

*Approved under the Central Bank Board
Resolution No. 215A, dated December 23, 2019*

Inflation Report

Monetary Policy Program, Q4, 2019



*Status Report on Implementation of the Monetary
Policy Program, Q3, 2019*

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 status report on implementation of the monetary policy program of the previous quarter, which presents the results of monetary policy implementation and covers the actual developments in the domestic economy.

Publishing of inflation forecast and assumptions underlying 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 December 10, 2019, i.e. the day on which the refinancing rate was set, the results of a 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.

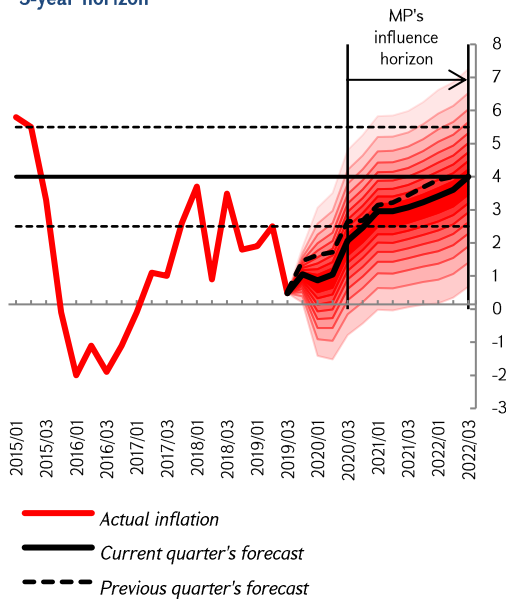
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1. EXECUTIVE SUMMARY

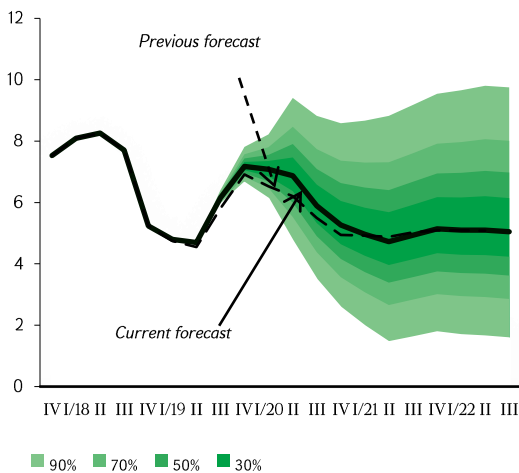
The inflation environment remained low in the fourth quarter of 2019, and the Central Bank further pursued an expansionary monetary policy. The 12-month inflation will still be running at a low level; at the end of 2019 it will be in the range of 0.8-1.2%.

Chart 1
Inflation (12-month) forecast probability distribution for 3-year horizon



Source: Armenia Statistics Committee,
Central Bank forecast

Chart 2
Real GDP (cumulative)¹ growth projection probability distribution for 3-year horizon



Source: Armenia Statistics Committee,
Central Bank forecast

The low inflation environment persisted over the fourth quarter of 2019, and the Central Bank of the Republic of Armenia (the Central Bank) continued carrying out an expansionary monetary policy.

In view of the current monetary policy and expected economic developments, the 12-month inflation will be running at a low level for a while; **at the end of 2019 it will be in the range of 0.8-1.2%**. On the back of the current macro-environment, the Central Bank prefers to inflation recovering gradually and estimates that presently the low inflation contributes to anchoring long-term inflation expectations and maintaining the purchasing power of income. As a result, the inflation will recover gradually in the medium term and stabilize around the target at the end of the forecast horizon.

The Central Bank considers the current policy rate to be sufficient to support the projected inflation path, so the **Central Bank Board has decided to leave the refinancing rate unchanged**. If macroeconomic developments unfold under the baseline scenario, the policy, the Central Bank estimates, will still need to be stimulative, while having the inflation gradually return to its target in the medium term.

Besides persistently weak inflation in the external environment, a low inflation continues to be shaped by supply-side factors, such as increasingly competitive product markets (determined by a common EAEU market and structural reforms) and a certain shift in demand for short-term consumer goods to long-term ones, which helps raise resource efficiency in the non-tradable sector.

According to the Central Bank's short-term forecasts, the 2019 economic growth will be in the range of 7.0-7.3%, and will approach its long-term equilibrium in the medium run.

The 2019 economic growth was mainly driven by private consumption. Mid-term economic growth will largely be determined by expanding of production capacities, the pace at which the Government will push forward the structural reforms and what economic growth potential can be expected in partner countries.

In the forecast horizon, risks to the inflation path are generally balanced but slightly upside risks to the economic growth prevail (see subsection 2.2.4 "Main assumptions and risks"). If predicted macroeconomic developments unfold and these risks materialize, the Central Bank will adjust the monetary conditions accordingly, while fulfilling the goal of price stability.

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

Global economic growth slowed down in 2019 and weak growth rates in the world are expected during 2020. In particular, even though uncertainties and pessimistic expectations diminished, economic growth rates are expected to remain sluggish in the United States and Russia, with some slowing anticipated in the Eurozone – the main trade partners to Armenia.

Economic developments in the United States: According to the second estimate by the U.S. Bureau of Economic Analysis, economic growth in the USA in the third quarter of 2019 was 2.0% y/y, mainly owing to private consumption's positive contribution as opposed to the negative contribution by investment. The 2019 economic growth is an estimated 2.3%. The unemployment rate in the third quarter of 2019 somewhat declined to 3.6%. The economic growth rate is predicted to slow down in 2020 due to weak investment.

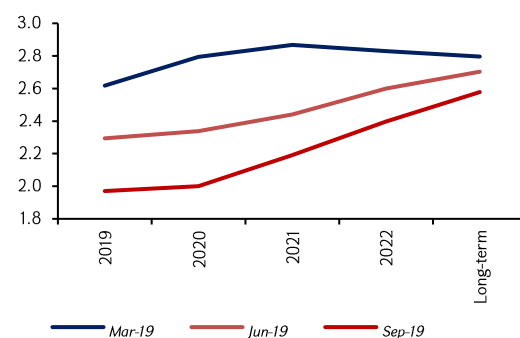
In the USA in the third quarter of 2019, the average quarterly personal consumption expenditure price index² was 1.4%, persisting below the US Federal Reserve's medium-term target. Given actual growth developments and further uncertainties arising from trade wars and in view of low inflation, the Fed cut the policy rate in October 2019 by another 0.25 pp to set it in a 1.50-1.75% range. In anticipation of weak economic growth and as the inflation is running below the target (in October personal consumption expenditure price index amounted to 1.3%), the Fed is expected to keep the current level of interest rates.

Economic developments in the Eurozone: According to preliminary estimates provided by the Eurostat, economic growth in the Eurozone in the third quarter of 2019 was 1.2% y/y, with a growth indicator of 1.1% estimated for 2019. The slowing of the growth in the Eurozone were prompted by a decline in the manufacturing sector and uncertainties associated with trade wars in the world. Note that in the third quarter of 2019, Germany, a major Eurozone member, posted a slightly positive growth, as opposed to the previous quarter's negative growth. The unemployment rate in the Eurozone persisted on the previous quarter's level of 7.5%.

The global economy slowed down in 2019 and weak growth rates will be observable in 2020.

Chart 3

FRS's interest rate path according to the FRS Board (average weights, %)



Source: US Federal Reserve System

² The personal consumption expenditure price index target is 2%, which on average is commensurate with headline inflation of 2.4%.

Chart 4
Economic growth in trade partner countries, (%)

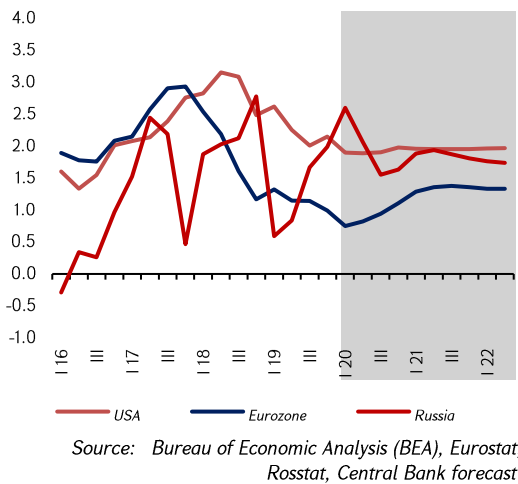


Chart 5
Inflation in trade partner countries, (%)

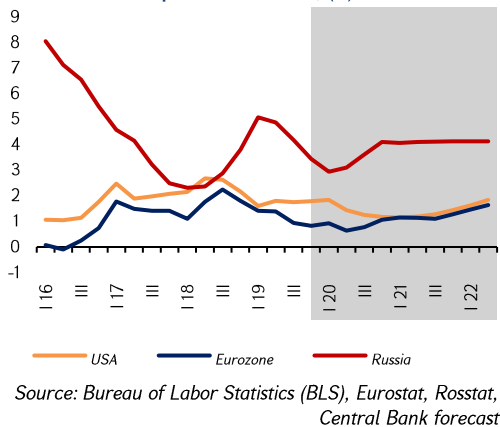
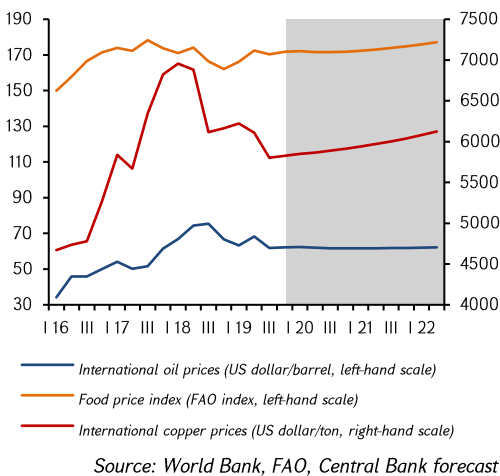


Chart 6
International prices of raw materials and food products



In the Eurozone in the third quarter of 2019, the average quarterly inflation decelerated to 0.9%, running below the European Central Bank's target. The low inflation owed primarily to falling energy prices, while core inflation averaged 1.0% over the third quarter. With low inflation and weak economic growth, the ECB announced that it would further pursue a negative interest rate policy and resume, if need be, the program of quantitative easing through purchases of assets.

Economic developments in Russia: According to preliminary estimates by State Statistics Service of the Russian Federation, economic growth in the third quarter of 2019 was higher than expected, amounting to 1.7% y/y. High growth rates were reported in trade and agriculture. Given the actual data for the first three quarters, the 2019 economic growth is an estimated 1.3%. Unemployment in Russia in the third quarter was 4.45%.

In the third quarter of 2019 the average quarterly inflation in Russia slowed to 4.2% from that of 4.9% reported in the previous quarter, approaching its target value of 4%. On a declining path, inflation in October even subdued to 3.8, a level below the target, thanks to low price inflation on food and non-food products. With inflation decelerating, the Bank of Russia cut the policy rate in the third quarter of 2019 by 0.25 (and another 0.5 pp in October) to 6.5%. As inflation expectations diminish and actual inflation trends downward, the Bank of Russia is expected to continue easing the monetary conditions.

Developments in world commodity and food product markets: In the third quarter of 2019 commodity and food product markets endured a low price environment due to a sluggish global demand and trade tensions.

In the third quarter of 2019, international copper prices decreased by 5.0% y/y as demand in the copper market slackened amid uncertainties over trade wars. It is expected that prices will keep low in the short run. International oil prices, despite a slower growth in supply volumes against the previous quarter, have fallen by 9% q/q. The fall in prices was attributable to the world demand weakened amid the US-China trade wars. In the short term, international oil prices are expected to remain at low levels.

In food product markets in the third quarter of 2019, relative to the previous quarter, sugar, wheat and dairy product prices dropped to some extent due to an upside revision for expected growth in production volumes in the previous quarter. However, according to the October data, there was a certain increase in prices in the aforementioned groups in anticipation of fewer crops in the following marketing year. In the short run, given the tensions arising from trade wars, major commodity groups will further see a weak inflation environment.

2.2. Forecasts

2.2.1. Inflation and monetary policy

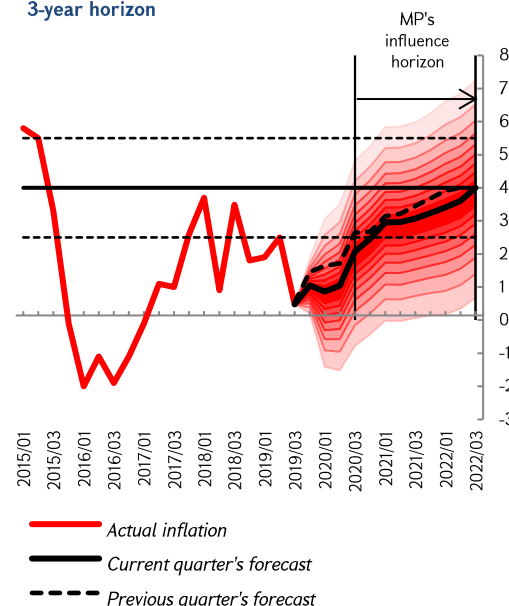
In the current quarter the inflation persists at a relatively low level. The Central Bank considers that the monetary stimulus needs to be maintained in a time of lack of inflationary pressures from the external sector and in anticipation of budgetary developments in the domestic economy, while leaving the policy rate unaltered. As a result, the inflation, still running below its target over the upcoming months, will stabilize around it in the medium run.

Current indicators point out that the third quarter's economic activity outpaced the expectations, and strong growth rates will be persisting over the fourth quarter of 2019, too. The economic activity remains so mainly thanks to a current estimation of high growth in services in terms of supply and growing private consumption in terms of demand, which is fostered by a stimulative monetary policy. The fiscal policy's impact on aggregate demand is going to be expansionary in the fourth quarter and during 2020. As a result, the GDP gap is estimated closed for the fourth quarter of 2019, and next year it will be positive amid the above developments, facilitating the gradual recovery of inflation. In the medium term, the impact of fiscal policy is expected to be neutral and the GDP gap to gradually phase out to zero.

On the other hand, the monetary policy's expansionary stance will gradually abolish while continuing to foster the demand growth. In view of the fiscal and monetary policy outlook described above, inflation will start to rebound in the coming quarters after remaining low. Short-term inflation expectations of the public are estimated virtually intact on the back of current developments in inflation and, particularly, core inflation, and will be pacing in line with the inflation trends. Nevertheless, these will also stabilize around the target, as inflation recovers. The Central Bank still prefers an inflation recovering gradually to an inflation that needs extensive stimulation, since the former scenario contributes to anchoring long-term inflation expectations and maintaining the purchasing power of income. **The Central Bank's Board has decided to leave the policy rate unaltered, opting for an expansionary stance of the monetary policy.** At the same time, in anticipation of macroeconomic developments, keeping monetary conditions expansionary will still be needed in order to fulfill the inflation target.

The Central Bank Board decided to leave the policy rate unchanged, keeping the monetary conditions expansionary.

Chart 1
Inflation (12-month) forecast probability distribution for 3-year horizon



Source: Armenia Statistics Committee,
Central Bank forecast

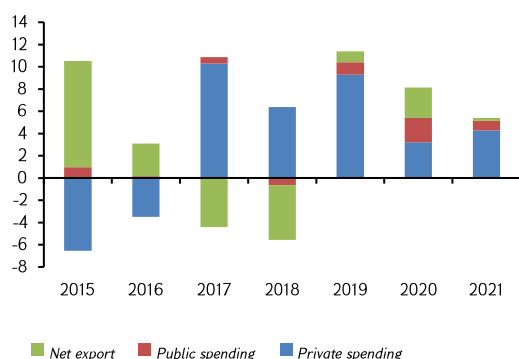
Table 1

Period	Inflation interval forecast probability distribution				
	<1.0%	1.0-2.5%	2.5-5.5%	5.5-7.0%	>7.0%
Q4, 2019	47.2%	52.7%	0.2%	0.0%	0.0%
Q1, 2020	54.9%	34.3%	10.8%	0.0%	0.0%
Q2	49.8%	33.9%	16.1%	0.1%	0.0%
Q3	27.5%	33.6%	37.0%	1.8%	0.2%
Q4	20.7%	31.1%	44.7%	3.3%	0.4%
Q1, 2021	14.3%	26.5%	52.1%	6.1%	1.0%
Q2	14.3%	26.4%	52.0%	6.2%	1.1%
Q3	13.1%	25.3%	53.3%	7.1%	1.3%
Q4	11.9%	23.3%	54.0%	8.7%	2.0%
Q1, 2022	11.1%	21.2%	53.5%	10.9%	3.3%
Q2	9.5%	19.5%	54.2%	12.6%	4.3%
Q3	6.9%	16.3%	54.7%	15.7%	6.5%

2.2.2. Economic activity³

Chart 8

Demand components⁴ contributing to the growth, (percentage point)



Source: Armenia Statistics Committee, Central Bank forecast

Aggregate demand: The 2019 economic growth is estimated in the range of 7.0-7.3% which is mostly driven by domestic demand and, particularly, vigorous private spending. The Central Bank calculates that growing consumer preference for durable goods has boosted up the demand for consumer loans. As a result, increased private spending owed primarily to a rather high growth in private consumption, which in turn has largely been financed by credit resources. In 2019 gross private fixed asset accumulation will persist on a low level but will gradually accelerate, in line with developments in construction sector in the near future. According to the Central Bank estimates, as economic growth in the external sector takes momentum and global uncertainties diminish, private investment will grow in the mid-term perspective too, contributing to economic growth. In the outcome, in 2019 private consumption will grow by 11.4%, gross private fixed asset accumulation, by 1.2%, and private spending, by 9.9%.

The structure of demand is predicted to change slightly in 2020, and the real growth in private consumption and import will gradually slow down mainly due to reduced car imports. Net export's contribution to the economic growth will increase, however. On the other hand, with the expected stimulus of the budget, public spending will contribute more to economic growth, and for a short while

³ For a detailed economic growth forecasts, see the "GDP Projection Probability Distribution", chart 19, table 2.

⁴ The change in tangible working capital inventories is not included in demand, so economic growths calculated by supply and demand may vary from each other.

aggregate demand will be higher than aggregate supply. As a result, in the short term, weak inflationary pressures are likely to come from the real sector but which will phase out at the end of the forecast horizon under the influence of the monetary policy.

External demand: Based on the 2019 results, net export's contribution to real GDP is estimated as positive. In the fourth quarter of 2019 the real growth of export of goods and services will slow given the sluggish growth in the mining and manufacturing⁵. So, the real growth of export of goods and services in 2019 is estimated in the range of 9.0-11.0%. In the fourth quarter of 2019 the real growth of import of goods and services were revised upward as the third quarter's growth proved higher-than-expected and it persisted over that period. The real growth of import of goods and services in 2019 is estimated in the range of 4.0-6.0%.

The growth of net inflow of remittances in 2019 is estimated within 0.0-2.0%.

As a result of the aforementioned developments, the current account deficit-to-GDP ratio will persist within the previous forecast of 7.0-8.0%.

In 2020 the current account deficit-to-GDP ratio will incur a notable adjustment, largely due to a significant reduction in car imports and because export growth rates remain strong. At the same time, the inflow of remittances of individuals will recover to be in the range of 7.0-9.0%, which will be determined by positive developments in the Russian economy in 2020. The real growth of export of goods and services will be in the range of 6.0-8.0%, whereas the real import of goods and services is predicted to reduce to the range of 0.0-3.0%.

In the light of these forecasts for 2020, the current account deficit-to-GDP ratio will be in the range of 4.0-6.0%.

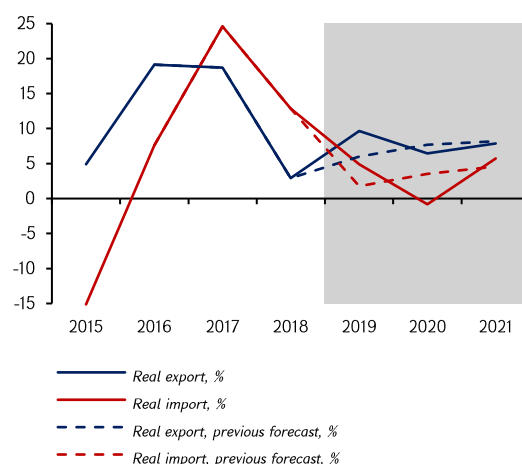
In the medium run, if supported by a faster growth of export, the current account deficit-to-GDP ratio will stabilize within its estimated equilibrium of 3.0-5.0%.

Fiscal policy: The **fiscal policy's impact** on aggregate demand in 2019 was estimated by the Central Bank using the adjusted⁶ program of state budget and taking into account the actual developments.

Tax revenues are expected to slightly fall behind the adjusted plan by the Government, making up 98.3% against the performance, which has considered the Government's decision to refund the economic agents as much as AMD 56 billion as a VAT debit balance that had accrued by July 1, 2017. In which event, the 2019 tax-to-GDP ratio will

Chart 9

Changes in real export and import of goods and services in the medium term, (%)



Source: Armenia Statistics Committee,
Central Bank forecast

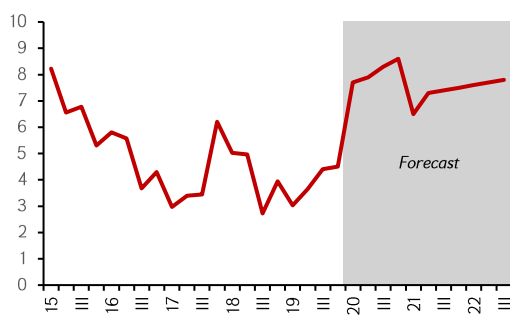
⁵ In October, growth rates in these industries decelerated.

⁶ The indicators set by the laws on "State Budget of the Republic of Armenia" are allowed to be adjusted during the year under certain Government resolutions which are posted at: <https://www.e-gov.am>.

In 2019, relative to 2018, the fiscal policy's impulse on aggregate demand is estimated 0.5 pp contractionary.

Chart 10

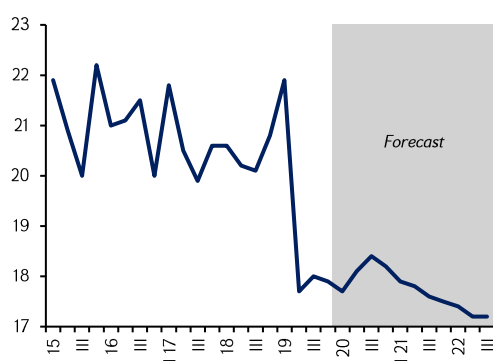
Nominal wage growth in private sector, y/y, (%)



Source: Armenia Statistics Committee,
Central Bank forecast

Chart 11

Unemployment rate, (%)



Source: Armenia Statistics Committee,
Central Bank forecast

reach 22.2%, up by 1.3 pp against the previous year (up by 1.6 pp., exclusive of the VAT debit balance refund).

Given the actual developments, the first nine months' public expenditures totaled 82.5% of the adjusted plan, with 5.3% (nearly AMD 90.0 billion) underperformed, which is slightly above the projection outlined in the previous plan. The expenditure-to-GDP ratio for the year will reach 24.5%, up by 1.1 pp relative to the previous year.

According to a preliminary assessment by the Central Bank, the budget deficit-to-GDP ratio in 2019 will amount to 1.7%.

Considering the above tax and expenditure projections and the public expenditure and revenue figures, net of one-off streams that do not affect the domestic demand, the 2019 fiscal policy's impulse on aggregate demand is estimated 0.5 pp contractionary, compared to that of 2018. Overall, in the first nine months of the year the budget has had a contractionary impact which will weaken owing to a 3.2 pp expansionary impact expected in the fourth quarter.

The 2020 fiscal policy's impact on aggregate demand was estimated using the Central Bank projections for the draft to the Republic of Armenia State Budget 2020. Note that the Central Bank made no further judgment on the performance of the 2020 state budget, assuming fully executed revenue and expenditure items.

In 2020 the taxes-to-GDP ratio⁷ will reach 22.5%, up by 0.3 pp relative to the one expected for 2019. The expenditures-to-GDP ratio will amount to 25.7%, up by 1.1 pp compared to the one expected for 2019.

In 2020 the deficit-to-GDP ratio will make up 2.3%.

Basing upon tax and expenditure estimations, net of one-off streams that do not affect the domestic demand, the 2020 fiscal policy impact is estimated to be 2.9 pp expansionary, relative to that of 2019. This is attributable to a minor contractionary impulse of revenues and an expansionary impulse of expenditures. The latter being contractionary is possible in the event of fully executed public expenditures. The expansionary impact may be adjusted commensurate with how the budget is performed.

The mid-term impact of the fiscal policy is assumed to be neutral.

Labor market⁸: In 2019 the growth rate of the private sector nominal wages will persist at the current level, 3.9%. As for 2020, supported by a minimum wage increase, the nominal wage growth in the private sector was revised upside and is an estimated 8.1%.

⁷ The GDP forecast is the Central Bank estimate.

⁸ The labor market data for third quarters of 2019-2022 are the Central Bank projections which are based on the actual second quarter 2019 data. The growth indicators presented in this sub-section are relative to the same reference period last year, unless otherwise specified.

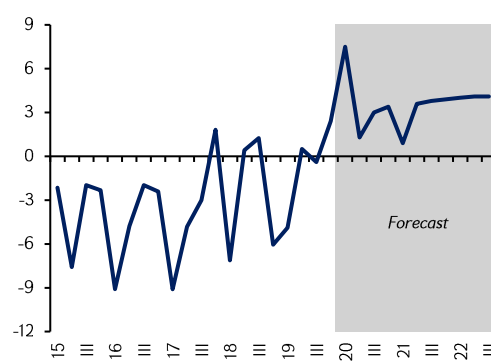
Subsequently, due to the base effect, the private nominal wage growth will slow down slightly, and at the end of the forecast horizon its growth rate is predicted to pace in line with its fundamentals, i.e. the economic growth and inflation developments, and it will stabilize at 7.7%.

Demand for labor supply has improved concomitant with high growths reported for GDP and demand. As a result, the unemployment rate trended downward since early 2019 and is an estimated 18.9%. The unemployment rate will subdue by about 0.2-0.5 pp annually over a medium-term perspective, approaching a 17.3% level at the end of the forecast horizon.

In 2019, as the growth of private nominal wages accelerates, the growth of firms' unit labor costs will increase; at the end of the forecast horizon, as inflation recovers, it will stabilize around the 4% inflation target.

Chart 12

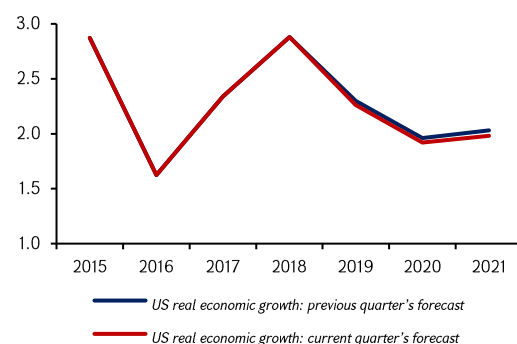
Unit labor costs growth, y/y, (%)



Source: Armenia Statistics Committee, Central Bank forecast

Chart 13

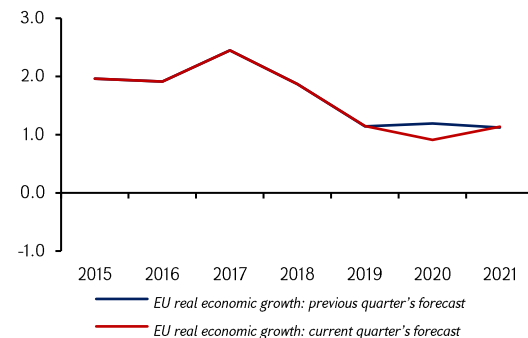
US economic growth forecasts, (%)



Source: Bureau of Economic Analysis (BEA), Central Bank forecast

Chart 14

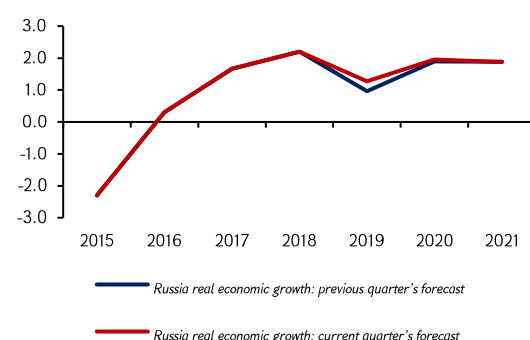
EU economic growth forecasts, (%)



Source: Eurostat, Central Bank forecast

Chart 15

Russia economic growth forecasts, (%)



Source: Rosstat, Central Bank forecast

2.2.3. Comparison with the previous forecast

As external demand slackens, the US and Eurozone mid-term economic growth indicators are now predicted to run at levels far below previous forecasts. Meanwhile, Russia's short-term economic growth indicators have been adjusted upside.

The US economic growth forecasts were revised somewhat downward due to low investment levels.

The forecasts of the Eurozone's economic growth in the forecast horizon were adjusted downward amid uncertainties over trade wars and the Brexit.

Current forecasts of economic growth in Russia in a short-term perspective are expected to be above the previous quarter's forecasts, attributable to an actual indicator expected to exceed the third quarter's forecasts, and because positive developments in the industry are persisting.

The world's basic commodity and food product markets anticipate an even weaker inflationary environment relative to the previous forecast, amid a sluggish global demand and in expectation of a decline in supply volumes for some food groups.

In the world's food product markets in 2019 and over a medium run, inflation is predicted to run slightly above the previous forecast, due to expectations of poor sugarcane and wheat harvest.

International oil price forecasts for the entire horizon are close to the previous low levels and are explained by a sluggish global demand.

International copper prices will shape at levels lower than outlined in the previous forecast, due to a contracted demand because of trade wars.

Chart 16
International food price forecasts

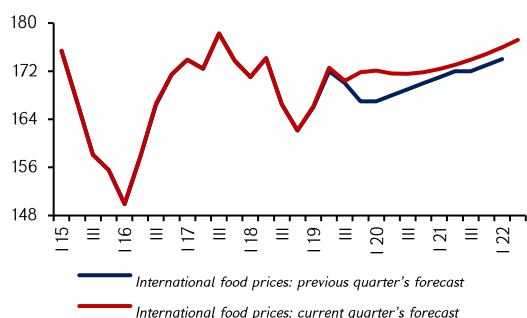


Chart 17
International oil price forecasts

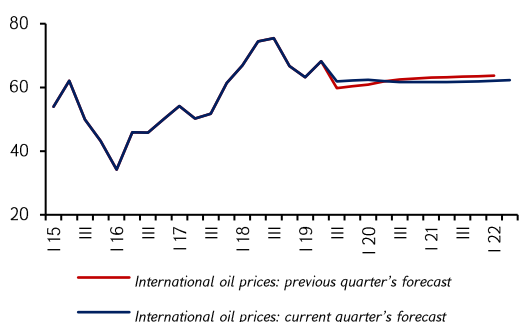


Chart 18
International copper price forecasts

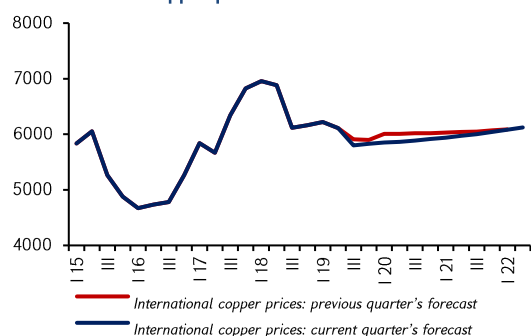
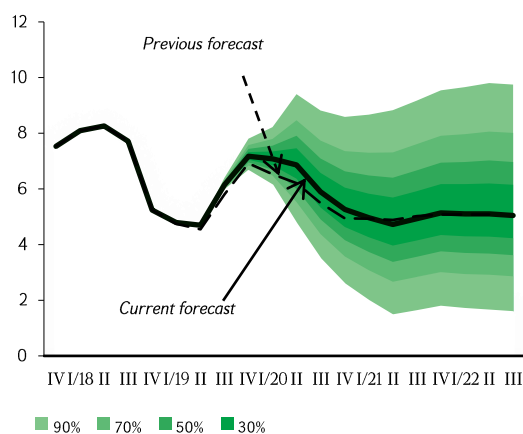


Chart 19
Real GDP (cumulative)⁹ growth projection probability distribution for 3-year horizon



Armenia's economic growth forecasts for 2019-2020 were revised somewhat upside; the forecasts remain much the same for the end of the forecast horizon, however.

The 2019 economic growth forecast was revised slightly upside relative to the previous one and is estimated in the range of 7.0-7.3%. The revision primarily owes to higher-than-expected actual figures and to GDP indicators adjusted for the first and second quarters. According to the Central Bank estimates, services will remain a key driver to the economic growth, which is considerably supported by continued growth of international tourism. Strong growth in services will be persisting in the near future thanks to the increase in public sector wages, directly reflected in the value added of public administration and defense sub-branch. The construction and industry sectors will also foster the economic growth, as their contributions to the growth will gradually increase in line with livelier investment activity. Currently high growth of lending to the manufacturing and construction also points to the expected positive developments in the above-mentioned sectors. The contribution of agriculture to economic growth in 2019 is estimated as negative; in the forecast horizon, however, the sector's contribution to the growth will be moderately positive.

Facilitated by an expansionary monetary policy and a stimulative effect of state budget expected in the near future, the GDP gap will step into a positive territory during 2020 and will gradually phase out afterwards. In the forecast horizon, the economic growth will come closer to its mid-term potential.

Table 2

Real GDP (cumulative) growth projection probability distribution		
Period	30% probability interval	90% probability interval
January-December 2019 / January-December 2018	7.0-7.3	6.6-7.8
January-December 2020 / January-December 2019	4.6-6.0	2.3-8.6
January-December 2021 / January-December 2020	4.3-6.2	1.8-9.5
January-September 2022 / January-September 2021	4.2-6.1	1.6-9.7

In 2019 the current account deficit-to-GDP ratio will be within the boundaries of previous forecast.

⁹ The growth rate of each quarter is calculated as the cumulative growth rate for the last four quarters.

The fiscal sector's impact of 0.5 pp contractionary on aggregate demand, as was estimated in the previous program, remains intact and is determined by 1.1 pp contractionary effect from taxes and 0.6 pp expansionary effect from expenditures. For 2020 the fiscal impact is an estimated 2.9 pp expansionary.

Current forecasts suggest that the inflation in the short run will be below previous forecasts, which is explained by a smaller-than-expected seasonal increase in prices of some agricultural goods, vegetables in particular. There is anticipation, however, that this will be a temporary phenomenon and that by the end of the year the prices of seasonal goods prices will somehow recover.

In the meanwhile, core inflation will run at a slightly lower level than expected, driven mainly by deflationary developments in foreign markets, on the one hand, and increasing competition in product markets amid structural reforms of the economy, on the other. Consequently, in pursuit of the inflation target, the monetary policy will remain stimulative so as to facilitate the recovery of aggregate demand while assisting the inflation to stabilize around the target at the end of the forecast horizon (see Chart “Inflation Forecasts Probability Distribution”).

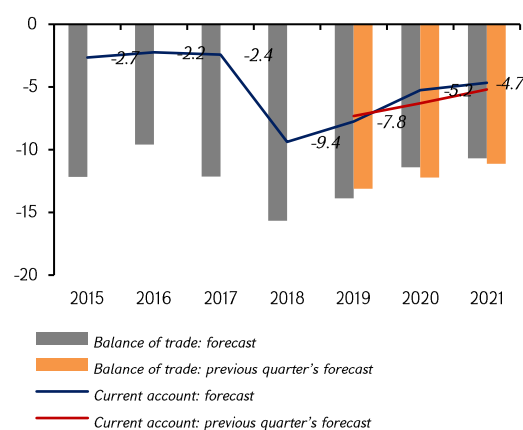
Short-term inflation expectations will linger around the value of previous forecasts; in the forecast horizon these expectations may even run slightly lower than predicted previously, reflecting relatively steady core inflation rates at present and how slowly it might recover later on.

2.2.4. Main assumptions and risks

This section contains the main assumptions underlying the Monetary Policy Program for the fourth quarter of 2019 and the risks to implementation of the program, which derive from the external sector developments, the fiscal policy implementation, current trends and short-term forecasts.

Chart 20

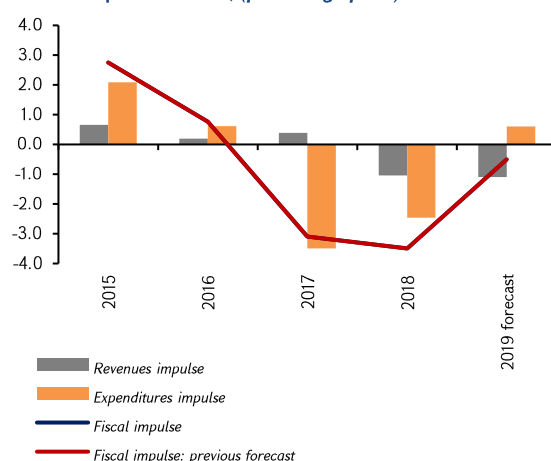
Mid-term current account-to-GDP ratio forecasts, (%)



Source: Armenia Statistics Committee, Central Bank forecast

Chart 21

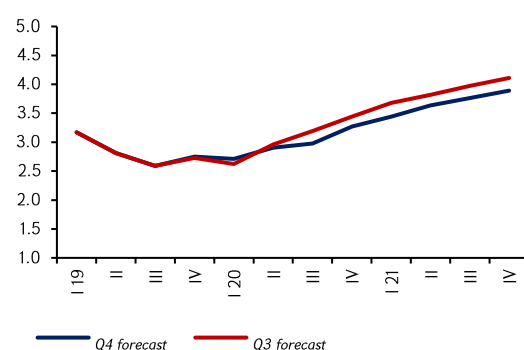
Fiscal impulse forecast, (percentage point)



Source: Central Bank estimation

Chart 22

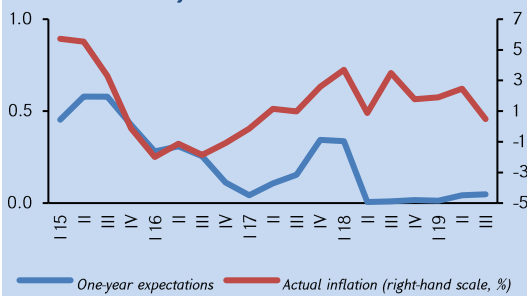
Short-term inflation expectation estimations, (%)



Source: Central Bank estimation

Chart 23

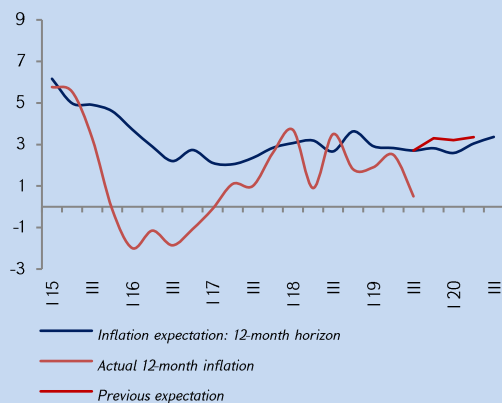
Share of households expecting high and too high inflation in a one-year horizon



Source: Armenia Statistics Committee, Central Bank surveys

Chart 24

Average level of financial system's inflation expectations, (%)



Source: Central Bank surveys

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

The third quarter 2019 survey on selected macroeconomic indicators carried out each quarter by the Central Bank by way of inquiries among households and companies in the financial sector denote that inflation expectations proved steady over the reporting quarter, with no noticeable changes relative to the previous quarter's figures. Specifically, the share of households expecting high and very high inflation rates for a one-year horizon in a total respondent base continues to be small, pointing to the gradual strengthening of price stability.

The financial system's inflation expectations had a slight shift downward relative to the previous survey, with an average level of inflation expectations decreased to around 3.0% from the previous value of 3.15%.

Forecast assumptions

Table 3

Main judgments and assumptions	Possible developments, if this assumption proves correct
Slow growth rates persist in the economies in main partner countries to Armenia due to a sluggish global demand	- Low inflation environment and slower pace of economic growth amid weak global demand will prompt the main partner countries to pursue low-interest rate policies. - Sluggish global demand will further be a cause for lower international commodity prices.
Country risk premium for Armenia keeps on reducing	According to current estimates, Armenia's risk premium is lower (by about 0.3 percentage points) and stands at around 2.2% now. However, according to the CBA estimates, this decrease is of a short-term nature.
Supply-side inflation shocks come along	Effective January 1, 2020, a change in customs and excise duty for some products are expected as a result of the EAEU membership. The impact of the change on inflation will mainly be discernable in the coming year and is estimated to reach 0.5 pp.

Impacts of tax reform	The effect of change of income tax and profit tax to the Tax Code taking effect in early 2020 will be seen in the short run mainly in terms of demand and inflation, which is included in the budget figures; in the long run, the effect will be seen primarily in terms of supply, helping the potential GDP run at about 0.3% higher. Moreover, the estimated increase in the potential will only be gradual and will not have a significant impact on the GDP gap and the inflation developments.
Effects of minimum wage increase	As a result of the increase in the minimum wage, the primary inflationary impacts are estimated to be limited, up to 0.05 pp.
Structural reforms and increased competition weaken the inflation environment	Access to the EAEU market, implementation of structural reforms, as well as increasingly competitive product markets lead firms to alter their pricing behavior and to lower their markups, which weakens inflationary pressures.
Increase resource efficiency	There is an estimated increase in resource efficiency in the non-tradable sector of the economy amid a growing demand for durable consumer goods and for lending. These developments diminish inflationary pressures as well by increasing supply and shifting demand (from short-term consumer goods to long-term consumer goods).
Full execution of the state budget 2020	The impact of fiscal policy in 2020 is estimated 2.9 pp expansionary. In the mid-term, it is estimated to have a neutral impact.
Measures to bolstering potential GDP growth	The activities of Amulsar mine and Alaverdi copper smelter are not factored in the monetary policy scenario. Their potential impact is considered in the framework of forecast risks. Officially, construction of the Amulsar mine is expected to continue in 2020, with the operation of the mine starting in 2021. The direct impact of the Amulsar mine on GDP will be 1.0-1.6% and, with indirect impacts, its contribution will be even higher, according to Central Bank estimates.

Forecast risks

The risks outlined in the baseline scenario are associated with both the supply and demand-driven developments in the relevant sectors of the economy.

In terms of aggregate demand, the main risks are attributable to the following factors:

- Mostly short-term deflationary risks may arise in connection with slower rates at which demand and, consequently, core inflation recovers in the forecast horizon.
- The impact of the fiscal policy in 2020 will be less expansionary as public expenditures and, particularly, capital plans under external funding continue to fall short.

Overall, risks to the inflation deviating from its path in the medium term are balanced (see Chart 1 “Inflation Forecasts Probability Distribution”).

In terms of supply, the following are risks to the inflation:

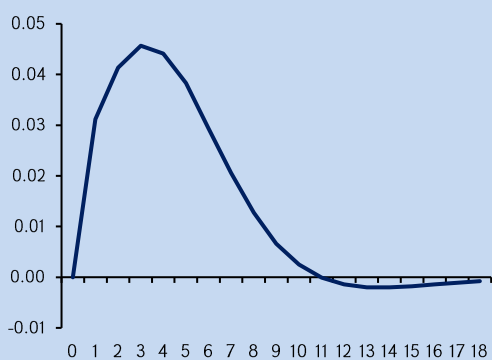
- Risks in either direction may arise in 2020 after a change in customs and excise duty for some products would affect the inflation (with an estimated impact of up to 0.5 pp).
- The estimated decrease in markups in various product markets as a result of implementation of structural reforms and increased competition, and the increase in productivity in the non-tradable sector of the economy may last longer, in which case a low inflation environment will persist driven by supply factors.

In addition to the risks mentioned above, there are mid-term risks (which are in either direction but upside risks prevail, however) associated with potential economic growth, as follows:

- The uncertainties associated with further operating of Amulsar mine and Alaverdi copper smelter.
- In the context of longer-term economic growth, the further course of structural reforms in the economy and to which extent they will affect the business and investment climate.
- Given high growth rates in mortgage loans¹⁰, as well as the large number of construction permits¹¹ issued lately, the risks to economic activity in the construction sector and to gross private fixed asset accumulation are estimated to trend upward.:

Chart 25

Estimates of minimum wage impact on inflation, (q/q, annualized)



Source: Central Bank calculations

Box 2

The impact of minimum wage increases on inflation

The increase in the minimum wage has an impact on the average wage level and, therefore, on the costs of the firms, which in turn transmits to inflation over time. The IMF estimates that one percent increase in minimum wage across developing countries leads to a 0.01-0.15% increase in average wage¹². Accordingly, a 23.6% rise in the minimum wage in Armenia will lead to about a 2% increase in the average wage or nearly a 3% increase in the average wage of officially registered workers in the private sector. This, affecting the marginal costs of production of goods and provision of services, will lead to a certain level of inflation over time. When considering the impact on inflation, the share of those informally employed in Armenia's labor market (which amounted to 41.3% in 2018, according to Armenia Statistics Committee data¹³) should be taken into

¹⁰ As of October 2019, the amount of mortgage loans has increased by 39.7% compared to the same month of the previous year.

¹¹ See <https://www.yerevan.am/am/quarterly-statistics/>.

¹² Cross-Country Report on Minimum Wages, IMF, 2016.

¹³ See <https://www.armstat.am/file/doc/99516743.pdf>.

account. The Armenia State Revenue Committee data (614459 registered employees as of September 2019)¹⁴, and the total number of employed, published by the SC, suggest that the informal employment rate has dropped significantly to 34-38%. The informal sector workers are mostly in agriculture. On the other hand, labor costs make up about 42% of production costs¹⁵. In addition, overwhelming majority of markets in Armenia are characterized as having features of competing monopolies, which implies that the change in marginal costs amid price rigidity will only gradually affect the inflation. Taking all this into account, the primary impact of the minimum wage increase on inflation is estimated to be rather limited, around 0.03 pp, and the overall impact over the next year, about 0.1 pp.

The assumption underlying the calculations is that a change in the minimum wage does not lead concurrently to a notable change in productivity. This assumption, it should be noted, is quite rigorous, and a common position on the subject in the world literature is lacking. However, the underlying logic is that the rise in wages is usually a consequence, not a cause, of increased productivity, so a substantial increase in wage-driven productivity in the economy is unlikely to be considered.

Box 3

The impact of change in Tax Code on inflation

The changes to income tax and profit tax, adopted on June 25, 2019, will take effect starting 2020. Reducing the businesses' tax burden on direct taxes and having it somehow shifted on to indirect taxes is what the Government intended when pursuing such changes. The changes made are aimed to simplify the overall taxing and to alter certain tax rates. Under the changes, a single tax rate is set for income tax, and the profit tax rate is reduced by two percentage points. These changes will have a short-term and long-term impact on the economy. In the short run, the effects will be observable mainly through demand, which by and large is included in the next year's budget indicators and, therefore, considered in the monetary policy program¹⁶. In the long run, the effects of tax change will be seen mostly from a supply side, as the structure of supply changes in the capital and labor markets. These effects have been quantified using a structural model. In particular, as a result of reduced income tax and profit tax rates, the net monetary impact on potential GDP in the long run (10 years and over) has been estimated to be about 0.3 pp positive.

The estimated long-term impacts will only materialize gradually.

The impact of positive change in potential GDP on the GDP gap estimates, hence inflation, in a three-year monetary policy forecast horizon will not be significant.

¹⁴ See https://www.armstat.am/file/article/sv_10_19a_142.pdf.

¹⁵ The ratio of wage fund (the product of total employed in the economy and average wage) to nominal GDP was considered as approximation of labor costs.

¹⁶ It should be noted that a number of micro data are needed for a more accurate quantifying (in terms of demand) of resource redistribution and territory-specific effects as a result of these changes, but such data are not available or nor accessible, however.

Neutral interest rate

The concept of a neutral interest rate is key to implementing a monetary policy. This is the level of interest rate that ensures zero GDP gap and a target level of inflation in the absence of economic shocks¹⁷. The neutral interest rate serves as a benchmark for assessing the policy stance. Specifically, a monetary policy is contractionary (expansionary) when the policy rate is above (below) the neutral interest rate. But having the short-term interest rate – the key instrument – set close to the neutral interest rate does not necessarily mean a target level of inflation is always secured. When the GDP gap is positive (negative) and inflation is above (below) its target level, the central bank will set a policy rate over a certain period to be above (below) the neutral interest rate to ensure that GDP returns to its potential level and inflation returns to its target level.

The neutral interest rate is not considered an observable variable, which means that policymakers cannot directly observe it and set the policy rate relative to it¹⁸. At the same time, neutral interest rate is not a fixed number value and varies over time under the influence of various factors¹⁹. The impact of these factors is possible to measure, which will help explain how the neutral interest rate has developed historically and make forecasts for the future.

The nominal neutral interest rate is the sum of the real neutral interest rate and inflation expectations.

$$NNIR = RNIR + IE$$

where:

NNIR- nominal neutral interest rate,

RNIR- real neutral interest rate,

IE- inflation expectations.

The capital market equilibrium can be graphically represented (Chart 26), as follows: red line shows the direct relationship between the real interest rate and the capital which the population wants to make available for production. When interest rates are high, people will want to lend higher amounts of capital to firms. Blue line represents firms' demand for capital, depending on the interest rate. When interest rates are high, firms will be willing to attract less capital into production. The capital demand curve also reflects the inverse relationship between the amount of capital and the marginal return on capital. At the point the curves intersect, an equilibrium in the capital market is shaped and the level of real neutral interest rate is determined²⁰.

¹⁷ The theoretical bases for neutral interest rates derive from the New-Keynesian framework, where a natural rate of interest is defined as the interest rate that would be at flexible prices and wages. Gali, Jordi. 2008 "Monetary Policy, Inflation and the Business Cycle: An Introduction to the New-Keynesian Framework", Princeton University Press, Princeton and Oxford.

¹⁸ Non-observable means that it cannot be calculated with the help of statistics and can only be estimated using economic models, with estimates being different depending on the model used. In this respect, the neutral interest rate is equivalent to other variables of economic equilibrium under the New-Keynesian Framework, such as potential GDP, a real exchange rate equilibrium, inflation expectations, and so on.

¹⁹ Laubach, Thomas, and John C. Williams. 2003. "Measuring the Natural Rate of Interest," Review of Economics and Statistics, 85(4), November, 1063–1070.

²⁰ Inflation Report, August 2018, Bank of England, <https://www.bankofengland.co.uk/-/media/boe/files/inflation-report/2018/august/inflation-report-august-2018.pdf>, pp. 39–43

The real neutral interest rate can be divided into long-term and short-term components based on the time horizon of the influence of factors.

$$RNIR = \text{long-term component} + \text{short-term component}$$

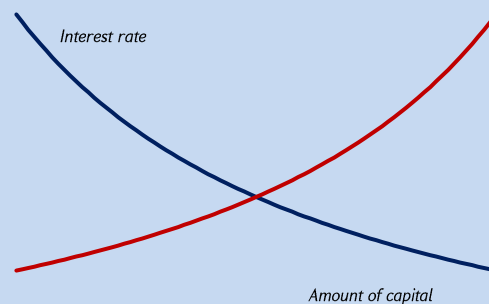
The long-term (trend) component is determined by relatively low-volatility structural factors that ensure a balance between the demand for capital and the resources available to finance that demand. In small open economies, such as Armenia, these factors are conditioned by developments in both the domestic economy and the external world.

Table 4. Impact of some important factors on the level of real neutral interest rate all else being equal^{21,22}

Factor	Impact of growth factor on capital market all else being equal	Impact of growth factor on neutral interest rate all else being equal	Time horizon of impact	Mechanism of impact on real neutral interest rate
Change in equilibrium interest rate in developed partner countries	Decrease in capital supply and increase in demand	Neutral interest rate rise	Both short-term and long-term	If the equilibrium interest rate changes in a given partner country, it also affects the capital market of that country, provided that there is a possibility of movement of capital.
Productivity and marginal return on capital	Increase in demand for capital	Neutral interest rate rise	Mostly long-term	The increase in productivity leads to an increase in the marginal return on capital, which creates more investment demand under the given interest rate.
Propensity for intertemporal substitution of consumption	Decrease in capital supply	Neutral interest rate increases	Mostly long-term	If people prefer focusing more on consumption today to consumption tomorrow, most of the current revenue is going to be spent on today's consumption, which reduces the amount of current savings.
Shifts in demography	Increase in capital supply	Neutral interest rate decreases	Mostly long-term	Widening age distribution of workable part of population, rising number of the middle-aged, and increasing life expectancy prompts a change in the supply of capital in the market, as under these factors people's propensity to save individually or in common in the economy increases.
Risk premium ²³	Decrease in capital supply	Neutral interest rate increases	Mostly long-term	An increase in country risk raises the equilibrium interest rate in the capital market, as those offering capital in the market demand a higher interest rate for high risk.

Chart 26

Capital market equilibrium and neutral interest rate



Source: Central Bank calculations

²¹ Holston, Kathryn, Thomas Laubach, John C. Williams. 2016. "Measuring the Natural Rate of Interest: International Trends and Determinants." Federal Reserve Bank of San Francisco Working Paper 2016-11. <http://www.frbsf.org/economic-research/publications/workingpapers/wp2016-11.pdf>

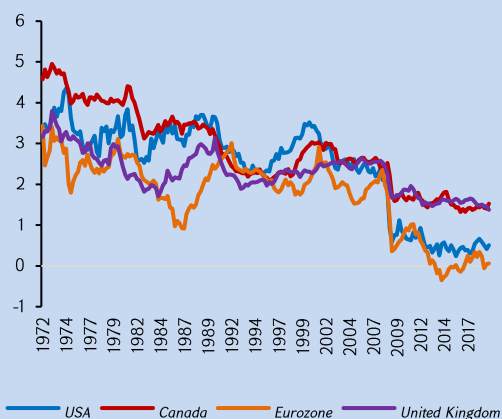
²² Inflation Report, August 2018, Bank of England, <https://www.bankofengland.co.uk/-/media/boe/files/inflation-report/2018/august/inflation-report-august-2018.pdf>, pp. 39-43

²³ Archibald, Joanne and Leni Hunter, "What is the Neutral Real Interest Rate, and How Can We Use It?", Reserve Bank of New Zealand Bulletin, Volume 64, No. 3, September 2011, <https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Bulletins/2001/2001sep64-3archibaldhunter.pdf>

Uncertainties about the future	Increase in capital supply	Neutral interest rate decreases	Mostly short-term	Added uncertainties about the future prompts households to put more of their current income into savings for the same interest rate as a means of safeguard from future uncertainties. As a result, one will see an increase in supply in the capital market, which leads to a decline in equilibrium interest rate.
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Chart 27

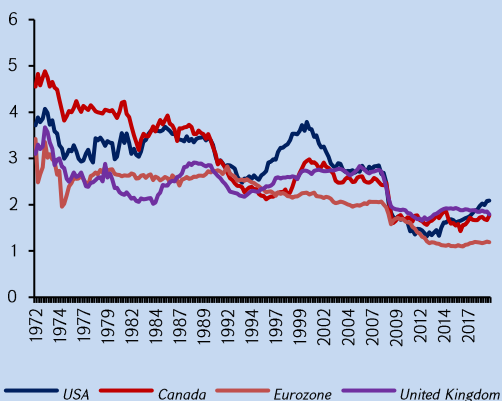
Real neutral interest rates in developed countries



Source: Central Bank calculations

Chart 28

Estimates of economic growth potential



Source: Central Bank calculations

According to estimates by the Federal Reserve Bank of New York²⁴, In developed countries in recent decades, real neutral interest rates have been declining. The chart shows real interest rates estimated for the US, Canada, the Eurozone and the United Kingdom. The overall decline of interest rates continued even in the post-crisis period and has been at its historic low in recent years.

The decline in world interest rates is due to both supply and demand factors. On a supply side, the main factor is the continued trend in aging of population in developed countries, as a result of which people are more willing to lend capital to firms under the given interest rates. Demographic changes taking place in developed countries are reflected in our graphic model through the supply curve moving rightward.

Another structural factor for global interest rate decreases is the declining trend in global productivity (see Chart 28), which is a demand-driven factor in the capital market point of view and comes in through a diminishing potential of the world economy. When firms' productivity declines, their demand for capital reduces, reflecting the demand curve moving leftward, as shown in the chart above. In the outcome, a new equilibrium is being shaped in the capital market at a lower real neutral interest rate.

The real neutral interest rate is higher in developing countries than in developed countries due mainly to a low level of capitalization in developing countries, in which case the marginal return on capital is still higher in these countries, than in developed ones. Over time, capital accumulates concurrent with a faster pacing economic growth in developing countries, as a result of which the marginal return on capital and the neutral interest rate in developing countries gradually decrease. This, in turn, will put downward pressure on the neutral interest rate by gradually pushing it down.

Reference literature

1. Archibald, Joanne and Leni Hunter, "What is the Neutral Real Interest Rate, and How Can We Use It?", Reserve Bank of New Zealand Bulletin, Volume 64, No. 3, September 2011
2. Gali, Jordi. 2008 "Monetary Policy, Inflation and the Business Cycle: An Introduction to the New-Keynesian Framework", Princeton University Press, Princeton and Oxford.
3. Holston, Kathryn, Thomas Laubach, John C. Williams. 2016. "Measuring the Natural Rate of Interest: International Trends and Determinants." Federal Reserve Bank of San Francisco Working Paper 2016-11
4. Laubach, Thomas, and John C. Williams. 2003. "Measuring the Natural Rate of Interest," Review of Economics and Statistics, 85(4), November, 1063-1070
5. Federal Reserve Bank of New York, *Measuring the Natural Rate of Interest*
6. Inflation Report, August 2018, Bank of England

²⁴ Federal Reserve Bank of New York, Measuring the Natural Rate of Interest, <https://www.newyorkfed.org/research/policy/rstar/overview>

3. ACTUAL DEVELOPMENTS IN Q3, 2019

3.1. Inflation

3.1.1. Fulfilment of the inflation target

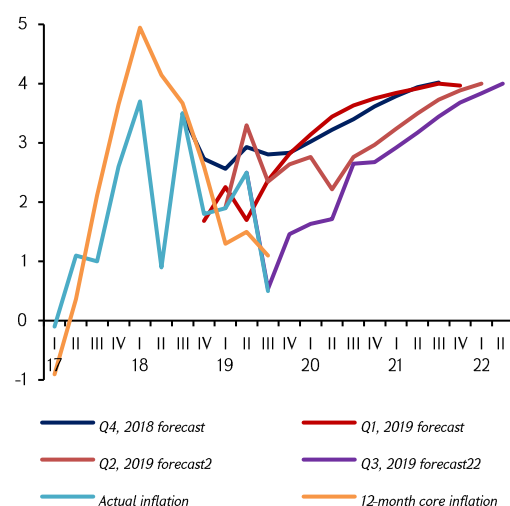
The Q4 2018 monetary policy program had predicted a stable behavior for inflation in the short run, up until Q4 2019, supported by expected macroeconomic developments and further a stimulative monetary policy. With inflation outlined to persist close to the lower part of the confidence band, the Central Bank would have to continue implementing an expansionary monetary policy in the short term, while stimulative monetary conditions were expected to phase out in the medium term and at a slower pace to help inflation recover and stabilize around the target.

In the meantime, actual inflation developments have somewhat deviated from the scenario, as the fiscal policy carried out each subsequent quarter proved more contractionary on the back of weaker-than-expected demand and lower prices in the external environment. Not only have these developments caused the domestic aggregate demand to slacken considerably but prompted the 12-month core inflation to subdue by 2.6 pp over the past one-year period to 1.1% at the end of September of 2019. On the other hand, due to prices of agricultural products which suffered a shift in seasonality in the sector, the 12-month headline inflation demonstrated volatility, reaching 0.5% in end-September, as a result.

With an inflation environment persisting low, the Central Bank has pursued an expansionary monetary policy over the past one-year horizon, **while favoring a gradual recovery of inflation**, since low inflation of that time contributed to anchoring long-term inflation expectations and maintaining the purchasing power of income. Also, as considerable inflationary effects from external and domestic economies were lacking because of persistently weak global and domestic demand, and that monetary conditions at the time were estimated rather expansionary, the Central Bank left the refinancing rate unchanged in the fourth quarter of 2018. In view of continued slowing in global economic growth and anticipated weakening of the inflation environment in world commodity markets, the Central Bank added to

Chart 29

According to the Central Bank forecasts, in the short term the 12-month inflation will run below the target value but will gradually expand in the mid-term and stabilize around the target at the end of the forecast horizon



Source: Armenia Statistics Committee, Central Bank

the monetary stimulus by cutting the refinancing rate by 0.25 pp to 5.75% in January 2019. In the period February–August, the policy rate stayed intact since the amount of stimulus was estimated satisfactory in light of expected expansionary fiscal policy. However, as the Government continued implementing contractionary fiscal policy while deflationary effects from the external sector were further observable, the Central Bank softened monetary conditions in September by cutting the refinancing rate by another 0.25 pp. At the same time, the Central Bank signaled the financial market that the monetary conditions would remain expansionary for as long a period as required, in fulfillment of the inflation target in the medium run.

3.1.2. Prices

The 12-month inflation remained low in the third quarter of 2019, amounting to 0.5% y/y, mainly driven by a 2.7% fall in seasonal prices of food products. In the meantime, the 12-month core inflation has been 1.1%, while the rise of regulated service tariffs, 0.7% y/y.

The y/y decrease in seasonal prices of food products is a result of 1.9% and 4.0% falling in prices of items “Fruit” and “Vegetable”, respectively (combined contribution to y/y inflation: -0.3 pp).

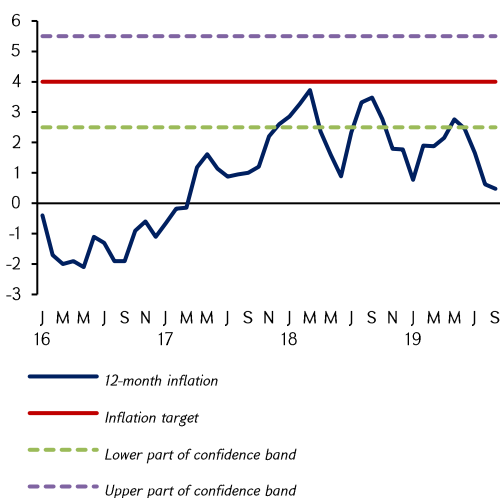
The y/y increase in core inflation rate was mainly driven by 3.3% and 7.3% growths reported for items “Bread products and wheat” and “Tobacco”, and 7.1%, 12.3% and 3.2% growths for items “Clothes”, “Footwear” and “Fuel”, respectively (combined contribution to y/y inflation: about 1.0 pp). At the same time, the decline in prices of food products in international markets has pushed the domestic prices of these products down. As a result, gradually declining from 4.6% y/y over the past one-year horizon, price inflation on non-seasonal food products amounted to 0.2% y/y in September.

In the past one-year horizon, inflation has been largely in line with demand developments, although it had somehow incurred the supply-side impact of individual products. At the beginning of the reporting period, due to external factors, the flour and bread prices have grown²⁵, with an estimated combined inflation impact of about 0.3 pp.

Note that the inflation impact of the change in customs duty on some commodity groups was estimated to reach 0.3 pp in early 2019, mainly due to the increase in poultry prices. As for the change in the tobacco and alcohol prices due to new excise tax rates, the actual impact on the headline inflation is estimated to be up to 0.2 pp.

Chart 30

A low inflation environment persisted over the last one-year horizon, with the 12-month inflation drifting around the lower part of confidence band



Source: Armenia Statistics Committee

²⁵ <http://www.competition.am/index.php?page=&menu=174&newsID=1547&lng=1>

Table 5

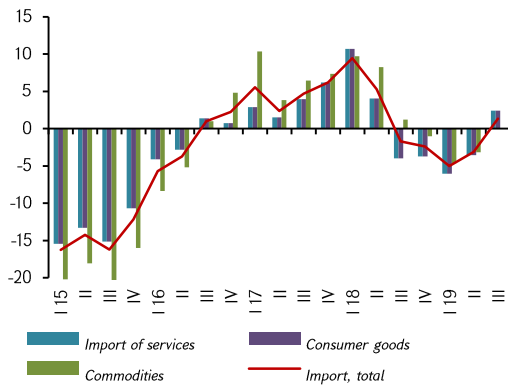
Consumer price inflation by commodity items as key contributors ²⁶			
<i>Commodity item</i>	<i>Weights</i>	<i>12-month inflation</i>	<i>Contribution</i>
Core inflation	72.7	1.1	0.8
Bread products and grains	8.99	3.3	0.30
Meat	9.87	-1.2	-0.12
Fats and oils	2.77	-5.8	-0.16
Sugar	0.60	-1.7	-0.01
Alcoholic drinks	2.77	3.0	0.08
Tobacco items	1.77	7.3	0.13
Clothes	2.58	7.1	0.18
Footwear	1.52	12.3	0.19
Medicament	4.83	-0.4	-0.02
Fuel	5.20	3.2	0.17
Seasonally sensitive goods	10.5	-2.7	-0.28
Egg	1.44	-0.3	0.0
Fruit	3.35	-1.9	-0.06
Vegetable	5.74	-4.0	-0.23
Regulated services	16.7	0.7	0.1

Import prices: In the third quarter of 2019, the dollar prices of import of goods and services to Armenia posted a 0.2% increase relative to the previous quarter after a one-year decline. The increase in dollar prices of import relative to the third quarter of the previous year has been 1.3% y/y and owed mainly to y/y appreciation of nominal exchange rates in main partner countries. The y/y contribution of intermediate goods to total import prices has been zero; the decrease in oil, aluminum and wheat prices has been offset by the y/y increase in other intermediate goods.

²⁶ The y/y data of structural elements of food products are calculated by the Central Bank based on the information provided by the Republic of Armenia Statistics Committee.

Chart 31

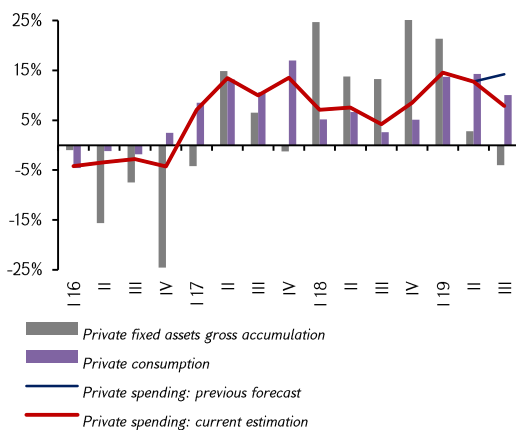
In the third quarter of 2019 the dollar prices of import of goods and services rose relative to the same quarter of the previous year, y/y, %



Source: Central Bank calculations

Chart 32

Structure of private spending (y/y growth)

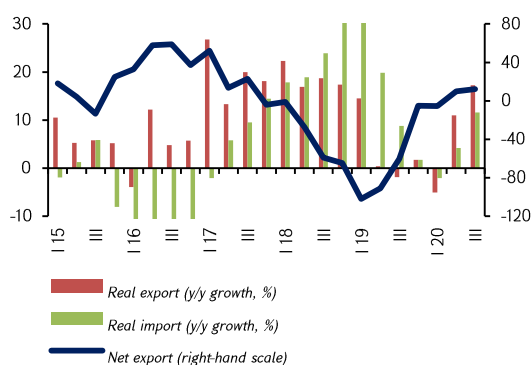


Source: Armenia Statistics Committee, Central Bank estimate

Increased domestic demand, fuelled by high growth in private spending, fostered the economic growth in the third quarter of 2019.

Chart 33

In the third quarter of 2019 net export position improved as export increased at a faster pace over import (net real export, y/y %, positive sign = improvement)



Source: Armenia Statistics Committee

3.2. Economic developments

3.2.1. Economy position

The negative GDP gap somehow contracted in the reporting quarter, with the GDP still lagging behind the potential level.

Continued stimulative monetary policy, growing lending volumes, high levels of economic activity and private spending (see subsections 3.2.2 and 3.2.3), the employment growth (see subsection 3.2.4), and the budget's expansionary impact in the reporting quarter all have facilitated the economy to gradually approach its potential level and production resources to be used in the most efficient manner. However, the GDP gap in the third quarter of 2019 is still estimated minor negative, which is in line with the weak inflation environment in the reporting quarter (see subsection 2.2.1). Exchange rate depreciation in partner countries in the third quarter of 2019, the slowing of economic growth in main partner countries, the low level of remittances in real terms have contributed to the shaping of a negative GDP gap.

3.2.2. The expenditures aspect of the economy

The economic growth in the third quarter of 2019 was largely driven by domestic demand that has increased mostly thanks to high growth in private spending. Unlike the previous quarters, public spending has positively contributed to the growth in the reporting period. Though slightly lower than in the previous quarter, private consumption growth persisted at a high level, amounting to 10.1%. Lending to households continues to grow while serving a key source that finances private consumption. Gross accumulation of private fixed assets in the reporting quarter has decreased by 3.6%, which is below the previous forecasts by the Central Bank. According to the Central Bank estimates, a weak investment environment is still due to the change in the investment structure, a reduced amount of large-scale investments, in particular. Thus, the growth of private spending in the third quarter was 7.9%, which mainly explains the economic growth of the same quarter.

High growth of private consumption still leaves a minor effect on inflation, according to the Central Bank estimates, determined by peculiarities in the consumption structure.

The real export and import volumes proved rather high in the third quarter of 2019. The real export volumes have grown faster than those of import. As a result, net real export's contribution to the GDP was

positive. Thus, the real growth of export of goods and services and import of goods and services in the third quarter of 2019 amounted to 17.2% y/y and 11.6% y/y, respectively. An increased amount of imported cars as well as medicines received under humanitarian aid were the main contribution to the growth of import.

In the third quarter of 2019 net remittances of individuals (seasonal workers' income and personal transfers inclusive) in US dollars reported a tiny growth, 0.5% y/y, according to the Central Bank estimates, reflecting the slowing of growth in the non-tradable sector of the Russian economy.

In the third quarter of 2019 the current account deficit-to-GDP ratio dropped by about 1.2 pp, according to the Central Bank estimates.

Fiscal policy²⁷: In the third quarter of 2019, the state budget performed with actual revenues and expenditures somehow deviated from the Central Bank's projections²⁸ in the direction upward. As a result, the fiscal policy's impact on aggregate demand in the third quarter of 2019 is an estimated 0.9 pp expansionary instead of the forecast 0.5 pp expansionary.

In the third quarter of 2019, actual budget revenues exceeded the projection by 4.1% thanks to overperformed tax revenues. As a result, the revenue impulse amounted to 1.1 pp contractionary, instead of the forecast 0.5 pp contractionary.

State budget expenditures made up 104.1% of the Central Bank projection, so the expenditures impulse had a larger effect, 2.0 expansionary against the expected 1.0 expansionary. Nominal growth of public demand²⁹ was 107.6%. **Government consumption** reached 105.8% of the projected indicator and **expenditures on non-financial assets** amounted to 113.5% of the projection. This is explained by more capital expenditures funded by domestic sources and lower performance of loans and donations under foreign assistance, which was also the indicator of the first half of the year.

With revenues and expenditures performance described above, the state budget generated a deficit of AMD 26.8 billion in the third quarter of 2019, against that of AMD 25.7 billion projected by the Central Bank.

3.2.3. The production aspect of the economy

The GDP growth amounted to 7.9% in the third quarter of 2019, which is 0.7% higher from previous estimates of the Central Bank.

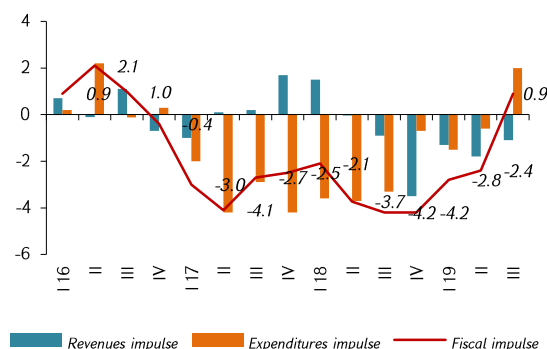
²⁷ The review of the fiscal sector used actual consolidated budget indicators of the third quarter of 2019.

²⁸ The revenue projection was based on the adjusted 2019 plan of the Government and the decision to refund the economic agents the VAT debit balance. The expenditure projection is the Central Bank estimate.

²⁹ Includes government consumption and investments.

Chart 34

In the third quarter of 2019 the expansionary effect of fiscal policy owed to the expansionary effect of expenditures

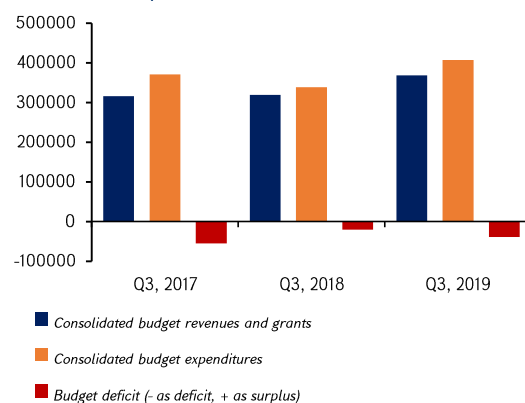


Source: Central Bank estimate

The fiscal policy's impact on aggregate demand is an estimated 0.9 pp expansionary, instead of 0.5 pp expansionary, for the third quarter.

Chart 35

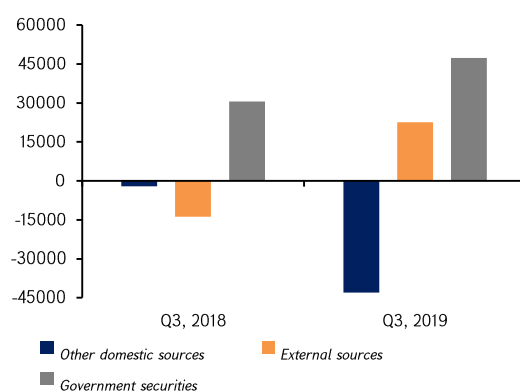
Main indicators of the consolidated budget (billion Armenian dram)



Source: Armenia Statistics Committee

Chart 36

In the third quarter of 2019 state budget generated a deficit as opposed to the surplus over the first half of the year (million Armenian dram)

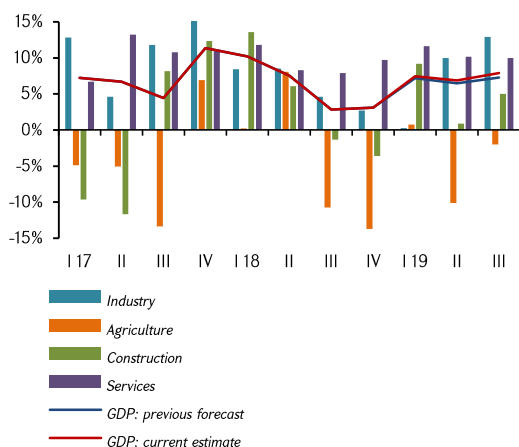


Source: Ministry of Finance

In the third quarter of 2019 the GDP growth was 7.9%, which is 0.7% higher from the Central Bank estimates.

Chart 37

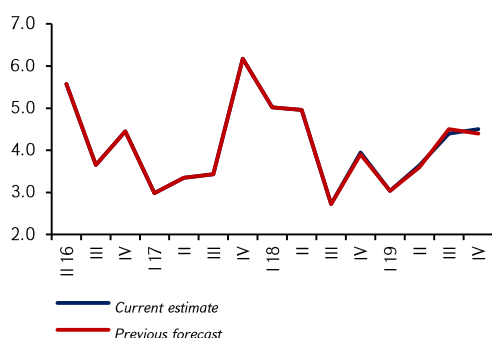
GDP structure by sector, (y/y growth, %)



Source: Armenia Statistics Committee,

Chart 38

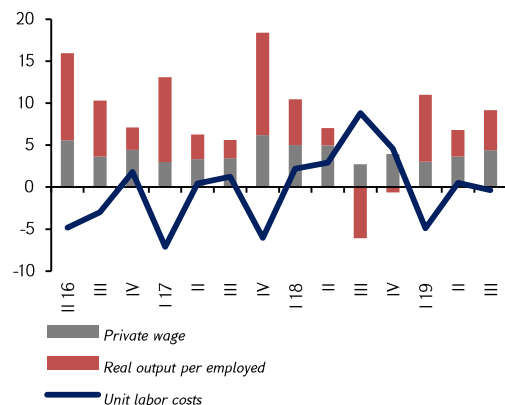
Private nominal wage, (y/y growth, %)



Source: Armenia Statistics Committee,
Central Bank estimate

Chart 39

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



3.3. Financial market developments

In the third quarter of 2019, the Board of the Central Bank cut the refinancing rate by 0.25 pp to 5.5%.

The decision to cut the policy rate came in consideration of deflationary effects, transmitting from the external sector, and the pace of the fiscal policy. On the other hand, the inflation and inflation expectations recovering gradually was highlighted as low inflation contributes to anchoring long-term inflation expectations and maintaining purchasing power of income. The Central Bank continued signaling the financial market participants that, in view of predicted macroeconomic developments, the monetary conditions would remain expansionary for as long a period as required, in order to fulfil the mid-term inflation target.

Table 6

Average quarterly interest rates in Armenia's financial market					
Instrument	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19
Central Bank refinancing rate (end of quarter)	6.00	6.00	5.75	5.75	5.50
Central Bank repo rate	6.17	6.17	5.94	5.86	5.80
Interbank repo rate (up to 7-day)	6.17	6.15	5.94	5.86	5.78
Yield of government securities on a yield curve (as of end-quarter)					
Short-term treasury bill (1-year)	6.70	6.63	6.57	6.36	6.26
Medium-term notes (up to 5 years)	8.60	8.48	8.65	8.39	7.99
Long-term bonds (30-year)	10.54	10.68	11.05	11.13	10.99

In the third quarter of 2019 short-term money market rates dropped, in line with the policy rate cut by the Central Bank. The quarterly interbank repo (up to 7-day) rate fell to 5.78%. The repo rate was 5.68% in September, having fallen by 0.16 pp against June.

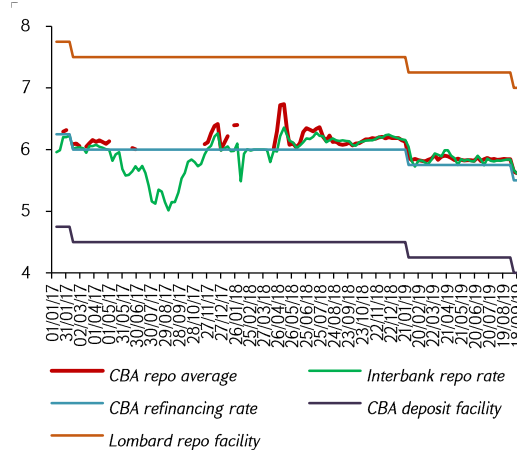
The interest rate decline was evident in almost all segments of the financial market: in the government securities market, yields on short-term bonds continued narrowing during the quarter. Government bond yields have reduced along the entire yield curve, reflecting the financial market participants' expectations over dropping interest rate. Note that the tightening in the mid-term segment of the curve was most pronounced.

In the third quarter of 2019 too, moderate lending terms amid the stimulative monetary policy of the Central Bank and adequately capitalized domestic financial system kept on fostering the growth of loans provided by financial companies. Lending persisted at a high

The refinancing rate was reduced by 0.25 pp to 5.5% in the third quarter of 2019.

Chart 40

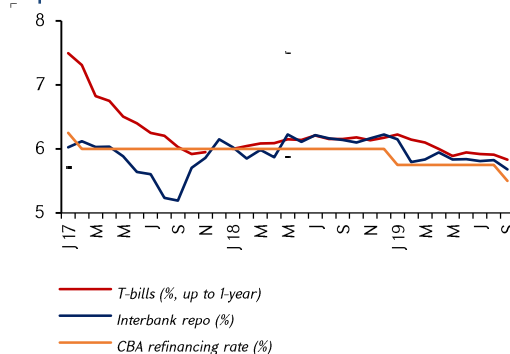
During the quarter short-term interest rates continued shaping around the Central Bank's policy rate



Source: Central Bank

Chart 41

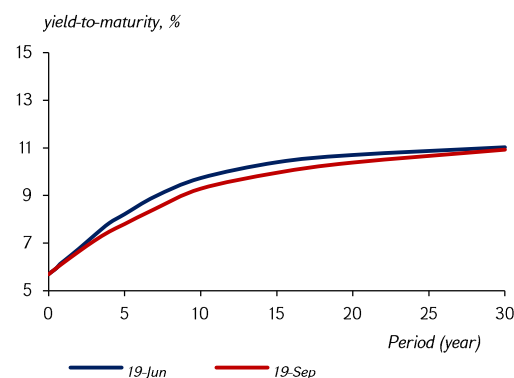
The behavior of short-term interest rates in the third quarter of 2019



Source: Central Bank, Armenia Stock Exchange

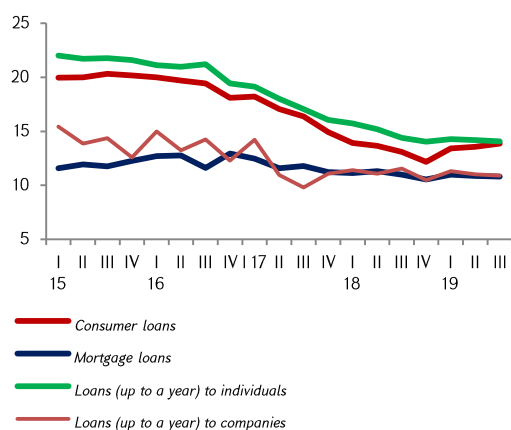
Chart 42

In the third quarter of 2019 yields in the government securities market narrowed along the entire curve



Source: Central Bank

Chart 43
Dynamics of interest rates on dram loans



Source: Central Bank

growth rate: the 12-month growth of total lending in September of 2019 was 15.2%, with consumer and mortgage loans still prevailing in total loan portfolio. The level of interest rates of loans remains much the same compared to the previous quarter.

4. SUMMING-UP

The inflation environment has been low in the course of 2019, and the Central Bank kept on implementing a stimulative monetary policy. However, letting the inflation recover gradually has been the choice of the Central Bank, estimating that in a macroeconomic situation of that time low inflation contributed to anchoring long-term inflation expectations and maintaining the purchasing power of income. The year saw a number of deflationary risks emerged through a more-than-expected contractionary fiscal policy and increasingly deflationary environment in the external sector, which have resulted in headline and core inflation rates both running below their values projected in the Monetary Policy Program. It is estimated that the year will end with the 12-month inflation floating in the range of 0.8-1.2%.

BOARD MEETING OF THE CBA

MINUTES

(10.12.2019)

On the Refinancing Rate

The CBA Board Meeting of December 10, 2019 attended by Deputy Governors Nerses Yeritsyan and Vakhtang Abrahamyan, and Board Members Hasmik Ghahramanyan, Arthur Stepanyan, Martin Galstyan, and Oleg Aghasyan

The Board meeting opened with presentation of the Situation Report as of December 10, 2019. It addressed current developments on inflation, external environment and real, fiscal and monetary sectors of the economy.

There was 1.1% inflation in November 2019 compared to that of 1.0% registered in the same month last year, and the 12-month inflation rate remained almost unchanged, **1.0%** at the end of the month. The month's inflation owed to the change in prices; in particular, prices in items "Vegetable" and "Fruit" grew by 20.1% and 3.5%, respectively (combined contribution to inflation: 1.3 pp), and prices in items "Fats and oils", "Dairy products" and "Bread products and grains" also posted increases by 0.7%, 0.4% and 0.3%. However, prices in item "Fish and seafood" fell by about 1.0%. ***The 12-month core inflation rate*** continued reducing to 0.7% at the end of October.

Addressing the current economic situation, the Board stated that ***economic activity exceeded the projected level*** owing mainly to the high growth in the services; in the period January-September, compared to the same period last year, the economic growth has been 7.5%. These trends are persisting over the fourth quarter too, so the January-October's Economic Activity Indicator hit a 7.2% level against the same period of the previous year, and the Central Bank estimates that the end-year indicator of economic growth will be around it, as well. Domestic demand too remains high during the fourth quarter thanks to the increase in private consumption, which is greatly supported by a stimulative monetary policy. The latter, as the financial system further benefits strong capitalization, has contributed to the high growth in economy lending, in which structure the share of consumer and mortgage loans is considerable. Although the impact of fiscal policy on aggregate demand for the last three quarters of the year has proved contractionary, at about 2.5 percentage points, in the fourth quarter and next year the fiscal policy is expected to be

expansionary, which is quite a solid boost for the domestic demand growth in the short term.

As to the external sector developments presented at the Board meeting, though persisting uncertainties have somewhat withdrawn, the global economic growth is still sluggish, reflecting both a weakening demand and persistently low inflationary environment in the world's commodity markets. In such a circumstance, central banks of main trade partner countries to Armenia will further pursue, in an upcoming period of time, a stimulative monetary policy in order to fulfil their inflation targets.

Talking about the developments in the domestic financial market, the Board admitted that short-term interest rates in the financial market fell during the fourth quarter, in line with a policy rate cut in September. In the government bond market in the meanwhile, interest rates also posted a decline along the entire yield curve.

The Board touched upon some supply-driven factors set to curb inflation, namely that the EAEU membership and structural reforms facilitate an increasingly strong competition in commodity markets, which changes the pricing behavior of firms and reduces their markups, and that efficiency in resource utilization is rising, which was mainly noticeable in non-tradable sector of the economy, shifting demand from the market of short-term consumer goods to that of long-term consumer goods.

Following presentation of the Situation Report and the developments in external and domestic macroeconomic environments, the Board began addressing the monetary policy directions and making decision on the interest rate. In view of non-inflationary impacts expected from the external sector in the near future and a stimulative fiscal policy, while preferring a gradual recovery of inflation, the Board ***found it appropriate to retain the monetary stimulus by leaving the refinancing rate unchanged.*** Given the predictable macroeconomic developments, the Board estimates that monetary conditions still need to be kept expansionary, in anticipation that the inflation will run below the target in the coming months but will gradually get closer to it in the mid-term perspective.

The Board also looked to current inflation risks. These risks are generally balanced now. However, if they materialize, an appropriate monetary policy response of the Central Bank will come along to ensure price stability in the medium term.

The Board approved the decision on 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 Rates of Instruments of Monetary Policy of the Central Bank of the Republic of Armenia

By virtue of Article 2 (3), Article 20 “c” and “e” of the Republic of Armenia Law on the Central Bank, and clauses of the Republic of Armenia Law on Normative Regulations, the Board of the Central Bank of the Republic of Armenia **enacts:**

1. Leave the refinancing rate of the Central Bank of the Republic of Armenia unchanged, at 5.5%.
2. Lombard facility rate offered by the Central Bank of the Republic of Armenia to be 7.0%.
3. Deposit facility rate offered by the Central Bank of the Republic of Armenia to be 4.0%.
4. This decision takes force on the day following its placing on the internet homepage of the Central Bank of the Republic of Armenia.

Nerses Yeritsyan,

Deputy Governor of the Central Bank

December 10, 2019

c. Yerevan

PRESS RELEASE
10.12.2019

In the December 10, 2019 meeting the Board of the Central Bank of Armenia decided to leave the refinancing rate unchanged, at 5.5%.

There was 1.1% inflation in November of 2019 compared to that of 1.0% registered in the same period of the previous year, and the 12-month inflation rate remained almost unaltered, reaching 1.0% at the end of the month.

In the external sector, some reducing of economic uncertainties was observable, yet the slow pace of global economic growth has been persisting, reflecting both weak global demand and low inflationary environment in international commodity markets. The Board of the Central Bank estimates that no considerable pressures from the external sector on the inflation environment are expected.

The Board admits that economic activity in Armenia in the third quarter exceeded the projected level, which will continue so during the fourth quarter, mainly thanks to the contribution by the services sector. Domestic demand remains strong as well, owing to increased private consumption, which continues to be sustained by the monetary policy's stimulative stance. At the same time, although the fiscal policy's impact on aggregate demand is estimated contractionary from the beginning of the year, the impact in the fourth quarter and throughout the next year is anticipated to be expansionary.

Given the abovementioned actual and expected developments in the external and domestic economies, and in view of further preference to a gradual recovery of inflation, the Board of the Central Bank finds it reasonable to keep the monetary stimulus under current terms by leaving the refinancing rate unchanged. The Board also finds that in view of anticipated macroeconomic developments, keeping the policy stance still expansionary will be needed. As a result, the expectation is that the inflation will run below the target in the coming months but will gradually return to the target in the mid-term perspective.

At present, risks to inflation deviating from the projection path are generally balanced; in the event such risks materialize, the Central Bank will respond adequately while maintaining price stability in the medium run.

Press Service of the Central Bank of Armenia

MAIN MACROECONOMIC INDICATORS OF ARMENIA

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	actual	actual	actual	actual	actual	actual	actual	actual	actual	program	program	program
Prices												
Inflation (y/y, end of period, %)	9,4	4,7	3,2	5,6	4,6	-0,1	-1,1	2,6	1,8	1,0	2,5	3,2
Consumer price index (y/y, average, %)	8,2	7,7	2,6	5,8	3,0	3,7	-1,4	1,0	2,5	1,5	1,4	3,1
Core inflation (y/y, average, %)	7,5	8,6	5,3	5,8	1,9	5,1	-2,0	0,8	4,0	1,2	2,0	3,4
Gross product												
GDP (billion Armenian dram)	3690,0	4028,9	4266,5	4555,6	4828,6	5043,6	5067,3	5568,9	6005,1	6532,5	7051,9	7596,8
GDP (% real growth)	2,2	4,7	7,2	3,3	3,6	3,2	0,2	7,5	5,2	7,2	5,3	5,1
Supply												
Industry (% real growth)	9,2	13,6	6,4	6,3	-0,9	6,2	7,7	11,7	5,8	8,1	4,7	5,5
Agriculture (% real growth)	-16,0	14,0	9,5	7,6	6,1	13,2	-5,0	-5,1	-8,5	-3,3	0,3	1,2
Construction (% real growth)	3,3	-12,2	4,5	-7,4	-4,5	-3,1	-14,1	2,8	0,8	4,6	4,4	4,1
Services (% real growth)	4,1	4,7	6,3	3,1	6,7	1,6	3,2	10,6	9,3	10,0	6,7	5,8
Taxes, net (% real growth)	13,4	3,8	9,9	3,6	1,8	-5,1	-4,7	9,7	8,0	7,1	5,7	5,5
Demand												
Consumption (% real growth)	3,9	2,6	7,7	1,9	0,7	-6,2	-0,5	10,5	5,1	10,1	2,8	4,2
Public consumption (% real growth)	3,9	1,9	-1,4	8,7	3,4	4,7	5,8	-3,9	7,6	4,0	3,1	2,4
Private consumption (% real growth)	3,9	2,7	9,1	0,9	1,0	-7,7	-1,2	12,7	4,7	11,4	3,2	4,5
Gross accumulation of fixed assets* (% real growth)	-2,9	-11,7	-1,9	-8,3	-2,2	2,5	-11,4	9,7	4,5	4,9	15,4	6,8
Public investment** (% real growth)	-12,7	-6,1	-22,4	-13,8	10,0	13,6	5,0	31,7	-38,0	24,9	66,2	13,7
Gross accumulation of private fixed assets (% real growth)	-1,5	-12,4	0,9	-7,8	-3,4	1,2	-13,9	6,2	12,8	1,2	3,8	4,4
Export of goods and services (% real growth)	20,4	14,5	12,0	8,9	6,4	4,9	19,1	18,7	2,9	9,7	6,5	7,9
Import of goods and services (% real growth)	7,2	-0,1	4,7	5,5	-1,0	-15,1	7,6	24,6	12,8	4,9	-0,8	5,7
External sector												
Balance of trade (million US dollar)	-2065,7	-2109,8	-2111,9	-2196,2	-2055,4	-1186,4	-944,4	-1376,1	-1789,1	-1771,4	-1614,3	-1664,3
Balance of services (million US dollar)	-260,8	-65,8	-101,6	-124,3	-113,0	-94,5	-71,4	-35,6	-157,8	-131,5	-60,0	-39,0
Remittances (million US dollar)	1421,9	1440,4	1539,8	1755,1	1616,1	1082,4	989,6	1179,3	1136,2	1156,2	1257,6	1333,0
Current account (million US dollar)	-1261,4	-1058,9	-1057,9	-812,9	-883,1	-279,1	-238,1	-344,4	-1165,3	-1063,9	-770,2	-743,8
Balance of trade (share in GDP, %)	-22,1	-20,8	-19,9	-19,7	-17,8	-11,3	-8,9	-12,2	-15,7	-13,9	-11,4	-10,7
Balance of services (share in GDP, %)	-2,8	-0,7	-1,0	-1,1	-1,0	-0,9	-0,7	-0,3	-1,3	-1,0	-0,4	-0,2
Remittances (share in GDP, %)	15,2	14,2	14,6	15,8	14,0	10,3	9,3	10,2	9,1	8,4	8,6	8,4
Current account (share in GDP, %)	-13,5	-10,5	-10,0	-7,3	-7,6	-2,7	-2,2	-3,0	-9,4	-7,8	-5,2	-4,7
Public sector***												
Revenues and grants (billion Armenian dram)	780,4	880,9	946,2	1071,4	1144,8	1167,7	1171,1	1237,2	1341,7	1492,4	1662,0	-
Tax revenues (billion Armenian dram)	699,4	777,4	878,4	1000,9	1064,1	1067,9	1079,7	1158,1	1258,1	1447,5	1599,9	-
Expenditures* (billion Armenian dram)	954,3	986,5	1006,1	1142,9	1235,1	1409,0	1449,1	1503,9	1447,1	1603,2	1822,6	-
Deficit (billion Armenian dram)	-173,9	-105,6	-59,9	-71,5	-90,3	-241,3	-278,0	-266,7	-105,4	-110,8	-160,6	-
Revenues and grants (share in GDP, %)	22,6	23,3	22,2	23,5	23,7	23,2	23,1	22,2	22,3	22,8	23,6	-
Tax revenues (share in GDP, %)	20,2	20,6	20,6	22,0	22,0	21,2	21,3	20,8	21,0	22,2	22,7	-
Expenditures (share in GDP, %)	27,6	26,1	23,6	25,1	25,6	28,0	28,6	27,0	24,1	24,5	25,8	-
Deficit (share in GDP, %)	-5,0	-2,8	-1,4	-1,6	-1,9	-4,8	-5,5	-4,8	-1,8	-1,7	-2,3	-
Monetary sector												
Broad money (y/y, end of period, %)	11,8	23,7	19,5	14,8	8,3	10,8	17,5	18,5	7,4	-	-	-
Dram broad money (y/y, end of period, %)	15,7	26,4	11,9	14,9	-3,5	5,2	24,8	28,9	13,2	-	-	-
Loans to economy (y/y, end of period, %)	26,7	35,3	27,6	12,9	20,8	-3,3	6,0	16,5	17,2	-	-	-
USD / AMD (Armenian dram for one US dollar)	373,7	372,4	401,8	409,6	415,9	477,9	480,5	482,7	483,0	-	-	-

* From now on, the Central Bank will only present the indicator of gross fixed asset accumulation instead of gross 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 gross accumulation. See https://www.armstat.am/file/article/sv_04_19a_112.pdf.

** Actual indicators of public investment are the capital expenditures of the consolidated budget, and the forecasts are based on the Mid-Term Expenditures Framework, 2019-2021.

*** The 2019 budget indicators are the Central Bank estimates.

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