THE CENTRAL BANK OF
THE REPUBLIC OF ARMENIA

Approved under the Central Bank Board Resolution No 35A, dated March 30, 2021

Inflation Report/1

Monetary Policy Program, Q 1, 2021

Status Report on Implementation of the Monetary Policy Program, Q4, 2020

The inflation targeting strategy of the Central Bank of Armenia highlights the importance of communicating of the Bank to the general public by publishing, inter alia, quarterly inflation reports.

The first section of the inflation report includes the Monetary Policy Program that provides main directions of the monetary policy in the forecast horizon as well as forecasts of inflation and other macroeconomic indicators. These forecasts are based on the Bank's assessment of the current situation and future assumptions by the Bank, which also include the impact of the Bank operations.

The second section includes the Status Report on implementation of the monetary policy program of the previous year, which presents the results of monetary policy implementation and covers the actual developments in the domestic economy.

Publishing of inflation forecast and assumptions underlying in parallel to target inflation indicator it makes the monetary policy of the Bank more transparent, understandable and predictable, which considerably increases the public confidence in the Bank. The Bank believes that a clear and trusted monetary policy positively affects the anchoring of inflation expectations and maintaining financial stability in terms of cost reduction.

According to the rule of monetary policy, the policy is aimed at minimizing the deviations between the 4% target and the inflation forecasts. The path to inflation rate shaped as a result of projected policy directions is published as a forecast probability distribution chart for the 12-quarter time horizon.

Projections in this report are based on the actual information available by March 16, 2021, i.e. the day on which the refinancing rate was set, the results of survey conducted by the Bank and the judgment made pursuant to the information on future developments of the macroeconomic environment.

All inflation reports which have been published to date are available on the Bank's website (www.cba.am) which also contains all press-releases and other monetary policy-related publications.

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1. EXECUTIVE SUMMARY

Amid the continuing spread of the coronavirus worldwide, the state of martial law declared in Armenia since the end of last year, and the resulting uncertainty over the economic outlook, Armenia at the beginning of 2021, continues to experience low economic activity and a weak demand environment. Meanwhile, a sizable surge in inflation and inflation expectations was observed. It is estimated that the inflationary trends were mainly due to supply factors, including inflationary effects transmitted from international commodity markets, as well as depreciation of the dram.

According to the baseline scenario of the Central Bank of Armenia, in the coming quarters 12-month inflation will remain at a high level. This will be mainly due to short-term supply factors, the impact of which will be gradually offset by the downward adjustment of inflation in the medium term. Given the short-term nature of inflation factors, monetary policy of the Central Bank in the near future will be aimed at neutralizing any risk of the acceleration of inflation expectations, without harm, as much as possible, to recovery of domestic demand

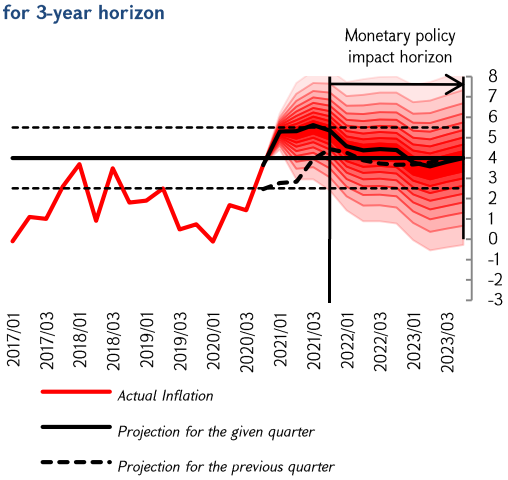
In the light of the implemented monetary policy and anticipated economic developments, 12-month inflation will still be persisting at a high level, while in the medium-term it will decline in the weak demand environment, stabilizing around the target of 4.0%. Given the projected path of inflation and continuing sluggish demand, as well as the important role of previous tightening of monetary conditions under the principle of future-oriented monetary policy in terms of curbing inflation and inflation expectations (refinancing rate increase in December 2020 and February 2021 by a total of 1.25 percentage point), ***the Central Bank decided to leave the refinancing rate unchanged***.

According to the Central Bank's short-term forecast scenario, the annual economic growth forecast for the beginning of 2021 amid a new wave of the pandemic, the ongoing martial law and uncertainty over the economic outlook has been revised slightly downwards compared to the previous one. In the medium term, economic growth will recover somewhat, but only at the end of the horizon will it approach the estimated long-term equiulibrium because of the expected low growth trends in productivity and investment.

Given the projected path of inflation and continuing sluggish hdemand, as well as the important role of previous tightening of monetary conditions under the principle of future-oriented monetary policy in terms of curbing inflation and inflation expectations, the Central Bank decided to leave the refinancing rate unchanged.

Chart 1

Inflation (12-month) projection probability distribution for 3-year horizon



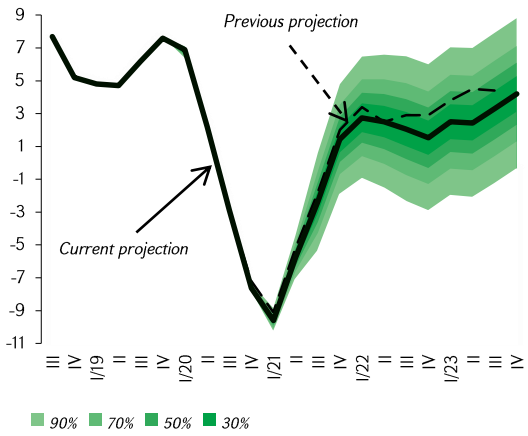
Source: NSS (Statistical committee, CBA projection)

Economic growth in 2021 will be mainly driven by growth in output from the construction and agriculture sectors, accompanied by some recovery in private spending growth, while domestic demand will remain weak due to low private consumption. Against the background of the gradual contraction of fiscal policy in the medium term, the expansionary monetary policy combined with gradual neutralization of the negative factors of demand will greatly contribute to the recovery of economic growth.

Risks of deviation from the forecast inflation and economic growth in the forecast horizon are balanced (see subsection "2.2.4 Main Assumptions and Risks"). The Central Bank monitors macroeconomic developments and in case of any emergence of risks the CBA stands ready to respond accordingly, ensuring the fulfilment of the price stability objective in the medium term.

Chart 2

Real GDP growth (cumulative)[1] forecast probability distribution for 3-year horizon



Source: NSS, CBA projection

[1] *The growth rate of each quarter is calculated as the cumulative growth rate for the last four quarters.*

2. FORECAST, FORECAST CHANGES AND RISKS

2.1. External Environment Developments

While the world economy has weathered the negative effects of the second wave of the last pandemic in 2020 better than it did in the first wave, the global economy has experienced an unprecedented year-on-year decline in 2020. By the end of the year, most countries, including Armenia's main partner countries, the United States, the Eurozone, and Russia, had experienced smaller-than-expected declines, mainly due to positive expectations for vaccine development and use, and the gradual easing of anti-pandemic restrictions. In 2021, with the vaccination against the pandemic, it is expected that the negative effects of the pandemic in developed countries will continue until second half of 2021, and in developing countries until the end of 2021, but with a weaker effect.

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Economic Developments in the United States. According to the Bureau of Economic Analysis of the US Department of Commerce, in the fourth quarter of 2020, the US economy registered a 2.4% year-on-year decline, which is close to the previous forecast of the Central Bank of Armenia. Subsequently, the annual economic decline in 2020 totaled 3.5%. During the fourth quarter, high economic activity continued due to the gradual easing of restrictions imposed by the state in order to prevent the spread of coronavirus. Revitalization of the economy was also accompanied by a decrease in the unemployment rate, which stabilized at 6.7%, compared to 8.8% in the previous quarter. According to the baseline scenario of the Central Bank of Armenia, in 2021, about 3.1% recovery of the US economy is projected, conditioned by the positive effects of the adoption of a new package of support for the fight against the pandemic.

In the USA, in the fourth quarter of 2020, the quarterly personal consumption expenditure price index[2] driven by demand recovery and the increase in food and energy prices, accelerated slightly and reached 1.3% y/y, still running below the US Fed's medium-term inflation target. Given the exiting growth developments, the Fed maintained the policy interest rate for the fourth quarter of 2020 in the range of 0.0-0.25%, and announced about continuation of the large-scale quantitative easing program. Supporting demand under the new stimulus package, as well as high commodity and food prices, will

[2] *The personal consumption expenditure price index target is 2%, which on average is commensurate with headline inflation of 2.3%.*

contribute to accelerate inflation in the US in 2021. However, given the still weak labor market developments, as well as the new monetary strategy announced at the end of last year, the US Federal Reserve will continue to pursue a low interest rate policy in the medium term.

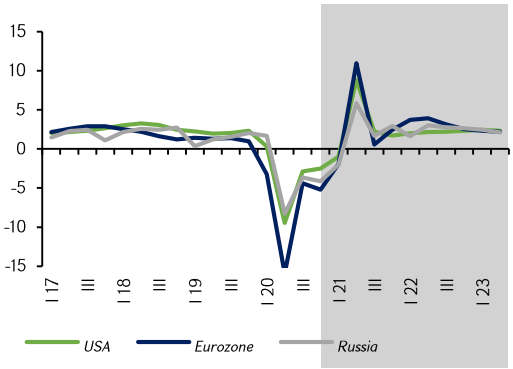
Economic developments in the Eurozone. Amid re-tightening of epidemic restrictions aimed at preventing the pandemic, the Eurozone economy in the fourth quarter of 2020 shrank over the previous quarter. According to preliminary estimates by the Eurostat, economic decline in the Eurozone in the fourth quarter of 2020 amounted to 5.1% year-on-year, in the light of which the annual economic decline in 2020 totaled 6.8%. Short-term tentative indicators and current estimates show that the trend of slow economic recovery will continue in the first quarter of 2021, as major eurozone member states continue to apply local and general restrictions to prevent the spread of the pandemic. However, the gradual increase of the use of vaccines will have a positive effect in terms of the prospects for economic development, whereby in the second half of 2021 a boost of the Eurozone economy is expected. Furthermore in 2021 the growth, according to the assessments of the Central Bank of Armenia, will reach 3.0%.

In the fourth quarter of 2020, inflation rate in the Eurozone totaled 0.3% year-on-year, being significantly below the ECB target, while year-on-year core inflation in the fourth quarter was only 0.4%. The low inflation was mainly due to the appreciation of the euro against the US dollar and weak domestic demand. At the beginning of 2021, a certain acceleration of inflation was observed in the Eurozone driven by high prices for energy and food products. It is expected that these factors will continue to contribute to the formation of prices at higher levels in 2021 than at the end of the previous year. However, in the face of weak domestic demand, inflation will remain below its target level, as a result of which, and given the slow recovery of the economy, the ECB will continue to pursue an expansionary policy, at the same time implementing a program of purchasing assets of 20.0 billion euros per month.

Economic developments in Russia. According to the CBA assessments, developments in the Russian economy in the fourth quarter of 2020, were of a more positive character previously projected, hence the economic decline in the fourth quarter is estimated at 4% instead of the 4.5% presented in the previous program of the Central Bank of Armenia. The recovery of the economy was mainly attributable to the positive developments in the industry. Amid

Chart 3

Economic growth in trade partner countries (%)



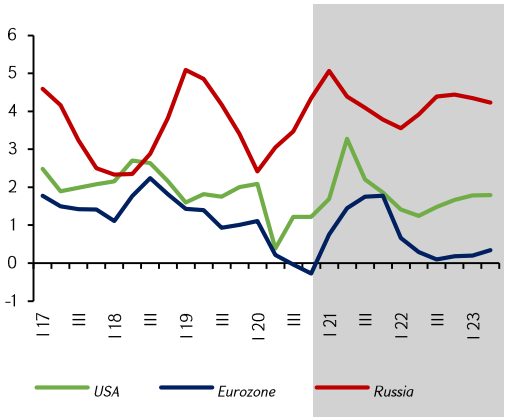
Source: BEA, Eurostat, Rosstat, CBA projections

rising international oil prices and the recovery of the world economy, it is expected that compared to 2020, trends in 2021 will be of a more positive nature. Subsequently, the growth in 2021, according to the Central Bank of Armenia projections, will amount to 2.1%.

Russia's average quarterly inflation continued to accelerate in the fourth quarter of 2020, amounting to 4.4% year-on-year, against 3.5% of the previous quarter, exceeding the target 4% indicator. At the same time, it should be noted that in February 2021, inflation continued to accelerate, reaching 5.7%. The acceleration of inflation rates mostly resulted from depreciation of Russian ruble and significant rises in food prices in the domestic and international markets. In the fourth quarter of 2020, the Bank of Russia maintained its policy interest rate at the July 2020 level of 4.25%. Given the accelerating inflation and projected economic developments, as well as the recovery of the world economy, the Bank of Russia announced that it would gradually move to a neutral monetary policy[3].

Chart 4

Inflation in trade partner countries(%)



Source: BEA, Eurostat, Rosstat, CBA projections

Developments in commodity and food product markets: After deflation at the beginning of the year, in the fourth quarter of 2020 prices of almost all products in the commodity markets continued to grow due to positive expectations of a recovery in the world economy. At the same time, the rise in food prices was mainly due to the impact of a number of negative supply factors related to the expected harvest of the 2020/21 marketing year, amid growing demand. In the context of the expanding global financial environment, prices over the forecast horizon in international commodity markets will remain high, even if some of the current short-term inflation factors are gradually neutralized in 2021 (see Box 1).

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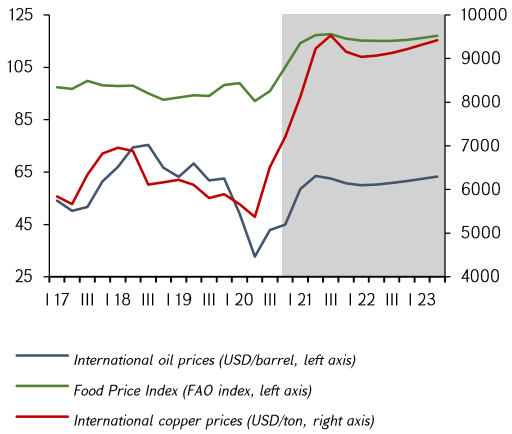
In the context of the expanding global financial environment, prices over the forecast horizon in international commodity markets will remain high.

The growth of international copper prices in the fourth quarter was fueled by the high growth of China's industry, as a result of which international copper market in the fourth quarter of 2020 recorded a 21.7% year-on-year rise in prices. It is expected that prices will continue to rise in the short term driven by the rapid growth in global demand for copper. International oil prices in the fourth quarter of 2020 grew by 4.7% over the previous quarter. The increase in oil prices continued in January 2021, underpinned by the reduction of supply volumes beyond the limits set by Saudi Arabia, outside the framework of the agreement signed between OPEC + member states, as well as expectations of a recovery in global demand in the light of the coronavirus vaccination programs. It should also be noted that in the short term, the aforementioned factors will continue to contribute to continuing high levels of international oil prices.

Chart 5

International commodity and food prices



Source: World Bank, FAO, CBA projections

[3] *In its March 19 sitting, the Bank of Russia raised policy interest rate by 0.25 percentage points, setting it at 4.5%.*

In the fourth quarter of 2020, inflation trends continued in almost all food markets. Thus, inflation observed in the sugar market was mainly conditioned by the low harvest volumes expected for the main sugar producing countries in 2020/21. Price growth in the grain market was driven by the decrease in supply volumes because of dry weather conditions in a number of countries. The recovery of global demand in the short term, as well as small volumes of supply of certain product groups will contribute to continuing high level of food prices.

Box 1[4]

The Impact of Expansionary Economic Policies on Global Commodity Markets

From the beginning of the coronavirus pandemic, parallel to the application of economic restrictions, all countries have rapidly shifted to expansionary fiscal and monetary policies. The size of the latter, in contrast to the limited opportunities of developing countries, is especially large in developed economies, where, despite the relatively large share of public debt in GDP, the "fiscal space" was greater.

In some countries, such as the United States, fiscal stimulus have been unprecedented high since World War II. In the USA, a double-digit budget deficit is designed for 2021 as well. It should be noted that only the latest package approved by the US Senate on March 11 of this year (American Rescue Plan), known also as the "Biden Plan", provides about $ 1.85 trillion additional potential stimulus to the economy (around 8.8% of GDP).

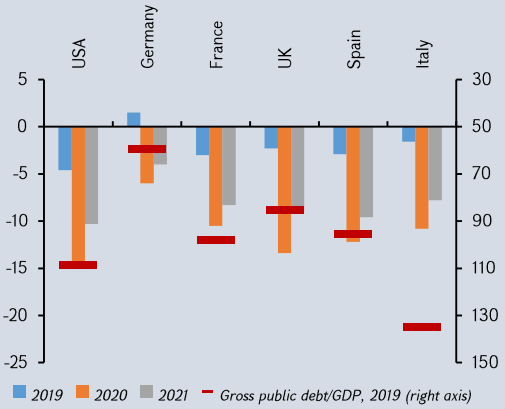
It should also be noted that, in addition to direct fiscal support, many countries also use indirect support mechanisms, such as credit guarantees, which in some countries reach quite large volumes (in Germany around 25% of GDP).

In addition to fiscal policy stimulus, many countries, especially developed ones, have shifted to loose monetary policy or deepened them. At present, the policy interest rates in the world's leading economies are very close to zero, and large asset-purchase programs are being implemented (their potential volume can reach several trillion dollars in both the US and the EU), as well as to provide "unlimited" liquidity through other channels.

It should be emphasizedthat both the US Federal Reserve and the ECB have repeatedly stated publicly that highly accomodative monetary policy will be maintained throughout the forecast horizon until 2024, and the transition to a neutral stance will be made gradually, explicitly announcing it in advance.

Chart 6

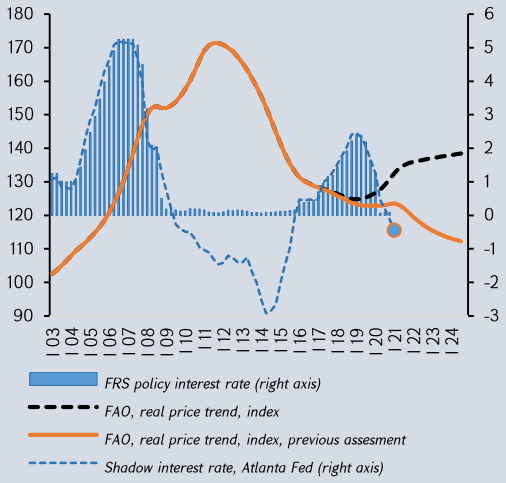
State budget surplus/deficit in a number of developed countries in 2019-2021 (% of GDP)



Source: Eurostat economic projections for autumn 2020, November 5, 2020, US Congressional Budget Office

Chart 7

Relationship between monetary policy and food and commodity prices (food)



Source: St. Louis Fed, CBA projections,

** The so-called "shadow interest rate" also includes quantitative estimates of non-traditional monetary policy instruments used when nominal interest rate is below the zero limit.*

[4] *Prepared by Vazgen Poghosyan from Monetary Policy Department.*

Under these unprecedented expansionary economic policies, when a relatively low interest rates and yields environment as well as liquidity with these global reserve assets is also maintained in developed countries, financial investors "in search of higher returns" have a significant impact on the growth of prices for almost all types of assets, including food and commodities. There is a lot of research on the linkages of global liquidity and expansionary fiscal policies (e.g. Belke, Bordon and Volz[5]; Chakraborty and Bordoloi1[6]), as well as the long-term and short-term effects of US monetary policy on international commodity prices (e.g. Anzuini, Lombardi, Pagano (2010)[7]. The main ways of impact discussed can be summarized as follows:

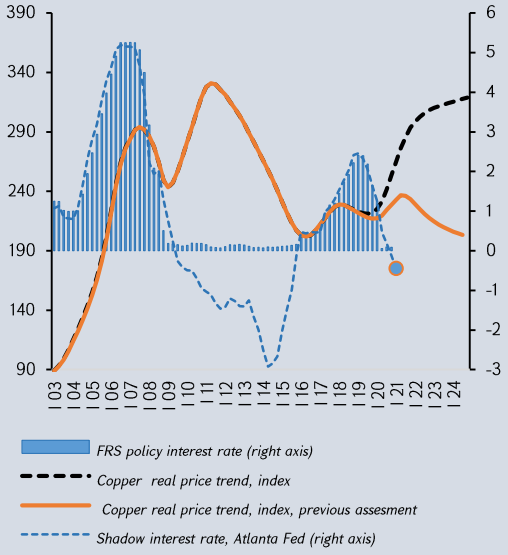
- ✓ *Expansionary policies create positive expectations for future inflation and economic growth (demand), leading to a growth of current commodity prices[8];*
- ✓ *Globally low interest rates reduce alternative stockpiling costs, increasing demand for goods. At low interest rates, at the same time, the supply of extracted raw materials decreases, as alternative costs of "keeping" them are also low[9];*
- ✓ *The accumulation of excess liquidity and the maintenance of low interest rates form among investors incentives for the search for high-yield assets, while on the other hand, reducing the alternative costs of gaining speculative positions in different asset markets. All of this stimulates demand for various assets, including demand for stock exchange food products based on pure financial considerations, with a significant impact on their prices.*

Similar phenomena have been observed since the end of last year, after overcoming the primary shock of the coronavirus and a certain reduction in the level of uncertainty, which is accompanied by the continuation of expansionary monetary and fiscal policies.

According to the current forecasts of the Central Bank of Armenia, in parallel with the expansionary fiscal and monetary policies around the world, food and commodity prices will still grow due to the above-mentioned channels, and will remain at high levels in the medium term, given the effects of other factors specific to individual commodity markets.

Chart 8

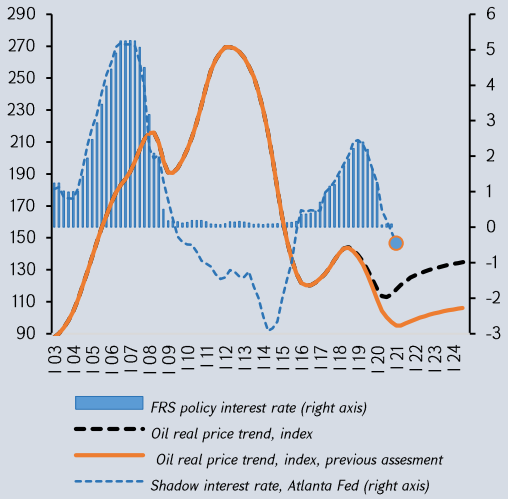
Relationship between monetary policy and food and commodity prices (copper)



Source: St. Louis Fed, CBA projections

Chart 9

Relationship between monetary policy and food and commodity prices (oil)



Source: St. Louis Fed, CBA projections

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[5] *Ruhr Economic Papers N323/ March 2012 – "Effects of Global Liquidity on Commodity and Food Prices" - https://www.rwi-essen.de/media/content/pages/publikationen/ruhr-economic-papers/REP_12_323.pdf*

[6] *Proceedings of the Sixth IFC Conference on "Statistical issues and activities in a changing environment", Basel, 28-29 August 2012 – "International commodity prices – volatility and global liquidity", BIS - https://www.bis.org/ifc/publ/ifcb36p.pdf*

[7] *ECB working paper N1232/August 2010 –" The impact of monetary policy shocks on commodity prices" - https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1232.pdf*

[8] *Barsky, R.B. and L. Kilian (2004) "Oil and the macroeconomy since the 1970s", Journal of Economic Perspectives 18: 115-134 - http://ourenergypolicy.org/wp-content/uploads/2012/05/R_Oil_and_the_Macroeconomy.pdf*

[9] *Frankel, J.A. (2008), "The effect of monetary policy on real commodity prices", edited by J. Campbell, University of Chicago press - https://www.nber.org/system/files/chapters/c5374/c5374.pdf*

2.2. Forecasts

2.2.1. Inflation and Monetary Policy

12-month inflation continued to increase in the current quarter. As of February, it was 5.3%. In parallel, the 12-month core inflation accelerated too, reaching 5.5% in February. The acceleration of inflation mainly bears the effects of inflationary pressures transmitted from the international commodity and cargo transportation markets, as well as depreciation of the Armenian dram. According to the Central Bank, under the expansionary monetary and fiscal policies of the world's leading countries, recovery of global economic activity and demand has been observed. In addition, due to a number of supply factors, an increase in prices was observed in the international commodity markets, which will continue to exert certain inflationary pressures on the Armenian economy. On the other hand, the level of economic activity in Armenia remains low, mainly due to the low growth rates in services and agriculture.

Aggregate demand and especially the volumes of private consumption also remain at a low level. In the current situation, the Central Bank considers that policy interest rate should be left unchanged at present, as the increase in current inflation and inflation expectations is mainly due to the above-mentioned supply factors, to which the Central Bank has already responded since the end of last year by raising interest rate by 1.25 percentage points. At the same time, given the current level of interest rates, monetary position is still considered expansionary, which is necessary from the point of view of maintaining favorable stimuli for the recovery of demand. The Board of the Central Bank considers that in the near future it is necessary to continue the adopted monetary policy, which will be aimed at neutralizing the risks of accelerating inflation expectations, while providing the most favorable conditions for the full recovery of demand.

The Central Bank considers that policy interest rate should be left unchanged at present, as the increase in current inflation and inflation expectations is mainly due to the above-mentioned supply factors, to which the Central Bank has already responded since the end of last year by raising interest rate by 1.25 percentage points.

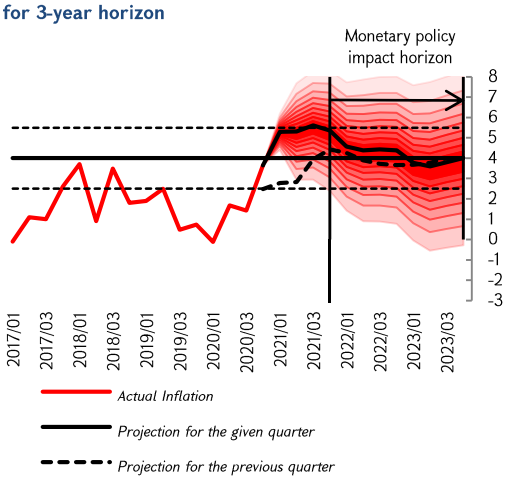
According to the current assessments of the Central Bank, the low economic activity and the weak demand in the first quarter of the year will continue. In terms of supply, activity in almost all sectors of the economy will be low. Against the background of last year, as well as current political and economic uncertainties, reflected by restrictive consumer and investment behavior the aggregate demand continues to

remain low as well. On the other hand, fiscal policy in 2021 will have a small stimulus effect, sending positive impulses for the recovery of demand. In addition, the relatively high level of remittances from abroad, as well as the existence of a somewhat stimulating monetary environment during the year will have a positive impact on economic activity. The tightening of financial conditions in the medium term together with a certain slowdown in lending growth rates, planned constraining fiscal policy, and gradual stabilization of remittances at a balanced level, will curb demand causing a small negative GDP gap, which, however, will close at the end of the forecast horizon.

Under monetary and fiscal policy outlook outlined above, 12-month inflation will remain slightly above the target 4% in the near future. Growth of public short-term inflation expectations, which is due to the current uncertainties, depreciation of the dram in the foreign exchange market and the actual acceleration of inflation, was in line with the Central Bank's forecasts. Under the principle of forward-looking monetary policy, the previous monetary tightening of the Central Bank was aimed at the projected growth of inflation expectations, so the risks of their further growth are currently estimated to be small. Inflationary expectations are expected to gradually stabilize in the medium term, along with a possible weakening of demand, and high uncertainty about them will gradually subside. This will also affect inflation behavior, which in the medium term, responding to weak demand, will approach the target level of 4%.

Chart 10

Inflation (12-month) projection probability distribution for 3-year horizon



Source: NSS (Statistical committee, CBA projection)

Table 1

Period	Inflation interval forecast probability distribution				
	<1.0%	1.0-2.5%	2.5-5.5%	5.5-7.0%	>7.0%
QI 2021	0.1	42.0	57.9	0.0	0.0
QII	6.0	27.2	58.8	6.9	1.2
QIII	7.5	25.3	55.7	9.0	2.5
QIV	2.2	11.8	56.5	18.8	10.8
QI 2022	1.9	9.2	52.9	21.7	14.2
QII	5.4	13.4	51.5	18.6	11.0
QIII	8.5	16.7	51.2	15.6	8.0
QIV	10.7	18.1	50.1	14.2	6.8
QI 2023	12.6	18.3	47.7	13.9	7.5
QII	14.4	17.6	44.5	14.1	9.4
QIII	13.9	17.0	44.1	14.6	10.4
QIV	12.4	15.8	43.6	15.8	12.5

2.2.2. Economic Activity [10]

After last year's deep economic downturn in 2021, GDP growth is expected to recover slightly, mainly due to the acceleration of private spending. The latter was quite restrictive because of the sharp increase of uncertainty last year, growth in private savings, as well as tightening of lending conditions. In 2021, along with the reduction of uncertainty, private savings are expected to decrease to some extent, but will still remain above the level of 2019 (see Box 4). As a result, driven by a 4.5% increase in private consumption and a 3.0% increase in gross accumulation of private fixed assets, private spending growth in 2021will total 4.3%, becoming the locomotive of growth this year. Resulting from the impact of the previous year's high base, government spending (consumption and investment) will have a mainly negative impact on growth, however, fiscal impulse, which is calculated on the basis of total state budget expenditures (including net lending), is considered to be slightly expansionary (see subsection "Fiscal Policy").

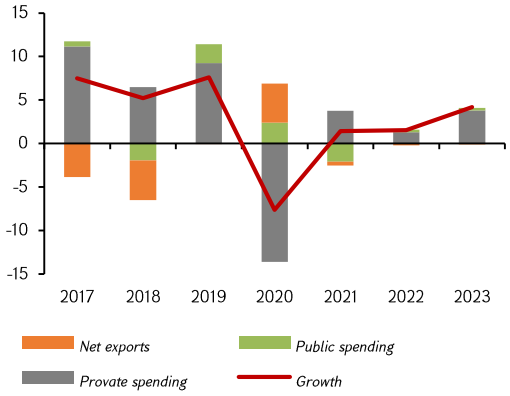
In the medium term, economic activity will recover at a slower pace than previously forecast, mainly due to slower productivity recovery and lower projected growth in private investment. The latter will be conditioned both by lower-than-expected levels of economic growth and demand, and by the medium-term effects of current political and economic uncertainties. The budget deficit is expected to gradually decrease over the forecast horizon, and the direct contribution of public spending to economic growth will be slightly positive. In the medium term, along with the recovery of productivity, as well as international tourism, export and import growth will accelerate, but the net export contribution to economic growth is assessed as slightly negative. As a result, GDP growth in the forecast horizon will remain low and at the end of the horizon will be remain around the estimated long-term level of 3.5%.

External demand: According to estimates, in 2020, the current account deficit/GDP ratio will improve over 2019, and will be around 4.0%, compared to the 5.0% forecast in the previous program of the Central Bank of Armenia.

The improvement of current account deficit/GDP ratio compared to the previous program of the Central Bank was conditioned by the recovery of the world economy with more positive developments than expected, higher than expected gold exports, as well as the

Chart 11

Contribution of demand[11] components to growth (percentage point)



Source: NSS, CBA projection

[10] *For a detailed economic growth forecasts, see the "GDP Projection Probability Distribution", Chart 18, Table 2.*

[11] *Demand does not take into account changes in inventories, as it is calculated by the CBA as a balance sheet item and does not reflect the real level of investment. Therefore, growth calculated by supply and demand factors can variate. See: https://www.armstat.am/file/article/sv_04_19a_112.pdf*

improvement of terms of trade above the expectations. Under these circumstances, the real decline in exports in the fourth quarter was lower than expected, while the decline in imports was slightly above the expectations. In 2020, real decline in exports of goods and services totaled 31.4%, and the real decline in imports of goods and services 32.1%. At the same time, as a result of the significant rise in international copper prices, trade balance deficit has improved against the projected level. In the fourth quarter, remittances of individuals from the United States continued to grow sharply, while remittances of seasonal workers plummeted in line with previous projections. Subsequently, in 2020, total remittances (including seasonal workers income and private transfers) are estimated to decrease by about 7.0%.

In 2021, current account deficit/GDP ratio will decrease sizably compared to the previous projections. The reason for that will be a high level of average copper prices compared to the previous forecast and the upward revision of the growth of remittances from individuals. At the same time, contribution of the tourism sector, as the sector most affected by the epidemic, will still remain at relatively low levels. According to the latest forecasts of international experts, despite the use of vaccines, the outlook for the recovery of world tourism are pessimistic.[12] There is still great uncertainty in this area regarding the possibilities and scope of the use of vaccine in developing countries. In addition to the mentioned factors, the uncertainties existing in Armenia will also have a certain negative impact on the process of tourism recovery in the medium term.

In the light of positive developments in the mining industry in the face of high copper prices, forecasts for real growth in exports of goods have been revised upwards. Furthermore, the projected certain recovery of the mining of the Sotk will have a positive contribution. In the light of more pessimistic expectations of the tourism sector, export of services has been revised downwards. As a result, the growth rate of real exports of goods and services will be lower than the previous projection, staying in the range of 1.0-3.0%.

Given the weak domestic demand, the growth of real imports of goods and services in 2021 has also been revised downwards, and it will be in the range of 2.0-4.0%. It should be noted that the import of tourism will also slow in line with international tourism developments, as well as due to the effects of weak domestic demand.

Remittances from individuals have been revised upwards due to the partial recovery of seasonal labor migration as a result of the expected revival of the Russian economy and the gradual easing of restrictions.

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[12] *See, https://www.e-unwto.org/doi/abs/10.18111/wtobarometereng.2021.19.1.1?journalCode=wtobarometereng*

At the same time, it is estimated that remittances from the United States will remain at a high level. In line with these projections, net inflow of total remittances in 2021 will grow by about 7.0-9.0% instead of the decrease projected in the previous program.

Under the above projections, current account deficit/GDP ratio in 2021 will improve both compared to the previous projections and the 2020 indicator, staying in the range of 2.0-4.0%.

In the medium term, in parallel with the recovery of global and domestic economies, current account deficit/GDP ratio will gradually approach and stabilize at the estimated equilibrium level of 4.0-6.0%.

Fiscal Policy: The fiscal policy's impact on aggregate demand for 2021 was estimated based on the indicators of the Republic of Armenia 2021 State Budget Law and the ensuing Central Bank projections.

According to those estimates, tax revenues in 2021 will be in line with the indicators of the Republic of Armenia 2021 State Budget Law. As a result, tax/GDP ratio[13] will be 22.2%, decreasing by 0.2 percentage points against 2020.

In terms of public expenditures, it is also expected that they will be made in accordance with the indicator established by law. In 2021, expenditure/GDP ratio will total 28.5%, decreasing by 2.1 percentage points compared to the previous year.

Subsequently, in 2021 deficit/GDP ratio will be 5.3%, down by only 0.1 percentage points against 2020. The deficit will be financed from external sources, where the largest share will be the amount of AMD 378.6 billion already received from the placement of Eurobonds.

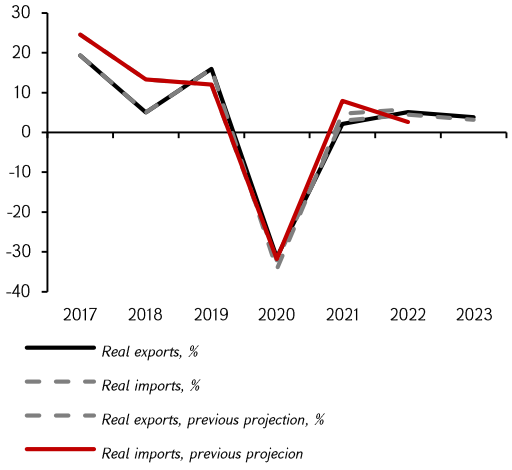
Although a rather high level of deficit is projected in 2021, adjusting government expenditures and revenues from flows that do not have an impact on aggregate demand, compared to 2020 (when fiscal policy was strongly expansionary), in 2021 a slight 0.3 percentage point expansionary effect of fiscal policy has been projected. This will be due to the neutrality of revenue and the small expenditure expansion impulses.

Concerning implementation of the current fiscal policy, given that according the Republic of Armenia 2021 State Budget Law, government debt in 2021 will be above the GDP threshold of 60%, it is assumed that implementation of current expenditures provided by law in the current year will be within the framework of an exceptional case defined by the current fiscal rule.

In the medium term, based on the main indicators of the revised fiscal framework for 2022-2023, slightly restrictive fiscal policy for 2022 and neutral fiscal policy for 2023 has been

Chart 12

Change in real export and import of goods and services in the medium term *(%)*



Source: NSS, CBA projection

Compared to 2020 (when fiscal policy was significantly expansionary), in 2021 a slight 0.3 percentage point expansionary effect of fiscal policy has been projected.

[13] *GDP indicators used in the program are the Central Bank projections.*

projected. Along with the recovery of the economy, from the point of view of macroeconomic stability in the medium term, it is important to gradually reduce debt/GDP ratio in accordance with the set scenario and fiscal rules, through growth of tax revenues and improvement of the structure of expenditures.

Labor Market[14]***.*** In 2021, the growth rate of nominal wages of the private sector will slow down and will be around 2.4%. Despite current acceleration of inflation, it is expected that the growth of private wages in the short term will be restrained. This will be due to the fact that the pressures on labor costs in enterprises, although significantly reduced in recent quarters, still persist, and the estimated demand for labor is weak. On the other hand, it is estimated that because of international restrictions, a substantial part of seasonal workers did not have the opportunity to go abroad for work, as a result the supply of labor in the domestic market increased, which will have a further deterrent effect on wage growth. Along with the acceleration of productivity in the medium term, as well as the stabilization of inflation around its target, the growth of private wages will gradually accelerate. In 2022, nominal wages in the private sector are projected to grow by 3.7%, and at the end of the forecast horizon this figure will be within 5.1%.

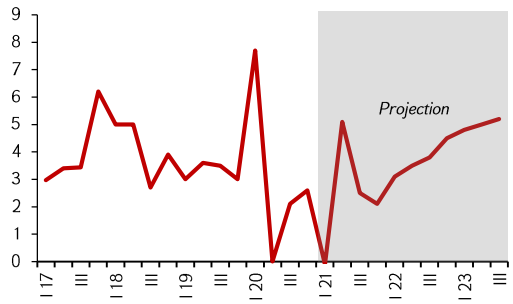
According to the Central Bank, government support programs aimed at protecting the jobs of employees in enterprises have significantly alleviated the problem of potential mismatch in searching and finding work in the labor market, which occurs in the case of structural changes taking place in the economy. As a result, with a deep economic downturn, only a minor increase in unemployment was observed in 2020. In 2021, in light of termination of the above-mentioned programs and internal integration of displaced persons from Artsakh on one hand and slow recovery of economic activity on the other, it is estimated that unemployment will remain at the same level as last year, amounting to 18.6%. In the medium term, the impacts of the pandemic and economic downturn on unemployment will gradually neutralize, and by the end of the forecast horizon the unemployment will approach 18.3%.

In 2021, the growth of unit labor costs of enterprises will slow down as a result of economic growth and acceleration of inflation, as well as wage restriction, and at the end of the forecast horizon will stabilize around its basic size, i.e. target inflation rate of 4%.

As a result, inflationary effects from the labor market will weaken in the short run and gradually offset in the medium term, driven by acceleration of economic growth and the recovery of productivity.

Chart 13

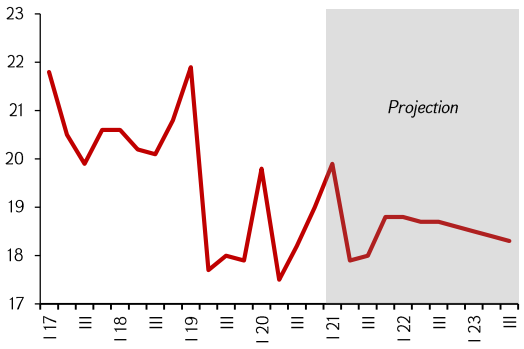
Nominal wage growth in private sector, y/y (%)



Source: NSS, CBA projection

Chart 14

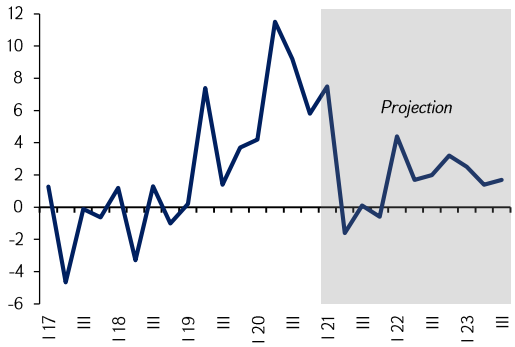
Inflation level (%)



Source: NSS, CBA projection

Chart 15

Unit labor costs growth, y/y (%)



Source: NSS, CBA projection

[14] *The labor market data for 2020-2023 are the Central Bank projections based on the actual 2020 second and third quarter data. The growth indicators presented in this sub-section are relative to the same reference period last year, unless otherwise specified.*

2.2.3. Comparison with the Previous Forecast

During the first quarter of 2021, some economic restrictions caused by the spread of the coronavirus were still in place in all partner countries, and in some countries (EU member states) lockdowns were still in place. In the main partner countries, along with the increasing collective immunity of the population, vaccinations are being carried out with great intensity. However, certain acceleration of the pandemic in the last part of the current quarter, together with some concerns about the effectiveness of vaccines, create additional uncertainty about the path of the epidemic, slowing to some extent the pace of global economic recovery. Despite implementation of highly expansionary fiscal and monetary policies, due to the above factors, the Central Bank projections of medium-term economic growth in the US and the Eurozone have been revised downwards.

In the US economy, both this year and throughout the entire forecast horizon, smaller economic growth than previously expected by the Central Bank will be observed. This is largely due to the slowdown in the labor market recovery after the third quarter of last year, caused by the impact of long-term labor market problems and declining labor force participation. At the same time, the Biden Plan, approved by the US Senate in the current quarter, with a potential volume of about $ 1.9 trillion, will strongly contribute to the expansion of domestic demand in the United States, especially in the short term.

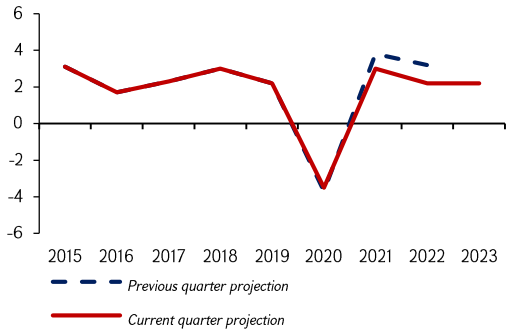
Hence, according to the current forecasts of the Central Bank, the US economy will reach its pre-crisis output level in the first half of next year.

In the context of maintaining sizeable economic constraints to prevent the spread of the coronavirus, as well as concerns about new restrictions and vaccine effectiveness in some countries, growth in a number of Eurozone countries will be somewhat lower throughout the forecast horizon. The slower rate of economic growth in the Eurozone projected for this year is partly due to a smaller-than-expected decline in last year's output. Economic growth in the Eurozone in 2022 will still be marginally higher than the long-term level, ensuring a return to pre-crisis GDP levels in early 2023.

In Russia, in contrast to other major partners, real economic growth along the forecast horizon will be higher than projected before, due to the wide possibilities and actual rate of vaccination, as well as the higher prices for raw materials (especially oil).

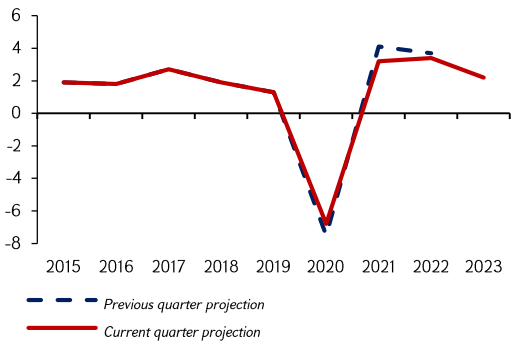
It should be noted that in light of the slower than previously expected growth of output in the forecast medium-term horizon, some acceleration of inflation will be observed in all partner

Chart 16
Economic growth forecasts, USA (%)



Source: BEA,CBA projection

Chart 17
Economic growth forecasts, EU (%)



Source: Eurostat, CBA projection

countries compared to the previous forecast, which is conditioned by faster recovery of demand under fiscal and monetary policies. Inflationary trends in international commodity markets will further contribute to short-term acceleration of inflation in partner countries.

Reflected by certain restrictions of supply in the short-term (bad weather conditions, lack of seasonal labor in some regions caused by travel restrictions because of coronavirus, oil extraction arrangements, etc.), and sufficiently high level of liquidity expected in international financial markets (see Box 1), commodity prices over the entire forecast horizon are projected to be at a significantly higher level than before.

Along with some neutralization of the current disproportion of supply and demand (due to the harvesting of new crops), world food prices will be dropping from the second half of this year. However, due to the strongly expansionary fiscal and monetary policies pursued in a number of leading economies, in the medium term they will remain relatively high.

In light of a notably stronger short-term reduction of supply than was previously planned by the Declaration of Cooperation signed between OPEC and non-OPEC countries, along with the slow recovery of global demand, the international oil prices are much higher than previously projected.

According to the Central Bank, further growth in demand for oil will be offset by a corresponding increase in supply, and oil prices will stabilize in the range of $ 60-65 at the end of the forecast horizon.

International copper prices have risen to levels well above previous forecasts, amid uncertainties over copper supply in light of China's rapid economic recovery and restrictions on preventing the spread of the coronavirus in some copper-producing countries.

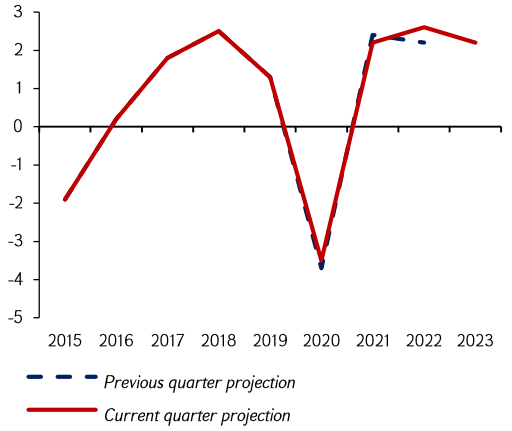
According to the current forecast of the Central Bank, international copper prices will decrease to some extent during the forecast horizon, along with the neutralization of temporary factors related to supply, but will remain at high levels under expanding financial conditions and liquidity in the global economy, continuing further gradual growth. The medium-term growth of copper prices will also be facilitated by the tendencies of gradual development of energy-efficient and less air-polluting industries, where the use of copper is quite intensive.

Armenia's economic growth projections were revised downward along the forecast horizon.

In 2021, economic activity was revised downwards and is currently estimated at around 1.4% compared to the previous 2%, mainly because of the expected lower level of domestic demand.

Charter 18

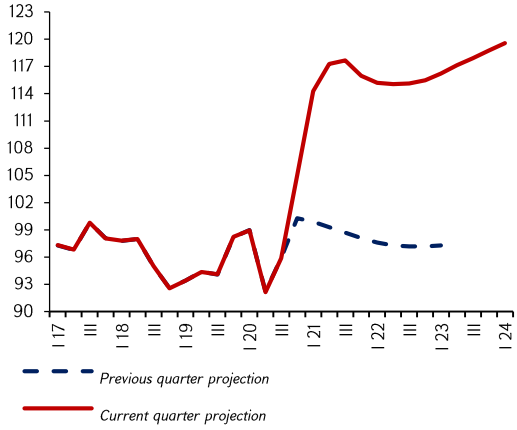
Economic growth forecasts, Russia (%)



Source: Rosstat, CBA projection

Chart 19

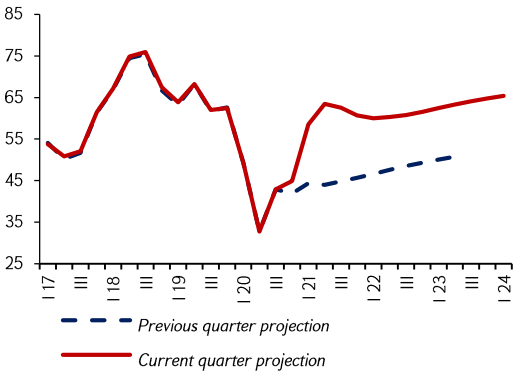
Food price forecasts



Source: FAO, CBA projection

Chart 20

Oil price forecastss



Source: World Bank, CBA projection

Compared to the previous projection, in 2021 higher growth is expected in the construction sector, the main driving force of which will be the government financed construction. In addition, while the construction carried out at the expense of the organizations and population is still low, it has begun to recover to some extent. Higher growth is also expected in the agricultural sector due to the continuation of support programs in the sector. Compared to the previous program, slower recovery is expected in industry and services. In particular, growth in services will be lower in the light of expectations of a slower recovery in tourism, and the slowdown in industry will be caused by the reduction of production and processing of precious metals from the beginning of 2021.

In the medium-term horizon, economic growth, compared to the previous projection, has been revised downwards and will still remain below the long-term stable level of 3.5%, due to the slower than previously projected recovery of productivity and investment. The reasons behind it are both lower-than-expected levels of actual economic growth and demand, and the medium-term negative effects of current political uncertainties.

Table 2

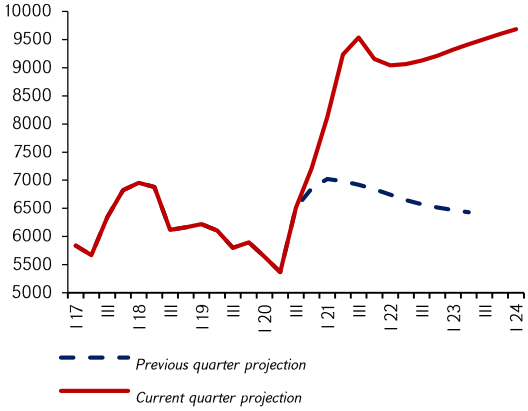
Probability Distribution of Real GDP Growth (Cumulative) Forecast		
Period	30% Probability Interval	90% Probability Interval
January-December 2020 / January-December 2019	(-7.69) - (-7.56)	(-7.93) - (-7.3)
January-December 2021 / January-December 2020	0.65 – 2.2	(-1.9) – 4.8
January-December 2022 / January-December 2021	0.48 - 2.6	(-2.95) - 6.0
January-December 2023 / January-December 2022	3.1 – 5.3	(-0.4) – 8.8

In 2021, the current account deficit-to-GDP ratio will be lower compared to previous forecast mainly due to a strong reduction in the trade deficit as a result of improved terms of trade. At the same time, instead of the previously projected decline, the high growth of remittances from the United States observed in 2020 will continue in 2021 as well.

In case the indicators approved by 2021 state budget law are fully achieved, fiscal impulse, which in the previous projection was assessed as slightly contractionary, is now expected to expand by some 0.3 percentage points in the year.

Chart 21

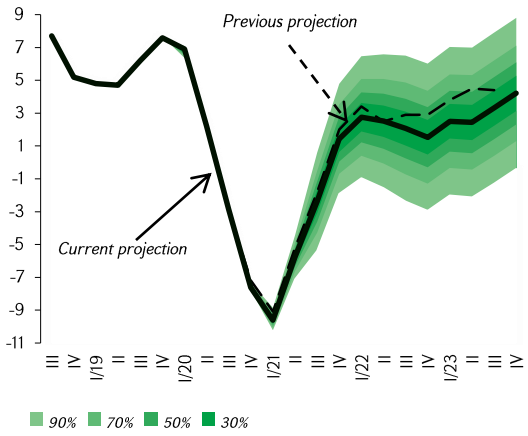
Copper price forecasts



Source: World Bank, CBA projection

Chart 22

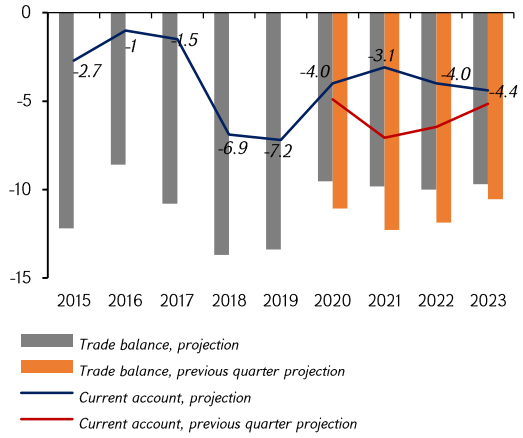
Real GDP growth (cumulative)[15] forecast probability distribution for 3-year horizon



Source: NSS, CBA projection

Chart 23

Current account/ GDP medium-term projections (%)



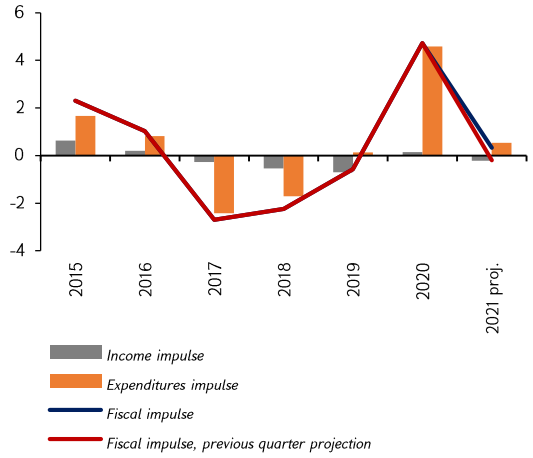
Source: NSS, CBA projection

[15] *The growth rate of each quarter is calculated as the cumulative growth rate of the last 4 quarters.*

According to the current projection, in the short term, both the 12-month and core inflation will be at significantly higher levels than estimated under the previous program. High inflation in the short run will continue due to inflationary pressures from international commodity and freight forwarding markets, as well as developments already observed in the currency market. On the other hand, weak domestic demand continues to offset to some extent and have a deterrent effect on inflation, which, however, will weaken as demand recovers. Accordingly, in contrast to the previous program, short term inflation will be above the target, and then it will decrease in the medium-term stabilizing around the target level (see the Chart 2. Inflation Forecast Probability Distribution).

Chart 24

Fiscal impulse projection (percentage point)



Source: CBA assessment

2.2.4. Main Assumptions and Risks

This section presents the main assumptions underlying the Monetary Policy Program for the second quarter of 2021, and the risks to implementation of the program stemming from external sector developments, fiscal policy, emerging trends and short-term projections.

Box 2

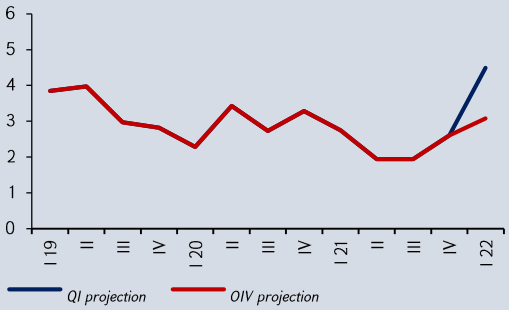
The results of survey on expectations by households and the financial system

Due to current developments in core inflation short-term inflation expectations will be higher than previously projected.

According to a survey conducted by the Central Bank on households and financial sector organizations' expectations for a number of macroeconomic indicators in Q4 2020, inflation expectations for the fourth quarter have risen somewhat. Specifically, the share of households expecting high and very high inflation rates for a one-year horizon has grown to a certain degree. In addition, the surveys also reflect higher level of uncertainty about the expected inflation in the fourth quarter.

Chart 25

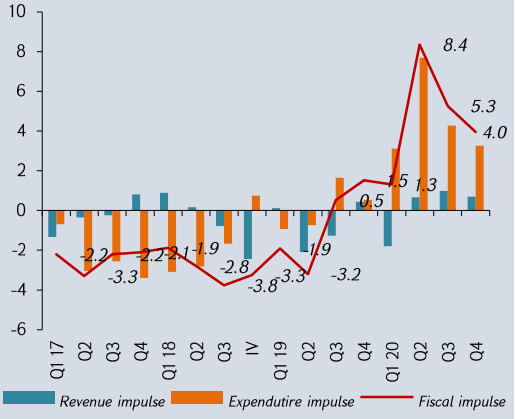
Short-term inflation expectation estimates (%)



Source: CBA assessment

Chart 26

Household inflation expectation surveys



Source: CBA

Forecast Judgements

Table 3

Main Judgements and Assumptions	Possible developments if these assumptions prove to be correct
In developed countries, the negative effects of the pandemic will decrease in parallel with vaccinations, but will last until the second half of 2021, and in developing countries they will continue until the end of 2021, but with a weaker impact. In partner countries, expansionary fiscal and monetary policies is expected to continue throughout the forecast horizon.	✓ In the short term, negative effects of the spread of coronavirus will be subdued by the use of the vaccine, and in the medium term, they will be gradually mitigated. ✓ Total demand over the forecast horizon will be slightly higher than previously expected due to coronavirus vaccine distribution expectations and actual application results, as well as largely expansionary fiscal and monetary policies. ✓ Within the environment of positive demand developments in the partner countries, inflation will be shaped at a somewhat higher trajectory than in the previous forecasts. ✓ International commodity markets and especially food recordedinflationary developments. Food and commodity prices will remain high.
Armenian country risk premium will be somewhat recovered in the near future, but under the conditions of high liquidity in the global financial markets, in the forecast horizon, it will stay below the long-term sustainable level.	✓ The country's risk premium in the first quarter is estimated at a relatively low level compared to the previous quarter, as well as the previous forecast. In the medium term, it will rise to some extent, stabilizing at a slightly higher level than the current value.
Inflation expectations have accelerated somewhat, but are in the manageable range and are largely anchored.	✓ It is estimated that public expectations of the short-term inflation have somewhat increased against the background of a certain acceleration of the actual inflation. ✓ Previous tightening of monetary conditions by the Central Bank was an important step towards curbing inflation and projected acceleration of inflation expectations, as evidenced by the growth of deposits in the banking system. Communication measures aimed at anchoring inflation expectations will also contribute to curbing inflation.
A slightly expansionary fiscal policy is planned for 2021.	✓ In 2021, a small expansionary impact of fiscal policy estimated at 0.3 percentage points is projected, provided that all indicators set by 2021 State Budget Law are met. Stimulus effect is due to execution of all public spending, as well as by providing net lending funds established by law. Based on the revised fiscal framework for 2022-2023, in 2022 a restrictive fiscal policy impact was projected, while in 2023 a neutral impact.
Uncertainties stemming from pandemic and martial law will have a deterrent effect on Armenia's potential growth and current demand developments (see Boxes 4 and 5).	✓ It is expected that the impact of the pandemic in Armenia will weaken and almost neutralize beginning from 2021, due to the application of the planned volumes of foreign vaccines, as well as gradual formation of herd immunity in Armenia.

	✓ It is expected that the volume of international tourism will gradually approach about 30% of the pre-crisis level by the end of 2021, amid the removal of various restrictions and the gradual activation of air communication. ✓ Under certain delay in consumption and investment due to persisting uncertainty, some negative pressures on domestic demand will emerge in the first half of the year, which will gradually be mitigated by the end of the year. ✓ Under economic uncertainties, savings increased significantly in 2020, which will be partially adjusted in the first half of 2021, having a positive impact on aggregate demand. However, the level of savings in the forecast horizon will remain above the pre-crisis level (see Box 4). ✓ The remaining economic and political uncertainties resulting from the military conflict in Artsakh will lead to low potential GDP growth in the medium term, in line with the previous forecast, largely caused by delays and reductions in capital investment (see Box 3).
Amid the continuing uncertainties and risks of the economic outlook, a gradual adjustment of the financial sector and a slowdown in lending rates will be observed in 2021 (see Box 2).	✓ A certain adjustment of the financial sector balance sheets is expected in 2021, which will have a certain deterrent effect on the overall demand developments. ✓ However, throughout the forecast period, macroprudential policy actions will be aimed at ensuring regular operation of the financial system, stopping short of additional risks for the real sector and macroeconomic stability.
Changes in excise and customs rates due to the requirement to apply common rates within the EEU.	✓ The impact of the excise tax change expected in 2021 is estimated at about 0.4 percentage points, and the impact of the change in customs rates - up to 0.2 percentage points inflationary.
The response to supply factors in inflation developments was manifested in the form of a one-time price adjustment.	✓ Within the factual inflation developments, progressive, phenomena of non-linear reaction or additional increase of surplus values have been observed. They will only be partially and insignificantly offset by further adjustments, and will largely be retained as a one-time upward adjustment of the price level.
A number of government support programs have had a positive impact on the labor market.	✓ Support programs for organizations to retain employees' jobs have strongly reduced the risk of potential job search-matching inconsistencies in the labor market resulting in low unemployment rates. The main effects of the completion of the relevant programs in 2021 will be mainly manifested in terms of the reduction of salary and labor expenditures.
As a result of the gradual removal of restrictions, in 2021, partial restoration of seasonal migration will be considered.	✓ In light of international restrictions, in 2020 large part of seasonal workers did not have the opportunity to go abroad for work, and this process may only partially resume in 2021. As a result, remittance flows from abroad will grow, while labor supply in the domestic economy will still remain above pre-crisis levels.

Box 3

Impact of Uncertainty on the Long-Term Prospects of the Economy [16]

At different stages of economic development, households and businesses operate in an environment of uncertainty, which is usually assessed, managed and regulated by appropriate tools. During 2020, first due to the spread of the pandemic, and then at the end of the year and in the period following the military conflict in Artsakh, economy faced a remarkable growth in uncertainty about the further course of economic prospects, which, as a result of various behavioral changes, can have a significant impact on economic developments in both the short-term, medium-term and long-term perspective. The Central Bank of Armenia has regularly assessed, discussed and presented in its monetary policy programs various mechanisms of the impact on uncertainty on economic processes[17]*. Recently, especially during and after the military conflict in Artsakh, there has been an increase in uncertainty about future economic prospects, which makes it extremely difficult for economic agents to assess and manage them. In such a situation, households and firms diminish the planning horizon in their behavior, which can have a significant impact on the potential for economic development and long-term growth prospects.*

Under the discussion of the aforementioned issues, a neoclassical model for an open economy has been built for the purpose to study the dynamics of long-term macroeconomic indicators. The model represents Armenia and the rest of the world. The rest of the world is exogenous for the Armenian economy. Armenian households can work both home and abroad, i.e. apply for migrate. In the production side , firms use labor and capital to produce goods and services. A representative household gets utility from the consumption of goods and services and leisure time. The latter can be formulated as a disutility from the working hours in Armenia and abroad. Thus, the household maximizes its utility function, which is presented as follows:

$$E_t \sum_{j=0}^{\infty} \beta^j \left(\frac{C_{t+j}^{1-\sigma}}{1-\sigma} - \frac{\left(N_{t+j}^H + \phi N_{t+j}^M\right)^{1+\varphi}}{1+\varphi} \right) \rightarrow max$$

Where: β is an indicator that shows the duration of the household's future planning horizon how much households are forward-looking); C_t is real consumption; N_t^H is labor force in Armenia; N_t^M is migration. σ, ϕ, φ parameters of utility function are structural parameters that characterize the economy.

Households make the migration decision based on the ratio of present values of expected domestic and foreign wages:

Migration = f($\kappa \frac{\beta}{\beta^*} \frac{E_t w_{t+1}^h}{E_t w_{t+1}^*}$*, other factors)*[18]*:*

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[16] *Prepared by Haykaz Igityan, Vahagn Davtyan, Hovhannes Manukyan from Monetary Policy Department of the Central Bank of Armenia.*

[17] *Inflation report for QII 2020, Box 2. The Impact of Growing Uncertainty on the Economy Following the Example of the United States.*
Inflation report for QII 2020, Box 2. Uncertainty Related to Overcoming the Pandemic: Medium Term Economic Impact Assessment in the US and Armenia.
Inflation report for QI 2021 (current), Box 4. The Impact of Uncertainty on Private Savings.

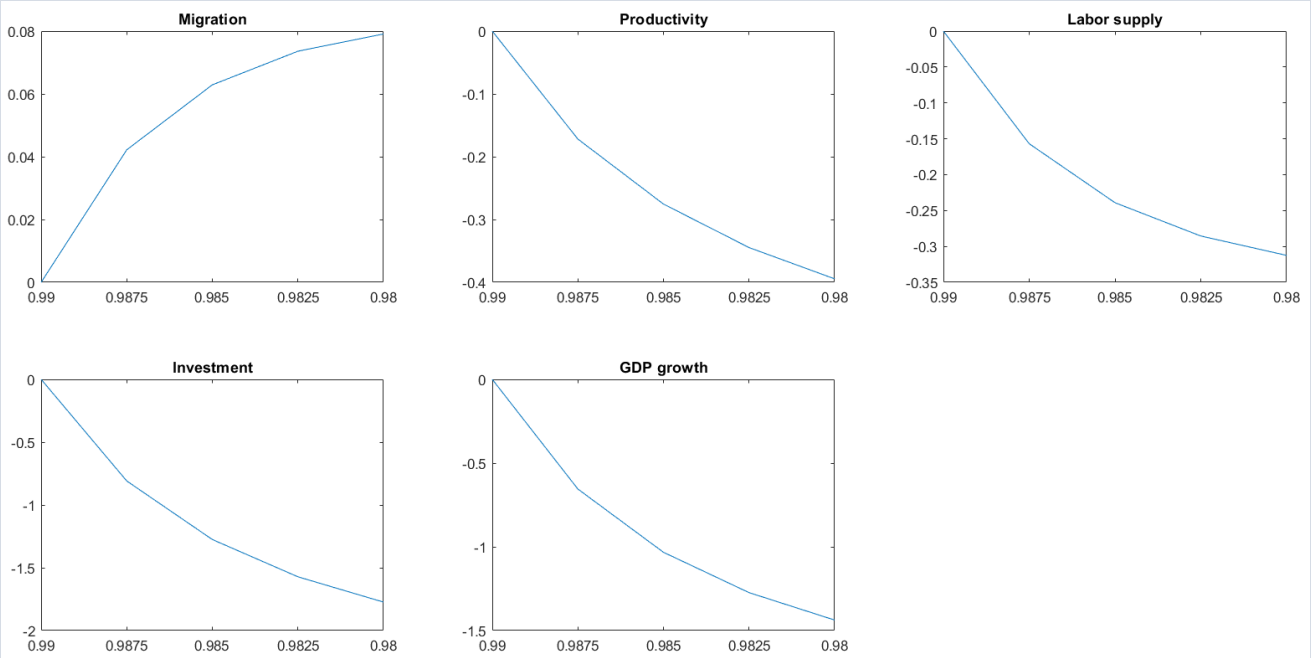
[18] *Those marked with are the variables of the rest of the world.*

This function is increasing with $\kappa \frac{\beta}{\beta^*} \frac{E_t w_{t+1}^h}{E_t w_{t+1}^*}$. *The equation shows that when the current value of future expected wages in Armenia decreases compared to the rest of the world, Armenian households are more prone to migration. The migration equation shows that when the planning horizon in Armenia is shrinking, or uncertainty is increasing compared to the rest of the world, households are increasing the migration levels.*

It is assumed that as a result of the military conflict in Artsakh, the level of uncertainty in Armenian households has increased, which has reduced their planning horizon. That is, in the above model, the increase in uncertainties is described by a decrease in β. For example, a decrease of β from 0.99 to 0.98 indicates that the duration of the household future planning horizon has dropped from 25 years to 12.5 years. Chart 27 shows the impact of growing uncertainty on the economy in the long run.

Chart 27

Impact of uncertainty on the economy



As a result of the decrease in β, households increase migration, due to which the supply of labor in Armenia decreases. As a result of the reduction of the planning horizon, the country's risk premium increases, as well as long-term investments in the economy decrease. Although estimates of the magnitude of the shock are currently unclear, under the assumption described above, when the planning horizon decreases from 25 years to 12.5 years, capital is reduced by about 1.7%. Reduction of capital, as well as migration leads to a reduction of labor force by about 0.3%. In addition to the above, as a result of increasing uncertainty, there is a certain non-optimal allocation of resources in firms, leading to a decrease in productivity. As a result, the growth of GDP potential is reduced by 1.4%, in which the capital contribution is 0.85%, the labor force contribution is 0.15%, and the productivity contribution is 0.4%.

Box 4[19]

Impact of Uncertainty on Private Savings

Increased uncertainty can have a significant impact on economic activity in both the short and medium term. The increase in uncertainty on economic entities is manifested by various mechanisms: increase in precautionary savings, decrease in investments and increase in risk premium[20].

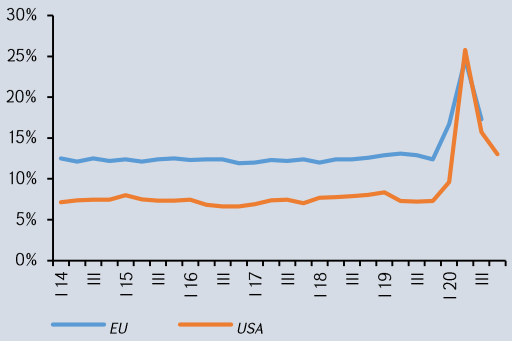
The spread of the pandemic around the world, including in Armenia, was accompanied by growing uncertainty and higher private savings, as a result of which private demand remained relatively subdued in the short run, as households' expectations for their future income became uncertain, and households reduced their current consumption to insure against possible future losses. Chart 28 shows that beginning from the second quarter of 2020, which basically coincides with the period of active spread of the pandemic, the level of private savings in the US and the EU grew remarkably, but decreased somewhat from the third quarter in light of the decrease in uncertainty. The latter, however, still remains above the pre-crisis level.

In Armenia, too, the spread of the pandemic since the second quarter of 2020 was accompanied by an increase in uncertainty and higher savings in the private sector (see Figure 29): The latter continued to grow strongly in the fourth quarter, conditioned by the military conflict in Artsakh, which, under the influence of additional uncertainties and psychological factors, further restrained private demand.

In terms of forecasting the macroeconomic environment, it is important to understand the scenarios for further adjustment of the high level of savings. The question should be discussed from two points of view: what is the behavioral basis or source of the formation of savings, and which part of the society has accumulated savings the most. Thus, in contrast to the United States, where the public, according to estimates, has largely saved money from the government's relatively large-scale measures[21], *the growth of savings in Armenia was mostly conditioned by consumption and investment deferrals under precautionary behavior. On the other hand, existing research shows that the growth of savings in the United States took place mainly among the poor and vulnerable*[22], *whereas, according to the Central Bank of Armenia projection, mainly based on model approaches, coronavirus in Armenia had a disproportionately negative impact on the incomes of particularly "vulnerable" part of the society,*[23] *probably also*

Chart 28

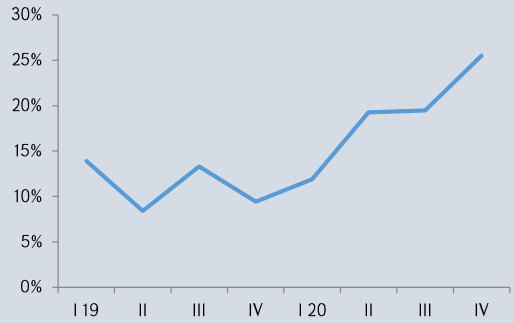
Private savings in disposable income



Source: FRED St. Louis Fed, Eurostat

Chart 29

Private spendings in GDP



Source: CBA assessment

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[19] *Prepared by Haik Karapetyan and Hasmik Kartashyan from Monetary Policy Department of the Central Bank of Armenia.*

[20] *See Inflation report for QII, 2020, Box 2. The Impact of Growing Uncertainty on the Economy Following the Example of the United States, 2020. https://www.cba.am/Storage/AM/downloads/parberakan/DVQ/Gnach_II_20.pdf*

[21] *Armantier Olivier, Goldman Leo, Koşar Gizem, Lu Jessica, Pomerantz Rachel, Van der Klaauw Wilbert, 2020. "How Have Households Used Their Stimulus Payments and How Would They Spend the Next?," Liberty Street Economics 20201013b, Federal Reserve Bank of New York. - https://libertystreeteconomics.newyorkfed.org/2020/10/how-have-households-used-their-stimulus-payments-and-how-would-they-spend-the-next.html*
Cobion O., Gorodnichenko Y., Weber M., 2020, "How Did U.S. Consumers Use Their Stimulus Payments?", NBER WP 27693 - https://www.nber.org/papers/w27693

[22] *https://www.jpmorganchase.com/institute/research/household-income-spending/household-cash-balances-during-covid-19-a-distributional-perspective*

[23] *See QIII 2020 inflation report, Box 1. Impact of coronavirus on the sectoral incomes of the economy in the Republic of Armenia. https://www.cba.am/Storage/AM/downloads/parberakan/DVQ/Inflation_III_2020.pdf*

reflected in the decline of their savings. From all this we can assume that if, for example, in the USA, where savings generated by the extra income of the poor can quickly turn into consumption, in Armenia, the probability of rapid adjustment is estimated as low, mainly as a result of generation of savings among the behavioral class with, apparently, low consumption propensity. In addition, the prolongation of uncertainties related to the overcoming of the coronavirus in developing economies compared to developed countries, as well as additional economic and political uncertainties in Armenia also indicate the possibility of a slower adjustment.

As a result, according to the Central Bank, it is expected that in 2021, along with the reduction of uncertainties, the level of private savings in Armenia will decrease to some extent, which will become an important source of economic growth by accelerating private spending, but will still be significantly above the pre-crisis level.

Forecast Risks

Current developments show that the level of coronavirus spread in the world remains quite high in a number of countries. While vaccine use is gradually increasing in many developed and some developing countries, which continues to convey some optimism to the markets, uncertainties about the future, both in the world and especially in developing countries, including Armenia, are still somewhat preserved, particularly considering the news of new coronavirus mutations. There are also additional uncertainties for the Armenian economy, because of the political and economic problems that emerged in the country as a result of the recent war and still exist, which also expand the risks around the baseline scenario. Overall, the persistent high level of uncertainty continues to be expressed in the form of wider ranges of uncertainty over inflation and other key macro-forecasts (See Charts 1 and 2, "Distribution of Inflation and Economic Growth Probabilities"). As before, in this case also, given the high uncertainties, only the most quantitatively substantial risks to the baseline scenario are presented below.

In terms of aggregate demand, the following risks stand out:

- External demand risks will be factored by the availability, coverage and effectiveness of coronavirus vaccines, as well as the amount and duration of expansionary monetary and fiscal policies in developing countries.
- Given lasting cautious consumer behavior there are risks of its further preservation in the long run, which will be manifested in the form of structural changes throughout consumption-savings

pattern, as well as shift of the demand from secondary to primary consumer goods. These developments may have an additional deterrent effect on aggregate demand and will put pressure on the further flow of investment in individual sectors, even lead to higher long-term losses in terms of the potential level of the economy.

- The impact of fiscal policy on aggregate demand largely depends on the state budget execution process. In case of higher-than-planned collection of taxes (due to increasing the efficiency of tax administration), revenues will have a certain contractionary effect against the estimated neutral impact. In case of public spending savings (currently estimated at about 2.5% of spending), spending will also have a contractionary effect. Given budget execution process of the previous years (average performance of public expenditures over the last 10 years compared to the adjusted program was 95.3%) and expenditure execution of the first two months of the current year, where shortfall of expenditures was observed, particularly in terms of external support, it can be assumed that further risks exist in terms of the full implementation of the expenditures approved by law.
- From the point of view of the volume of lending to the economy by the financial sector, due to the speed of balance sheet adjustments of financial institutions, there are risks of a strong decrease, and in case of their emergence, volumes of financial intermediation will be reduced, preventing the recovery of aggregate demand.

In terms of supply, risks to the inflation are as follows:

- In terms of supply in the short run, risks to the inflation are being assessed as balanced. Despite the lack of fundamental factors contributing to the depreciation of the dram in foreign exchange market, short-term risks of depreciation due to market participants' behavioral factors remain, fueling the short-term inflationary risks of imported goods, as well as local goods and services as a tributary impact.
- It is estimated that the previous increase in interest rates by the Central Bank is sufficient to curb the growth of inflation expectations against the background of current high level of inflation that was conditioned exclusively by supply factors, and to keep it in control. However, given that current uncertainties are high, there are risks that some economic entities may temporarily display more backward-looking behavior, that is, form expectations based on recent inflation indicators rather than future economic developments. Hence, it can be stated that there are upward risks to inflation expectations in the short run.

- In studying price dynamics of some product groups within current inflation in recent months, such factors as fast response of prices and growth of markups have been observed, which, according to the baseline scenario, will only be partially adjusted in the coming months. Still, there are bilateral risks associated with the extent and timing of their adjustment.
- Risks in commodity prices will depend on the speed with which the world economy recovers, as well as the actual effects of possible supply factors (e.g., crop volumes) in commodity markets.
- Under the actual developments of inflation and exchange rate, there are risks of revision of gas, electricity and other regulated tariffs.
- The decline in unit labor costs observed in recent months in the labor market due to the slowdown in wage growth may be of a more long-term nature, causing additional deflationary pressures during the year as a result of accelerated inflation and slow recovery of growth.

In the medium-term perspective, risks that inflation would deviate from the projection path are assessed as balanced and are rather sizeable quantitatively (see Chart 1: Inflation Forecast Probability Distribution).

In addition to the above-mentioned inflation risks, there are additional potential medium-term risks related to economic growth, which are two-sided and balanced. These risks, in particular, are associated with the following domestic factors:

- Basically upward risks related to the further operation of the Amulsar mine, Alaverdi copper smelter and Sotk gold mine.
- Uncertainties related to the duration of the pandemic, which can have a negative impact on the behavior of consumers and the business environment.
- Additional negative risks of investment reduction in case of prolongation or increase of economic and political uncertainties in Armenia.
- Probability of decrease of labor resources due to possible emigration of the population and the ensuing risks of potential growth shrinking.
- Uncertainties about government strategy for economic recovery, size and content of possible reforms, which can be considered as a balanced risk.

In general, as there is still a lot of uncertainty about further healthcare situation and political and economic developments, the Central Bank seeks to reduce the potential risks arising from these uncertainties through designing and discussing various scenarios for the development of the situation and considering the possibilities of response by respective policies, which will allow to react in accordance with the situation at the very first signs when these risks materialize.

3. ACTUAL DEVELOPMENTS IN Q4,2020

3.1. Inflation

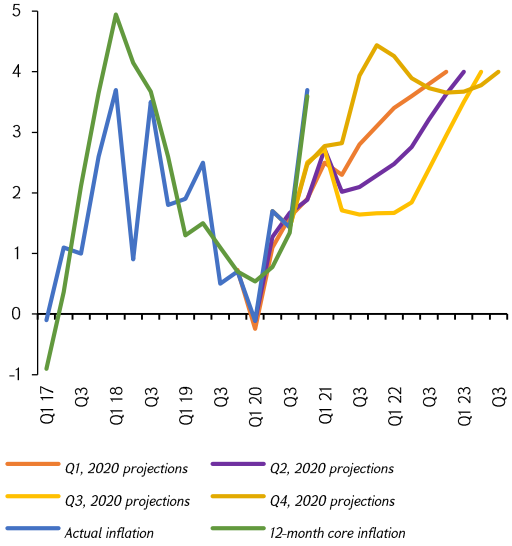
3.1.1. Fulfillment of the Inflation Target

The reporting period - the entire 2020 in this case - proved a rather difficult year for the world and, particularly, for Armenia, with a number of health and geopolitical developments and economic and social challenges which derived therefrom. Back in the beginning of the year, when the CBA was making MP program forecasts for the first quarter of 2020, the New Coronavirus rapidly spreading in the world started appearing in Armenia. In the program published, the CBA informed the public that the world was in a state of great uncertainty both in terms of healthcare and economic issues, the situation changing day by day, making any forecast, even the quantitative assessment of the current situation, strictly conditional, so the program was to be used mainly as a guide. According to the baseline scenario, the 12-month inflation would further stay low in the short run amid a significant decline in economic activity and weakening aggregate demand as a consequence of coronavirus pandemic and pandemic-driven restrictions; in the medium run it would approach and stabilize around the 4% target along with measures to conquer the pandemic and facilitate demand recovery.

In the reporting period, as expected, a low inflationary environment was shaped. In the second and third quarters of 2020, because of healthcare and economic restrictions imposed to overcome the coronavirus pandemic as well as the uncertainty about the economic outlook, a sharp decline in economic activity was observable, with significant reductions in all sectors of the economy. In such a situation, the Government implemented a considerably stimulative fiscal policy steered to providing social and economic support. However, in the midst of high uncertainty accumulated due to the pandemic, the people showed precautionary behavior. This has outpaced the fiscal stimulus, leading to weakened domestic demand and persistently low inflationary environment. It should be noted that the martial law announced in Armenia on September 27th as well as the new wave of coronavirus that broke out and spread rapidly in the meantime have added to uncertainties in terms of outlook to economic recovery and inflation developments in the fourth quarter. In addition, the expectations that global economic activity and external demand would rebound by the end of the year led to a significant increase in inflation environment in both the international commodity markets and the main partner countries to Armenia, under which inflationary pressures spilled over to the Armenian economy through a number of import food products. At the end of the year, as a result of the aforementioned

Chart 30

According to the Central Bank projections, 12-month inflation would still be low in the short-term and stabilize around the 4% target in the medium term



Source: NSS, CBA

developments as well as depreciation of the dram, inflation in Armenia grew higher than expected and inflationary expectations increased.

In a macroeconomic environment shaped under the developments described above, the 12-month inflation in the first three quarters has proved lower than expected, prompting the CBA to revise periodically the projection path of inflation downside. Already in the fourth quarter, however, the projection path of inflation to reach the target came in a short-term revision upside.

Using its main instrument – the 7-day repo agreements – the Central Bank has fully met the demand for dram liquidity in the domestic financial market which has grown high on the back of the Covid-19 pandemic and the declared martial law. Short-term market interest rates have responded appropriately to the policy rate changes, as they largely shaped around the policy rate. During the year, amid uncertainty related to the economic and political outlook, Armenia's currency market saw the dram depreciating to some extent. The CBA, while adhering to the floating exchange rate policy, has taken a small situational part in the foreign exchange market in ensuring the normal functioning of the financial market.

In the reporting period, in consideration of possible inflationary effects under a persistently weak aggregate demand, the Central Bank conducted a stimulative monetary policy. The CBA had the amount of stimulus increased by December, gradually reducing the refinancing rate by a total of 1.25 percentage points. At the end of December, taking into account some acceleration of inflation and inflation expectations under inflationary effects anticipated from the external sector as well as the increase in the country's risk premium, the Central Bank decided to raise, in a bigger step, the interest rate on the underlying instrument by 1.0 percentage point.

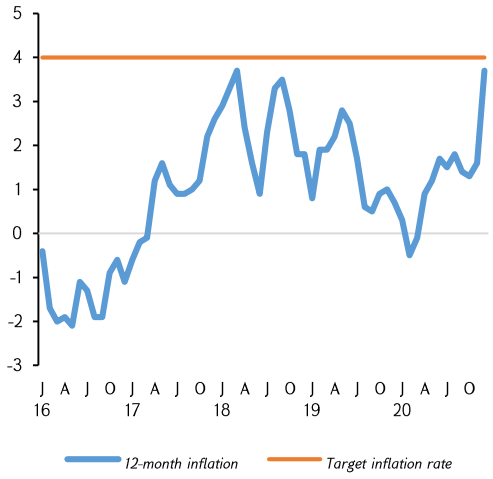
3.1.2. Prices

During the first quarter of 2020, 12-month inflation remained low, thereafter, showing some volatility, increased during the year, approaching the target at the end of the year. In particular, weak inflationary environment at the beginning of the year was mainly due to the strong deflation of seasonal food products, especially "Vegetables" and "Eggs". Starting from the second quarter of 2020, a certain recovery of inflation has been observed, which is a result of a certain growth in the prices of seasonal agricultural products, especially fruits.

Acceleration of inflation at the end of the year was conditioned by the acceleration of core inflation, which was mainly factored by the

Chart 31

Inflation has remained low over the last year, then, showing some volatility, has grown during the year, approaching the target at the end of the year.



Source: NSS

inflation of imported food and non-food products. The latter has borne the impact of both the rise in food prices in international markets and the depreciation of dram. As a result of the reduction of supply of relevant goods in international markets, inflation of "Bakery and Cereals", "Oils and Fats" and "Sugar" product groups in the Armenian economy was sizeable. The growth of international energy prices has had its impact on the year-end rise in fuel prices. The rise in prices for pharmaceuticals also contributed significantly to the 12-month inflation, which was almost entirely due to the high demand during the pandemic. Especially at the end of the year, the sharp increase in air transport tariffs contributed to the acceleration of core inflation, which was reflected in the easing of air communication restrictions applied by some countries to prevent the pandemic. Tariffs for regulated services underwent minor inflation during the year, recording a 1.0% year-on-year growth.

At the beginning of 2020, inflationary impact of the change in customs tariffs of some product groups, amounted to about 0.2 percentage points, which was in line with the projected level, whereby the rise in prices for "Tobacco Products" and "Alcoholic Beverages" still continues to be affected by the inflationary impact of changes in excise tax rates at the beginning of the year.

Table 4

Consumer price inflation by commodity items as key contributors

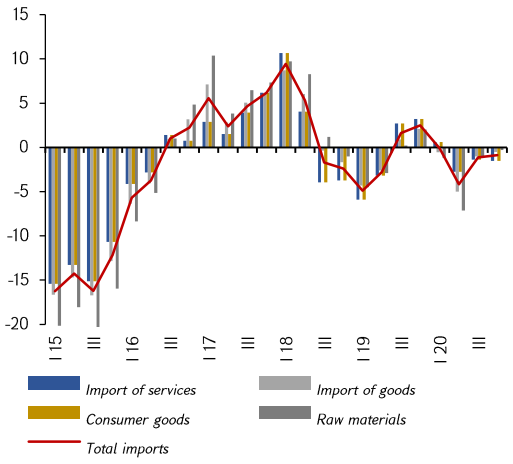
Designation	**Weights**	**12-month inflation**	**Contribution**
Core inflation	**72.7**	**3.63**	**2.64**
Bread and cereals	7.73	7.37	0.58
Meat	9.58	-0.57	-0.05
Oils and fats	2.37	13.15	0.31
Sugar	0.53	38.12	0.20
Alcoholic beverages	2.79	12.27	0.34
Tobacco	1.39	6.63	0.09
Clothing	2.45	0.12	0.00
Footwear	1.33	0.49	0.01
Medicines and health products	4.62	5.82	0.27
Fuel	5.29	2.93	0.15
Air passenger transportation services	0.48	35.47	0.17
Education	3.14	2.03	0.06
Hospital services	2.66	1.37	0.04
Outpatient care services	2.37	2.84	0.07
Seasonal food products	**11.47**	**7.53**	**0.86**
Eggs	1.15	18.51	0.21
Fruits	4.19	11.38	0.48
Vegetables	6.13	2.84	0.17
Regulated services	**15.88**	**1.01**	**0.16**

Import prices: During the fourth quarter of 2020, the acceleration of food inflation in the global economy was reflected in the increase of RA import prices. Armenian import prices in USD terms grew by 1.1% as compared to the previous quarter, as a result price decrease rates continued to slow down compared to the same period of the previous year and totaled 0.9% year-on-year. During the fourth quarter, prices of both consumer goods and intermediate consumer goods in USD terms have grown.

As for the developments over the same period of the previous year, the 0.9% decrease was mainly due to the lower level of oil prices compared to the previous year (average oil prices are still 28.0% lower than last year's average): The decrease in consumer goods prices compared to the previous year was mainly conditioned by the depreciation of the nominal exchange rates of the Russian ruble. The y/y decline in oil prices offset the y/y growth of prices for other goods.

Chart 32

In Q4 2020, the decline in dollar prices for imports of goods and services slowed down compared to the same quarter last year, y/y, %



Source: CBA estimates

3.2. Economic Developments

3.2.1. Economy Position

In the reporting quarter, the GDP gap lingered in a negative territory. Economic decline in the fourth quarter of 2020 totaled 8.8%, mainly as a result of the decline in private demand (see Section 3.2.2) and reflecting the decisions to postpone private spending in light of the epidemic and the sharp increase in uncertainty conditioned by the military conflict in Artsakh. Subsequently, the GDP gap remained in the negative range of the previous quarter and had a deflationary effect on the consumer market, although overall inflation accelerated, mainly due to supply factors (see Section 2.2.1). The stimulating effect of the state budget and the growth of remittances in the fourth quarter played a positive impact on GDP gap and offset the decline in private demand to some extent.

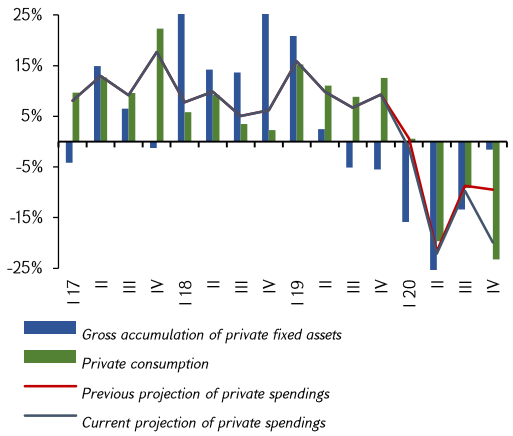
Economic decline in the fourth quarter of 2020 totaled 8.8%, mainly as a result of the decline in private demand.

3.2.2. The Expenditure Aspect of the Economy

8.8 percent economic downturn in the fourth quarter of 2020 was largely driven by declining private spending, which was deeper than previously projected. The decline in private spending was 19.9% and was conditioned by 23.3% and 1.6% decline in private consumption and private fixed assets, respectively. It should be noted that in the fourth quarter, in light of the spread of pandemic and military conflict in Artsakh, there was a sharp increase in uncertainty, which affected the consumption and investment decisions of economic agents. However,

Chart 33

Private spending structure *(y/y growth)*



Source: NSS, CBA estimate

compared to previous projections, the impact of the uncertainty was considerably higher, and was mainly reflected in the delay in private consumption and the larger-than-expected increase of private savings. Another reason behind the low private consumption was the slowdown in lending to the economy amid the emerging risks. The decline in the accumulation of private fixed assets was milder, mainly due to more-than-expected positive developments in the construction, which, according to estimates, will not last long, as the growth there is mainly due to the development of construction activity in one sub-sector of the economy and is not widespread.

According to the Central Bank estimates, private demand had a larger-than-expected deflationary impact on the consumer market, and the acceleration of inflation in the reporting quarter was mainly due to supply factors.

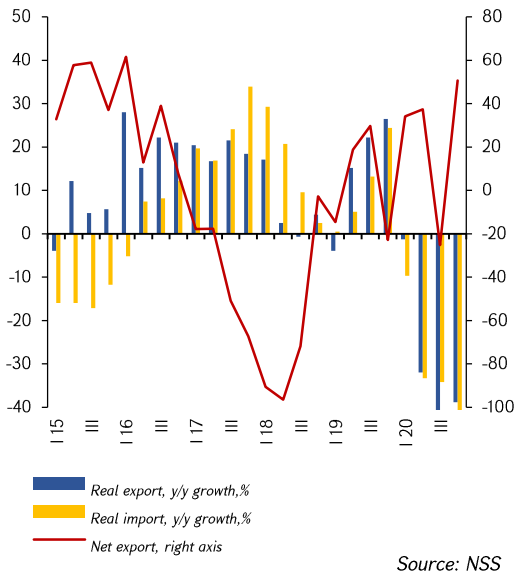
The slow recovery in global and domestic economies in the fourth quarter of 2020 was reflected in export and import recovery behaviors, which was almost in line with the Central Bank projections. In light of higher-than-expected global economic recovery, exports recovery was somewhat higher than projected by the Central Bank. Compared to the projections of the Central Bank of Armenia, the recovery of imports has slowed down because of the slower-than-expected recovery of the domestic economy. At the same time, year-on-year decrease in real volumes of imports of goods and services in the fourth quarter exceeded year-on-year decrease in real exports of goods and services. Subsequently, net real export contribution to GDP in the fourth quarter was positive.

In Q4 2020, decline in real exports of goods and services totaled 38.8% year-on-year, while decline in real imports of goods and services 42.4% year-on-year. The decline in exports in the fourth quarter was due to the slow recovery in global demand, as well as low levels of tourism exports. The small number of international flights to Armenia combined with the uncertainties stemming from the martial law in Armenia were reflected in the low level of tourism exports. The decrease in imports was conditioned by the decline in domestic private demand and the low level of tourism imports. The low level of tourism imports was in turn the result of the small number of flights, as well as additional costs in terms of prices and healthcare needs, if any. In 2020, the overall real decline in exports and imports of goods and services totaled 31.4% and 32.1%, respectively.

In Q4 2020, net remittances of individuals (including seasonal workers' income and personal transfers) in US$ terms are estimated to decrease by 3.6% year-on-year, which will be almost in line with the Central Bank's projections made in the previous quarter. Structural shifts by countries in remittances continued in the fourth quarter as well when the decline in remittances from Russia was offset by an unprecedented growth in remittances from the United States and

Chart 34

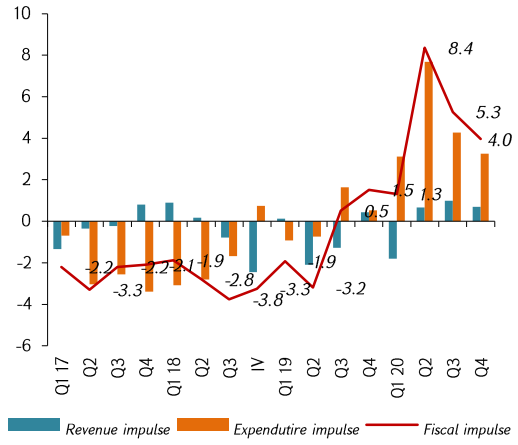
Net export position improved in Q4 2020, due to the higher decrease of imports compared to exports (net real exports, y/y, positive value means improvement)



Source: NSS

Chart 35

Expansionary impact of fiscal policy in the fourth quarter of 2020 is mainly due to increased spending



Source: CBA estimates

Other countries (as a group). The decrease in remittances from Russia was mainly caused by migration restrictions that have been in place since the first quarter.

As a result of the above developments, in the fourth quarter of 2020, according to estimates, the current account deficit/GDP ratio decreased by about 11.0 percentage points due to the improvement of the trade balance, as well as the high growth of private transfers.

***Fiscal Policy*[24].** In Q4 2020, the actual budget revenues deviated from the Central Bank's projections towards higher collection, while expenditures were in line with the projections[25]. Subsequently, the impact of fiscal policy on aggregate demand for the quarter was 4.0 percentage points expansionary, against the projected 5.6 percentage point expansionary. This is due to the less expansionary impact of higher revenue collection and the revision of the actual economic growth rate.

In Q4 2020, the actual budget revenues amounted to 106.1% of the adjusted program[26], mainly due to higher tax revenues. In addition, in the fourth quarter, the Unified tax account also increased (about 17.6 billion drams), which, was included in the calculation of impulse as amount actually collected from the economy. As a result, the revenue impulse was smaller than the projected 2.6 percentage point expansionary, expanding by 0.7 percentage points. In the fourth quarter, the grants target was also exceeded, amounting to 48.4 billion drams, due to a number of grants received for budget support.

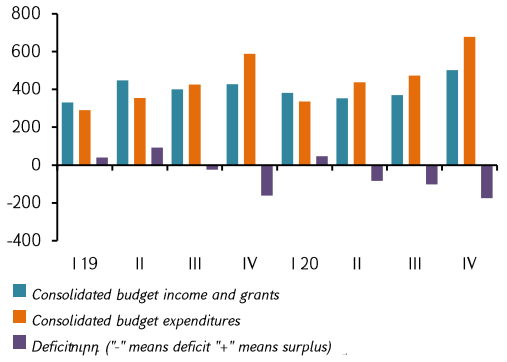
State budget expenditures in the fourth quarter were within the projection of the Central Bank, but net lending was lower than projected. As a result, the expenditures impulse was 3.3 expansionary instead of the projected 3.0 expansion (due to net lending underperformance). Within the structure of state budget expenditures, shortfall in some items against the Central Bank projection was observed, while ***public consumption*** surpassed the projected level by 11.1%, partly due to implementation of anti-crisis programs in light of the spread of coronavirus and the growth of health expenditures. Actual expenditures ***on non-financial assets*** were also significantly higher than projected by the Central Bank, with an increase in domestic financing, particularly in the defense sector.

As a result of the above-mentioned developments in revenues and expenditures, a state budget deficit of 179.1 billion drams was shaped in the fourth quarter, lower than projected by the Central Bank due to higher revenue collection and higher grants.

The impact of fiscal policy on aggregate demand for the quarter was 4.0 percentage points expansionary, against the projected 5.6 percentage point expansionary.

Chart 36

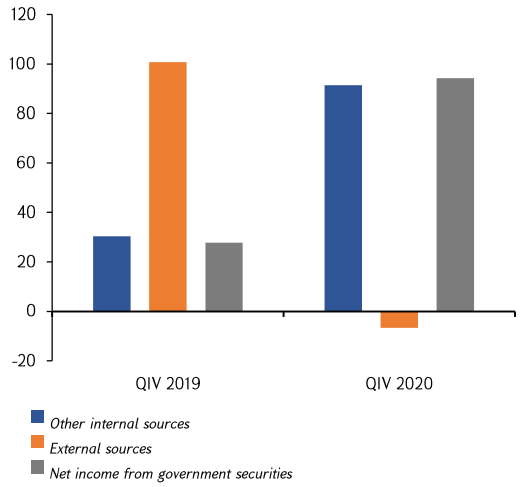
Main indicators of the consolidated budget (AMD billion)



Source: NSS

Chart 37

In QIV 2020, the state budget had a deficit, and the share of domestic funding sources within funding sources grew *(AMD billion)*



Source: Ministry of Finance

[24] *The review of the fiscal sector used actual consolidated budget indicators at the fourth quarter of 2020.*

[25] *The revenue plan was based on the currently adjusted program of the Government of the Republic of Armenia for 2020. Expenditure projection is the Central Bank estimate.*

[26] *Under the government-adjusted quarterly plan, taxes were reduced in line with economic downturn estimates and in terms of a more pessimistic scenario.*

To sum up, the expansionary impact of fiscal policy in the fourth quarter of 2020 in terms of demand and inflation was lower than expected.

Debt financing from internal sources is largely due to net inflows from the placement of treasury bonds.

As for the main annual indicators of the state budget, the total state budget revenues totaled AMD 1,560.4 billion, shrinking by 0.3% as compared to the same period of the previous year, and the state budget expenditures totaled AMD 1,894.3 billion, growing by 16.3% as compared to the same period of the previous year.

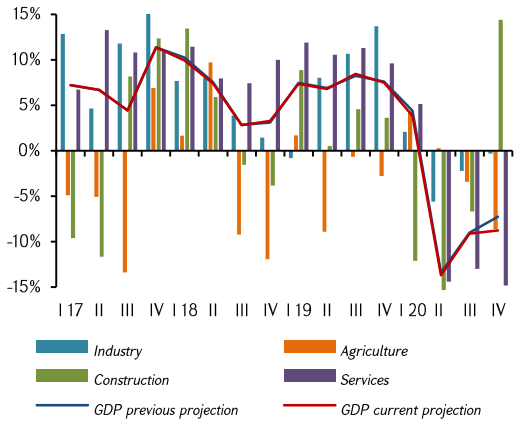
As a result, in 2020 state budget deficit of 333.9 billion drams was recorded, and the impact of fiscal policy on aggregate demand was 4.7 percentage points stimulative due to the expansionary impact of spending.

3.2.3. Output Aspect of the Economy

In the fourth quarter of 2020, the GDP decline totaled -8.8%, which was more profound than the Central Bank projection. Some shifts were observed at the sectoral level too. In particular, a larger-than-expected decline was observed in the agricultural sector, amounting to -8.6%. Despite the increase in output, consumption was low, as a result of which the value added decreased. Decline in the services sector reached -14.8%, which was mainly due to the substantial drop in the sub-sectors of culture, entertainment and leisure, trade, accommodation and public catering. This was mainly caused by spread of the epidemic and the military conflict in Artsakh, which was reflected in the delay in private consumption in the face of a sharp increase in uncertainty, as well as a significant reduction in international tourism since the second quarter. Due to the growth in the sub-sector, a smaller-than-expected -0.3%, decline was observed in the industry. Although in the reporting quarter a decline was observed in the mining sub-sector, due to the availability of inventories the growth in the manufacturing still remained high. Impressive growth of 14.4% was observed in the construction sector, which was conditioned by the large increase in the volume of construction carried out at the expense of the state budget starting from the third quarter.

Chart 38

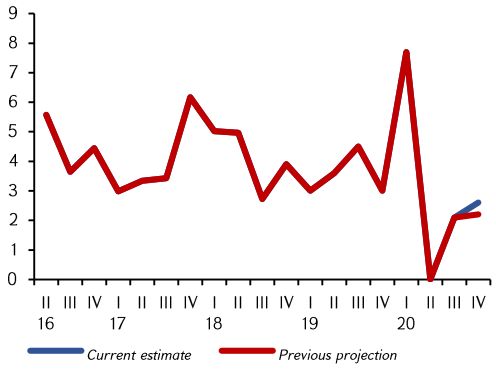
GDP Sectoral Structure *(y/y growth, %)*



Source NSS, CBA estimate

Chart 39

Private nominal saalries *(y/y growth, %)*



Source: NSS, CBA estimate

3.2.4. Labor Market

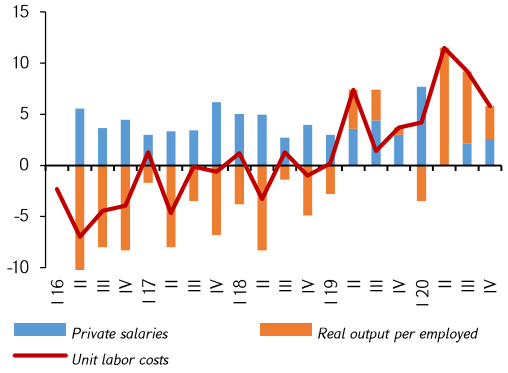
In the fourth quarter of 2020 the growth rate of nominal wages in the private sector is estimated at 2.6%, which is slightly higher than the Central Bank's previous projections, due mainly to higher-than-expected consumer price level. However, the growth rate of real wages of the private sector in the fourth quarter remained low and amounted to about 0.6%.

Unemployment is estimated to have risen slightly to 19% in the fourth quarter of 2020, in line with previous projection of the Central Bank. It is also partly influenced by the end of the Government's job support programs. According to estimates, the slowdown in economic growth and productivity in recent quarters has been accompanied by the decrease of hours worked[27] rather than the decline in employment, as a result of which unemployment growth in the reporting quarter is estimated to be small.

During the reporting period, the growth of enterprises' unit labor costs slowed down somewhat, but still remained high at 5.8%, reflecting the acceleration of private wage growth relative to declining output per unit of labor. As a result, inflationary pressures from the labor market remain, but have weakened considerably in the reporting quarter.

Chart 40

Unit labor costs *(y/y growth, %)*



Source: NSS, CBA estimate

Given the projected acceleration of inflation under the expected inflationary effects of the external economy and growth of the country's risk premium, at the end of the fourth quarter of 2020, the Central Bank Board raised the refinancing rate by 1.0 percentage point to 5.25%.

3.3. Financial Market Developments

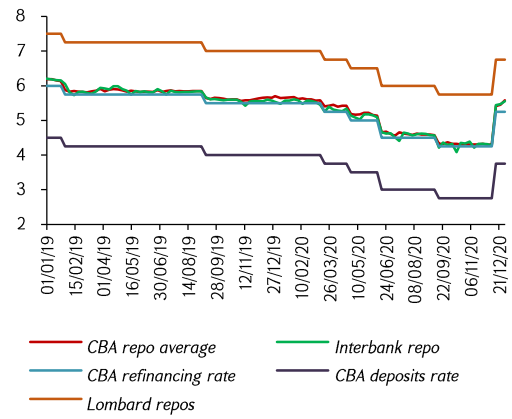
Given the projected acceleration of inflation under the expected inflationary effects of the external economy and growth of the country's risk premium, at the end of the fourth quarter of 2020, the Central Bank Board raised the refinancing rate by 1.0 percentage point to 5.25%.

Table 5

Average quarterly interest rates in Armenia's financial market								
Indicators	**25.01.20-17.03.20**	**18.03.20-28.04.20**	**29.04.20-16.06.20**	**17.06.20-28.07.20**	**29.07.20-15.09.20**	**16.09.20-27.10.20**	**28.10.20-15.12.20**	**16.12.20-02.02.21**
Central Bank refinancing rate (end of quarter)	5.50	5.25	5.00	4.50	4.50	4.25	4.25	5.25
Central Bank repo rate	5.63	5.42	5.19	4.64	4.60	4.33	4.31	5.47
Interbank repo rate (up to 7-day)	5.51	5.28	5.08	4.58	4.50	4.25	4.29	5.49
Yield of government securities on a yield curve (as of end-quarter)								
Short-term treasury bill (1 year)	5.81	5.80	5.84	5.57	5.63	5.59	5.94	6.6
Medium term notes (5 year)	6.81	7.00	7.01	6.94	6.96	6.92	7.36	8.18
Long-term bonds (30-year)	9.76	10.04	8.67	8.53	8.54	8.71	8.98	9.32

Chart 41

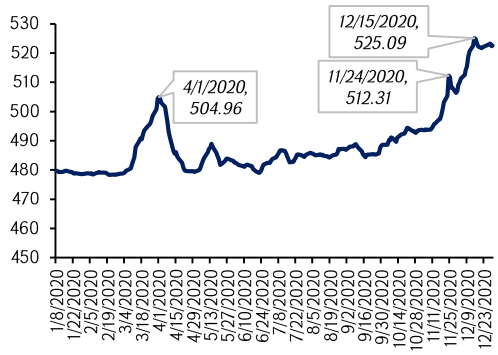
During the quarter short-term interest rates continued to stay around the CBA policy interest rate



Source: CBA

Chart 42

USD/AMD exchange rate dynamica in 2020



Source: CBA

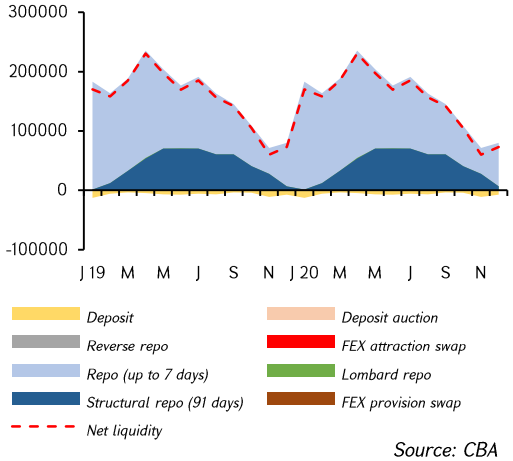
[27] *The decrease in average hours worked is estimated at about 3.7%.*
[28] *Productivity In unit labor costs is represented by a negative contribution.*

Based on forecasts of some acceleration of inflation and inflation expectations, stimulative stance of monetary policy was maintained even in the contest of increasing policy interest rate by the Central Bank in the fourth quarter, which, together with the fiscal stimulus, should have contributed to the further recovery of the weak domestic demand under the new wave of coronavirus and additional uncertainties amid martial law declared in Armenia. The CBA Board also assessed the need to gradually reduce monetary stimulus in the forecast horizon, expecting a deterrent impact on accelerating inflation expectations, partly deriving from rising interest rates in the financial market.

Demand for monetary and foreign exchange liquidity grew in the financial market during the fourth quarter amid political uncertainty. The Central Bank continued to inject necessary liquidity to the banking system through its main instrument, promoting formation of short-term interest rates around the CBA policy interest rate. Given the uncertainties that emerged during the quarter, there was an increase of volatility in currency market, as the Armenian dram had a certain depreciation during the quarter. The AMD/USD quarterly average exchange rate depreciation totaled 3.54%. Continuing to adhere to the floating exchange rate policy, but at the same time emphasizing the importance of sustainability of financial market, the Central Bank had twice intervened slightly in foreign exchange market with the view mitigating the stock market volatility during the quarter, announcing it in advance. Net sales by the Central Bank for the quarter amounted to USD 110.85 million. In addition, the Central Bank used currency swap tool in order to meet demand for currency liquidity.

Chart 43

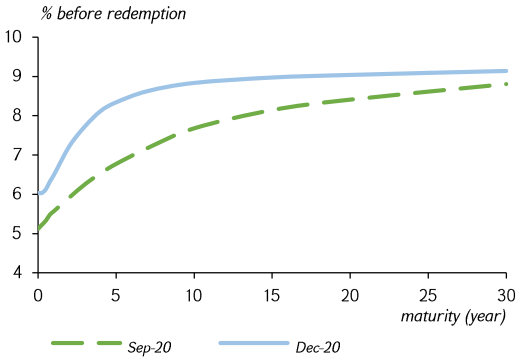
Liquidity absorbed and injected through CBA transactions (average monthly stock), AMD million



Source: CBA

Chart 44

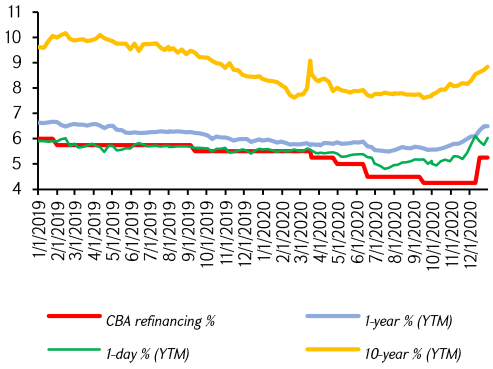
During QIV, 2020 yields in the government bond market grew along the entire curve



Source: CBA

Chart 45

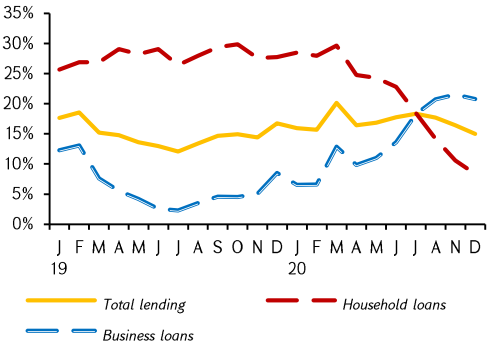
Dynamics of the CBA refinancing rate and government securities yields



Source: CBA

Chart 46

Dynamics of 12-month growth of lending provided by banks



Source: CBA

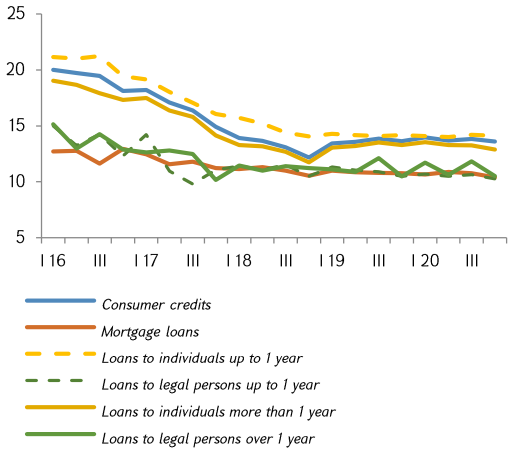
[29] *The names of the transactions are indicated from the banks' perspective. For example, in the case of a foreign exchange swap, a commercial bank attracts foreign currency from the Central Bank and provides AMD to the Central Bank.*

Amid the uncertainties, the decisions of financial market participants on investing in government bonds were quite cautious. Low bond demand and under-placement were accompanied by a gradual growth in bond yields over almost the entire quarter. Yields increased along the government bonds yield curve, at the end of the quarter also partially affected by the CBA policy rate hike.

The impact of pessimistic expectations of economic activity on lending volumes in the fourth quarter of 2020 also alleviated with the implementation of state support programs. As a result of the strict approaches set by banks in the consumer lending market, the volume of loans to households has continued to plummet.

Despite a slight slowdown in lending rates, overall lending grew during the quarter, reaching a 12-month increase of 14.3% in December 2020. As for interest rates on deposits and loans, the impact of the CBA policy has not yet been evident there.

Chart 47
Dynamics of interest rates on AMD loans



Source: CBA

4. SUMMING UP

According to the monetary policy program of the Central Bank for the first quarter of 2021, 12-month inflation will continue to grow somewhat in the near future, mainly due to inflationary effects transmitted from the external sector, and in the medium term, in the environment of weak domestic demand, prices will be adjusted downwards, ***and inflation will stabilize around the target***. To this situation, the Central Bank continues to maintain a stimulative stance of monetary policy. At the same time, monetary policy will continue to be aimed at neutralizing any risk of accelerating inflation expectations, without harm, as much as possible, to recovery of domestic demand.

The risks of deviating from the projected inflation trajectory are balanced in the forecast horizon, and in case of their emergence the Central Bank is ready to respond accordingly to ensure the achievement of the goal of price stability in the medium term.

BOARD MEETING OF THE CBA

MINUTES (16.03.2021)

On the Refinancing Rate

The CBA Board Meeting of March 16, 2021 attended by CBA Governor Martin Galstyan, Deputy Governors Nerses Yeritsyan and Vakhtang Abrahamyan, and Board Members Hasmik Ghahramanyan, Arthur Stepanyan, Oleg Aghasyan, Hovhannes Khachatryan and Davit Nahapetyan

The Board meeting opened with a report of the situation as of March 16. It addressed the developments on inflation, external environment, and real, fiscal, financial and monetary sectors of the economy in the context of the continuing outbreak of the coronavirus, and major uncertainties related to the economic prospects.

It was noted that in February 2021, 0.6% inflation was recorded, compared to 0.2% deflation in the same month of the previous year. Subsequently, ***the 12-month inflation continued to grow and at the end of the month totaled 5.3%***, approaching the ceiling of the confidence band. ***The 12-month core inflation*** grew concomitantly, totaling ***5.5%*** by the end of February. Among the main commodity groups, during the month, the prices for food and non-alcoholic beverages grew by 0.6%, non-food products by 1.0%, and tariffs for services by 0.1%.

The developments of the foreign sector in the first quarter of 2021 were presented, according to which trends of economic activity and demand recovery in the main partner countries continued. It is expected that they will continue in the medium term too, due to the implementation of expansionary monetary and fiscal policies in those countries. According to projections, by the second half of 2021, the widespread impact of the coronavirus vaccine will mitigate negative impacts of the pandemic in developed countries and by the end of the year, in developing countries. Due to the positive expectations of global demand on one hand, and a number of supply factors on the other, inflationary tendencies in the main commodity markets persisted, contributing to the formation of a higher-than-expected inflationary environment in partner countries. However, as inflation in the US and the Eurozone remains below target, the central banks of these countries will continue to pursue expansionary monetary policy,

whereas the Central Bank of Russia will gradually switch to a neutral monetary policy during the year to curb inflation-driven inflation expectations. In the current situation, under the medium-term expansionary policies implemented in developed countries, prices in the international commodity and food markets throughout the forecast horizon will be shaped at a high level.

As for the economic situation in Armenia, the developments of the fourth quarter were summed up and it was noted that in light of the new outbreak of the epidemic, martial law declared in Armenia and increased uncertainties related to economic development prospects, lower than expected economic activity was observed in the fourth quarter, the main reason for that being the lower output in services and agriculture, by 14.8% and 8.6%, respectively. Low economic activity continued in the first quarter of 2021, as the economy continued to suffer from the decline in the services sector, which, in turn, was the result of sluggish domestic demand and low private consumption. In the first quarter, domestic demand was constrained by cautious behavior of the public in face of great uncertainty and slowdown in lending to the economy, which was to some extent offset by the Government's implementation of the expansionary fiscal policy during that period and the impact of larger-than-expected remittances inflow.

The Board discussed the situation in the financial market of the Republic of Armenia in the first quarter and noted that the short-term market interest rates adequately responded to the recent increases in the policy interest rate by the Central Bank, settling mainly around it. Yields on the government bond market grew in January, especially across the long-term section of the curve, but since February they started to drop, approaching year-end levels, reflecting developments in market expectations and risk assessments. At the beginning of the year, interest rates on loans and deposits in the banking system also grew, whereas growth rates of lending to the economy by the banking system continued to slow down due to the contraction of almost all types of loans, with the exception of mortgage lending, the growth of which is upheld due to the Government's plan for the refund of interest on income tax.

The Board reviewed inflation developments in the economy of Armenia during the first quarter, noting that both general and core inflation continued to accelerate simultaneously. According to estimates, inflation developments in recent months have been mainly influenced by supply factors, i.e. transfer of prices from international commodity and freight markets to domestic prices, as well as the depreciation of the Armenian dram. Following the discussion, it was

concluded that the impact of these factors has already been maximized by the one-time price adjustment, which will keep the 12-month inflation high in the short run, and then, with weak domestic demand, prices will adjust downwards and stabilize around the target in the forecast horizon. At the same time, it was noted that, in parallel with inflation, inflation expectations rise to some extent, which, partly as a result of the previous actions of the Central Bank, are considered as manageable and are mainly anchored.

An extensive discussion took place on the principles of monetary policy pursued by the Central Bank in the current situation and the importance of making them more accessible to the public. Under the inflation targeting strategy, the Central Bank pursues a future-oriented monetary policy, which means that decisions on refinancing rates are made on the basis of projected inflation and also affect future inflation, and the impact of the current actions on the actual inflation is limited. It has already occurred as a result of previous decisions, which were based on certain assumptions and expectations regarding those developments. In this context, it was noted that the Board, anticipating some acceleration of inflation and inflation expectations due to supply-side factors and in line with the principle of future-oriented monetary policy, significantlytightened monetary terms in December and February, raising the refinancing rate by a total of 1.25 percentage points.

Following a discussion of the situation report and external and domestic macroeconomic developments, the Board proceeded to addressing the monetary policy directions and making decision on the policy rate. ***The Board reviewed the proposal to rise the refinancing rate by 0.5 percentage points***, on the grounds that, although the acceleration of inflation is mainly due to the short-term impact of supply, but at the same time, inflationary expectations are rising among the public, which need to be addressed. At the same time, as a result of the discussions on the macroeconomic situation in the foreign and Armenian economies, inflation developments and the signals transmitted by their policies, the CBA Board concluded that the recent sharp tightening of monetary conditions was an important and sufficient step to curb inflation and inflation expectations, and the need for additional tightening in a sluggish demand environment can probably be avoided at present by triggering communication measures to curb inflation expectations. In view of the above, ***the CBA Board unanimously decided to leave the refinancing rate unchanged***, at the same time noting that the monetary policy will be aimed at neutralizing any risk of accelerating inflation expectations in the near future, without harm, as much as possible, to recovery of domestic

demand. Under such conditions, it is projected that the 12-month inflation, after some acceleration in the near future, will decrease in the forecast horizon and stabilize around the target of 4%.

The Central Bank Board noted that the risks of inflation deviation from the projected medium-term forecast under the high uncertainty of economic outlook are balanced, and in case of their emergence are ready to respond accordingly, in fulfilment of the objective of price stability.

The Board approved interest rates of monetary instruments of the Central Bank and the proposed press release, which are attached hereto.

THE CENTRAL BANK OF THE REPUBLIC OF ARMENIA

BOARD DECISION

Interest Ratesof the Republic of Armenia Central Bank Operations in Financial Market

By virtue of Article 2.3 (20) "c" and "f" of the Republic of Armenia law "On the Central Bank", and provisions of the Republic of Armenia law "On Normative Legal Acts", the Board of the Republic of Armenia Central Bank, herewith enacts:

1. Set the refinancing rate of the Central Bank of the Republic of Armenia at 5.5%.

2. Set the lombard repo facility rate offered by the Central Bank of the Republic of Armenia at 7.0%.

3. Set the deposit facility rate offered by the Central Bank of the Republic of Armenia at 4.0%.

4. This decision shall enter into force on the day following the day of its publication on the website of the Central Bank of the Republic of Armenia.

Martin Galstyan,
Governor of the Central Bank

March 16, 2021

PRESS RELEASE
16.03.2021

At the March 16, 2021 meeting, the Board of the Central Bank of Armenia decided to leave the refinancing rate unchanged, on a 5.5% level.

In February of 2021, inflation stood at 0.6% compared to 0.2% deflation recorded in the same month of the previous year, in which case the 12-month inflation and core inflation have increased to 5.3% and 5.5%, respectively, at the end of the month, mainly due to the effects transmitted from international commodity markets and the dram depreciation.

The economic activity and demand recovery trends continue in the main partner countries to Armenia during the first quarter of 2021, and this is expected to persist in the mid-term horizon, mostly fueled by the implementation of expansionary monetary and fiscal policies in those countries. Positive expectations about recovery of global demand, as well as a number of supply factors, continue to drive the price increases in the international food and commodity markets. This also contributes to a higher-than-expected inflationary environment in the partner economies. In such a situation, the Board of the Central Bank of Armenia still anticipates an inflationary impact on the Armenian economy from the external sector.

The economic downturn in Armenia in the fourth quarter of 2020 somewhat exceeded the forecasts presented in the previous monetary policy program, mainly due to reduced activity in services and agriculture sectors. In the first quarter of 2021, the economic activity remains sluggish, which is still mainly caused by the decline in services sector, reflecting the impact of persistent weak demand and low private consumption. Notwithstanding the small expansionary fiscal policy, domestic demand is expected to remain somewhat subdued in the near-term future amid existing uncertainty and slowdown in the lending growth. Under such conditions, the Board of the CBA is not anticipating inflationary effects from the domestic economy.

Back in December, forecasting some acceleration of inflation and inflation expectations due to supply factors, the Board of the CBA substantially tightened the monetary conditions. Taking the above into account and given the persisting environment of weak demand, the Board of the CBA finds it reasonable to leave the current policy rate unchanged. The Board agrees that in the near future as well, the monetary policy will target the neutralization of any risks of acceleration in inflation expectations, while trying to minimize the possible negative impact on the domestic demand recovery. As a result, after a certain acceleration in the near future, the 12-month inflation is projected to decrease and stabilize around the 4% target in the forecast horizon.

The Board of the CBA reckons that, under high uncertainty over the economic outlook, the risks of inflation deviating from the mid-term projection path are balanced; if such risks materialize, the Central Bank stands ready to react accordingly, in fulfilment of the objective of price stability.

Detailed information underlying the decision on the level of interest rate is available in Inflation Report (Monetary Policy Program for the first quarter of 2021) to be published by March 30, 2021.

ARMENIA: SELECTED MACROECONOMIC INDICATORS

Items	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	actual	actual	actual	actual	actual	actual	actual	actual	program	program	program
Prices											
Inflation *(y/y, end of period, %)*	5,6	4,6	-0,1	-1,1	2,6	1,8	0,7	3,7	5,4	4,4	3,7
Consumer price index *(y/y, average, %)*	5,8	3,0	3,7	-1,4	1,0	2,5	1,5	1,2	5,4	4,6	3,6
Core inflation *(y/y, average, %)*	5,8	1,9	5,1	-2,0	0,8	4,0	1,2	1,3	6,7	3,7	3,0
Gross product											
GDP *(billion Armenian dram)*	4555,6	4828,6	5043,6	5067,3	5568,9	6017,0	6569,0	6183,7	6485,6	6782,4	7348,5
GDP *(%, real growth)*	3,3	3,6	3,2	0,2	7,5	5,2	7,6	-7,6	1,4	1,5	4,2
Supply											
Industry *(%, real growth)*	6,3	-0,9	6,2	7,7	11,7	4,9	8,3	-1,5	0,7	2,8	5,2
Agriculture *(%, real growth)*	7,6	6,1	13,2	-5,0	-5,1	-6,9	-2,6	-4,0	2,7	1,4	2,8
Construction *(%, real growth)*	-7,4	-4,5	-3,1	-14,1	2,8	0,6	3,7	-6,6	4,7	2,8	3,4
Services *(%, real growth)*	3,1	6,7	1,6	3,2	10,6	9,1	10,7	-10,2	1,2	1,0	4,0
Taxes, net *(%, real growth)*	3,6	1,8	-5,1	-3,7	9,7	8,0	7,1	-10,0	0,4	0,9	4,8
Demand											
Consumption *(%, real growth)*	2,3	1,2	-6,0	-2,1	11,6	3,8	11,8	-10,2	1,8	1,5	4,1
Public consumption *(%, real growth)*	7,6	-1,2	4,7	-2,4	-2,1	-3,0	12,5	15,6	-10,9	1,2	1,5
Private consumption *(%, real growth)*	1,7	1,6	-7,5	-2,1	14,0	4,8	11,7	-14,0	4,5	1,5	4,6
Gross accumulation of fixed assets* *(%, real growth)*	-7,0	-2,2	2,5	-11,4	9,7	4,8	4,4	-8,6	0,0	1,6	1,6
Public investment** *(%, real growth)*	-13,8	10,0	13,6	5,0	31,7	-37,4	31,1	15,6	-9,1	2,5	1,4
Gross accumulation of private fixed assets *(%, real growth)*	-7,8	-3,4	1,2	-13,9	6,2	19,6	-0,5	-14,5	3,0	1,4	1,6
Export of goods and services *(%, real growth)*	8,6	6,4	4,9	21,3	19,3	5,0	16,0	-31,4	2,1	5,1	3,8
Import of goods and services *(%, real growth)*	0,0	-2,7	-15,3	6,3	24,6	13,3	12,0	-32,0	2,9	4,5	3,2
External sector											
Balance of trade *((million US dollar))*	-2196,2	-2055,4	-1186,4	-976,9	-1400,9	-1759,0	-1805,5	-1362,3	-1399,6	-1472,3	-1550,6
Balance of services *((million US dollar))*	-124,3	-113,0	-96,4	70,4	159,4	56,7	-23,4	157,7	181,4	174,1	198,3
Remittances *((million US dollar))*	1755,1	1616,1	1098,3	1009,4	1179,3	1136,2	1143,8	1057,8	1150,4	1099,4	1057,3
Current account *((million US dollar))*	-812,9	-883,1	-284,7	-107,9	-173,9	-860,0	-987,5	-500,3	-383,7	-514,8	-611,0
Balance of trade *(share in GDP, %)*	-19,7	-17,8	-12,2	-8,6	-10,8	-13,7	-13,4	-9,5	-9,8	-10,0	-9,7
Balance of services *share in GDP, %)*	-1,1	-1,0	-0,9	0,7	1,4	0,5	-0,2	1,2	1,5	1,3	1,4
Remittances *(share in GDP, %)*	15,8	14,0	10,4	9,5	10,2	9,1	8,4	8,4	9,3	8,5	7,6
Current account *(share in GDP, %)*	-7,3	-7,6	-2,7	-1,0	-1,5	-6,9	-7,2	-4,0	-3,1	-4,0	-4,4
Public sector											
Revenues and grants *(billion Armenian dram)*	1071,4	1144,8	1167,7	1171,1	1237,8	1341,7	1559,1	1560,4	1509,5	1641,6	1785,2
Tax revenues *(billion Armenian dram)*	1000,9	1064,1	1067,9	1079,7	1158,0	1258,1	1464,3	1385,2	1440,1	1575,3	1729,4
Expenditures *(billion Armenian dram)*	1142,9	1235,1	1409,0	1449,1	1504,8	1447,1	1623,0	1894,3	1850,8	1821,1	1934,8
Deficit *(billion Armenian dram)*	-71,5	-90,3	-241,3	-278,0	-267,0	-105,4	-63,9	-333,9	-341,3	-179,5	-149,6
Revenues and grants *(share in GDP, %)*	23,5	23,7	23,2	23,1	22,2	22,3	23,7	25,2	23,3	24,2	24,3
Tax revenues *(share in GDP, %)*	22,0	22,0	21,2	21,3	20,8	20,9	22,3	22,4	22,2	23,2	23,5
Expenditures *(share in GDP, %)*	25,1	25,6	28,0	28,6	27,0	24,1	24,7	30,6	28,5	26,9	26,3
Deficit *(share in GDP, %)*	-1,6	-1,9	-4,8	-5,5	-4,8	-1,8	-1,0	-5,4	-5,3	-2,6	-2,0
Monetary sector											
Broad money *(y/y, end of period, %)*	14,8	8,3	10,8	17,5	18,5	7,5	11,2	9,0	-	-	-
Dram broad money *(y/y, end of period, %)*	14,9	-3,5	5,2	24,8	28,9	13,2	21,5	14,8	-	-	-
Loans to economy *(y/y, end of period, %)*	12,9	20,8	-3,3	6,0	16,5	17,2	18,5	14,3	-	-	-
USD/AMD *(Armenian dram for one US dollar)*	409,6	415,9	477,9	480,5	482,7	483,0	480,4	489,0	-	-	-

** Hereinafter, the Central Bank will only present the indicator of the aggregate fixed asset accumulation instead of the aggregate accumulation, since the change in tangible working capital inventories is considered by Armenia's Statistics Committee as a balancing item and it does not show the true level of the aggregate accumulation. See https://www.armstat.am/file/article/sv_04_19a_112.pdf:*

*** Actual indicators of public investment are capital expenditures of the consolidated budget, and the forecasts are based on the currently revised macro framework for 2022-2024.*

**** indicators of the 2021 budget are those of the law "On 2021 State Budget of the Republic of Armenia". The indicators for 2022-2023 are presented from the revised macro framework.*

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