

Underlying inflation

September 2022

Monthly inflation

General, underlying and items

Inflation under the Venezuelan Central Bank [BCV] methodology¹.

During September², prices under the BCV methodology [NCPI] reported a lower growth rate relative to the previous month. In this period, local inflation reached 15.0%, this leads to a year-on-year inflation rate of 245.3% compared to the same month in 2021.

Ecoanalitica Inflation [BCV Methodology*]

	Index	m/m (%)	Accum. (%)	y/y (%)
Sep-21	5,753.7	13.0	450.1	1,332.3
Oct-21	7,006.8	21.8	569.9	1,375.1
Nov-21	8,008.3	14.3	665.6	841.7
Dec-21	8,592.9	7.3	721.5	721.5
Jan-22	9,419.5	9.6	9.6	481.7
Feb-22	9,805.7	4.1	14.1	415.0
Mar-22	10,821.6	10.4	25.9	387.4
Apr-22	11,762.0	8.7	36.9	308.4
May-22	12,642.9	7.5	47.1	281.8
Jun-22	13,926.2	10.2	62.1	273.2
Jul-22	14,910.8	7.1	73.5	211.6
Aug-22	17,269.7	15.8	101.0	239.2
Sep-22	19,867.0	15.0	131.2	245.3

Source: BCV and Ecoanalitica.

Note: Index was simplified (base 100 = Dec 2017), and divided by 1,000,000 in 2022.

**Estimated using official weights data published by BCV in 2007.*

¹ This report is based on Ecoanalitica's own estimation. As usual, we followed the "Central Bank of Venezuela [NCPI*] methodology," keeping the original weights over basic basket components considered on its definition. We learned that, back in June 2014, the Central Bank of Venezuela made changes to such weightings.

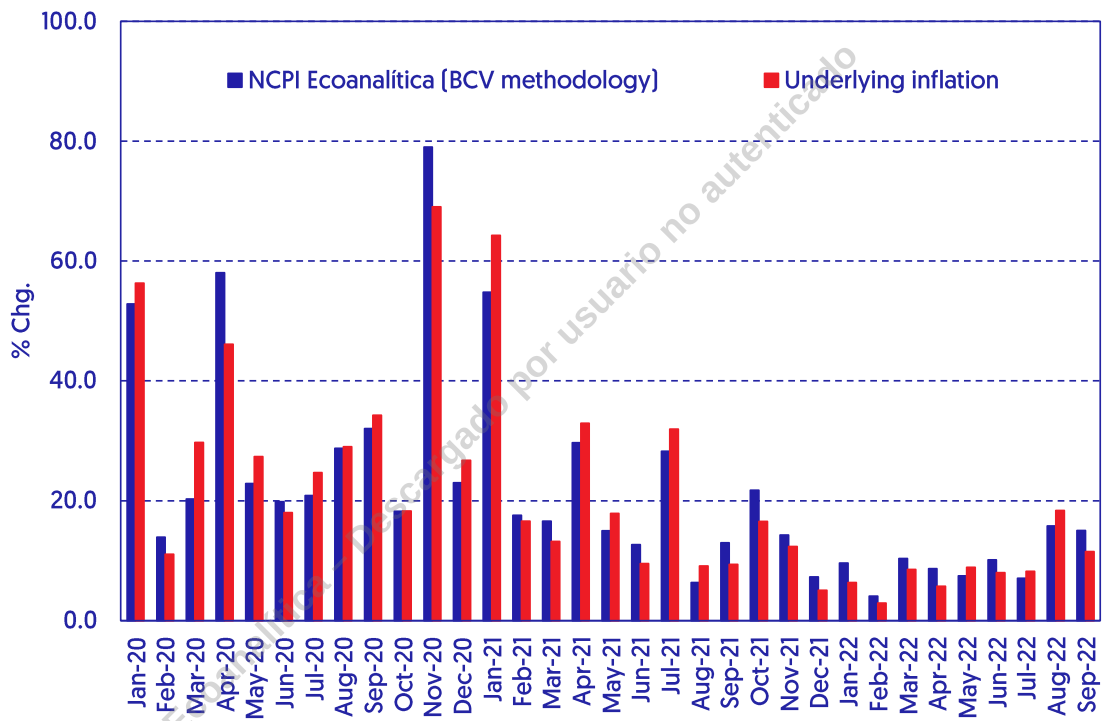
² Due to the quarantine and consequent suspension of part of the economic activity together along with the shortage of some products, it is expected that the inflation indicators may present imperfections. In view of this, it is suggested that a cautious approach be taken towards these.



Underlying inflation

Underlying inflation was lower than in the previous month, reaching 11.5% during September. The underlying inflation had a negative distance of 3.5 percentage points [pp.] from the NCPI inflation. Given September underlying inflation, the year-over-year growth of this index reached 191.1%.

Monthly inflation (%)



Source: Ecoanalítica.



A detailed overview

The asymmetry of inflation persists. In September, the items that registered the highest inflation were "Education services" [22.0%], "Communications" [20.4%] and "Housing rent" [18.1%]. On the other hand, "Alcoholic beverages and tobacco" [13.0%], "Health" [10.5%] and "Transport" [10.0%] prices experimented the lowest variations.

Monthly inflation (%)

	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Cumulative Inflation ¹	Interannual Inflation ²
Foodstuff and non-alcoholic beverages	9.9	8.4	12.4	7.0	19.7	14.4	160.3	290.9
Alcoholic beverages and tobacco	3.6	7.1	10.1	6.8	17.0	13.0	96.2	166.4
Clothing and footwear	4.1	5.0	5.0	8.0	24.0	14.3	84.2	172.2
Housing rent	7.3	7.0	8.0	6.4	8.6	18.1	108.3	164.1
Home services except telephone	9.3	9.2	12.0	13.0	20.3	18.0	173.2	344.8
Home equipment	4.1	4.0	7.1	5.4	17.2	14.2	79.6	133.5
Health	9.0	7.5	9.1	6.5	13.4	10.5	107.9	199.7
Transport	10.1	10.0	8.1	6.8	8.7	10.0	117.5	317.6
Communications	9.4	4.0	12.0	5.4	5.0	20.4	126.4	259.4
Entertainment and culture	6.5	5.4	9.4	8.0	16.0	18.0	128.1	176.9
Education services	6.9	4.3	9.9	6.6	3.0	22.0	95.7	162.1
Restaurants and hotels	13.4	8.4	14.0	9.3	20.3	16.6	190.9	378.7
Other goods and services	8.7	8.5	8.5	5.0	14.0	17.0	122.4	197.3
Exchange rate ³	8.1	12.6	4.3	4.8	39.5	-0.3	75.9	42.6
Underlying Inflation	5.7	8.9	8.0	8.3	18.4	11.5	111.5	191.1
NCPI Ecoanalítica (BCV methodology)	8.7	7.5	10.2	7.1	15.8	15.0	131.2	245.3

Source: Ecoanalítica.

¹Cumulative inflation since the start of the year.

²Last twelve months' inflation.

³Non official exchange rate.



Relative prices' deformation

Different price variations among items affect the relation between them. The following matrix shows the prices' changes of all the items (seen at the rows on the left) in relation to the prices' changes of their counterparts (seen at the columns above). An item with a positive value means it has been made more expensive, while one with a negative value means it has cheapened.

Relative price change during September 2022 (%)

Item	Foodstuff and non-alcoholic beverages	Alcoholic beverages and tobacco	Clothing and footwear	Housing rent	Home services except telephone	Home equipment	Health	Transport	Communications	Entertainment and culture	Education services	Restaurants and hotels	Other goods and services	Exchange rate
Foodstuff and non-alcoholic beverages	0.0	1.3	0.1	-3.1	-3.0	0.2	3.5	4.0	-5.0	-3.0	-6.2	-1.8	-2.2	14.8
Alcoholic beverages and tobacco	-1.2	0.0	-1.1	-4.3	-4.2	-1.1	2.2	2.7	-6.2	-4.3	-7.4	-3.1	-3.4	13.4
Clothing and footwear	-0.1	1.2	0.0	-3.2	-3.1	0.1	3.4	3.9	-5.1	-3.1	-6.3	-1.9	-2.3	14.7
Housing rent	3.2	4.5	3.3	0.0	0.1	3.4	6.8	7.3	-2.0	0.0	-3.2	1.3	0.9	18.4
Home services except telephone	3.1	4.4	3.2	-0.1	0.0	3.3	6.7	7.2	-2.0	-0.1	-3.3	1.2	0.8	18.3
Home equipment	-0.2	1.1	-0.1	-3.3	-3.2	0.0	3.3	3.8	-5.2	-3.2	-6.4	-2.0	-2.4	14.6
Health	-3.4	-2.2	-3.3	-6.4	-6.3	-3.2	0.0	0.5	-8.2	-6.4	-9.4	-5.2	-5.5	10.9
Transport	-3.9	-2.7	-3.8	-6.8	-6.7	-3.7	-0.5	0.0	-8.6	-6.8	-9.8	-5.6	-6.0	10.3
Communications	5.2	6.6	5.3	2.0	2.1	5.4	8.9	9.5	0.0	2.0	-1.3	3.3	2.9	20.8
Entertainment and culture	3.1	4.4	3.2	0.0	0.1	3.3	6.8	7.3	-2.0	0.0	-3.3	1.2	0.9	18.4
Education services	6.6	8.0	6.7	3.3	3.4	6.8	10.4	10.9	1.3	3.4	0.0	4.7	4.3	22.4
Restaurants and hotels	1.9	3.2	2.0	-1.3	-1.2	2.1	5.5	6.0	-3.2	-1.2	-4.5	0.0	-0.4	16.9
Other goods and services	2.2	3.5	2.4	-0.9	-0.8	2.5	5.9	6.4	-2.8	-0.9	-4.1	0.4	0.0	17.4
Exchange rate	-12.9	-11.8	-12.8	-15.6	-15.5	-12.7	-9.8	-9.4	-17.2	-15.5	-18.3	-14.5	-14.8	0.0

Source: Ecoanalitica.



Cost of living in dollars.

The difference between the inflation of each item and the variation of the exchange rate determines whether the exchange rate becomes more expensive (real appreciation) or cheaper (real depreciation) in dollars within the Venezuelan economy. Variations in the cost of living in dollars can be understood as the increase, or decrease³, in the amount of dollars required to acquire the same basket of goods compared to its equivalent cost in foreign currency in the previous period.

During the month of September, the cost of living in dollars increased 15.4%; it accelerated with respect to the previous month by 32.4 pp. This rise was mainly influenced by the increase in the cost of living in USD of items such as "Education services", "Communications" and "Housing rent" and "Entertainment and culture", which presented positive variations of 22.4%, 20.8%, 18.4% y 18.4%, respectively. In year-on-year terms, the cost of living in USD has grown 142.2%.

Variation of living costs in USD (%)

	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Cumulative variation ¹	Interannual variation ²
Foodstuff and non-alcoholic beverages	1.7	-3.8	7.7	2.1	-14.2	14.8	48.0	174.1
Alcoholic beverages and tobacco	-4.1	-4.9	5.6	2.0	-16.1	13.4	11.5	86.8
Clothing and footwear	-3.7	-6.8	0.6	3.1	-11.1	14.7	4.7	90.9
Housing rent	-0.7	-5.0	3.5	1.5	-22.1	18.4	18.4	85.2
Home services except telephone	1.1	-3.0	7.4	7.9	-13.8	18.3	55.3	211.9
Home equipment	-3.7	-7.7	2.7	0.6	-16.0	14.6	2.1	63.7
Health	0.9	-4.6	4.6	1.7	-18.7	10.9	18.2	110.1
Transport	1.9	-2.3	3.6	2.0	-22.1	10.3	23.6	192.8
Communications	1.2	-7.7	7.4	0.6	-24.7	20.8	28.7	152.0
Entertainment and culture	-1.5	-6.5	4.8	3.1	-16.8	18.4	29.7	94.2
Education services	-1.1	-7.5	5.4	1.7	-26.2	22.4	11.2	83.8
Restaurants and hotels	5.0	-3.7	9.3	4.3	-13.8	16.9	65.4	235.7
Other goods and services	0.6	-3.7	4.0	0.2	-18.3	17.4	26.5	108.5
General costs in USD*	0.6	-4.6	5.6	2.2	-17.0	15.4	31.5	142.2

Source: Ecoanalítica.

*Based on Ecoanalítica's NCPI (BCV methodology).

¹Cumulative variation since the start of the year.

²Last twelve months' variation.

³ When calculated on the basis of the differences between inflation and exchange rate variation, it is common to find occasions in which the variations are negative, i.e. price growth lagged behind the exchange rate and therefore fewer dollars are required to maintain purchasing power in foreign currency than in the previous period.



Official inflation published by BCV.

The BCV published inflation data until August of 2022. The official figures show an accumulated inflation of 60.5% in 2022, with a year-on-year inflation of 114.0%.

BCV inflation

	Index	m/m (%)	Accum. (%)	y/y (%)
Aug-21	2,273.2	19.8	489.5	2,343.7
Sep-21	2,434.2	7.1	531.2	1,946.0
Oct-21	2,600.5	6.8	574.4	1,575.3
Nov-21	2,819.2	8.4	631.1	1,197.5
Dec-21	3,032.4	7.6	686.4	686.4
Jan-22	3,235.6	6.7	6.7	472.3
Feb-22	3,329.4	2.9	9.8	340.1
Mar-22	3,376.0	1.4	11.3	284.3
Apr-22	3,524.6	4.4	16.2	222.0
May-22	3,755.1	6.5	23.8	167.0
Jun-22	4,183.2	11.4	37.9	157.1
Jul-22	4,496.9	7.5	48.3	136.9
Aug-22	4,865.7	8.2	60.5	114.0

Sources: BCV and Ecoanalítica.

Note: Index was simplified (base 100 = Dec 2017) and divided by 1,000,000 in 2022.



Forecasts of different inflation indicators.

With the aim of offering our clients clear and precise information, at **Ecoanalítica** we include forecasts for three inflation indicators each month. For our “Official Central Bank Inflation” indicator, we reproduce the adjustments that the Central Bank (BCV) unofficially made to their methodology, using an econometric model that allows us to have a better estimate of the updated figures that the BCV might publish in the future.

It is important to note that in an environment of high or chronic inflation, slight increases in the weekly inflation rate generate large shocks in monthly inflation. For this reason, it cannot be ruled out that in the coming months inflation will be higher than in previous months. On the other hand, even in the absence of hyperinflation, chronic inflations are volatile processes, and apparent stabilizations may be followed by unanticipated price accelerations [or lower growth].

It should be noted that the BCV is the only organization authorized to publish official inflation figures. Therefore, their official data must be taken at face value for purposes of submitting reports to government agencies. However, at **Ecoanalítica** we consider that for internal estimates, or as a planning tool, the best indicator for measuring the evolution of prices in Venezuela is our “BCV methodology” indicator.

Inflation rate forecast

<i>Inflation (%)</i>	<i>2021E (y/y)</i>	<i>2021E (m/m average)</i>	<i>2022F (y/y)</i>	<i>2022F (m/m average)</i>
Official BCV Inflation Rate	686.9	18.8	155.0	8.1
BCV Methodology Inflation Rate ^{1/}	721.5	19.2	226.3	10.4
Underlying Inflation Rate	707.5	19.0	184.9	9.1

Sources: BCV and Ecoanalítica.

^{1/} **Ecoanalítica's own estimation, since 2015.**

Monthly averages are geometric, not arithmetic, to reflect price variations with greater precision.

For more information on our scenarios read our Perspectives Report.

At **Ecoanalítica**, we try to ensure that our forecasts accurately guide our clients' decisions, and we adjust them when the facts provide new information that changes our perspective. For this reason, we make monthly changes, which in a context of high inflation may seem substantial, but in reality, differ relatively little in terms of orders of magnitude.



Weighted Exchange Rate of the Venezuelan Consumer (VES/USD)

	Sep-22	Aug-22	Sep-21	y/y (%)	Depreciation % (m/m)	m/m (%)
Foodstuff and non-alcoholic beverages	8.38	6.95	4.22	98.6	-17.05	20.55
Alcoholic beverages and tobacco	8.39	6.97	4.23	98.7	-16.94	20.39
Clothing and footwear	8.40	6.98	4.23	98.7	-16.91	20.34
Housing rent	8.32	6.85	4.19	98.4	-17.61	21.38
Home services except telephone	8.30	6.82	4.18	98.3	-17.77	21.61
Home equipment	8.39	6.97	4.23	98.7	-16.94	20.39
Health	8.21	6.68	4.14	98.0	-18.58	22.82
Transport	8.30	6.82	4.18	98.3	-17.79	21.65
Communications	8.14	6.57	4.11	97.8	-19.23	23.82
Entertainment and culture	8.18	6.64	4.13	97.9	-18.83	23.20
Education services	8.08	6.48	4.09	97.6	-19.80	24.68
Restaurants and hotels	8.39	6.96	4.22	98.6	-17.01	20.50
Other goods and services	8.29	6.81	4.18	98.3	-17.87	21.75
Total	8.32	6.86	4.19	98.4	-17.51	21.22
Unofficial Exchange Rate	8.40	6.98	4.23	98.7	-16.91	20.34

Sources: BCV and Ecoanalítica.

Unofficial exchange rate is a weighted average between the corporate and conventional rate.
The published exchange rates represent a monthly average, not their values at the end of the month.

Detailed Underlying Inflation

	Index	m/m (%)	Accum. (%)	y/y (%)
Sep-21	49,908	9.4	486.7	1,387.3
Oct-21	58,178	16.6	584.0	1,365.4
Nov-21	65,369	12.4	668.5	874.0
Dec-21	68,683	5.1	707.5	707.5
Jan-22	73,072	6.4	6.4	422.9
Feb-22	75,235	3.0	9.5	361.7
Mar-22	81,682	8.6	18.9	342.8
Apr-22	86,371	5.7	25.8	252.2
May-22	94,066	8.9	37.0	225.3
Jun-22	101,620	8.0	48.0	220.8
Jul-22	110,004	8.3	60.2	163.2
Aug-22	130,255	18.4	89.6	185.5
Sep-22	145,287	11.5	111.5	191.1

Sources: BCV and Ecoanalítica.

Note: Index was simplified (base 100 = Dec 2017) and divided by 1,000,000 in 2022.





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