



CENTRAL BANK OF  
MONTENEGRO

# PRICE STABILITY REPORT 2022

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## LIST OF ABBREVIATIONS

ARIMA	Autoregressive Integrated Moving Average
GDP	Gross Domestic Product
CBCG	Central Bank of Montenegro
COVID-19	COronaVirus Disease-19 (SARS-CoV-2)
CPI	Consumer Prices Index
ECB	European Central Bank
EMU	Economic and Monetary Union
EU	European Union
FAO	Food and Agriculture Organization
HICP	Harmonised Index of Consumer Prices
IMF	International Monetary Fund
MNE	Montenegro
MONSTAT	Statistical Office of Montenegro
OPEC	Organisation of the Petroleum Exporting Countries
USA	United States of America
FDI	Foreign Direct Investments
VAT	Value Added Tax
UN	United Nations
USD	American Dollar



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# 1. INFLATION INDICATORS

## 1.1. Inflation trend in Montenegro

The highest average world inflation in the last twenty years<sup>1</sup> was recorded in 2022. Notable price increase was recorded in most countries of the world, while in some developed countries such as the USA, Germany and Great Britain, inflation reached multi-decade highs. As Russia is a significant producer of oil and natural gas in the world, the sanctions introduced by the EU, due to the situation in Ukraine, resulted in a large increase in energy prices. Record droughts in Europe further contributed to the rise in electricity prices. Disruptions in global supply chains, occasional blockades of grain and fertilizer exports from several Black Sea ports also contributed to the rise in the prices of food raw materials. The growth of food prices, coupled with growing energy prices, accounted for more than half of inflation in many regions, on average.

According to the IMF April 2023 report<sup>2</sup>, the average price of oil increased by 39.2% year-over-year. According to the Food and Agriculture Organization (FAO) data, the food price index, which tracks changes in international prices of basic food products, grew by 14.3% on average in the comparative period and reached a record level since the beginning of its calculation in 1990. According to the aforementioned IMF report, this had the greatest impact on the increase in the average growth of consumer prices in 2022 at the global level, up to the level of 8.7%. Inflationary pressures started to weaken at the end of the year owing to a gradual resolution of the stagnation in global supply chains and the restrictive monetary policy measures introduced by central banks.

According to MONSTAT data, Montenegro recorded the highest inflation in 2022 since regaining its independence in 2006. A double-digit annual growth rate of consumer prices was recorded in April that remained on an upward trend until December when it slightly declined and amounted to 17.2% (at the same time, the annual HICP inflation was 15.7%). Consumer prices were by 13.0% higher on average in 2022 compared to the previous year.

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<sup>1</sup> UN: *World Economic Situation and Prospects 2023*, January 2023.

<sup>2</sup> IMF: *World Economic Outlook: A rocky recovery*, April 2023.

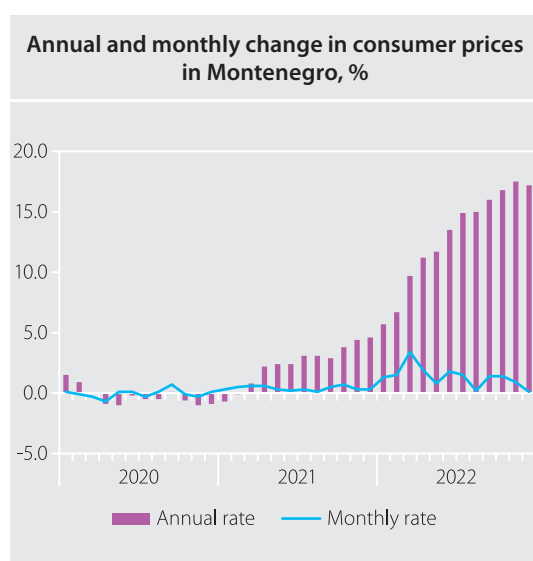
The main contributors to the annual inflation growth were the prices in the category *food and non-alcoholic beverages* (10.23 pp), *housing, water, electricity gas and other fuels* (2.19 pp), and *transport* (1.41 pp) (Table 2). Observing the movement of prices by months, the highest growth of consumer prices was seen in March (3.4%), whereas the lowest growth was recorded in December (0.1%) (Graph 1).

**Table 1**

Inflation in Montenegro in the period 2021–2022, in %								
	2021				2022			
	III	VI	IX	XII	III	VI	IX	XII
Change in relation to the previous year-end	1.4	2.4	3.3	4.6	6.3	11.1	14.5	17.2
Annual change	0.8	2.4	2.9	4.6	9.7	13.5	16.0	17.2

Source: MONSTAT

**Graph 1**



Source: MONSTAT

The largest contributor to the growth of annual inflation rate with 10.23 pp in December was the increased prices of *food and non-alcoholic beverages* with a growth of 28.9%. The growth in this category was mostly due to an increase in the prices of milk, cheese and eggs of 47.8%, then bread and cereals of 31.2%, meat of 20.4%, vegetables of 29.7%, fruit of 23.7%, sugar, jam, honey, chocolate and confectionery of 23.4%, oil and fats of 21.4%, fish and seafood of 20.1%, and non-alcoholic beverages of 13.1%. In order to limit the impact of price growth, the Government of Montenegro adopted several temporary measures (with validity from May until the end of 2022) with the aim of reducing the tax rate on basic food products: The Law Amending the Law on Value Added Tax<sup>3</sup>, which reduced the VAT rate on flour and oil obtained from sunflower (from 7% to 0%) and on salt (from 21% to 7%), then additional amendments to the Law on Value

Added Tax<sup>4</sup>, which reduced the VAT rate on bread from the then 7% to 0% and the decision<sup>5</sup> which temporarily limited the wholesale and retail trade margins of certain products for human consumption (by regulating the maximum amount of margin in wholesale trade in the amount of 5%, and in retail trade in the amount of 7% on wheat flour, granulated sugar, edible sunflower oil and table salt).

<sup>3</sup> Parliament of Montenegro session of 5 May 2022.

<sup>4</sup> Parliament of Montenegro session of 15 June 2022.

<sup>5</sup> Decision on temporary measures to limit prices of products of special importance for human life and health and the list of products; Government of Montenegro session of 23 June 2022.



A significant contributors to the annual inflation (with 2.19 pp) were prices under the *housing, water, electricity gas and other fuels* category that rose 16.2%. Growth in solid fuel prices of 48.8% (the largest part of which refers to the increase in beech firewood prices of 55.2%) and real rents paid by tenants for primary residence of 30.6% (due to the increased demand for apartments by non-residents) had the greatest impact on the growth of the aforementioned category. Also, prices growth in the category *transport* of 12.0% contributed to total inflation growth with 1.41 pp. Under the influence of the significant increase in oil prices on the international market, the prices of fuel and lubricants for motor vehicles in Montenegro rose 11.2%. However, this growth would have been significantly higher if the Government of Montenegro had not influenced the lowering of fuel prices through the reduction of excise duty on fuel. Namely, the Law Amending the Law on Excise Duties adopted in May allowed for the reduction of excise duty on fuel by up to 50%<sup>6</sup>, and then the Decision on the reduction of the amount of excise duty for the sale of unleaded gasoline and gas oils<sup>7</sup>. The decision was extended several times until the end of 2022 (in October, the excise duty was reduced by 40%, by additional 25% in early December, while at the end of December an amendment to the Decision was adopted defining a reduction of the excise duty by 15% for the period until 27 February 2023).

An increase in consumer prices was also recorded in the following categories: *hotels and restaurants* (16.8%), *miscellaneous goods and services* (16.4%), *furnishing, household equipment and routine household maintenance* (13.4%), *clothing and footwear* (8.3%), *health* (6.8%), *alcoholic beverages and tobacco* (5.7%), *recreation and culture* (3.5%), *education* (3.1%), and *communications* (0.3%).

**Table 2**

Annual rate of growth (in %) and contribution of individual categories to total inflation <sup>8</sup> in Montenegro				
	Weights	XII 2022/XII 2021	Growth rate	Contribution
TOTAL	1,000.0	117.2	17.2	17.2
Food and non-alcoholic beverages	353.8	128.9	28.9	10.2
Alcoholic beverages and tobacco	39.8	105.7	5.7	0.2
Clothing and footwear	87.3	108.3	8.3	0.7
Housing, water, electricity gas and other fuels	135.0	116.2	16.2	2.2
Furnishing, household equipment and routine household maintenance	39.0	113.4	13.4	0.5
Health	40.3	106.8	6.8	0.3
Transport	117.7	112.0	12.0	1.4
Communications	48.5	100.3	0.3	0.0
Recreation and culture	32.3	103.5	3.5	0.1
Education	18.3	103.1	3.1	0.1
Hotels and restaurants	46.5	116.8	16.8	0.8
Miscellaneous goods and services	41.4	116.4	16.4	0.7

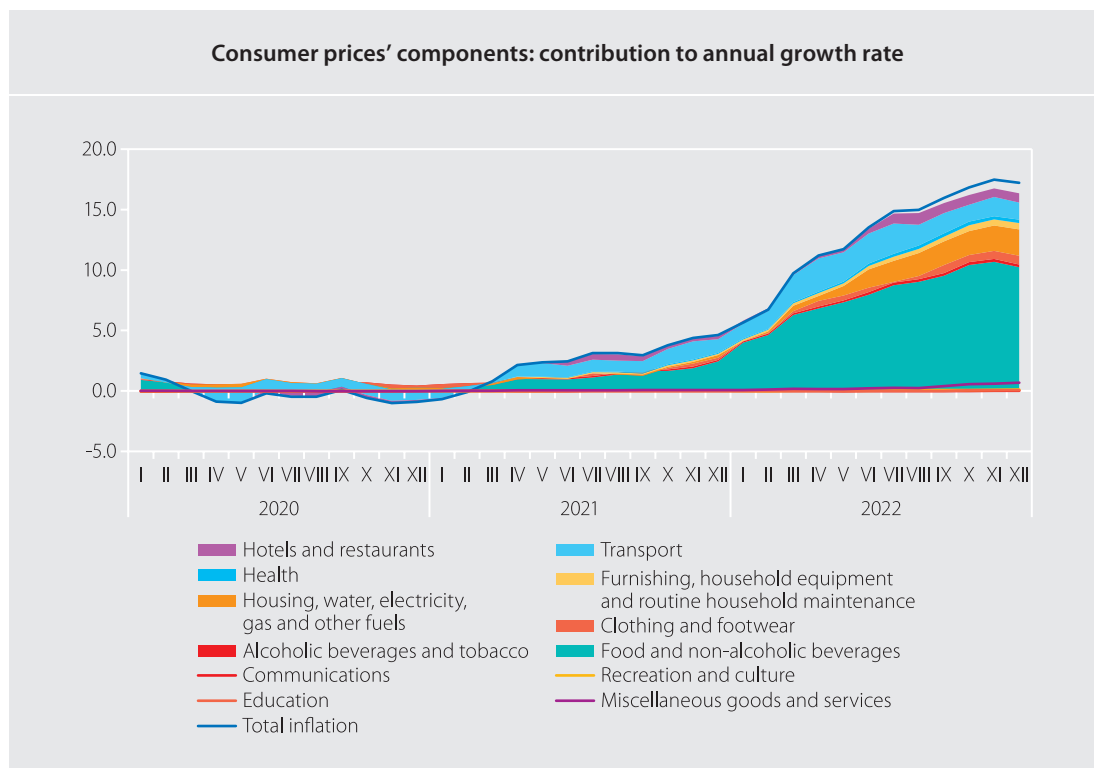
Source: MONSTAT

<sup>6</sup> Source: Parliament of Montenegro session of 5 May 2022.

<sup>7</sup> Government of Montenegro session of 9 May 2022.

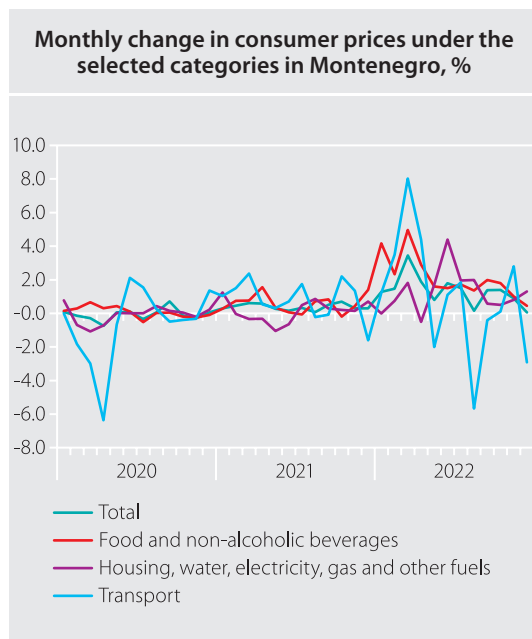
<sup>8</sup> It should be noted that regardless of the index changes, the contribution share of certain categories is not recorded before the second and/or third decimal due to the weight structure.

Graph 2



Source: MONSTAT

Graph 3



Source: MONSTAT

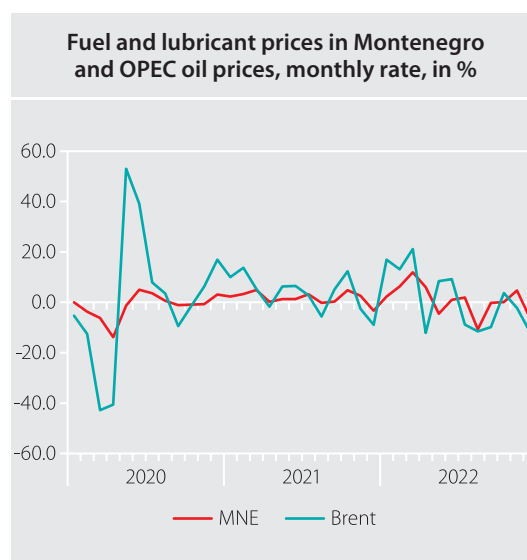
After the increase in oil demand, as a result of the gradual recovery of economic activities due to the subsiding of the COVID-19 pandemic, we saw an increase in the price of this energy product in 2021. This trend continued in 2022 due to the situation in Ukraine, especially after the introduction of EU sanctions against Russia whose production previously accounted for 14% of the total supply of oil on international exchanges. The Organization of the Petroleum Exporting Countries and its allies (OPEC+), excluding Russia, decided to increase production in July and August to offset the impact of sanctions, which contributed to the oil price decline in September. However, uncertainties induced by the slowdown of global economies and the future outlook on the oil market led to a subsequent agreement by the OPEC+ members to reduced production by 100,000 barrels per day in October, and by two million barrels per day starting from November (which is the largest reduction since the COVID-19 pandemic crisis).

The price of the OPEC reference basket averaged at USD 99.91/barrel in 2022, being 43.30% higher than the 2021 average. The average price of Brent oil amounted to USD 100.92/barrel, being 42.88% higher than in the comparative period. Observed on monthly level, the highest average price of Brent oil was recorded in June, of USD 123.56/barrel, which is also the highest price since March 2012. The IMF April 2023 report<sup>9</sup> forecasts crude oil price to average at USD 73.13/barrel in 2023 and USD 68.90/barrel in 2024.

The annual core inflation rate stood at 19.4% in December and it was 2.2 pp higher than total annual inflation<sup>10</sup>. This was due to the rise in the prices of almost all groups of food products that are not excluded, as well as the prices of other product groups that determine core inflation on annual level. During the first seven months of 2022, the annual rate of core inflation was lower than overall inflation, while from August to December it was higher (graph 5). The largest spread between total annual and core inflation was recorded in April due to price changes of certain products that are included in the annual inflation calculation, but not included in the core inflation calculation (e.g. prices of a large number of agricultural products, tobacco, fuel and lubricants, and the like).

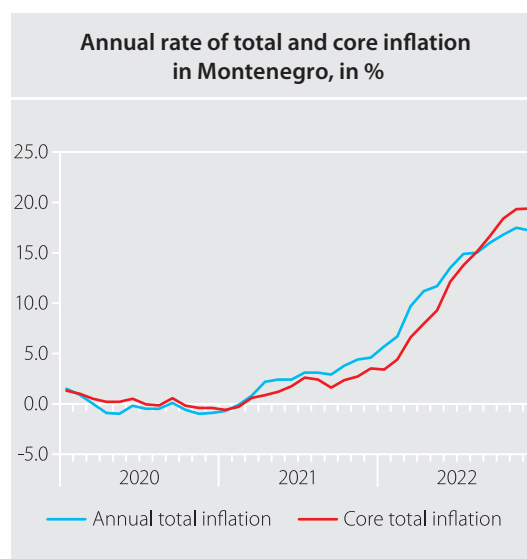
The UN report *World Economic Situation and Prospect 2023* from January 2023 indicates that inflation in developed countries amounted to 7.5% in 2022, which represents a significant increase compared to the previous year, when it amounted to 3.3%. Countries in transition also recorded an increase in inflation from the level of 7.2% in 2021 to 14.5%, and this was particularly due to a significant increase in the level of inflation in the region of Southeast Europe, as well as

Graph 4



Source: MONSTAT and OPEC "Monthly Oil Market Reports" (\*North Sea Dated)

Graph 5



Source: MONSTAT and CBCG calculations

<sup>9</sup> IMF: *World Economic Outlook: A rocky recovery*, April 2023.

<sup>10</sup> Core inflation is used as an indicator of the trend of the long-term or future rate of inflation, that is, it enables the distinction between temporary price shocks and long-term inflation. Total annual inflation is an indicator of the average price change of all products and services used by households for consumption purposes. Read more on the methodology at: [https://www.cbcg.me/slike\\_i\\_fajlovi/eng/fajlovi/fajlovi\\_publikacije/radne\\_studije/obracun\\_bazicne\\_stope\\_inflacije\\_english.pdf](https://www.cbcg.me/slike_i_fajlovi/eng/fajlovi/fajlovi_publikacije/radne_studije/obracun_bazicne_stope_inflacije_english.pdf)

in the Republic of Moldova, Russia, Belarus and Ukraine. Inflation growth was also recorded in developing countries, from 6.6% in 2021 to 10.8% in 2022, due to rising prices in all regions, with the exception of North Africa. As stated in the Report<sup>11</sup>, inflation in developed countries could amount to 5.2% in 2023, 8.0% in countries in transition, and 8.5% in developing countries.

**Producer prices of export manufactured products**<sup>12</sup> recorded the year-over-year increase of 1.5% in December 2022, while their average annual price growth was 29.8%. Average price growths were recorded in both mining and quarrying sector and manufacturing industry of 23.4% and 30.6%, respectively.

**Import prices of manufactured products**<sup>13</sup> recorded the year-on-year increase of 8.7%, and the average annual rate of growth amounted to 12.9% in December 2022. Average annual price growths were recorded in both mining and quarrying sector and manufacturing industry of 15.8% and 12.9%, respectively.

## 1.2. Inflation trends in the region and the EU

Significant inflation surges were recorded in all countries in the region and the EU. The highest annual rate of consumer prices among countries in the region December 2022 was recorded in North Macedonia (18.7%), followed by Serbia (15.1%), Bosnia and Herzegovina (14.8%), and Albania (7.4%).

The annual HICP<sup>14</sup> inflation recorded in the EU stood at 10.4%. Of the EU countries, the highest inflation was in Hungary, 25.0% and Latvia, 20.7%, while the lowest rate of inflation was recorded in Spain, 5.5% (graph 6). The annual inflation rate in the euro area in the same period amounted to 9.2% and it was 4.2 pp higher than the annual rate in December 2021, and the highest contributors to inflation with 2.66 pp and 2.79 pp were the annual price increase of food and non-alcoholic beverages and energy generating products of 16.0% and 25.5%, respectively. The average annual rate in the euro area was 8.4% in 2022, but in its May report<sup>15</sup> the European Commission forecasted an inflation rate of 5.8% in 2023 and 2.8% in 2024.

<sup>11</sup> Detailed data on inflation trends for individual regions and countries are listed in the Report Annex *World Economic Situation and Prospect 2018*, in Tables A.5, A.6 and A.7.

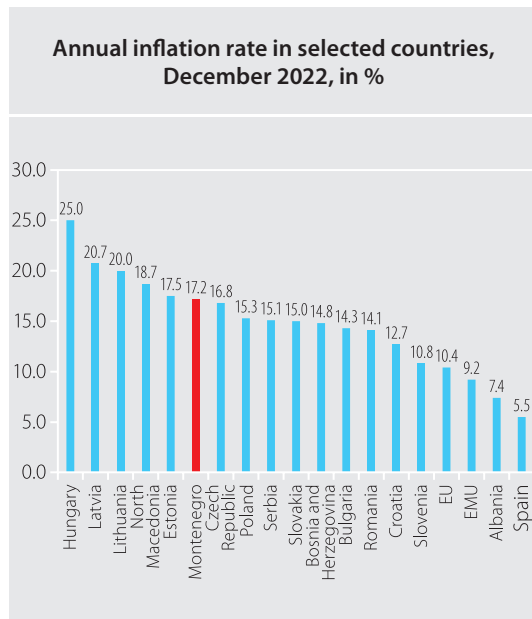
<sup>12</sup> The Export Price Index (EPI) tracks monthly changes in the price which firms and countries receive for products they export. It is an important economic indicator that can be used as time series deflator, particularly for national account purposes.

<sup>13</sup> The Import Price Index refers to the monthly change in prices of imported manufactured products. It can be used as a time series deflator, especially for the needs of national accounts and as a means of harmonizing prices when concluding different sales contracts.

<sup>14</sup> Harmonised Index of Consumer Prices (HICP) is the basis for a comparative measure of inflation in Europe and the assessment of stability of monetary value in the euro area. Every EU member state is obliged to produce the HICP index.

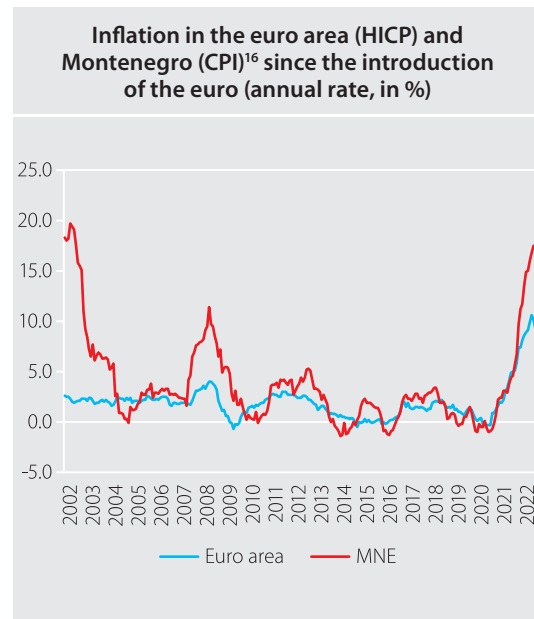
<sup>15</sup> Source: European Commission: *European Economic Forecast, Spring 2023*, May 2023.

**Graph 6**



Source: National statistical offices and Eurostat

**Graph 7**



Source: MONSTAT and Eurostat

<sup>16</sup> Cost of living had been used for measuring inflation in Montenegro until 2009, after which consumer prices were introduced.

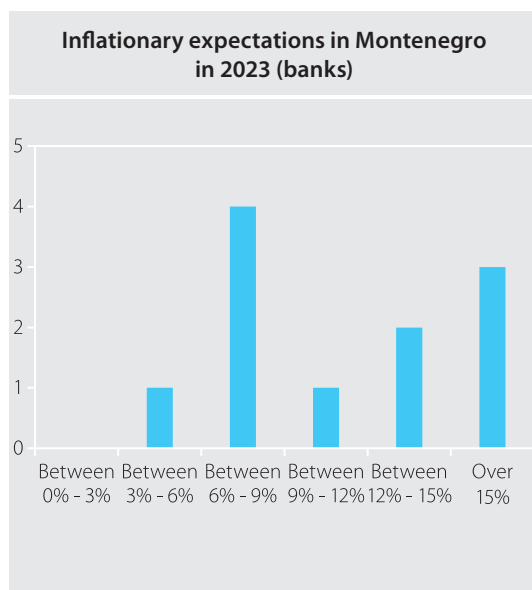
## 2. INFLATION EXPECTATIONS OF THE BANKING AND CORPORATE SECTOR

### 2.1. Banks' expectations

When it comes to inflation expectations of banks, as per the survey conducted in February 2023, one bank expect that the rate of inflation in 2023 will range between 3% and 6%, one believes that it will be between 9% and 12%, two banks a growth between 12% and 15%, three banks expect inflation above 15% (graph 8), while four banks expects inflation to range between 6% and 9%. No bank expects inflation between 0% and 3%.

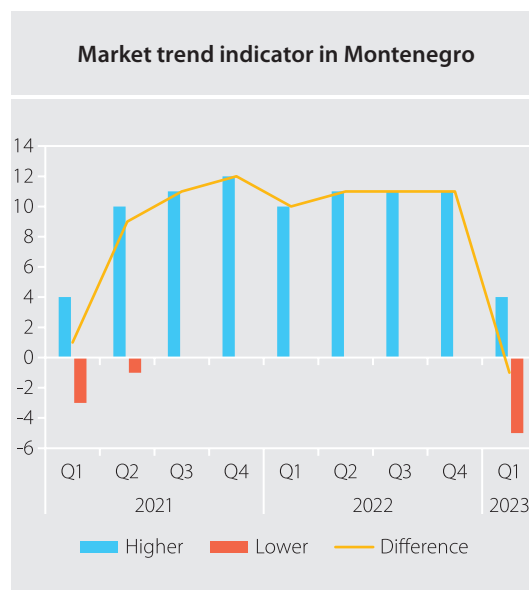
For the purpose of calculating inflation forecasts, we use the market trend indicator (horizontal line in graph 9) that is calculated as the difference between the number of banks expecting inflation growth and those expecting inflation decline. If the market trend indicator has a negative value, a decrease in inflation is expected in the upcoming period. However, if its value is positive, then an increase in the inflation rate can be expected. If it has a zero value, no change in the inflation rate can be expected in the upcoming period. The more negative value of the market trend indicator, the lower the inflation expectations and vice versa, higher positive value means higher inflation level expectations. The survey conducted in the first quarter of the year indicates an increase in banks' inflation expectations in 2023.

Graph 8



Source: CBCG survey

Graph 9



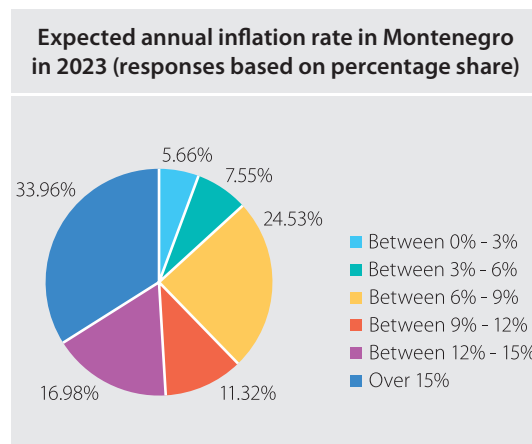
Source: CBCG survey

## 2.2. Expectations of the corporate sector (banks excluded)

### *Inflation*

Of the total number of the surveyed economic entities, most of them (33.96%) believe that the annual inflation rate in 2023 will be over 15% (graph 10), 24.53% forecast the annual inflation rate from 6% to 9%, while 16.98% of the respondents think that inflation will range between 12% to 15%. Inflation in the range between 9% and 12% is expected by 11.32% of the respondents, 7.55% expect the rate between 3% and 6%, and 5.66% believe it would range between 0% and 3%.

Graph 10



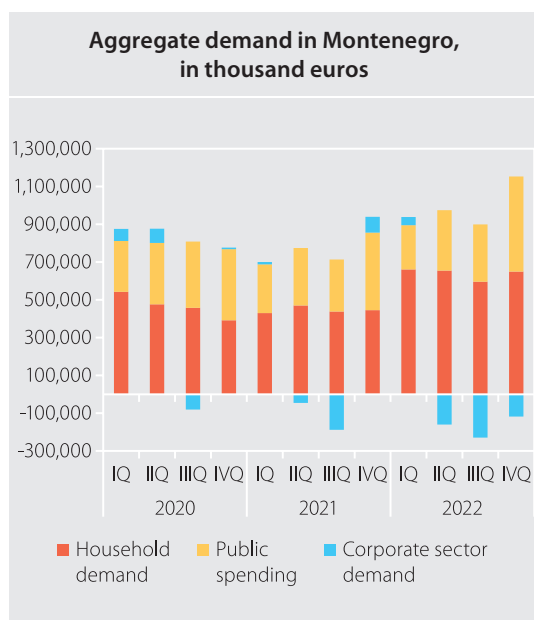
Source: CBCG survey

## 3. INFLATION DETERMINANTS

### 3.1. Demand

According to preliminary indicators, the total demand in the fourth quarter of 2022 was higher than in the other three quarters, as well as compared to the fourth quarter of the previous year. Observing the structure of total demand in Q4 2022, compared year-over-year, the share of household demand and public spending increased, while the corporate demand component decreased.

Graph 11



Source: CBCG calculations

Graph 12



Source: CBCG calculations

#### Box 1 – Aggregate demand calculation methodology

For the purpose of a more complete monitoring of aggregate demand as a determinant of inflation, the CBCG has developed the aggregate demand calculation methodology. The starting point of this methodology is that the aggregate demand represents the sum of demand of three sectors: personal spending (households), investment spending (corporate sector), and public spending.



However, taking into account the lack of numerous data necessary for calculating the aggregate demand, the existing data should not be treated as the indicator of the exact amount of aggregate demand, but as an indicator showing the aggregate demand trend. In the existing methodology, a number of substantial data were not available, such as: corporate investments, revenues from share sales, non-market income, non-observed economy revenues, and the like. Methodology of aggregate demand calculation is expressed by the following equation:

$$AD = C + I + G$$

AD – aggregate demand

C - personal spending = sum of paid salaries + sum of paid pensions + paid frozen foreign currency deposits + net compensations to households – net household savings (savings – loans granted)

I - investment spending = - net corporate savings (deposits – loans)

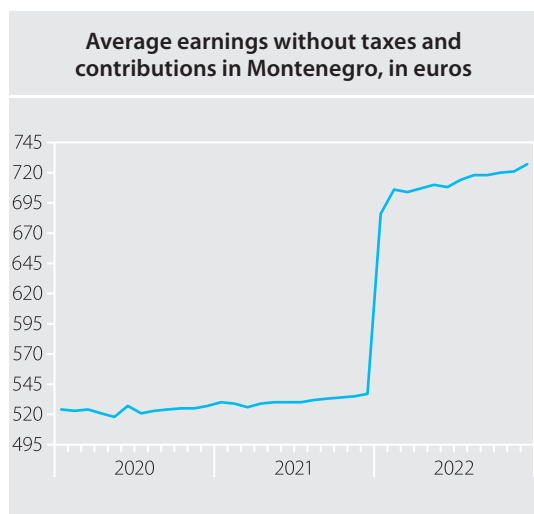
G - public spending = public spending – paid pensions – salaries paid from the budget – net Government savings (deposits – loans – Treasury bills)

### 3.1.1. Earnings and other available demand determinants

MONSTAT data show that an average gross earnings in Montenegro was 833 euros in 2022 and it increased by 11.35 in relation to the average in the previous year. At the same time, the average salary without taxes and contributions amounted to 712 euros and it was 33.83% higher as a result of the „Europe Now!“ program.

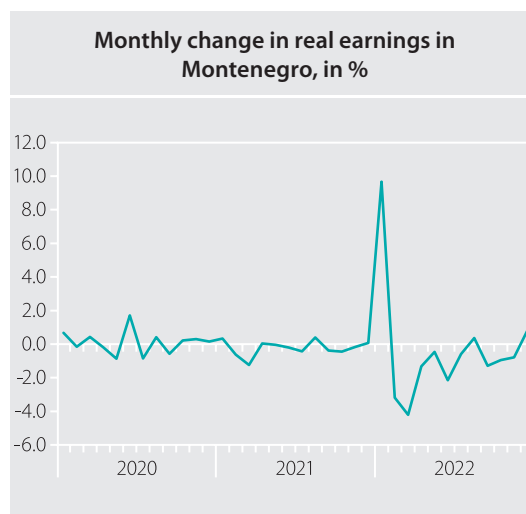
Observed by months, the highest nominal growth in earnings without taxes and contributions was recorded in January (27.75%), at the time the aforesaid program was launched (graph 13), while the lowest nominal growth of 0.14% was recorded in November. The highest nominal decline in earnings without taxes and contributions was recorded in March and June (0.28% in each month).

Graph 13



Source: MONSTAT

Graph 14

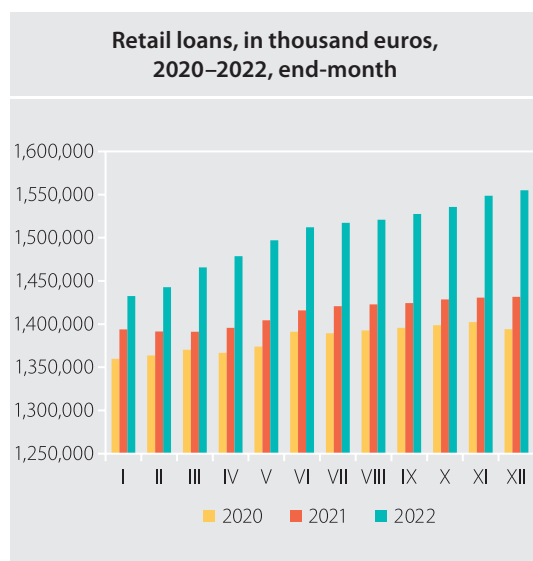


Source: MONSTAT

If we take into account consumer prices, i.e. trends in earnings in real terms, it can be concluded that real wages and salaries recorded the highest growth in January, while the highest real decline was reported in March.

Retail sector loans<sup>17</sup> recorded positive trends during 2022. Loans to this sector grew at a monthly average rate of 0.69% during the reporting year, while this rate was 0.22% in 2021.

**Graph 15**



Source: CBCG calculations

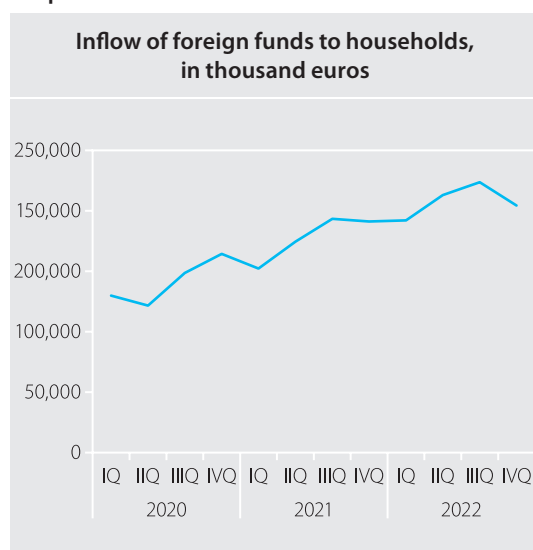
Total retail sector loans amounted to 1,555.08 million euros at end-2022, which is the year-over-year growth of 123.58 million euros or 8.63% (graph 15).

*Per capita*<sup>18</sup> debt amounted to 2,517.61 euros at the end of the reporting period and it rose 211.47 euros of 9.17% year-over-year.

At end-December 2022, total MFI loans granted to the retail sector amounted to 66.95 million euros, which is 3.92 million euros or 6.22% more than at end-2021.

Retail sector deposits recorded positive trends in 2022 albeit with minor fluctuations. Loans to this sector grew at a monthly average rate of 1.40% during the reporting year, while this rate was 1.19% in 2021.

**Graph 16**



Source: CBCG

Retail sector deposits amounted to 1,701.37 million euros at end-2022, being 258.87 million euros or 17.95% higher than a year ago.

The loans to deposits ratio of the retail sector was 0.91 at end-December and it decreased year-on-year when it was 0.99.

At end-December 2022, the retail sector net savings amounted to 146.28 million euros, which is far more favourable than in the comparative year when this sector recorded net savings of 10.99 million euros.

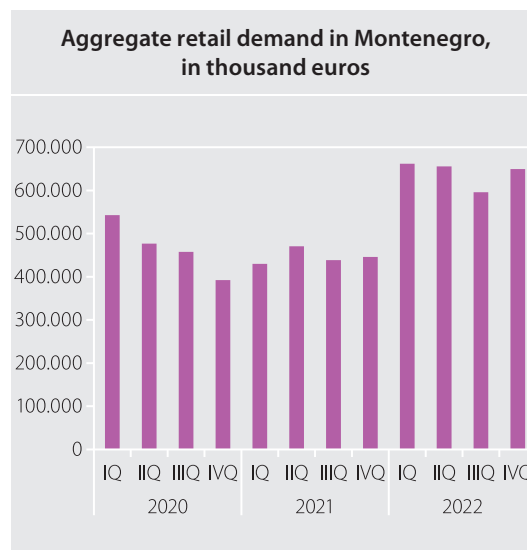
<sup>17</sup> The retail sector includes resident natural persons and entrepreneurs.

<sup>18</sup> Population estimate for 2022 as at 1 January 2022 amounts to 617,683. Source: MONSTAT.

The balance of payments statistics recorded the year-on-year increase in 2022 in the inflow of monetary resources arising from compensations to employees as well as remittances.

According to preliminary indicators, total retail demand in Q4 2022 was lower than in Q1 and Q2, while it was higher than in Q3 and the comparative quarter of 2021.

Graph 17



Source: CBCG calculations

### 3.1.2. Public sector demand

#### *Montenegro's public finances*<sup>19</sup>

According to the Ministry of Finance preliminary data, **public spending** reached 2,598.67 million euros or 44.83% of the estimated GDP<sup>20</sup> for 2022. Compared to the plan, public spending was 129.03 million euros or 4.73% lower, and 311.21 million euros or 13.60% higher than in the previous year. The increase in spending, for the most part, was caused by an increase in social protection expenditure, that is, compensations to mothers with three or more children that were payed starting from April, and the payment of allowances for all children up to 18 years of age from October 2022.

The recorded level of public spending was financed from tax revenues (1,558.15 million euros), contributions (462.80 million euros), fees (142.01 million euros), other revenues (52.64 million euros), revenues from donations (49.41 million euros), duties (18.82 million euros), and receipts from loan repayment and funds transferred from the previous year (15.40 million euros).

Current public spending (public spending reduced by capital expenditure) amounted to 2,245.70 million euros or 38.74% of GDP and it grew year-over-year by 11.99%, while capital expenditure amounted to 352.97 million euros or 6.09% of GDP.

<sup>19</sup> The structure of Montenegro's public finances comprises of the Budget of Montenegro with the state funds (Pension and Disability Fund, Health Insurance Fund, Compensation Fund, Employment Agency, and Labour Fund) and local government budgets (Old Royal Capital Cetinje, Capital Podgorica, and 23 municipalities).

<sup>20</sup> Estimated GDP for 2022 amounts to 5,796.76 million euros.

According to individual economic classification, transfers accounted for the main share in the structure of public expenditures with 42.19%, followed by capital expenditure with 13.58%, while 4.68% referred to other expenditures.

**Preliminary public revenues** were estimated at 2,299.23 million euros or 39.66% of estimated GDP, being 5.81% and 4.80% higher in relation to the 2022 plan and 2021, respectively. As for the structure of public revenues, tax revenues accounted for the main share of 67.77%, followed by contributions with 20.13%, whereas the other revenues accounted for the remaining 12.10%.

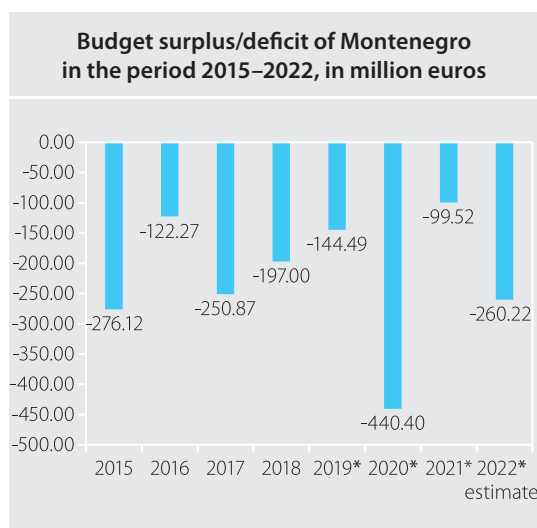
According to the Ministry of Finance preliminary data, the budget recorded **public spending cash deficit** of 299.44 million euros or 5.17% of GDP, which is 205.96 million euros more than in 2021.

### *Budget of Montenegro*

According to Ministry of Finance preliminary data, total revenues<sup>21</sup> of the Budget of Montenegro amounted to 2,231.08 million euros in 2022.

**Current revenues** of the Budget amounted to 2,010.37 million euros and they accounted for 34.68% of the projected GDP. Compared to the plan, they were 4.11% higher, while compared to 2021, they rose 5.18%, as a result of a successful summer tourist season, better tax discipline, and growing exports and inflation. In the structure of current revenues, tax revenues accounted for the main share of 68.70%, followed by contributions with 23.02%, fees with 3.62%, donations with 1.71%, other revenues with 1.45%, receipts from loan repayment and funds transferred from the previous year with 0.75%, and duties with 0.74%.

**Graph 18**



\* Note: Proposal of the Law on Annual Financial Statements of the State Budget of Montenegro for 2019, 2020, and 2021

Source: Ministry of Finance

Tax revenues amounted to 1,381.13 million euros, recording a 6.44% increase relative to the plan and a 16.66% increase year-over-year. The biggest increase compared to the previous year was recorded in the collection of value added tax (216.10 million euros or 31.23%). Also, the fees category recorded a significant growth (of 21.65 million euros or 42.38%) due to the collection based on the „Economic citizenship“ program and payment of one-off fees for oil and gas exploration activities.

Revenues from contributions amounted to 462.80 million euros and they were 3.19% lower than planned, while they recorded a decrease of 16.53% on the annual basis, which is a consequence of the cancelling of health insurance contributions in accordance with the „Europe Now!“ program.

<sup>21</sup> Revenues include current revenues (direct and indirect taxes and non-tax revenues), borrowings and loans from domestic and foreign sources, as well as receipts from property sale.

**Consolidated budget expenditures** amounted to 2,270.59 million euros in 2022 and they accounted for 39.17% of GDP. Recorded expenditure was 4.77% lower than planned but 12.91% higher year-on-year. Current budget expenditures amounted to 924.19 million euros, being 3.50% lower than planned but also 5.53% higher than in 2021. Social protection transfers amounted to 668.39 million euros or 11.53% of GDP. Capital expenditure amounted to 240.50 million euros or 4.15% of GDP.

Montenegro's **cash budget deficit** is estimated at 260.22 million euros or 4.49% of GDP, and it is 160.70 million euros higher than the cash deficit and 156.66 million euros higher than adjusted deficit recorded in 2021<sup>22</sup>. Debt repayment amounted to 291.57 million euros.

### 3.1.3. Non-financial sector

Lending to the non-financial sector<sup>23</sup> during 2022 saw positive trends, albeit with certain fluctuations. Loans to this sector grew at a monthly average rate of 0.73%, while this average stood at 0.36% during the previous year.

Total loans of the non-financial sector amounted to 1,261.58 million euros at end-December 2022, which is 104.11 million euros or 8.99% more than a year ago.

Long-term loans accounted for the main share in the structure of loans to the sector with 79.14%, which indicates that loans to the corporate sector were mainly used for increasing the volume of economic activity.

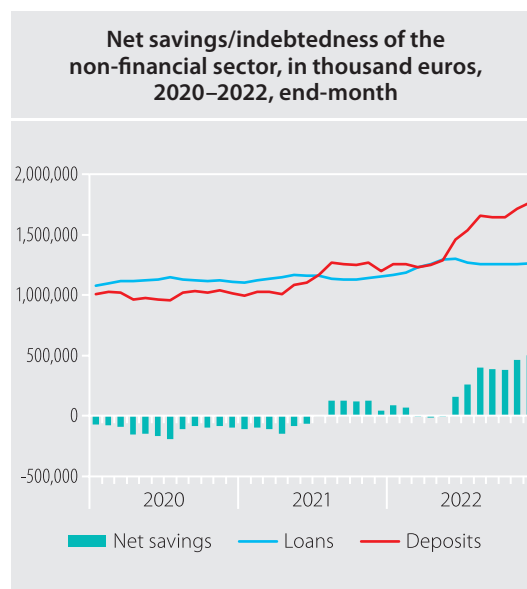
Deposits of the non-financial sector also recorded a positive trend in 2022. Loans to this sector grew at a monthly average rate of 3.36% during the reporting year, while this rate was 1.48% in 2021.

Deposits of the non-financial sector amounted to 1,766.65 million euros at the end of the reporting year and they rose by no less than 566.88 million euros or 47.25% compared to December 2021.

The loans to deposits ratio of the non-financial sector amounted to 0.71 at end-December and it decreased year-on-year when it was 0.96.

Due to the lack of data on the non-financial sector investments, we can use the sector's net savings/indebtedness as an approximation.

Graph 19



Source: CBCG calculations

<sup>22</sup> Adjusted deficit stated in the Proposal of the Law on Annual Financial Statements of the State Budget of Montenegro for 2021.

<sup>23</sup> The non-financial sector includes state-owned and private companies.

At end-December 2022, net savings of the non-financial sector was recorded in the amount of 505.07 million euros, which is significantly more favourable compared to the previous year when net savings was recorded in the amount of 42.30 million euros (graph 19).

### 3.1.4. External demand and the current account

Preliminary data show that the current account deficit amounted to 765.92 million euros in 2022, which is the year-on-year increase of 67.99%. This increase is a result of an increase in deficit on the goods account and it was partially offset by an increase in surpluses on the services account and the primary and secondary income accounts.

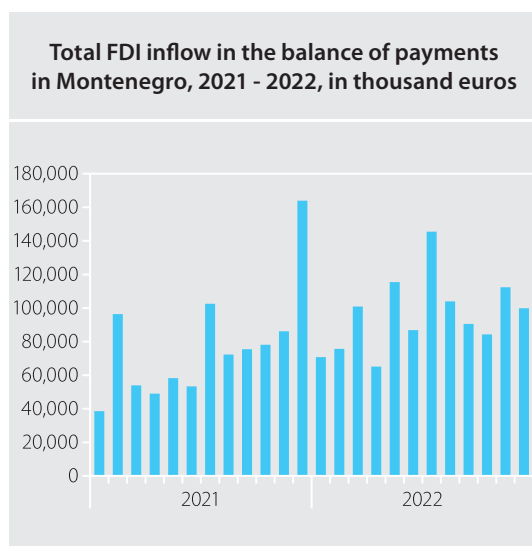
The goods account saw a deficit increase of 2,670.10 million euros or 39.42% more than in 2021. Total visible exports amounted to 763.46 million euros, recording an increase of 45.20%, whereas total visible imports amounted to 3,433,56 million euros, being 40.66% higher year-on-year. The services account recorded a surplus of 1,317,23 million euros, which is 37.77% more than in 2021. The surplus in the primary income account amounted to 118.39 million euros, which is the year-on-year increase of 13.89%. This trend is the result of a higher inflow based on compensations to employees. The secondary income account ran a surplus of 468.56 million euros in 2022, which is 16.90% more than in the previous year.

Preliminary data suggests that the net inflow of foreign direct investments (FDI) amounted to 782.64 million euros in the reporting year, which is the year-on-year growth of 34.56%. Total FDI inflow reached 1,151.42 million euros, recording an increase of 24.07% (graph 20). Equity investments amounted to 667.42 million euros (a 35.28% increase), while the inflow in the form of intercompany debt added up to 401.54 million euros or 24.15% more year-on-year. In the structure of equity investments, investments in companies and banks amounted to 219.40 million euros (a 2.01% increase),

while real estate investments reached 448.02 million euros (a 60.99% increase). The inflow arising from the withdrawal of funds invested abroad amounted to 82.46 million euros. In the structure of total FDI inflow, the share of real estate investments amounted to 38.91%, followed by intercompany debt with 34.87%, while investments in companies and banks accounted for 19.05%. Total FDI outflow amounted to 368.79 million euros or 6.45% more than in 2021. The outflow from residents' investments abroad amounted to 132.42 million euros, while the withdrawal of non-residents' funds invested in Montenegro amounted to 236.37 million euros.

In 2022, the portfolio investments account recorded a net outflow of 174.94 million euros, while the net outflow from the other investments account amounted to 260.81 million euros.

Graph 20



Source: CBCG

## 3.2. Supply and production

In 2022, industrial output recorded the year-over-year decline of 3.3%. *Electricity, gas and steam supply* sector dropped by 10.8%, while *manufacturing industry* and the *mining and quarrying* sector recorded respective output growths of 0.3% and 8.9%. Observing monthly data on industrial output (graph 21), the severest monthly decline was recorded in January (-26.5%), while the highest increase was recorded in November (26.0%).

Preliminary MONSTAT data indicate that 2.18 million **tourists** visited Montenegro in 2022, which is 30.71% more than in the previous year, but 17.44% less than in the record year 2019. Tourist overnights reached 12.43 million, which is the year-over-year increase of 25.89%. Due to the situation in Ukraine and the global price growth, which slowed the recovery of this sector to the pre-pandemic levels, 14.02% fewer overnights were recorded compared to 2019.

MONSTAT data shows that a total of 271,088 m<sup>3</sup> of **forest assortments from the national forests**<sup>24</sup> were produced in 2022, which is the year-on-year increase of 78.3%<sup>25</sup>.

According to preliminary MONSTAT data, the total value of executed **construction works** amounted to 688.72 million euros, recording the year-over-year decline of 4.44%, while measured by the effective working hours, it declined by 2.89% (18.12 million euros).

MONSTAT data also indicate that the results in **transport** showed positive trends in the majority of its segments. Thus, road passenger transport increased 55.70%<sup>26</sup> year-over-year, while road freight transport increased by 3.31%<sup>27</sup>. Railway transport saw a 40.18%<sup>28</sup> increase in passenger transport, while freight transport rose by 42.74%<sup>29</sup>. Air transport saw a 45.77% growth in passengers at airports, but cargo turnover at airports declined by 10.09%. Total turnover of goods in ports amounted to 2.93 million tonnes and it was 57.57% higher compared to the previous year, with exports accounting for 62.42% and imports made up 37.58%. In the observed period, exports increased by 87.19%, and imports increased by 24.78%.

<sup>24</sup> The total production of forest assortments is to be published by MONSTAT at end-2023.

<sup>25</sup> Presented through weighted index.

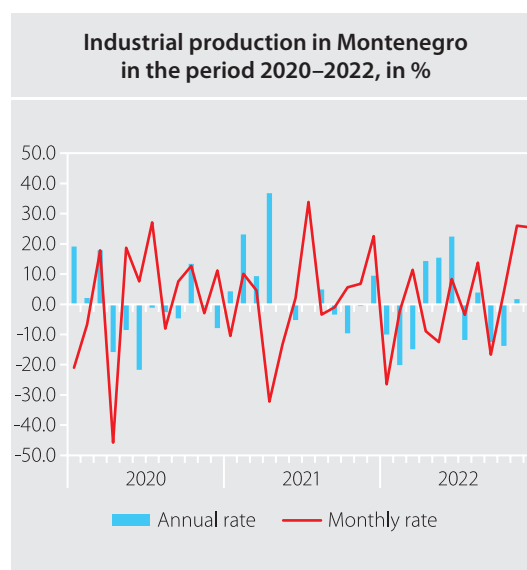
<sup>26</sup> Presented as the number of transported passengers, while it increased by 60.53% when expressed in passenger kilometres.

<sup>27</sup> Presented through transported goods in thousand tonnes, and when presented in ton-kilometres it increased by 3.65%.

<sup>28</sup> Presented as the number of transported passengers, but when presented in passenger-kilometres, it increased by 39.71%.

<sup>29</sup> Presented in thousand tonnes, and when presented through tonne kilometres the increase was 48.40%.

Graph 21



Source: MONSTAT

## 4. MONETARY POLICY

The Central Bank of Montenegro (CBCG) is a regulatory institution, responsible for monetary policy, fostering and preserving the stability of the financial system, including fostering and maintaining a sound banking system and safe and efficient payment systems.

The Central Bank of Montenegro Law prescribes that the CBCG's primary monetary policy instruments are open market operations, credit operations, and reserve requirement, all of which support the attainment of one of the Central Bank's primary objectives and that is the achievement and maintaining of price stability. However, the available instruments have a very limited influence on inflation trends, especially in conditions when the growth of inflationary pressures is determined by external factors, as was the case in 2022.

With the aim of analysing inflation in Montenegro, the Central Bank produced a working paper which examines the contributions of selected factors impacting the strong price growth in 2022. The aim of the study is to review the situation in order to determine whether it is necessary to use some of the potential limited instruments to mitigate this impact. The analysis shows to what extent inflation in Montenegro depends on the global factors and inflation in the euro area and how much domestic market factors influence the inflation. Using various statistical and econometric techniques, the components of inflation in Montenegro are analysed in detail.

To analyse the contribution of global, regional and domestic factors to inflation in Montenegro, the method "Analysis of the main components" was used. The obtained results indicate that inflation in Montenegro is under the prevailing influence of global factors involving the movement of prices, primarily of raw materials, food and oil. The analysis also pointed to a small regional factor influence, which was to be expected as this influence is "absorbed" by the global factor. When it comes to the impact of domestic factors, the analysis of the main components shows that in times of increase and/or decrease of taxes and excise duty burdens, these factors had a significant influence on price movements.

Furthermore, the paper examines the persistence of the long-term relationship between the inflation rate in Montenegro and inflation in the euro area. The results of the ARDL model have confirmed that there is a co-integration relationship between these two series and that, in the short term, a one percentage increase in inflation in the euro area leads to an increase in inflation in Montenegro by about 0.77 percentage points.



Finally, in the third empirical analysis, the impulse response function and variance decomposition of the SVAR model showed how inflation reacts to different shocks in the movement of global and domestic factors. The SVAR model results, which evaluated the dynamics of the influence of various factors on inflation, are similar to the results obtained based on the “Analysis of the main components” method. Inflation in Montenegro is more responsive to global shocks than to domestic shocks. To wit, the conducted econometric analysis of the reaction direction of the consumer price index to shocks has confirmed that an increase and also an upsurge in food and oil prices on the international market is reflected in the positive and significant reaction of this index in Montenegro, while the impact of household demand on the inflation index is positive in the first two quarters, and after that period the effects of this variable gradually subside. When it comes to the impact of the inflation factor in the euro area, it was assessed that it has a positive impact but not so significant in this model because the assumption is that the impact is “muffled” by factors such as food and energy prices. Also, an interesting conclusion of the SVAR model refers to the fact that prices grow mostly autoregressively in the short term, while the percentage impact of other factors increases over time, notably of the prices of food on the international market, then oil prices, and factors that boost household demand. Finally, the results show that household demand shocks are more pronounced than public consumption shocks.

The results of the study point to certain implications for economic policy makers. First of all, fiscal policy measures should be specifically targeted in order to mitigate inflationary pressures coming from the global environment and/or the transmission of international food and oil prices to other prices. Furthermore, dealing with inflation presupposes the implementation of structural reforms in the public sector.

Also, based on the analysis of the results, it could potentially be concluded that the instruments of monetary and macroprudential policy will be used in the event that the prices of goods and property (real estate in the first place) continue to rise, driven by the growth of demand and not costs, which could affect the potential overheating of demand and excessive credit growth. In that case, price growth would shift from cost-driven to demand-driven growth, which could ultimately lead to the accumulation of systemic risk, and consequently to the Central Bank measures in accordance with available instruments.

## 5. INFLATION FORECAST FOR 2023

### 5.1. Model assessment

Montenegro's inflation fan chart is a graphic representation of inflation forecast probability distribution presented by the consumer price index. In that respect, instead of determining specific points, the fan chart also takes into account potential risks and uncertainties through probability distribution that might influence the inflation trend in the following period. The very purpose of the fan chart is to indicate and consider uncertainties in the real economy flows, which are consequently reflected in the inflation rate trend (increase in energy prices, increase/decrease in foreign trade deficit, and the like.).

Montenegro's Fan Chart for 2023 was based on the following three estimated components:

1. **Central projection values** – the value of the fan chart central projection derived from the ARIMA model.
2. **Degree of uncertainty** – determines the Fan Chart width. The uncertainty degree ratios are obtained through analytical assessment and calculation of the relative impact of potential internal and external shocks that are possible in the Montenegrin economy over the one-year period and which are reflected through the “thickness” of the band around the central projection.
3. **Fan chart skewedness** – based on the level of skewedness of the distribution of inflation projection, the fan chart is adjusted to the forecast to show whether the values of the central projections have overestimated or underestimated inflation rates. The position of the mean value of inflation distribution will also depend on this.

#### *Central projection of fan chart - ARIMA model 2023*

With a view to developing the inflation fan chart, an ARIMA (Autoregressive Integrated Moving Average) model of time series of inflation of Montenegro presented via the Consumer Price Index<sup>30</sup> was developed.

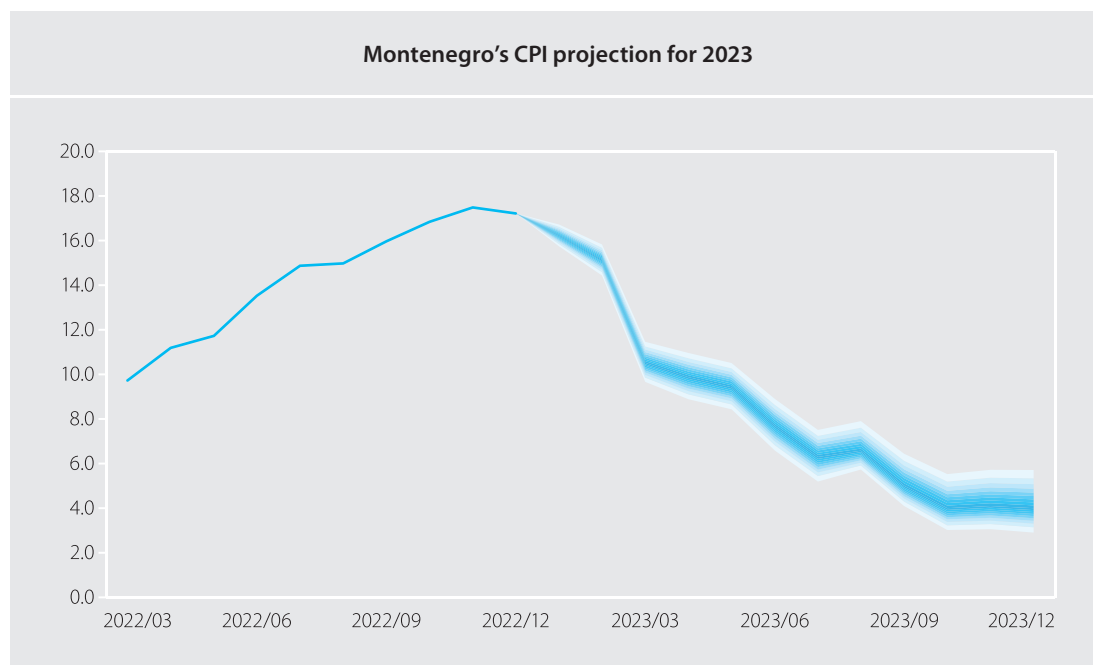
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<sup>30</sup> A detailed explanation of the ARIMA model of Montenegro was presented in the working study of the Central Bank No. 11 *Inflation forecasting: Empirical research on the retail price index trend of Montenegro for 2007 - applying of the ARIMA model.*

The ARIMA model was used for short term forecasts (12 months), whereby iteration of several ARIMA models was made, which were ranked based on their efficiency and diagnostics quality. The selected ARIMA model, ARIMA (3,1,3)<sup>31</sup> has a sufficient confidence level for the forecast purposes.

Monthly forecast values were used as the value of central projection in the CPI graph for 2023. Obtained values represent the distribution mode, i.e. values with the highest frequency in the distribution of this time series.

**Graph 22**



Source: CBCG, 2023

Mean value of the obtained model is 8.2. The value of the coefficient of asymmetry varies in the range of from 0.5 to 1, and the relative standard deviation is 0.3. Model projection of inflation is located in the lower band of the distribution. This indicates that the corresponding range of uncertainty of future inflation is set towards higher levels. The Fan Chart presents a 90% probability of inflation distribution. The central projection is usually in the deepest shade of the Fan Chart, i.e. in the central 10% of probability<sup>32</sup>. The fan chart has an equal number of bands (eight) on either side of the central band whereby every band of the same colour, both above and below the central band, cumulatively describe the next 10% of inflation trend probability. As the degree of uncertainty grows over time, so the fan chart spreads.

<sup>31</sup> The ARIMA model is generally referred to as an ARIMA (p,d,q) where p represents the number of autoregressive variables, d refers to the level of dependent variable that needs to be made stationary, and q is the number of variables, moving averages, in the certain model.

<sup>32</sup> The model values (central projection) are usually in the deepest band shade, but in case of a significant risk level, it can happen that the central projection does not cover either of these values. (Britton, E, Fisher, P.G. and Whitley, J.D. (1998), *The Inflation Report projections: Understanding the Fan Chart*, Bank of England, Quarterly Bulletin, 38, pp. 30–37).

The model projection assumes a gradual decline in inflation in 2023 from 16.2%, as was the rate in January, to the projected 4% in December.

The fan chart of inflation in Montenegro, based on the ARIMA model assessment for 2023, indicates that there is a 90% probability that the CPI inflation will range between 2.9% and 16.7%, depending on the month, with the central projection at 8.2%. Inflation projected for December 2023 ranges between 5.7% and 2.9%, with the central projection at 4%. The fan chart central projection (the darkest part) represents a 10% probability span (graph 22).

A gradual decrease in the prices of energy generating products and other raw materials on the world market is expected as of Q2 2023 and, consequently, a decrease in overall inflation. The risks related to the projected inflation rate remain pronounced as they are linked to disruptions in food yields, energy prices, and changes in the ECB's monetary policy. Compared to the previous projection and risks that were oriented towards higher levels, their relationship is gradually becoming more balanced out. Inflation could reach higher levels in case of higher energy prices on the world market, as well as the spillover of energy prices to the prices of other products and services. An additional risk is the possibility of further wage growth in 2023. On the other hand, lower prices of energy and other raw materials on the world market, the slowdown of global economic growth, which has a modest but direct impact on the prices of raw materials, and the additional tightening of monetary policy and lower-than-expected inflation in the main foreign trade partner countries could contribute to the weakening of inflationary pressures.

The projection is based on the following assumptions:

1. High inflation in countries that are the main foreign trade partners, mostly driven by the prices of energy generating products, raw materials and food fuelled by the war in Ukraine. Their growth is the main reason for the inflation increase because it encourages price growth in many other sectors.
2. According to the ECB's<sup>33</sup> baseline scenario forecast from March, the average inflation in the euro area will amount to 5.3% this year. Inflation will decline quite quickly in the next six to seven months due to factors that reduce inflation. As the ECB explains, a very important role in the fall in inflation will be played by the expected decrease in the prices of energy generating products, that is, the easing of supply bottlenecks that has already begun, and the effects of decisions on monetary policy tightening. It is assumed that energy prices in the euro area that achieved a growth of over 40% last autumn will record a decline in the second half of 2023 due to the weakening of the strong base effect, as well as the strengthening of the euro exchange rate. Next, prices for the other HICP components are expected to begin to decline with the easing of producer cost pressures, especially those related to food prices inflation. According to the ECB's projections, total inflation has been on a downward trend this year, and it could come down to 2.9% and 2.1% in 2024 and 2025, respectively.
3. The ECB has started with the normalization of its monetary policy, which implies an increase in the reference interest rates. The rate for main refinancing operations was increased to 3.5 bp in March 2023. The ECB has announced that they will continue to increase the interest rate until the available data and market expectations begin to signal that inflation has a downward

<sup>33</sup> Source: ECB (2023): *ECB staff macroeconomic projections for the euro area*, March 2023.

trend leading to the target inflation rate of around 2%. The impact of the continued normalisation of the ECB's monetary policy and further increases in interest rates that are expected on the markets will also transmit to the real economy and the reduction of demand.

4. Regardless to their falling from the record levels reached in early 2022, food prices on the international market remain high. As the world's two largest exporters of wheat and other key crops enter their second year of war, many vulnerable countries continue to face increased uncertainty in their food supply. According to data from the FAO, food prices recorded the year-on-year drop of 19% in March 2023 due to a decline in the prices of vegetable oils, dairy products, and grain. Futures trading indicates that wholesale grain prices will fall some 8% this year from their current highs. However, as stated in the IMF (2023)<sup>34</sup>, higher domestic retail food prices may persist for another six to twelve months. Also, higher prices tend to discourage stock holding and reduce speculative activity in commodity futures markets, thus putting downward pressure on food prices in the coming period.
5. Oil and other raw material current futures in the world markets point to prices slowdown in 2023. Projections are that the price of oil will be around USD 83 per barrel in 2023, declining to around USD 74 per barrel in 2024, in line with the expected reduction in the prices of oil, gas and other raw materials, and the resolution of supply bottlenecks of imported raw materials.

Finally, the escalation of the Russian-Ukrainian conflict could trigger new inflationary trends and restriction of trade flows that this projection does not currently account for. Changes of any of the abovementioned parameters would require the forecast revision.

## 5.2. Expert assessment

Last year, Montenegro recorded the highest inflation since regaining independence in 2006. However, it should be emphasised that this inflation is under the prevailing influence of global factors related to the movement of prices, primarily of raw materials, food and oil, and to a lesser extent the result of domestic imbalances.

The expectations of both surveyed businessmen and bankers also point to high rates of inflation. Also, the aggregate demand in the fourth quarter of 2022 was higher than in the other three quarters, as well as compared to the fourth quarter of the previous year.

A high level of global geopolitical and economic uncertainty, which spills over to prices in Montenegro due to the country's import dependence, makes it difficult to make inflation forecasts not only in Montenegro, but also in a large number of other countries. The key uncertainties still revolve around the duration and impact of the situation in Ukraine and the related sanctions, the movement of prices of energy generating products and food as their growth pushes the prices in other sectors; consequences and impact of the pandemic (although everything points to the subsiding of pandemic risk); as well as whether we will see a recovery or further disruptions of the global supply chains.

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<sup>34</sup> Source: IMF blog (2023): *Global Food Crisis May Persist, With Prices Still Elevated After Year of War*. Available at: <https://www.imf.org/en/Blogs/Articles/2023/03/09/global-food-crisis-may-persist-with-prices-still-elevated-after-year-of-war>

During 2022, in response to high inflation in the world, there was a strong and accelerated tightening of the policy of the leading central banks and/or increase in key reference interest rates. However, it should be noted that these measures of central banks aimed at curbing inflation also carry the risk of slowdown of economic growth or even entering a recession, and their effects on inflation are not immediate, but are visible only after a certain time.

The model projections indicate that in December 2023 the CPI inflation will range from 2.9% to 5.7%, with the central projection at 4%. Our expert assessment forecasts somewhat higher inflation rate ranging from 3% to 7%.

**Table 3**

Expected inflation rate in Montenegro at end-2023		
Lower inflation threshold	Central projection	Upper inflation threshold
3%	5%	7%

Deviation between the expert and model projections is a result of high uncertainty and, therefore, both will be updated during the year. The expert assessment is based on the same assumptions as the model assessment, and a deviation from any of the assumptions would require the forecast revision.



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