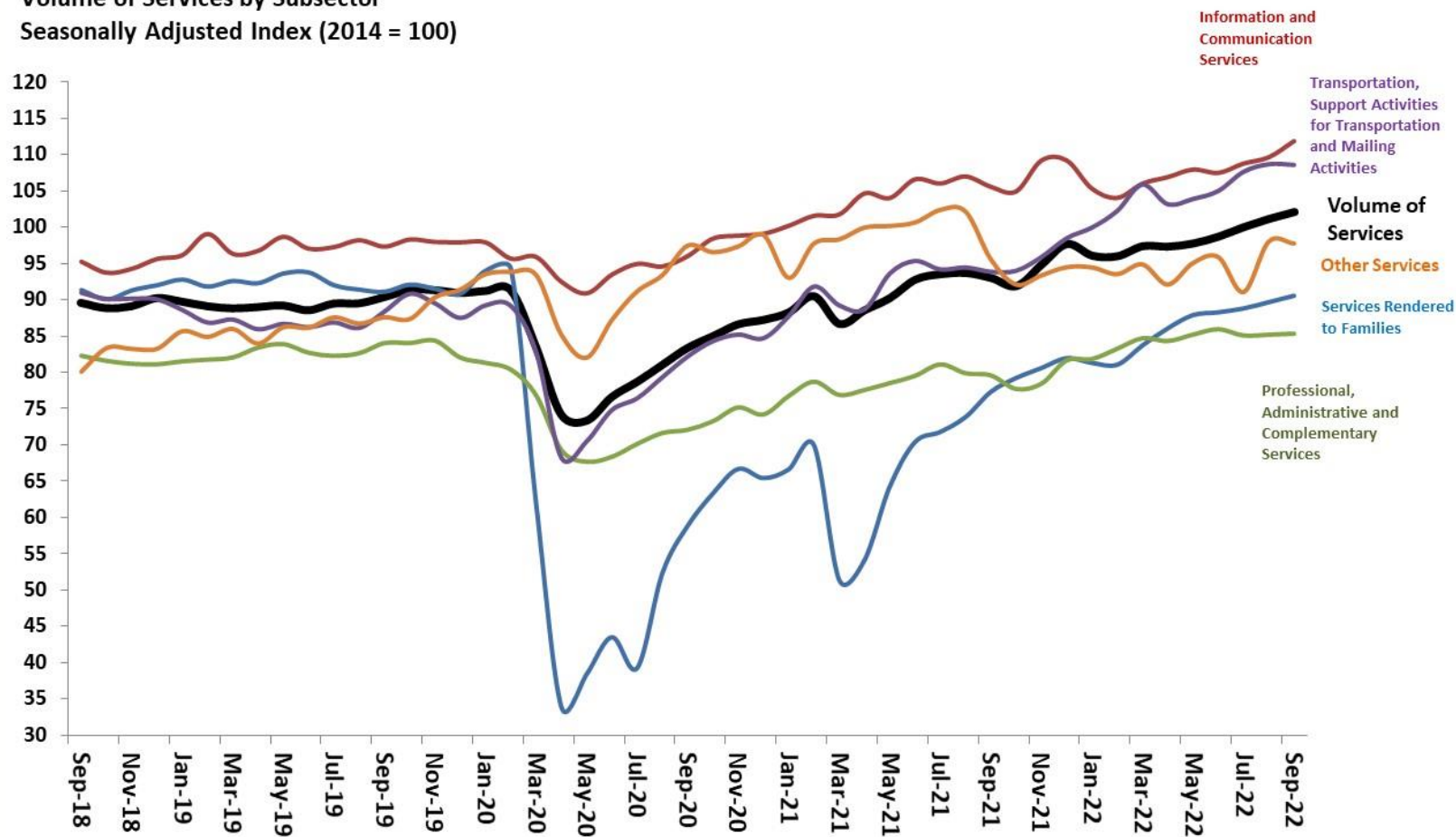
Volume of Services and Subsectors

ECONOMIC ACTIVITY



Source: IBGE, Monthly Survey of Services (PMS). Note: Carry over 2022: based on Sep/2022 compared to 2021 average.

Volume of Services by Subsector
Seasonally Adjusted Index (2014 = 100)



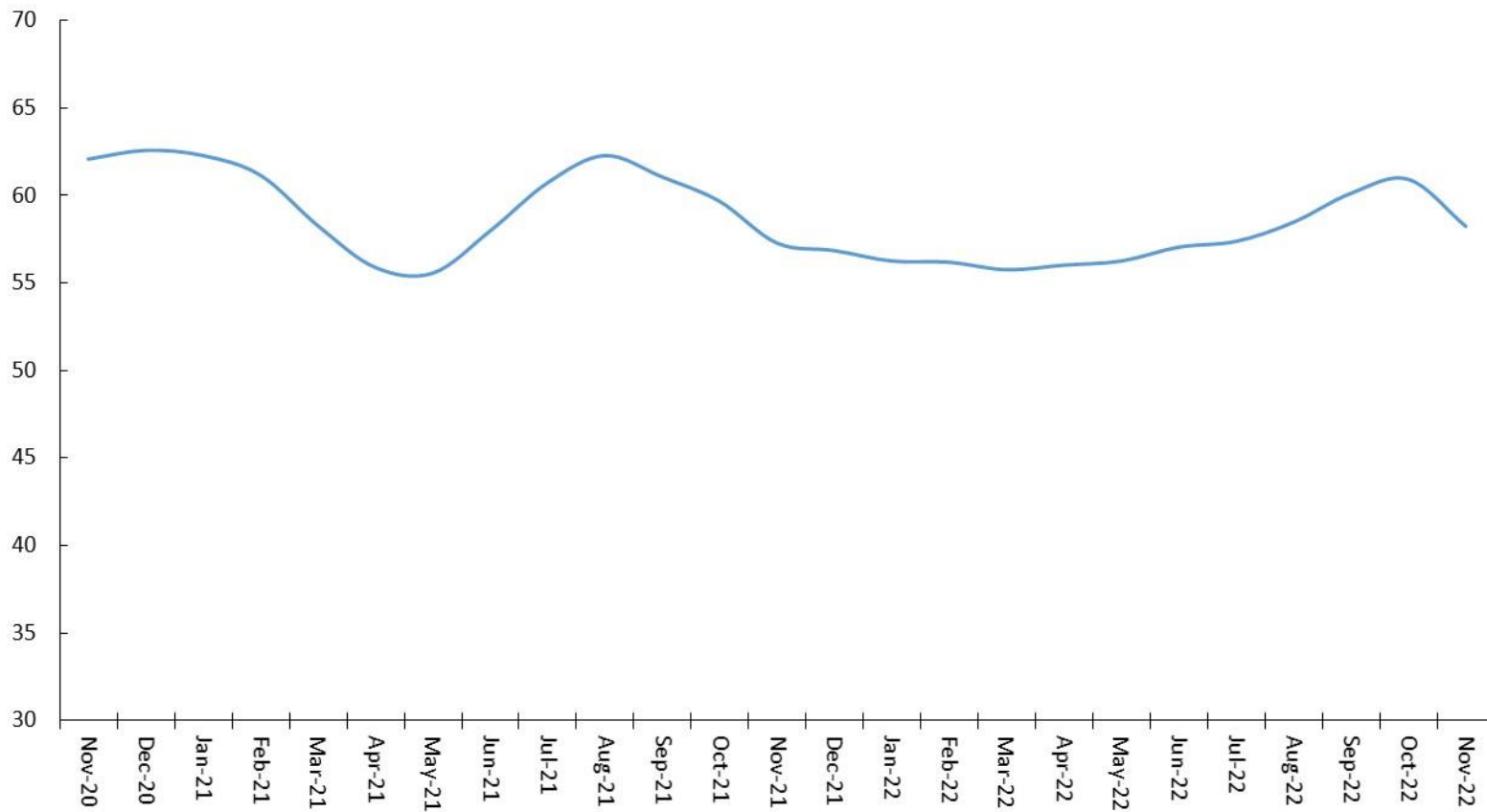
Source: IBGE, Monthly Survey of Services (PMS).

Other Monthly Economic Activity Indicators

ECONOMIC ACTIVITY

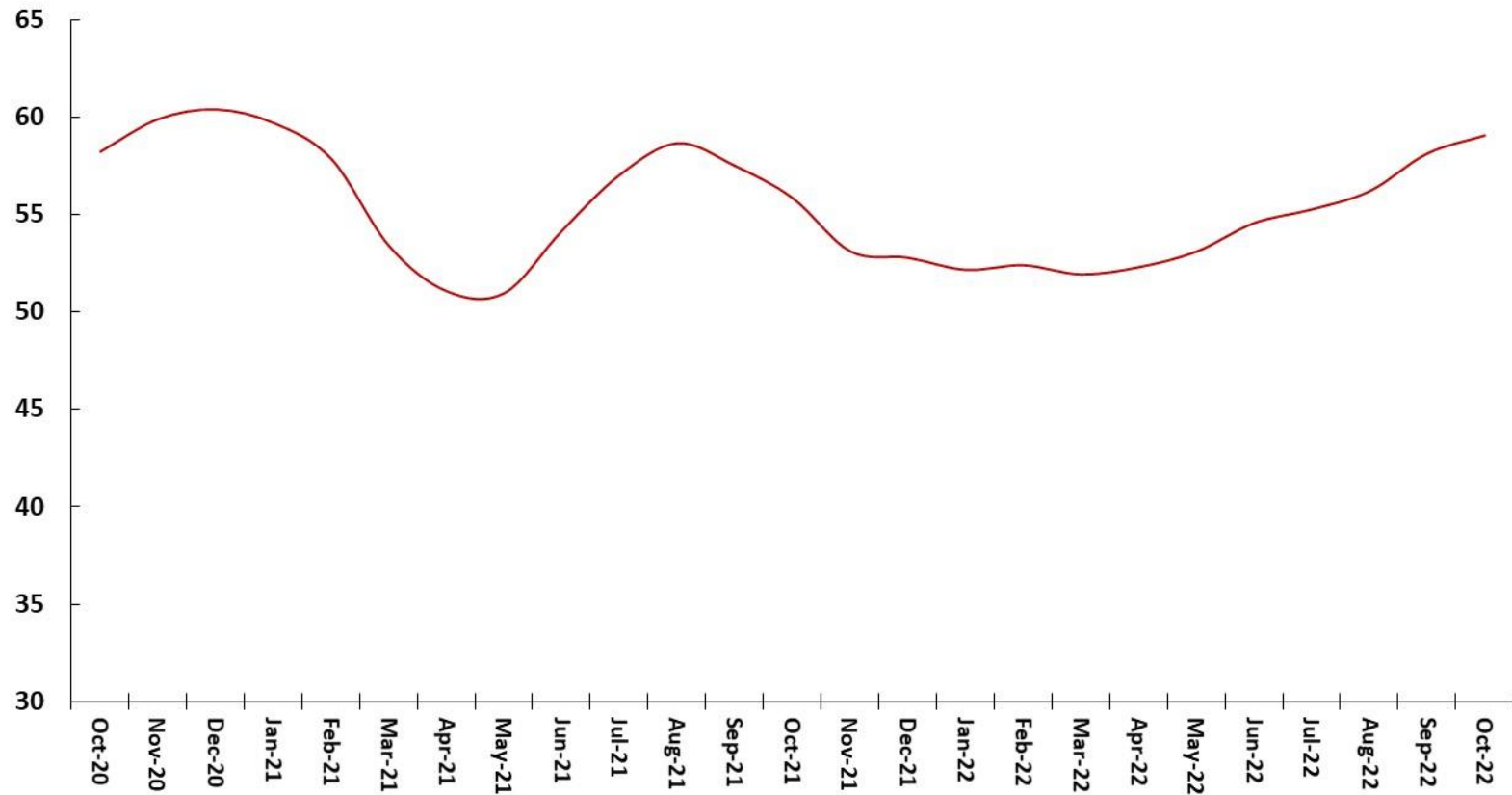
	Last update (m / y)	Annual change % (y-1)	change % (m-1 / y) / (m-1 / y-1)	change % (m / y) / y-1	change % (m- 1/y) / (m-2/y) (seasonally adjusted)	change % (m/y) / (m-1/y) (seasonally adjusted)	Year-To-Date	(m-1 / y) accum. in 12- months	(m / y) accum. in 12- months	carry-over	
Industry Indicators (CNI)											
Real Sales Revenue	Sep-22	-0.1%	11.0%	7.9%	1.4%	-0.2%	1.6%	-2.0%	-0.7%	3.2%	2022
Working Hours in Production	Sep-22	-2.1%	6.9%	3.3%	2.4%	-1.1%	3.0%	2.8%	2.7%	2.9%	2022
Capacity Utilization - UCI	Sep-22	0.4%	-2.0%	-2.3%	-0.1%	-0.1%	-0.6%	0.1%	-0.3%	-0.6%	2022
Industry Inventories (CNI) - Final Goods - planned x realize	Nov-22	1.0%	5.8%	3.7%	3.3%	0.4%	3.5%	6.7%	5.9%	3.0%	2022
Business Confidence - ICEI (CNI)	Nov-22	19.5%	4.2%	-7.7%	-4.2%	-14.0%	-2.3%	-3.4%	-3.0%	-2.7%	2022
Sao Paulo Industry Confidence - ICEI-SP (FIESP)	Oct-22	25.9%	14.4%	7.7%	11.0%	-5.2%	0.5%	-3.6%	-2.2%	2.3%	2022
Industry Capacity Utilization - NUCI (FGV)	Oct-22	0.7%	0.7%	-0.7%	-1.7%	-0.1%	2.1%	2.1%	1.8%	1.8%	2022
Industry Confidence (FGV)	Oct-22	12.5%	-6.2%	-8.9%	-0.8%	-3.8%	-8.0%	-8.3%	-8.6%	-7.3%	2022
Consumer Confidence (FGV)	Oct-22	13.1%	17.0%	15.0%	6.5%	-0.4%	3.7%	0.1%	2.0%	6.6%	2022
Services Confidence (FGV)	Oct-22	14.6%	4.6%	0.0%	1.0%	-2.6%	7.1%	9.1%	8.0%	6.4%	2022
Construction Confidence (FGV)	Oct-22	8.5%	5.5%	5.1%	3.6%	-0.8%	5.0%	4.2%	4.6%	5.0%	2022
Retail Confidence (FGV)	Oct-22	15.2%	7.7%	3.4%	2.4%	-3.7%	1.1%	-0.5%	-0.1%	3.2%	2022
Supermarket Sector Total Retail Sales (ABRAS)	Sep-22	1.3%	24.9%	26.0%	9.0%	1.3%	11.6%	6.6%	8.7%	14.6%	2022
Natural Gas and Oil Production (ANP)	Jun-22	4.5%	-8.0%	-2.5%	-11.1%	5.7%	0.6%	0.2%	0.4%	-1.2%	2022
Electric Energy Consumption - Total (EPE)	Sep-22	1.2%	2.9%	0.2%	0.3%	-1.3%	1.3%	1.4%	1.1%	1.3%	2022
Industry Consumption (EPE)	Sep-22	1.3%	2.8%	1.8%	0.5%	-0.9%	0.5%	1.2%	1.0%	0.7%	2022
Electric Energy System Supply (ONS)	Oct-22	1.8%	-4.2%	2.5%	-2.4%	0.3%	0.5%	1.3%	1.6%	0.2%	2022
Corrugated Fiberboard Sales (ABPO)	Oct-22	7.9%	3.4%	1.4%	-0.4%	-2.1%	-2.4%	-3.6%	-2.8%	-2.0%	2022
Heavy Vehicles Road Traffic (ABCR)	Oct-22	8.4%	3.6%	2.7%	-0.4%	-0.7%	2.2%	1.6%	1.9%	2.0%	2022
Total Vehicles Production (ANFAVEA)	Oct-22	16.0%	19.3%	15.1%	-6.2%	2.4%	4.4%	0.7%	4.4%	3.0%	2022
Car Production	Oct-22	9.1%	17.1%	21.8%	-9.3%	4.3%	5.9%	1.2%	5.9%	4.8%	2022
Commercial Vehicles Production	Oct-22	84.0%	8.3%	13.5%	-10.2%	1.0%	3.3%	4.0%	3.3%	3.2%	2022
Total Vehicles Exports (ANFAVEA)	Oct-22	28.2%	21.2%	47.8%	-32.1%	42.7%	23.9%	18.4%	23.9%	22.9%	2022
Total Vehicles Sales/Licensing (FENABRAVE)	Oct-22	5.5%	25.1%	11.4%	-1.8%	-3.2%	-6.6%	-9.6%	-6.6%	-7.9%	2022
Domestic Vehicles Sales/Licensing	Oct-22	5.2%	26.8%	13.2%	-1.6%	-4.0%	-8.7%	-12.2%	-8.7%	-10.0%	2022
Imported Vehicles Sales/Licensing	Oct-22	7.7%	14.9%	0.3%	4.8%	-2.0%	11.1%	12.4%	11.1%	10.0%	2022

Business Confidence Index – ICEI
3-month moving average



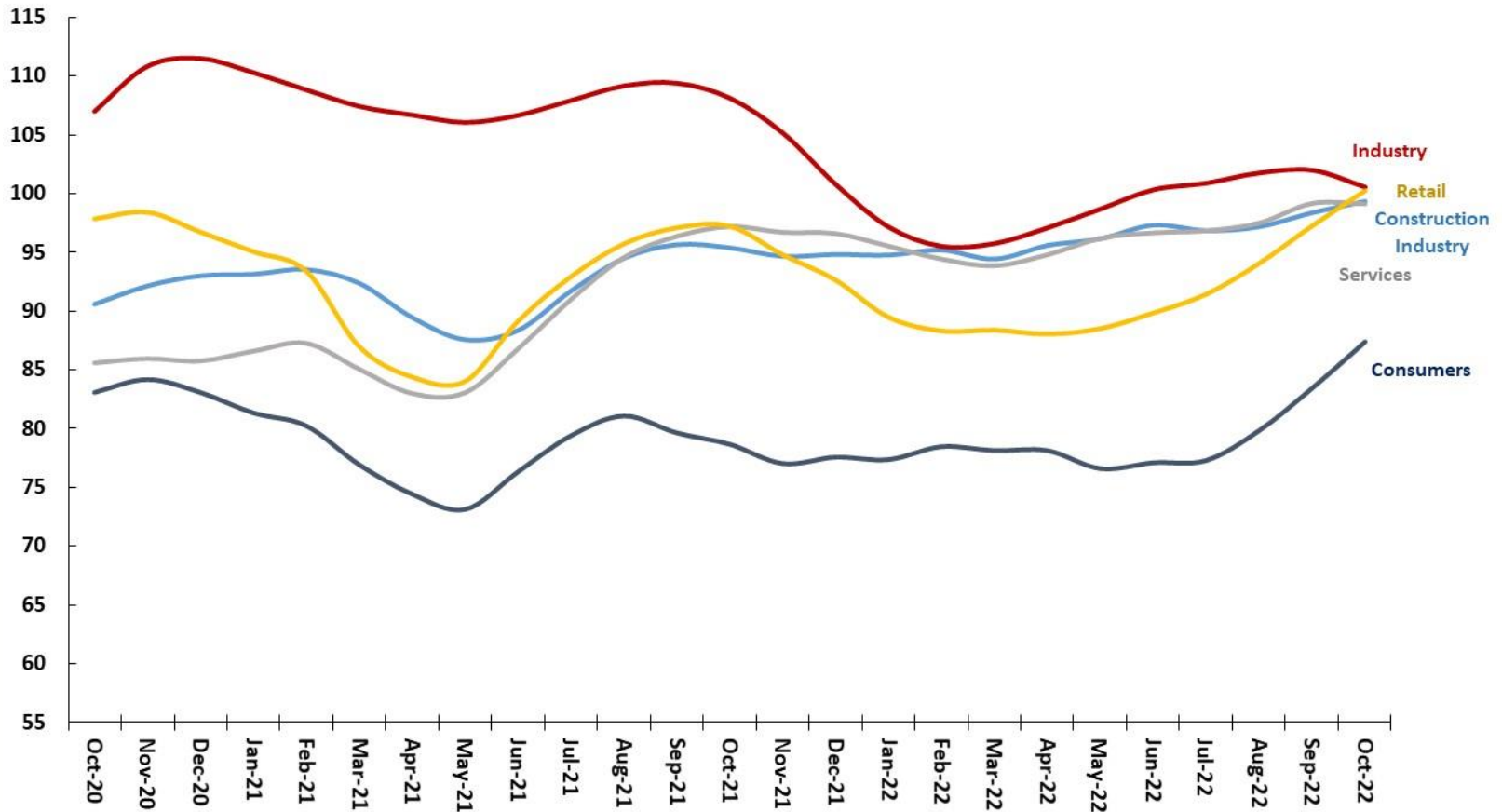
Source: CNI.

Sao Paulo Industry Confidence - ICEI-SP
3-month moving average



Source: FIESP.

Economic Confidence Indicators
3-month moving average



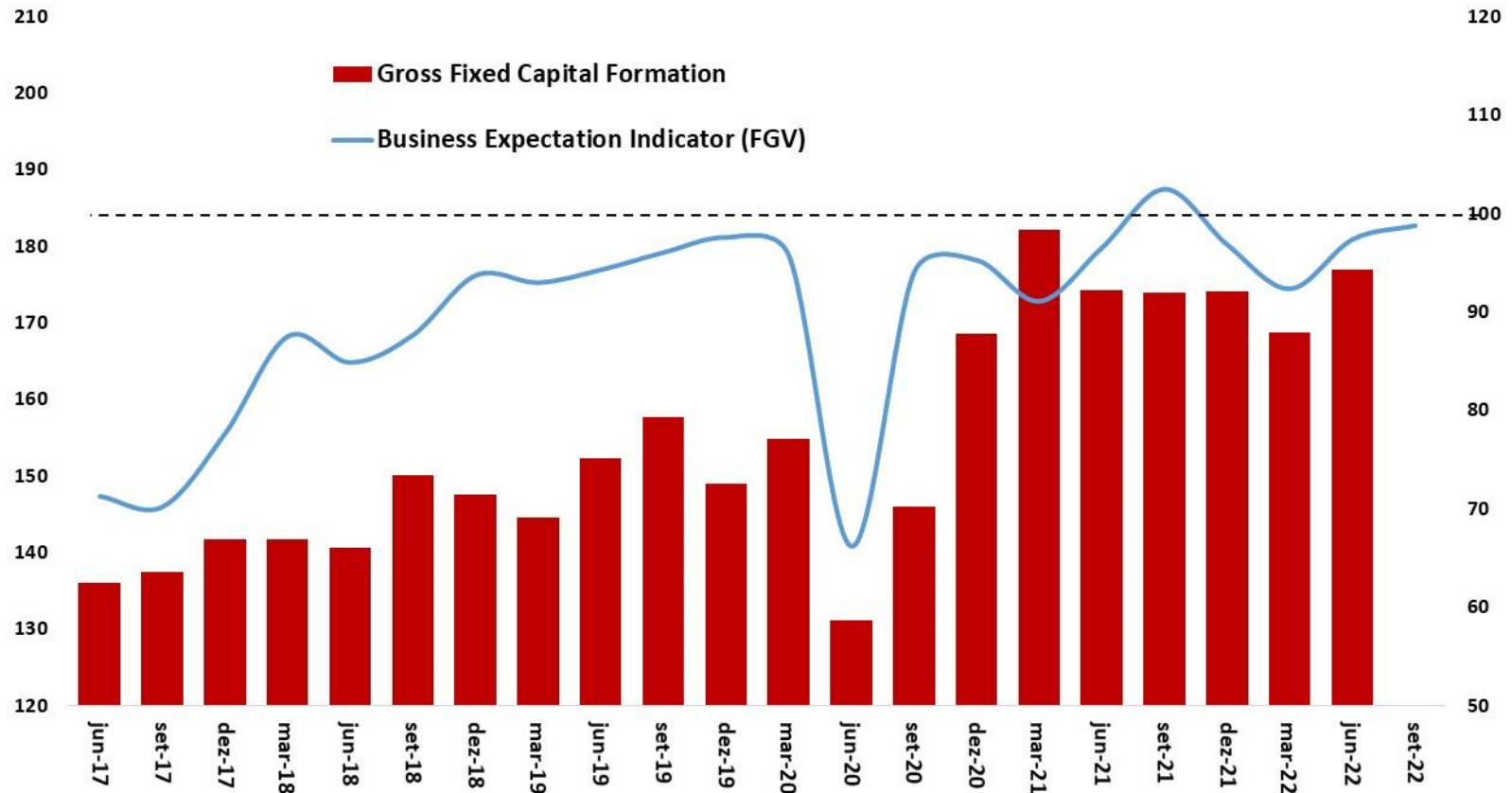
Source: IBRE/FGV.

Gross Fixed Capital Formation and Investment Intention

ECONOMIC ACTIVITY

Gross Fixed Capital Formation (Quarterly National Accounts)
Chained Series of the Seasonally Adjusted Index: 1995=100

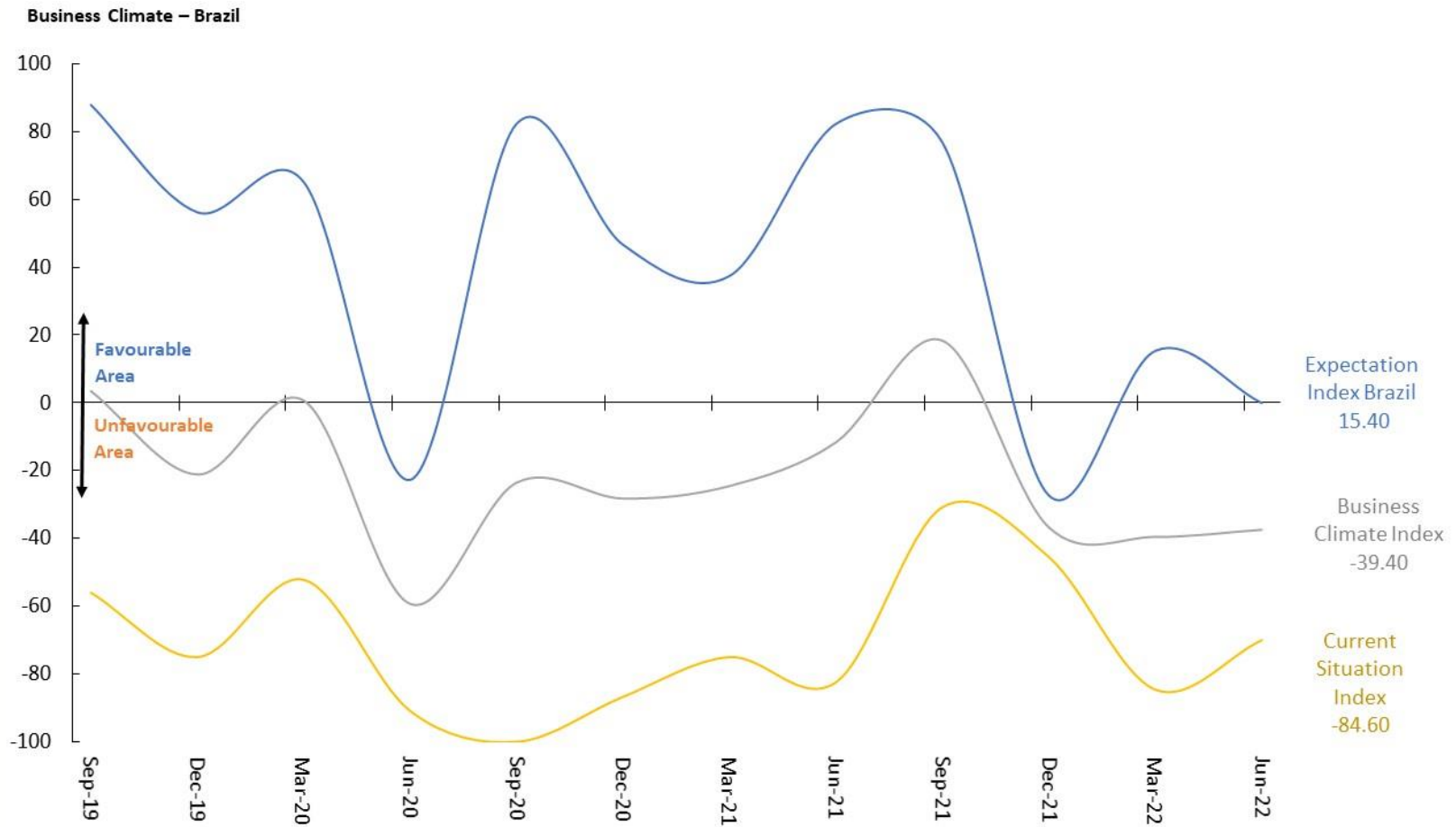
Business Expectation Indicator*
IBRE/FGV Investments Survey



Source: IBGE e IBRE/FGV.

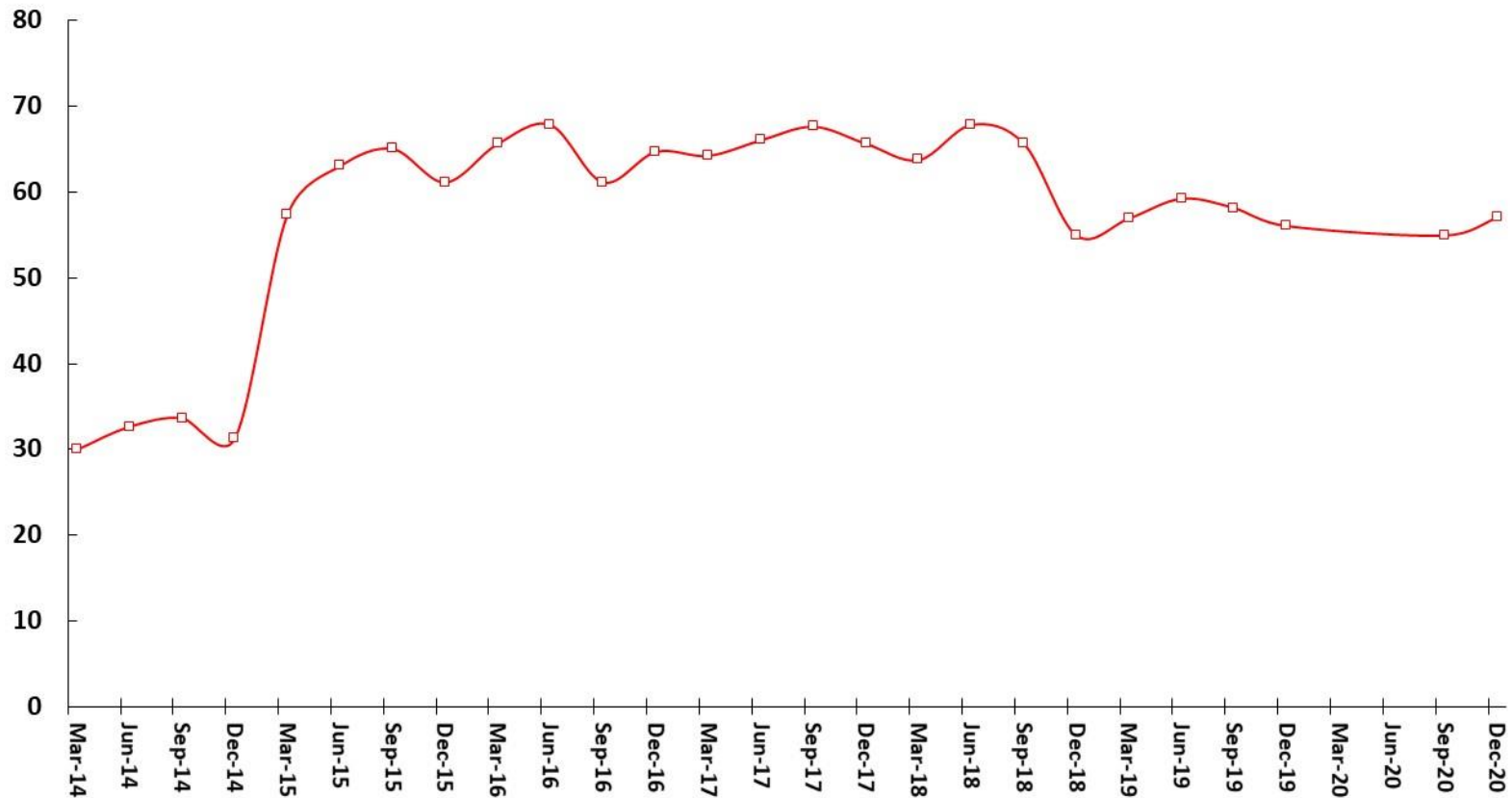
*Note: Measures the difference between positive and negative answers, plus 100.

IFO / FGV: Business Climate Index - Brazil



Source: IFO and FGV.

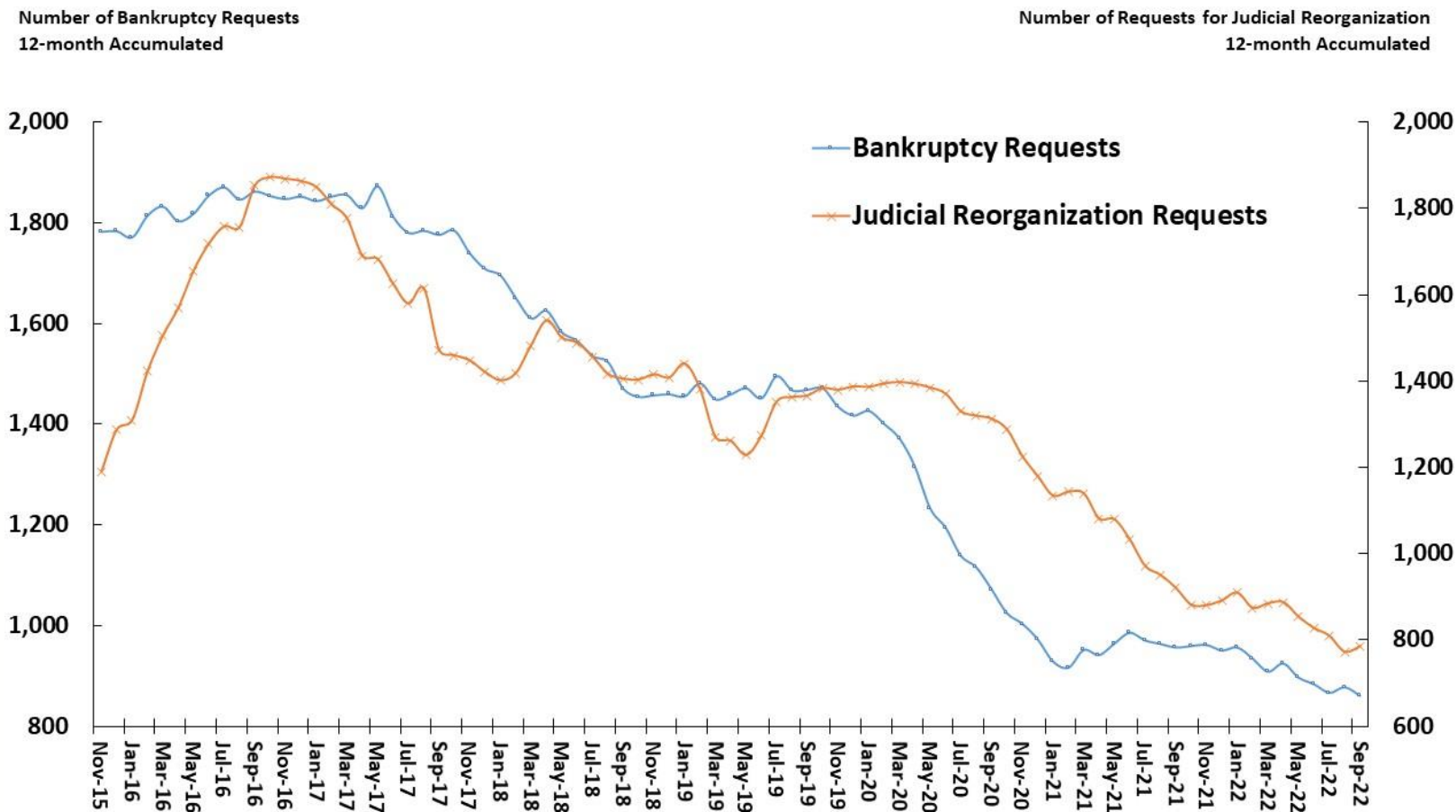
Fear of Unemployment and Life Satisfaction (CNI)
3-month moving average



Source: CNI.

Bankruptcy and Judicial Reorganization Requests

ECONOMIC ACTIVITY

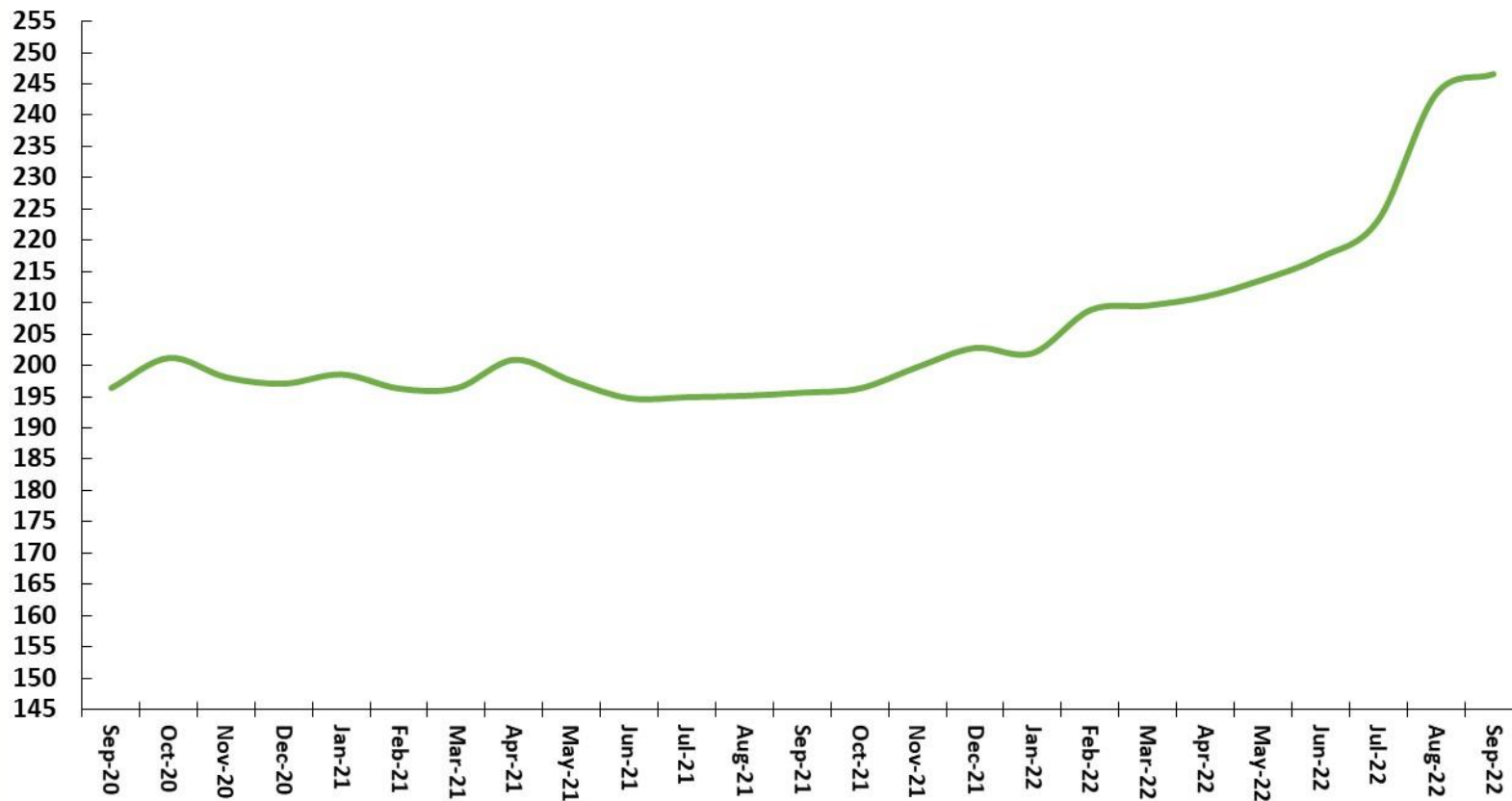


Source: Serasa-Experian.

ABRAS: Supermarket Sector Total Retail Sales

ECONOMIC ACTIVITY

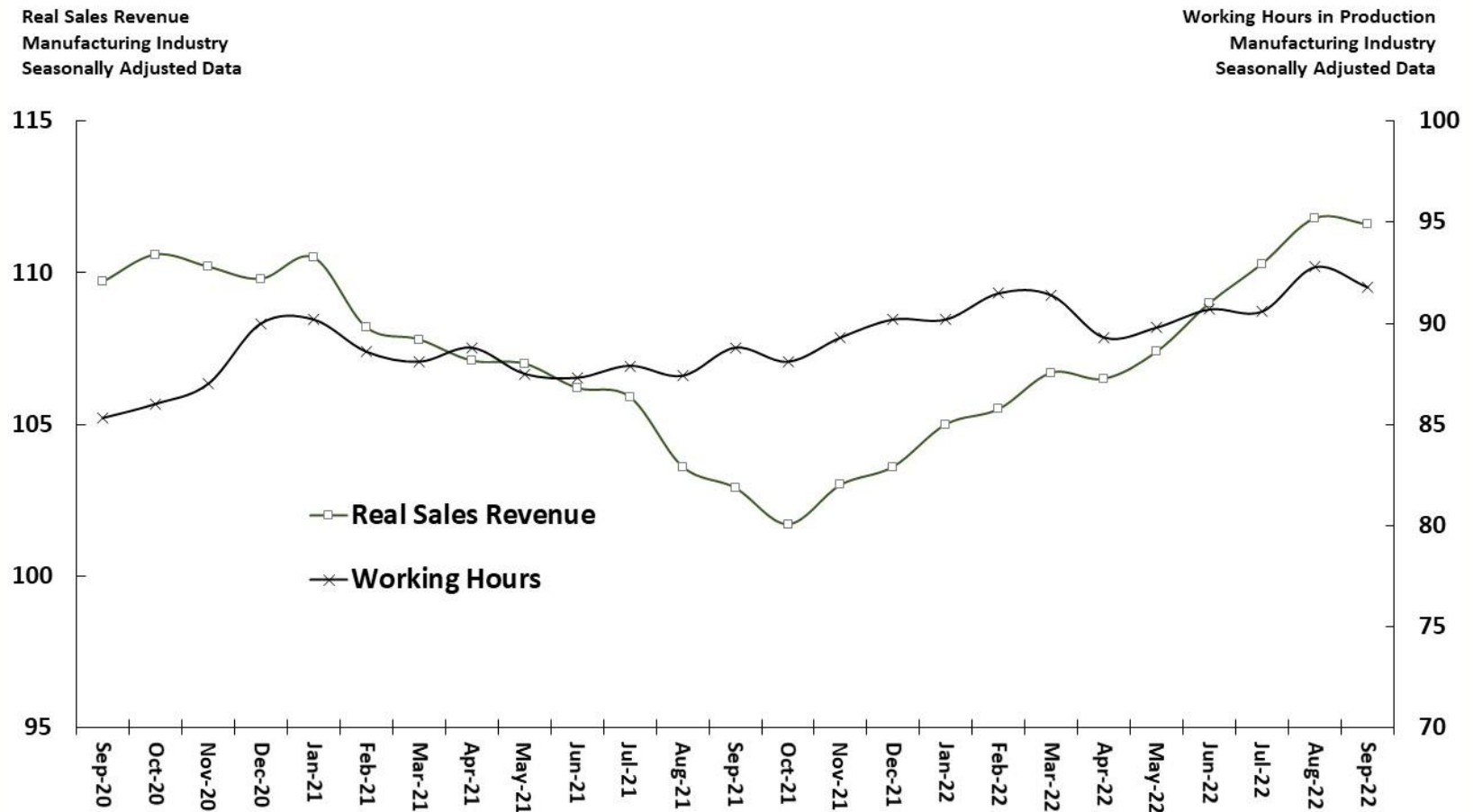
Total Retail Sales
Seasonally Adjusted Data*



Source: ABRAS. * Seasonally adjusted by SPE.

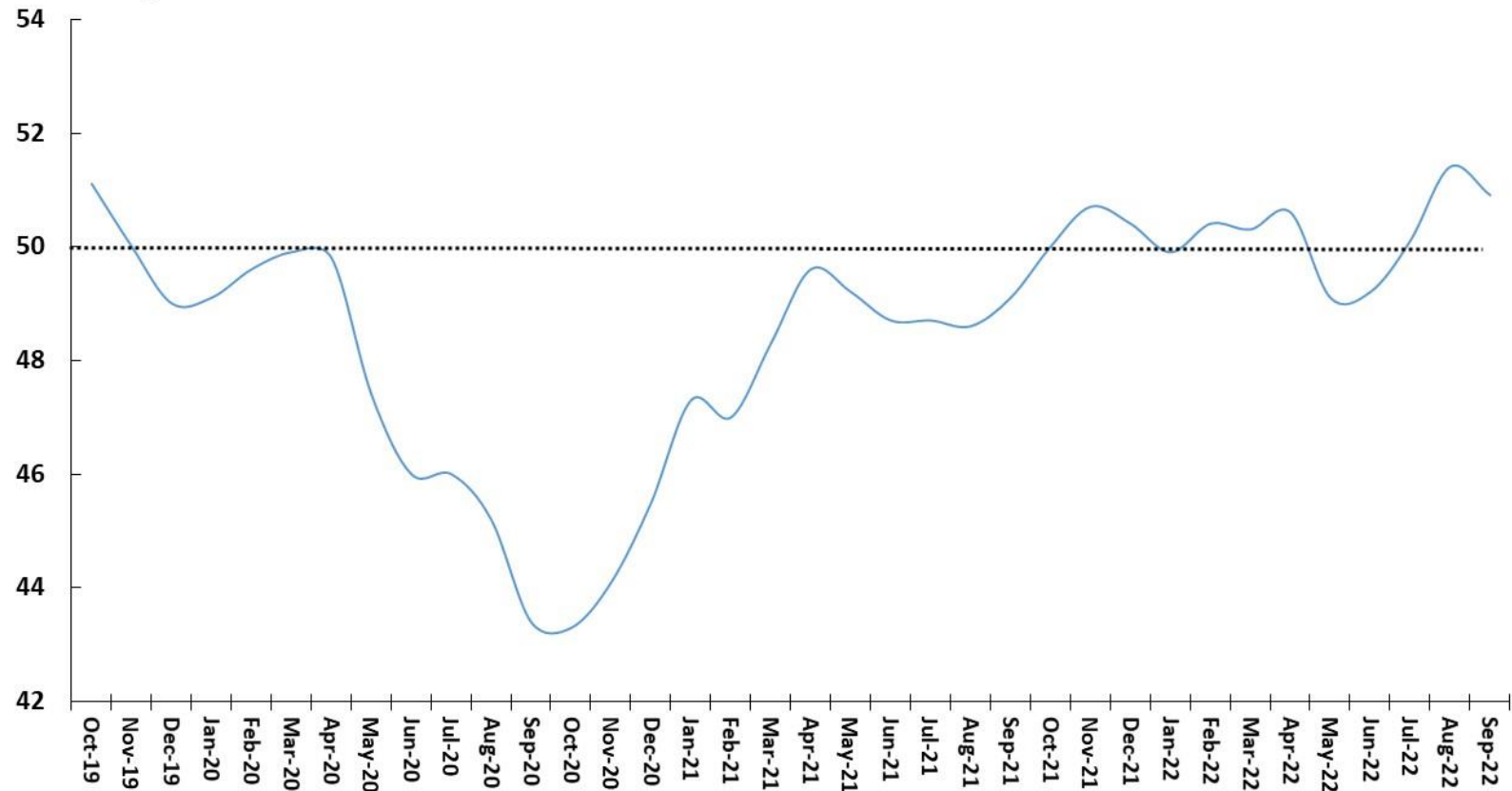
CNI: Industry Real Sales Revenues and Working Hours

ECONOMIC ACTIVITY



Source: CNI.

General Industry Inventories Level
Final Goods - planned x effective



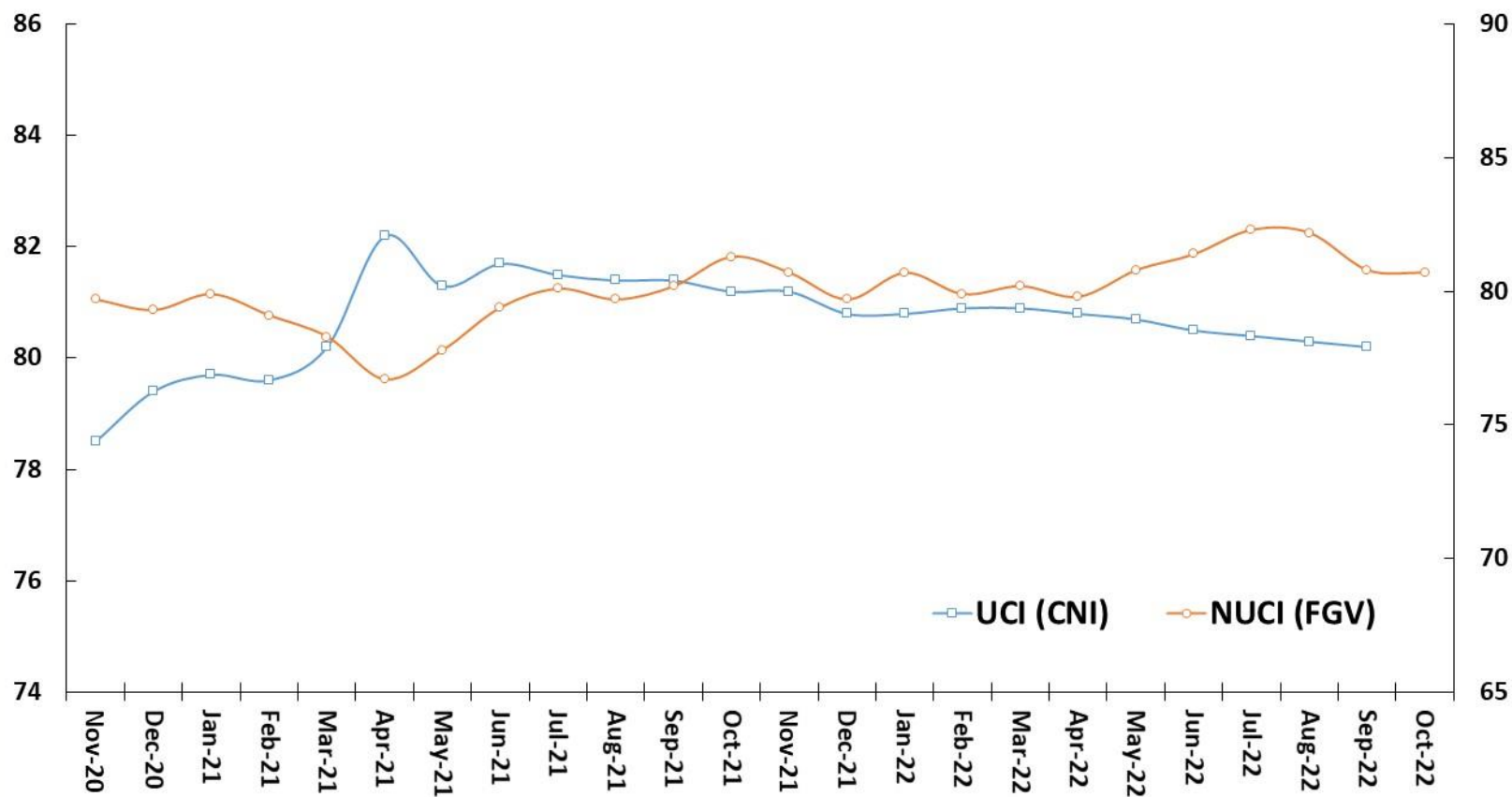
Source: CNI.

Capacity Utilization Rate

ECONOMIC ACTIVITY

Capacity Utilization Rate - UCI (CNI)
Seasonally Adjusted Data

Industry Capacity Utilization Rate – NUCI (FGV)
Seasonally Adjusted Data



Source: CNI and FGV.

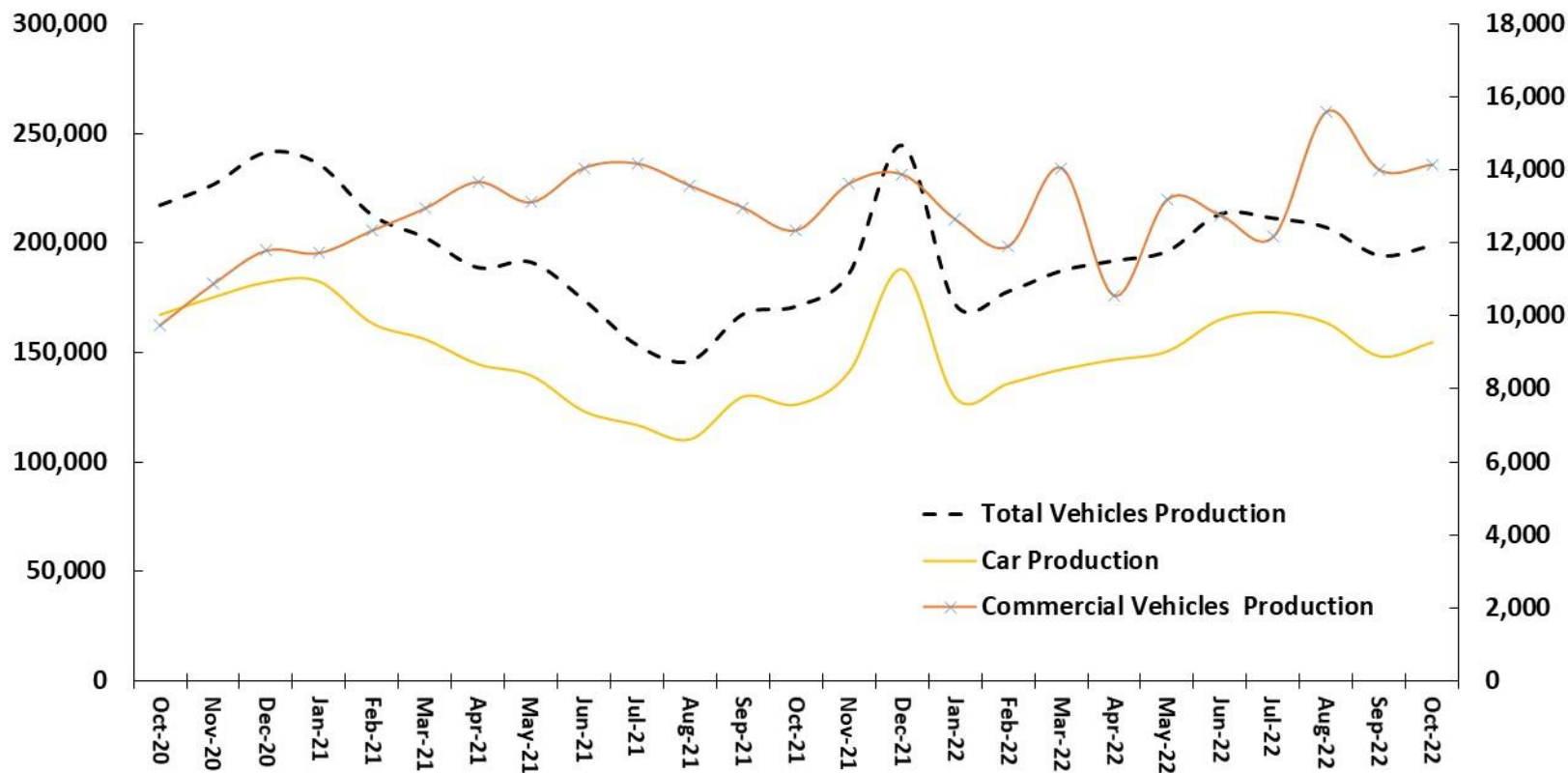


Anfavea: Automotive Sector Production

ECONOMIC ACTIVITY

Total Vehicles and Car Production
Daily Average of Vehicles Monthly Manufactured
Seasonally Adjusted Data*

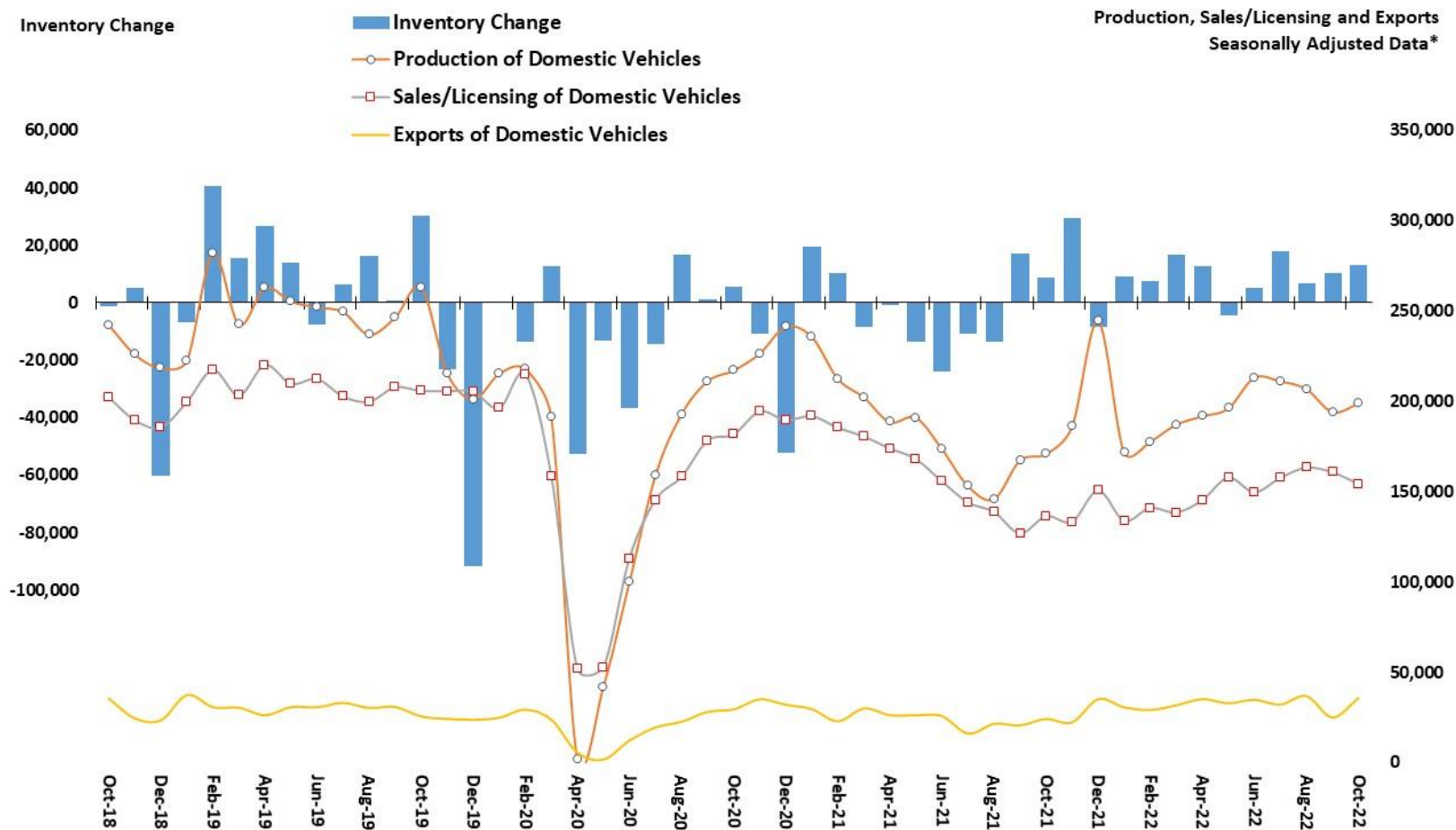
Commercial Vehicles Production
Daily Average of Vehicles Monthly Manufactured
Seasonally Adjusted Data*



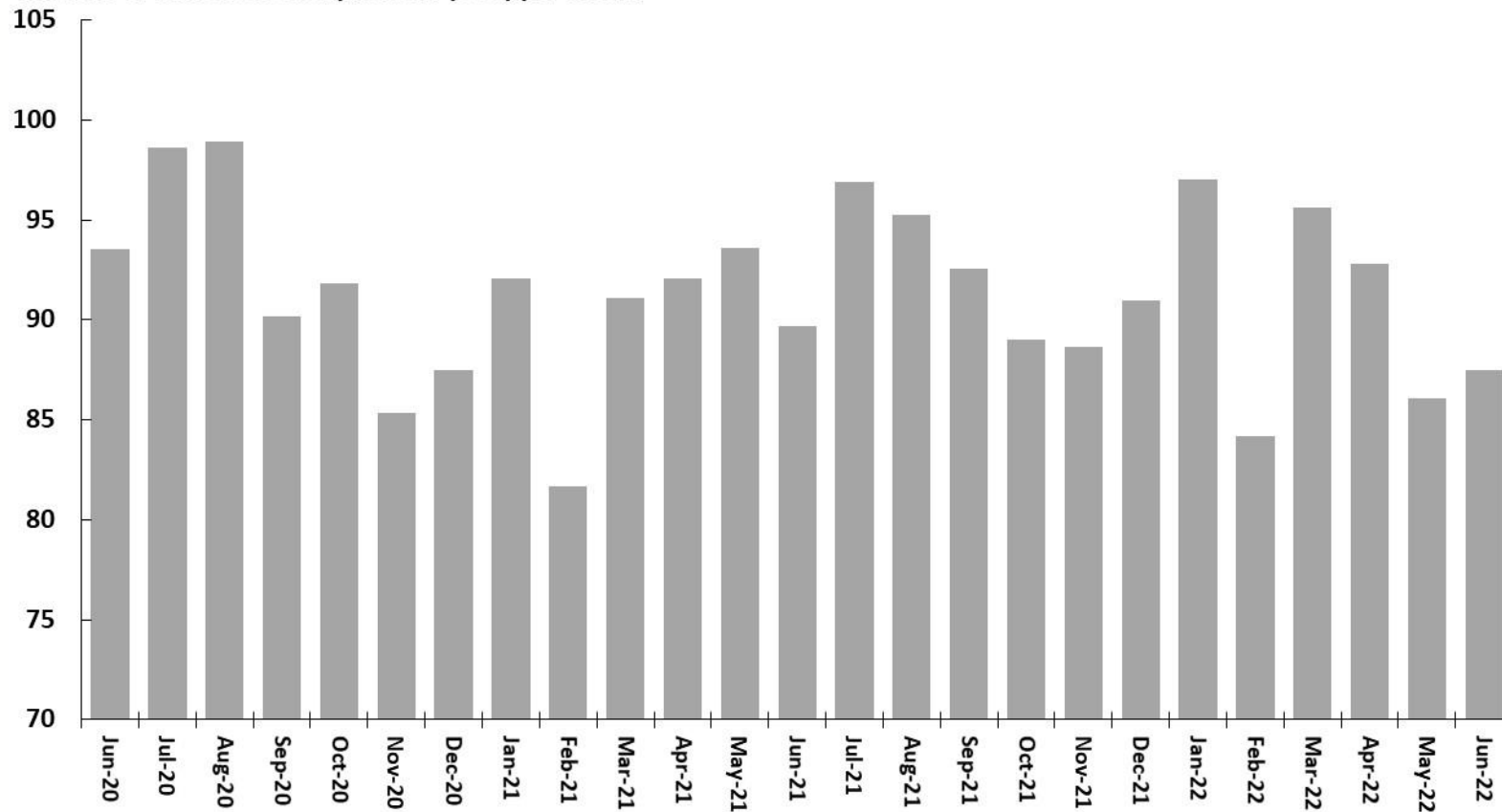
Source: ANFAVEA. * Seasonally adjusted by SPE.

Automotive Sector Production, Sales and Inventory Change

ECONOMIC ACTIVITY



Natural Gas and Oil Production
Millions of Barrels of Oil Equivalent (BOE) per Month



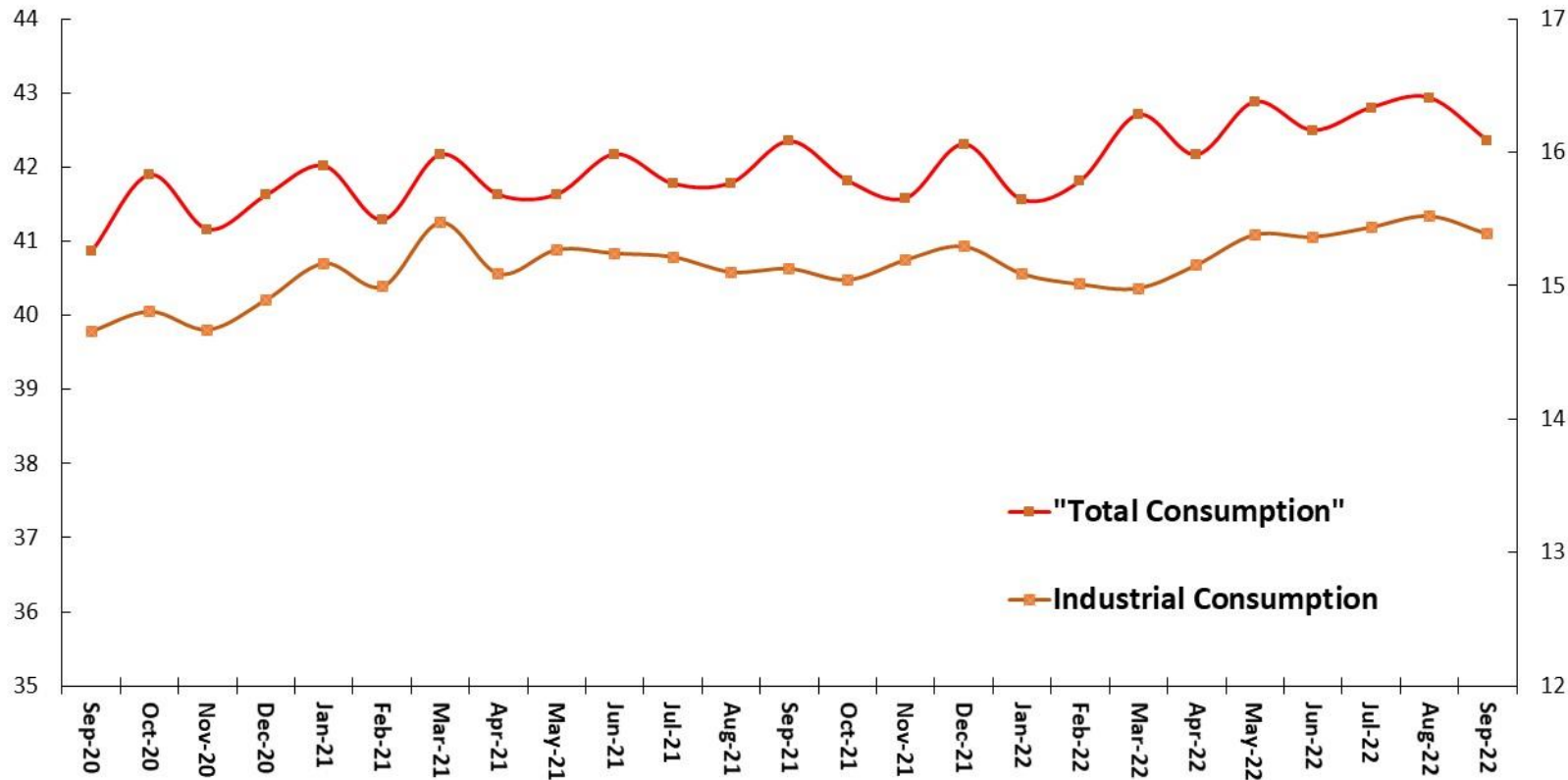
Source: ANP.

ANEEL: Electrical Energy Consumption

ECONOMIC ACTIVITY

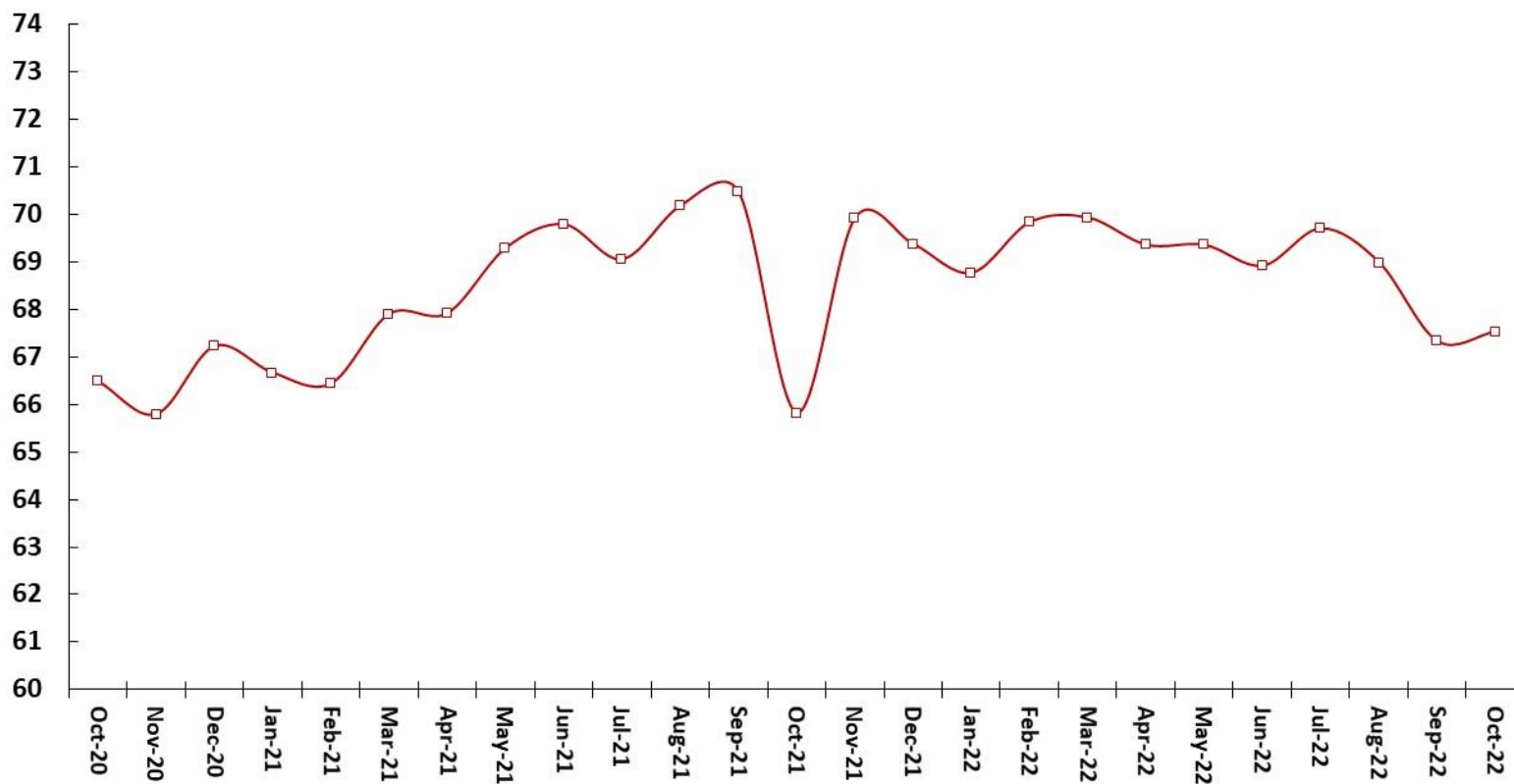
Total Electric Energy Consumption
Millions of MWh
Seasonally Adjusted Data*

Electric Energy Industrial Consumption
Millions of MWh
Seasonally Adjusted Data*



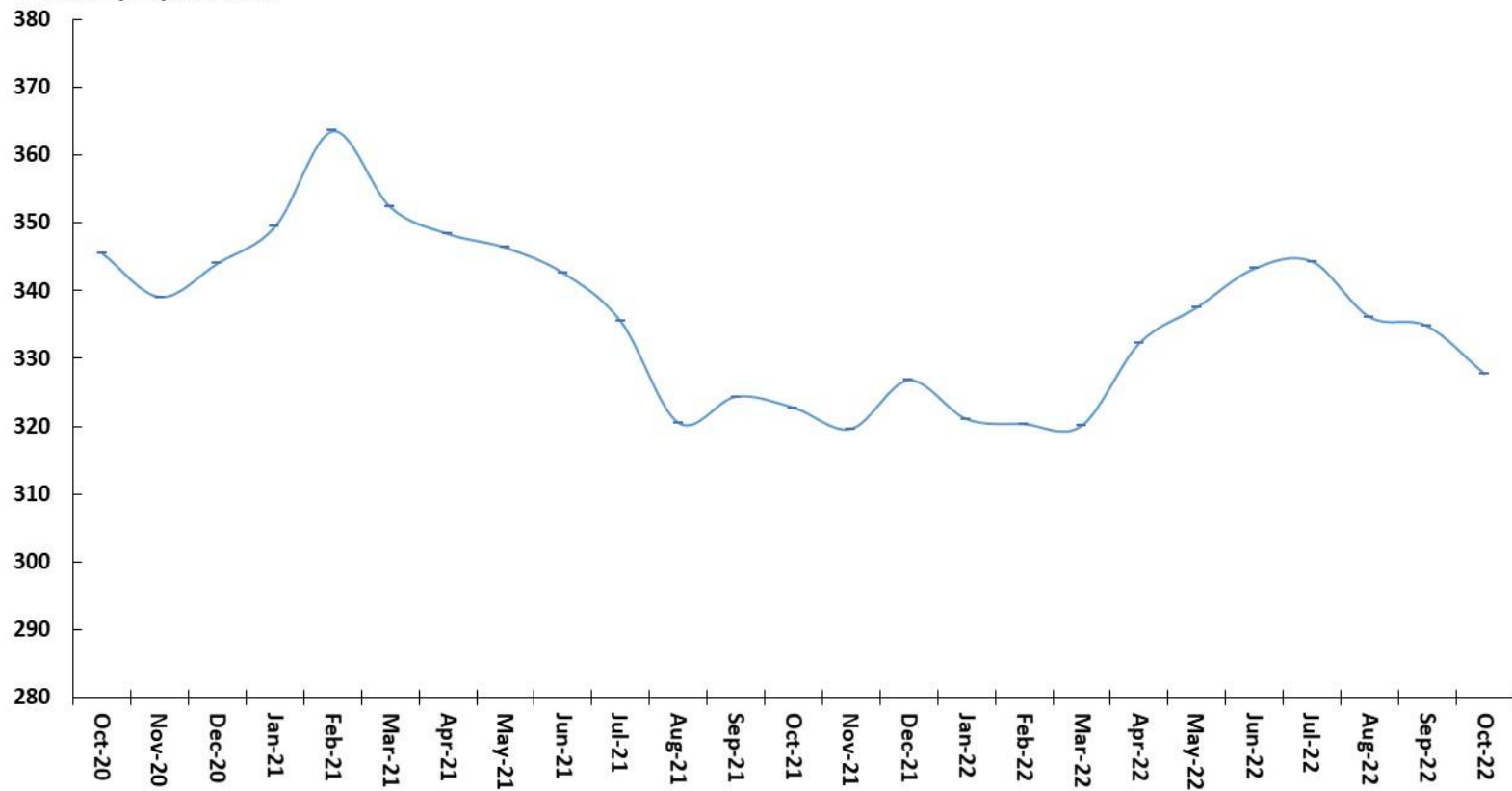
Source: ANEEL. * Seasonally adjusted by SPE/MP.

Electric Energy System Supply
Millions of MWh
Seasonally Adjusted Data*



Source: ONS. * Seasonally adjusted by SPE.

Corrugated Fiberboard Sales
1.000 of Tons
Seasonally Adjusted Data*

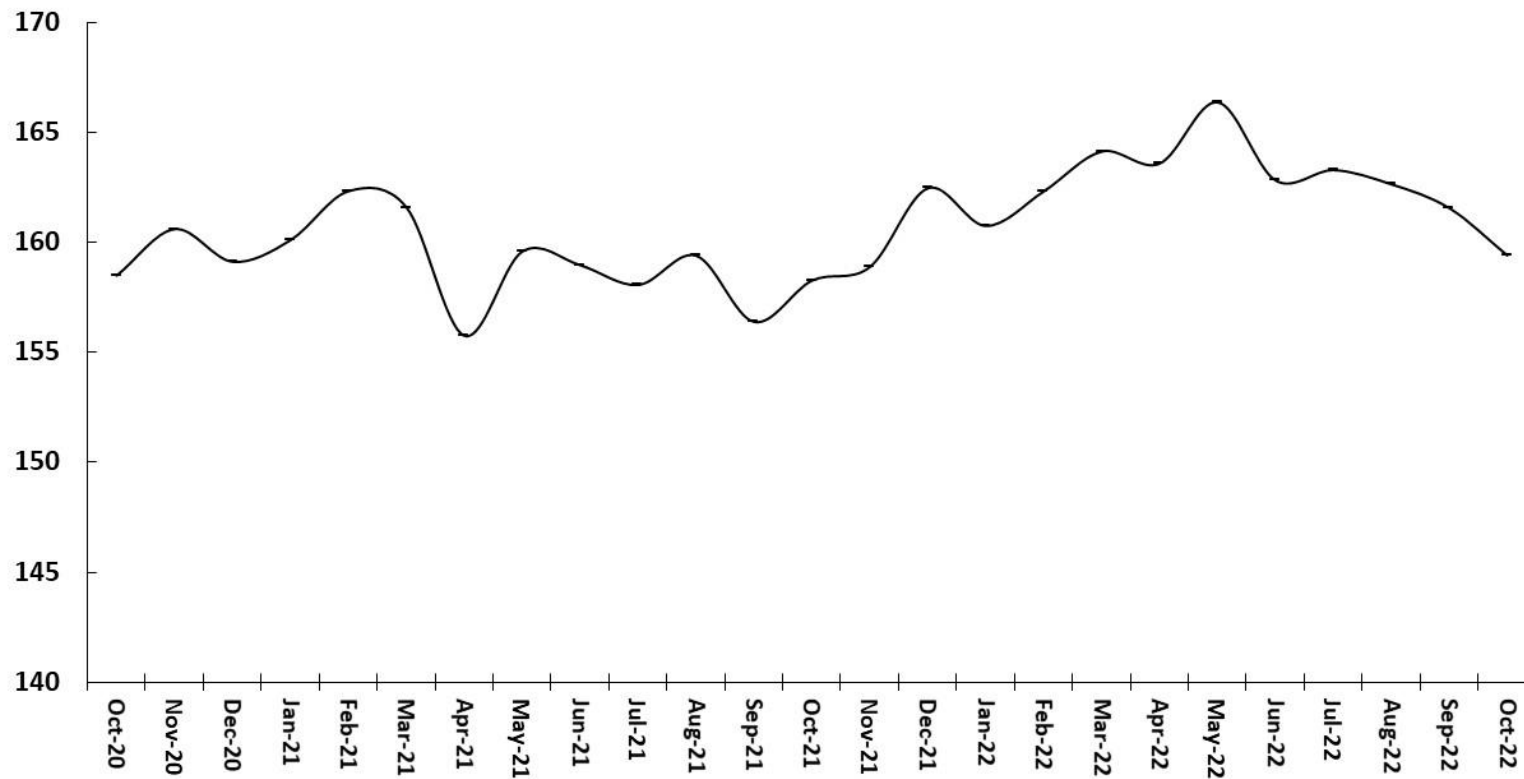


Source ABPO. * Seasonally adjusted by SPE.

ABCR: Heavy Vehicles Road Traffic Index

ECONOMIC ACTIVITY

Heavy Vehicles Road Traffic Index
Index: 1999=100
Seasonally Adjusted Data



Source: ABCR.

Labor market

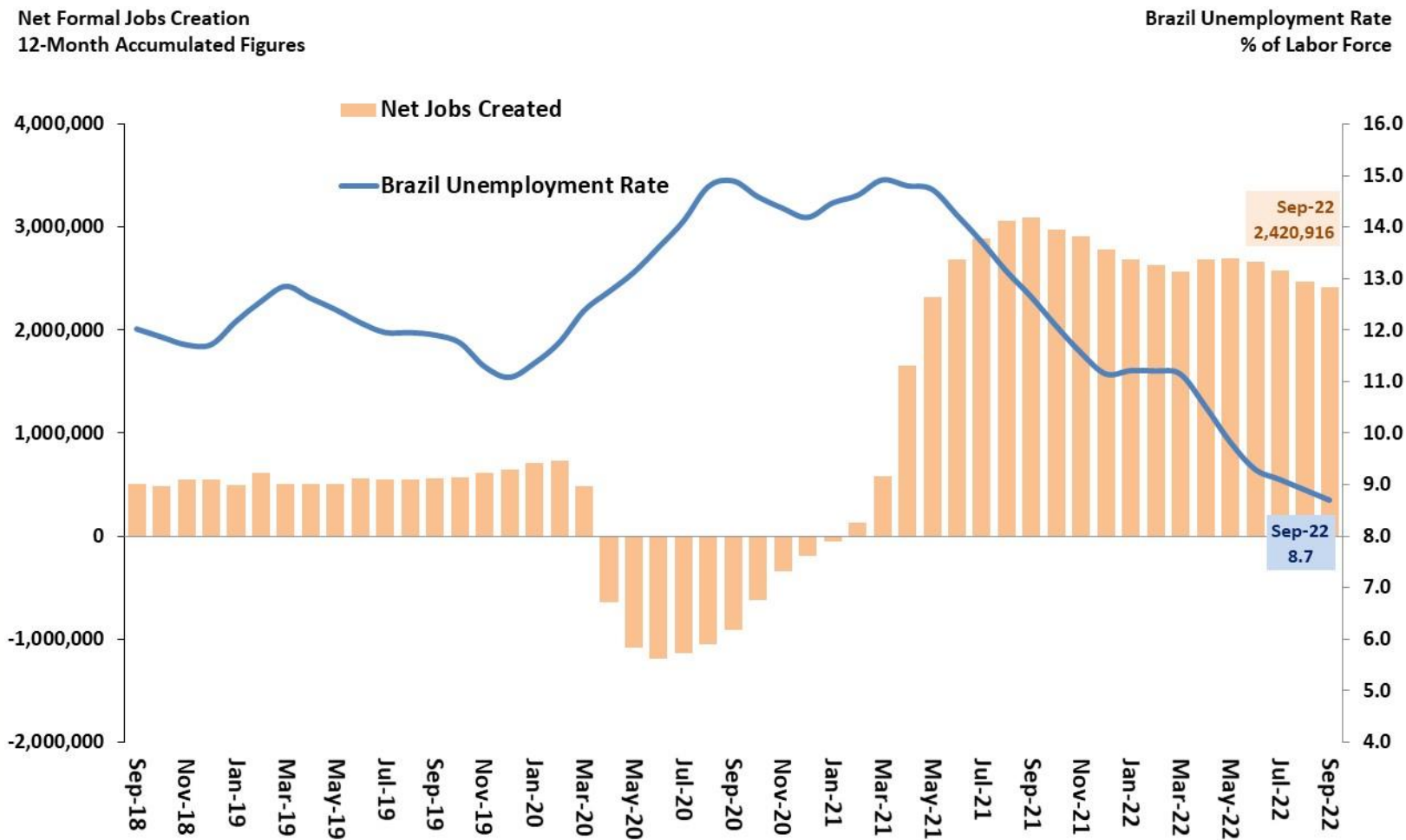
										BCB/Focus:		11/11/22	
Employment Indicators	September-22	2020 average	2021 average	set/yy (12-months moving average)	Sep-22	chg.% 2021 / 2020	chg.% ago/yy- ago/yy	chg.% set/yy- set/yy	chg.% YTD 2020 / YTD 2019	chg.% set/yy - 2019 average	2022	2023	2024
Brasil (PNADC, IBGE)													
Unemployment Rate % Labor Force		13.5	13.5	10.4	8.7	0.0 pp	-4.2 pp	-3.9 pp	-4.1 pp	-4.8 pp	9.95	10.2	10.0
Working Age Population (in thousands)		169,917	171,551	172,741	173,457	1.0%	0.9%	0.9%	0.9%	1.1%			
Labor Force (in thousands)		101,254	104,652	107,854	108,729	3.4%	2.9%	2.2%	4.1%	3.9%			
Employed Population (in thousands)		87,638	90,549	96,651	99,269	3.3%	7.9%	6.8%	9.1%	9.6%			
Unemployed Population (in thousands)		13,617	14,103	11,202	9,460	3.6%	-30.1%	-29.7%	-26.4%	-32.9%			
Average Real Earnings (PNADC, IBGE)	September-22	2020 average	2021 average	set/yy (12-months moving average)	Sep-22	chg.% 2021 / 2020	chg.% ago/yy- ago/yy	chg.% set/yy- set/yy	chg.% YTD 2020 / YTD 2019	chg.% set/yy - 2019 average			
real values (in R\$ of last month)													
Employed Population		2,921	2,747	2,633	2,737	-5.9%	-0.7%	2.5%	-5.5%	-0.4%			
Formal Contract		2,730	2,608	2,318	0	-4.5%	-1.0%	-100.0%	-14.6%	-100.0%			
Informal Contract		1,866	1,761	1,575	0	-5.6%	1.8%	-100.0%	-13.7%	-100.0%			
Self-employed		2,133	2,082	2,210	3,795	-2.4%	1.9%	85.2%	8.1%	82.3%			
Public Sector		4,267	4,120	3,752	3,795	-3.4%	-7.7%	-3.9%	-11.6%	-7.9%			
Real Wage Bill (in R\$ millions of last months)		251,047	243,955	250,432	266,731	-2.8%	7.7%	9.4%	3.5%	9.3%			
Formal Jobs (CAGED, MTE)	September-22	2020	2021	ago/yy accum. in 12- months	set/yy accum. in 12-months	Year-To- Date	Sep-22	chg.% 2021 / 2020	chg.% set/yy accum.12-m / 2019	chg.% YTD 2020 / YTD 2019			
Million people													
Net Formal Jobs Creation		-193	2,777	2,473	2,421	2,148	278	-1542.2%	-12.8%	85.8%			
Job Openings		15,625	20,946	22,759	22,794	17,614	1,927	34.1%	8.8%	111.7%			
Job Separations		15,818	18,169	20,286	20,373	15,467	1,648	14.9%	12.1%	116.6%			

Macroeconomic Parameters						
Year	Labor Force	Formal Jobs in Private Sector				
		Employed Population	Earnings		Wage Bill	
			Nominal	Real	Nominal	Real
	Chg. % accum. In 4-trimesters					
2016	1.32	-4.28	7.65	-1.03	3.04	-5.26
2017	1.70	-2.76	5.90	2.36	2.99	-0.46
2018	1.20	-0.58	3.43	-0.22	2.84	-0.79
2019	1.77	1.43	3.35	-0.37	4.83	1.06
2020	-5.88	-6.91	5.84	2.54	-1.51	-4.56
2021	4.35	2.56	2.70	-5.10	5.37	-2.75
2022	3.42	9.38	8.61	-0.71	18.86	8.74
2023	2.69	4.40	6.54	2.04	11.18	6.50
2024	2.02	2.54	4.62	1.01	7.27	3.58
2025	2.17	2.47	4.06	1.03	6.63	3.53
2026	2.29	2.86	4.39	1.36	7.37	4.25

Source: SPE/ME. Macroeconomic Parameters, November-2022.

Unemployment Rate and Net Formal Job Creation

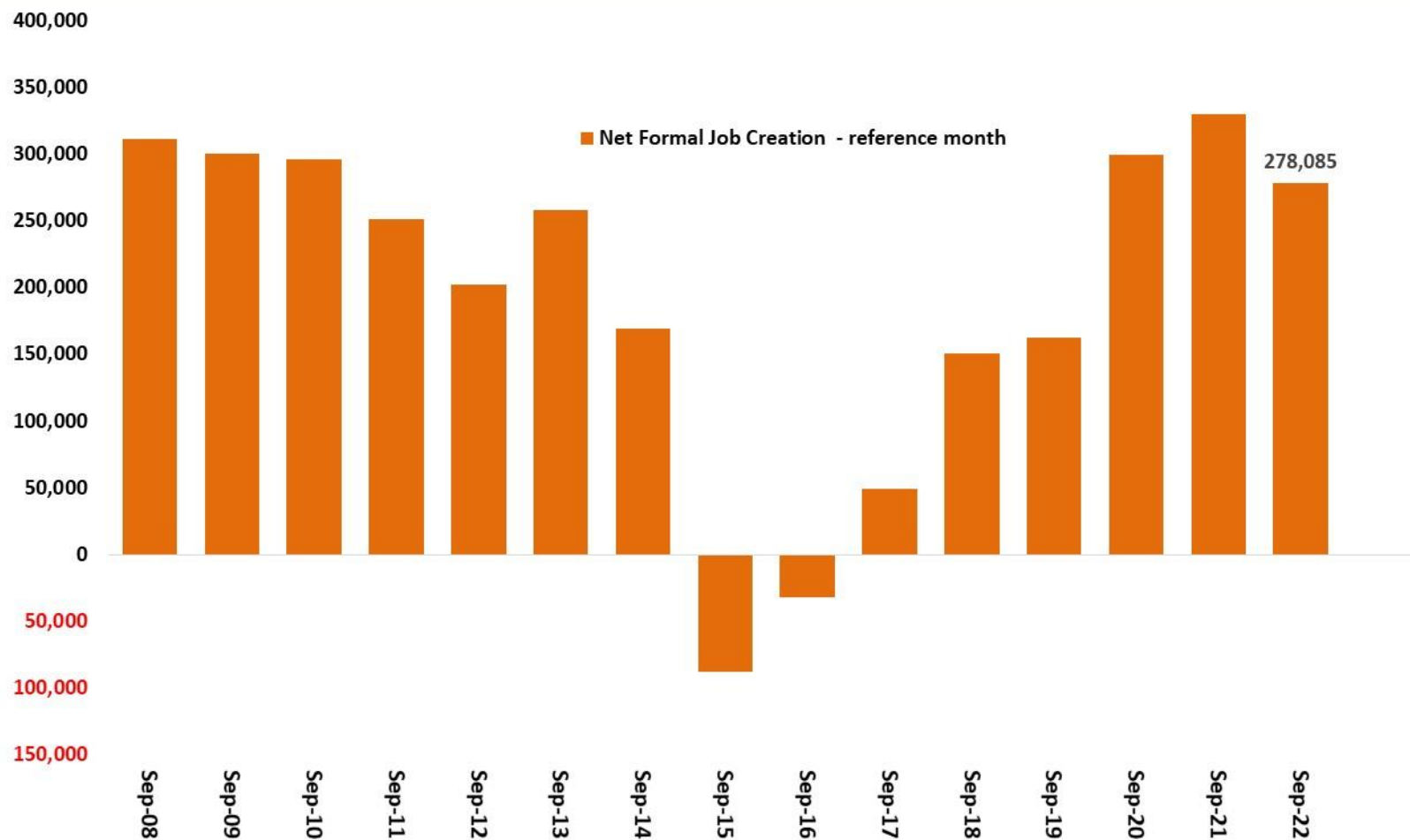
LABOR MARKET



Sources: IBGE - PNADC and ME-CAGED (adjusted data).

Net Formal Job Creation on Month

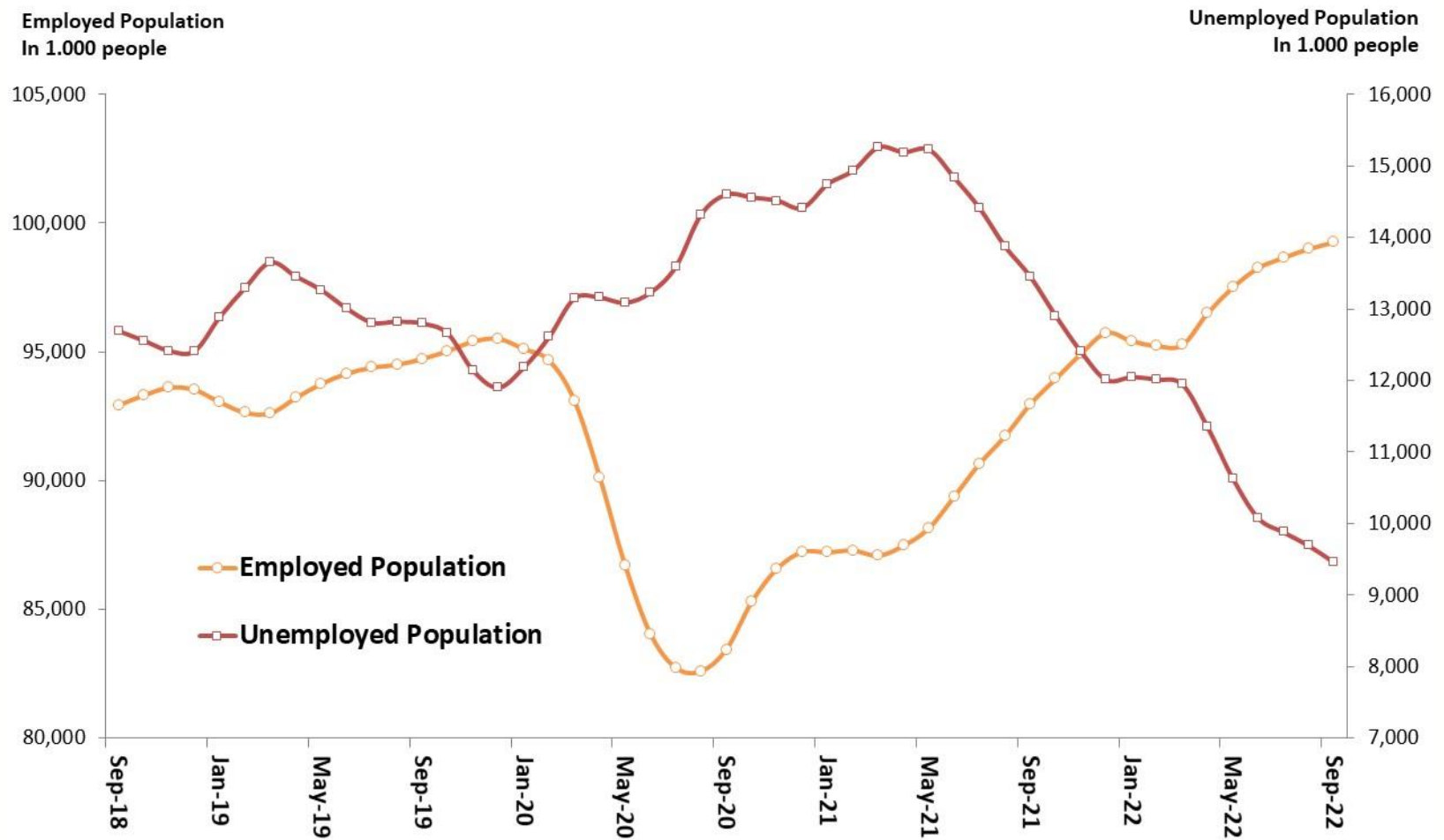
LABOR MARKET



Source: ME-CAGED (adjusted data).

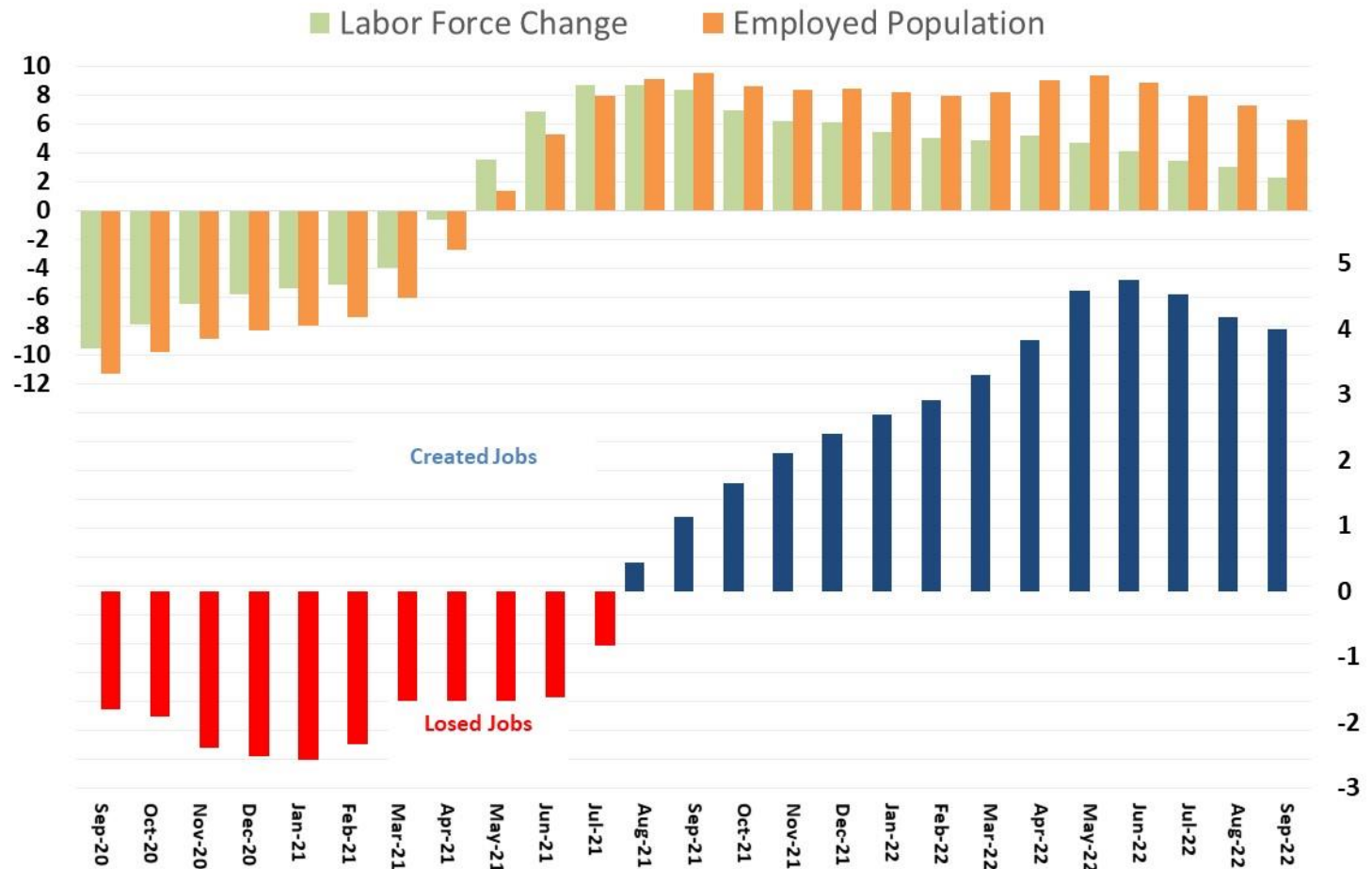
Employed Population and Labor Force Evolution

LABOR MARKET



Source: IBGE - PNADC.

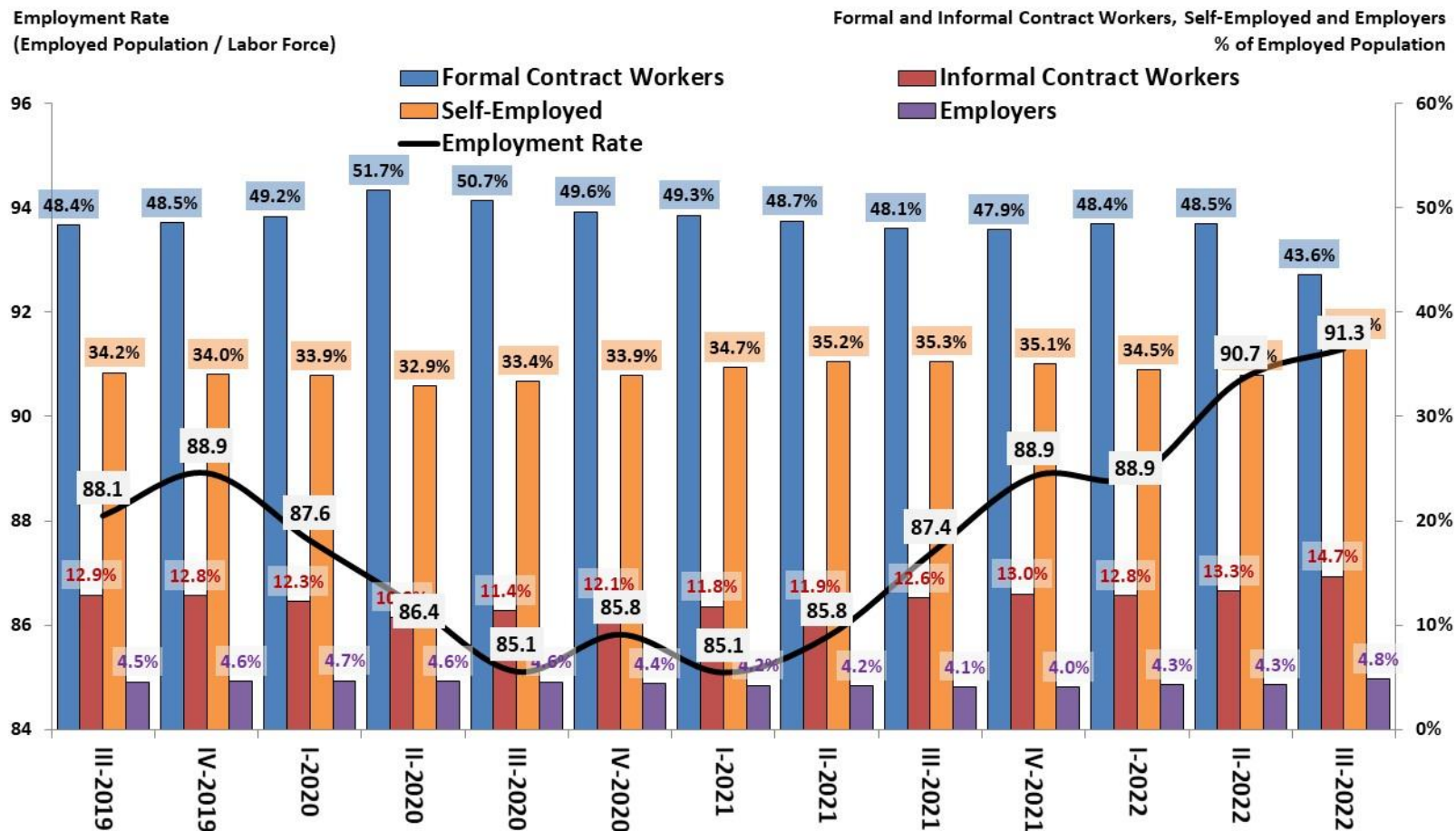
12-Month Total Unemployment Increase Decomposition



Source: IBGE - PNADC.

Labor Market Evolution by Employment Type

LABOR MARKET

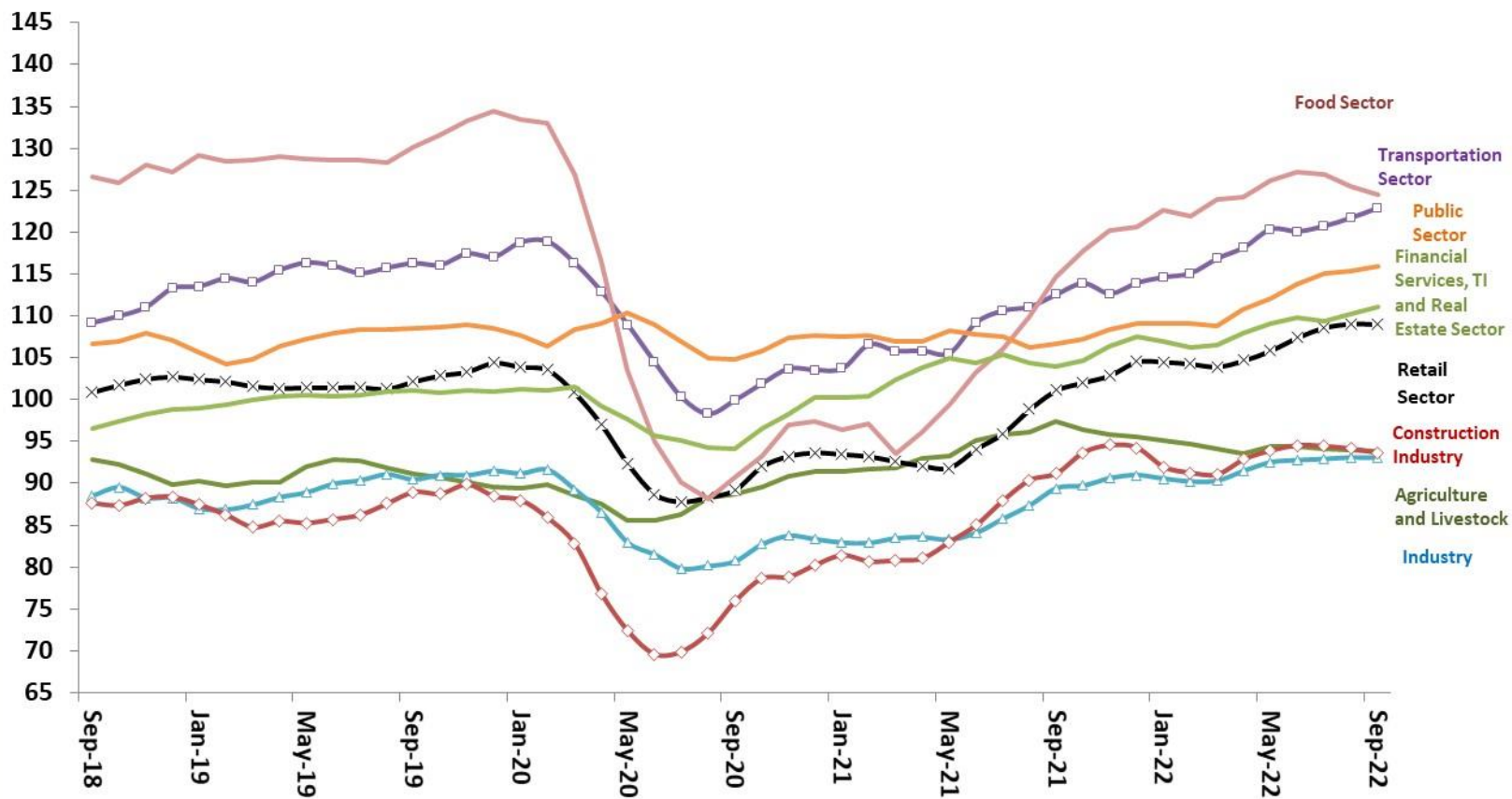


Source: IBGE - PNADC. Note: Formal contract includes both private and public sectors and Self-Employed includes home-workers and family-workers.

Employment by Sector of Activity

LABOR MARKET

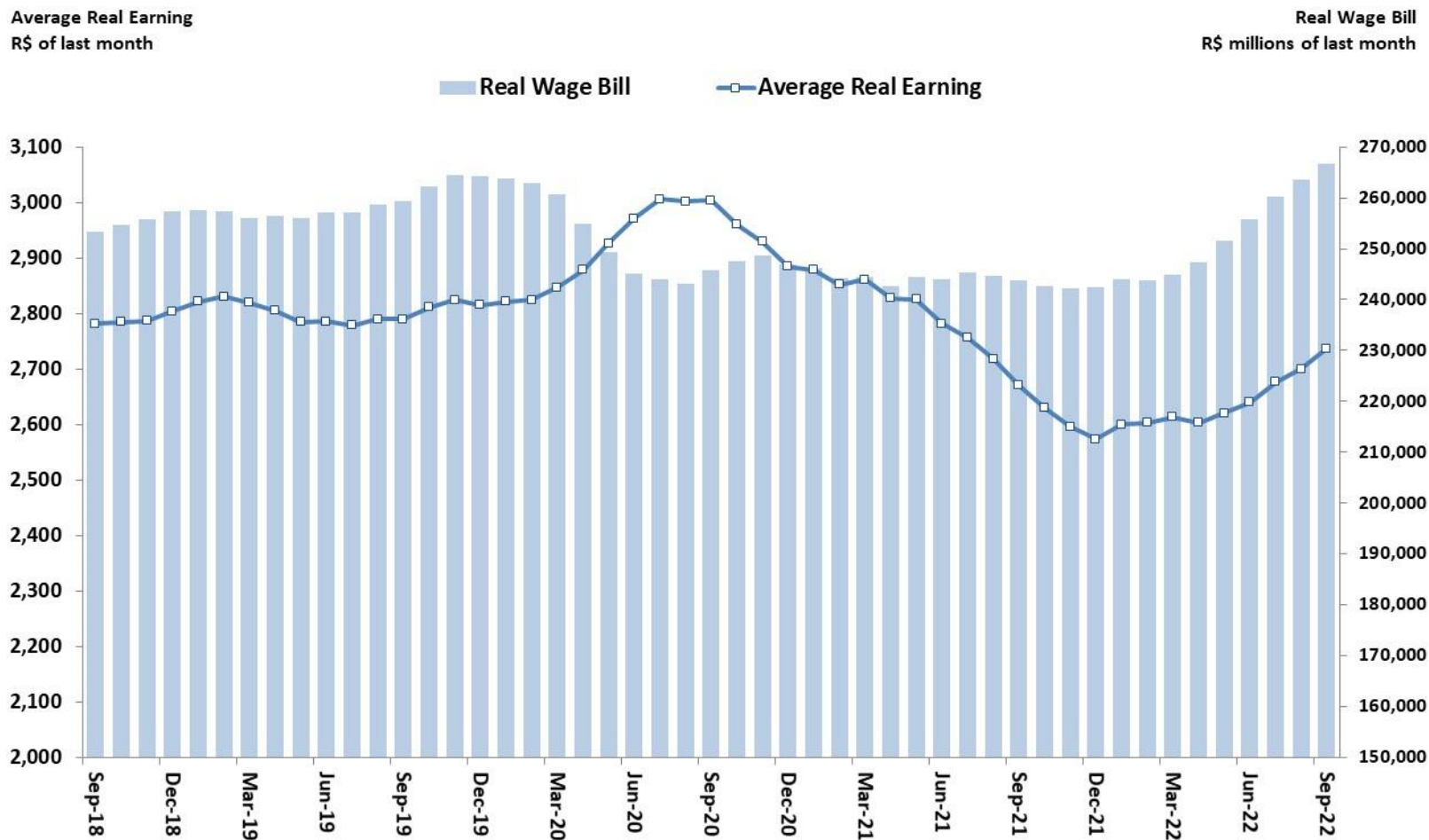
Employed Population by Sectors of Activity
Index: 2013 = 100



Source: IBGE - PNADC.

Real Wage Bill and Average Real Earning

LABOR MARKET



Source: IBGE - PNADC.

Inflation

Inflation – Main Indices

INFLATION

													BCB/Focus: 11/11/22		
Inflation Index	Last update (m / y)	2020	2021	Accum. In 12- months	YTD Wednesday	YTD Thursday	(m-2/y-1)	(m-1/y-1)	(m/y-1)	(m-2/y)	(m-1/y)	(m / y)	2022	2023	2024
IPCA Inflation Target (CMN)		4.0%	3.8%	3.5%									3.50%	3.25%	3.00%
Consumer Price Index IPCA (IBGE)	Oct-22	4.52%	10.06%	6.47%	8.24%	4.70%	0.87%	1.16%	1.25%	-0.36%	-0.29%	0.59%	5.82%	4.94%	3.50%
IPCA core (By exclusion food and energy - Ex2)	Oct-22	2.8%	7.3%	8.3%	5.8%	6.8%	0.5%	1.0%	1.0%	0.5%	0.5%	0.7%			
Food and Beverages	Oct-22	14.1%	7.9%	11.2%	7.1%	10.3%	1.4%	1.0%	1.2%	0.2%	-0.5%	0.7%			
Housing	Oct-22	5.3%	13.0%	1.1%	11.1%	-0.6%	0.7%	2.6%	1.0%	0.1%	0.6%	0.3%			
Household Articles	Oct-22	6.0%	12.1%	10.5%	9.4%	7.9%	1.0%	0.9%	1.3%	0.4%	-0.1%	0.4%			
Apparel	Oct-22	-1.1%	10.3%	18.5%	7.1%	15.0%	1.0%	0.3%	1.8%	1.7%	1.8%	1.2%			
Transportation	Oct-22	1.0%	21.0%	1.5%	16.4%	-2.3%	1.5%	1.8%	2.6%	-3.4%	-2.0%	0.6%			
Health and Personal Care	Oct-22	1.5%	3.7%	9.8%	3.5%	9.6%	0.0%	0.4%	0.4%	1.3%	0.6%	1.2%			
Personal Expenses	Oct-22	1.0%	4.7%	8.1%	3.6%	6.9%	0.6%	0.6%	0.8%	0.5%	1.0%	0.6%			
Education	Oct-22	1.1%	2.8%	7.3%	2.8%	7.3%	0.3%	0.0%	0.1%	0.6%	0.1%	0.2%			
Communication	Oct-22	3.4%	1.4%	-0.9%	1.0%	-1.4%	0.2%	0.1%	0.5%	-1.1%	-2.1%	-0.5%			
Consumer Price Index INPC (IBGE)	Oct-22	2.07%	3.43%	6.46%	8.45%	4.81%	0.88%	1.20%	1.16%	-0.31%	-0.32%	0.47%			
Consumer Price Index IPCA - 15 (IBGE)	Oct-22	4.23%	10.42%	6.85%	8.30%	4.80%	0.89%	1.14%	1.20%	-0.73%	-0.37%	0.16%			
General Price Index IGP-10 (FGV)	Nov-22	-0.42%	7.92%	5.57%	17.47%	18.00%	-0.37%	-0.31%	1.19%	-0.90%	-1.04%	-0.59%			
General Price Index IGP-M (FGV)	Oct-22	-0.53%	7.55%	6.52%	16.75%	5.58%	0.66%	-0.64%	0.64%	-0.70%	-0.95%	-0.97%	6.32%	4.50%	4.00%
General Price Index IGP-DI (FGV)	Oct-22	-0.42%	7.10%	5.56%	2.91%	4.87%	-0.14%	-0.55%	1.60%	-0.55%	-1.22%	-0.62%			
Consumer Price Subindex IPC/Br-DI	Oct-22	3.22%	4.34%	5.06%	0.27%	3.34%	0.71%	1.43%	0.77%	-0.57%	0.02%	0.69%			
Construction Cost Subindex INCC-DI	Oct-22	4.25%	3.83%	9.89%	0.89%	8.78%	0.46%	0.51%	0.86%	0.09%	0.09%	0.12%			
Wholesale Price Subindex IPA-DI	Oct-22	-2.52%	8.73%	5.20%	3.92%	4.82%	-0.42%	-1.17%	1.90%	-0.63%	-1.68%	-1.04%			
IPA-DI Industry	Oct-22	1.22%	9.16%	4.50%	3.25%	4.71%	3.93%	-0.04%	-0.06%	0.67%	-1.20%	-1.79%			
IPA-DI Agriculture	Oct-22	-12.34%	7.52%	5.49%	4.20%	4.86%	-2.11%	-1.64%	2.72%	-1.14%	-1.88%	-0.73%			
São Paulo Consumer Price Index IPC RMSP (FIPE)	Oct-22	2.28%	2.99%	7.62%	8.32%	6.24%	1.44%	1.13%	1.00%	0.12%	0.12%	0.45%			

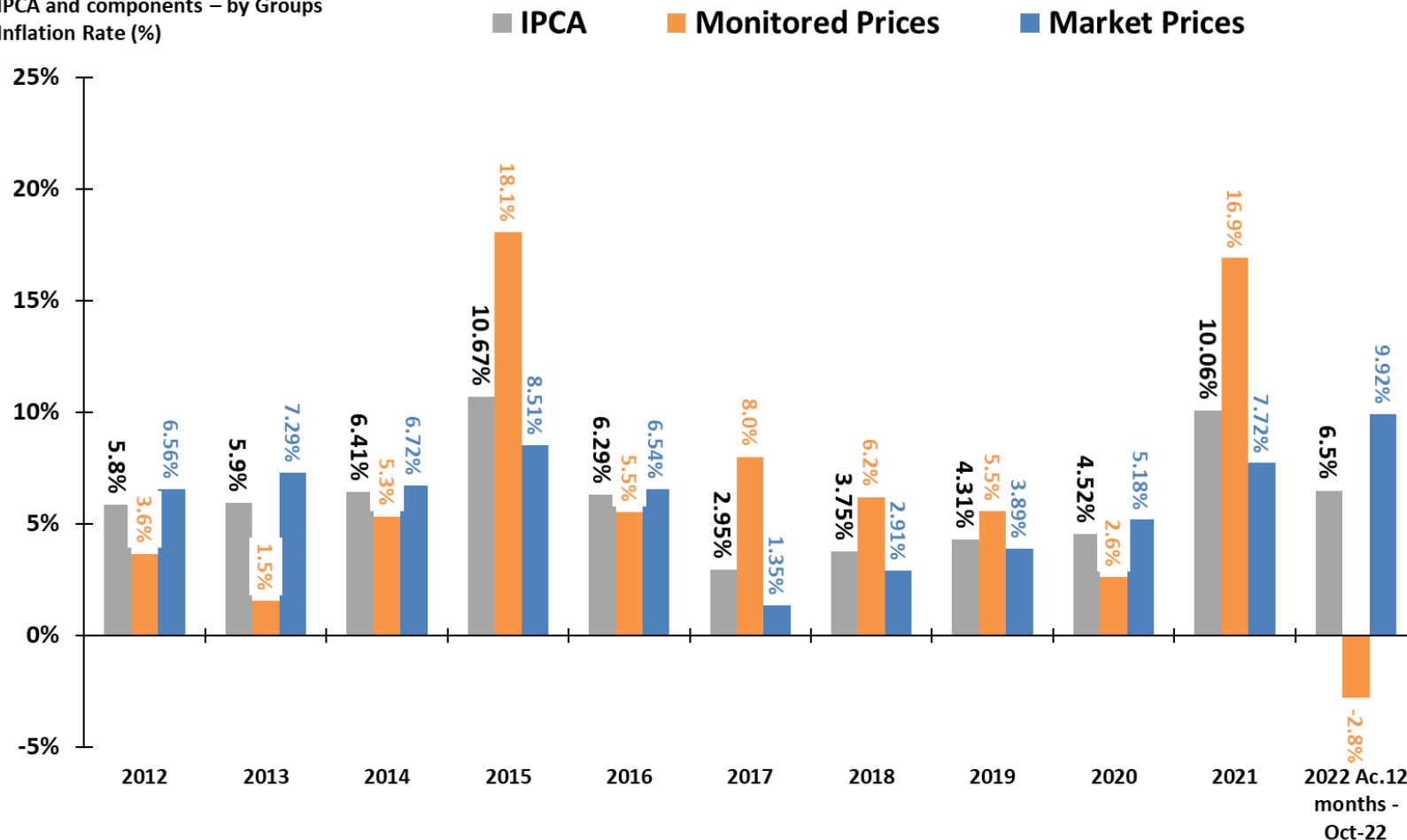
Macroeconomic Parameters						
Year	Inflation					
	IPCA		INPC		IGP-DI	
	Annual Average	Annual Accum.	Annual Average	Annual Accum.	Annual Average	Annual Accum.
	Chg. %					
2016	8.74	6.29	9.32	6.58	10.19	7.18
2017	3.45	2.95	2.97	2.07	0.96	-0.42
2018	3.66	3.75	2.87	3.43	5.81	7.10
2019	3.73	4.31	3.75	4.48	6.05	7.70
2020	3.21	4.52	3.61	5.45	13.05	23.08
2021	8.30	10.06	8.99	10.16	27.30	17.74
2022	9.29	5.85	9.44	6.00	10.44	6.11
2023	4.42	4.60	4.65	4.90	2.74	4.55
2024	3.57	3.00	3.67	3.00	4.35	4.19
2025	3.00	3.00	3.00	3.00	4.06	3.98
2026	3.00	3.00	3.00	3.00	3.85	3.71

Source: SPE/ME. Macroeconomic Parameters, November-2022.

Relative Prices Convergence in the Consumer Price Index

INFLATION

IPCA and components – by Groups
Inflation Rate (%)

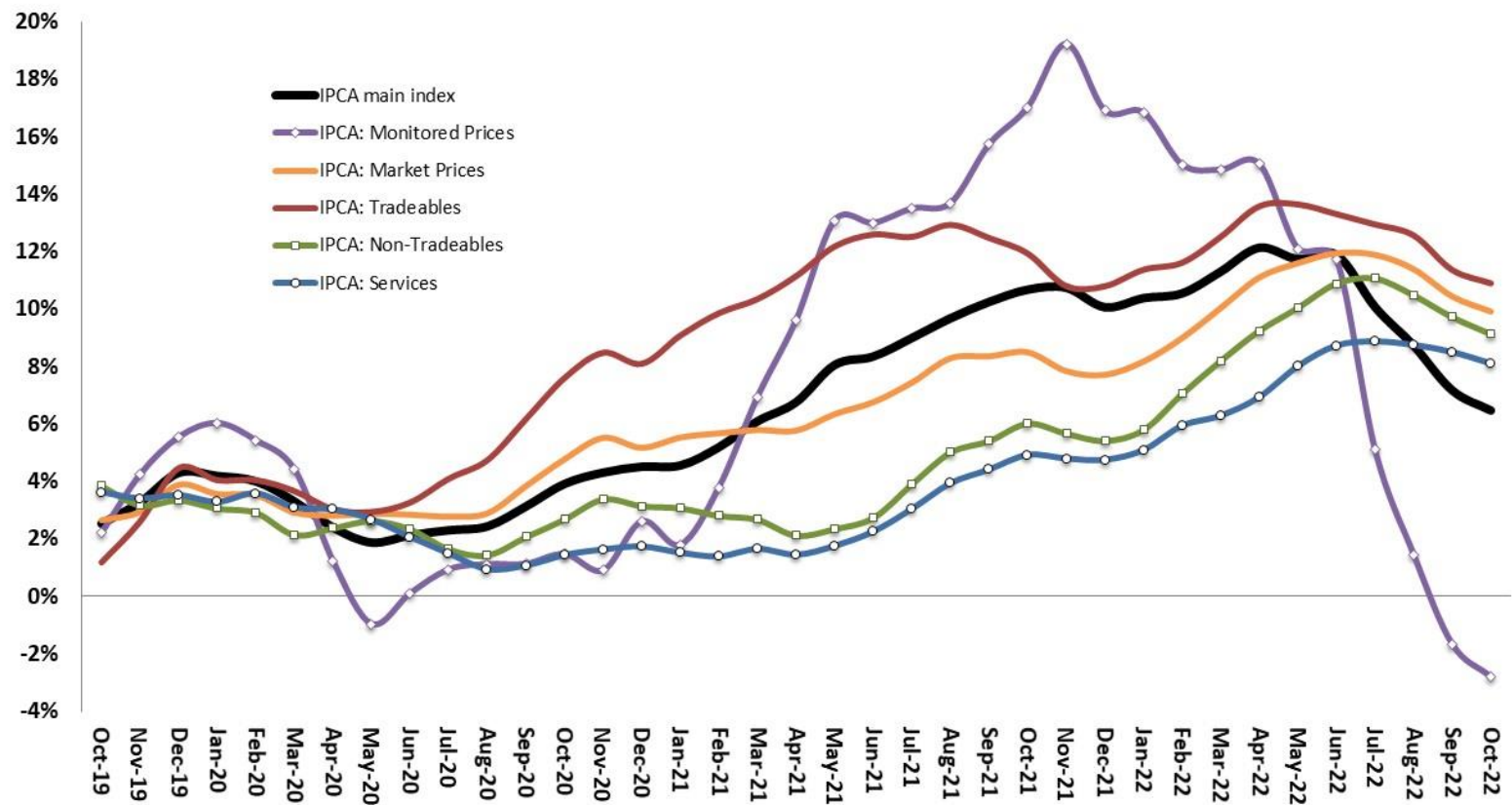


Source: IBGE.

Consumer Price Index (IPCA) and Subindices

INFLATION

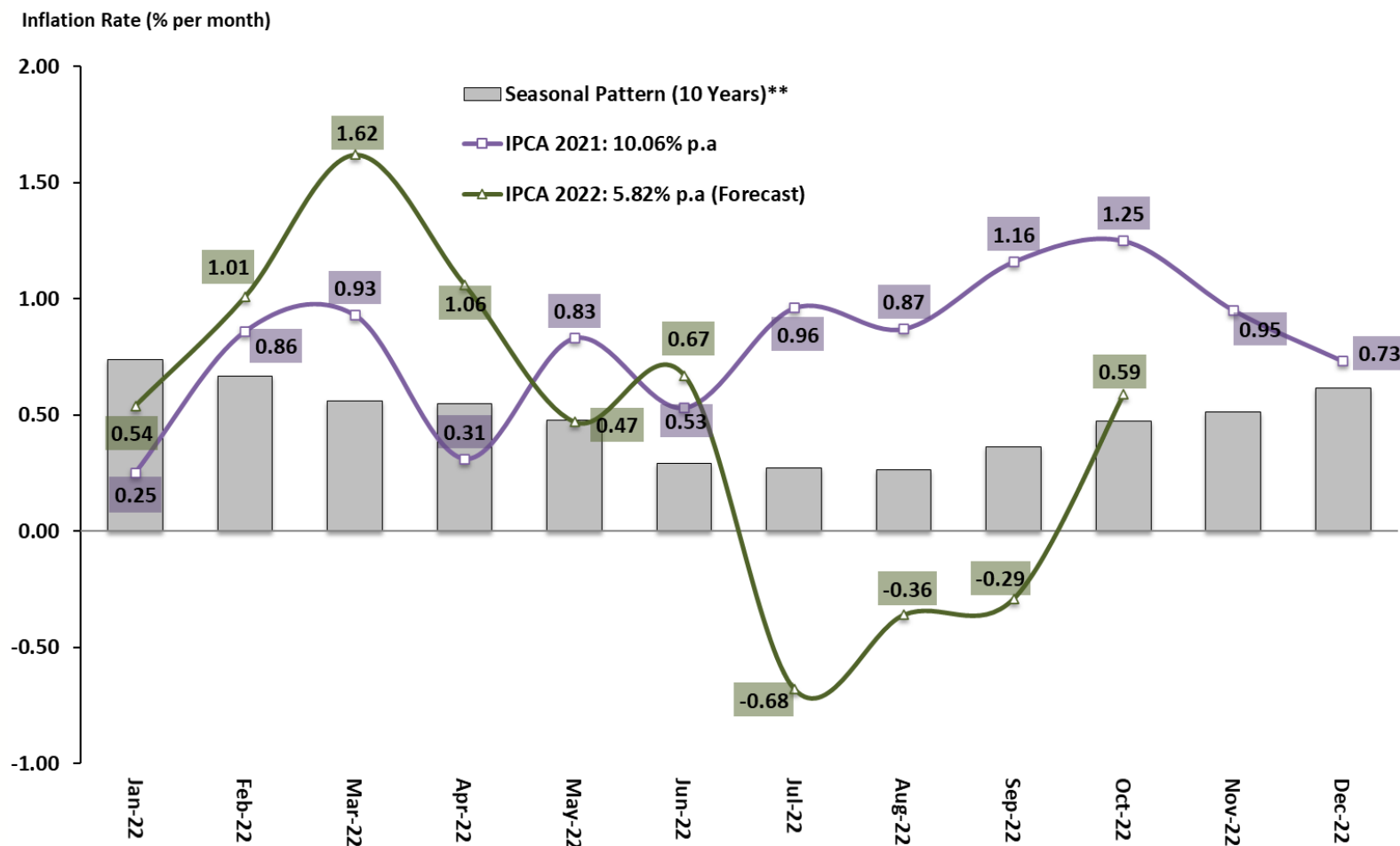
Consumer Price Index and Subindexes
12-months accumulated rate (%)



Source: IBGE

Consumer Price Index (IPCA) and Seasonal Pattern

INFLATION



Sources: IBGE and Central Bank of Brazil. * Annual Forecast: Central Bank of Brazil, Focus Survey, 11/11/2022 *Seasonal pattern estimated by SPE.

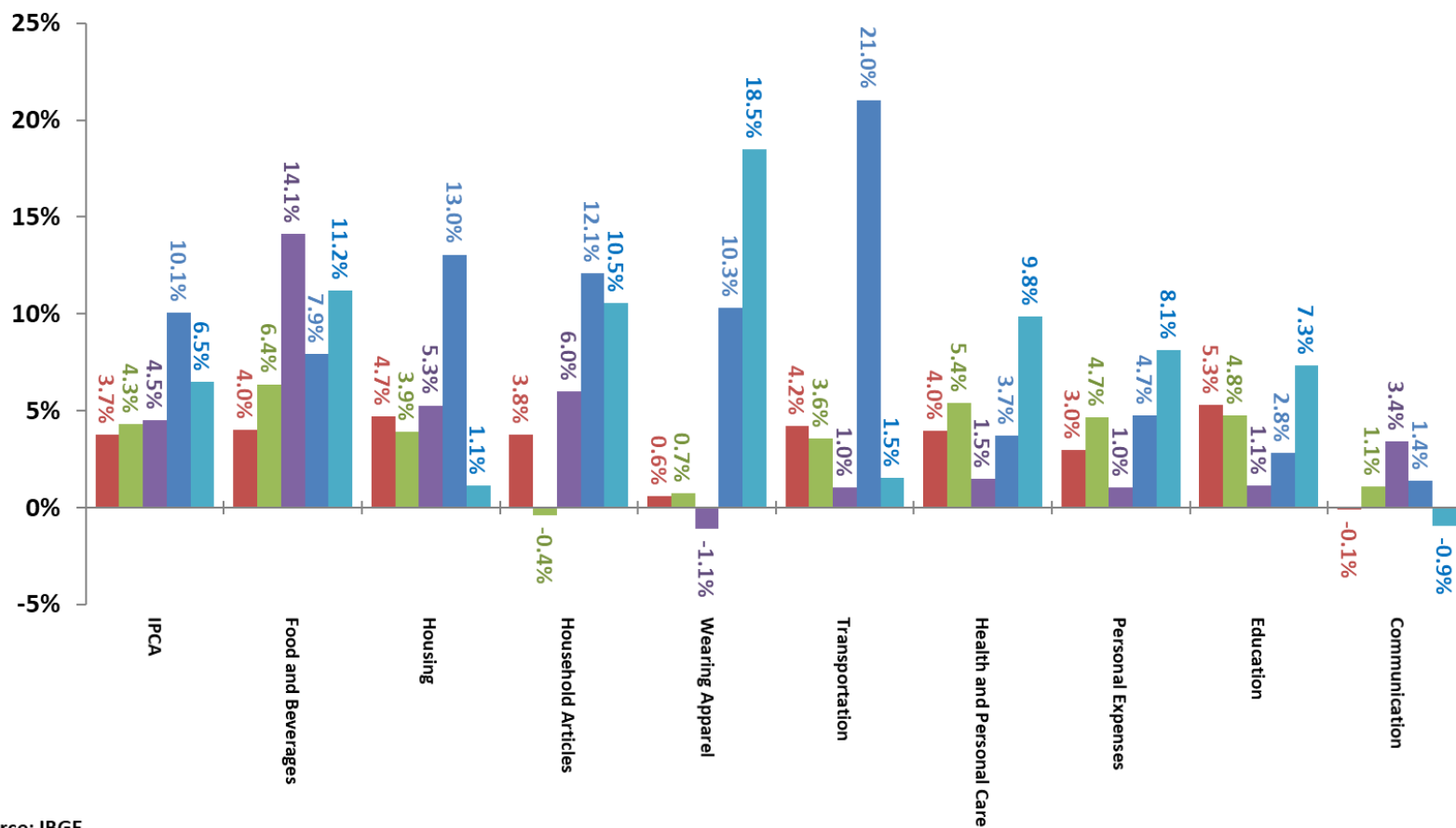
Consumer Price Index (IPCA) by Groups

INFLATION

IPCA and components – by Groups

Inflation Rate (%)

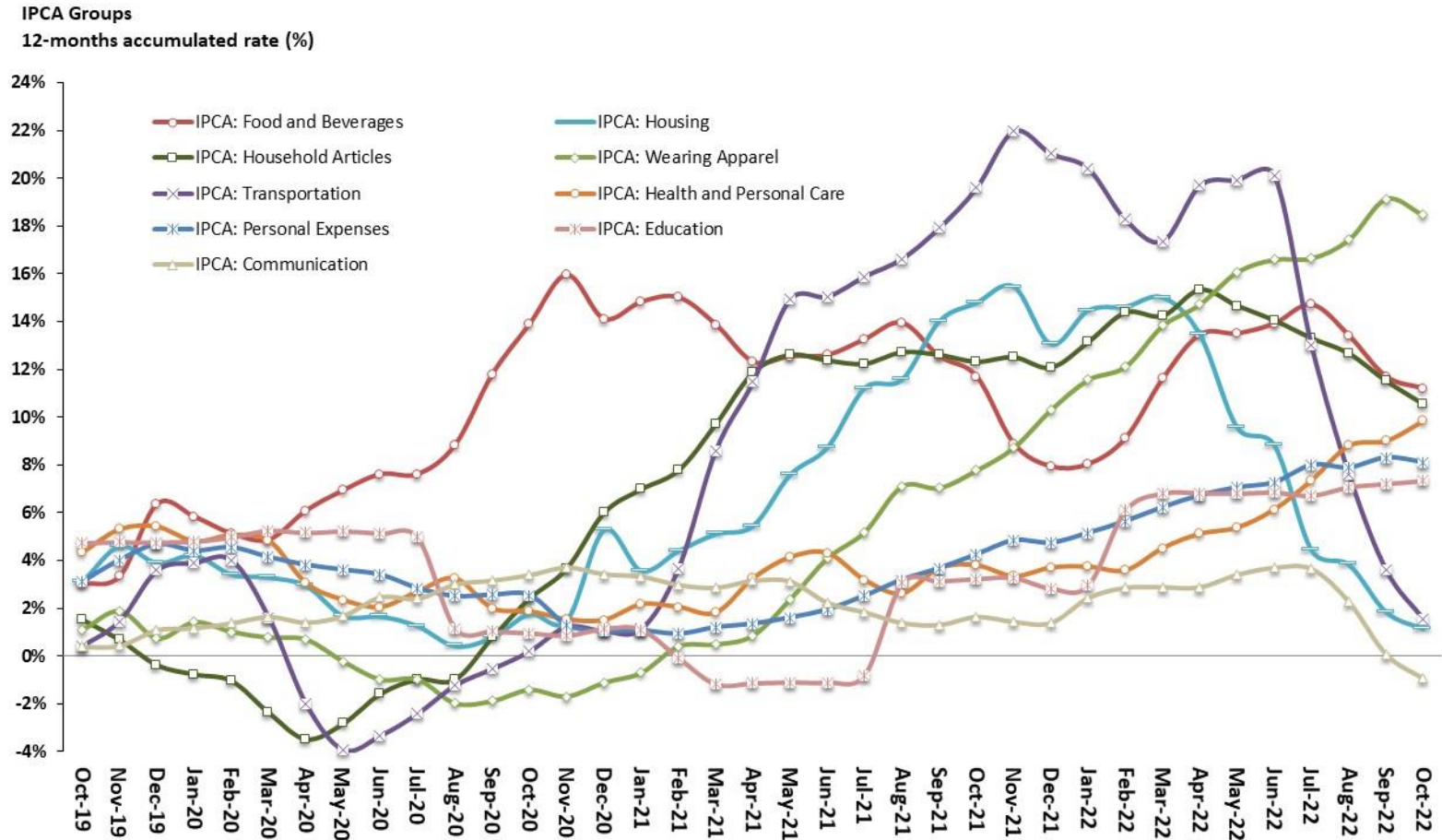
■ 2018 ■ 2019 ■ 2020 ■ 2021 ■ 2022 Ac.12 months - Oct-22



Source: IBGE.

Consumer Price Index (IPCA) by Groups

INFLATION

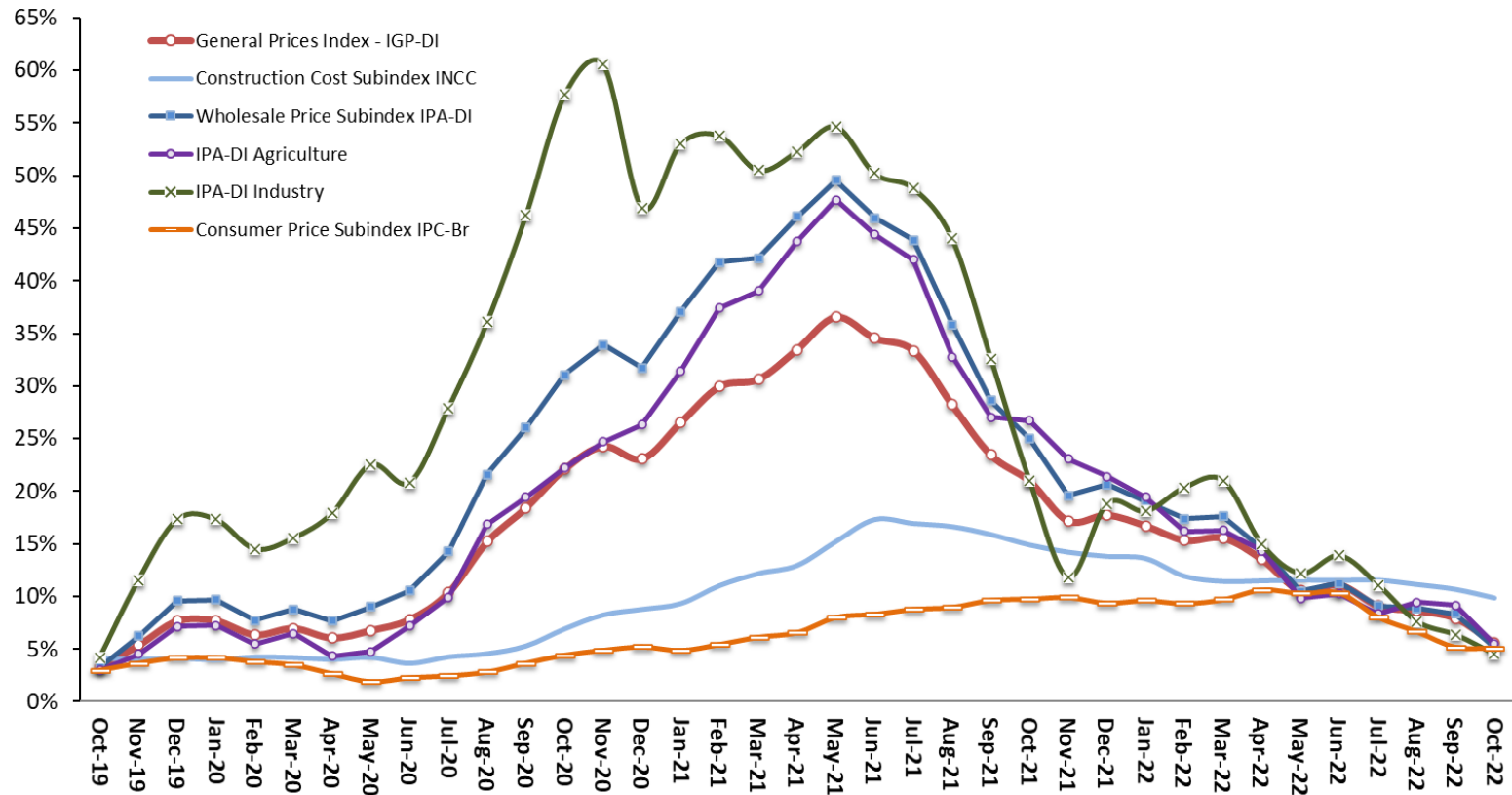


Source: IBGE.

General Price Index (IGP-DI) by Subindices

INFLATION

General Prices Subindexes
12-months accumulated rate (%)



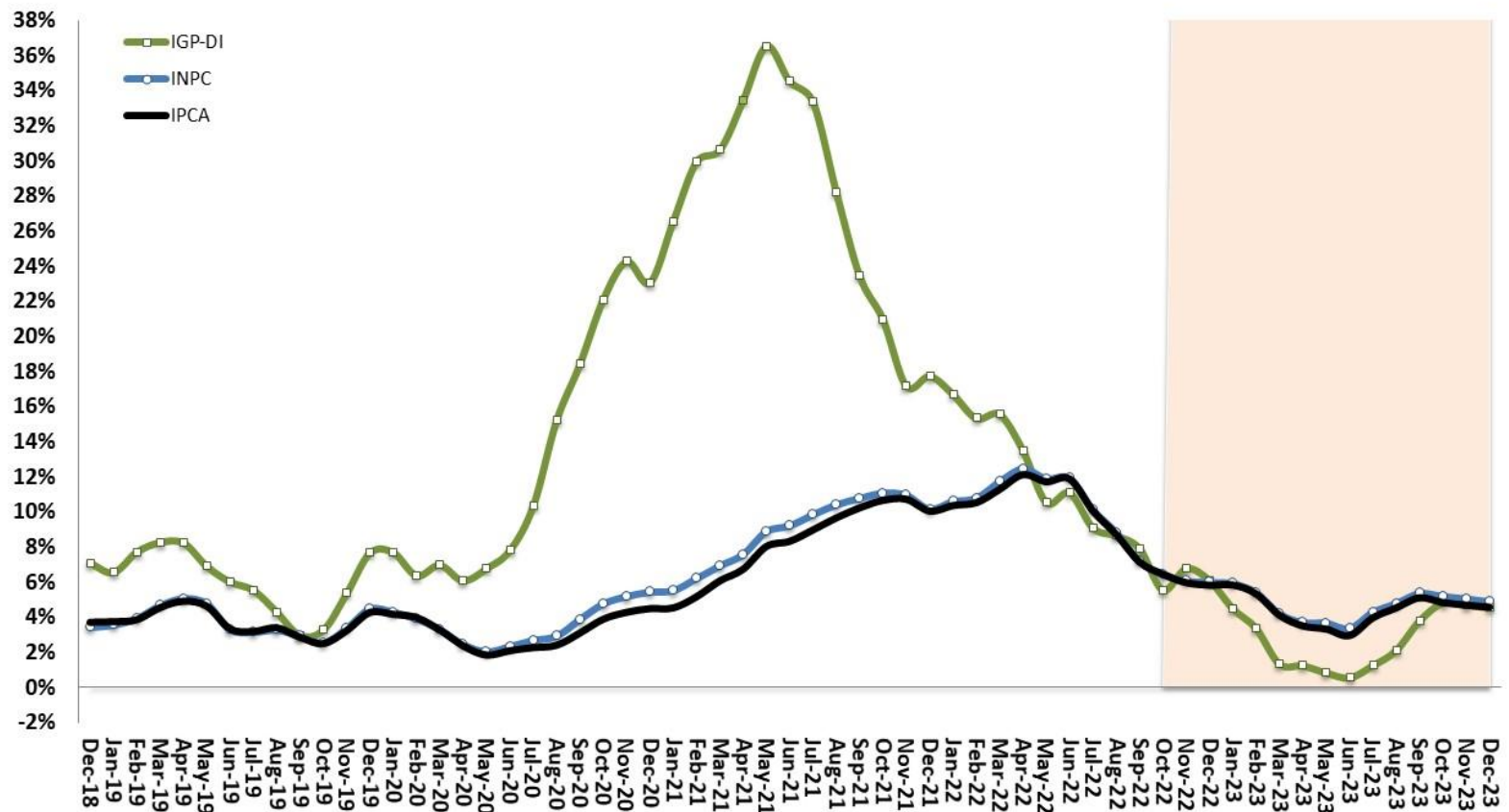
Source: IBGE.

Major Inflation Indices

INFLATION

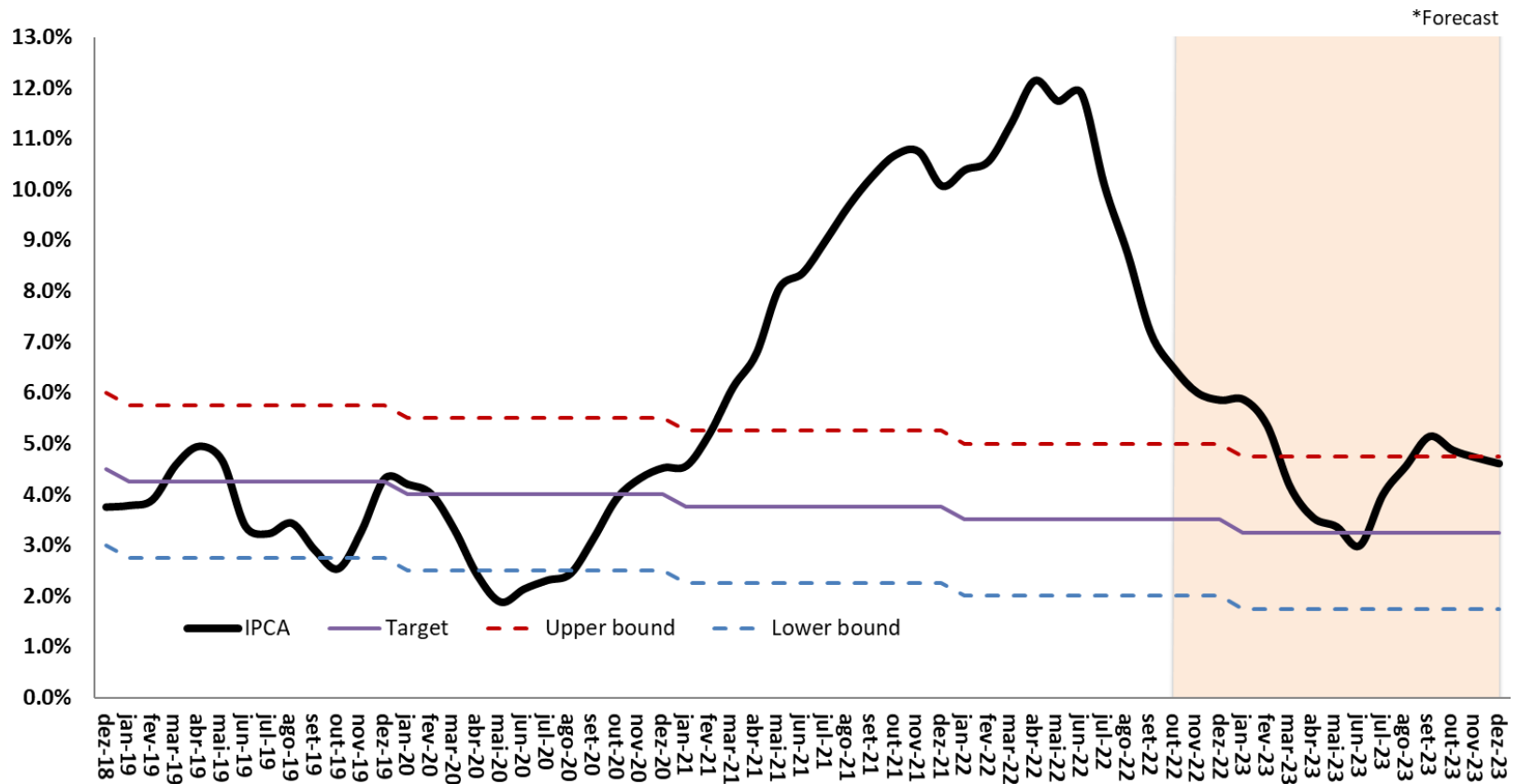
Major Inflation Indexes
12-month accumulated rate (%)

*Forecast



Source: IBGE and FGV. *Forecast: Macroeconomic Parameters, July-2022.

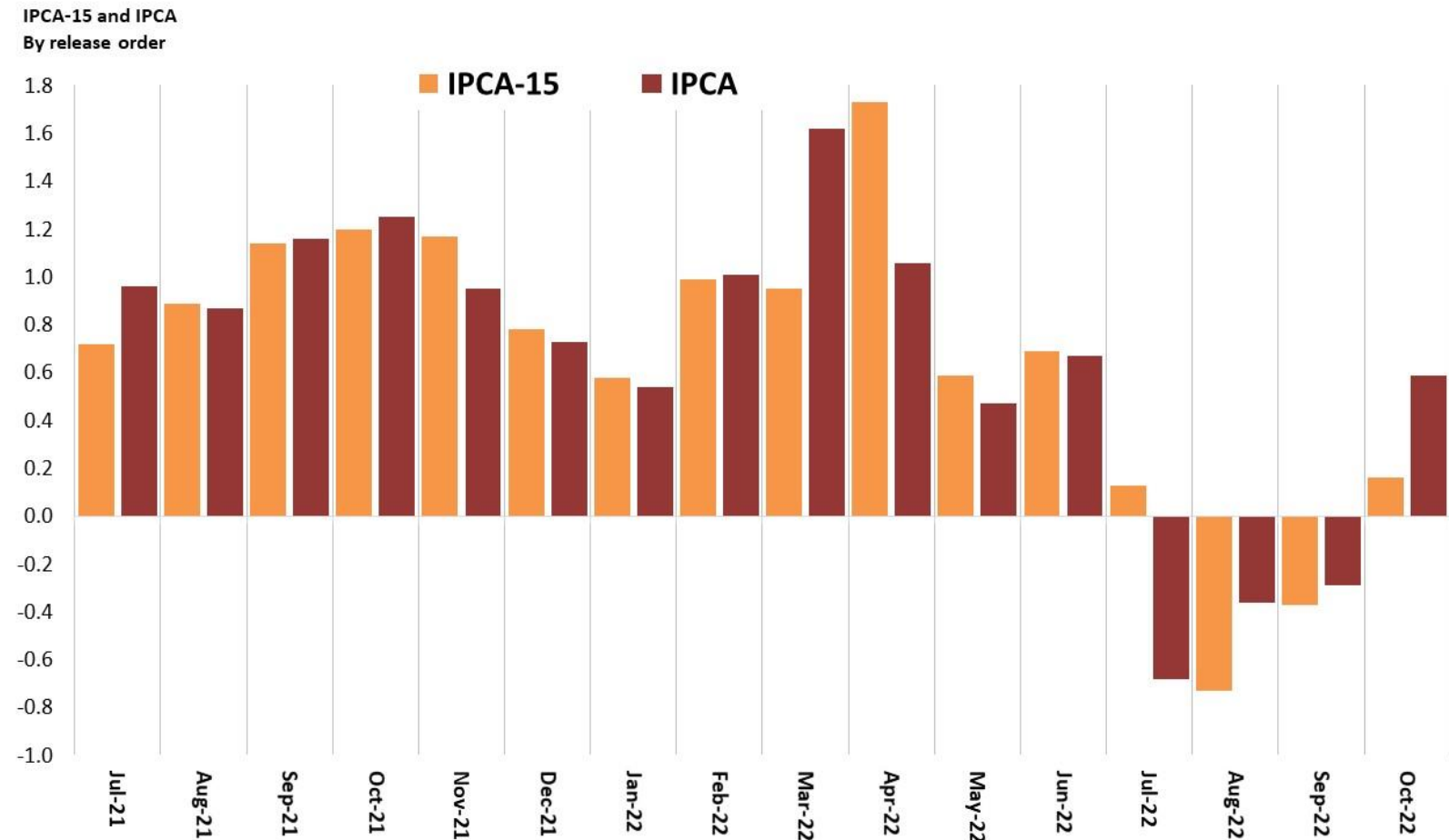
IPCA and Inflation Targeting
12-month accumulated rate (%)



Source: IBGE and Central Bank of Brazil. *Forecast: Macroeconomic Parameters, November-2022.

IBGE: Monthly Consumer Price Indices

INFLATION

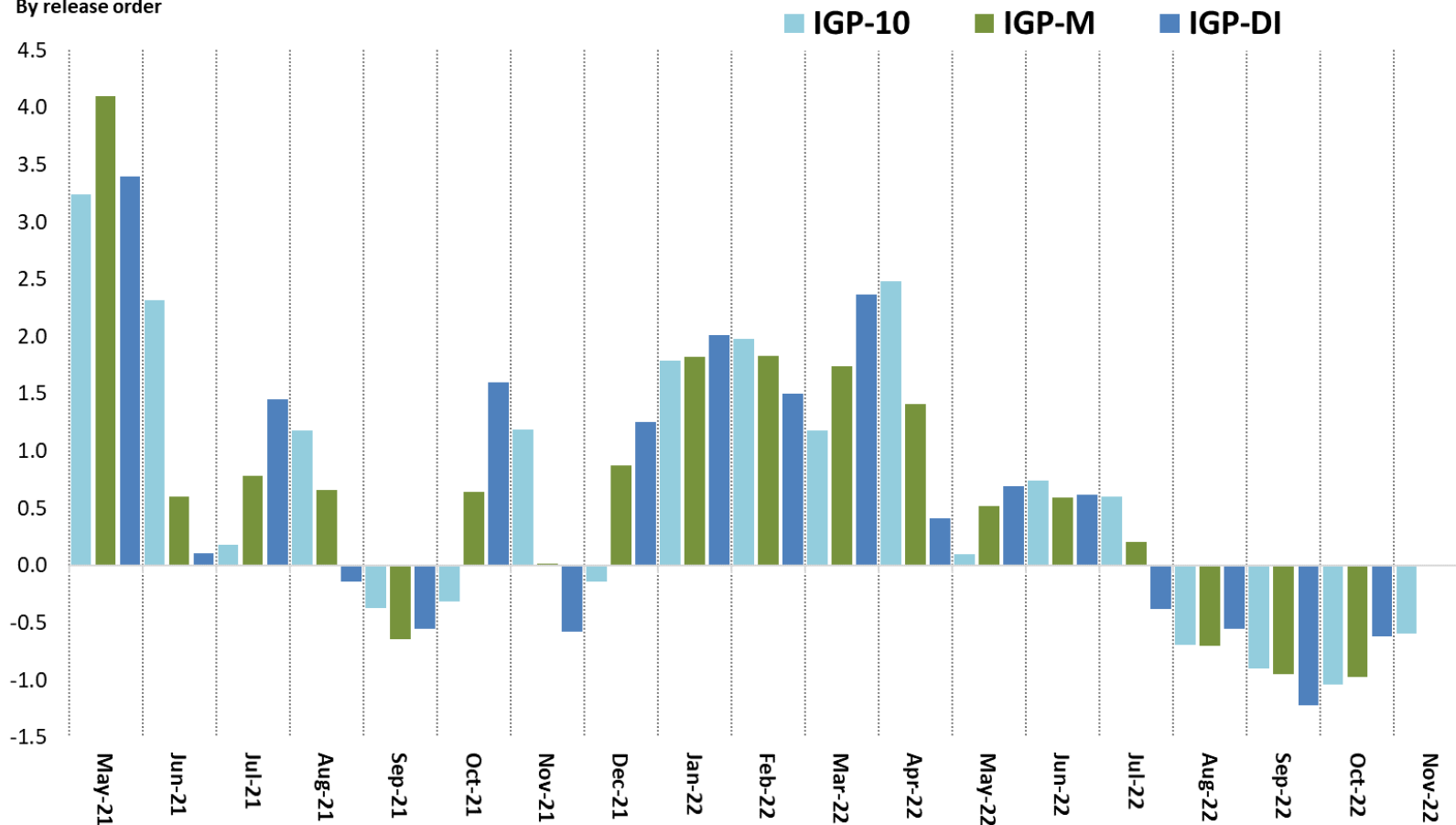


Source: IBGE.

FGV: Monthly General Price Indices

INFLATION

IGP-10, IGP-M and IGP-DI
By release order



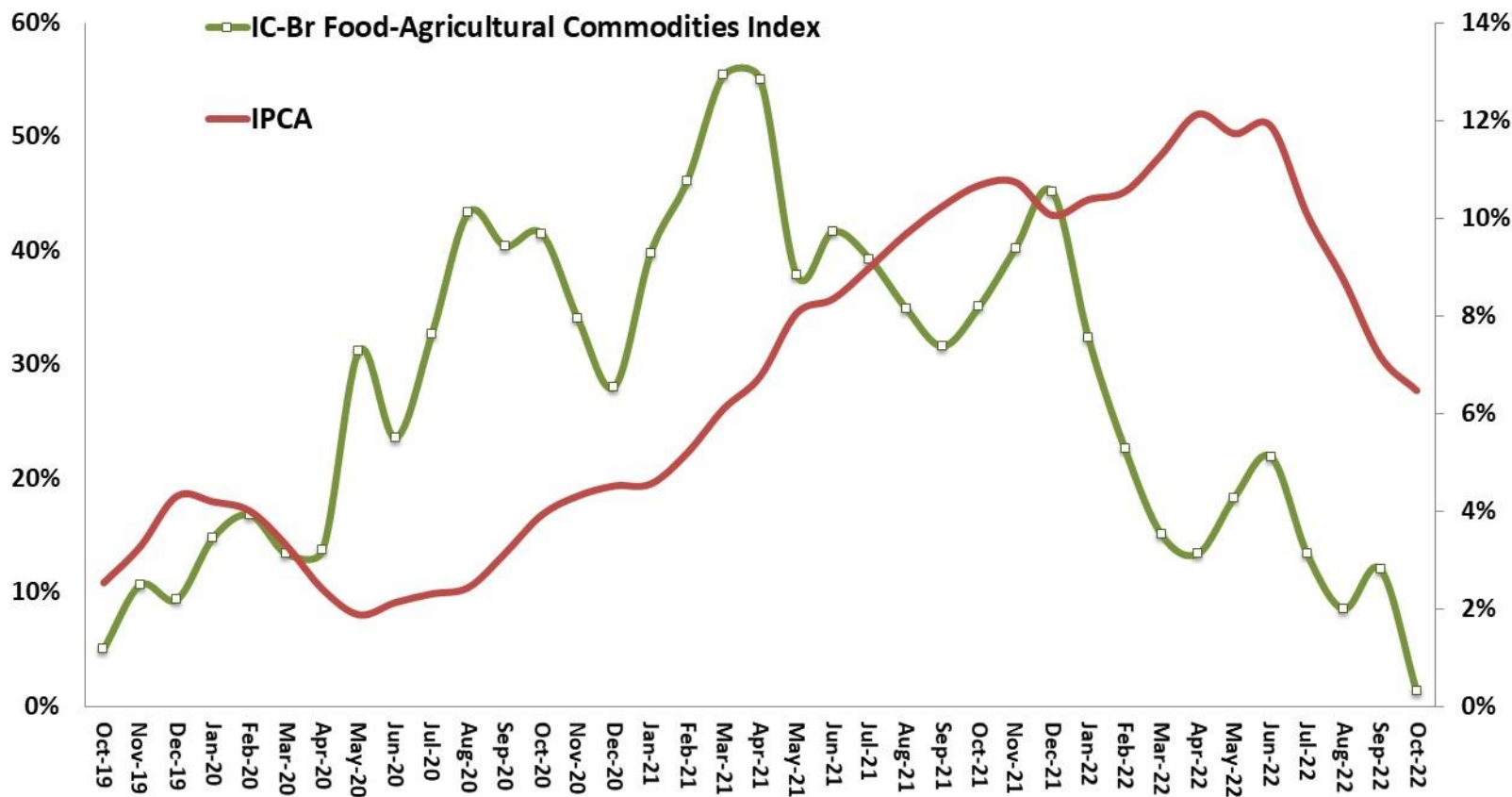
Source: FGV.

Consumer Price Index and Commodity Index (Brazil Agriculture)

INFLATION

Commodity Index – Brazil Agriculture (IC-Br Ag)
12-month accumulated change rate (%)

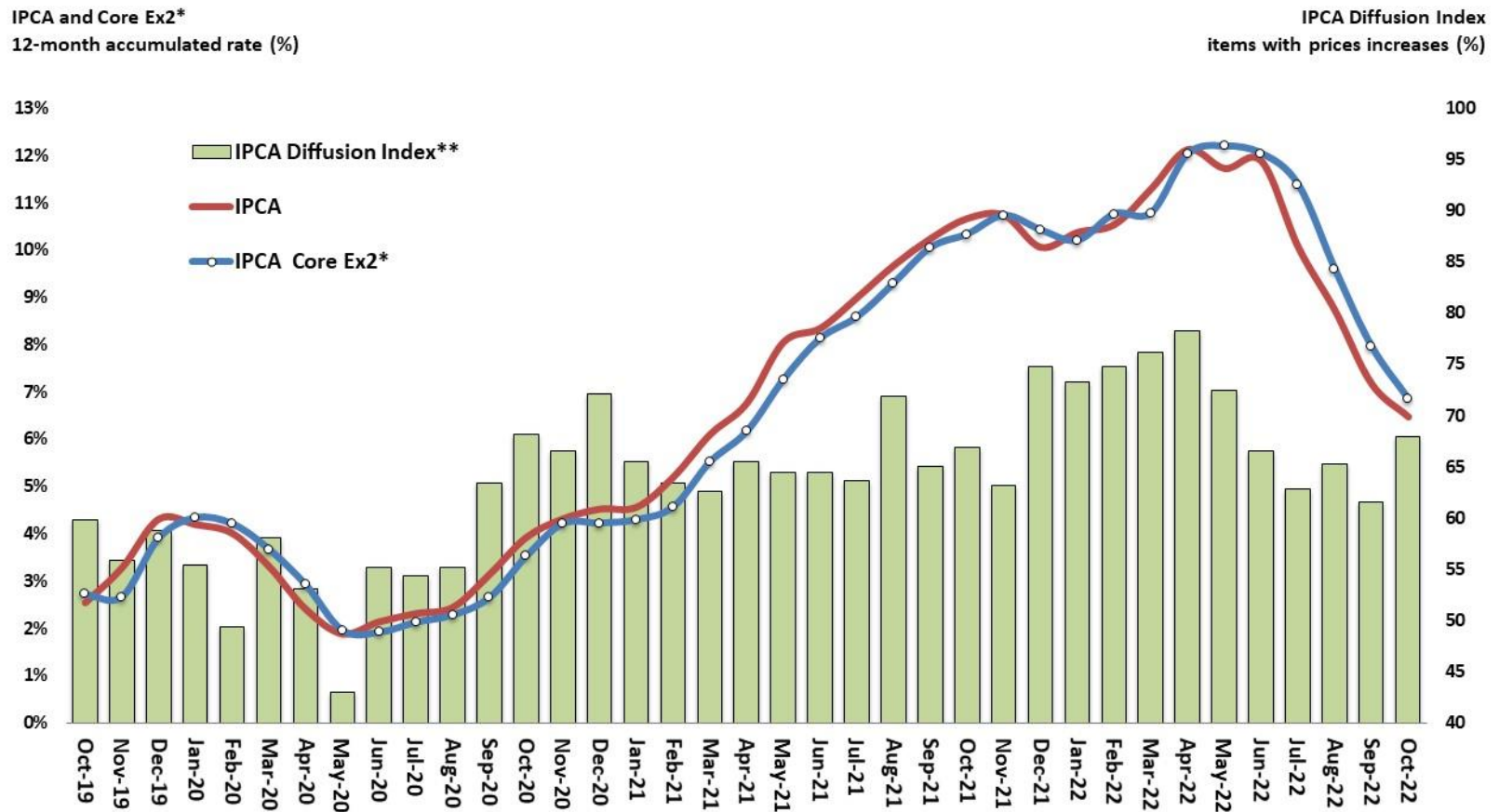
Consumer Inflation - IPCA
12-month accumulated rate (%)



Sources: IBGE and Central Bank of Brazil.

IPCA, Core Inflation (IPCA Ex2) and Diffusion Index

INFLATION



Sources: IBGE and Central Bank of Brazil.

* Ex2 = Exclusion from the main index of 12 items, 10 from residence dining and 2 from monitored prices. The excluded items represent, on average, 16% of IPCA main index.

** Diffusion Index = % of items from IPCA with price increase.

Credit Market

Credit Market (BCB)	September-22											
End-of-Period Outstanding Credit (in R\$ billions)	Dec-20	Dec-21	Sep-22	% of Total Credit dez/yy	% of Total Credit dez/yy	% of Total Credit set/yy	chg.% set/yy-dez/yy	chg.% set/yy-dez/yy	% of GDP dez/yy	% of GDP dez/yy	% of GDP set/yy	
Total Credit to the National Financial System (NFS)	4,016.9	4,673.5	5,176.7	100.0%	100.0%	100.0%	16.3%	10.8%	53.8%	53.8%	55.0%	
by type of borrower												
Public Sector (incl. State-Owned Enterprises)	223.5	202.3	212.2	5.6%	4.3%	4.1%	-9.5%	4.8%	3.0%	2.3%	2.3%	
Private Sector	3,793.4	4,470.0	4,964.5	94.4%	95.6%	95.9%	17.8%	11.1%	50.8%	51.5%	52.7%	
Non-Financial Corporations	1,775.9	1,962.7	2,109.7	44.2%	42.0%	40.8%	10.5%	7.5%	23.8%	22.6%	22.4%	
Households	2,241.1	2,710.8	3,067.0	55.8%	58.0%	59.2%	21.0%	13.1%	30.0%	31.2%	32.6%	
by type of lender												
Public Financial Institutions	1,807.8	1,990.2	2,201.4	45.0%	42.6%	42.5%	10.1%	10.6%	24.2%	22.9%	23.4%	
National Private Financial Institutions	1,558.3	1,971.7	2,215.9	38.8%	42.2%	42.8%	26.5%	12.4%	20.9%	22.7%	23.5%	
Foreign Private Financial Institutions	650.8	710.8	759.4	16.2%	15.2%	14.7%	9.2%	6.8%	8.7%	8.2%	8.1%	
by type of credit												
Earmarked Resources	1,697.7	1,882.2	2,079.7	42.3%	40.3%	40.2%	10.9%	10.5%	22.7%	21.7%	22.1%	
Housing	277.5	366.8	445.0	6.9%	7.8%	8.6%	32.2%	21.3%	3.7%	4.2%	4.7%	
Rural	741.5	843.7	939.9	18.5%	18.1%	18.2%	13.8%	11.4%	9.9%	9.7%	10.0%	
BNDES Development Bank	445.7	431.3	442.8	11.1%	9.2%	8.6%	-3.2%	2.7%	6.0%	5.0%	4.7%	
Others	233.0	240.4	252.0	5.8%	5.1%	4.9%	3.2%	4.8%	3.1%	2.8%	2.7%	
Non-Financial Corporations	687.5	685.3	727.2	17.1%	14.7%	14.0%	-0.3%	6.1%	9.2%	7.9%	7.7%	
Households	1,010.1	1,196.9	1,352.6	25.1%	25.6%	26.1%	18.5%	13.0%	13.5%	13.8%	14.4%	
Non-earmarked Resources	2,319.2	2,791.3	3,097.0	57.7%	59.7%	59.8%	20.4%	11.0%	31.1%	32.2%	32.9%	
Non-Financial Corporations	1,088.3	1,277.4	1,382.5	27.1%	27.3%	26.7%	17.4%	8.2%	14.6%	14.7%	14.7%	
Households	1,230.9	1,513.9	1,714.5	30.6%	32.4%	33.1%	23.0%	13.2%	16.5%	17.4%	18.2%	
Non-earmarked Resources (BCB)	September-22											
	Dec-20	Dec-21	Sep-22	% of Total Credit dez/yy	% of Total Credit dez/yy	% of Total Credit set/yy	chg.% dez/yy-dez/yy	chg.% set/yy-dez/yy	% of GDP dez/yy	% of GDP dez/yy	% of GDP set/yy	
New Loans, Spread and Delinquency Rates												
New Loans (12-months accum. in R\$ billions)	3,606.4	4,369.0	5,127.1	100.0%	100.0%	100.0%	21.1%	17.4%	48.3%	50.3%	54.5%	
Non-Financial Corporations	1,748.7	2,086.3	2,462.6	48.5%	47.8%	48.0%	19.3%	18.0%	23.4%	24.0%	26.2%	
Households	1,857.7	2,282.6	2,664.5	51.5%	52.2%	52.0%	22.9%	16.7%	24.9%	26.3%	28.3%	
Spread (in pp per year)	20.8	23.6	28.3				2.9 pp	4.7 pp				
Non-Financial Corporations	7.7	9.7	11.0				2.0 pp	1.4 pp				
Households	31.7	34.7	41.4				3.0 pp	6.6 pp				
Delinquency (% non-performing loans by 90 days or more)	2.9	3.1	4.0				0.2 pp	0.9 pp				
Non-Financial Corporations	1.5	1.5	1.9				0.1 pp	0.4 pp				
Households	4.2	4.4	5.7				0.2 pp	1.3 pp				

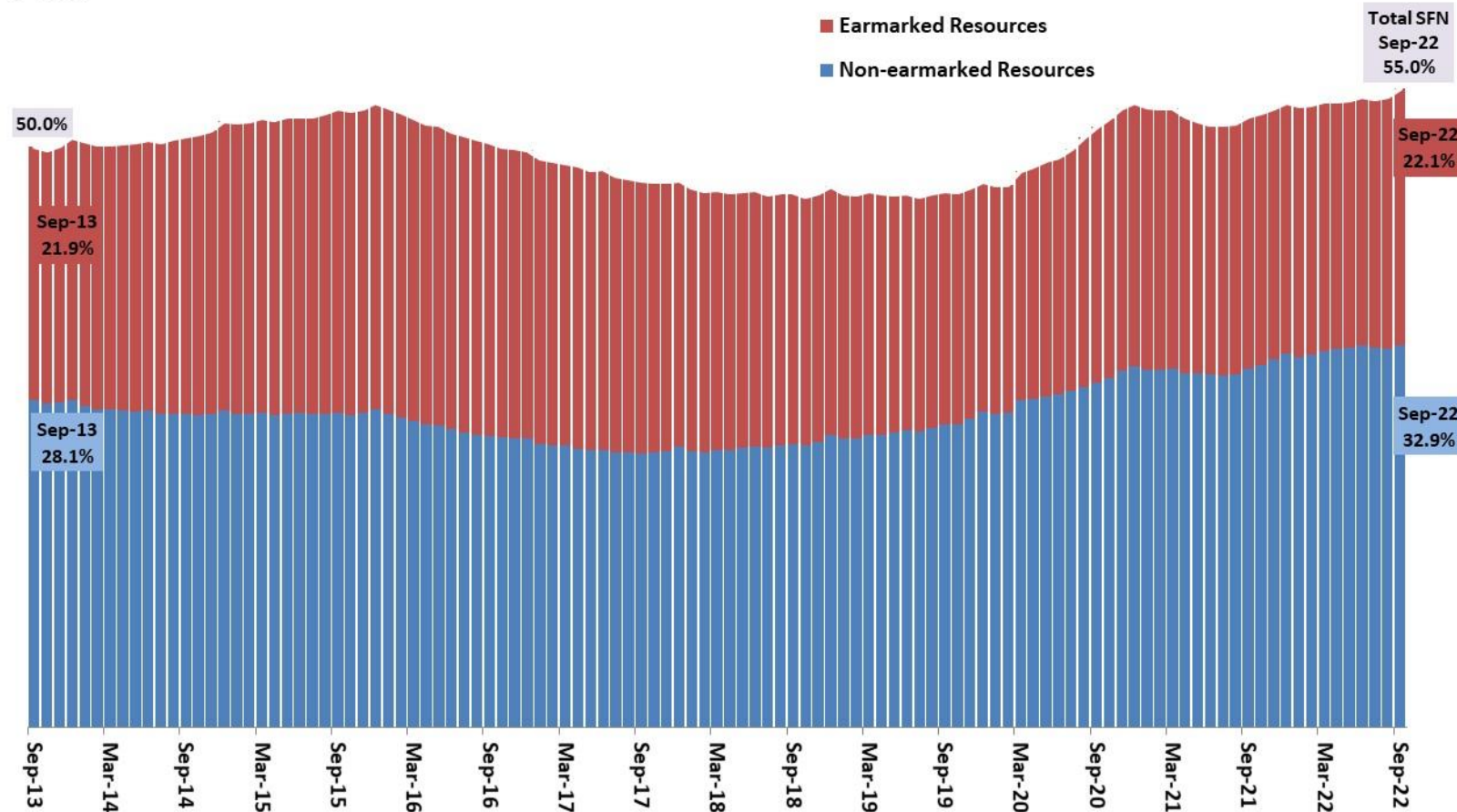
Macroeconomic Parameters		
Year	Credit Market	
	Total Credit	
	Annual Average	
	BRL million	Annual chg. %
2016	3,144,353	0.84
2017	3,079,705	-2.06
2018	3,145,561	2.14
2019	3,324,502	5.69
2020	3,699,682	11.29
2021	4,288,795	15.92
2022	5,005,969	16.72
2023	5,674,188	13.35
2024	6,302,856	11.08
2025	6,935,484	10.04
2026	7,600,889	9.59

Source: SPE/ME. Macroeconomic Parameters, November-2022.

Total Credit: Earmarked and Non-earmarked Resources

CREDIT MARKET

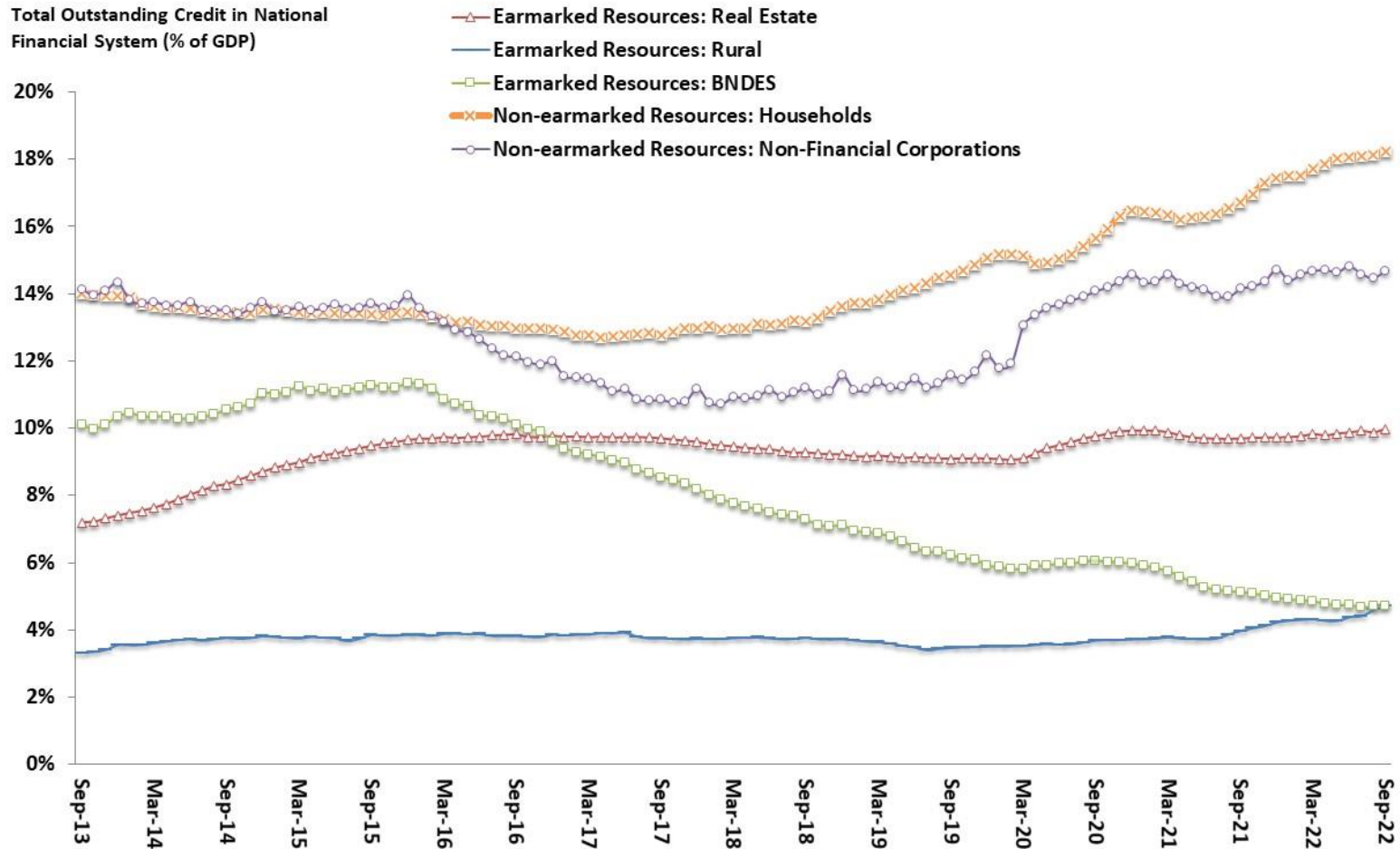
Total Outstanding Credit in National Financial System (SFN)
% of GDP



Source: Central Bank of Brazil.

Total Credit Evolution by Major Segments

CREDIT MARKET

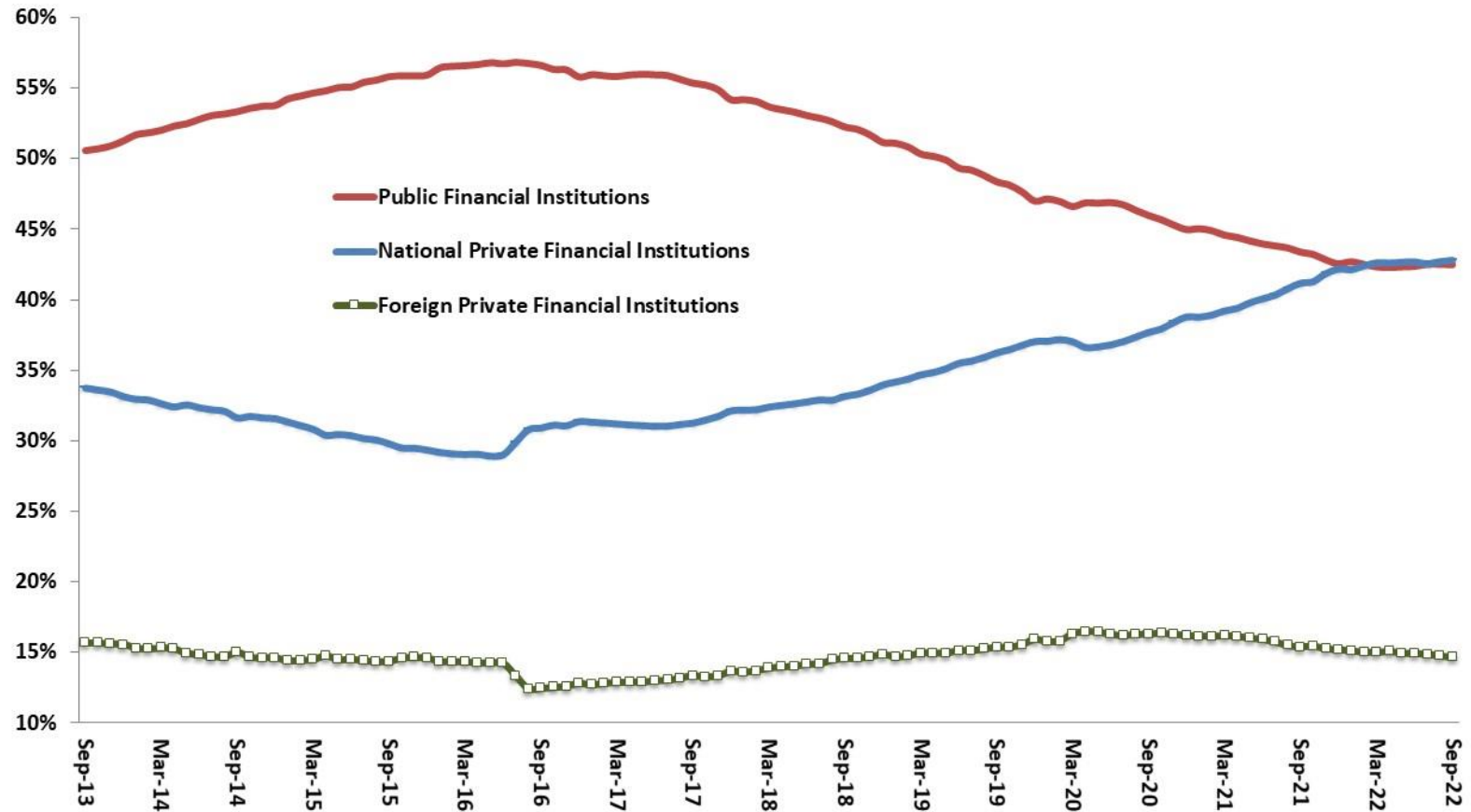


Source: Central Bank of Brazil.

Total Credit by Types of Financial Institutions

CREDIT MARKET

% of Total Outstanding Credit
to the National Financial System



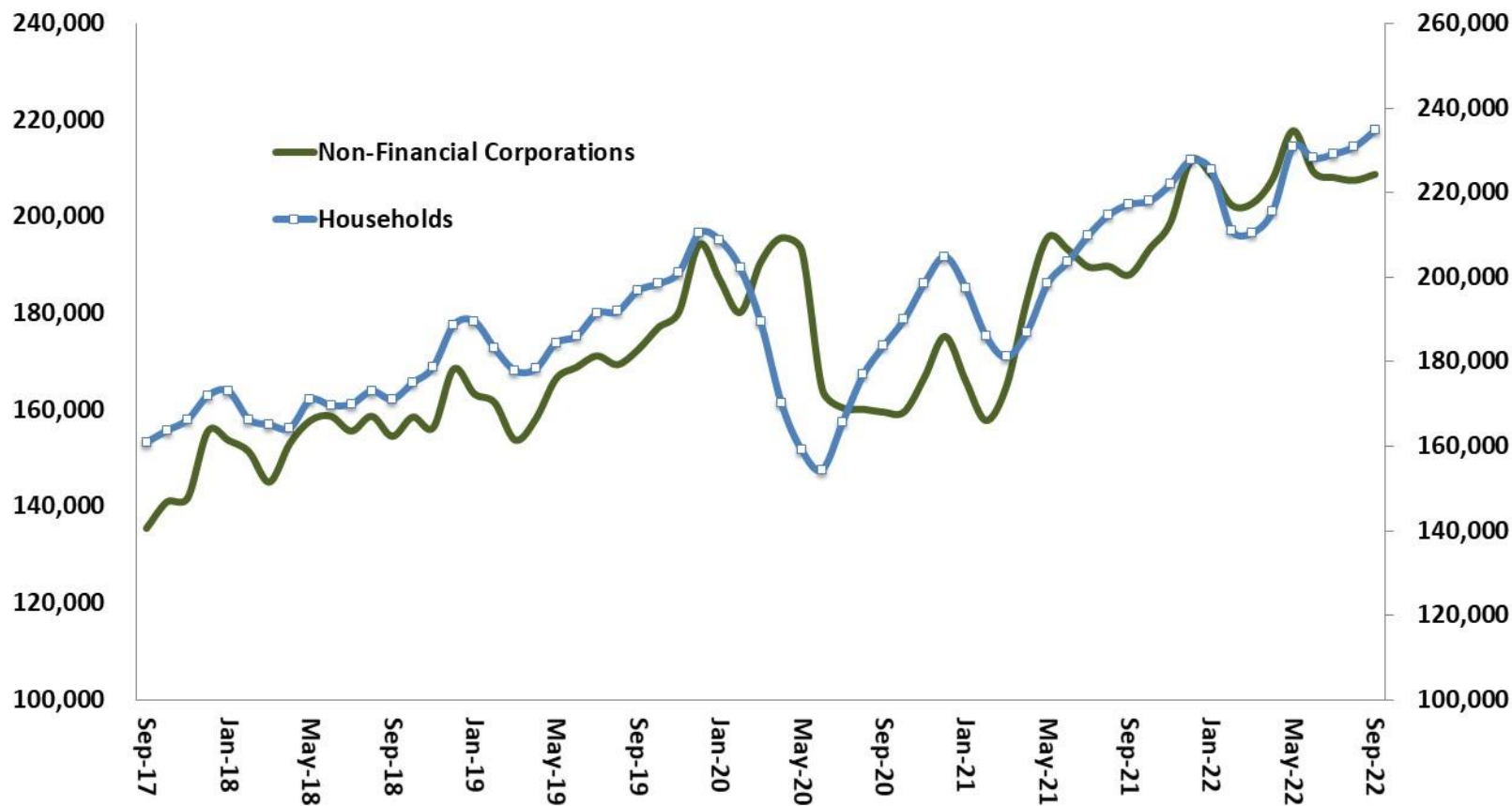
Source: Central Bank of Brazil.

New Loans to Households and Non-Financial Corporations

CREDIT MARKET

New Loans to Non-Financial Corporations
R\$ millions of the last month
3-Month Moving Average - Seasonally Adjusted*

New Loans to Households
R\$ millions of the last month
3-Month Moving Average - Seasonally Adjusted*

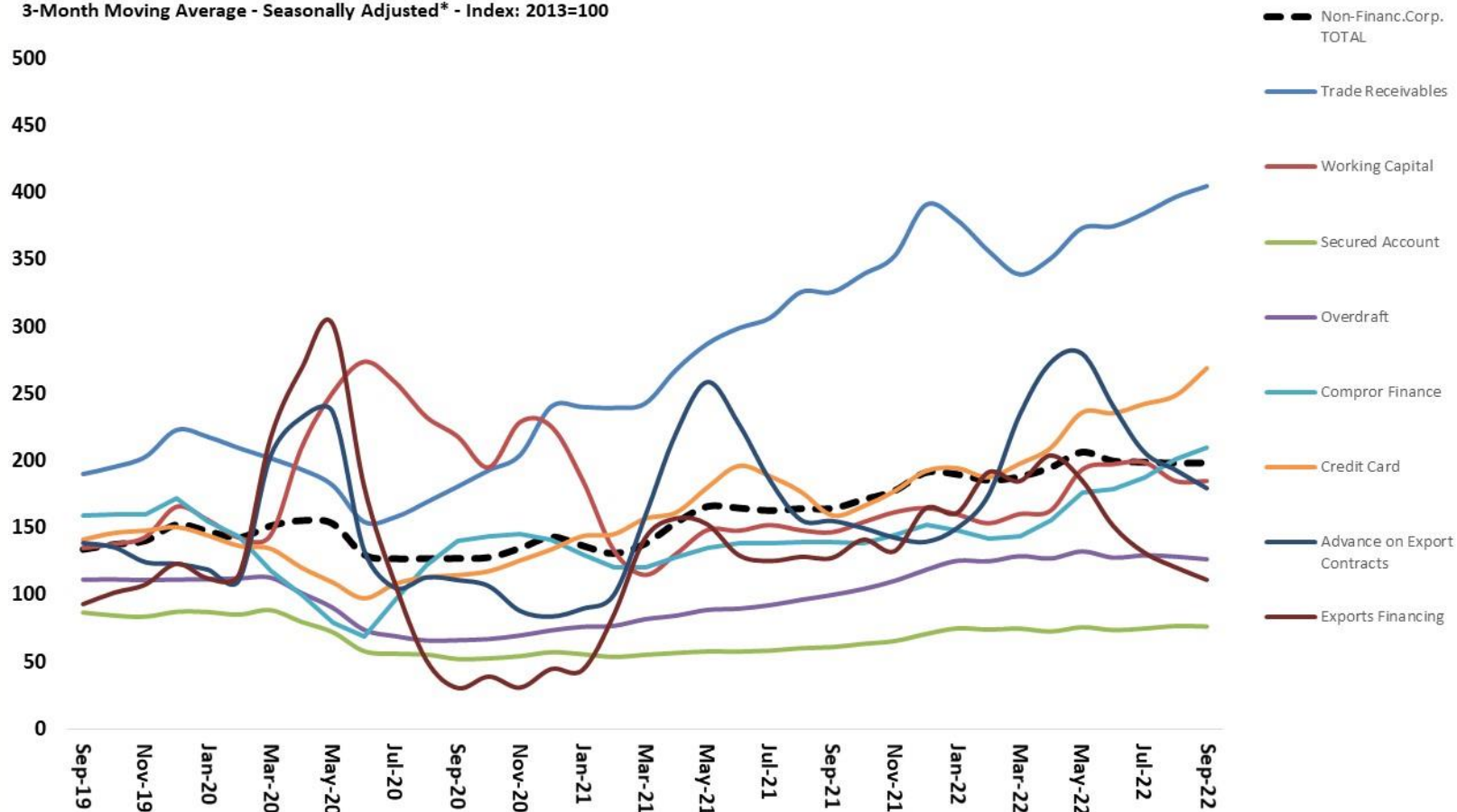


Source: Central Bank of Brazil. * Seasonally adjusted by SPE.

New Loans to Non-Financial Corp. by Type of Credit Lines

CREDIT MARKET

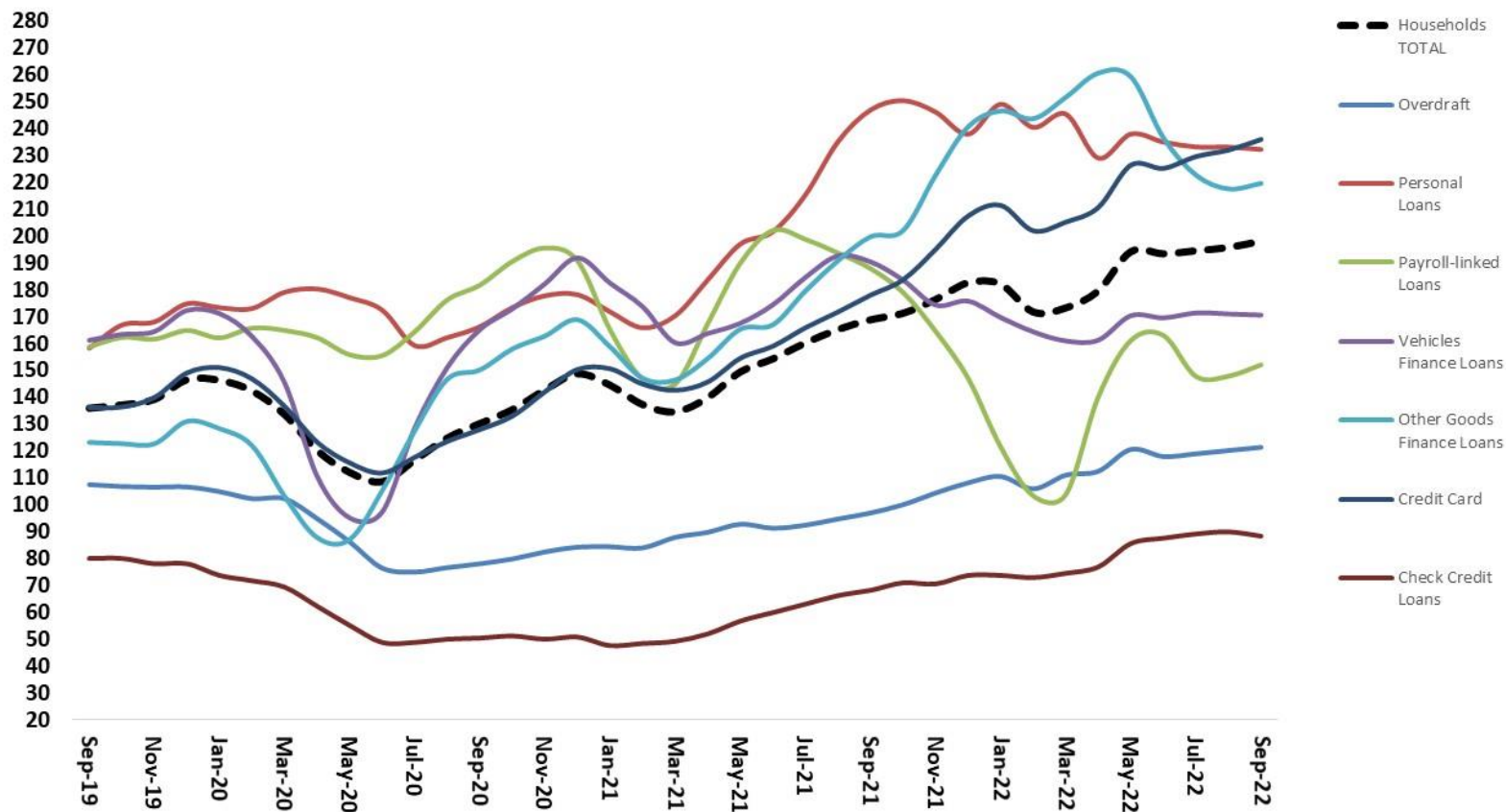
New Loans to Non-Financial Corporations – Last Month Real Values (IPCA)
3-Month Moving Average - Seasonally Adjusted* - Index: 2013=100



Source: Central Bank of Brazil. * Seasonally adjusted by SPE.

New Loans to Households by Type of Credit Lines

New Loans to Households – Real Last Month Values (IPCA)
3-Months Moving Average - Seasonally Adjusted* - Index: 2013=100



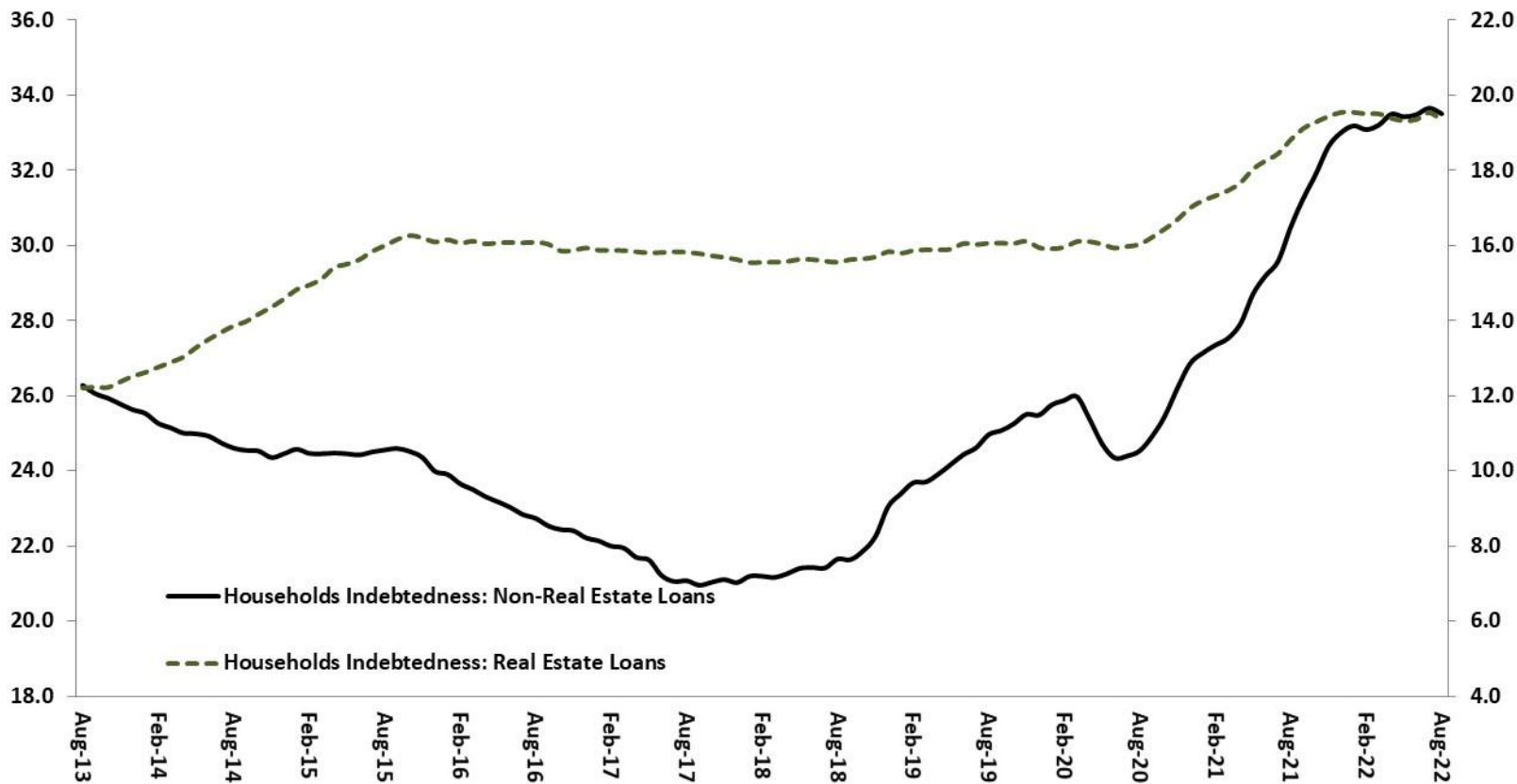
Source: Central Bank of Brazil. * Seasonally adjusted by SPE.

Households Indebtedness Rate

CREDIT MARKET

Households Indebtedness Rate* – Non-Real Estate Loans
% of 12-month Accumulated Income

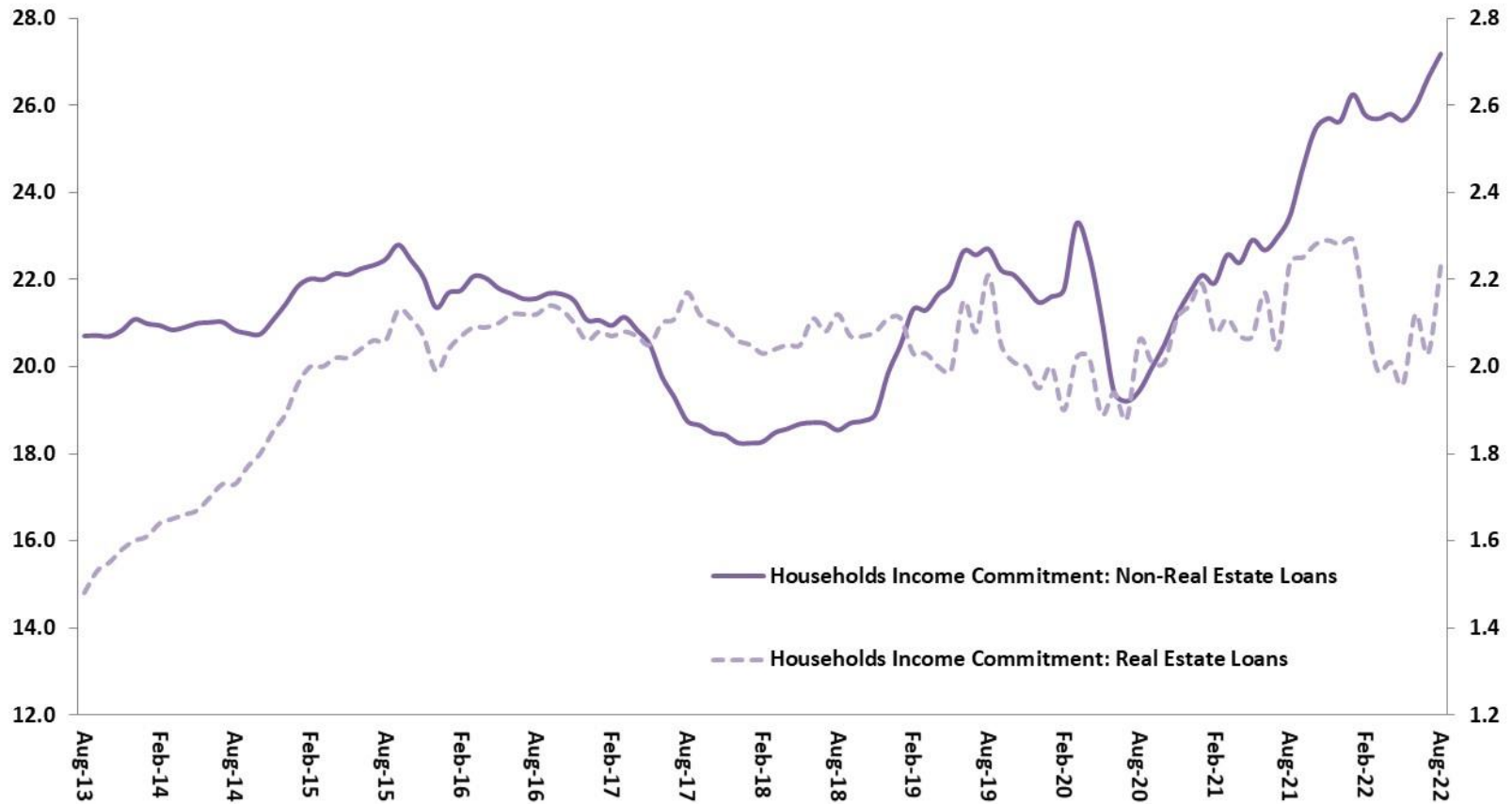
Households* Indebtedness Rate* – Real Estate Loans
% of 12-month Accumulated Income



Source: Central Bank of Brazil. * Indebtedness rate = total outstanding debt / 12-months accumulated income.

Households Income Commitment* – Non-Real Estate Loans
% of Monthly Income – 3-month moving average – seasonally adjusted data

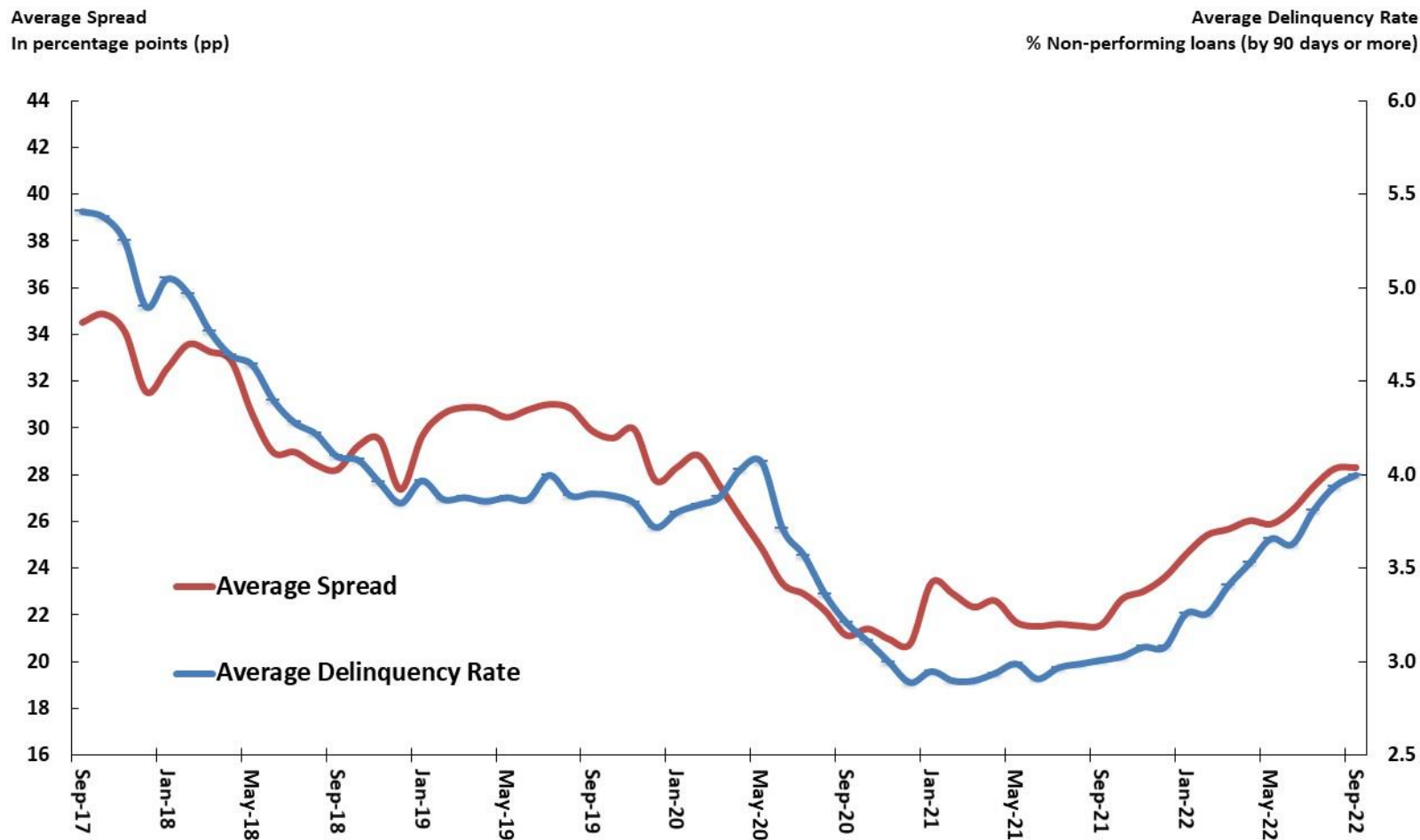
Households Income Commitment* – Real Estate Loans
% of Monthly Income – 3-month moving average – seasonally adjusted data



Source: Central Bank of Brazil. * Households Income Commitment = Loans Service Monthly Expenditure / Monthly Income.

Non-earmarked Resources: Spread and Delinquency Rates

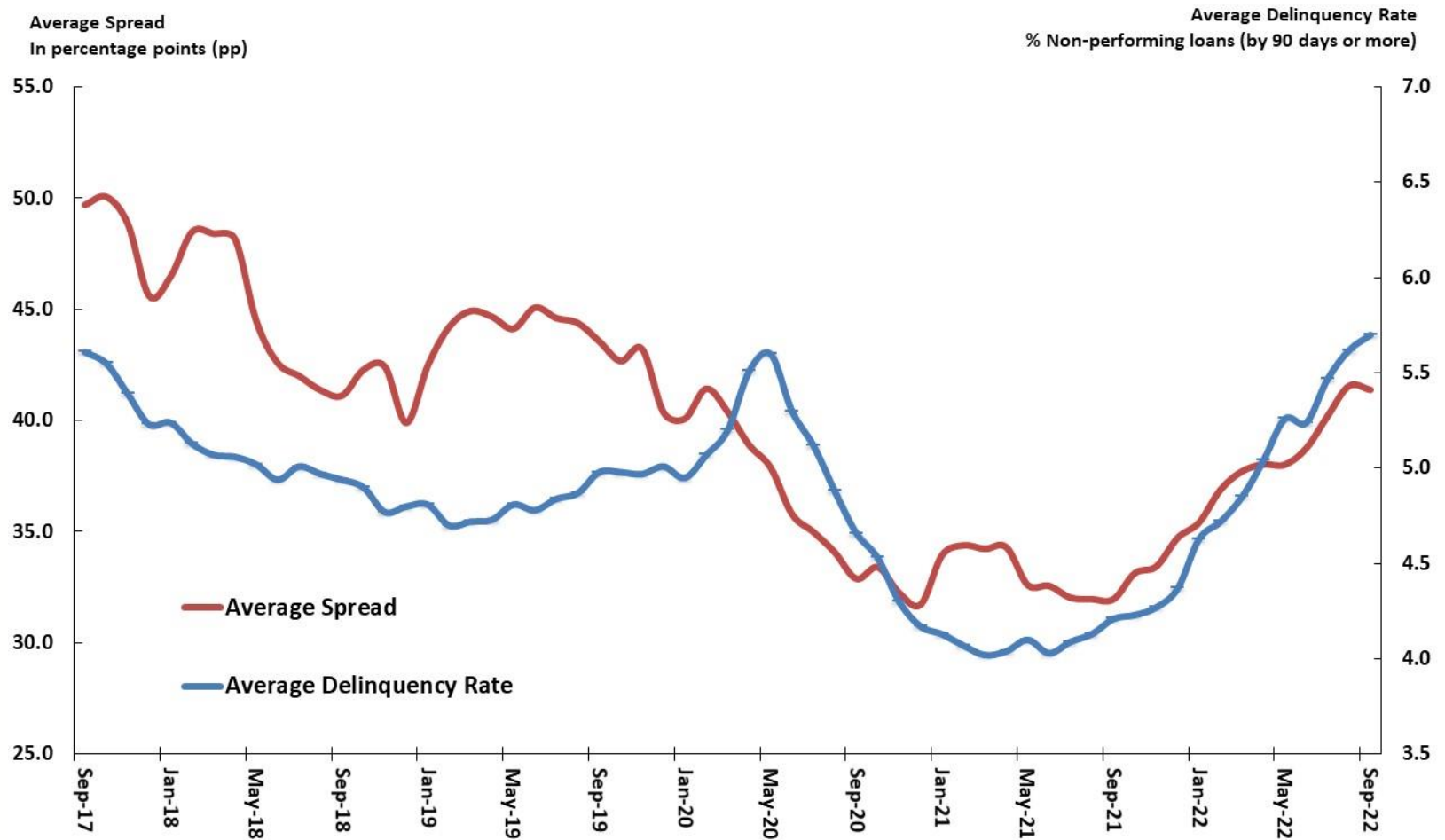
CREDIT MARKET



Source: Central Bank of Brazil.

Households Loans: Spread and Delinquency Rates

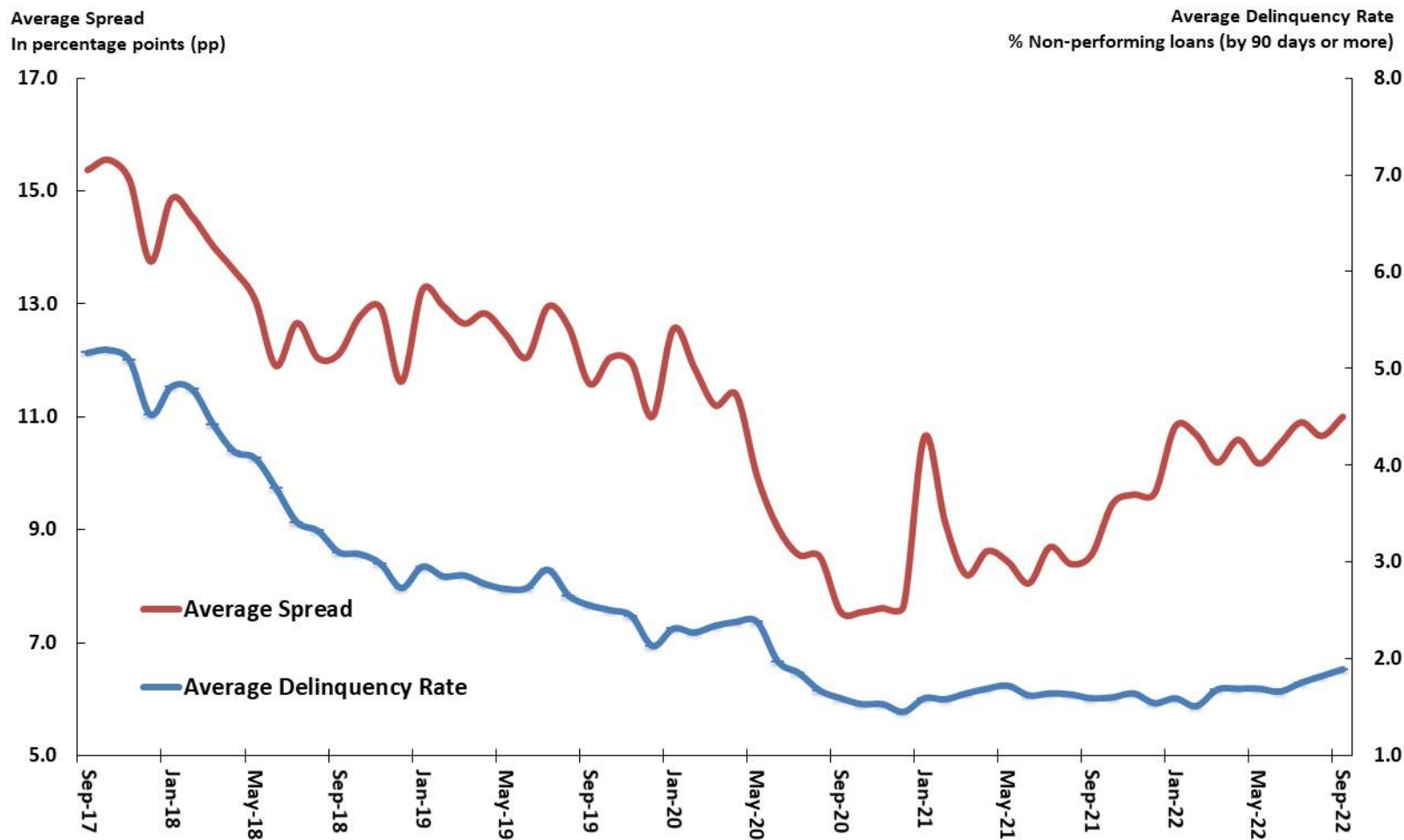
CREDIT MARKET



Source: Central Bank of Brazil.

Non-Financial Corp. Loans: Spread and Delinquency Rates

CREDIT MARKET



Source: Central Bank of Brazil.

Financial Markets

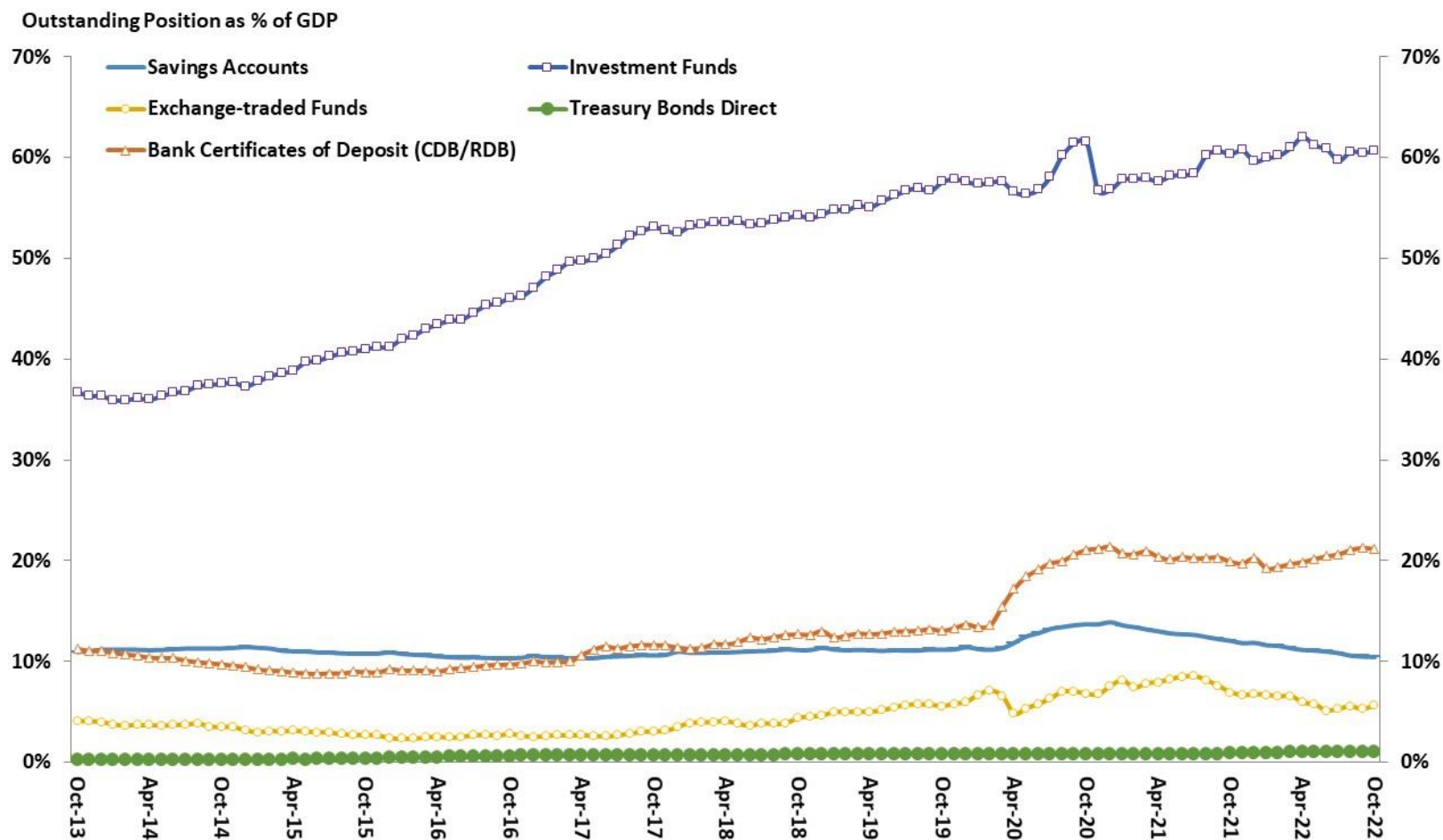
										BCB/Focus: 11/11/22		
Financial Savings (BCB)	October-22	Dec-20	Dec-21	Oct-21	Oct-22	chg. % Dec/17 / Dec/16	chg. % Dec/18 / Dec/17	chg. % out/yy- Dec/18	chg. % out/yy- out/yy			
Outstanding Positions - R\$ billions												
Bank Certificates of Deposit (CDB/RDB)		1,598.0	1,758.4	1,695.4	1,994.3	58.1%	10.0%	13.4%	17.6%			
Savings Accounts (Caderneta de Poupança)		1,035.6	1,030.6	1,027.3	987.7	22.5%	-0.5%	-4.2%	-3.9%			
Investment Funds		4,245.9	5,179.3	5,141.2	5,710.6	-0.3%	22.0%	10.3%	11.1%			
Exchange-traded Funds		565.3	584.7	589.4	530.4	28.0%	3.4%	-9.3%	-10.0%			
Treasury Bonds Direct (Tesouro Direto)		62.7	79.2	74.5	99.9	5.1%	26.3%	26.2%	34.0%			
BM&F-Bovespa - listed companies value as % of GDP		69.3%	52.7%	69.3%	52.7%	0.53 pp	0.47 pp	4.43 pp	-16.57 pp			
Capital Market (CVM)	October-22	Dec-20	Dec-21	Oct-21	Oct-22	chg. % Dec/17 / Dec/16	chg. % Dec/18 / Dec/17	chg. % out/yy- Dec/18	chg. % out/yy- out/yy			
New Public Offering - R\$ billions												
Stocks		26.1	36.0	36.0	30.8	517.8%	37.6%	-100.0%	-			
Debentures		3.3	10.1	6.9	12.0	-77.7%	209.7%	-	-			
Housing Credit-backed Securities (CRI)		3.5	15.8	11.1	21.1	-83.8%	355.0%	-35.8%	3.0%			
Investment Funds - new shares		24.6	24.4	21.3	16.8	162.1%	-1.2%	-30.1%	-57.5%			
Monet Market (BCB)	October-22	Dec-20	Dec-21	Oct-21	Oct-22	chg. % Dec/17 / Dec/16	chg. % Dec/18 / Dec/17	chg. % out/yy- Dec/18	chg. % out/yy- out/yy			
Interest Rates												
Selic market rate (% py)		1.90	8.76	7.65	13.65	-2.7 pp	6.9 pp	4.9 pp	6.0 pp			
CDI (% py)		1.90	8.76	7.65	13.65	-2.7 pp	6.9 pp	4.9 pp	6.0 pp			
Swap DI-Pre 180 days (% py)		2.10	11.20	10.31	13.69	-2.2 pp	9.1 pp	2.5 pp	3.4 pp			
Swap DI-Pre 360 days (% py)		2.83	11.79	11.92	13.15	-1.7 pp	9.0 pp	1.4 pp	1.2 pp			
Monet Market (BCB)	November-22	Dec-20	Dec-21	Nov-21	Nov-22	chg. % Dec/17 / Dec/16	chg. % Dec/18 / Dec/17	chg. % nov/yy- Dec/18	chg. % nov/yy- nov/yy	2022	2023	2024
Selic target rate (% py)		2.00	9.25	7.75	13.75	-2.5 pp	7.25 pp	4.5 pp	6.0 pp	13.75%	11.25%	8.00%
TJLP (% py)		4.55	5.32	5.32	7.20	-1.0 pp	0.8 pp	1.88 pp	1.88 pp			
Brazil Sovereign Risk (BCB)	October-22	Dec-20	Dec-21	Oct-21	Oct-22	chg. pp Dec/17 / Dec/16	chg. pp Dec/18 / Dec/17	chg. % out/yy- Dec/18	chg. % out/yy- out/yy			
Monthly Average (in basis points)												
EMBI+ (JPMorgan)		260	326	362	270	46 pp	66 pp	-56 pp	-92 pp			
5 years CDS		143	205	247	277	43 pp	62 pp	72 pp	30 pp			
10 years CDS		215	292	331	369	35 pp	77 pp	77 pp	38 pp			

Macroeconomic Parameters								
Year	Financial Indicators							
	Selic market rate			Long term rate TJLP		Referential rate TR	Financial Savings	
	Annual Average	December	Real chg.	Annual Average	December	Annual Average	Annual Average	
	Annual chg. %						BRL million	Annual chg. %
2016	14.08	13.65	7.33	7.50	7.50	2.01	4,566,852	13.89
2017	9.87	7.00	6.72	7.12	7.00	0.60	4,992,423	9.32
2018	6.48	6.40	2.64	6.72	6.98	0.00	5,346,678	7.10
2019	5.90	4.59	1.53	6.18	5.57	0.00	5,744,064	7.43
2020	2.64	1.90	-1.80	4.87	4.55	0.00	6,367,887	10.86
2021	3.91	8.76	-5.59	4.79	5.32	0.05	7,334,662	15.18
2022	12.34	13.65	6.13	6.76	7.20	1.66	8,514,539	16.09
2023	12.82	11.15	7.86	7.10	6.90	1.84	9,469,209	11.21
2024	9.07	7.90	5.90	6.60	6.42	0.48	10,344,152	9.24
2025	7.90	7.90	4.76	6.18	6.09	0.04	11,193,095	8.21
2026	7.83	7.78	4.70	5.82	5.68	0.01	12,041,335	7.58

Source: SPE/ME. Macroeconomic Parameters, November-2022.

Major Financial Savings Instruments

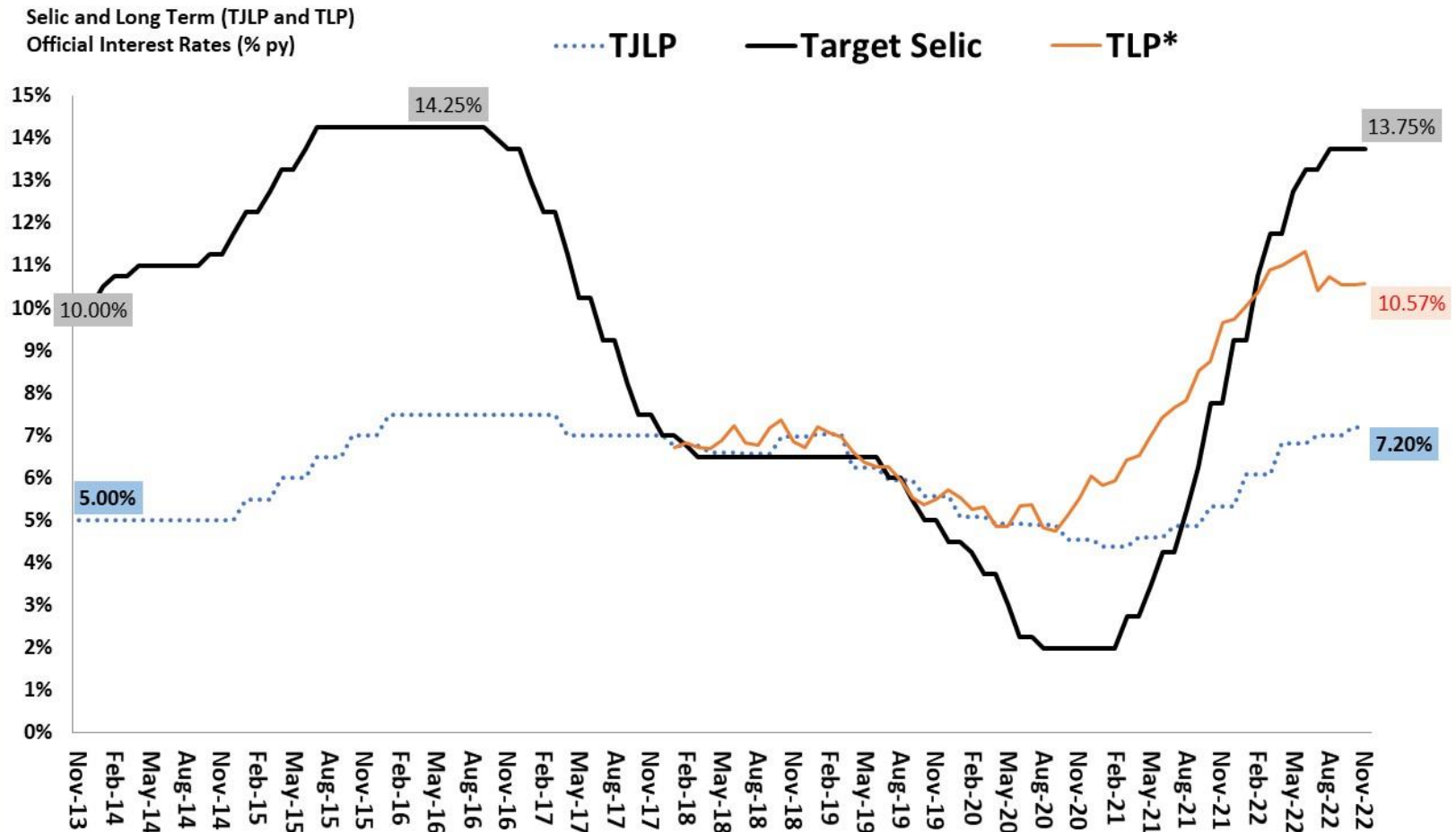
FINANCIAL MARKETS



Source: Central Bank of Brazil.

Official Interest Rates Evolution (Target Selic and TJLP)

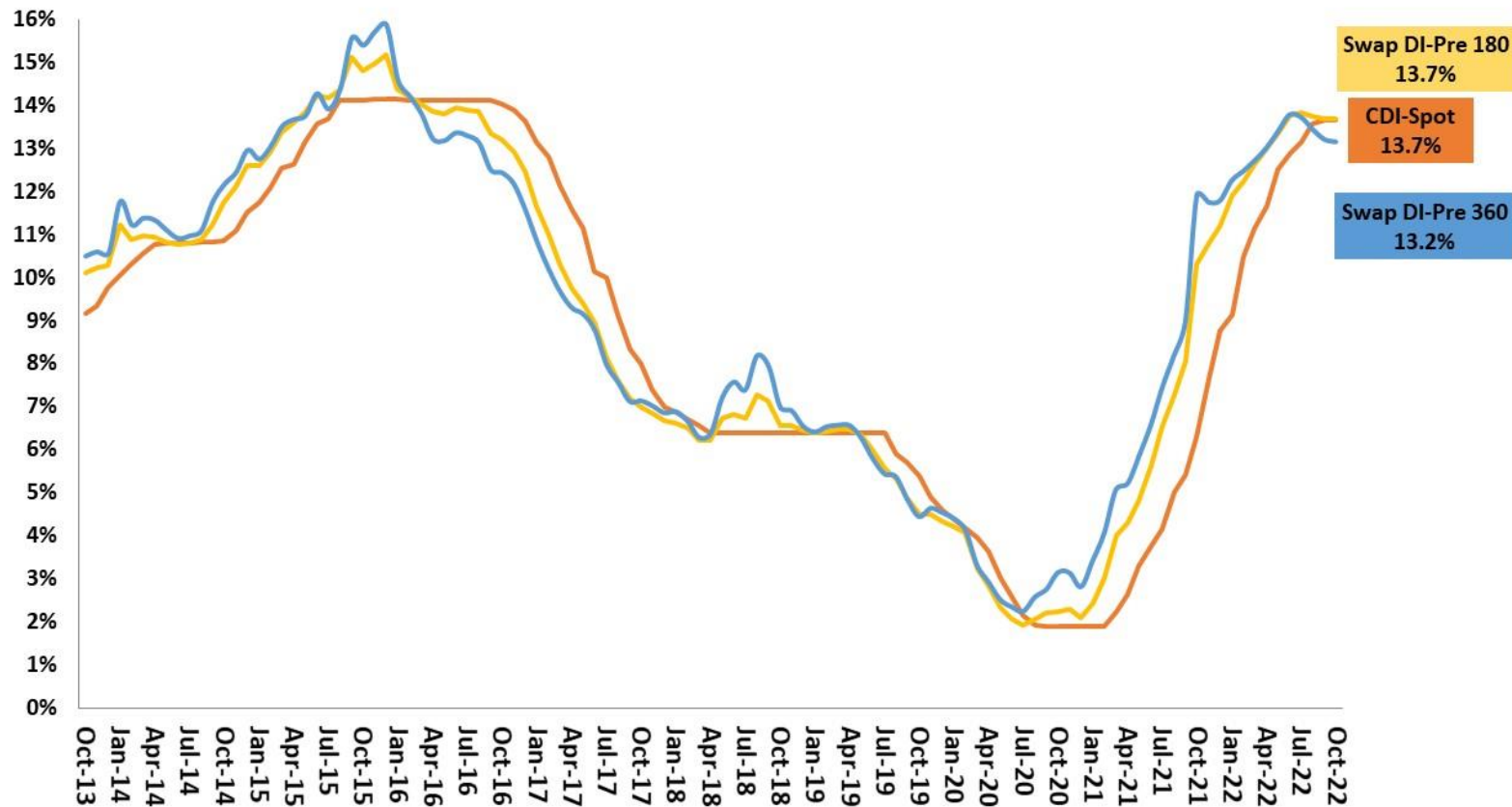
FINANCIAL MARKETS



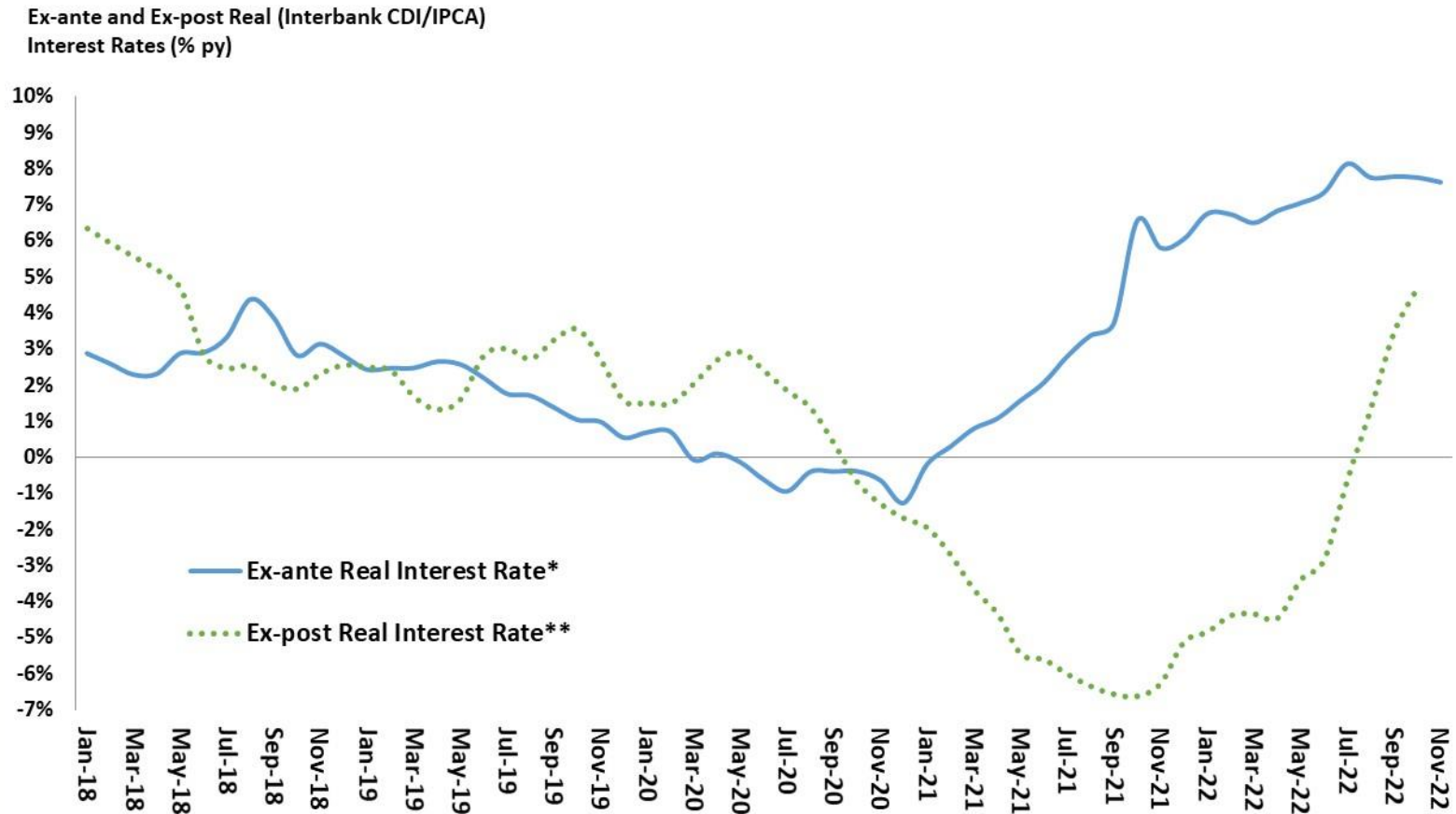
Source: Central Bank of Brazil. *TLP is 3-Month average of 5-Year NTN-B bonds plus IPCA Market Expectation (Focus Survey by BCB).

Interbank Spot, 180 and 360-days
Interest Rate (% p.a.)

Reverse Points of Yield Curve



Source: Central Bank of Brazil.



Source: Central Bank of Brazil. Data valid up to the date of the report.

* Ex-ante Real Interest Rate = Expected Interbank CDI/IPCA ratio, considering 360-days Swap DI-Pre rate and IPCA median of BCB-Focus Survey.

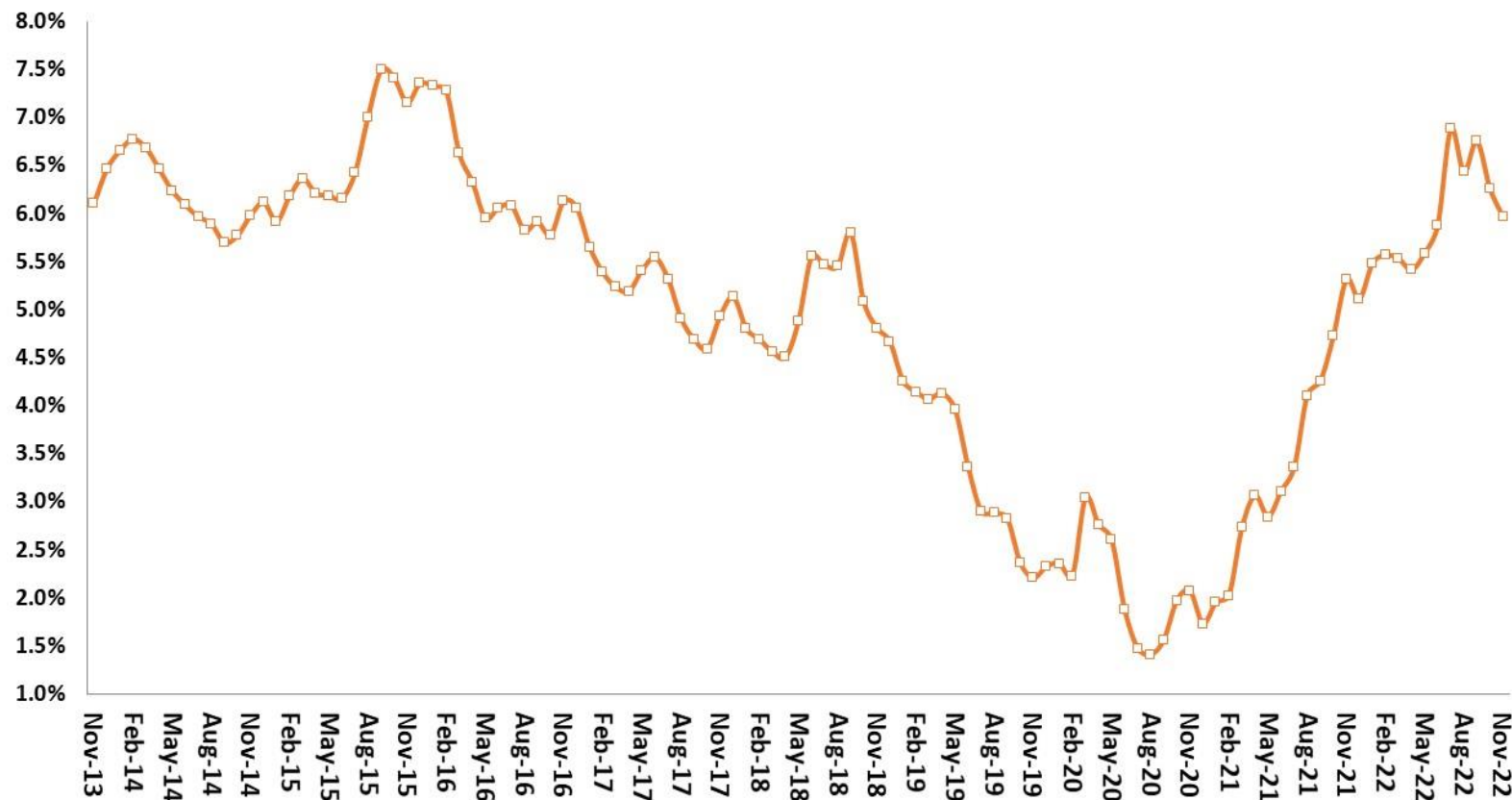
** Ex-post Real Interest Rate = Observed 12-months accumulated CDI/IPCA ratio.

Domestic Federal Bond (NTN-B): Implicit Real Interest Rate

FINANCIAL MARKETS

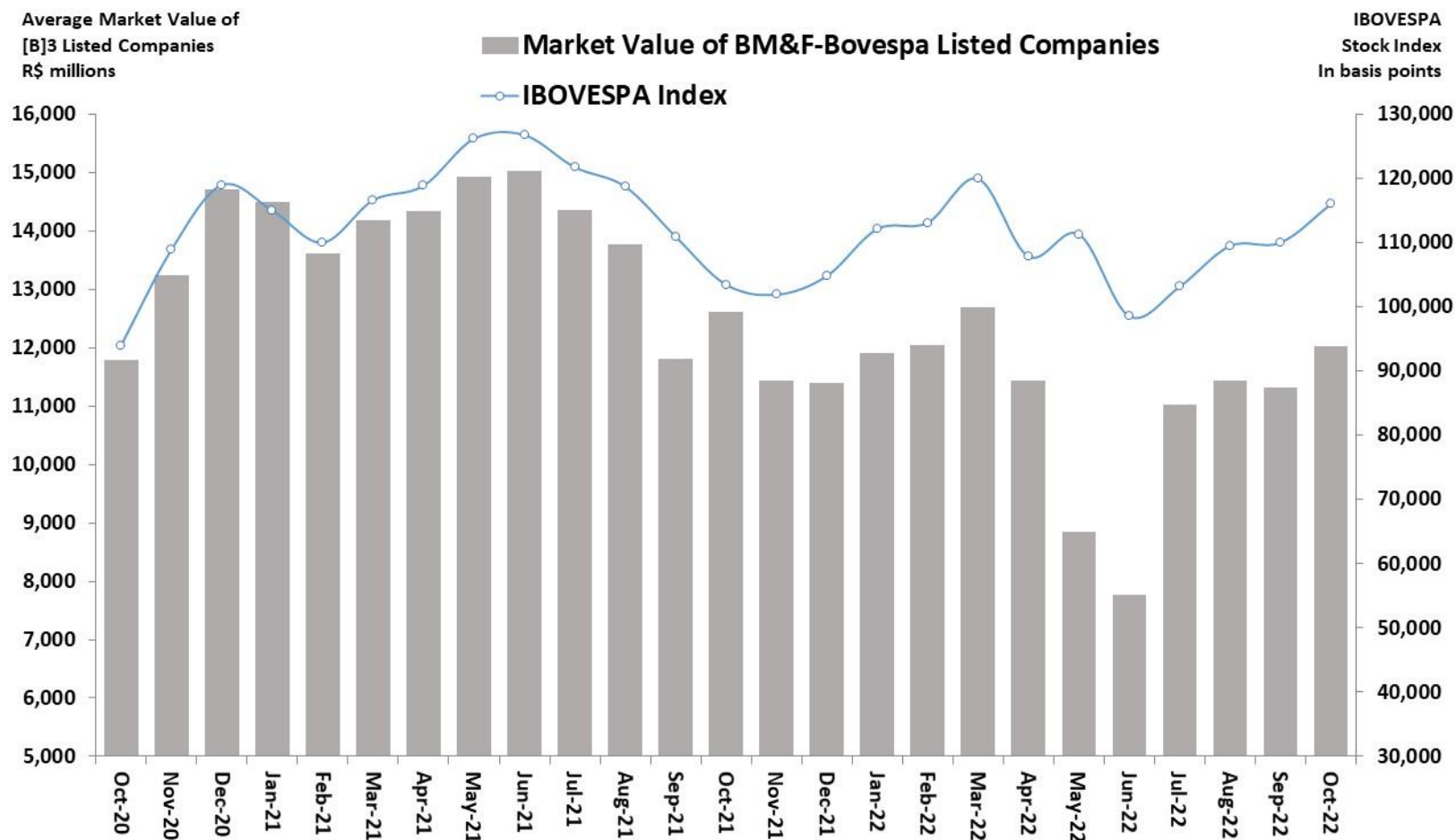
NTN-B 2024*

Real Interest Rate (% p.a.) – End Of Month



Source: STN. * Interest rate paid by the NTN-B 2024 besides the IPCA inflation rate. Data valid up to the date of the report.

Brazilian Stock Market Evolution



Source: Central Bank of Brazil.

EMBi+ Brasil Spread
(basis points)

600

500

400

300

200

100

0

S&P and Fitch Investment
Grade Period
(Apr/2008 until Sep/2015)
Average = 242 bps.

228

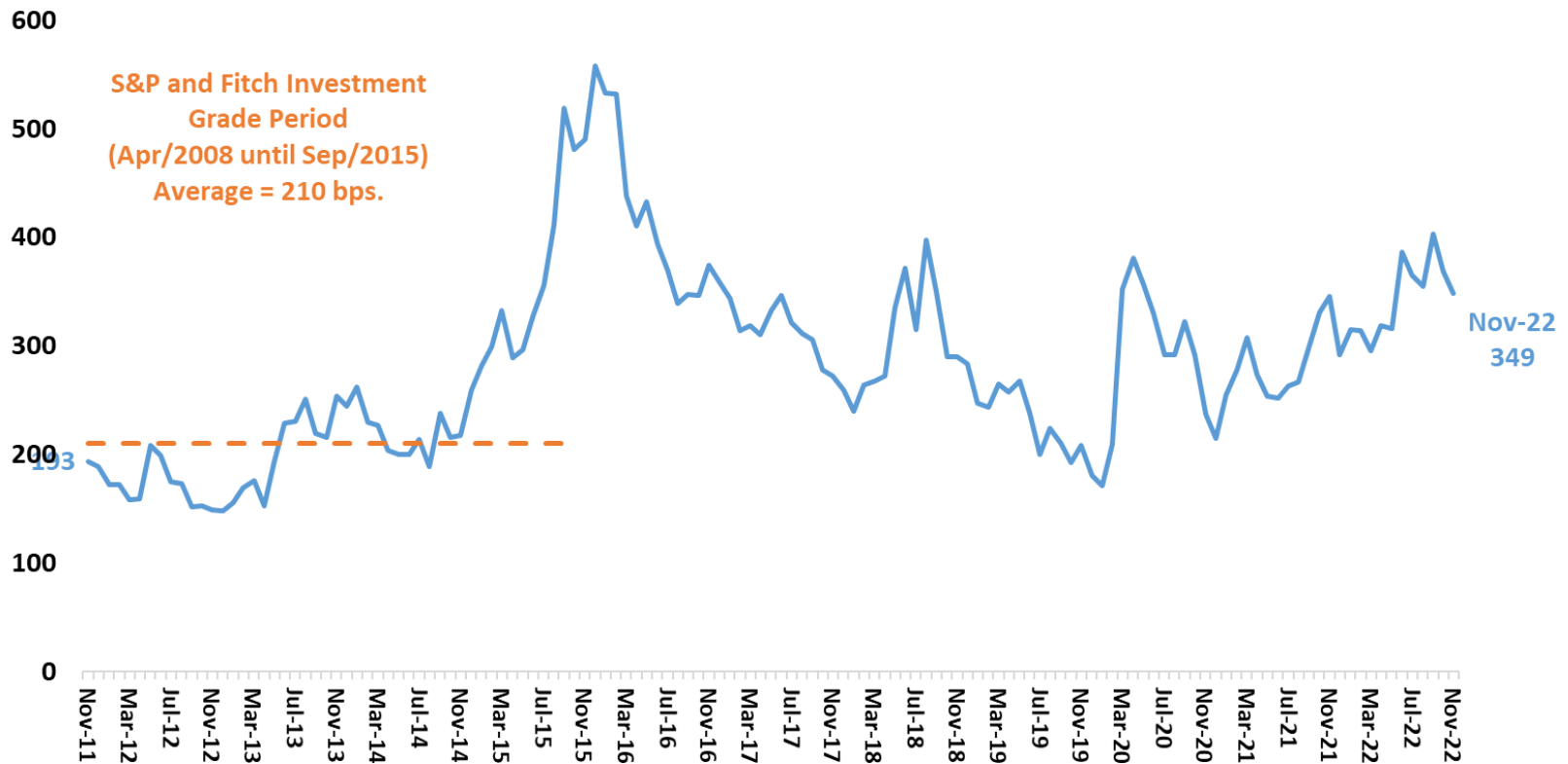
Nov-22
270

Nov-11
Feb-12
May-12
Aug-12
Nov-12
Feb-13
May-13
Aug-13
Nov-13
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May-14
Aug-14
Nov-14
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Feb-20
May-20
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May-21
Aug-21
Nov-21
Feb-22
May-22
Aug-22
Nov-22

Source: JPMorgan. Data valid up to the date of the report.

Sovereign Risk (CDS 10Y BR)

CDS 10Y Brazil Spread
basis points



Source: Bloomberg. Data valid up to the date of the report.

Foreign Trade

Foreign Trade

FOREIGN TRADE

											BCB/Focus: 11/11/22		
Exchange Rate Indicators (BCB)	October-22			chg.%	chg.%	chg.%					Average FX	Average FX	Average FX
FX % change rate: appreciation (-) or depreciation (+) of the Real	2020	2021		Aug/22- Aug/21	Sep/22- Sep/21	Oct/22- Oct/21	YTD 2022	Aug/22 accum. in 12-months	Sep/22 accum. in 12-months	Oct/22 accum. in 12-months	Rate 2021	Rate 2022	Rate 2023
Nominal Exchange Rate (R\$/US\$) - sale - end of period; month value:	5.257	32.9%	3.1%	0.7%	-0.6%	-6.8%	-4.7%	-2.8%	-2.5%	-2.9%	5.20	5.20	5.15
Exchange Rate Indicators (BCB)	October-22			chg.%	chg.%	chg.%							
FX % change rate: appreciation (-) or depreciation (+) of the Real	2020	2021		Aug/22- Aug/21	Sep/22- Sep/21	Oct/22- Oct/21	YTD 2022	Aug/22 accum. in 12-months	Sep/22 accum. in 12-months	Oct/22 accum. in 12-months			
Real Effective Exchange Rate (IPCA)	27.9%	3.2%		-4.7%	-9.1%	-8.2%	-10.8%	-8.2%	-8.4%	-8.6%			
Exchange Rate / Wage Ratio adjusted by Labor Productivity	12.6%	-22.3%		7.6%	-7.3%	-5.8%	-7.0%	-12.3%	-10.0%	-8.3%			
Unitary Labor Cost in US\$	-20.2%	-0.8%		8.6%	16.7%	13.3%	19.2%	18.0%	18.1%	17.7%			
Foreign Trade of Goods (FUNCEX)	September-22			chg.%	chg.%	chg.%							
Average Price and Quantum	2020	2021		Jul/22- Jul/21	Aug/22- Aug/21	Sep/22- Sep/21	YTD 2022	Jul/22 accum. in 12-months	Aug/22 accum. in 12-months	Sep/22 accum. in 12-months			
QUANTUM													
Exports (X)	1.4%	3.6%	3.4%	6.7%	12.0%	3.1%	1.7%	1.6%	2.5%				
Basic Goods	5.8%	-0.3%	-0.9%	0.6%	12.2%	-1.2%	-2.2%	-2.8%	-1.6%				
Semi-Manufactured	10.0%	2.0%	7.7%	6.4%	17.2%	4.6%	1.7%	2.4%	3.6%				
Manufactured	-9.1%	12.8%	9.5%	19.4%	9.0%	11.0%	10.0%	10.3%	10.2%				
Imports (M)	-7.9%	22.1%	7.7%	16.7%	10.2%	2.9%	7.4%	6.1%	5.1%				
Intermediate Goods	-7.4%	26.6%	10.9%	18.7%	2.8%	2.0%	7.8%	6.7%	4.8%				
Capital Goods	-4.4%	1.8%	9.3%	34.0%	20.1%	6.8%	1.5%	2.0%	3.0%				
Durable Consumer Goods	-30.1%	44.6%	-2.5%	29.4%	11.7%	1.3%	10.6%	9.8%	7.8%				
Semi and Non-Durable Consumer Goods	-2.6%	5.1%	0.9%	28.7%	13.4%	3.2%	-2.0%	-0.8%	-0.5%				
Fuel and Lubricants	-15.7%	34.6%	-8.6%	-15.5%	31.4%	-0.1%	16.2%	9.5%	9.3%				
Exports Profitability Index	6.9%	3.2%	5.2%	-6.4%	-3.6%	-3.8%	-0.2%	-1.3%	-1.8%				
Quantum Ratio = average quantum X / average quantum M	12.5%	-17.5%	-2.2%	-6.0%	1.7%	1.2%	-5.6%	-3.7%	-1.7%				
PRICE													
Exports (X)	-6.7%	29.5%	12.7%	5.3%	5.5%	15.2%	23.1%	19.8%	17.6%				
Basic Goods	-4.8%	38.0%	8.9%	1.0%	3.3%	13.2%	23.4%	19.0%	16.1%				
Semi-Manufactured	-6.4%	27.8%	13.7%	4.5%	-0.5%	13.5%	23.5%	20.4%	17.3%				
Manufactured	-10.3%	14.4%	21.6%	16.6%	12.9%	20.8%	22.5%	22.0%	21.3%				
Imports (M)	-7.3%	13.2%	25.3%	16.7%	13.2%	27.6%	28.9%	28.4%	27.5%				
Intermediate Goods	-5.1%	15.1%	23.3%	11.9%	10.5%	25.1%	27.9%	27.0%	25.8%				
Capital Goods	-1.4%	-1.1%	1.6%	0.6%	0.4%	5.4%	5.4%	5.4%	4.9%				
Durable Consumer Goods	-6.8%	4.6%	6.1%	1.3%	6.3%	9.3%	10.3%	9.5%	9.6%				
Semi and Non-Durable Consumer Goods	-6.6%	0.8%	6.2%	0.3%	9.2%	10.0%	11.1%	10.6%	10.8%				
Fuel and Lubricants	-25.4%	39.1%	87.9%	87.9%	50.4%	93.6%	95.6%	96.3%	92.9%				
Terms of Trade = average price X / average price M	0.6%	14.7%	-10.0%	-9.8%	-6.8%	-9.8%	-4.1%	-6.4%	-7.6%				

Macroeconomic Parameters								
Year	Imports of Goods				Fuels			
	Brent Oil		Imports of Goods less Fuels		Gasoline		Diesel	
	Average price	Chg. %	USD million	Chg. %	Annual average sales			
	USD				Million cubic meters	Chg. %	Million cubic meters	Chg. %
2016	44.05	-15.89	125182.54	-16.40	2.62	4.09	4.52	-5.13
2017	54.39	23.49	139730.39	11.62	2.69	2.63	4.56	0.91
2018	71.07	30.66	161647.66	15.69	2.33	-13.13	4.64	1.56
2019	64.03	-9.91	163757.67	1.31	2.32	-0.49	4.77	3.00
2020	42.30	-33.94	144852.28	-11.54	2.18	-6.13	4.79	0.30
2021	70.44	66.53	193314.84	33.46	2.39	9.75	5.18	8.07
2022	101.77	44.48	233349.07	20.71	2.54	6.16	5.32	2.74
2023	89.30	-12.26	258598.00	10.82	2.62	3.36	5.48	3.02
2024	81.58	-8.64	283676.65	9.70	2.74	4.45	5.67	3.40
2025	77.00	-5.62	309154.09	8.98	2.86	4.38	5.85	3.21
2026	73.85	-4.08	334648.70	8.25	2.98	4.10	6.02	2.97

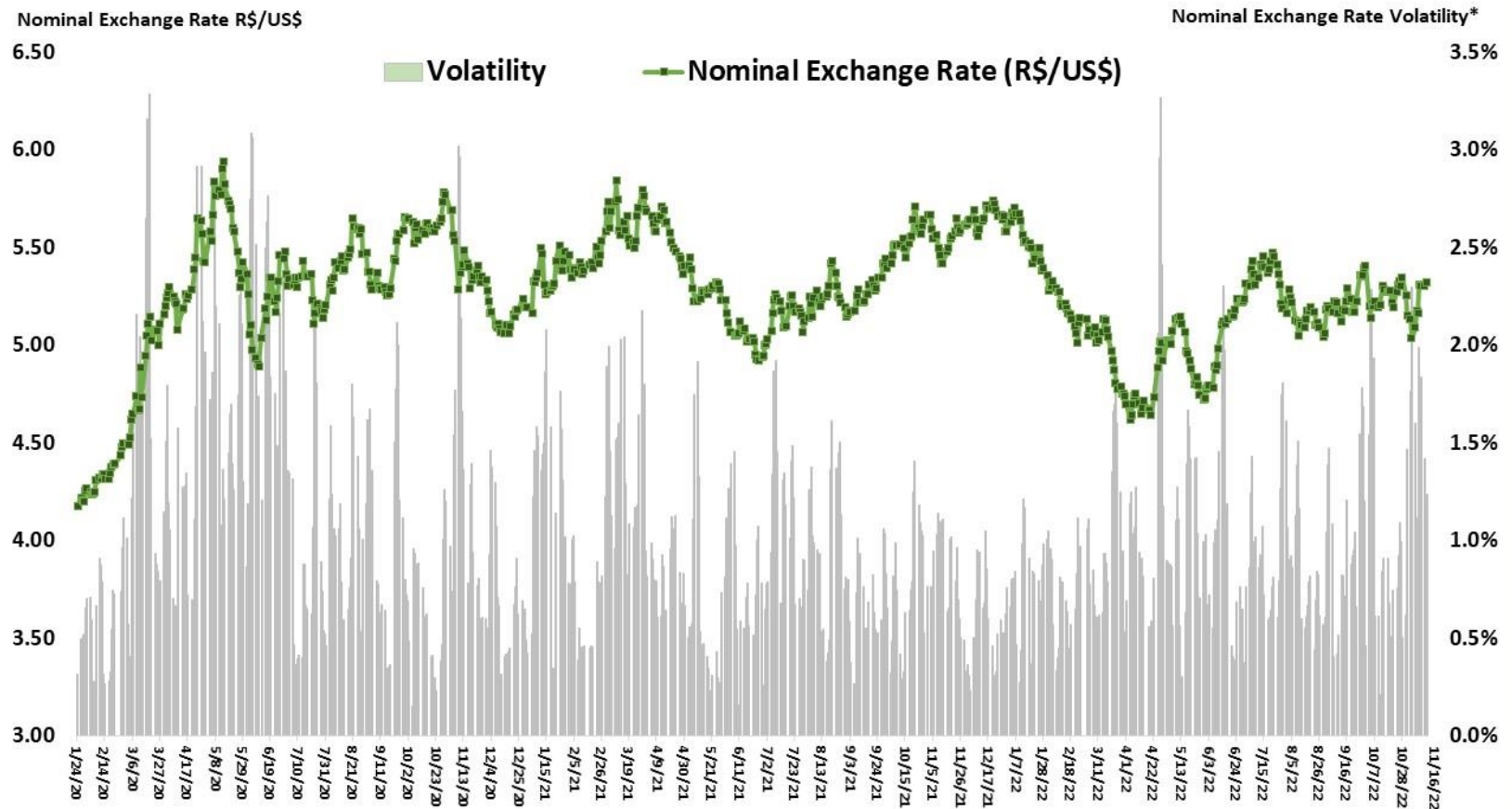
Source: SPE/ME. Macroeconomic Parameters, November-2022.

Macroeconomic Parameters				
Year	External Sector			
	Exchange Rate			
	Annual Average	December	Average chg. %	Annual chg. %
	Exchange Rate BRL/USD			
2016	3.5	3.3	4.8	-13.4
2017	3.2	3.3	-8.5	-1.8
2018	3.7	3.9	14.5	18.0
2019	3.95	4.03	7.95	5.78
2020	5.16	5.20	30.69	25.21
2021	5.40	5.58	4.64	9.83
2022	5.16	5.20	-4.40	-7.99
2023	5.19	5.20	0.68	-0.05
2024	5.13	5.10	-1.18	-2.12
2025	5.14	5.18	0.17	1.75
2026	5.19	5.20	0.97	0.43

Source: SPE/ME. Macroeconomic Parameters, November-2022.

Daily Nominal Exchange Rate R\$/US\$

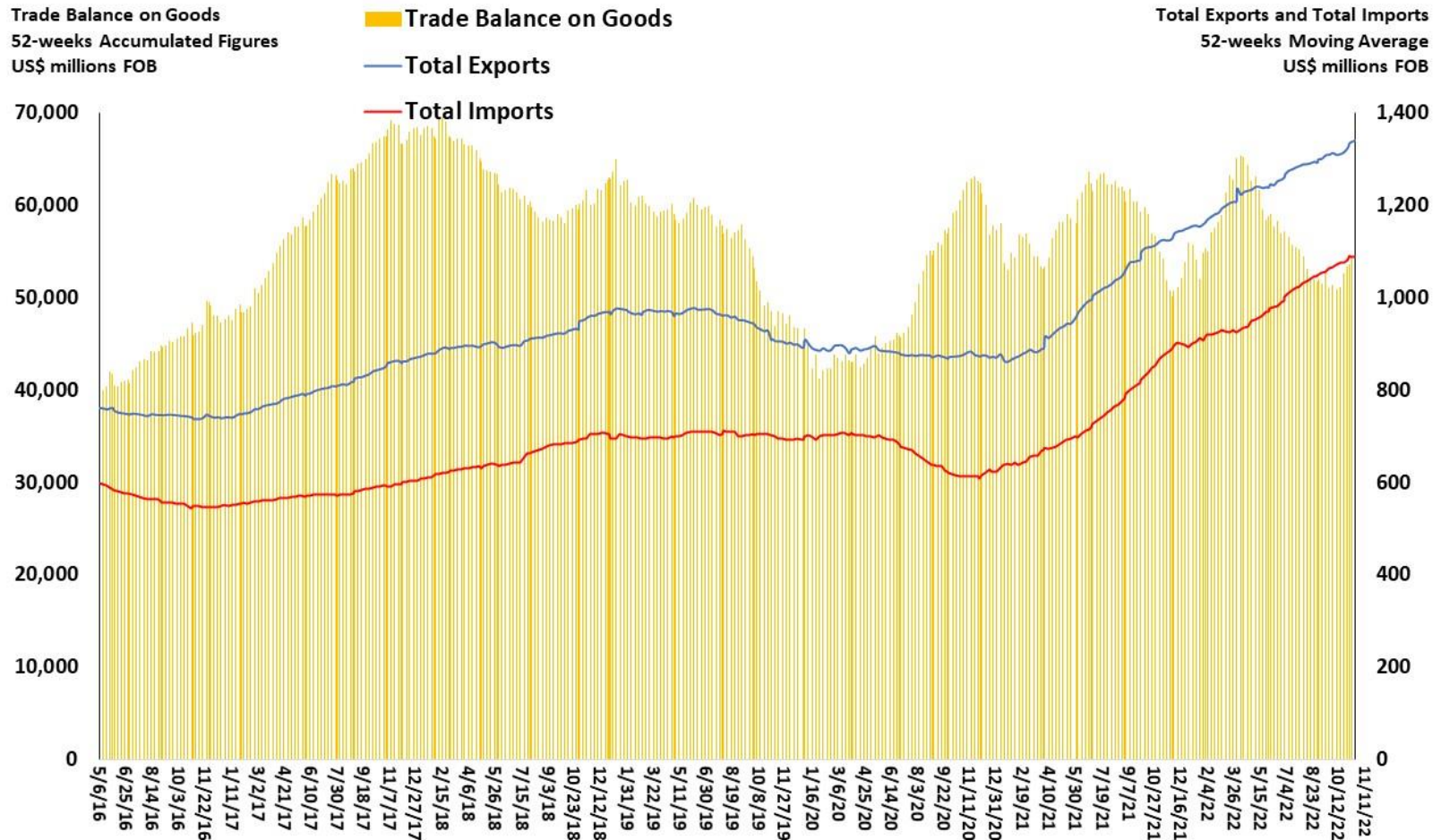
FOREIGN TRADE



Source: Central Bank of Brazil. *Volatility = 5-days Moving Coefficient of Variation.

Trade Balance on Goods (52 weeks daily average)

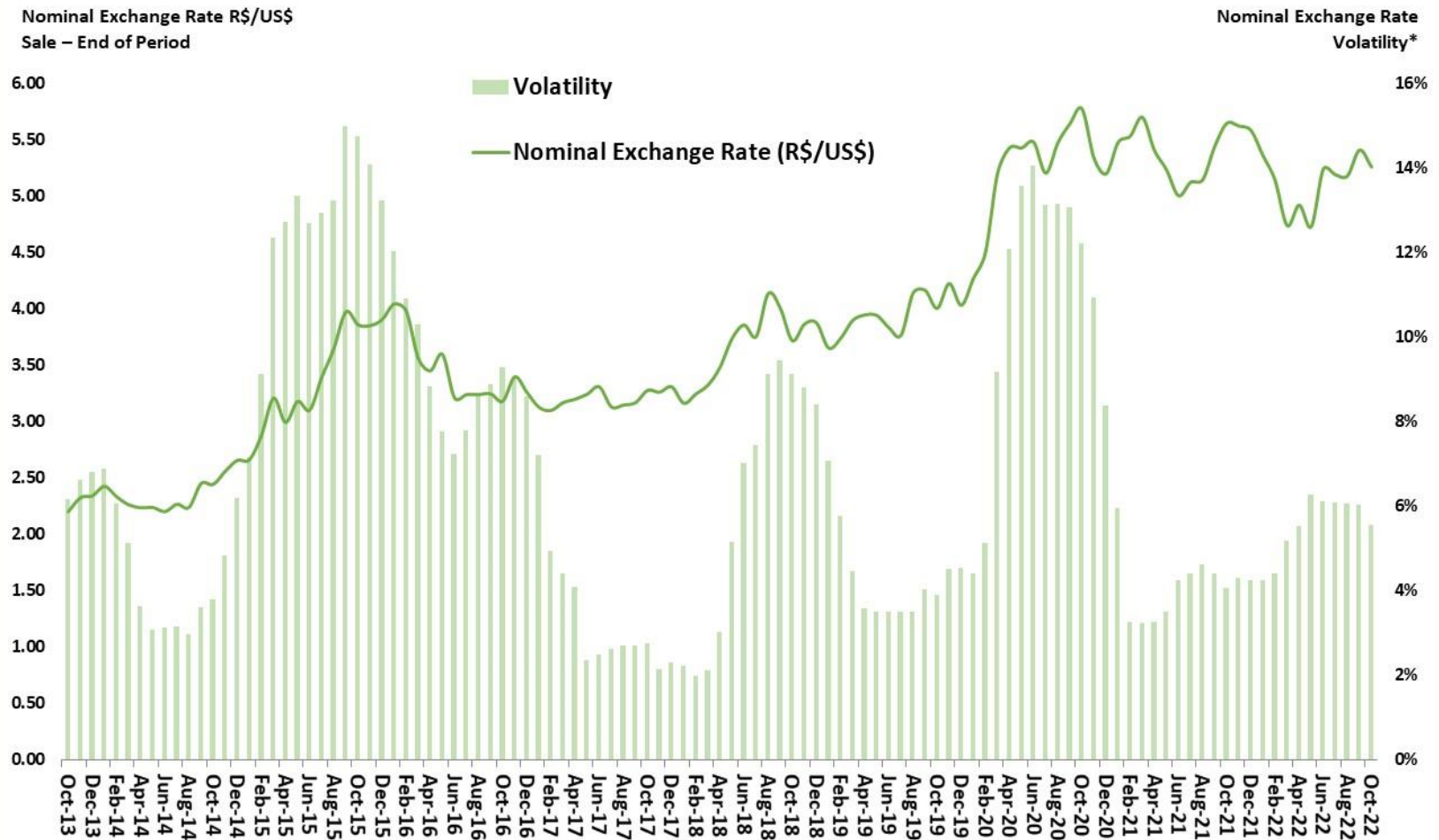
FOREIGN TRADE



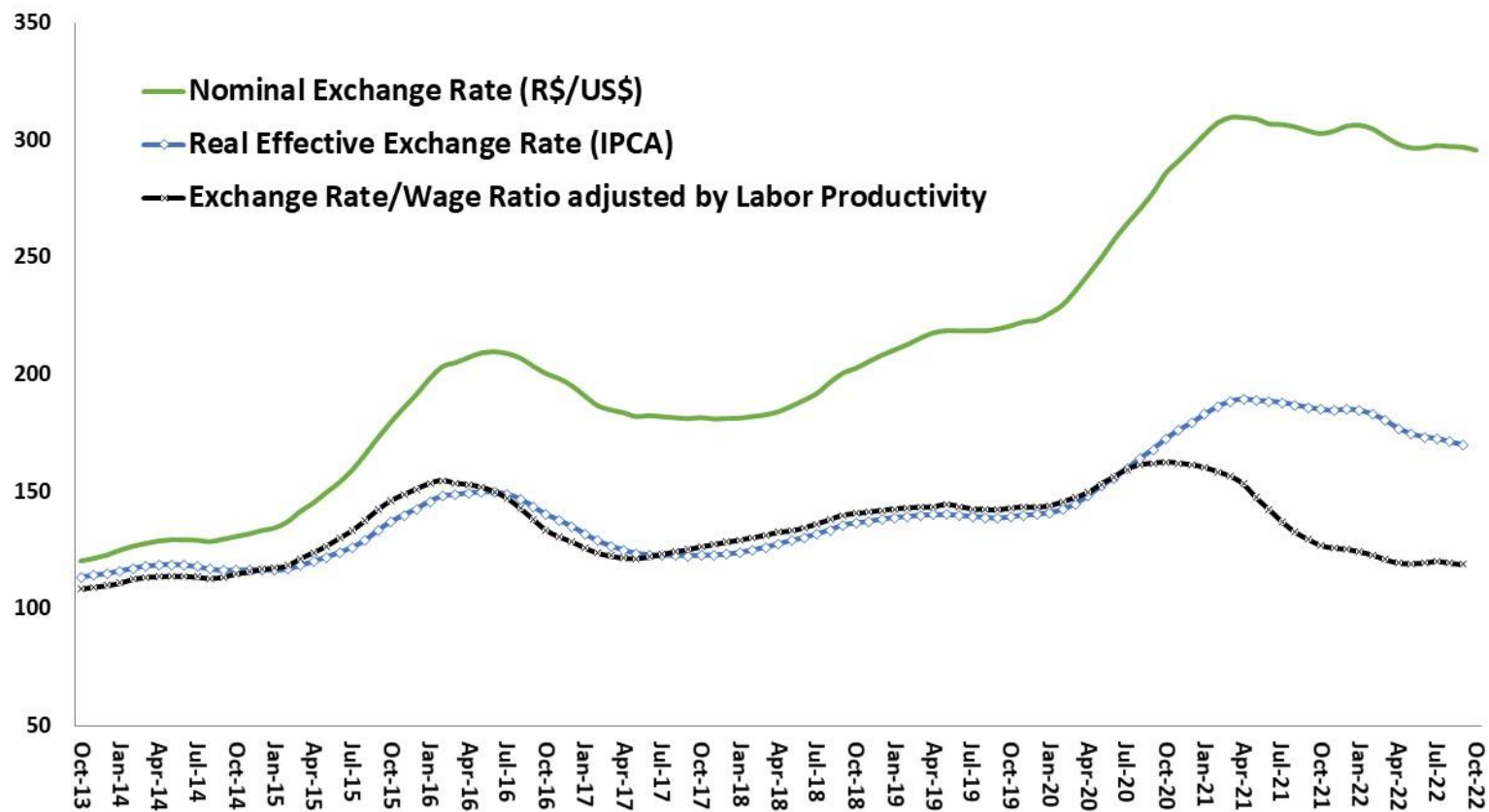
Source: SECEX.

Nominal Exchange Rate R\$/US\$

FOREIGN TRADE

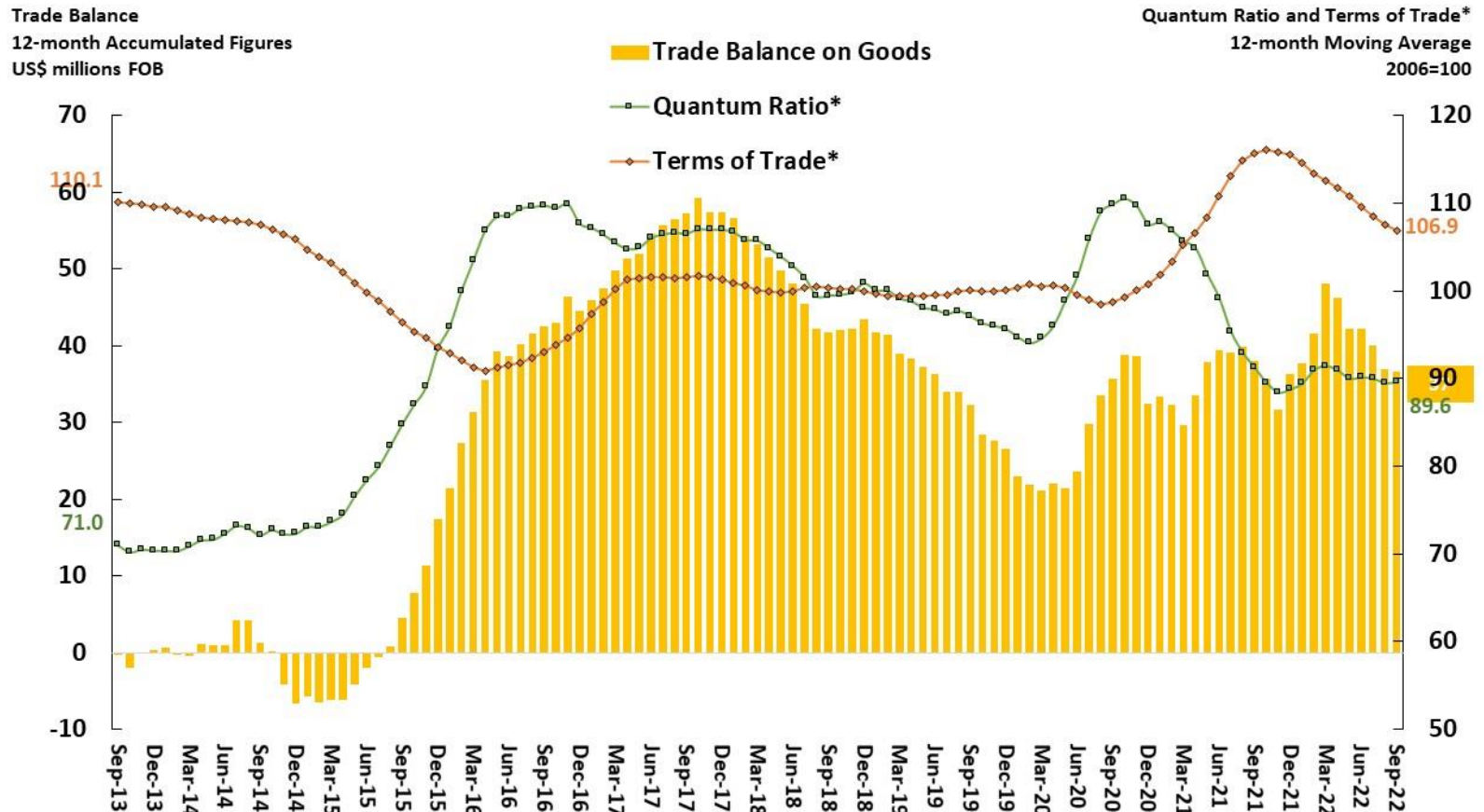


Exchange Rate Indexes (2006=100)
12-month Moving Average



Source: Central Bank of Brazil.

Trade Balance, Quantum and Terms of Trade Ratios



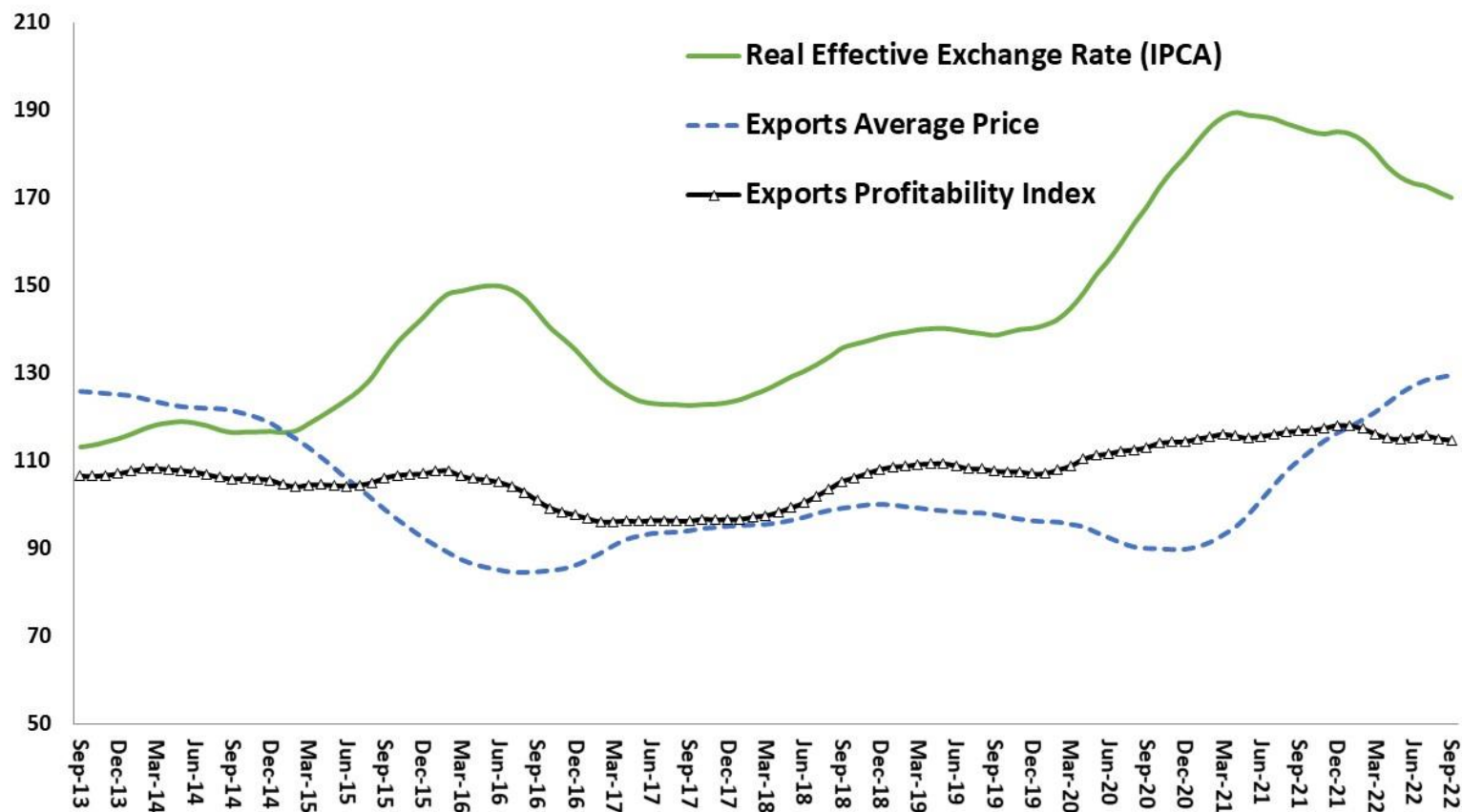
Sources: Central Bank of Brazil, SECEX and FUNCEX.

* Quantum Ratio = (average quantum Exports / average quantum Imports)

Terms of Trade = (average price Exports / average price Imports)

Exports: Profitability, Price and Real Exchange Rate

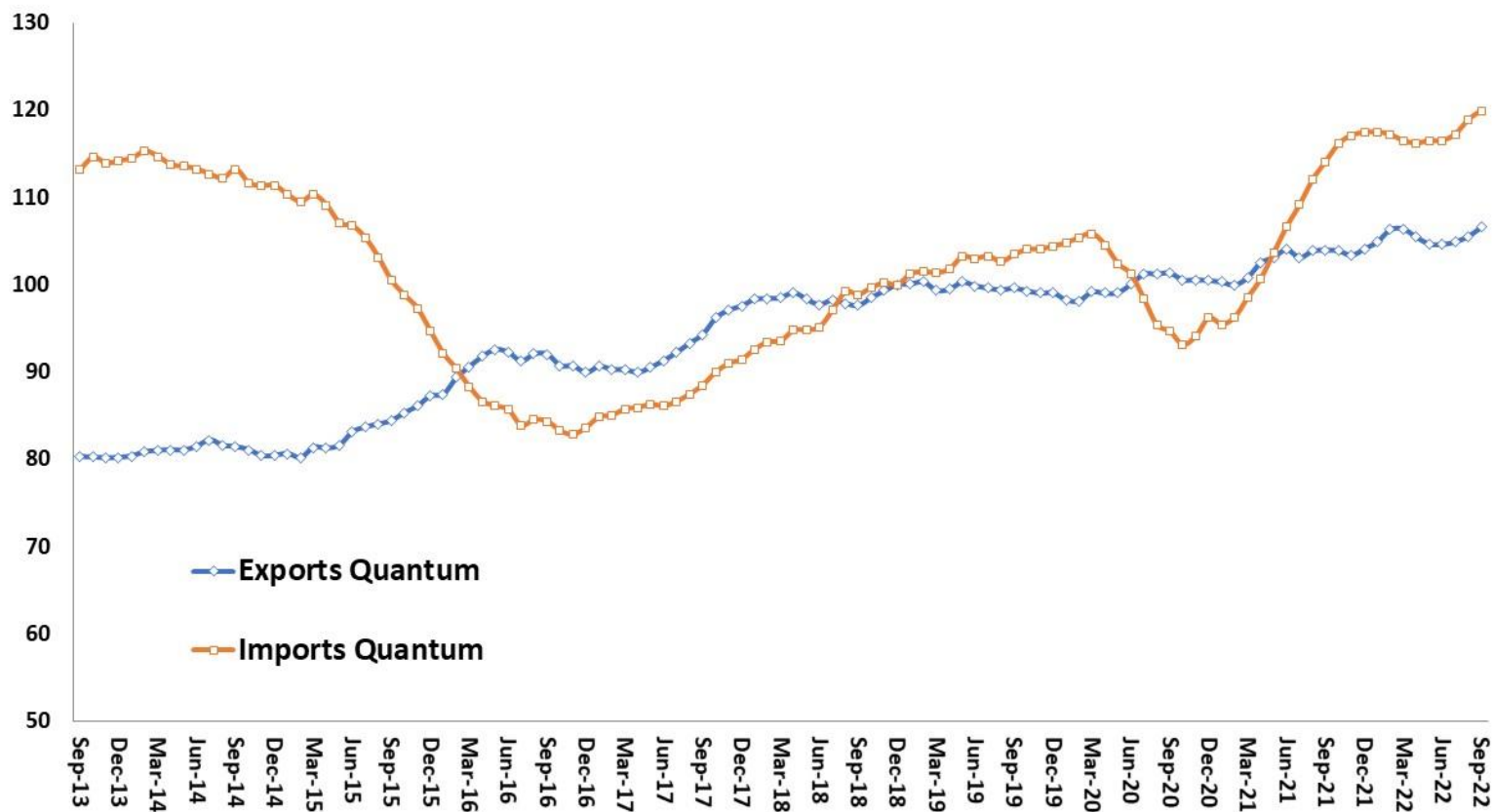
Real Effective Exchange Rate (IPCA), Exports Average Price and Exports Profitability Index
12-month Moving Average (2006=100)



Sources: Central Bank of Brazil and FUNCEX.

Quantum of Exports and Imports

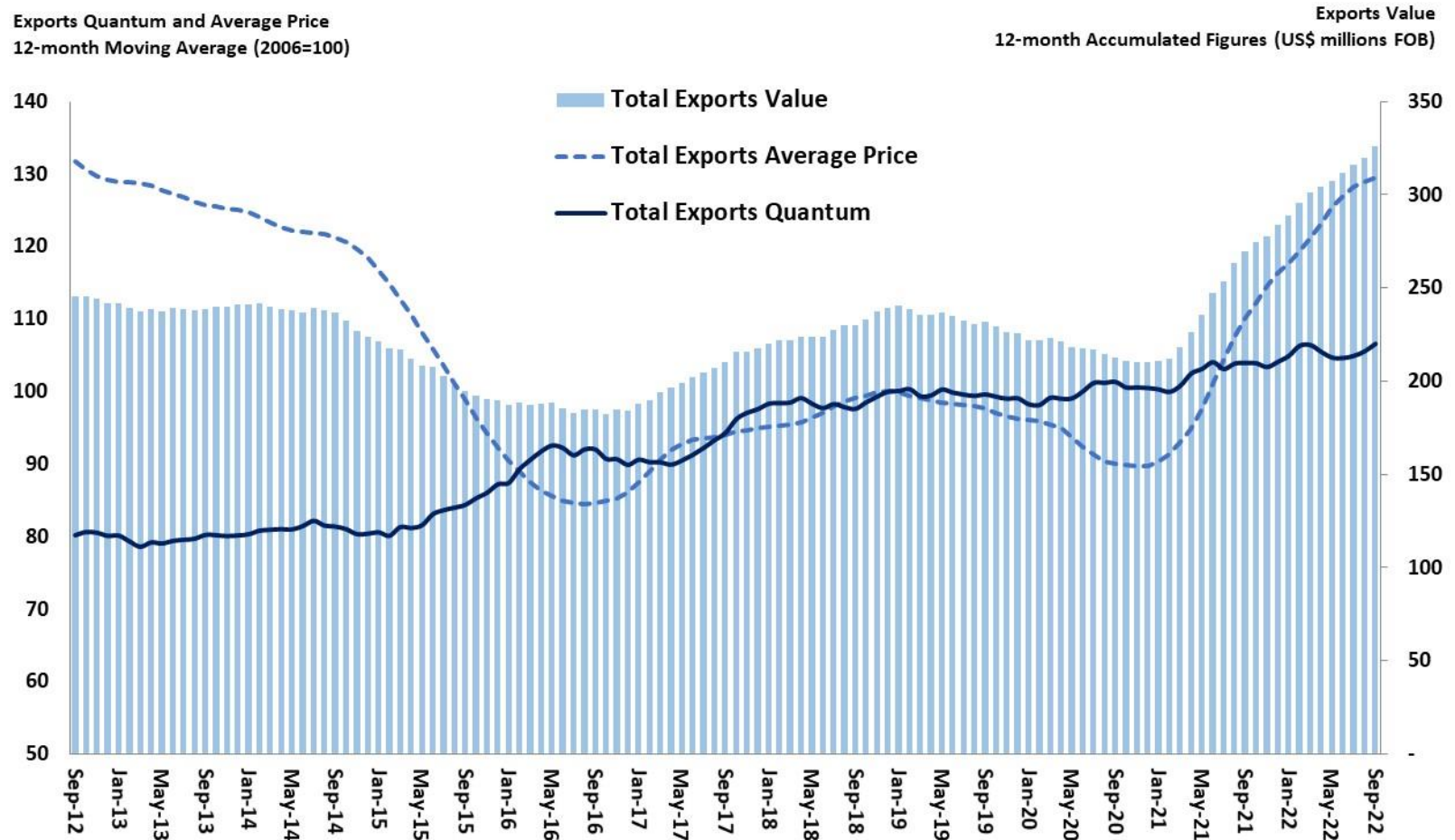
Exports and Imports Quantum
12-month Moving Average (2006=100)



Source: FUNCEX.

Total Exports: value, quantum and price

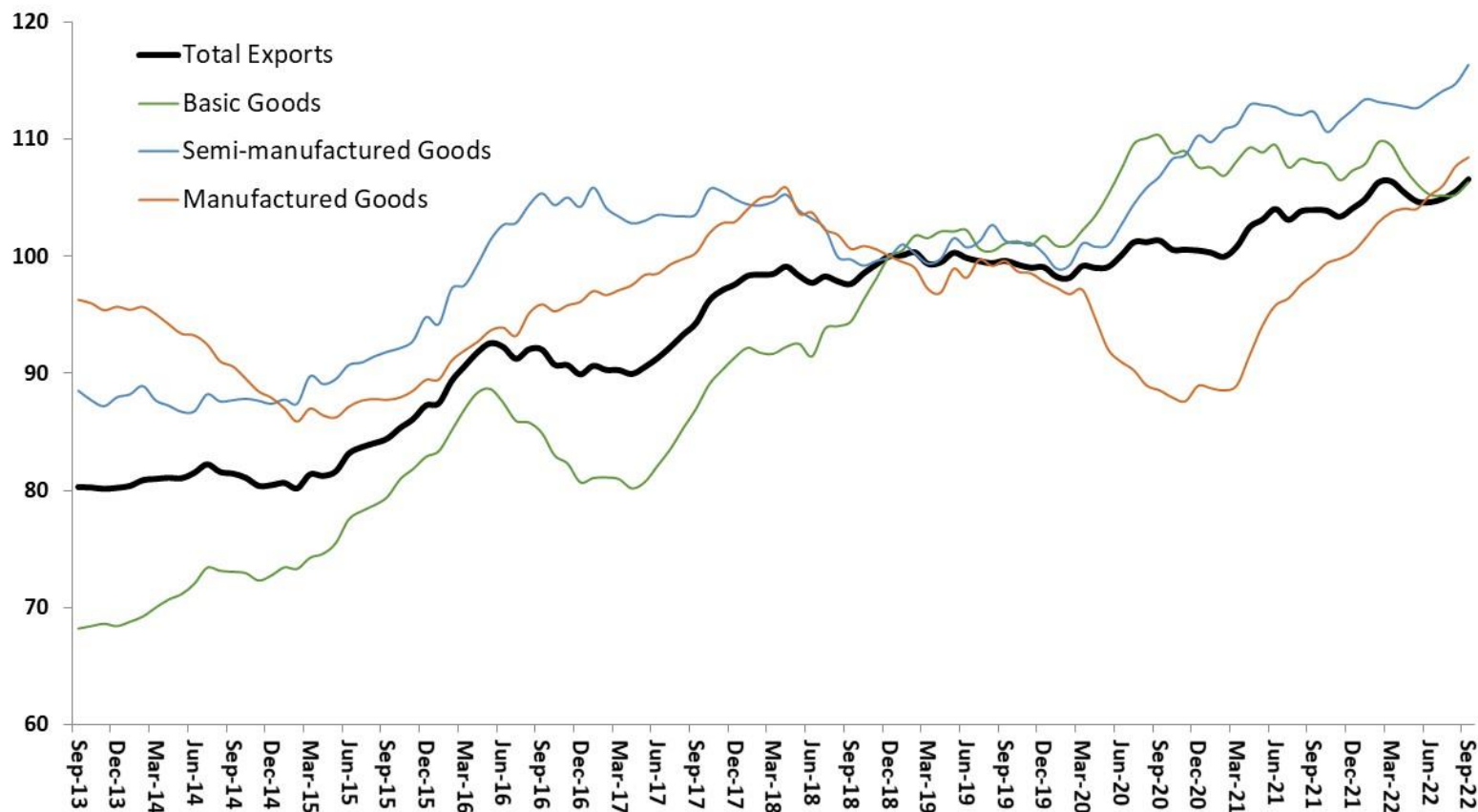
FOREIGN TRADE



Sources: SECEX and FUNCEX.

Quantum of Total Exports by Class of Products

Exports Quantum by Class of Products
12-months Moving Average (2006=100)

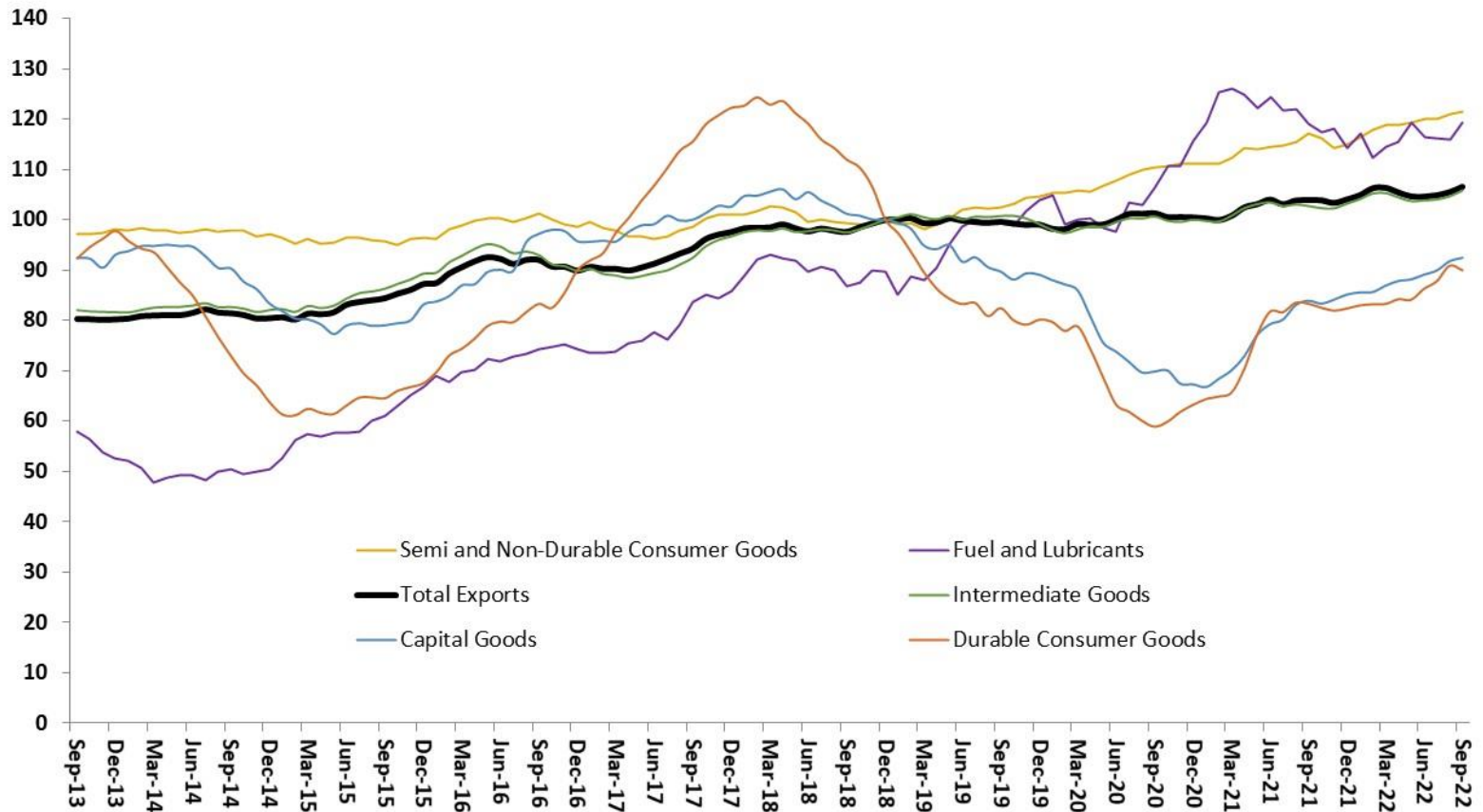


Source: FUNCEX.

Quantum of Total Exports by Economic Categories

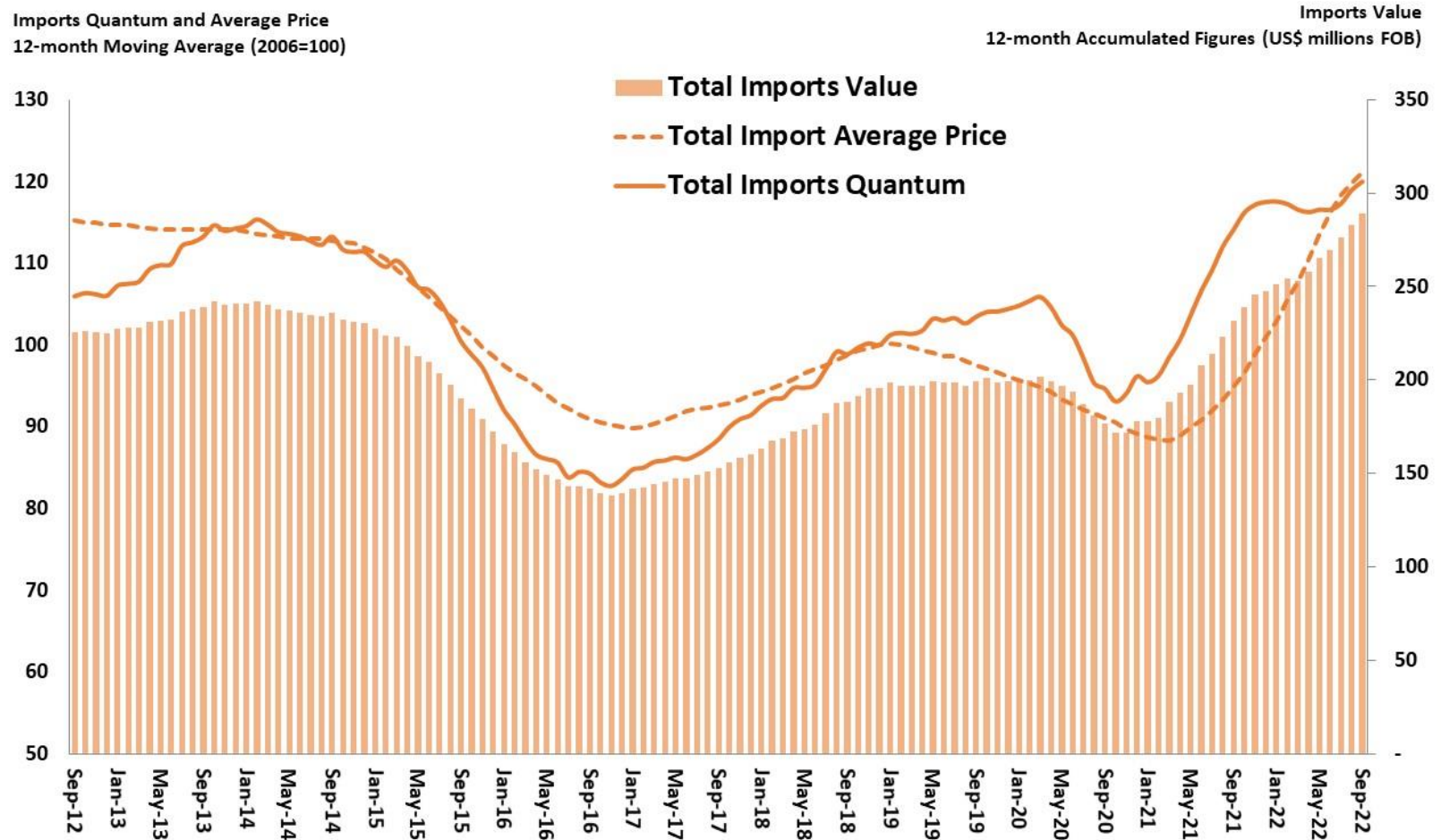
FOREIGN TRADE

Exports Quantum by Economic Categories
12-month Moving Average (2006=100)



Source: FUNCEX.

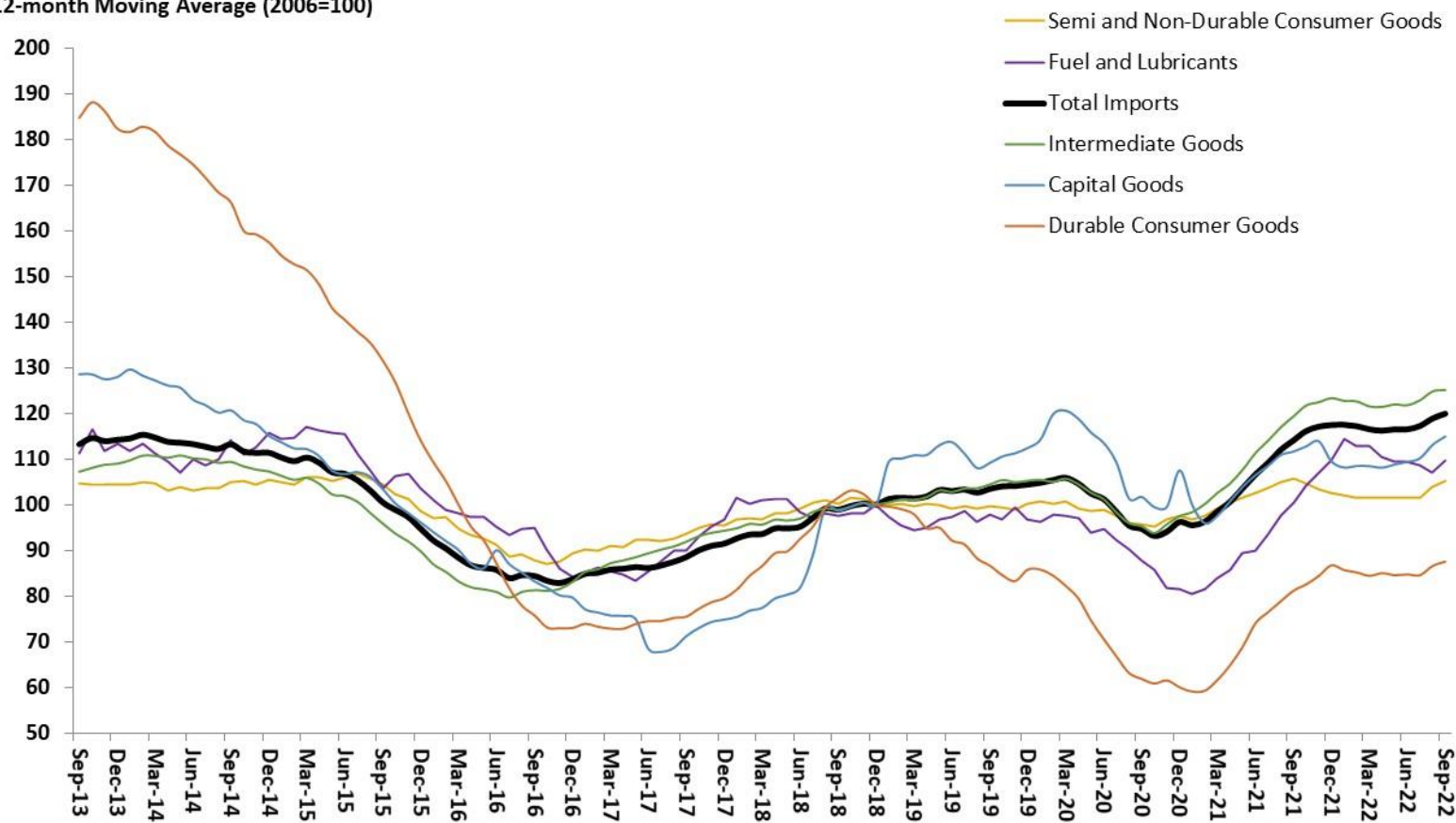
Total Imports: value, quantum and price



Sources: SECEX and FUNCEX.

Quantum of Total Imports and by Economic Categories

Imports Quantum by Economic Categories
12-month Moving Average (2006=100)

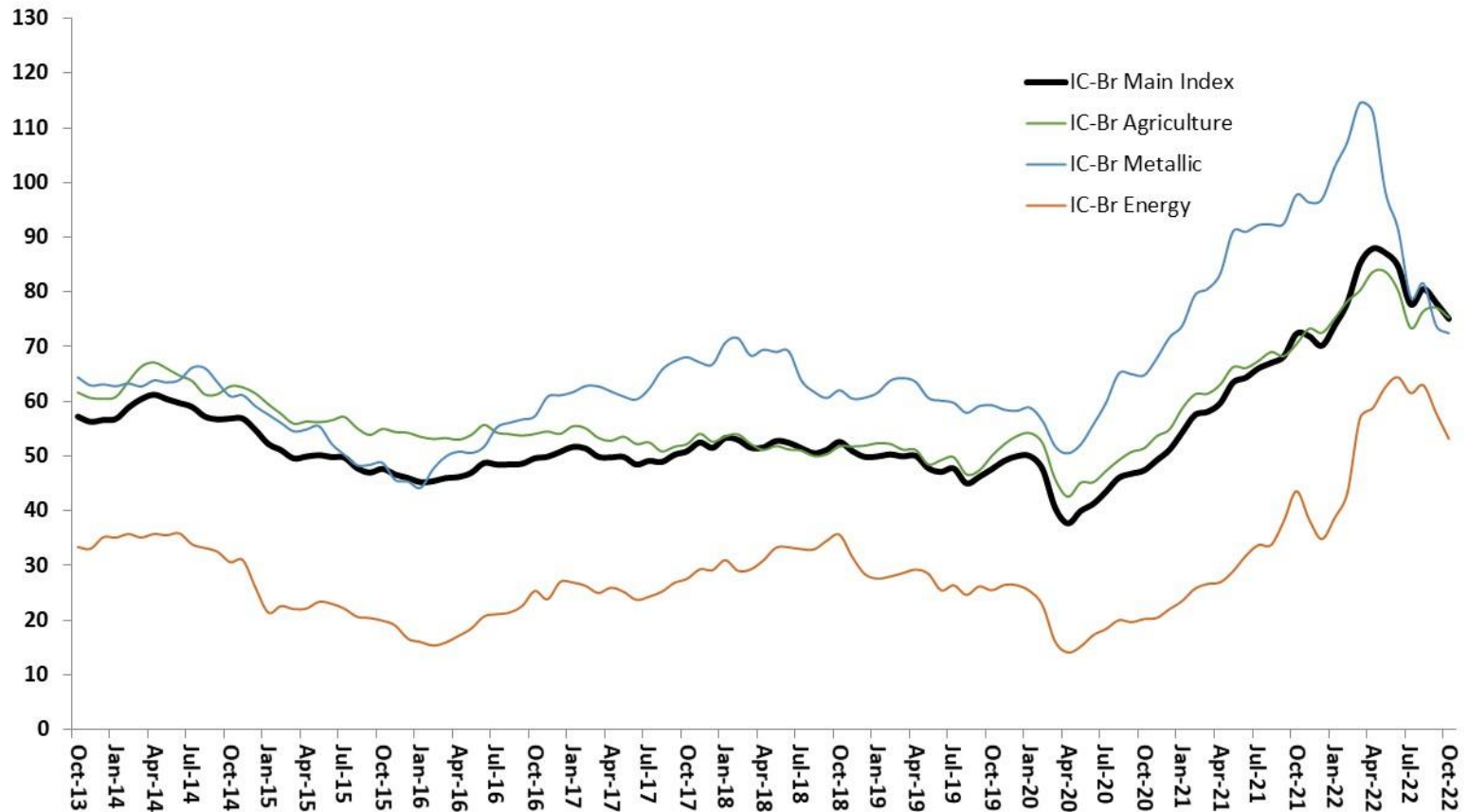


Source: FUNCEX.

Brazilian Commodity Price Indices

FOREIGN TRADE

Brazilian Commodity Index (IC-Br)
12-month Moving Average (2006=100)

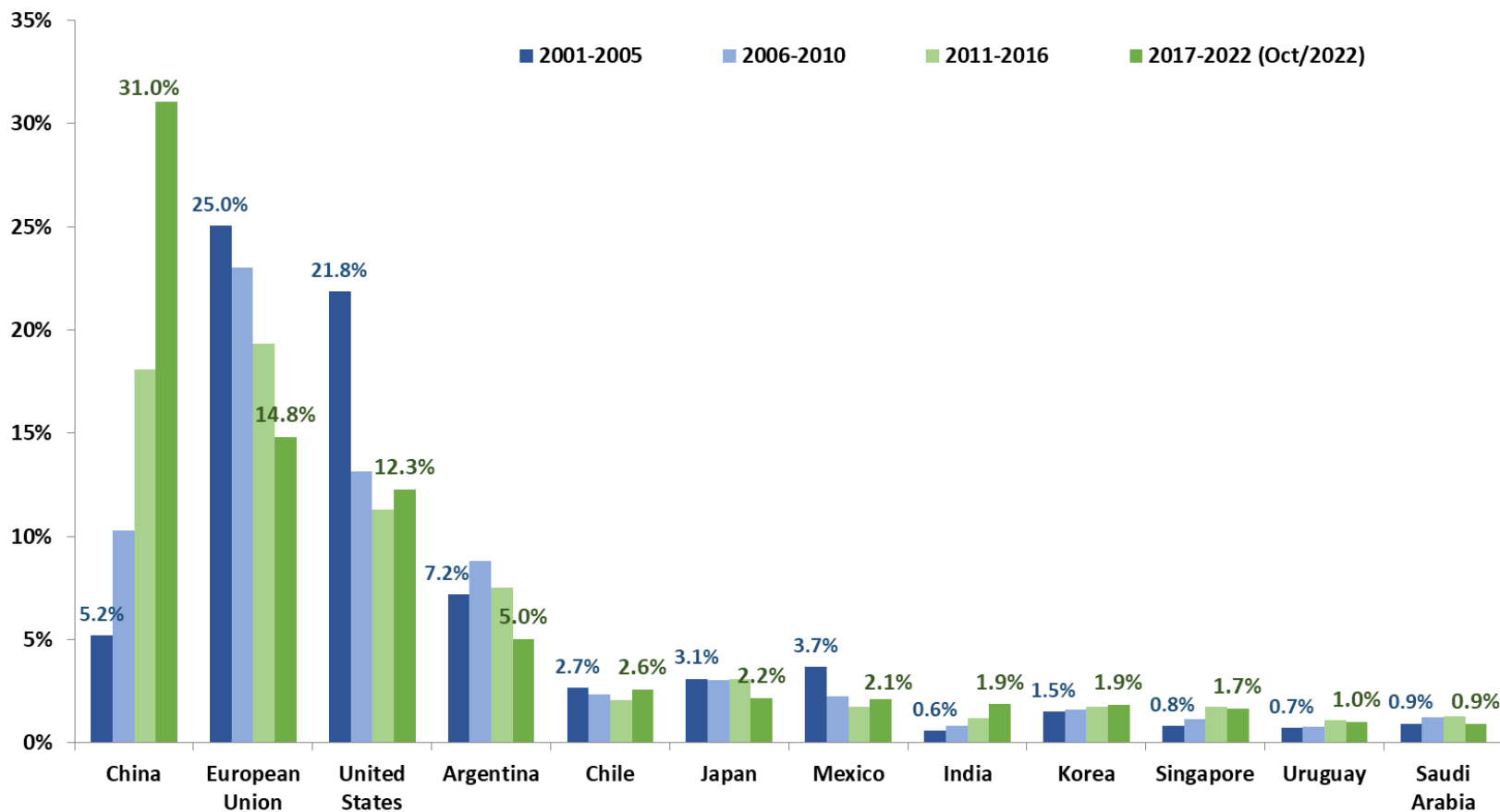


Source: Central Bank of Brazil.

Brazilian Exports Evolution by Country of Destination

FOREIGN TRADE

% of Exports Value



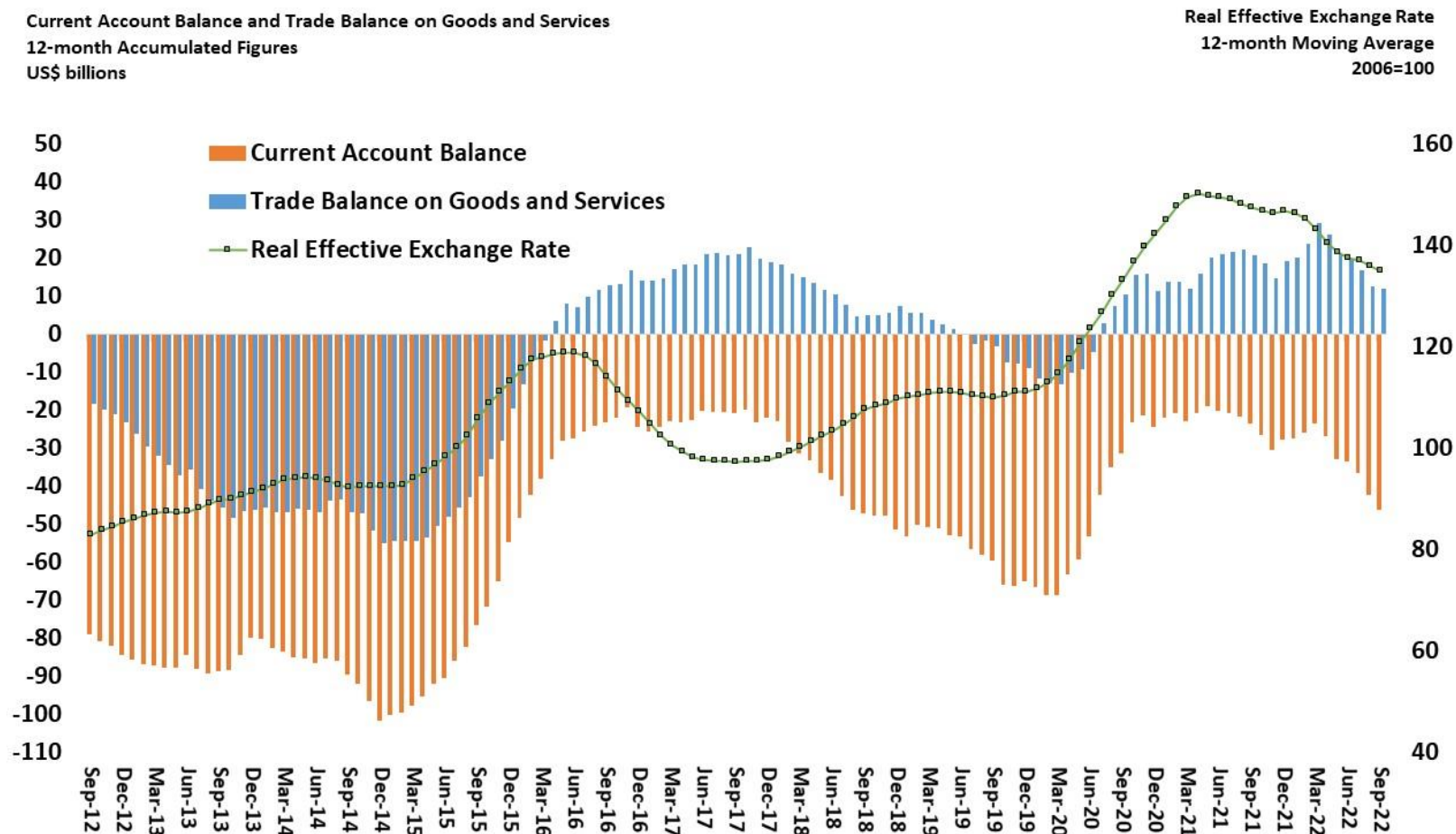
Source: SECEX.

External Sector

										BCB/Focus:		11/11/22	
Balance of Payments (BCB)		September-22											
In US\$ millions		2020	2021	set/yy accum. in 12-months	chg.% 2021 / 2020	chg.% set/yy accum. 12-m / 2021	chg.% ago/yy - ago/yy	chg.% set/yy - set/yy	chg.% - Jan ago/yy - Jan ago/yy	chg.% - Jan set/yy - Jan set/yy	2022	2023	2024
Balance of Payments		7,878	-6,006	-5,813	-176.2%	-3.2%	15.4%	100.2%	-210.1%	-3.7%			
Current Account Balance (CAB)		-24,492	-27,925	-46,153	14.0%	65.3%	-1806.7%	195.5%	-8.6%	160.5%	-41.0	-38.9	-43.1
CAB as % of GDP		-1.7%	-1.7%	-2.6%	0.0 pp	-0.8 pp	-1.0 pp	-1.1 pp	0.0 pp	0.0 pp			
Balance on Goods		32,369	36,363	36,650	12.3%	0.8%	-56.4%	-7.7%	19.5%	0.8%	335.0	327.9	334.0
Exports		210,707	284,012	325,974	34.8%	14.8%	13.4%	24.5%	37.6%	19.4%	280.0	270.6	286.0
Imports		178,337	247,648	289,325	38.9%	16.8%	31.7%	28.2%	41.7%	23.0%	55.0	56.0	50.1
Balance on Services		-20,941	-17,112	-24,808	-18.3%	45.0%	65.8%	39.6%	-22.9%	63.3%			
Primary Income		-38,264	-50,471	-61,778	31.9%	22.4%	41.0%	92.7%	32.2%	31.2%			
Secondary Income		2,344	3,294	3,783	40.54%	14.8%	58.3%	43.7%	35.4%	19.5%			
Capital Account		4,141	226	258	-94.6%	14.3%	64.7%	19.6%	-45.3%	18.9%			
Financial Account		-12,472	-33,706	-51,708	170.2%	53.4%	21806.0%	160.6%	120.8%	110.0%			
Direct Investments		-41,254	-27,284	-55,153	-33.9%	102.1%	22.4%	259.5%	-40.5%	117.7%			
Foreign Direct Investments (FDI)		37,786	46,441	73,811	22.9%	58.9%	69.3%	99.7%	38.7%	63.2%	80.0	75.0	80.0
Portfolio Investments		12,882	-5,694	5,362	-144.2%	-194.2%	-32.7%	783.4%	-106.1%	-100.0%			
Stock Market		7,701	-901	-702	-111.7%	-22.1%	70.3%	140.7%	-106.9%	-14.8%			
Bonds		-3,822	-15,114	13,257	295.5%	-187.7%	-6.2%	-77.1%	-289.2%	-222.0%			
Others Investments and Capital Flows		15,899	-728	-1,916	-104.6%	163.2%	-93.6%	93.2%	-1348.3%	-12.7%			
International Reserves - liquidity concept		355,416	358,398	327,580	0.8%	-8.6%	-11.2%	-11.5%					
Gross External Debt (BCB)		September-22											
In US\$ millions		2020	2021	Sep-22	2020 % of total	set/yy % of total	chg. pp	2020 % of GDP	set/yy % of GDP	chg. pp			
Total External Debt		619,416	670,286	660,100	100.0%	100.0%	-	37.1%	37.5%	0.4 pp			
Gross External Debt		307,056	325,440	319,524	49.6%	48.4%	-1.2 pp	18.4%	18.2%	-0.2 pp			
Public Sector		82,349	98,455	90,551	26.8%	28.3%	1.5 pp	4.9%	5.1%	0.2 pp			
Private Sector and Public Financial Sector		224,707	226,985	228,973	73.2%	71.7%	-1.5 pp	13.5%	13.0%	-0.5 pp			
Short Term		71,517	78,753	74,687	23.3%	23.4%	0.1 pp	4.3%	4.2%	0.0 pp			
Medium and Long Term		235,539	246,687	244,837	76.7%	76.6%	-0.1 pp	14.1%	13.9%	-0.2 pp			
Intercompany Loans		245,953	242,107	249,462	39.7%	37.8%	-1.9 pp	14.7%	14.2%	-0.6 pp			
Domestic Bonds with Foreign Investors		66,407	102,739	91,114	10.7%	13.8%	3.1 pp	4.0%	5.2%	1.2 pp			

Brazil: Real Exchange Rate and External Sector Adjustment

EXTERNAL SECTOR

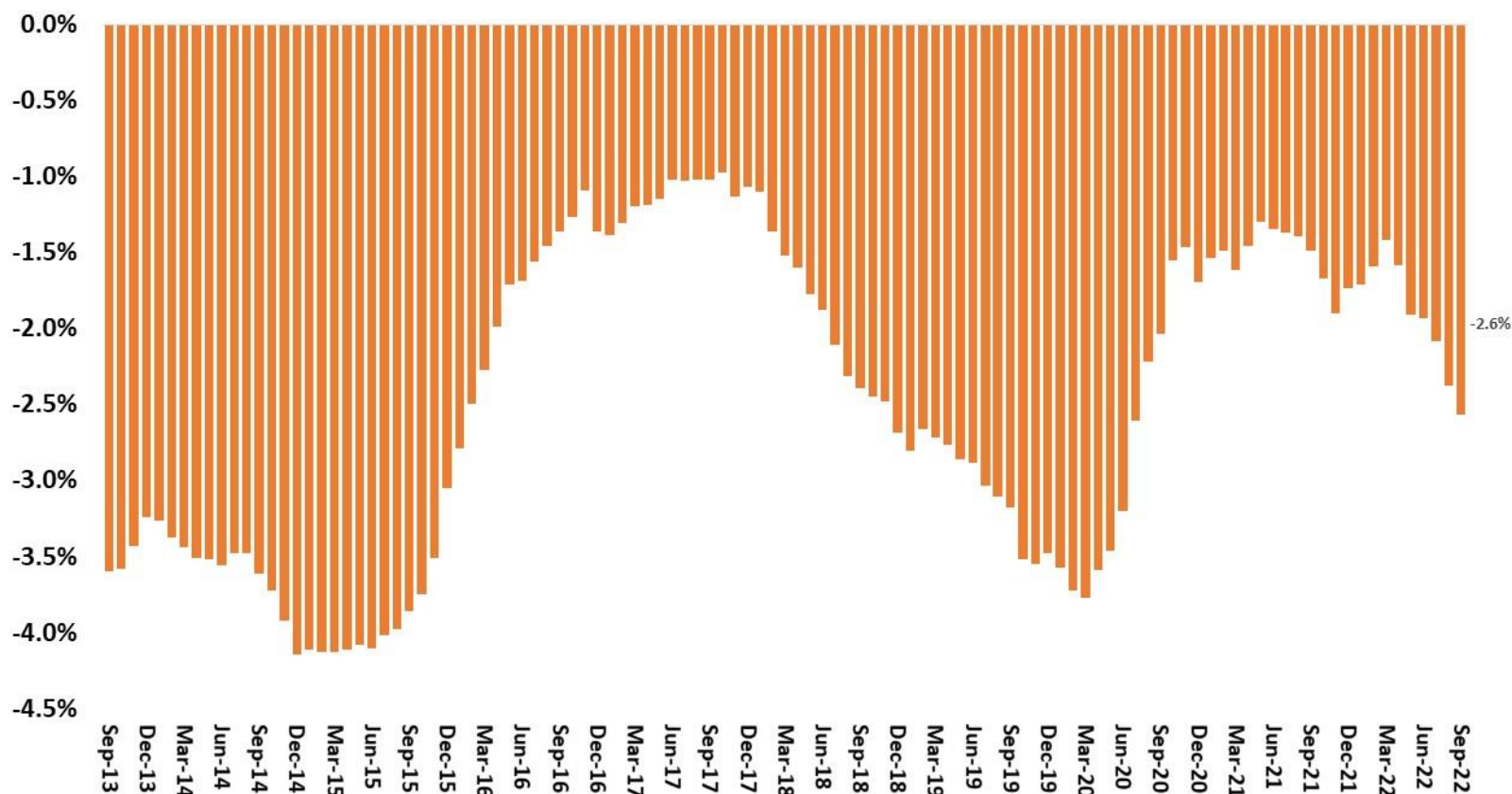


Source: Central Bank of Brazil.

Current Account Deficit as % of GDP

EXTERNAL SECTOR

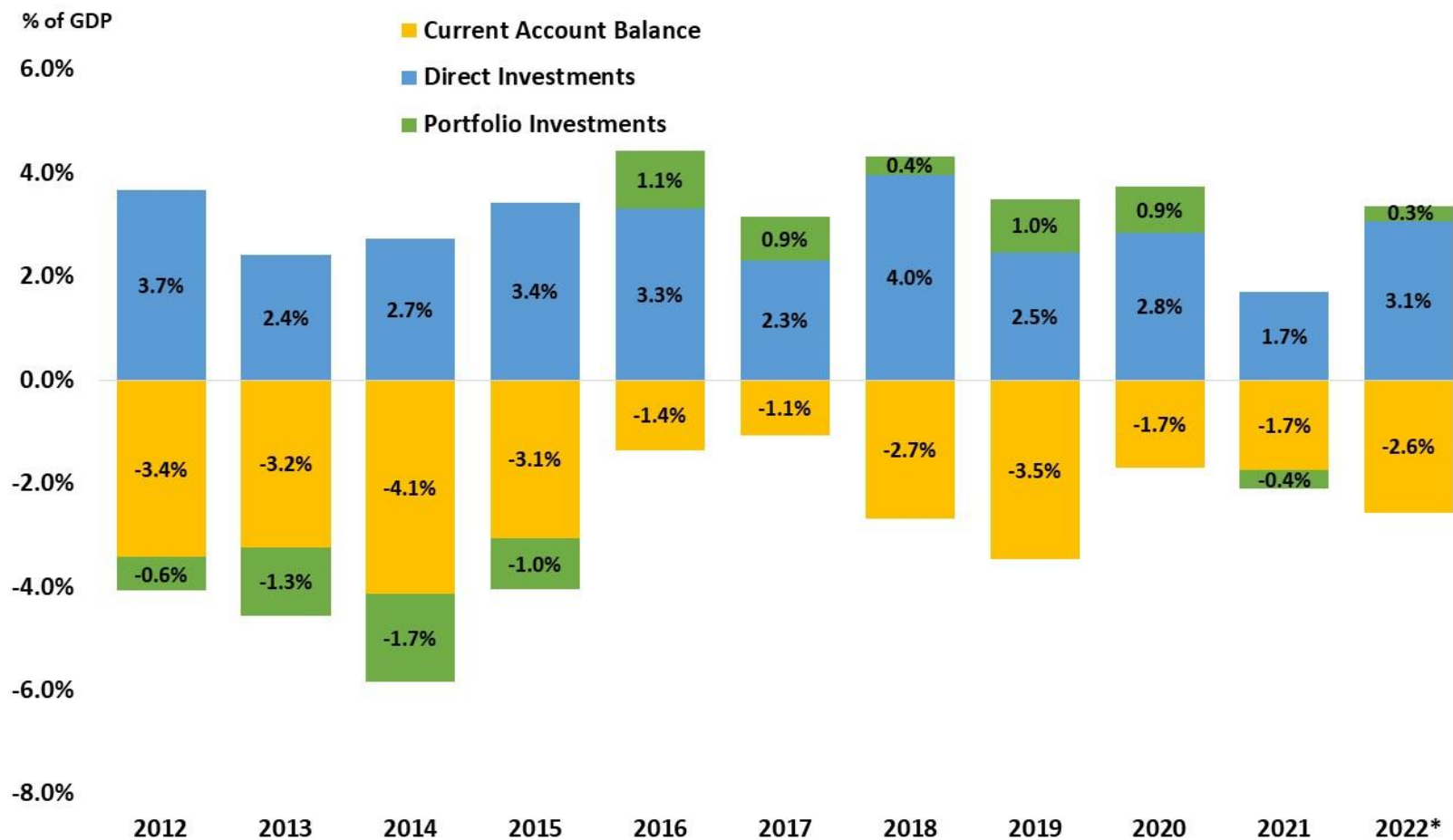
Current Account as % of GDP
12-month Figures



Source: Central Bank of Brazil.

Current Account Deficit Financing

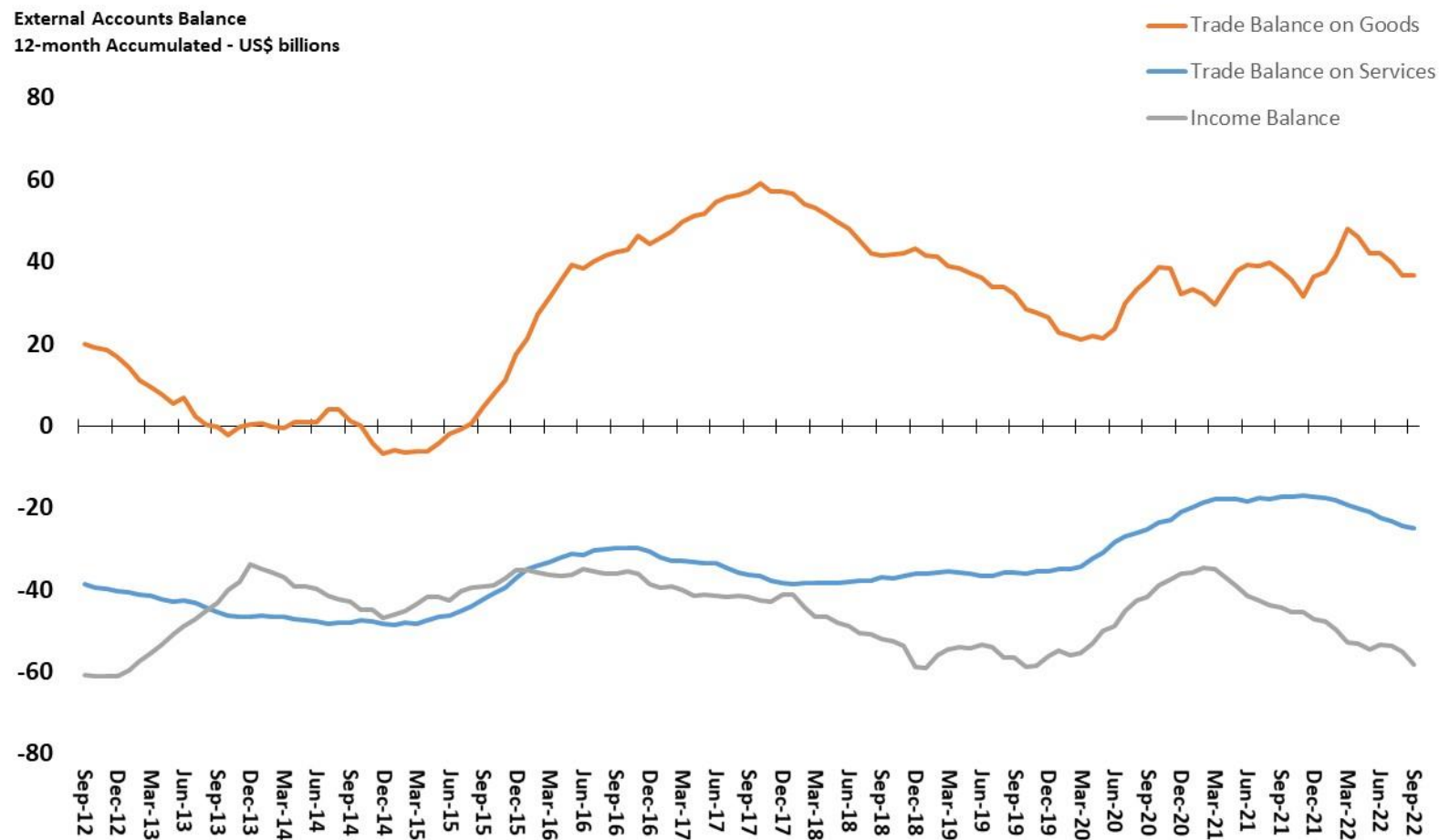
EXTERNAL SECTOR



Source: Central Bank of Brazil. *May/2022.

Current Account Balance Components

EXTERNAL SECTOR

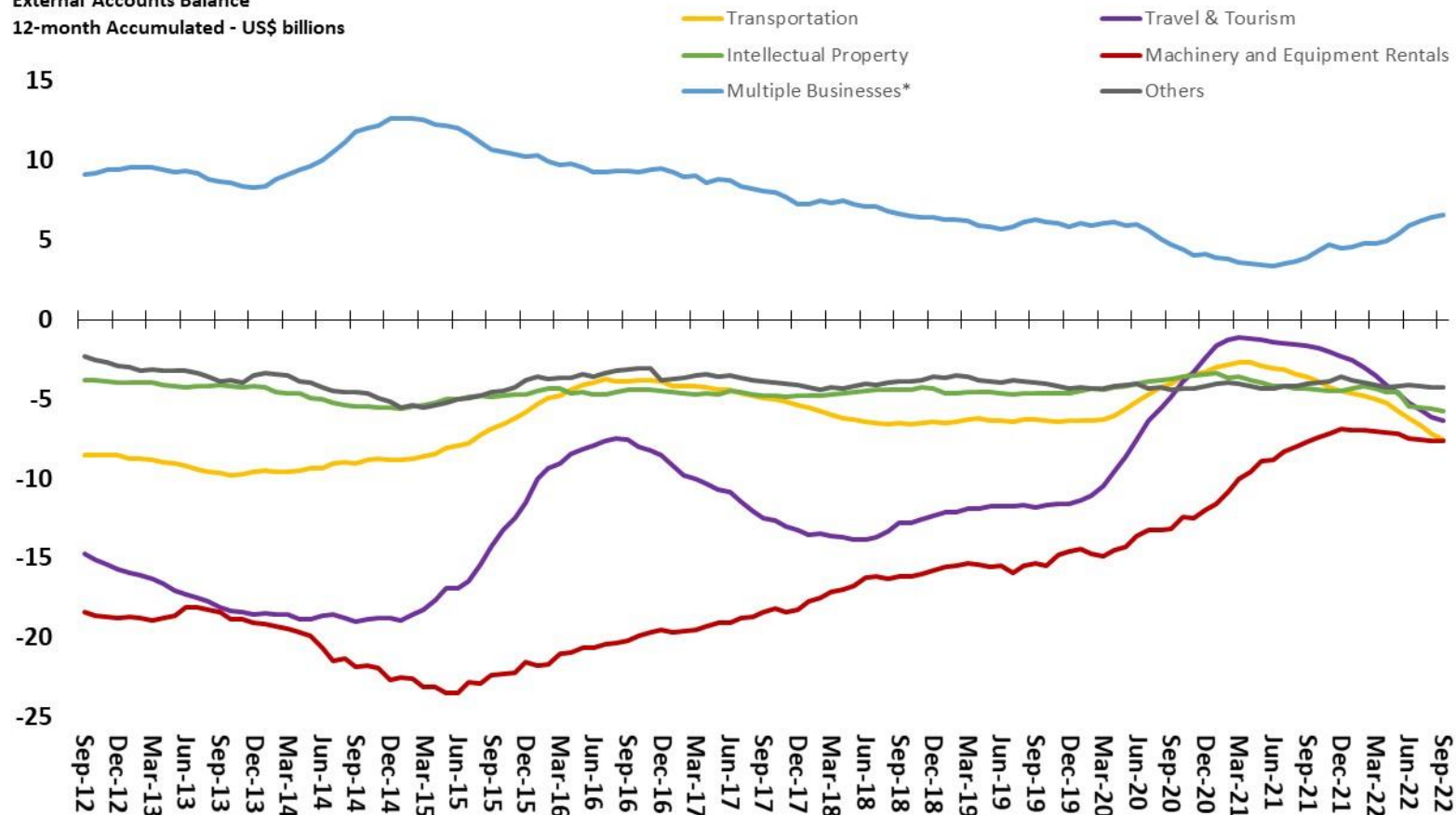


Source: Central Bank of Brazil.

Service Account Balance and Components

EXTERNAL SECTOR

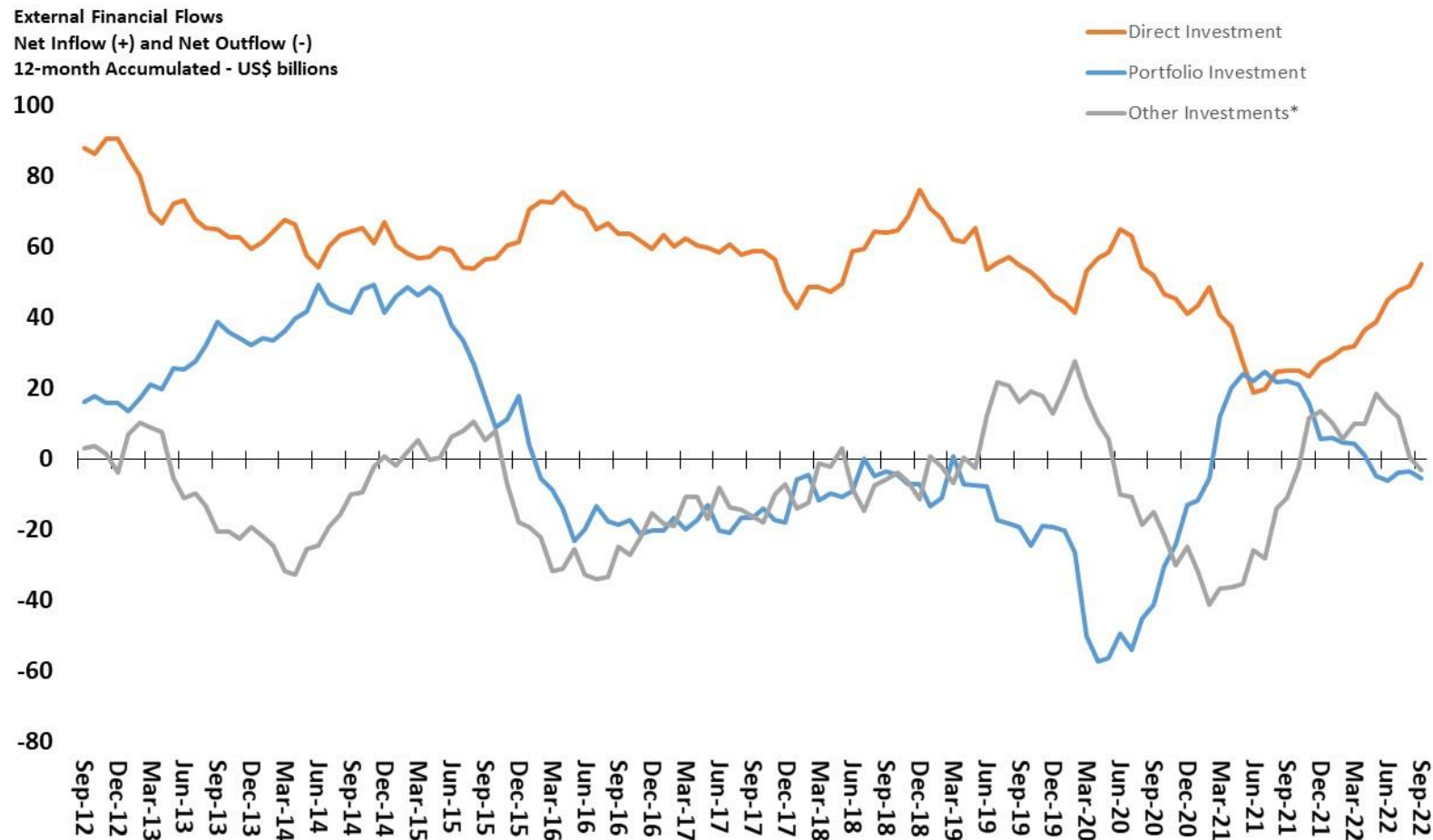
External Accounts Balance
12-month Accumulated - US\$ billions



Source: Central Bank of Brazil. *Includes services of P&D, legal services, marketing, architecture & engineering, environmental services, among others.

Financial Account Balance and Components

EXTERNAL SECTOR

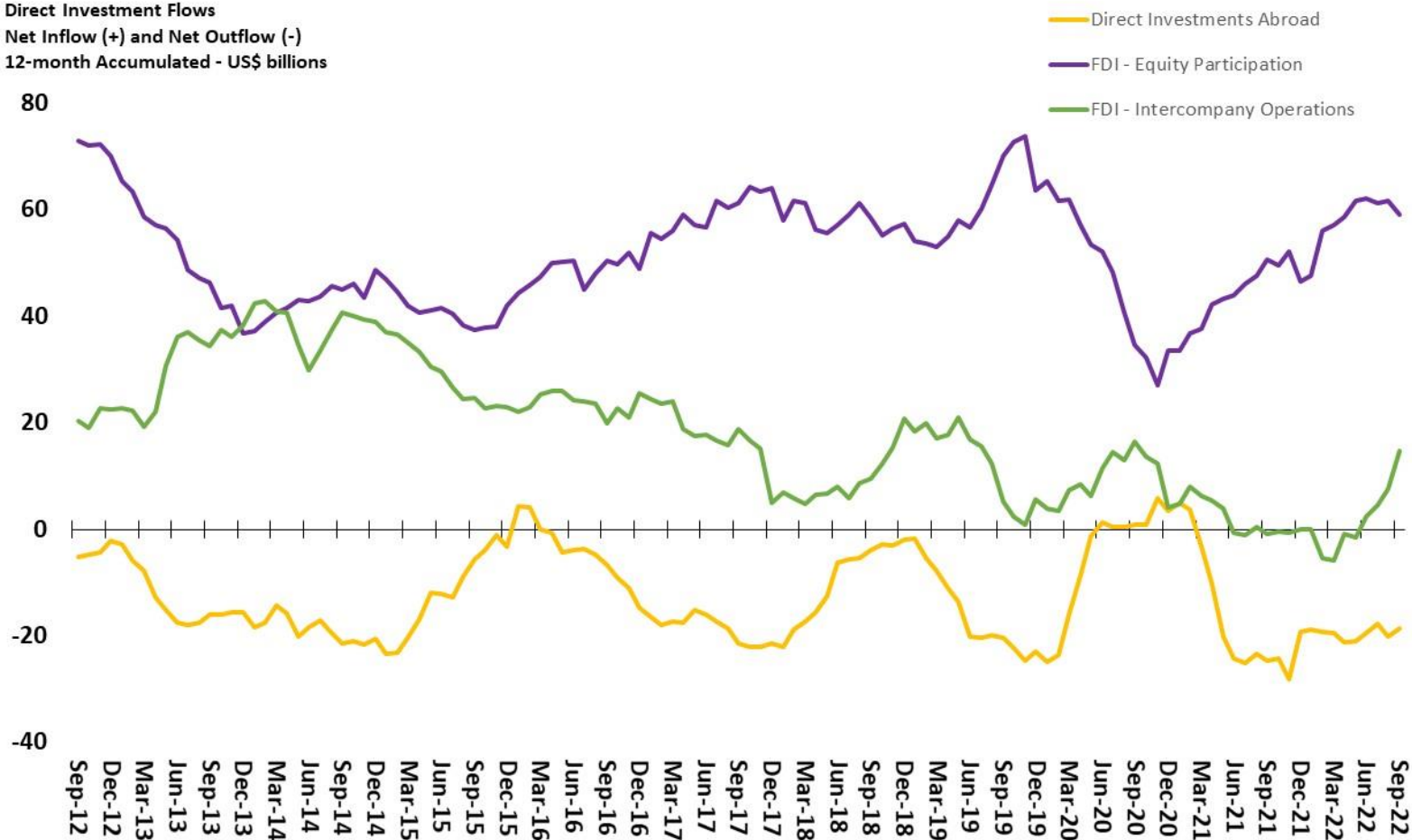


Source: Central Bank of Brazil. *Commercial Credit and Loans.

Direct Investments and Components

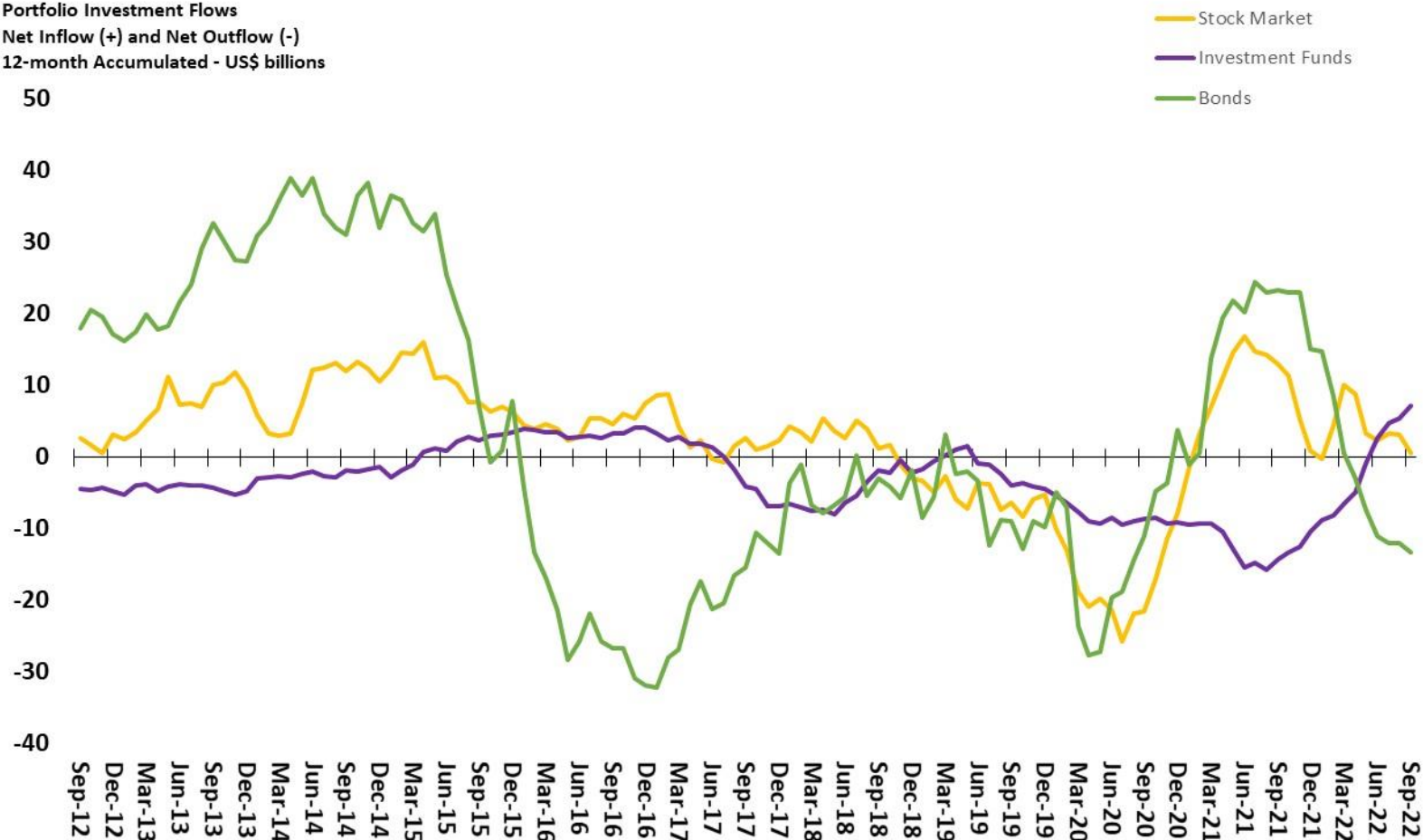
EXTERNAL SECTOR

Direct Investment Flows
Net Inflow (+) and Net Outflow (-)
12-month Accumulated - US\$ billions



Source: Central Bank of Brazil.

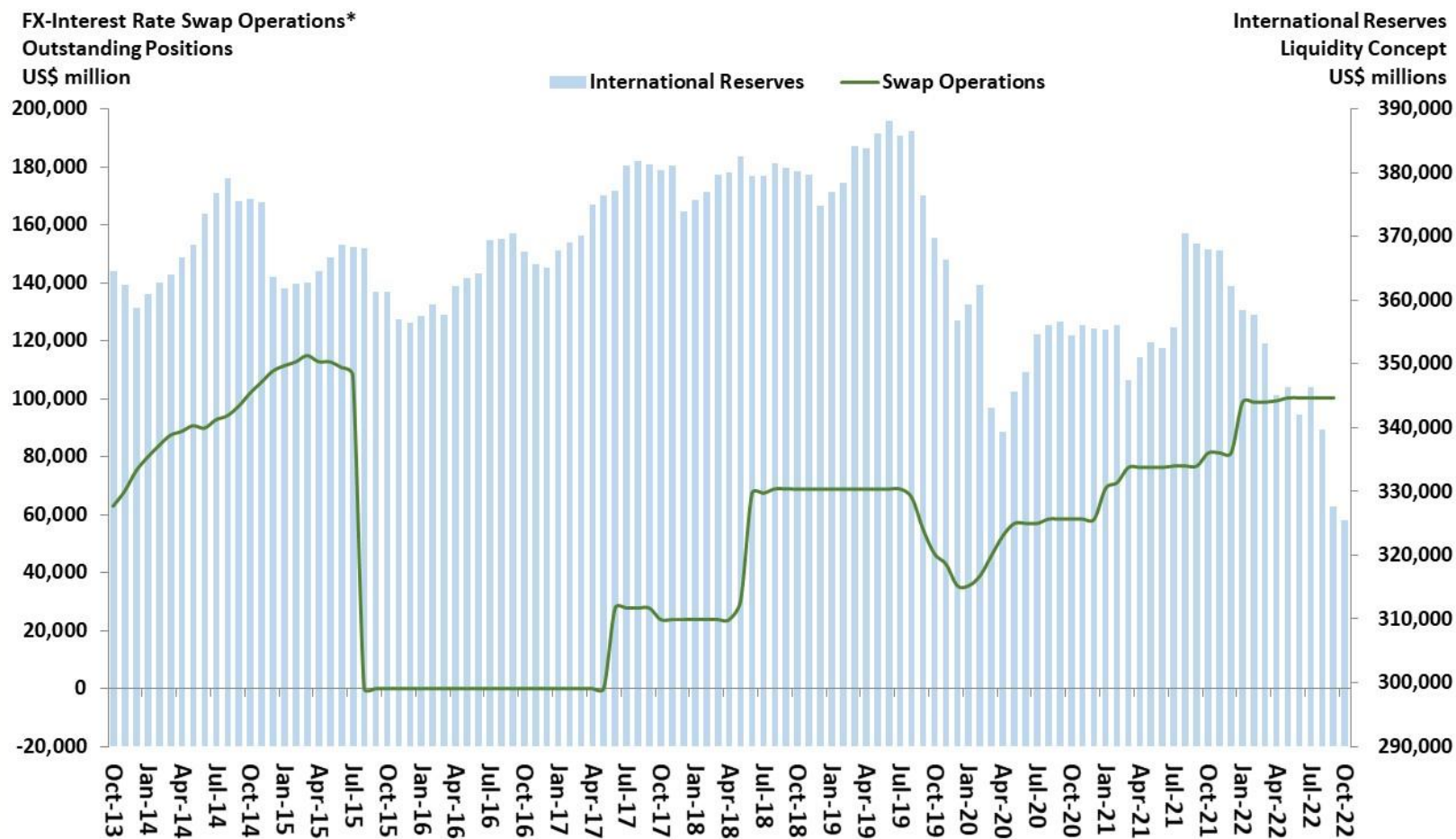
Portfolio Investment Flows
Net Inflow (+) and Net Outflow (-)
12-month Accumulated - US\$ billions



Source: Central Bank of Brazil.

Brazilian International Reserves

EXTERNAL SECTOR



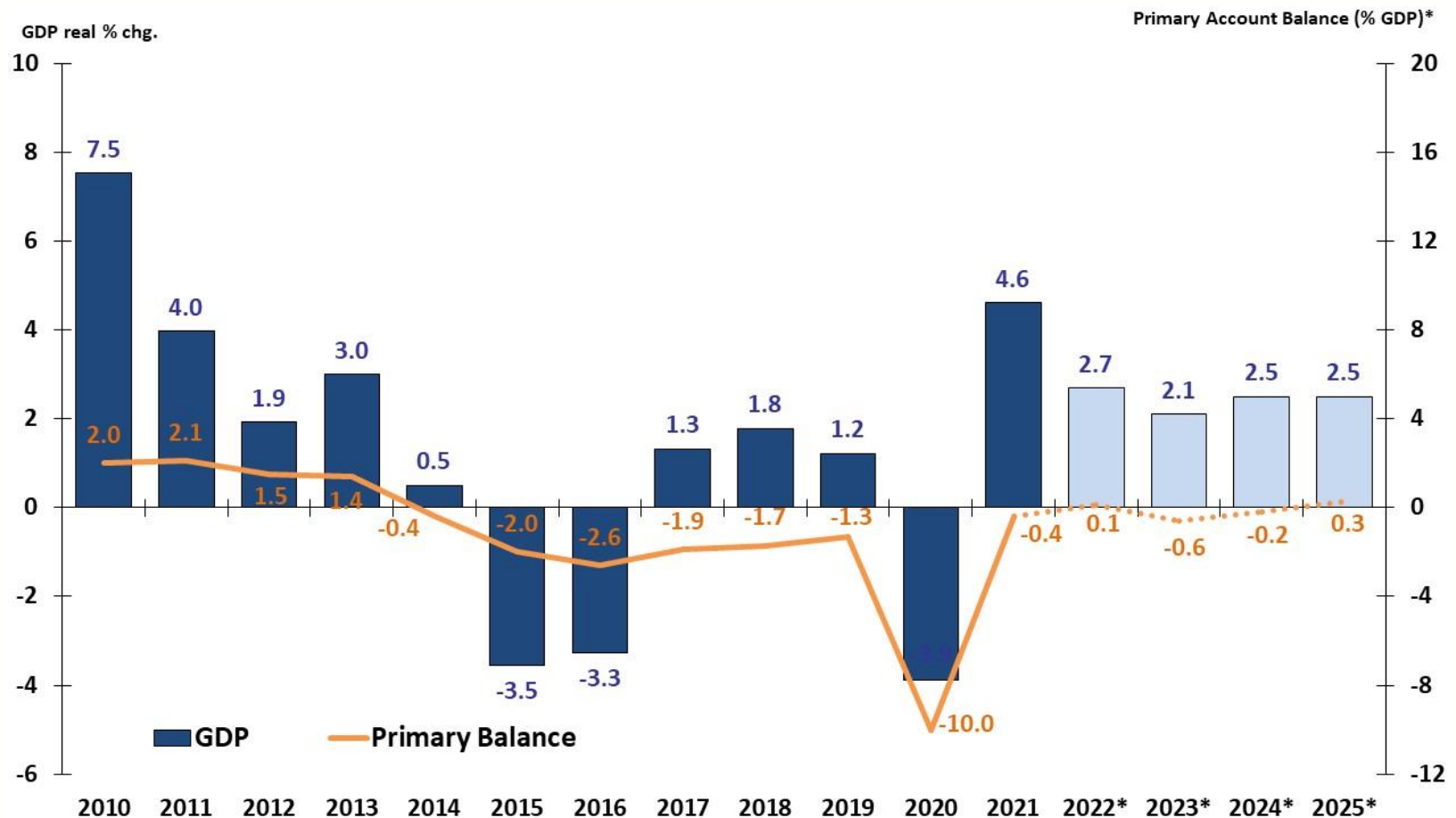
Source: Central Bank of Brazil. *Positive values represent net sell position on fx and negative values net buy position on fx.

Public Sector Accounts

Public Sector Accounts

PUBLIC SECTOR ACCOUNTS

										BCB/Focus: 11/11/22			
Federal Government Accounts	September-22	12-month Accumulated Figures (in R\$ millions)						chg. %			2022	2023	2024
		2017	2018	2019	2020	2021	set/yy accum. in 12-months	2021 / 2020	Dec/17 accum. 12- m / 2016	YTD 2018 / YTD 2017			
Federal Budget (National Treasury/Ministry of Finance)													
Total Primary Revenue (a)		1,383,653	1,488,999	1,635,608	1,468,096	1,932,650	2,286,439	31.6%	18.3%	25.3%			
National Treasury		1,008,868	1,097,817	1,222,277	1,063,324	1,470,406	1,346,224	38.3%	-8.4%	29.3%			
Social Security General System		374,785	391,182	413,331	404,773	462,244	378,009	14.2%	-18.2%	15.4%			
States and Municipalities Mandatory Transfers (b)		228,335	256,724	288,331	263,798	353,547	336,461	34.0%	-4.8%	33.3%			
Net Primary Revenue (a-b)		1,155,318	1,232,276	1,347,277	1,204,298	1,579,103	1,387,771	31.1%	-12.1%	24.2%			
Total Primary Expenditure		1,279,579	1,352,497	1,442,342	1,947,553	1,614,171	1,353,996	-17.1%	-16.1%	8.9%			
National Treasury		722,344	766,118	815,831	1,283,649	904,588	743,271	-29.5%	-17.8%	7.3%			
Social Security General System		557,235	586,379	626,510	663,904	709,583	610,726	6.9%	-13.9%	10.9%			
Federal Government Accounts	September-22	12-month Accumulated Figures (in R\$ millions)						% of GDP					
		2017	2018	2019	2020	2021	set/yy accum. in 12-months	2020	2021	set/yy accum. in 12-months			
Federal Budget (National Treasury/Ministry of Finance)													
Primary Account Balance of Federal Government (STN/MF)		-124,261	-120,221	-95,065	-743,255	-35,068	33,775	-10.0%	-0.4%	0.4%			
National Treasury		58,189	74,976	118,114	-484,123	212,270	266,492	-6.5%	2.4%	2.8%			
Social Security General System		-182,450	-195,197	-213,179	-259,132	-247,338	-232,717	-3.5%	-2.8%	-2.5%			
Consolidate Public Sector Accounts	September-22	12-month Accumulated Figures (in R\$ millions)						% of GDP			2022	2023	2024
		2017	2018	2019	2020	2021	set/yy accum. in 12-months	2020	2021	set/yy accum. in 12-months			
Public Sector Financial Need (Central Bank of Brazil - BCB)													
Primary Account Balance Target in Law - LDO (% GDP)											0.1%	-0.6%	-0.2%
Primary Account Balance		-110,583	-108,258	-61,872	-702,950	64,727	130,802	-9.4%	0.7%	1.4%	1.1%	-0.6%	0.0%
Federal Government		-118,442	-116,167	-88,899	-745,266	3,913	35,068	-10.0%	-0.4%	0.4%			
States and Municipalities		7,498	3,492	15,196	38,748	97,694	91,104	0.5%	1.1%	1.0%			
State Owned Companies (except Petrobrás and Eletrobrás)		362	4,417	11,831	3,567	2,906	4,630	0.0%	0.0%	0.0%			
Net Financial Public Expenditure (Debt Interest Payments)		-400,826	-379,184	-367,282	-312,427	-448,391	-435,569	-4.2%	-5.2%	-4.6%			
Nominal Account Balance		-511,408	-487,442	-429,154	-1,015,377	-383,664	-304,767	-13.6%	-4.4%	-3.2%	-6.0%	-7.8%	-6.0%
General Public Sector Debt (BCB)	September-22	Debt Outstanding (in R\$ millions)						chg. %			2022	2023	2024
		Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Sep-22	dez/yy - dez/yy	dez/yy - dez/yy	set/yy - dez/yy			
End of Period Debt Outstanding (in R\$ millions)													
Consolidated Public Sector		3,382,942	3,695,837	4,041,769	4,670,004	4,966,921	5,487,491	15.54%	6.36%	10.48%			
Federal Government		2,534,119	2,763,702	3,078,019	3,651,460	4,029,713	4,604,298	18.6%	10.4%	14.3%			
States and Municipalities		789,403	871,134	907,931	954,485	880,490	827,785	5.1%	-7.8%	-6.0%			
State Owned Companies (except Petrobrás and Eletrobrás)		59,420	61,001	55,819	64,060	56,718	55,408	14.8%	-11.5%	-2.3%			
Net Domestic Debt		4,001,077	4,215,974	4,750,944	5,654,808	5,898,308	6,263,342	19.0%	4.3%	6.2%			
Net External Debt		-618,135	-748,749	-709,175	-984,804	-931,387	-775,850	38.9%	-5.4%	-16.7%			
General Public Sector Net Debt (% GDP)		51.4%	52.8%	54.7%	62.5%	57.2%	58.3%	7.8 pp	-5.3 pp	1.1 pp	58.0%	61.4%	64.0%
General Public Sector Gross Debt (% GDP)		73.7%	75.3%	74.4%	88.6%	80.3%	77.1%	14.2 pp	-8.3 pp	-3.1 pp	77.5%	81.0%	82.4%
General Public Sector Gross Debt (in R\$ millions)		5,449,151	5,937,904	6,437,299	7,305,734	8,014,883	8,146,393	13.49%	9.71%	1.64%			

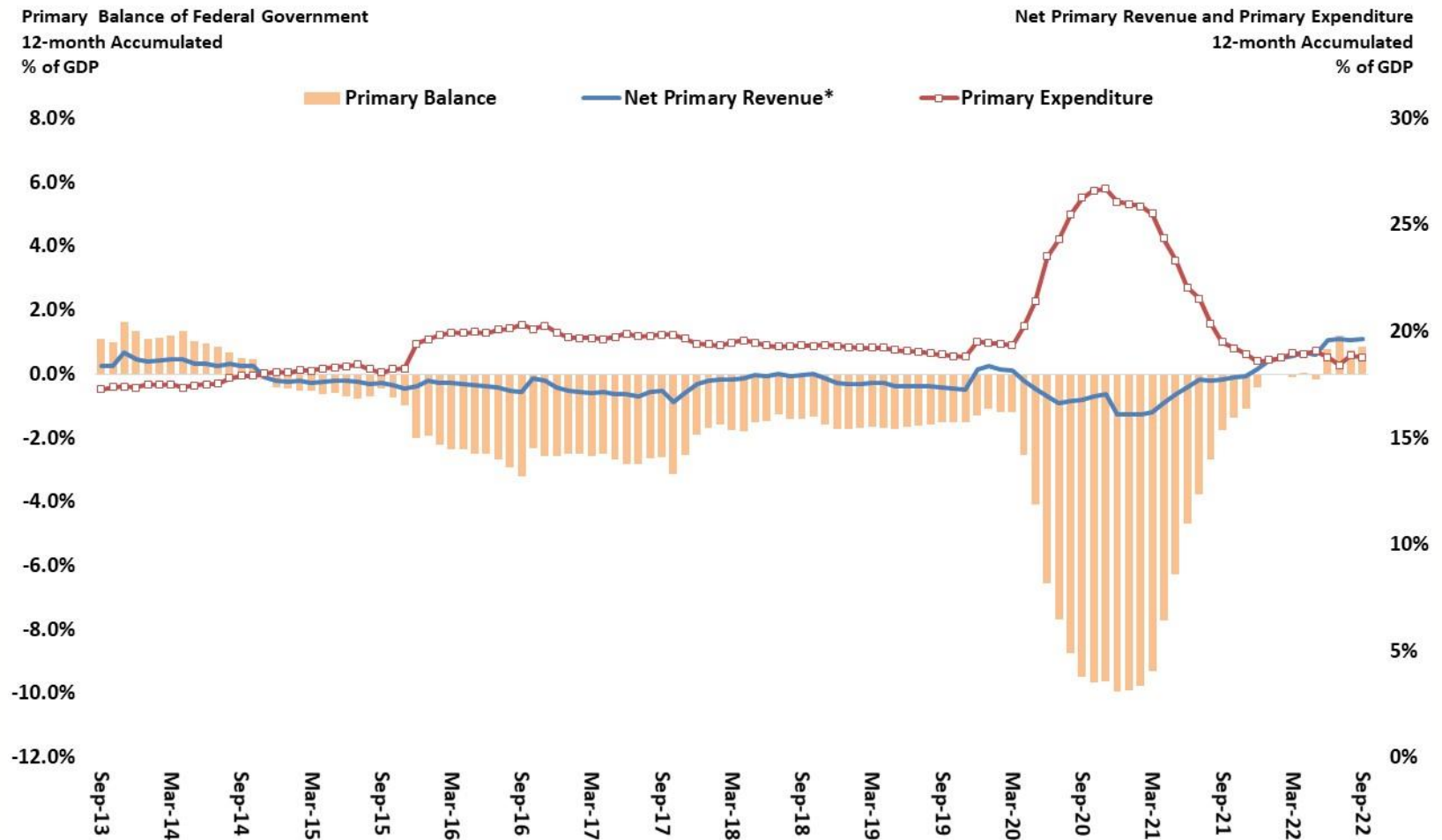


Source: IBGE, STN and Central Bank of Brazil. Primary Account Balance of Federal Government.

* Annex-Fiscal Targets of Budgetary Guidelines Bill - PLDO 2023; and Macroeconomic Projections from SPE, novembro/yyyy.

Primary Balance of Federal Government (as % GDP)

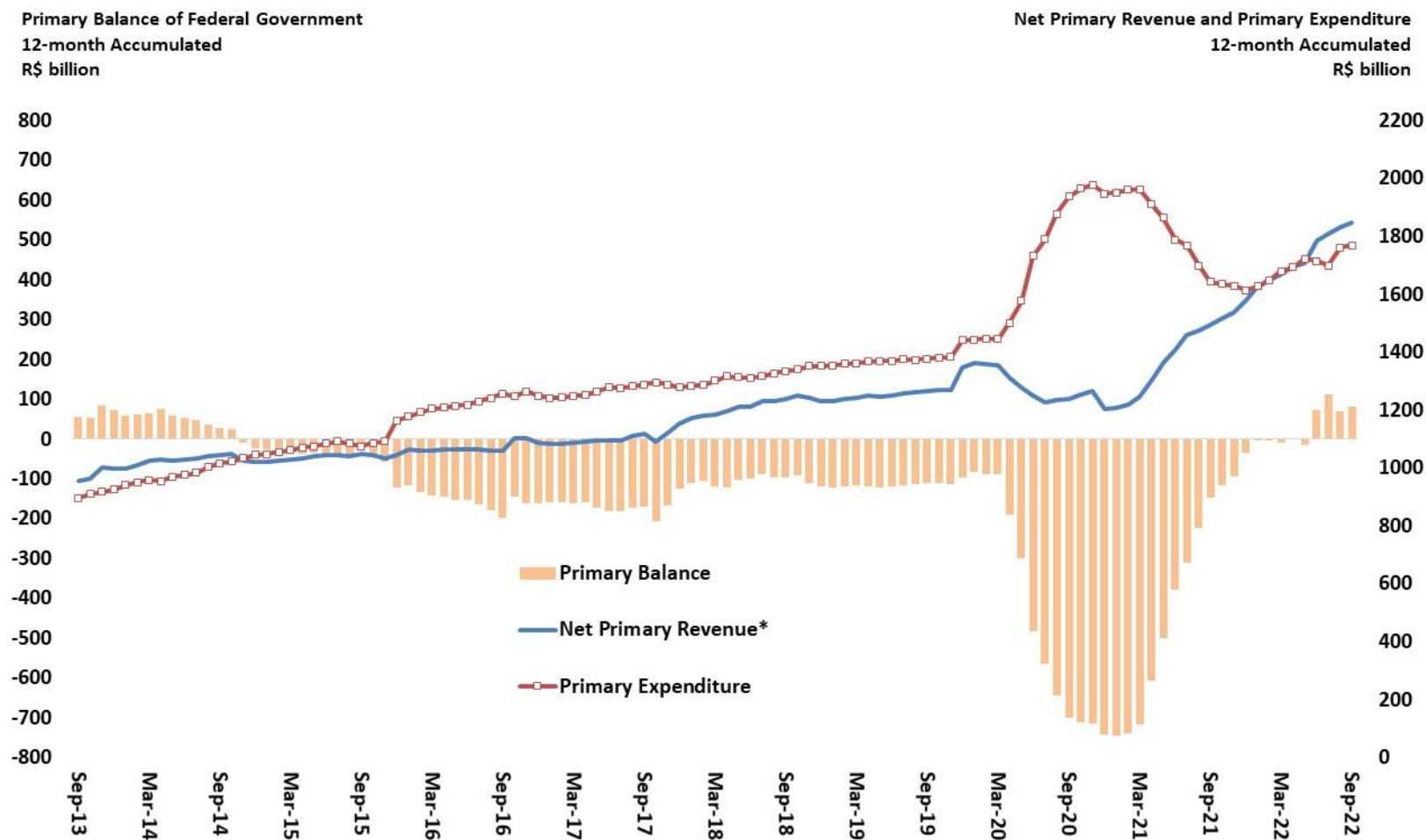
PUBLIC SECTOR ACCOUNTS



Sources: STN/ME. *Excludes compulsory transfers to subnational entities.

Primary Balance of Federal Government (nominal values)

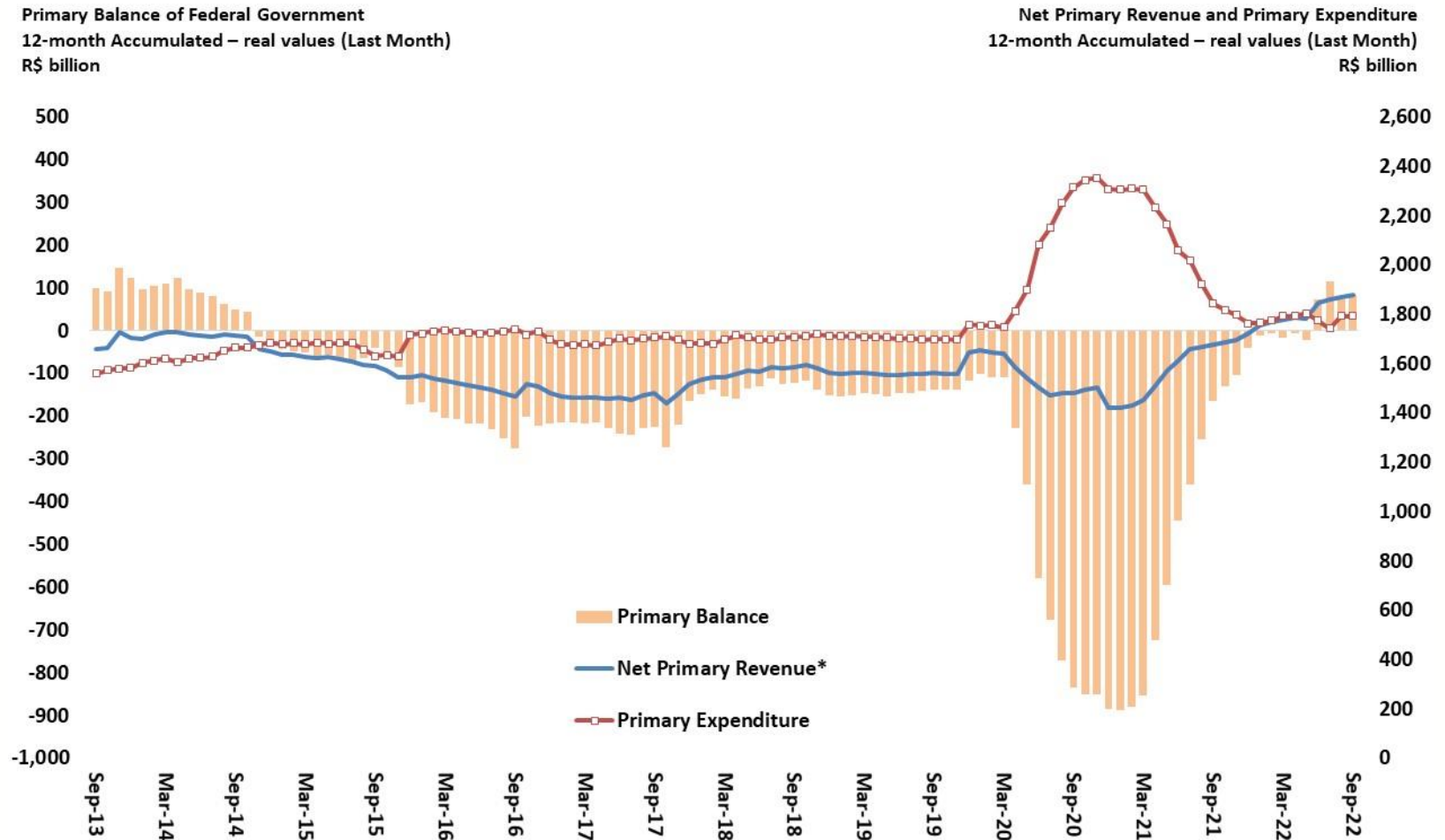
PUBLIC SECTOR ACCOUNTS



Source: STN/ME. *Excludes compulsory transfers to subnational entities.

Primary Balance of Federal Government (real values)

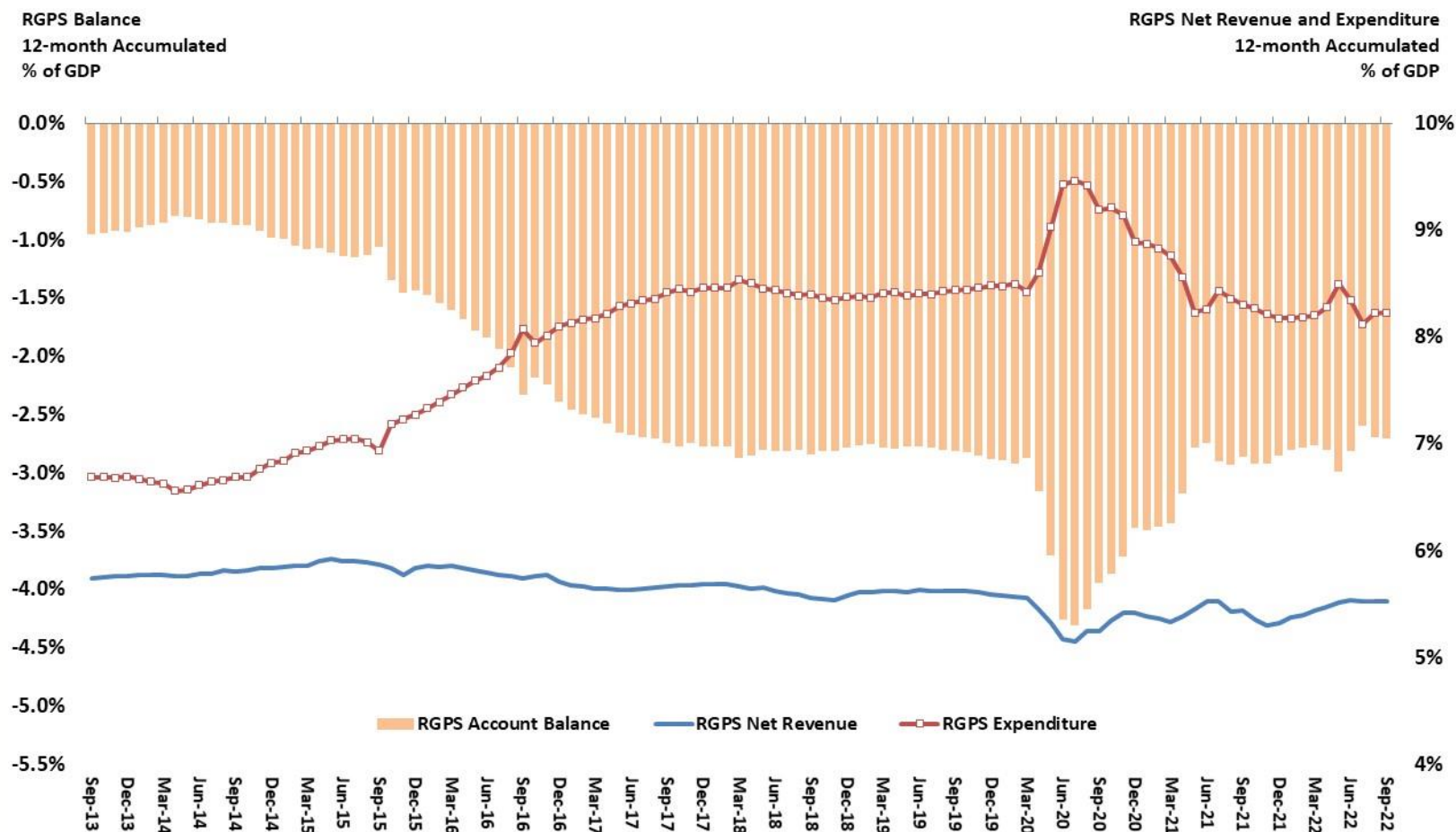
PUBLIC SECTOR ACCOUNTS



Source: STN/ME. *Excludes compulsory transfers to subnational entities.

General Social Security System (RGPS) Balance

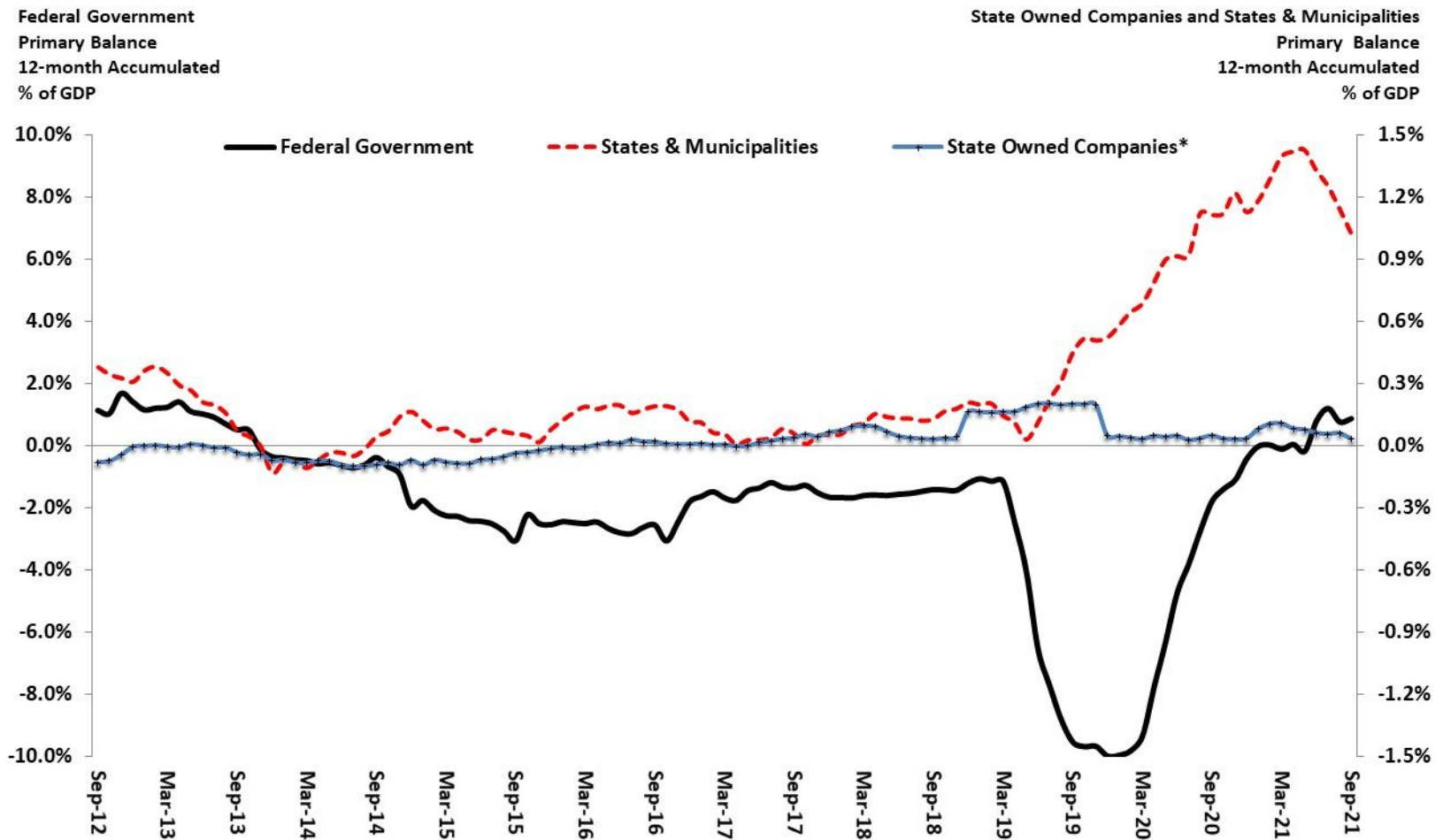
PUBLIC SECTOR ACCOUNTS



Sources: Central Bank of Brazil and STN/ME.

Public Sector Primary Balance (as % GDP)

PUBLIC SECTOR ACCOUNTS

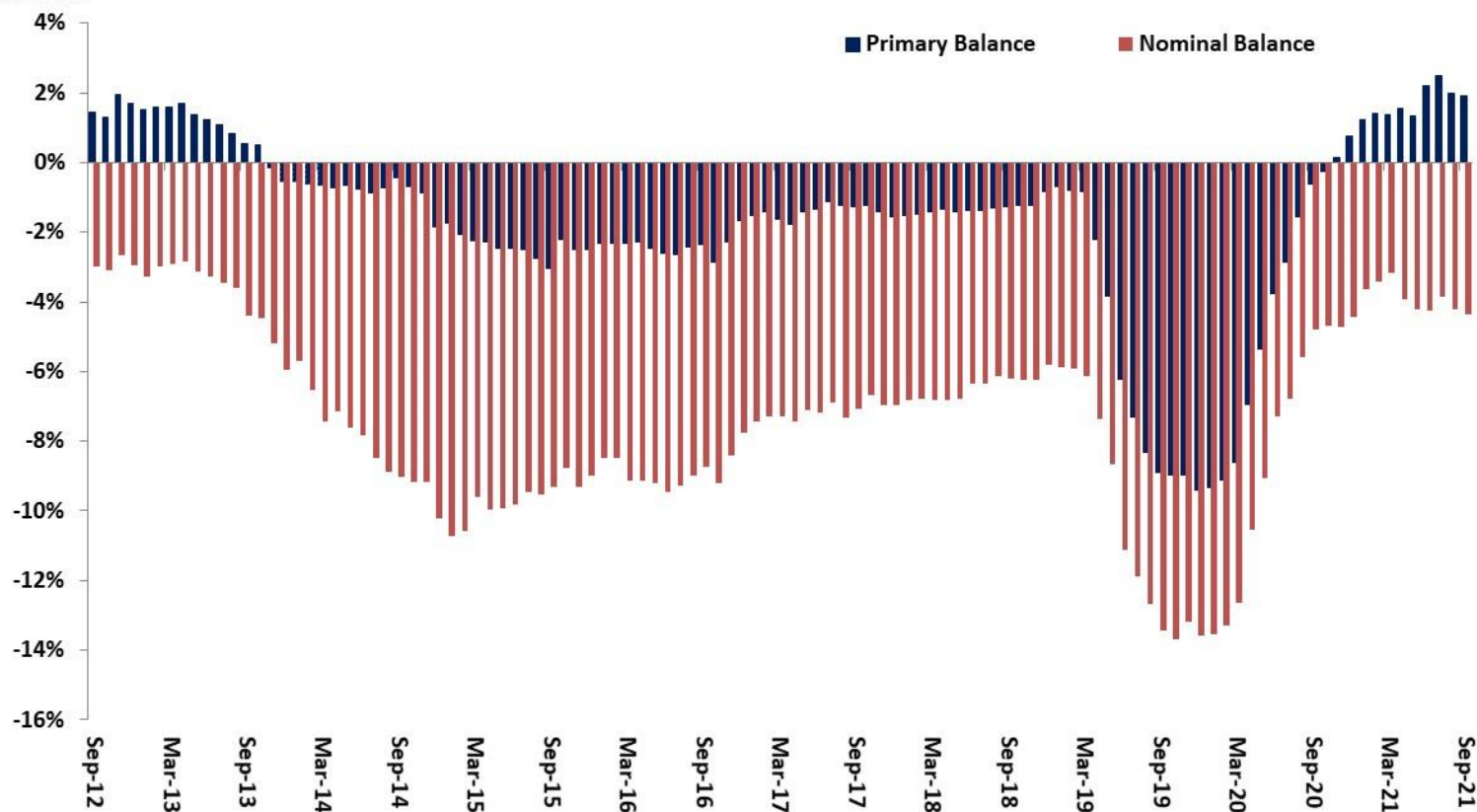


Sources: Central Bank of Brazil. *Excludes Petrobras and Eletrobras.

Public Sector Primary and Nominal Balance

PUBLIC SECTOR ACCOUNTS

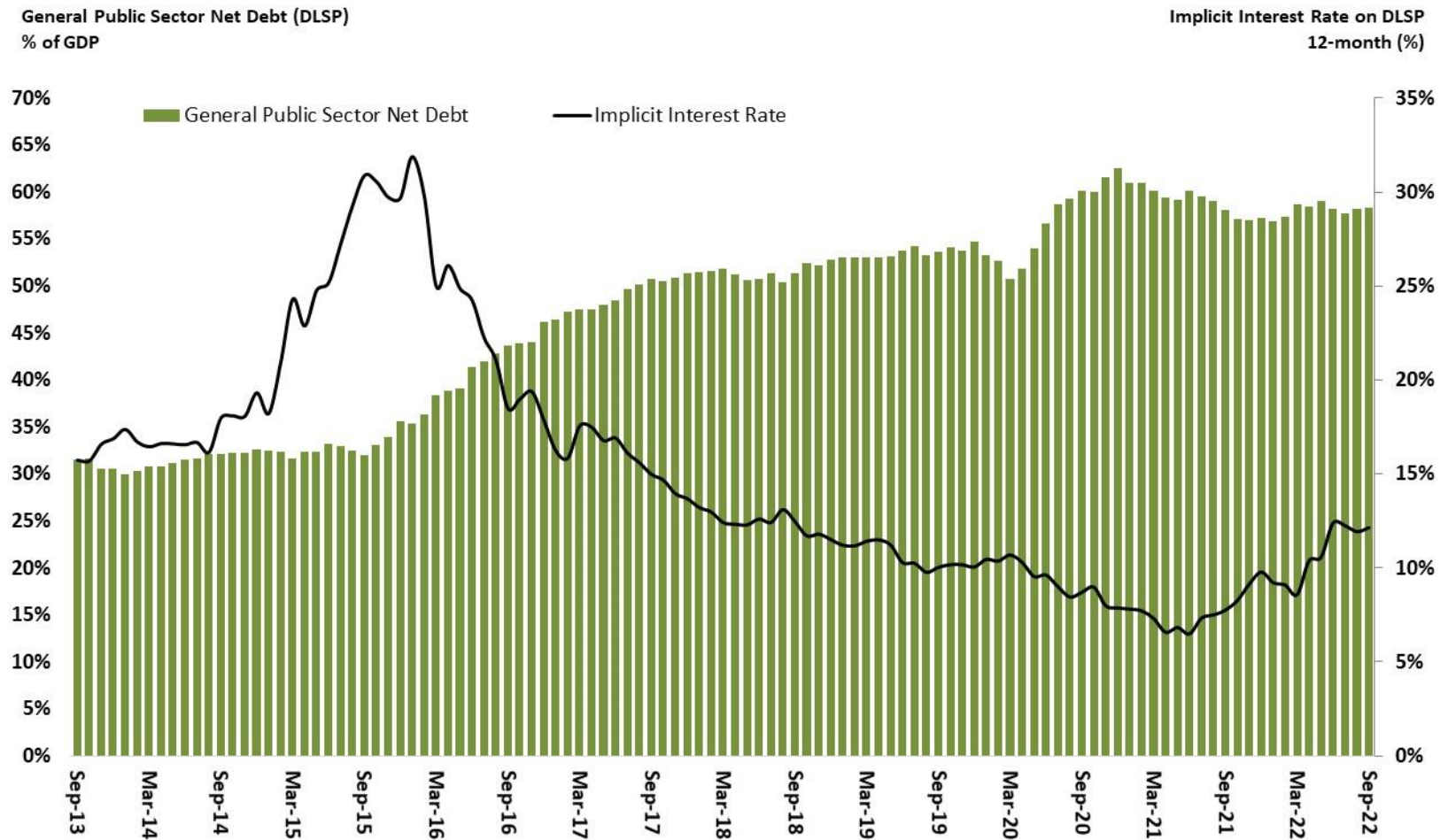
Consolidated Public Sector
Primary and Nominal Balance
12-month Accumulated
% of GDP



Source: Central Bank of Brazil.

Public Sector Net Debt (as % GDP)

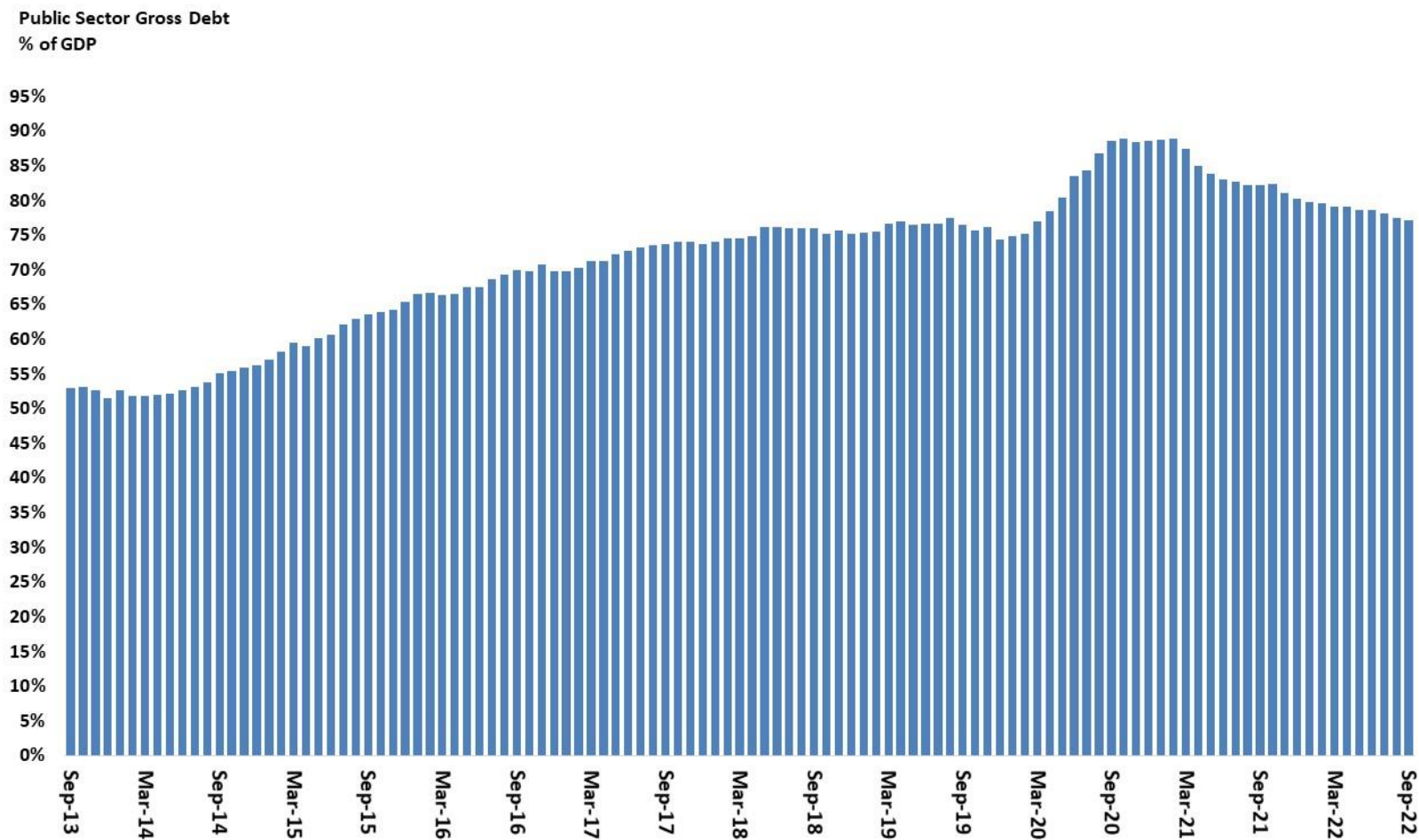
PUBLIC SECTOR ACCOUNTS



Source: Central Bank of Brazil.

Public Sector Gross Debt (as % GDP)

PUBLIC SECTOR ACCOUNTS

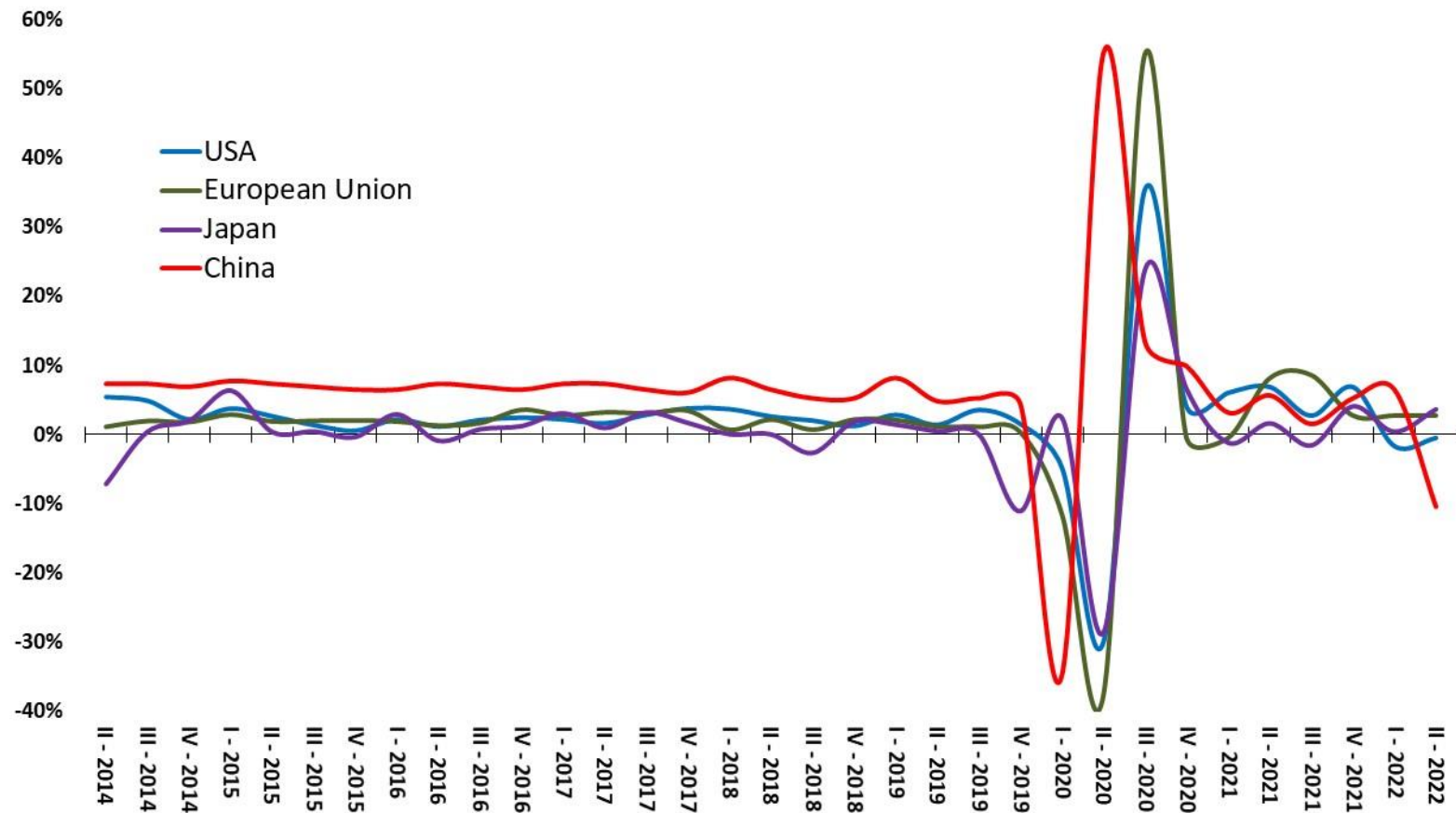


Source: Central Bank of Brazil.

World Economy

											IMF - WEO, Oct. 2022.		
World	Q4 2020												
data from IMF and WTO		2017	2018	2019	2020	2021	Q4-2016 / Q4-2015	Q4-2017 / Q4-2016	Q4-2018 / Q4-2017	Q4-2019 / Q4-2018	Q4-2020 / Q4-2019	2022	2023
World Output - GDP		3.8%	3.6%	2.8%	-3.0%	6.0%	2.8%	3.6%	2.7%	-1.4%	4.4%	3.2%	2.7%
Advanced Economies		2.5%	2.3%	1.7%	-4.4%	5.2%	2.3%	2.0%	1.5%	-3.9%	4.7%	2.4%	1.1%
Emerging Market and Developing Economies		4.8%	4.6%	3.6%	-1.9%	6.6%	4.8%	4.6%	3.7%	0.9%	4.2%	3.7%	3.7%
Latin America and the Caribbean		1.4%	1.2%	0.2%	-7.0%	6.9%	1.3%	1.1%	0.0%	-4.8%	3.9%	3.5%	1.7%
World Trade of Goods and Services		5.6%	4.0%	0.9%	-7.8%	10.1%						4.3%	2.5%
National Accounts	Q3 2022												
data from IMF, OECD, Eurostat, NBSC and METI		2017	2018	2019	2020	2021	Q2-2022 / Q2- 2021	Q3-2022 / Q3- 2021	Q1-2022 accum. in 4- quarters	Q2-2022 accum. in 4- quarters	Q3-2022 accum. in 4- quarters	2022	2023
USA - GDP		2.2%	2.9%	2.3%	-2.8%	5.9%	1.8%	1.8%	6.5%	4.1%	3.3%	1.6%	1.0%
Household Expenditure		2.4%	2.9%	2.2%	-3.8%	7.9%	2.4%	2.0%	8.7%	5.5%	4.1%		
Government Expenditure		0.5%	1.4%	2.2%	2.5%	0.5%	-1.3%	-0.6%	-0.3%	-0.4%	-0.8%		
Gross Fixed Capital Formation		4.1%	4.8%	3.2%	-2.7%	7.7%	7.2%	2.3%	12.3%	8.3%	7.4%		
Exports of Goods and Services		4.1%	2.8%	-0.1%	-13.6%	4.6%	7.3%	11.3%	8.2%	6.4%	7.6%		
Imports of Goods and Services (-)		4.4%	4.1%	1.2%	-8.9%	14.0%	11.2%	7.5%	16.2%	11.8%	10.4%		
Industrial Production		1.3%	3.2%	-0.8%	-7.2%	5.5%							
Unemployment (% of Labor Force)		4.4%	3.9%	3.7%	8.1%	5.4%							
Consumer Price Index		2.1%	2.4%	1.8%	1.2%	4.7%						6.4%	2.3%
European Union - GDP		3.0%	2.2%	2.0%	-5.6%	5.4%	4.3%	2.4%	7.1%	4.8%	4.3%	3.2%	0.7%
Household Expenditure		1.8%	1.5%										
Government Expenditure		1.1%	1.1%										
Gross Fixed Capital Formation		3.1%	3.3%										
Exports of Goods and Services		5.3%	3.0%										
Imports of Goods and Services (-)		4.3%	3.3%										
Industrial Production		3.5%	1.6%	-3.3%	-8.0%	9.4%							
Unemployment (% of Labor Force)		9.1%	8.2%	7.6%	7.2%	6.6%							
Consumer Price Index		1.6%	1.8%	1.4%	0.7%	2.9%						10.0%	5.0%
Japan - GDP		1.7%	0.6%	-0.4%	-4.6%	1.7%	1.4%		2.5%	1.0%		1.7%	1.6%
Industrial Production		2.8%	1.1%	-2.8%	-9.8%	6.4%							
Unemployment (% of Labor Force)		2.8%	2.4%	2.4%	2.7%	2.8%							
Consumer Price Index		0.5%	1.0%	0.5%	0.0%	-0.2%						2.4%	1.2%
China - GDP		6.9%	6.8%	6.0%	2.2%	8.1%	0.4%	3.9%	5.4%	3.5%	3.3%	3.2%	4.4%
Industrial Production		6.1%	6.1%	6.2%	2.1%	9.6%							
Unemployment (% of Labor Force)		3.9%	3.8%	3.6%	5.6%	5.1%							
Consumer Price Index		1.6%	2.1%	2.9%	2.4%	0.9%						2.7%	1.8%

GDP - real quarterly % chg. – seasonally adjusted data (annualized)

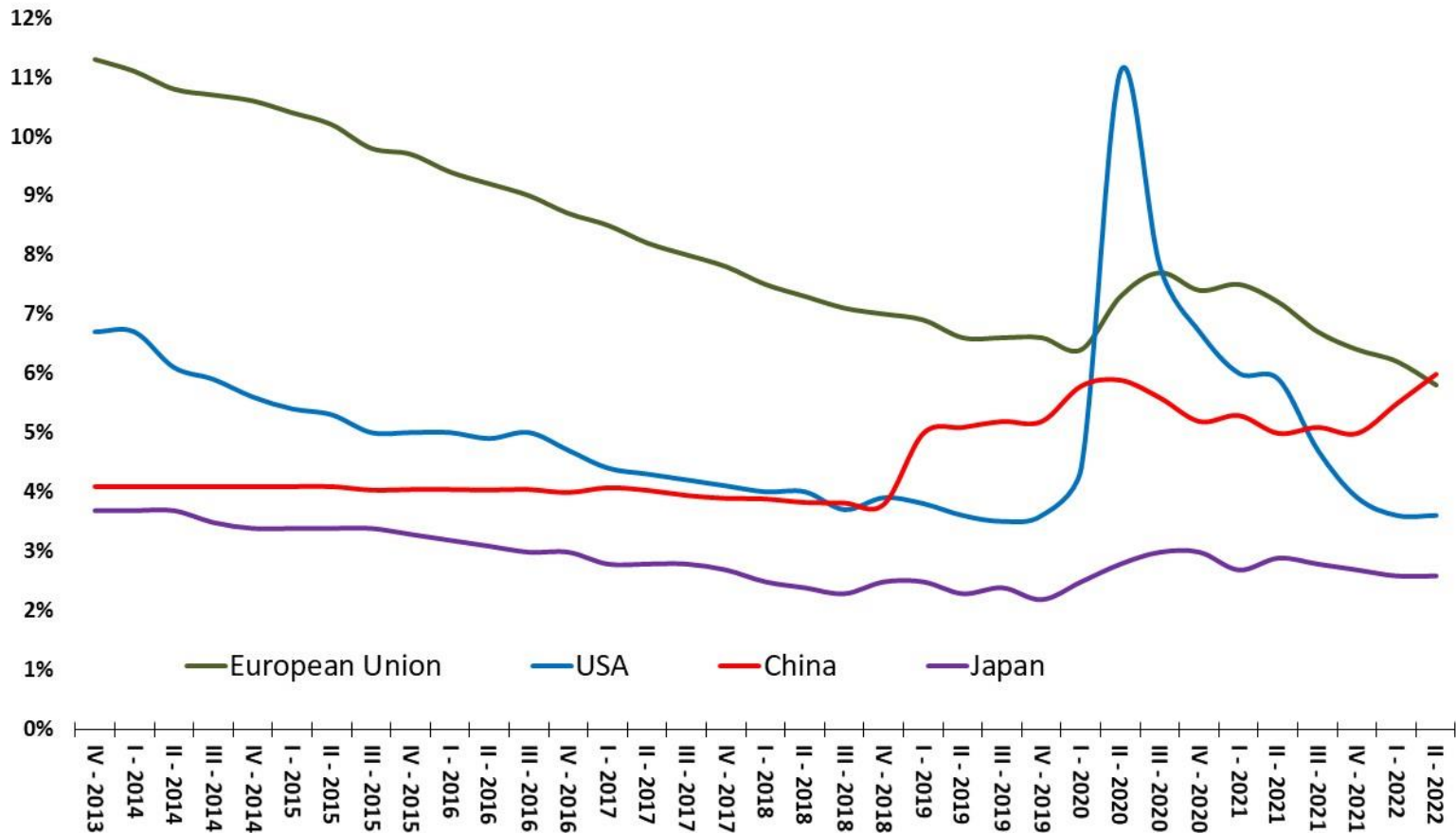


Source: OECD.

World's Major Economies Unemployment Rate

WORLD ECONOMY

Unemployment Rate as % of Labor Force

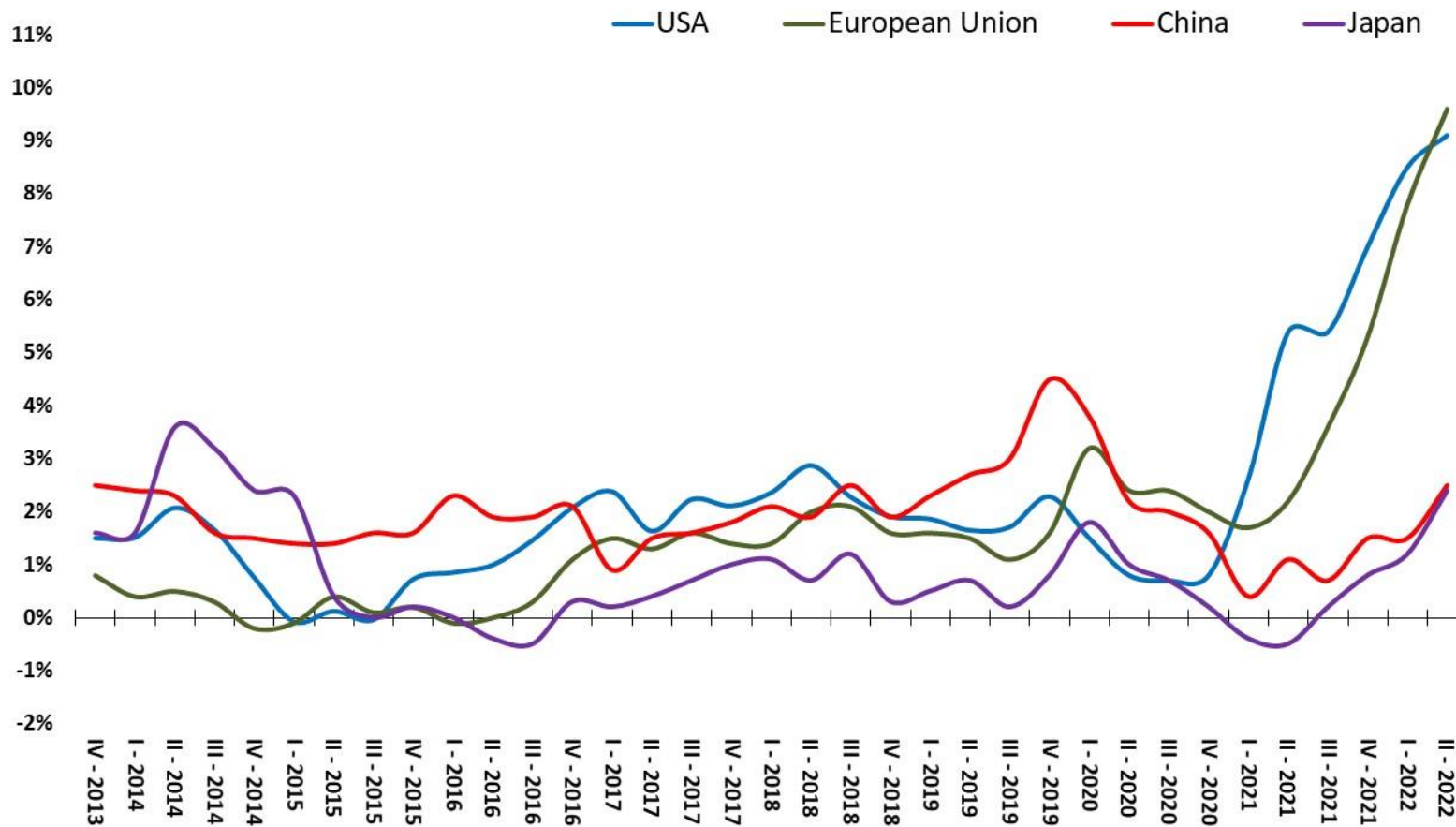


Source: OECD.

World's Major Economies Consumer Price Index

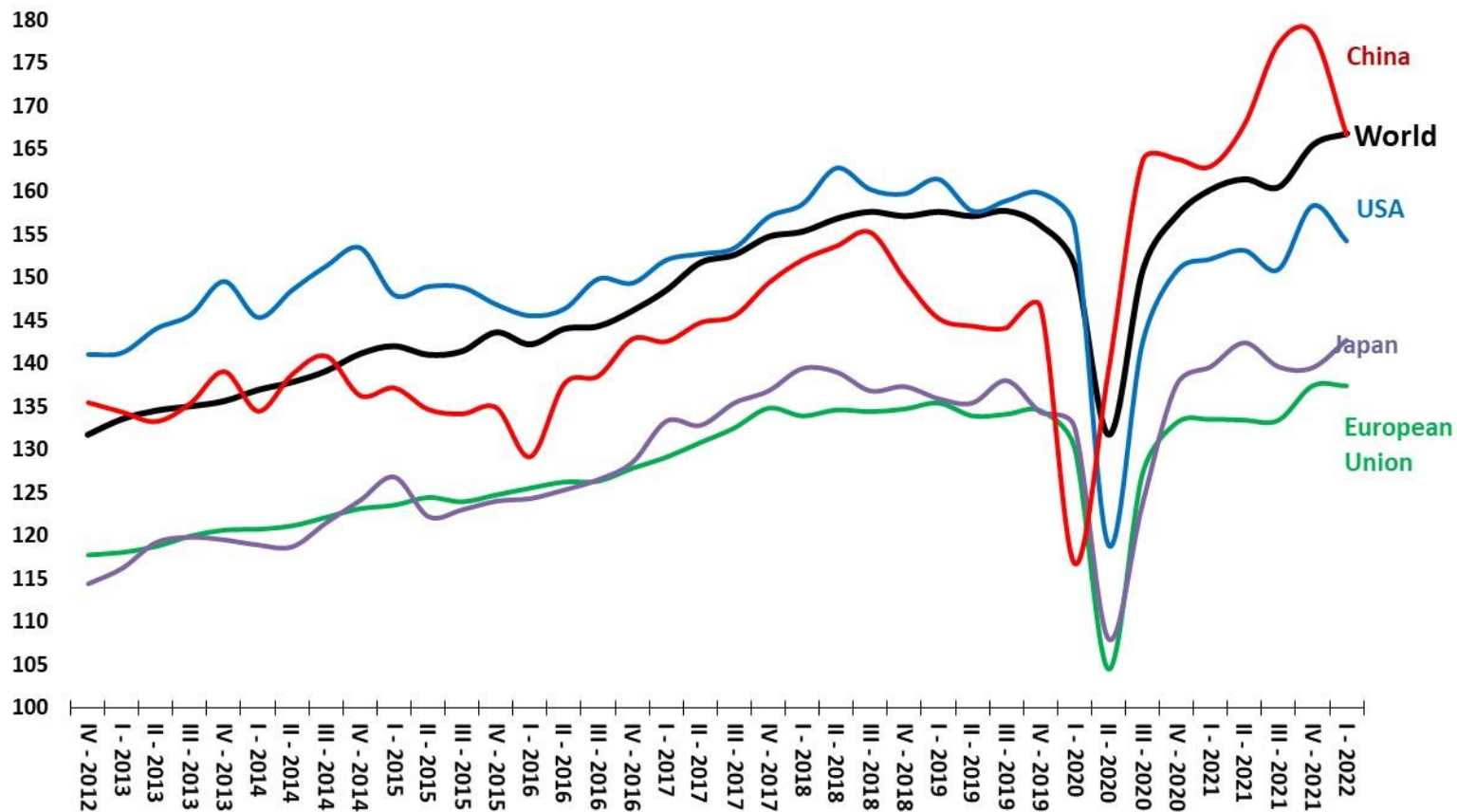
WORLD ECONOMY

Consumer Price Indexes – annual chg. %



Source:: OECD.

Total Exports Volume Index – Q3-2012 = 100

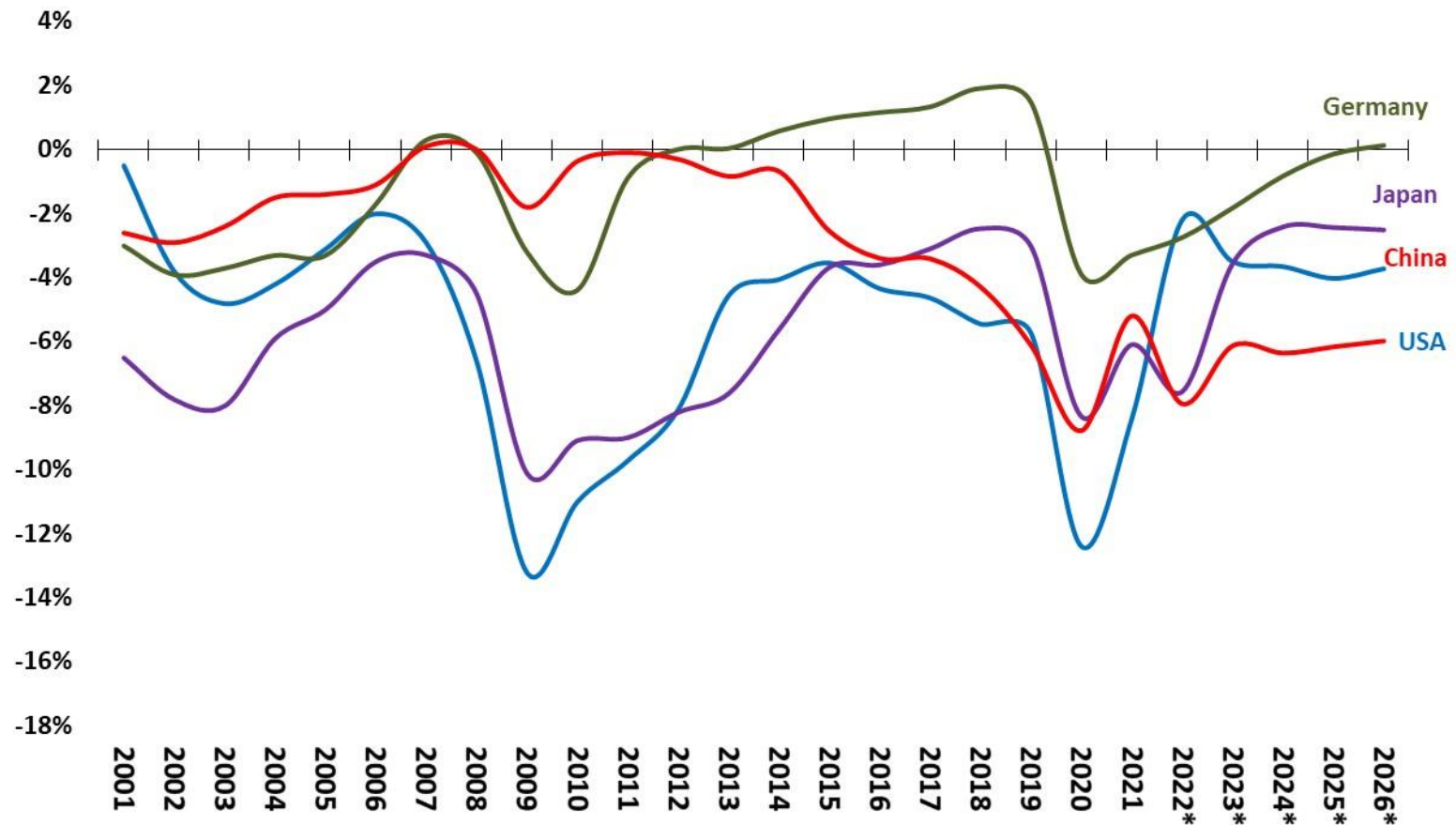


Source: WTO.

World's Major Economies Government Primary Surplus

WORLD ECONOMY

Central Government Primary Surplus as % of GDP

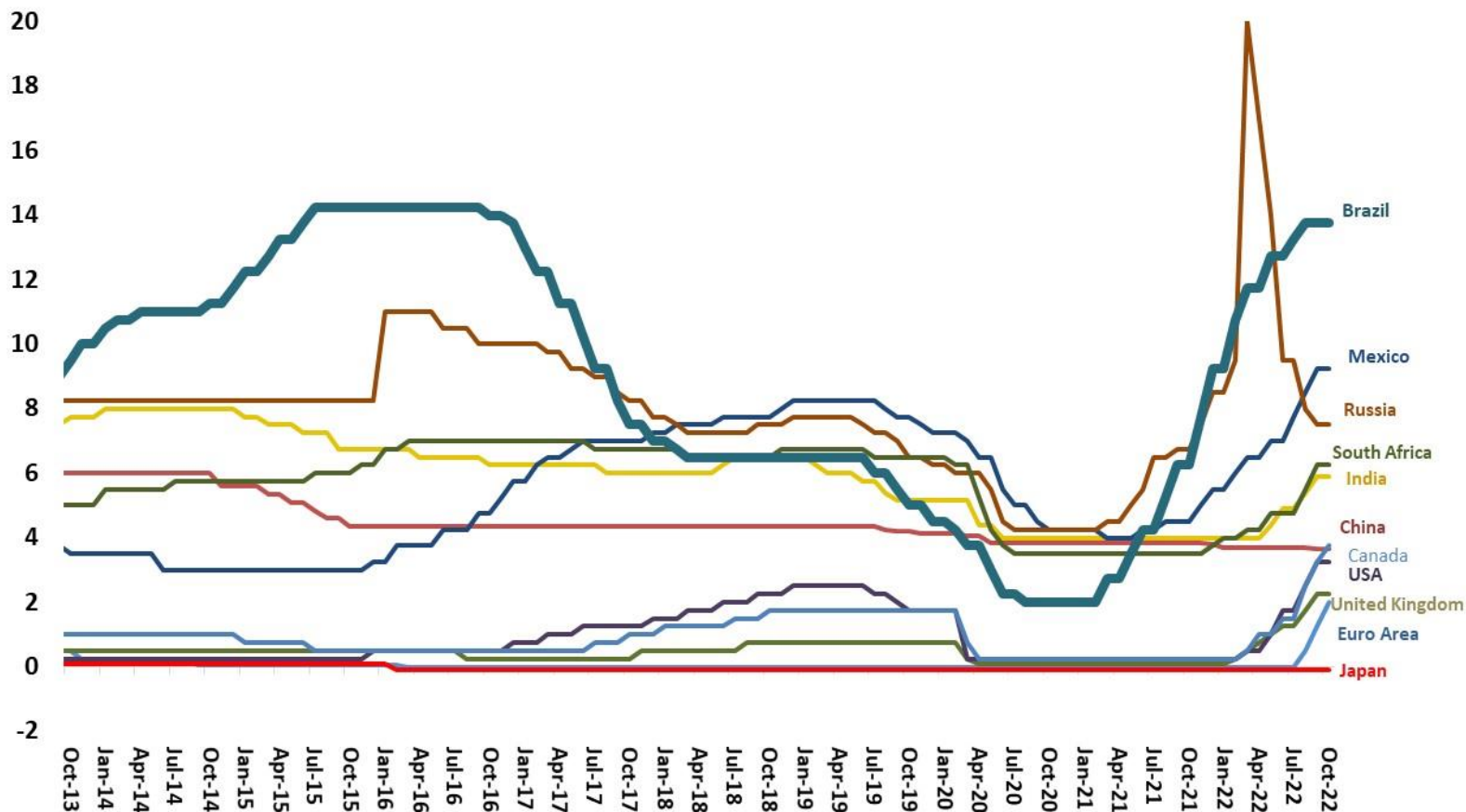


Source: IMF. * Estimated values - WEO Apr-21.

Selected Economies Main Interest Rate

WORLD ECONOMY

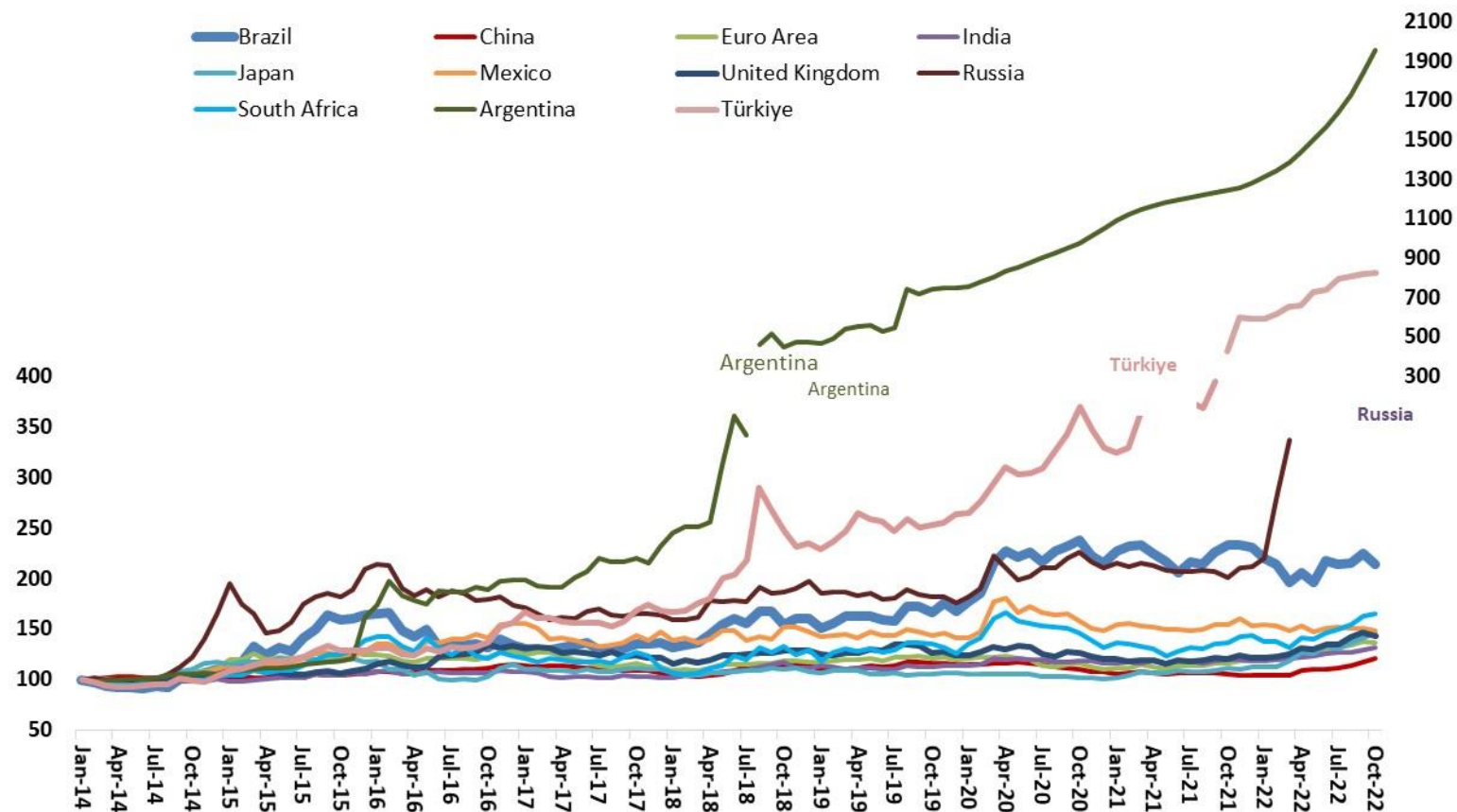
Main Interest Rates – Selected Economies – % per year



Source: Central Bank of Brazil.

Selected Economies FX-dollar Rate Evolution

Selected Economies FX-rate Indexes – Dec/2008 = 100

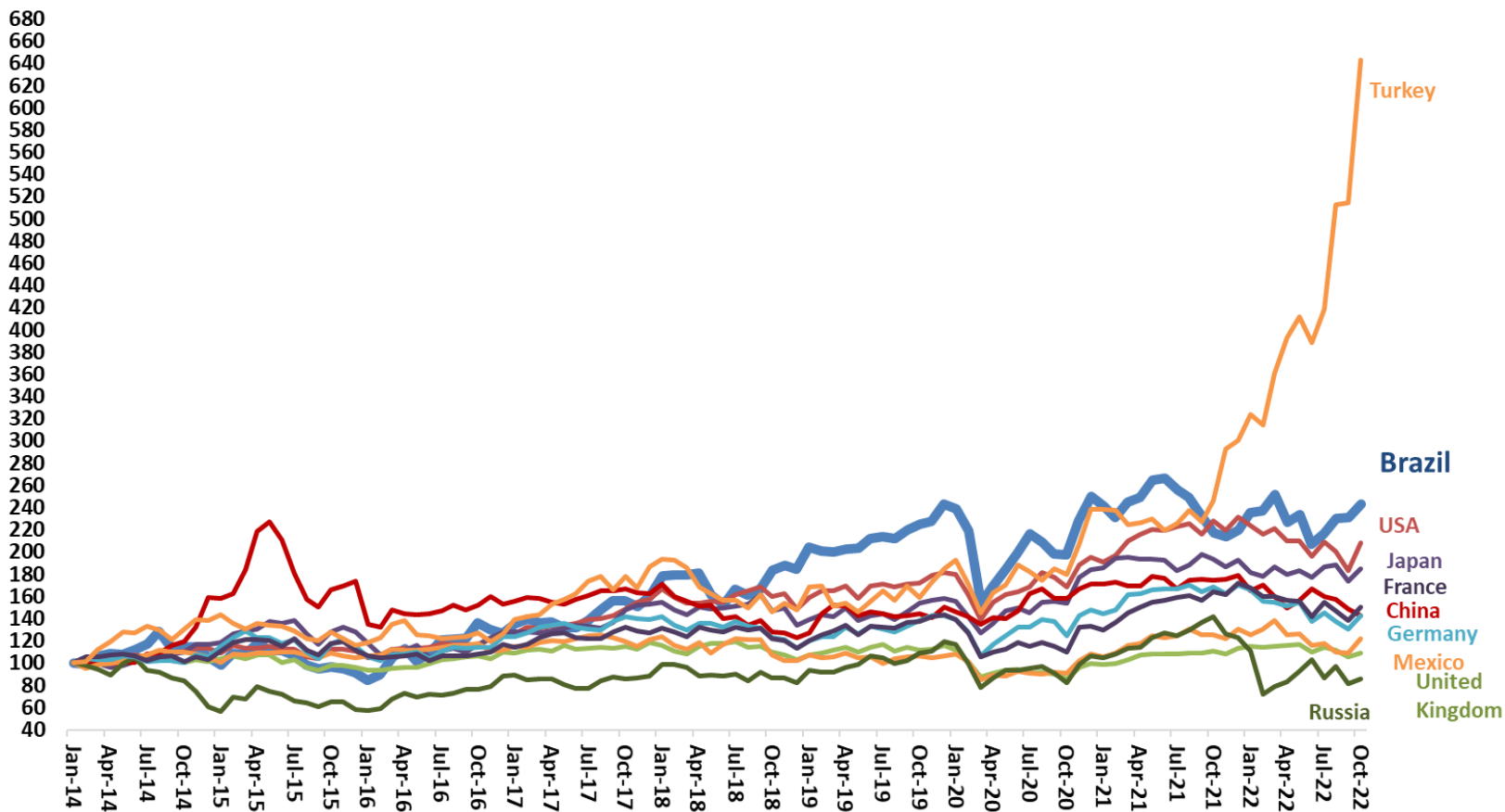


Source: Bloomberg.

Selected Economies Main Stock Index Evolution

WORLD ECONOMY

Selected Economies Main Stock Indexes – Dec/2008 = 100



Source: Bloomberg.

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