# Adria Region Macro Quarterly 4Q 2022

## **Economic Cool-down Gains Traction**

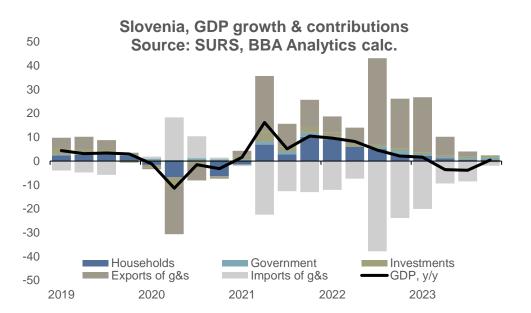
#### Authors:

Andrej Knez, Chief Markets Analyst Ivan Odrcic, Lead Financial Markets Analyst Ratko Guduric, Senior Markets Analyst

October 19, 2022

#### Slovenia

	2019	2020	2021	2022E	2023F	2024F
GDP real growth (%)	3.5	-4.3	8.2	6.1	-1.3	4.2
GDP current prices (EUR mln)	48,533	47,021	52,208	60,393	61,671	65,530
GDP per capita (EUR)	23,233	22,361	24,770	28,636	29,242	31,072
CPI (%, annual average)	1.7	-0.3	2.1	9.1	4.9	2.0
CPI (%, end-of-year)	2.0	-1.2	5.1	10.0	2.0	2.1
Unemployment rate (%, ILO)	4.5	5.0	4.8	4.3	4.3	4.1
Employment growth (% annual average)	2.5	-0.6	1.3	2.7	1.7	2.0
Imports of goods (EUR mIn)	29,240	26,732	31,342	37,945	40,980	41,410
Exports of goods (EUR min)	30,278	28,604	32,431	37,685	39,440	39,834
EUR/USD (average)	1.12	1.14	1.18	1.06	1.01	1.08
EUR/USD (end-of-year)	1.12	1.22	1.14	0.98	1.05	1.10
3M Euribor (average)	-0.36	-0.43	-0.55	0.41	2.43	1.99
10Y EUR swap rate (average)	0.26	-0.14	0.05	2.00	2.97	2.50



 Based on high growth in 2022, which is seen at 6.1% yoy, GDP in 2023 is expected to decline by -1.3% yoy, amid high base effect and deteriorating household consumption and weak exporting prospects.

## Economic activity

- Continuing inflationary pressures are seen taking a bite on personal consumption, which are pushing real wages deep into negative territory, while exports are seen being heavily influenced by slowing demand from the country's main trading partners. Negative risks stem from very tight labour market that constrains household consumption via employment prospects (poor demographics and labour unavailability), as there are more foreigners than nationals newly-employed year in, year out in the country.
- For **2024** we expect overall economic activity to **rebound** to **4.2% yoy**, largely due to base effect, but also assuming a stabilization in the global economic situation, given the country's heavy reliance on global trading flows first and foremost.
- HICP inflation rate in 2022 seen at 9.1% yoy, largely affected by soaring food and energy components, while for 2023 we expect headline inflation to soften to 4.9%, as base-effects materialise, monetary tightening shows results, demand deteriorates and government measures take even stronger effect.

#### Inflation

- Negative risks stem from uncertain global geopolitical outlook, which could disrupt supply chains, ultimately affecting the foreign demand, while positive risks stem from actions of the newly-formed government that could provide further support for the economy, as it did regarding energy costs.
- Looking forward to 2024, we see inflationary pressures fading to 2.0% yoy, as the combination of higher interest rates, and base effect further impacts overall consumer inflation level.

Bloomberg

#### Slovenia

 We expect the ECB to hike interest rates significantly in the coming months as inflationary pressures continue to extend beyond energy and food. At its September meeting, the ECB Governing Council opted for a significant rate hike of 75 basis points (bps) in order to move quickly to higher interest rates. The ECB should continue on this track as there are still inflationary pressures on the horizon. Therefore, another 75 basis points of rate hikes are expected at the next ECB Governing Council meeting in October. Considering the interest rate levels reached so far, the subsequent rate hikes in December and February are likely to be significantly scaled back to just 25 basis points each. We see a total of 225 basis point rate hikes by middle of 2023.

#### Monetary and fiscal policy

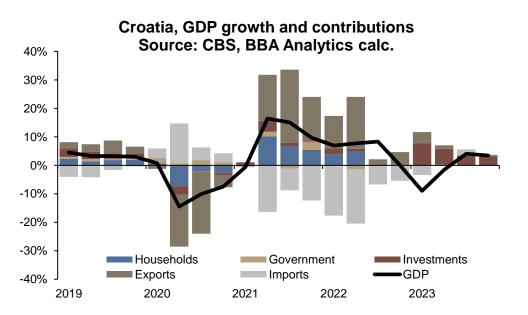
- Fiscal deficit will deteriorate in 2023 largely on the back of the government-imposed 5 bnEUR public spending plan (o/w 1.5 bnEUR for corporates and 1.2 bnEUR of direct help to households) to curb negative effects from high inflation on private sector spending. The named public support program will be combined with weakening economic activity and slowing inflation as both elements standing largely behind the fiscal gap increased above 5% of GDP. That said, we see Slovenia's gross public financing needs (incl. maturing debt and budget gap) at above 8% of GDP, with only 2 percentage points coming from debt maturities. The mentioned financing need compares with higher prints at regional peers, with Croatia and Hungary among the highest ones at 15% of GDP, followed by Serbia and Romania at 10% of GDP.
- EUR/USD has barely moved since mid-August, trading near par. The increased filling of gas storage facilities in Europe will further alleviate the fear of an energy crisis and ensure lower wholesale prices for gas and electricity. This improves the outlook for the Eurozone economy compared to the US, which provides some stronghold to the euro as it gives more manoeuvring space for the ECB to continue with monetary tightening. An above-parity recovery for the EUR/USD remains the key dilemma for 2023. Our view is that the EUR/USD downside pressure will dominate at least until 2H 2023, when after anticipation of the reversal in the Fed's policy towards rate cuts will gain traction and the EUR/USD will resultantly receive some footing.

FX and interest rates

 On interest rates outlook, we forecast the EUR rates under upside pressure at least until middle of 2023, when we currently see the ECB in the rate hiking mode. Slovenian long term yields will still benefit from the economy's structural strengths and we would not expect any sizeable widening in bond spreads unless there is an unanticipated deterioration in risk appetite driven by factors such as geopolitical concerns etc. Aside from direct EURIBOR movement effects, we still see upside pressures on the private sector borrowing rates at the local banks to be somewhat mitigated by the remaining ample liquidity in the system and weakening demand for loans as a function of general economic weakness.

#### Croatia

	2019	2020	2021	2022E	2023F	2024F
GDP real growth (%)	3.5	-8.1	10.2	5.8	-0.4	2.0
GDP current prices (EUR mln)	55,604	50,225	57,232	66,910	70,185	73,163
GDP per capita (EUR)	13,678	12,408	14,718	17,207	18,049	18,815
CPI (%, annual average)	0.8	0.0	2.7	10.4	6.0	2.2
CPI (%, end-of-year)	1.3	-0.3	5.2	12.4	2.1	2.3
Unemployment rate (%, ILO)	6.7	7.6	7.7	7.3	7.3	7.0
Employment growth (% annual average)	2.3	-1.2	2.2	2.6	1.5	2.0
Imports of goods (EUR min)	22,996	20,631	23,723	28,442	28,450	29,303
Exports of goods (EUR mln)	12,966	12,793	15,370	18,015	18,021	18,562
EUR/USD (average)	1.12	1.14	1.18	1.06	1.01	1.08
EUR/USD (end-of-year)	1.12	1.22	1.14	0.98	1.05	1.10
3M Euribor (average)	-0.36	-0.43	-0.55	0.41	2.43	1.99
10Y EUR swap rate (average)	0.26	-0.14	0.05	2.00	2.97	2.50



 As GDP in 2022 outperforms by expanding by estimated 5.8% yoy, on the back of strong domestic and foreign demand, we see headline real GDP displaying a symbolic drop in 2023. Main driver of an overall GDP dynamics in 2023 will be household consumption, which is facing hardships in the wake of soaring inflation and negative real wage growth. The key element preventing a harsher GDP contraction, meanwhile, should present in the form of largely EU-backed investment expenditure.

## Economic activity

- Even if we assume a low 50%-alike **EU funds absorption**, which is conservative compared to 64% historical average, this would still produce a 2bn EUR impetus for the economy via **fixed investments** in 2023. Not all of it is GDP positive: a) investment spending is highly import intensive, and b) labour employed in construction is nowadays very much imported due to labour shortages created by citizen drain towards Western EU countries. **Exports** would still bear a **strong hit from dwindling external demand**, reflecting negative spill-over effects from demand aggravation in the EU's biggest economy i.e. Germany, which comes as a result of geopolitical hardship-fuelled energy crisis. Also important is the labour market, where due to multi-year reductions in active population and anegdotally filled order books in various economic areas, we do not see GDP dynamics creating any massive deterioration in the employment level.
- In 2024, we see GDP growth rate speeding up, courtesy of rebounding household consumption and accelerating gross investments.

Bloomberg

### Croatia

5

Inflation	<ul> <li>Average HICP inflation rate in 2022 is seen at 10.4% yoy, amid surging food and energy prices, while for 2023 we expect the headline growth to slow to a still elevated 6%, affected by government interventions to curb price growth, along with stronger demand-side pressures mounting from spillover effects, which will aid price pressures on the services side. A more pronounced slowdown in inflation will be prevented by transitory effects of the recent price surges of electricity and natural gas.</li> <li>Positive risks of further inflation deceleration stem from stabilising effects of global monetary tightening, as well as supply-chain normalisation.</li> <li>In 2024, we see average annual inflation rate slowing further, to ca 2.2%, primarily due to base-effect and milder demand.</li> </ul>
Monetary and fiscal policy	<ul> <li>We see the Croatia National Bank avoiding any major policy moves, with the upcoming Eurozone entry just around the corner and the FX rate proving quite stable in the EMU entry phase. That said, we expect the ECB to hike interest rates significantly in the coming months as inflationary pressures continue to extend beyond energy and food. At its September meeting, the ECB Governing Council opted for a significant rate hike of 75 basis points (bps) in order to move quickly to higher interest rates. The ECB should continue on this track as there are still inflationary pressures on the horizon. Therefore, another 75 basis points of rate hikes are expected at the next ECB Governing Council meeting in October. Considering the interest rate levels reached so far, the subsequent rate hikes in December and February are likely to be significantly scaled back to just 25 basis points each. We see a total of 225 basis point rate hikes by middle of 2023.</li> <li>On public finance for 2023, we see fiscal deficit on a rise in next year due to weakening economic activity and public costs related to high energy costs. Given the structure of public debt maturities and the mentioned fiscal gap, we see the public financing needs at 15% of GDP. Despite being among the highest in broader region with only Hungary in the range of Croatia's public financing needs, we nevertheless do not see this materially affecting Croatia government yields which will still bear benefits from the Eurozone entry also in the next year, even if somewhat less than in 2022.</li> </ul>
FX and interest rates	<ul> <li>With Croatia entering the Eurozone at start of 2023, we are shifting the focus away from the EUR/HRK onto EUR/USD. In this respect, the recent gas storage fillings in Europe are favouring some stronghold to the euro as it gives more manoeuvring space for the ECB to continue with monetary tightening. An above-parity recovery for the EUR/USD remains the key dilemma for 2023. Our view is that the EUR/USD downside pressure will dominate at least until 2H 2023, when after anticipation of the reversal in the Fed's policy towards rate cuts will gain traction and the EUR/USD will resultantly receive some footing.</li> <li>On interest rates outlook, we forecast the EUR rates under upside pressure at least until middle of 2023, when we currently see the ECB in the rate hiking mode. On the long term yields, we see more volatility down the road with risks tilted to the upside in the next few months. Spreads of Croatian bonds will be under comparatively less pressure than for lower rated issuers, with Croatia still benefiting from the Eurozone entry. Aside from direct EURIBOR movement effects, we still see upside pressures on the private sector borrowing rates at the local banks to be somewhat mitigated by the remaining ample liquidity in the system and weakening demand for loans as a function of general economic weakness.</li> </ul>

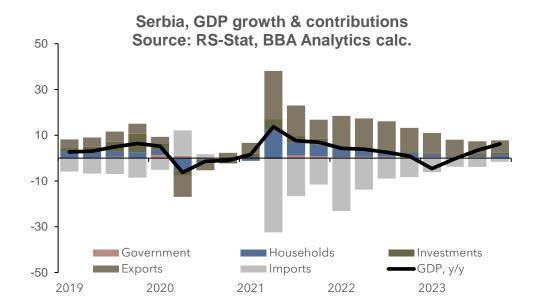
#### Serbia

**Economic** 

activity

Inflation

	2019	2020	2021	2022E	2023F	2024F
GDP real growth (%)	4.3	-0.9	7.5	2.6	1.3	3.5
GDP current prices (EUR mln)	46,005	46,815	53,329	59,873	63,208	66,728
GDP per capita (EUR)	6,624	6,786	7,803	8,761	9,249	9,764
CPI (%, annual average)	1.9	1.8	4.0	11.0	7.3	3.6
CPI (%, end-of-year)	2.1	1.3	7.9	11.9	3.6	3.7
Unemployment rate (%, ILO)	10.5	9.1	11.1	10.0	9.8	9.5
Employment growth (% annual average)	2.0	1.9	2.6	1.4	1.4	1.5
Imports of goods (EUR mIn)	22,012	21,780	25,311	30,168	31,584	32,216
Exports of goods (EUR mln)	16,647	16,548	19,700	23,036	25,071	26,126
EUR/RSD (average)	117.84	117.63	117.58	117.52	117.68	117.88
EUR/RSD (end-of-year)	117.74	117.63	117.53	117.32	117.80	118.00
6M Belibor (average)	2.65	1.37	1.08	2.00	5.50	5.00
5Y RSD govt rate (average)	3.50	2.77	2.63	6.28	8.50	8.00



 Following real GDP growth at just below 3% in 2022, we see real GDP growth slowing to 1.3% in 2023 on weakening household expenditure and slower growth of goods exports. Private spending rationing comes largely as a result of high inflation pressures on household income fundamentals. The labour market is showing relative resilience given tight labour supply and provides some stronghold for the overall economic activity going forward. Exports growth will be weaker as a result of general production downturn in broader Europe and Serbia cannot escape unscathed given its links to the production activity dynamics. Investments will maintain a positive development, but also at much slower pace than in this year given rise in capital costs and general deterioration in investment confidence globally.

- Forecast of economic rebound in 2024 is based on assumed recovery in personal spending and stronger investments on clearer prospects for monetary policy i.e. availability and price of capital going forward.
- HICP inflation rate in 2022 seen at 11% on average, whereas we see slower pace of growth at 7.3% on average in 2023 thanks to high base effects and pull-down effects from households amending their spending habits to elevated costs of living. This will also reflect monetary tightening effects, both local and imported from influences of the key central banks rate hikes onto internationally traded goods.
- We see upside risks stemming from potential prolongation in geopolitical concerns, especially on energy goods. Another element to watch for is personal spending a better-than-expected outcome there could prolong the inflation slowdown momentum.
  - Looking into 2024, inflation will in our view slow further, but the key message is that price growth will still remain relatively high compared to previous couple of years

Bloomberg

volatile consumer price categories onto core inflation are gaining traction and developments of ex-energy/ex-food inflation will be in the central bank's focus. Another element to watch for is the stability of the EUR/RSD – strong investment inflows have seen a reversal in the central bank's open market operations with purchases of hard currency in the recent months to prevent the dinar appreciation. This gives additional manoeuvring space for the NBS as we see the EUR/RSD critical for the overall stability of financial system and the private sector, whereas the recent activities have placed the NBS FX reserves at 16.5 bnEUR, which is up by 2.6 bnEUR from this year's low in May and some 50 mEUR up ytd.
All said and given the ongoing uncertainty on the global markets, we now expect the NBS to hike the reference rate by additional 150 basis points in the next six months and see the reference rate at 5.50% at end of 1Q 2023. Also, if the growth outlook deteriorates further, a potential deterioration in sentiment towards emerging markets by the end of the year could require the NBS to step up foreign exchange interventions and/or undertake more aggressive tightening.
On public financing needs for 2023, we see the fiscal deficit on a rise in next year due to weakening economic activity and public costs related to high energy costs. Given the structure of public debt maturities, we see the public financing needs of Serbia as 10% of GDP. Although this is not the highest figure in broader region with Croatia and Hungary at even higher levels, we think the borrowing need will still prevent any major outperformance of government debt against the regional peers.
EUR/RSD will trade in the tight range till the end of 2022 and through 2023. We see the FX pair remaining in a so-called dirty float regime, with the NBS acting against any major fluctuations by directly selling or buying hard currency on the market. In the current environment while assuming the absence of a major blow in the global financial market conditions, we see the NBS managing to hold this position even on the cost of further sales of foreign currency reserves against a deteriorated macro outlook globally.
On the interest rates, we see rates to increase in 2023 amid global slow down, fight against high inflation and persistent geopolitical concerns. Aside from the central bank tightening, cost of money also rises on the back of global risk aversion hence the availability of capital. Robustness of unengaged liquidity in the financial systems will still prevent a major and quick increase of interest rates in the private sector borrowing.

The tightening of monetary policy is expected to continue as the fight against elevated inflation continues. Namely, transitory effects of highly

Bloomberg Adria

7

## Monetary and fiscal policy

FX and interest rates

•

٠

٠

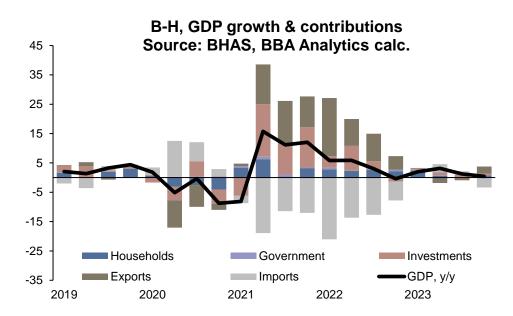
#### **Bosnia and Herzegovina**

**Economic** 

activity

Inflation

	2019	2020	2021	2022E	2023F	2024F
GDP real growth (%)	2.8	-3.2	7.6	3.5	1.7	2.0
GDP current prices (EUR mln)	18,675	18,124	20,412	24,004	26,002	27,384
GDP per capita (EUR)	5,350	5,216	5,874	6,907	7,483	7,880
CPI (%, annual average)	0.6	-1.1	2.0	13.6	6.5	3.3
CPI (%, end-of-year)	0.3	-1.6	6.3	14.5	2.9	3.4
Unemployment rate (%, ILO)		15.9	17.4	16.5	16.2	15.9
Employment growth (% annual average)	2.3	-1.0	1.3	2.8	1.8	2.0
Imports of goods (EUR mIn)	9,559	8,276	9,970	12,028	11,960	12,319
Exports of goods (EUR mln)	6,849	5,763	7,181	8,761	8,714	8,975
EUR/USD (average)	1.12	1.14	1.18	1.06	1.01	1.08
EUR/USD (end-of-year)	1.12	1.22	1.14	0.98	1.05	1.10
3M Euribor (average)	-0.36	-0.43	-0.55	0.41	2.43	1.99
10Y EUR swap rate (average)	0.26	-0.14	0.05	2.00	2.97	2.50



Economic activity growth in 2022 is seen slowing to 3.5% yoy, primarily as household consumption is being affected by soaring inflation and base-effect kicks in. For 2023, we expect GDP to decelerate to 1.7%, amid falling investment and exporting prospects, as the unfavourable foreign environment spans into the year, as well as household consumption slows on the back of persistently high level price movement. Foreign remittances are the key element preventing a sharper slowdown in the overall economic activity.

# Positive risks stem from fast government forming at the entity level of Federation of B-H, which should support government action against supply side factors driving inflationary pressures, which bites through personal incomes of citizens, while negative risks stem from deteriorating global surrounding, that will dampen foreign demand.

- 2024 should bring about to a some growth momentum of overall activity, at the level of around 2.0% yoy, i.e., hovering around the historical average, with the strongest support coming from rebounding investment and exporting activity.
- Inflation rate in 2022 seen at a high outtake of 13.6%, given the soaring food and energy components and no major government support measures to shield the economy from further price escalation.
- In **2023**, supported by base-effect mostly, we see **inflationary pressures** to soften to **6.5%**, while more and more contribution factors of consumer price increase comes from the demand side, which is softening.
- Positive risks stem from highly-expected government forming on all levels at the Federation of B-H level, given the implemented measures from high-representative for B-H Mr. Schmidt, which should on the economic level relax decision-making and in the end provide some support from soaring price pressures. All told, we see inflation rate further softening in 2024, i.e., to 3.3%.

#### Monetary and fiscal policy

- We do not see the Central Bank of Bosnia and Herzegovina moving away from the Currency Board Arrangement (CBA), with the stability of the EUR/BAM being currently perceived as resistant to the short term fluctuations. In this respect, the CBBH's foreign exchange reserves are seen as adequate at above 8 bnEUR, covering for more than eight months of imports. The IMF proposed changes in managing the central bank's balance sheet in order to avoid the volatility and deterioration in the currency board coverage ratio, which we see already taking place with the CBBH restructuring the FX reserves lately by selling gold assets. The environment will be challenging going forward given that capital is less available and costlier, however we see the B-H's political situation upgrades and gaining the EU candidacy status as giving some positive views in the eyes of the IMF, which will also spill over onto the perception of the currency board stability.
- On public financing needs for 2023, we see deterioration in the public finance in 2023 against weakening economic activity and lower inflation not providing the nominal boost for the tax intake. B-H's gross public financing needs are still relatively low at around 4% of GDP.
- The EUR/BAM stability will remain in place going forward, according to our view.
- Financing will be costlier going forward as interest rates in the private sector borrowing activities are an (in)direct function of borrowing terms
  in the Eurozone. Demand for loans will become weaker due to private sector spending rationing and generally deteriorated investment
  prospects, hence reducing the upside pressure on lending rates in the banking sector.

FX and interest rates

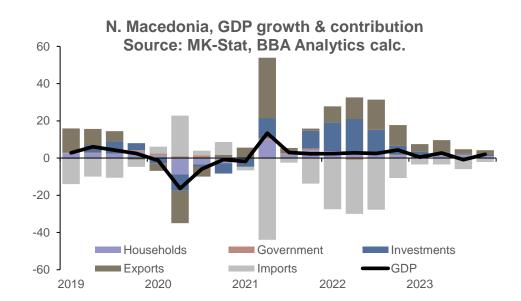
#### North Macedonia

**Economic** 

activity

Inflation

	2019	2020	2021	2022E	2023F	2024F
GDP real growth (%)	3.9	-6.1	4.0	3.1	1.1	2.6
GDP current prices (EUR mln)	11,261	10,635	11,735	13,546	14,381	15,192
GDP per capita (EUR)	5,423	5,132	5,662	6,536	6,939	7,330
CPI (%, annual average)	0.7	1.2	3.4	13.3	7.9	3.0
CPI (%, end-of-year)	-0.2	3.1	4.9	16.6	3.0	3.1
Unemployment rate (%, ILO)	17.3	16.4	15.7	15.0	15.0	14.6
Employment growth (% annual average)	5.1	-0.3	0.0	-2.0	0.0	1.0
Imports of goods (EUR min)	7,001	6,221	7,093	8,548	8,824	9,243
Exports of goods (EUR mln)	5,210	4,630	5,201	5,995	6,276	6,590
EUR/MKD (average)	61.54	61.64	61.60	61.60	61.60	61.60
EUR/MKD (end-of-year)	61.53	61.68	61.55	61.58	61.58	61.58



- Real GDP growth will print somewhat lower figure in 2022 than in the previous year, however a more pronounced slowdown in the real GDP will take place in 2023. Although still being positive, growth rates of private spending and real investments will be much lower than in the previous two years. This will reflect deteriorated investment sentiment amid geopolitical concerns and lengthy fight against persistently high inflation. Increase in cost of funds and capital being less available are additional factors behind slower growth of investments going forward. Household expenditure will mark slower growth numbers as citizens amend spending habits after this year's spending rebound, and this largely against increased costs of living.
  - Risks remain tilted to the downside given any stoppages in the economy which may arise in case of disruptions in the energy supply amid gas flow dependency from Russia.
  - We see economic activity rebounding in 2024, assuming improvement in foreign trade and better insight in fighting the lengthy inflation pressures.
  - Inflation rate in 2022 we see at above 13% on average, followed by a slowdown to just below 8% average inflation rate in 2023. Inflation
    deceleration will come on the back of high base effects, the recent reduction in the commodity prices and a drag coming from households
    amending their spending habits against elevated living costs.
  - Inflation rate will still remain above of multi-year averages in 2023 given prolonged effects from food and energy cost pressures onto other consumer categories. An upside risk to inflation rates comes from potentially too long amendment to household expenditure.
    - We see inflation slowing further to 3% in 2024 as a result of persistent monetary tightening and the economic activity slowdown in between.

Bloomberg

Monetary and fiscal policy

> FX and interest rates

- High inflation is largely due to global factors, but inflation expectations have also risen, leading to higher nominal wage growth. As such, the National Bank of the Republic of North Macedonia (NBRNM) has started to normalize its monetary policy. Since the end of 2021, it has been intervening in the foreign exchange market and absorbing Denar's liquidity. In addition, since April, NBRNM have raised the benchmark interest rate by a cumulative 175 basis points. The NBRNM should continue to tighten monetary policy and be prepared to deal with a large and persistent inflation differential with the Eurozone and further pressures on the FX reserves. We see the NBRNM hiking the rates for additional 150 basis points in the next six months and see the tightening cycle ending in 1H 2023 alongside other key central banks. Hiking rates will surely be used more in case of deteriorated capital flow profiles in case of a global blow to the risk sentiment.
- Fiscal figures will deteriorate in 2023 on the back of slowing economic activity and as we assume the need for more government support for the ailing economy. Given the structure of public debt maturities we see the public financing needs of N.Macedonia as 9% of GDP. This places the country among the ones with the highest borrowing needs for 2023 and hence adds to upside borrowing rate pressures.
- We expect the NBRNM managing to defend the EUR/MKD in a dirty float regime, although at the cost of foreign exchange reserve stability.
- Interest rates will be under upside pressure as a result of general increase in the cost of money courtesy of prolonged fight against high
  inflation and capital price hikes in the light of global geopolitical concerns. Since money-printing cannot be fully reversed in a short time
  frame and demand for loans will become weaker against the backdrop of slowing economic activity, we do not see a major upside move in
  the private sector borrowing rates.

Bloomberg Adria

# **Bloomberg Adria**

#### Bloomberg Adria

#### **Bloomberg Adria Team Analytics**

Andrej Knez, Chief Markets Analyst andrej.knez@bloombergadria.com

Ivan Odrcic, Lead Financial Markets Analyst Ivan.odrcic@bloombergadria.com

Ratko Guduric, Senior Markets Analyst ratko.guduric@bloombergadria.com

Jelena Zindovic, Senior Corporate Finance Analyst jelena.zindovic@bloombergadria.com

Matteo Mosnja, Corporate Finance Analyst matteo.mosnja@bloombergadria.com

Ilija Nesic, Corporate Finance Analyst Ilija.nesic@bloombergadria.com

#### Disclosures Appendix

This report is oriented for professionals and analysts that live in the country or abroad who are interested in investing and following local and regional markets. The information and opinions in this report/investment research were prepared by Bloomberg Adria and/or one or more of its subsidiaries/affiliates (collectively, 'Bloomberg Adria') for information purposes only. This report is not investment advice or an offer or solicitation for the purchase or sale of any security/financial instrument or to participate in any trading strategy. Neither Bloomberg Adria nor any of its employees accept any liability for any direct or consequential loss arising from any use of this publication or its contents. Any investments referred to herein may involve significant risk, are not necessarily available in all jurisdictions, may be illiquid and may not be suitable for all investors. The value of, or income from, any investments referred to herein may fluctuate in price and value. Past performance is not indicative of future results. Besides, the risks associated with an investment in the financial, money market or investment instrument or security under discussion are not explained in their entirety. Estimates of future performance are based on assumptions that may not be realized. Investors should make their own investment decisions without relying on this publication. Only investors with sufficient knowledge and experience in financial matters to evaluate the merits and risks should consider an investment in any issuer or market discussed herein and other persons should not take any action on the basis of this publication.

This report is based on information available to the public. While reasonable care has been taken to ensure that the information contained herein is not untrue or misleading at the time of publication, Bloomberg Adria makes no representation or guarantee with regards to the accuracy, completeness or suitability of the data. Bloomberg Adria does not undertake to advise you of changes in its opinion or information. Moreover, we reserve the right not to update this information or to discontinue it altogether without notice.

From time to time our analysts receive assistance from the issuer including, but not limited to, discussions with management of the subject company(ies). However, it should be presumed that the author(s) have communicated with the subject company to ensure factual accuracy of the (company) research report prior to publication, without mentioning recommendation and summary.

Any opinions and estimates contained herein reflect the current judgment of the author(s) and do not necessarily reflect the opinion of Bloomberg Adria or any of its subsidiaries and affiliates. This report is disseminated and available primarily electronically to professional clients and eligible counterparties, who are expected to make their own investment decision without undue reliance on this publication, and may not be sold, redistributed, reproduced or published in whole or in part for any purpose without the prior express consent of Bloomberg Adria.

Please always cite source when quoting. The content is copyrighted and cannot be quoted in a commercial setting/media outlet without prior written consent.

Additional information is available on request. Bloomberg Adria and others associated with it may be involved or seek to be involved in many businesses that may relate to companies, issuers or instruments mentioned in this report. These businesses include market making, providing liquidity and specialized trading and other proprietary trading, fund management, investment services and investment banking.

Bloomberg Adria and others associated with it including any of its employees may have positions in securities of companies or financial instruments discussed in this research, and may trade them in ways different from those discussed in this report.

This report may include research based on technical analysis. Technical analysis is generally based on the study of trading volumes and price movements in an attempt to identify and project price trends. Technical analysis does not consider the fundamentals of the underlying issuer or instrument and may offer an investment opinion that conflict with other research generated by Bloomberg Adria. Investors may consider technical research as one input in formulating an investment opinion. Additional inputs should include, but are not limited to, a review of the fundamentals of the underlying issuer/security/instrument.

The author(s) is/are named in the front page of this report. The research analyst(s) or analysts who prepared this report (see the first page) hereby certifies that: (1) the views expressed in this report accurately reflect their personal views about the subject securities or issuers and/or other subject matter as appropriate; and, (2) no part of his or her compensation was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this report. On a general basis, the efficacy of recommendations and clients' feedback are factors in the performance appraisals of analysts.