

THE CENTRAL BANK  
OF THE REPUBLIC OF ARMENIA

*Approved under Board of  
the Central Bank Resolution No. 189A,  
dated August 25, 2017*

# Inflation Report

*Monetary Policy Program, Q3, 2017*



*Status Report on Implementation of the Monetary  
Policy Program, Q2, 2017*

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*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 August 15, 2017, 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.*

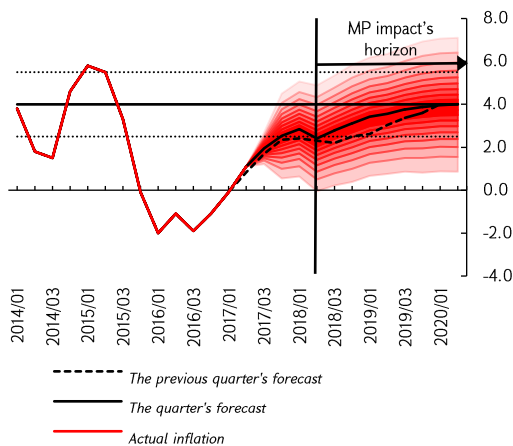
*All inflation reports which have been published to date are available on the Bank's website which also contains all press-releases and other monetary policy-related publications.*

## 1. EXECUTIVE SUMMARY

*Up until the end of 2017 the inflation will continue expanding, shaping within the confidence band; in the forecast horizon it will stabilize around the 4% target.*

Chart 1.1

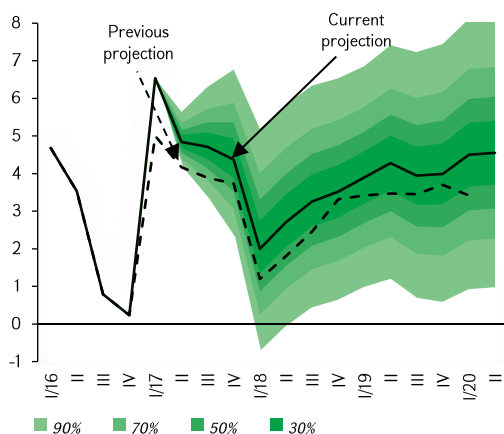
Inflation (12-month) Forecast Probability Distribution Chart for 3-year horizon



*In view of high economic activity reported in the first half of the year, the Central Bank has revised the 2017 economic growth forecast upside.*

Chart 1.2

Real GDP Cumulative Projection Probability Distribution Chart for 3-year horizon



**According to the Q3, 2017 Monetary Policy Program of the Central Bank of Armenia (“the Central Bank”), up until the end of 2017 the inflation will continue expanding, shaping within the confidence band; in the forecast horizon it will stabilize around the 4% target.**

Positive developments in the macroeconomic environment expected in the short run will primarily contribute to the recovery of the 12-month inflation rate, owing to relatively high activity observed in both the external and domestic economies since the beginning of the year. At the same time, it is estimated that the impact of expansionary monetary policy on inflation will still be noticeable. Macroeconomic developments of the second quarter have been mostly in line with the baseline scenario, so the Central Bank decided to leave the monetary conditions unchanged; this corresponded to the impulses the Central Bank’s Board previously gave to the financial market that should the expected macroeconomic developments unfold the policy rate would remain unchanged for some time. The Central Bank estimates that monetary conditions will further be expansionary in the foreseeable future, under which circumstance the GDP gap will run slightly positive in the medium run, making sure the inflation stabilizes around the target in the forecast horizon.

**In view of registered high economic activity in the first half of the year, the Central Bank has revised the 2017 economic growth forecast upside. In the forecast horizon the economic growth rates will accelerate, gradually approaching the long-term equilibrium.**

Economic growth is recovering primarily by supply factors, owing to increased productivity in industry and service sectors, in particular. Rebounding of aggregate demand is underpinned by both continuous recovery of external demand and positive behavior of domestic demand, which, under a contractionary fiscal policy, is fully driven by expansionary monetary policy implementation. In the structure of domestic demand, private investment also increases; this may positively contribute to the GDP growth potential in future.

Economic growth in the medium-term will strive for its long-term potential, staying within a 4-5% range. In the meanwhile, the tradable sector of the economy will remain the key driver to economic growth, which will be fueled by persistent productivity growth rates and Armenia’s competitiveness in an inflation environment much lower than in trade partner countries.

**In the forecast horizon** risks to the implementation of monetary policy program are balanced and largely depend on how fast the global and domestic demand will recover. In the short-term, inflation risks may also show up as a result of volatile prices of domestic agricultural products and raw materials in international markets, as well as because of geopolitical developments and economic expectations thereon. If these risks materialize, the Central Bank will react accordingly by maintaining the inflation target in the medium run.

## 2. FORECAST, FORECAST CHANGES AND RISKS

### 2.1. External environment<sup>1</sup>

**World economy will continue growing in 2017 in line with previous forecasts. Slower economic growth rates are expected in the USA and Russia – principal trade partners to Armenia, and some acceleration of growth in the Eurozone.**

**Some stability in international commodity and food product markets is anticipated in the second half of 2017 after the price-fall in the beginning of the year; minor inflationary patterns will be observable in these markets, except for the sugar market.**

Economic growth in the **USA** is forecast to be 2.0% in 2017 against a former prediction of 2.4% growth, yet the medium-term projections remained consistent with the previous ones<sup>2</sup>. The revision of economic growth owed primarily to a lower growth indicator registered in the first half of 2017 and an expectation that the US fiscal policy will come in less expansionary compared to the previous one. In such a circumstance, as well as if the inflation rate runs above the target, the US Federal Reserve System might continue raising the policy rate more slowly than previously expected.

Economic growth in **Eurozone** in 2017 is predicted to be 1.9% compared to the previous growth forecast of 1.2%. This revision largely owes to upside adjustment of growth indicator in major Eurozone countries – Germany, France, Spain and Italy, which is driven by a significant increase in domestic demand, a decline in the unemployment rate and lessened political uncertainties. However, it should be noted that in the medium term the economic growth will run at the level of 1.4% as in the previous forecast, and the European Central Bank will continue to pursue a low interest rates policy up until the start of 2018.

Economic growth in **Russia** in 2017 is expected to be 1.5% compared with a previous forecast of 1.6%. The adjustment is mainly related to using of new reciprocal economic sanctions and, as a consequence, a certain reduction in the expected investment. In the short term, inflation is expected to be higher compared with the previous forecast (which still runs below the target) due to expectation of lesser harvest as a result of poor weather conditions, under which circumstances the Central Bank of Russia will, in the short run, carry out a less expansionary monetary policy compared to the previous forecast.

Economic growth rates are expected to be slower in the USA and Russia – principal trade partners to Armenia, and some acceleration of growth will be expected in the Eurozone.

Some stability in international commodity and food product markets is anticipated in the second half of 2017 after the price-fall in the beginning of the year.

Chart 2.1

Economic growth in main trade partner countries (%)

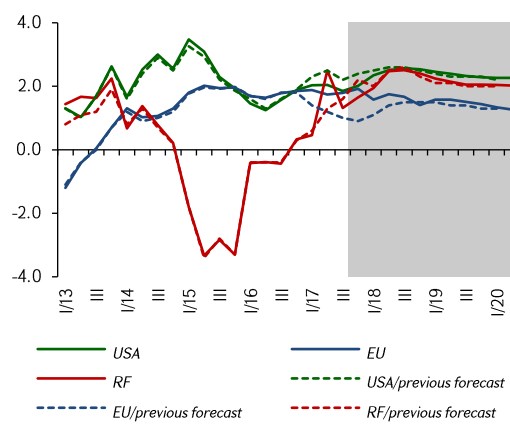
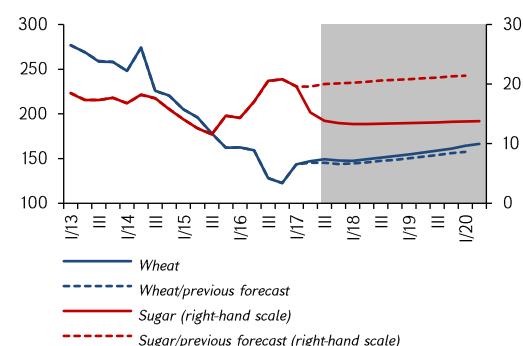


Chart 2.2

Food products (US dollar)

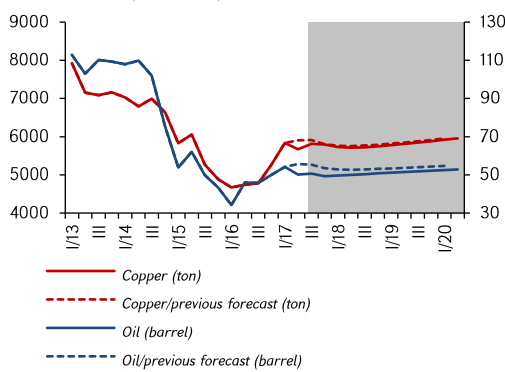


<sup>1</sup> The forecasts of external sector were based on the information provided from international reputable analytical, research, ratings organizations and financial institutions as well as various news agencies worldwide (including the IMF, the World Bank, The Economist, Economist Intelligence Unit, the Global Insight, the Financial Times, and so on).

<sup>2</sup> All forecasts for the external environment are based on the information available as of 28.07.2017.

Chart 2.3

Commodities (US dollar)



According to the IMF July 2017 report “World Economic Outlook”, world economic growth forecast for 2017 is 3.5%, which means that the forecasts for April 2017 remained unchanged.

In **commodity and food product markets** in the second half of 2017, international prices are predicted to restore from their lows observable in the first half of the year, but in the mid-term these will be at a slightly lower level compared to the previous forecast. In particular, after demonstrating low price trends at the beginning of the year, the international copper prices will strengthen in the third quarter of 2017, driven largely by a substantial increase in demand from China, but in the medium run the prices will decline slightly from their short-term levels due to the abolition of expected major investments in the US infrastructures. Risks to the developments in international commodity prices are positioned downward due to reducing demand as a result of political uncertainties in the USA, whereas risks are expected to rise in food markets owing to the US dollar depreciation.

## 2.2. Aggregate supply and aggregate demand

### Aggregate supply

The **central value of economic growth forecast for 2017 has been revised upside**. Note that factors behind the revision, such as high growth in tourism and rapid expansion of the tradable sector, were mentioned as positive risks in the previous monetary policy program. As a result, the 2017 economic growth is estimated in the range of 3.9-4.8% instead of the former forecast of 3.3-4.8%. The medium-term forecast revisions are negligible: economic growth in 2018 is expected within 2.8-4.2%, in 2019, in the range of 3.2-4.8% and in the first half of 2020, 3.7-5.4%.

The following developments are expected in the sectors of the domestic economy in the forecast horizon:

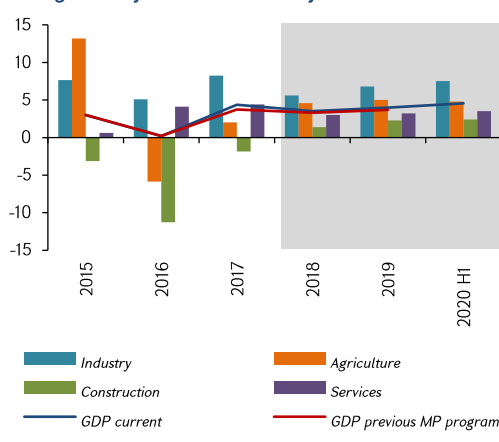
For **Industry**, the 2017 forecasts were revised upside owing to strong economic activity in the first half of the year and higher prices of ore and minerals registered in the same period of time. It should be noted that these developments were outlined in the previous projections as positive risks to the industry. As a result, in 2017 the growth of value added in industry is forecast within 7.8-8.6% against the previous forecast of 7.2-8.4%.

For **Construction**, the value added forecasts in the sector did not vary significantly from the previous ones; a 1.5-2.4% decline is anticipated in 2017.

For **Agriculture**, economic activity slowed down since the second half of 2016 persisted over the first half of this year. As a result, the sector’s growth is estimated in the range of 1.6-2.4% instead of the previous estimation of 3.6-4.4%.

Chart 2.4

GDP growth by sectors of economy



For **Services**, the 2017 growth of value added will be within 4.2-4.6%, which is higher compared to the previous forecast (3.4-4.0%). The revision is largely determined by higher increase in the number of tourists visiting Armenia, in comparison with the Central Bank expectations.

There have been no considerable revisions to the developments anticipated in the sectors of domestic economy for 2018-2019: industry, construction, agriculture and services are expected to increase by 6.0-7.0%, 2.0-2.8%, 4.4-5.2% and 3.1-3.7%, respectively.

In the **forecast horizon** risks to the economic growth are dual-sided and balanced.

Among upside risks, most prominent is the implementation of a number of projects by the Government of Armenia aimed at improving the business climate and investment promotion and how they will affect the economic growth. The domestic economic agents exploring and entering new export markets and creating new products in recent years in order to bolster the GDP potential are other positive risks to the growth.

A slower-than-expected recovery of private demand in the medium run is a downside risk. The speed of recovery of world economy compared to the baseline scenario, adverse weather conditions and the pace at which structural reforms are pushed ahead remain dual-sided risks to economic growth.

| <b>Real GDP Growth (Cumulative) Projection Probability Distribution</b> |                          |                          |
|-------------------------------------------------------------------------|--------------------------|--------------------------|
| Period                                                                  | 30% probability interval | 90% probability interval |
| January-December 2017 / January-December 2016                           | 3.9% - 4.8%              | 2.3% - 6.8%              |
| January-December 2018 / January-December 2017                           | 2.8% - 4.2%              | 0.6% - 6.5%              |
| January-December 2019 / January-December 2018                           | 3.2% - 4.8%              | 0.5% - 7.4%              |
| January-June 2020 / January-June 2019                                   | 3.7% - 5.4%              | 0.9% - 8.2%              |

**Labor market:**<sup>3</sup> The average nominal wage<sup>4</sup> forecasts for 2017-2019 were adjusted upside whereas forecasts for the unemployment rate for the same period were virtually the same.

Consistent with the previous Central Bank predictions, in 2017 the average nominal wage is expected to grow by 4.2% in the **private sector** and by 1.0% in the **public sector** (instead of formerly predicted 0.7% decline), driven by actual developments. In the forecast horizon, the private and public sector wage growth will speed up along with acceleration of economic growth and inflation.

<sup>3</sup> The labor market data for 2017-2019 are the Central Bank projections which are based on the first quarter of 2017 data and actual January-May of 2017 figures. The growth indicators presented in this sub-section are relative to the same reference period last year, unless otherwise specified.

<sup>4</sup> Average nominal wage constitutes a grand sum of salary and salary equivalents (premiums, allowances, bonuses, one-time incentive pays, etc.).

Chart 2.5

Real GDP Cumulative Projection Probability Distribution Chart for 3-year horizon

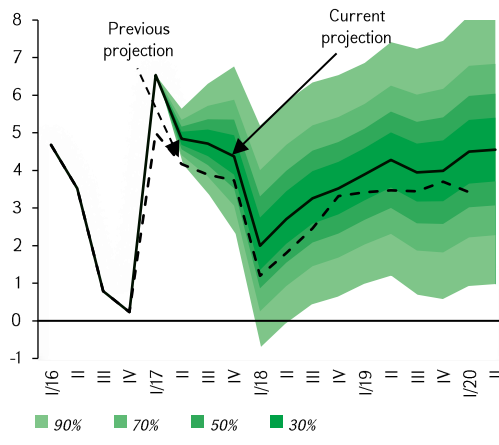


Chart 2.6

Nominal wage growth, y/y

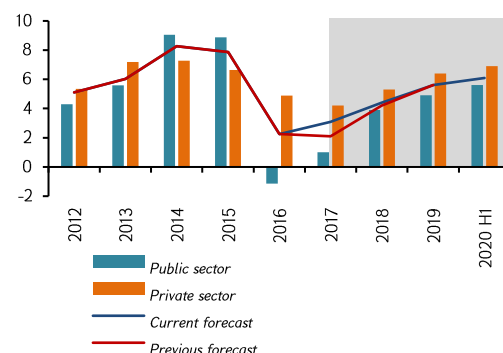
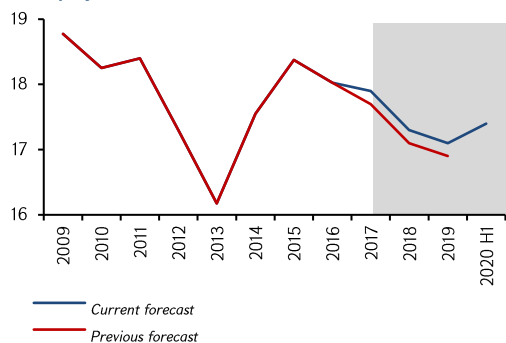


Chart 2.7

## Unemployment rate



The 2018-2020 forecasts for private and public sector wages do not vary much from the previous forecast by the Central Bank.

On the back of the aforementioned developments, the growth of **average nominal wage is expected to reach 3.1% in 2017 and to accelerate annually by 0.8-1.2 pp in the forecast horizon.**

**The 2017-2020 unemployment rates remain virtually intact for revision.** For 2017 the unemployment is forecast to be 17.9%, which will gradually decrease by 0.3-0.5 pp year-on-year along with the economic growth to reach its mid-term equilibrium in the forecast horizon.

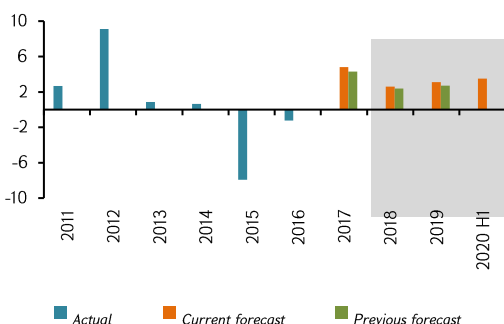
As a result of the above-mentioned developments, **in 2017 the productivity growth rate will outperform that of wage, forcing the 0.2-0.4% inflationary pressures gradually out of the consumer market.** In the forecast horizon, a significant impact on the inflation from the labor market is not likely.

### Aggregate demand <sup>5</sup>

**Contrary to previous forecasts, the expected higher economic growth will positively affect the households' and firms' disposable income. Private spending is predicted to grow by 4.8-5.2%, which is 0.4 pp higher than the previous forecasts. To maintain debt sustainability in the medium-term perspective, the budget deficit is expected to decline in 2017, which, although set to leave somewhat a dampening effect on domestic demand in short term, will contribute to increasing confidence in the long run, sustainability of public finances and investment and economic activity. The above-described developments in the private and public sectors suggest that the growth of domestic demand in 2017 will be within 3.6-4.0%, which is 0.6 pp higher than the previous forecast. In anticipation of a faster economic growth, the negative gap of domestic demand will shrink in 2017 and eliminate in early 2018. It is expected that domestic demand will run slightly above the equilibrium in 2018-2020, creating a positive gap.**

Chart 2.8

## Private consumption (%)



### Private sector spending

Predicted higher economic growth in 2017 will boost real household incomes up. Taking also into account an expected increase in lending in 2017, private consumption will grow by around 0.5 pp higher compared with the previous forecast, amounting to 4.8%. In line with previous forecasts, in 2018-2019 private consumption is expected to increase by 2.4-2.8% and 2.9-3.3%, respectively. In the first half of 2020, the growth rate of private consumption will reach 3.5%.

<sup>5</sup> The data of real growth of private consumption, investments, private spending and domestic demand for 2017-2019 are the Central Bank estimates. These actual figures are as of the first quarter of 2017 published by the National Statistics Service of Armenia. The real growth indicators represented in this sub-section are relative to the same reference period last year, unless otherwise specified.

In 2017 the growth of private investment remains unchanged against the previous forecast and is estimated to reach 6%. The growth of private investment in 2018-2019 is expected to somehow exceed the previous forecasts, which is explained by revision of the economic growth. As a result, private investment will increase by 5.0% in the forecast horizon.

The aforementioned developments in private consumption and investment will result in a 5% increase in private spending in 2017, which is 0.4 pp higher from the previous forecast. In the forecast horizon the growth of private expenditures will be within 3.0-4.0%.

The expected growths notwithstanding, private spending will decelerate to relatively low levels in the beginning of forecast horizon: because there has been 6.9% and 2.9% fall in private spending in 2015 and 2016, respectively, about 5.5% growth recorded in the first half of 2017 was still insufficient for private spending to recover. It should also be noted that the growth rates reported earlier the year are higher than the economic fundamentals denote, which suggests that private spending may grow at a slower pace in the forecast horizon than it has been over the first half of the year. So, up until the first quarter of 2018, the **private spending gap will create an average of 0.2-0.4 pp contractionary impact on inflation**, which is smaller from the indicator outlined in previous forecasts. From the second quarter of 2018 to the end of the forecast horizon, **it will turn into inflationary, amounting to 0.7-0.9 pp on average**, which is slightly above the previous forecasts.

### Current account

The second quarter 2017 developments point to higher rates of growth in terms of export of goods and services. Taking also into account the positive revisions of the industry sector, the 2017 forecast of real export of goods and services was adjusted upside (in the range of 10.0-12.0%).

Consistent with positive developments in the economic activity and domestic demand in particular, higher-than-expected growth was reported for import of goods and services, with investments goods having contributed substantially to the overall imports. Based on this, the 2017 forecast for real import of goods and services was revised upside (in the range of 10.0-12.0%).

The forecast for private transfers of individuals for the second quarter of 2017 remained unchanged. Considering a slightly lower-than-expected growth in the first half of the year, the growth of private transfers in 2017 will stand between 12.0-14.0%, which will be determined by how the developments unfold in Russia for economic recovery.

As a result of the above developments, it is expected that the 2017 current account deficit-to-GDP ratio will run in the range of 1.0-3.0%, a value that was predicted in the previous quarter.

Chart 2.9

Private investment (%)

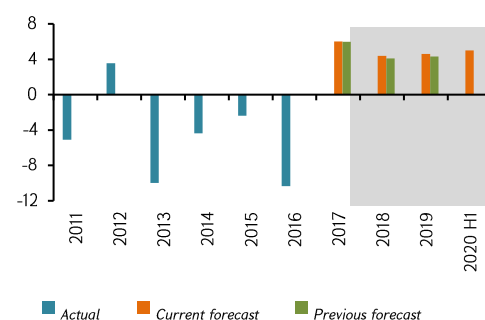


Chart 2.10

Contribution to economic growth

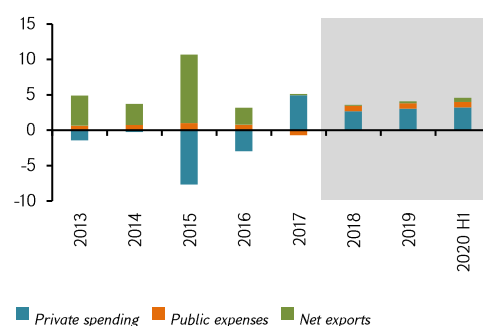
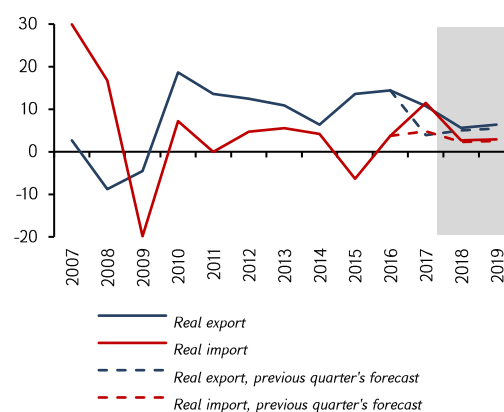


Chart 2.11

Real export and real import of goods and services (y/y, %)



## The fiscal sector <sup>6</sup>

The Central Bank's 2017 forecasts for state budget revenue, which are in line with adjusted quarterly plans, carry some change in relation to the previous monetary policy program. The positive trend of tax collection observable over the first half of 2017 is predicted to remain so during the year in anticipation of higher economic growth and improved tax administration. As a result, the tax-to-GDP ratio<sup>7</sup> is expected to reach 22.2%; this is almost in line with the previous quarter's projection and some 0.9 pp higher than the previous year's indicator.

The year's results suggest that savings on public expenditures are anticipated, mainly in terms of capital expenditure financed from external sources. The expenditures are expected to amount to 97.0% of the adjusted quarterly plans. The expenditures-to-GDP ratio is an estimated 25.8%, 0.7 pp lower than the first quarter projection and 2.2 pp lower than the previous year's indicator.

The budget deficit is predicted to reach AMD 120.6 billion instead of AMD 151.6 billion by adjusted plans. As a result, the deficit-to-budget ratio will make up 2.2% instead of 2.8% as was planned for the quarter.

Given the abovementioned changes and the GDP indicator revised up, the fiscal policy's impact on aggregate demand is estimated 4.0 pp contractionary for 2017, which exceeds the previous projection by 1.0 pp.

In the **medium run**<sup>8</sup>, to achieve a sustainable debt environment, as it has been outlined in the previous MPEP, the fiscal policy is steered to gradual reduction of the deficit. However, the 2018-2020 deficit-to-GDP ratio is projected to reach an average 2.4% (in 2017-2019, an average 2.2%). In spite of the increase in the average rate of deficit, as more debt interest payment is planned in mid-term, the impact of the fiscal policy on aggregate demand is estimated to be contractionary.

*The fiscal policy's impact on aggregate demand is estimated 4.0 pp contractionary for 2017, which exceeds the previous projection by 1.0 pp.*

<sup>6</sup> The fiscal policy's impact on aggregate demand for 2017 has been estimated, using the indicators of the Republic of Armenia Law on "State Budget 2017" and revenue and expenditure figures adjusted under selected RA Government decrees as well as the Central Bank forecasts. The indicators defined under the laws of the state budget are subject to adjustment under selected RA Government decrees, and are placed at the Government's website://www.e-gov.am.

<sup>7</sup> The 2017 GDP is the Central Bank estimate.

<sup>8</sup> The fiscal policy's forecast horizon is based on the main indicators that underlie the Republic of Armenia "Medium-Term Public Expenditures Program for 2018-2020".

| Medium-term fiscal policy impact assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |      |      |      |      |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|------|
| % of GDP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Budget revenues <sup>9</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 22.4 | 22.4 | 23.6 | 23.4 | 23.5 | 23.7 |
| Budget expenditures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 27.2 | 28.0 | 25.8 | 26.1 | 25.9 | 25.8 |
| Debt interest payment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.5  | 1.9  | 2.2  | 2.4  | 2.3  | 2.5  |
| Budget balance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -4.8 | -5.6 | -2.2 | -2.7 | -2.4 | -2.1 |
| Primary balance *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -3.3 | -3.7 | 0.0  | -0.3 | -0.1 | 0.4  |
| One-off flows **                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -0.6 | 0.4  | -0.1 | -0.5 | -0.8 | -0.7 |
| Adjusted balance ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -2.7 | -4.1 | 0.1  | 0.2  | 0.7  | 1.1  |
| Cyclical balance ****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -0.1 | -0.4 | -0.3 | 0.1  | 0.2  | 0.2  |
| Cyclically adjusted primary balance<br>(structural balance sheet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -2.6 | -3.7 | 0.4  | 0.1  | 0.5  | 0.9  |
| Fiscal stance *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |      | -4.0 | 0.2  | -0.3 | -0.5 |
| <p>* Budget balance less debt interest payments.</p> <p>** Temporary or one-off budget entries. In this case net lending is considered; the sign “+” means resources allocated and the sign “-” means resources repaid.</p> <p>*** Primary balance sheet adjusted by temporary or one-off entries.</p> <p>**** The Central Bank estimate: a part of the budget balance which depends directly on the business cycles. The latter's components depend on the GDP gap and revenues and expenditures elasticity coefficients on GDP gap.</p> <p>***** The Central Bank estimate: y/y change in the structural budget balance that reflects a discretionary nature of the fiscal policy (the positive sign denotes fiscal expansion and the negative sign denotes fiscal contraction).</p> |      |      |      |      |      |      |

**Summary: from the third quarter of 2017 to the first quarter of 2018 the aggregate demand and labor market developments will create minor deflationary pressures of 0.6-0.8 pp on average in the consumer market, which is virtually the same in comparison with the previous forecast. The combined impact of the fiscal policy, private demand and labor market on domestic prices will be deflationary, 1.1-1.3 pp on average, and on the other hand net external demand's impact, 0.4-0.6 pp inflationary. These effects do not essentially vary from previous estimations.**

**As economic conditions in both external and domestic sectors improve further and the expansionary monetary policy still has a lingering effect, the aggregate demand will continue growing with a positive gap. As a result, starting from the first half of 2018 up until the end of the forecast horizon, the deflationary impact of overall aggregate demand and labor market will phase out and change into that of inflationary, making up an average 0.9-1.0 pp, which is slightly above the estimated level in the previous forecast.**

<sup>9</sup> State budget indicators are represented excluding the off-budgetary funds.

## 2.3. Inflation forecasts and monetary policy directions in the 3-year forecast horizon

In the third quarter of 2017 global economic recovery trends will continue while price stabilization in the world's commodity markets will be observed. Inflationary pressures from the external sector both in the short-term and mid-term are not likely.

According to the results of the second quarter of 2017, the **y/y inflation has been 1.1%**, slightly surpassing the previous program's indicator of 0.8%; in July it amounted to 0.9% driven by a sharp decline in the seasonal prices for agricultural products. However, core inflation was recovering from 0.3% y/y in June to 0.7% y/y in July, pointing to a gradual recovery in demand. According to Central Bank estimates, the GDP gap is gradually declining, though it is still in the negative territory. Demand is restored thanks to continued recovery of external demand, on the one hand, and positive behavior of domestic demand, on the other, which, coupled with contractionary fiscal policy, is fully driven by expansionary monetary policy implementation. Restoring of domestic demand, in addition to private consumption, owed also to the growth of private investment, which may positively affect the potential GDP growth in future. In the first half of 2017, relative to the same period of the previous year, demand has recovered through an increased lending (more loans to firms) and grown imports, including import of intermediate goods.

Economic growth keeps on recovering as well, owing more to supply factors though. Increased export of goods and services (travel services in particular) and labor market developments on the whole reflected the growth of productivity in industry and service sectors. In the labor market, the productivity growth has exceeded the wage growth, forcing the inflationary pressures out in 2017. Under these conditions, the forecast for economic growth in 2017 was revised upward to 3.8-4.8%, instead of 3.2-4.8% in the previous quarter.

With a strong productivity growth, the GDP gap ran negative in the second quarter. In view of this as well as the pace at which inflation recovered, maintaining monetary conditions at the current level (refinancing rate – 6.0%) was considered most appropriate. As a result, the GDP deficit is anticipated to phase out at the beginning of 2018, and the inflation will run within the confidence band by the end of 2017. In the meanwhile, where developments in the macroeconomic environment unfold according to prediction, the monetary conditions may remain expansionary, in which case the GDP deficit will run slightly positive in medium-term, helping the inflation stabilize around the target.

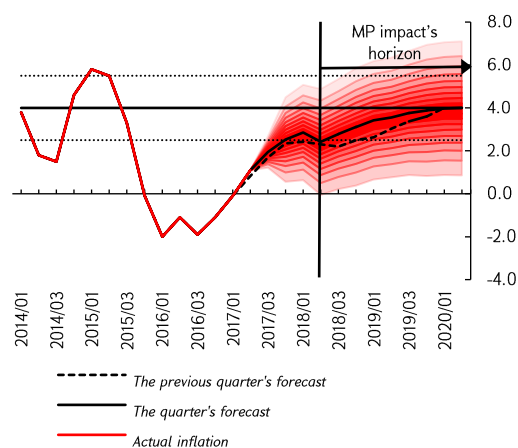
Economic growth in medium-term will strive for its long-term potential, in the range of 4-5%. At the same time, the tradable sector of the economy will remain the key driver to economic growth, which will be fueled by persistent productivity growth rates and Armenia's competitiveness in an inflation environment much lower than in trade partner countries.

*According to the second quarter 2017 results, the y/y inflation has been 1.1%, slightly surpassing the previous program's indicator of 0.8%; in July it amounted to 0.9% driven by a sharp decline in the seasonal prices for agricultural products.*

*The forecast for the 2017 economic growth was revised upward to 3.8-4.8%, instead of 3.2-4.8% in the previous quarter.*

Chart 2.12

Inflation (12-month) Forecast Probability Distribution Chart for 3-year horizon



| Period   | Inflation interval forecast probability distribution |          |          |          |       |
|----------|------------------------------------------------------|----------|----------|----------|-------|
|          | <1.0%                                                | 1.0-2.5% | 2.5-5.5% | 5.5-7.0% | >7.0% |
| Q3, 2017 | 1.7                                                  | 87.1     | 11.2     | 0.0      | 0.0   |
| Q4       | 10.1                                                 | 38.9     | 50.3     | 0.7      | 0.0   |
| Q1, 2018 | 8.5                                                  | 31.2     | 57.8     | 2.4      | 0.1   |
| Q2       | 17.2                                                 | 35.0     | 45.8     | 1.9      | 0.1   |
| Q3       | 12.6                                                 | 30.1     | 53.2     | 3.8      | 0.3   |
| Q4       | 10.1                                                 | 25.4     | 56.9     | 6.6      | 1.0   |
| Q1, 2019 | 7.4                                                  | 21.7     | 60.1     | 9.2      | 1.7   |
| Q2       | 6.6                                                  | 20.1     | 60.6     | 10.5     | 2.1   |
| Q3       | 5.8                                                  | 17.8     | 60.2     | 12.9     | 3.3   |
| Q4       | 6.1                                                  | 16.8     | 57.9     | 14.5     | 4.7   |
| Q1, 2020 | 5.7                                                  | 16.0     | 57.5     | 15.4     | 5.3   |
| Q2       | 5.8                                                  | 16.0     | 57.0     | 15.6     | 5.6   |

***In the forecast horizon*** risks to the implementation of monetary policy program are balanced and mostly depend on how fast the global and domestic demand will recover. In the short-term, inflation risks may also show up as a result of volatile prices of domestic agricultural products and raw materials in international markets, as well as because of geopolitical developments and economic expectations therefrom. If these risks materialize, the Central Bank will react accordingly by maintaining the inflation target in the medium run.

### 3. ACTUAL DEVELOPMENTS IN Q2, 2017

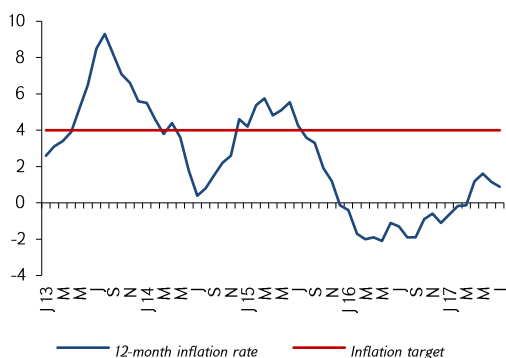
#### 3.1. Inflation

##### 3.1.1. Actual inflation and fulfilment of the inflation target

There was **-0.2%** inflation in the second quarter of 2017 (instead of projected -0.5%); this was driven primarily by a seasonal decrease in food prices, with prices of items “egg” and “vegetable and potato” having fallen by -4.4% and -23.7%, respectively (negative contribution to the quarter’s inflation: around 1.3 pp<sup>10</sup>). In the second quarter of 2017 the **core inflation rate was 0.7%, slightly above the projection**, in which case the 12-month rate reached 1.1% at the end of June. The latter has largely been driven by increased airfare (26.6% q/q) and increased prices of items “fish products” (6.3% q/q) and “meat products” (2.9% q/q), the impact of which on the core inflation has somewhat been offset by fallen prices of items “bread” (-0.5% q/q) and “dairy products” (-1.2% q/q).

Chart 3.1

In the second quarter of 2017 the inflation environment further stabilized



| Price inflation by commodity item as key contributors <sup>11</sup> |                      |              |                     |              |             |              |
|---------------------------------------------------------------------|----------------------|--------------|---------------------|--------------|-------------|--------------|
| Commodity item                                                      | March, 2017<br>(y/y) |              | June, 2017<br>(y/y) |              | Q2, 2017    |              |
|                                                                     | Growth               | Contribution | Growth              | Contribution | Growth      | Contribution |
| <b>CPI</b>                                                          | <b>-0.1</b>          |              | <b>1.1</b>          |              | <b>-0.2</b> |              |
| <b>Food products</b>                                                | <b>3.3</b>           | <b>1.5</b>   | <b>4.9</b>          | <b>2.3</b>   | <b>-0.9</b> | <b>-0.4</b>  |
| Bread products                                                      | -0.88                | -0.08        | -1.44               | -0.13        | -0.48       | -0.04        |
| Meat products                                                       | -0.15                | -0.01        | 3.35                | 0.29         | 2.87        | 0.25         |
| Dairy products                                                      | -2.81                | -0.12        | -2.40               | -0.10        | -1.22       | -0.05        |
| Fruit                                                               | 23.75                | 0.79         | 13.54               | 0.45         | 26.55       | 0.88         |
| Vegetable and Potato                                                | 13.45                | 0.72         | 19.18               | 1.03         | -23.70      | -1.27        |
| Eggs                                                                | 15.76                | 0.12         | 24.16               | 0.18         | 6.44        | 0.05         |
| Sugar                                                               | -1.16                | -0.02        | 23.00               | 0.30         | -4.37       | -0.06        |
| <b>Non-food products</b>                                            | <b>14.91</b>         | <b>0.13</b>  | <b>16.69</b>        | <b>0.14</b>  | <b>0.68</b> | <b>0.01</b>  |
| <b>Services</b>                                                     | <b>-3.5</b>          | <b>-0.8</b>  | <b>-2.9</b>         | <b>-0.6</b>  | <b>-0.2</b> | <b>0.0</b>   |

On the back of the aforementioned developments the inflation environment kept on stabilizing, as was expected, during the second quarter of 2017, in which case **the 12-month inflation rate amounted to 1.1% in June instead of the projected 0.8%**.

According to the Republic of Armenia National Statistics Service data, there was -2.6% inflation recorded in July, mainly due to seasonal

<sup>10</sup> Some statistical discrepancy between the grand sum of certain commodity items’ contribution to inflation and the officially published headline inflation may exist due to the characteristics of statistical methodology for inflation calculation.

<sup>11</sup> The y/y data of structural components of food products in the table are calculated by the Central Bank on a basis of information from the National Statistics Service of Armenia, since no such information is officially published by the NSSA due to a new inflation calculation methodology.

fall in prices for agricultural products. As a result, the 12-month inflation rate has slightly softened to 0.9%.

For the previous one-year horizon, which covers a timespan from third quarter of 2016 to third quarter of 2017, weak domestic demand and the world commodity markets' deflationary impact on domestic prices were still to linger over the quarter, according to Q3, 2016 monetary policy program. Also, subsidizing the electricity tariff for some groups of the population and small businesses by the Republic of Armenia Government and "Electric Networks of Armenia" CJSC was supposed to cease starting August 1, 2016, and this would be partially offset by reduced electricity tariffs. Under this circumstance, as the Central Bank reckoned, the deflation environment would persist in the third quarter and gradually weaken afterward, and **the 12-month inflation rate would gradually return to the target in the forecast horizon**. Meanwhile, in view of the factors mentioned above, the core inflation forecasts were adjusted downside.

In such a situation, the **Central Bank was planning to further ease monetary conditions in the third quarter of 2016** that would facilitate the aggregate demand to expand, the deflationary pressures to phase out and the inflation to stabilize around the target in the forecast horizon.

In the third quarter of 2016, following actual inflation developments, the deflation environment has deepened, as was anticipated, largely due to persistently sluggish domestic demand, coupled with prices of agricultural products having shown profound seasonality and deflationary effects that were still transmitting from the external sector. Under these circumstances, **the 12-month inflation rate** dropped to -1.9% in September from -1.1% in June.

Moreover, the deflationary risks that existed at the end of the third quarter and encompassed such factors as the expected reduction in gas and electricity tariffs in the first quarter of 2017 and a contractionary fiscal policy envisaged for 2017 prompted the Central Bank to make downward revisions in its forecasts for the fourth quarter of 2016 and the first quarter of 2017.

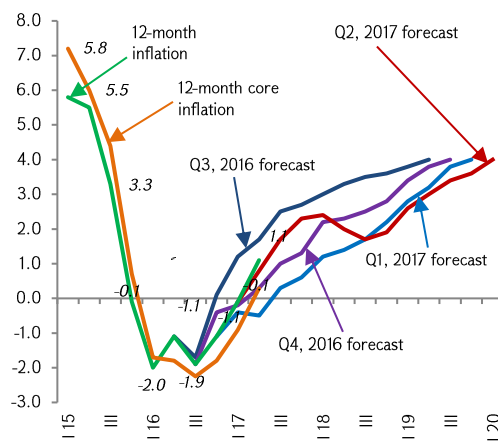
Emergence of the above deflationary risks notwithstanding, the inflation developments in the fourth quarter began incurring the influence of expansionary monetary policy implemented by the Central Bank, under which the 12-month inflation rate has increased to -1.1% by the end of the year.

In the first quarter of 2017 the **12-month inflation rate** continued increasing, bearing the influence of the same factors, reaching **-0.1%** at the end of March.

In view of domestic demand still sluggish in the period from July 2016 to March 2017, spillover of deflationary effects on food and, later on, non-food products from the external sector and anticipated impact of contractionary fiscal policy of the Government for 2017, the Central Bank has frequently (5 times) loosened monetary conditions in that period, reducing the refinancing rate by a total of 1.5 pp to **6.0%** at the end of February.

Chart 3.2

According to the Central Bank predictions, the inflation will expand gradually in the forecast horizon and stabilize around the 4% target in end-horizon



Inflation expanded considerably in the second quarter of 2017 as prices of agricultural products grew. As a result, the **12-month inflation rate entered a positive territory starting from April**, fluctuating around the **1.3%** average value during the quarter. At the same time, economic activity has been high enough in the first half of the year; expansionary monetary policy of the recent years further contributed to the recovery of domestic demand, inflation expectations have notably diminished and inflationary risks are estimated as mainly balanced. In the current situation, taking into account the aforementioned factors of influence and expectations of persistently positive developments in external and domestic economies, the Central Bank left monetary conditions unchanged in the second quarter, keeping the **refinancing rate at a 6% level**. Nevertheless, as the Central Bank reckons, such a policy is still expansionary, in which case the inflation will continue to grow; it will hit the confidence band in 2017 and stabilize around the target in the forecast horizon.

### 3.1.2. Import prices and producer prices

**Import prices:** in the second quarter of 2017 the growth of dollar prices of import of goods and services to Armenia slowed to 1.0% q/q on average. The growth over the same reference period last year amounted to 2.7% y/y. The slowing of growth in dollar prices of import was driven by slower growing prices of iron ore in world markets and weaker y/y appreciation of Russian ruble, which is due to slowdown in growth rates of dollar prices of consumer goods imported from this country.

**Producer prices<sup>12</sup>:** according to the Central Bank estimates, the GDP deflator in January-June 2017 has increased by about 1.4% in relation to the same period last year, which is in line with previous forecasts. Consistent with the previous forecasts, there has been a y/y rise in prices by 5.0% in **Industry**, no significant price changes have been reported **Agriculture** and **Services**, whereas a 2.0% y/y price deflation has been registered in **Construction**.

### 3.1.3. Inflation and interest rate expectations

According to the Central Bank estimates, the households' inflation expectations, which had reduced considerably in 2015-2016, continued to stabilize in the second quarter of 2017, as was expected, and will recover gradually in an upcoming one-year horizon, anchoring around the inflation target in the forecast horizon. Estimations produced on the Central Bank core model suggest that inflation expectations were virtually the same in the second quarter of 2017 (0.6%) in comparison with the previous quarter.

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<sup>12</sup> The price index change for January-June 2017 is relative to the same reference period last year, unless otherwise specified.

The results of survey conducted by the Central Bank for the second quarter of 2017 about expectations of the households and financial sector with regard to a number of macroeconomic indicators suggest that inflation expectations further stabilized. Thus, inflation expectations of the households for an upcoming one-year horizon remained anchored around a **0.6%** level of the 12-month inflation rate (the same level with the previous quarter). According to the survey, the **average level of the financial system's inflation expectations was 2.9%** for an upcoming one-year horizon, against the previous quarter's figure of **2.6%**. Commercial banks expected an average **2.5%** of the 12-month inflation rate compared to the previous survey's figure of **2.2%**, inflation expectations of credit organizations amounted to **3.3%** (previous survey: **3.0%**), investment companies and funds anticipated a **2.3%** level of average inflation compared to the previous level of **2.1%**. Inflation expectations of insurance companies have risen by about 1.0 pp compared to the average value of the previous survey, making up **3.5%**.

According to the second quarter survey results, the financial market's expectations of interest rates for a one-year horizon followed a path trending gradually down. Moreover, the expected levels of the next four quarters were also revised downside.

#### **Box 1**

##### ***The Central Bank's Views of Inflation Expectations – a Key Monetary Policy Fundamental***

*The factor of expectations plays a crucial role in the implementation of the monetary policy of the Central Bank of Armenia (CBA) as it determines straightforward the degree of confidence in the monetary policy the CBA conducts and the flexibility to respond to negative economic shocks.*

*The CBA's views of inflation expectations are based on the idea of separating the two components of such expectations into short-term and long-term ones. Short-term expectations are generally shaped in line with actual developments in inflation, current shocks in the economy and how the CBA responds thereto. The "Inflation Report" presents exactly short-term inflation expectations. Whereas long-term expectations reflect the public's perception of the CBA's ability to maintain price stability in the long run.*

*The existence of estimates on inflation expectations is very important for the CBA. To this end, the CBA uses a number of approaches. Specifically, general public surveys is one approach the CBA takes with regard to inflation expectations for quite a long time, on a short-term and, starting from the second half of 2016, long-term (5-year horizon) bases. The survey results show that long-term inflation expectations are more inert and diminish slower than short-term inflation expectations.*

*Another approach to shaping an understanding of inflation expectations is that the CBA estimates short-term inflation expectations through a change in the level of dollarization of up to 1-year deposits (the share of residents' foreign currency deposits with up to 1 year of maturity in total deposits with the same maturity) and a change in the level of interest rates on the yield curve's short-term (up to 1 year) segment. Long-term inflation expectations are estimated through a change in the level of*

**Figure 1**

*The dollarization of deposits with up to 1 year and over 1 year of maturity (ratio of residents' foreign currency deposits to total deposits)*

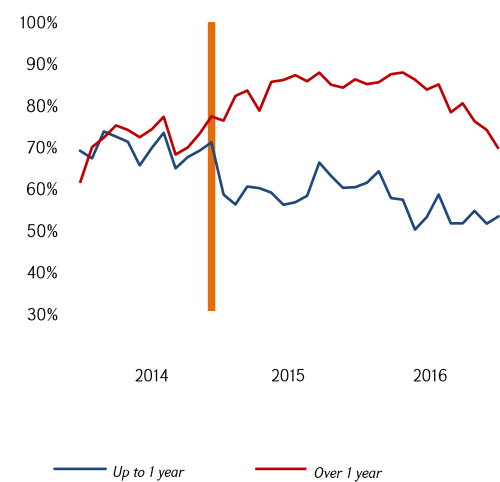
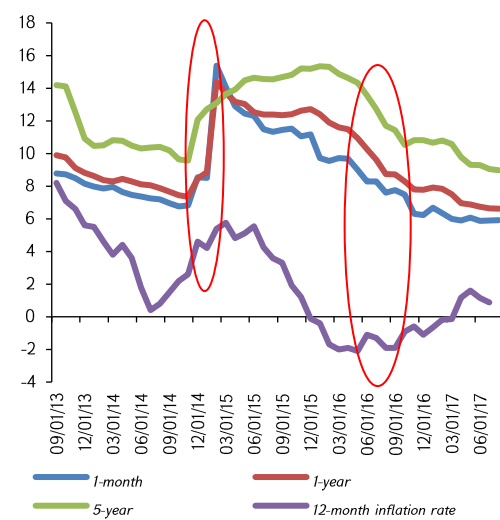


**Figure 2**

*Interest rates of the yield curve for 1-month, 1-year and 5-year maturities*



*The economic growth indicator for the first half of 2017 has exceeded the Central Bank's predictions, amounting to 6.1%, which prompted an upside revision of the growth for that time in the range of 4.6-5.0%.*

dollarization of long-term (over 1 year) deposits (the share of residents' foreign currency deposits with over 1 year of maturity in total deposits with the same maturity) and a change in the level of interest rates on the yield curve's long-term (e.g. 5 years) segment.

Figure 1 shows that in the aftermath of the currency crisis dollarization of deposits with up to 1-year of maturity has decreased (end-2014: more than 71.0%, end-2016: about 54.0%), whereas dollarization of over 1-year foreign currency deposits first has increased notably (end-2014: about 78.0%, September 2015: 88.0%), persisted at a high level for a while and only starting from May 2016 began decreasing to 70.0% by the end of the year.

Figure 2 presents short-term and long-term yield curves; it is obvious that in 2014 both short-term and long-term interest rates demonstrated a sharp increase, influenced by the financial crisis, although no steep increase in the 12-month inflation rate has been recorded. As a result of the consistent policy by the CBA, concomitant with a decline in inflation, short-term (up to 1-year) interest rates have fallen at a rapid pace from over 14.0% in early 2015 to about 7.0% in July 2017, whereas long-term (5-year) interest rates persisted at levels as high as nearly 15% for about one and a half years and starting from the second quarter of 2016 only they dropped to 9.0% in July of 2017.

The behaviors of the aforementioned two indicators show that the CBA policy more efficiently influences the short-term inflation expectations, while long-term expectations respond much later as they retain the inertia of previous increase and require some time length for sustainability of short-term expectations. That is why only after 1.5 years of low inflation long-term interest rates in the financial market have also started falling rapidly.

In summary, let us state that high inflationary expectations observable at the end of 2014 have considerably mitigated as a result of monetary policy implemented by the CBA in 2015-2017, and reduced dollarization of deposits (Figure 1), declined slopes of yield curves (Figure 2) and subsided 12-month inflation rate well reflect these trends. The functioning of monetary policy transmission mechanism also proved effective owing to reduced inflation expectations – considerable easing of monetary conditions by using the instrument of cutting the CBA refinancing rate in 2015-2017 was reflected in the behavior of interest rates of dram loans and deposits (see Box 1 “The Impact of Easing of Monetary Conditions on Financial Market Rates” of the Inflation Report Q2, 2017).

## 3.2. Aggregate supply and aggregate demand

### 3.2.1. Aggregate supply<sup>13</sup>

The economic growth indicator for the first half of 2017 has exceeded the Central Bank's expectations, amounting to 6.1%. This development is behind the revision of the growth for that time in the range of **4.6-5.0%** from the previous estimation of 4.0-4.4%. The revision owed primarily to higher growth in the industry and more tax revenue collections in relation to the Central Bank's expectations.

<sup>13</sup> The GDP and economic sectors' value added growth indicators for January-June 2017 are the Central Bank estimates, unless otherwise specified.

The growth of value added in **Industry** in the first half of 2017 is estimated 9.0-9.8% y/y. According to previous forecasts, growth in the industry was estimated to be 7.8-8.5%. The revision to growth in industry is driven by higher prices of ores and minerals in international markets in comparison with previous predictions as well as faster economic growth potential. The decline of value added in **Agriculture** is estimated in the range of 2.9-3.7% instead of the level previously predicted to stay unchanged. In the reporting period, the developments in the agricultural sector show further sluggishness in activity in the sector observed since the end of 2016. The developments in **Services** and **Construction** in the first half of the year have been in line with the Central Bank's expectations.

### 3.2.2. Aggregate demand<sup>14</sup>

The growth of private spending in the second quarter of 2017 is an estimated 4.7% – somewhat higher than the previous forecast<sup>15</sup>. Higher consumption has been driven by the rapid growth of economic activity compared to the expectations.

In the second quarter of 2017 investment activity was in line with previous forecasts, with the growth of private investment estimated at 5.6%. It should be noted that the first quarter of the year saw a 6.8% growth of private investment which has recovered after a long-term decline, increasing the potential for future economic growth.

The aforementioned developments with private consumption and investment resulted in an estimated 4.8% growth in private spending in the second quarter of 2017. This is about 0.4 pp higher in comparison with the previous forecast. Note that private spending has been slightly below the equilibrium and it created minor inflationary pressures in the consumer market, which makes up 0.2-0.4 pp, according to the Central Bank estimates.

In the second quarter of 2017, the net real export indicator has declined, according to the Central Bank estimates, amid a stronger real growth of import of goods and services over the real growth of that of export. Thus, in the second quarter the real growth of export<sup>16</sup> of goods and services was 15.5% y/y, while the real growth of import<sup>17</sup> of goods and services, 24.2% y/y.

In the second quarter of 2017 the growth of net remittances in dollar terms slowed down to 9.3% y/y, which was primarily attributable to the developments in the Russian economy.

Chart 3.5

GDP and economic sector dynamics

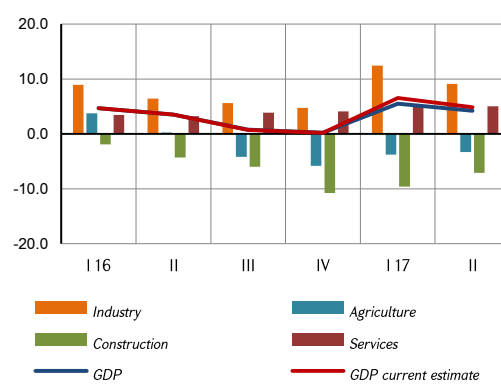


Chart 3.6

Private spending dynamics (y/y growth, %)

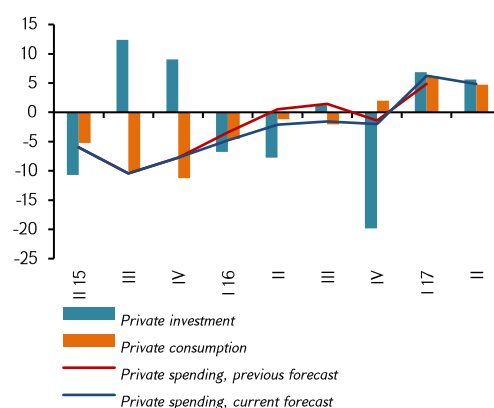
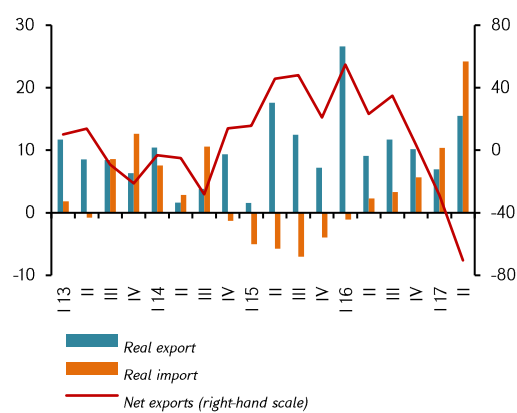


Chart 3.7

In the second quarter of 2017 net export in real terms deteriorated

net real export (y/y, %), positive sign = improvement



<sup>14</sup> The private spending, private consumption and private investment indicators for the second quarter of 2017 are the Central Bank estimates which are based on the actual first quarter 2017 data. The growth estimates provided in this sub-section are relative to the same reference period last year, unless otherwise specified.

<sup>15</sup> It is worth mentioning that the private spending growth indicator for 2016 has been revised by the National Statistics Service of Armenia. The previously published 1.0% private spending growth indicator has been adjusted as a 1.2% decline.

<sup>16</sup> The indicators of real growth of export and import are the Central Bank estimates.

<sup>17</sup> The humanitarian aid excluded, the real growth of import in the second quarter of 2017 amounted to 19.5% y/y.

Chart 3.8

Average wage growth by sector, y/y (%)

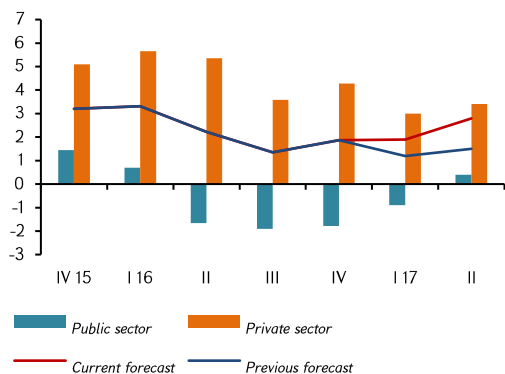


Chart 3.9

In the second quarter of 2017 the fiscal sector's contractionary impact owed to the contractionary effect of expenditures

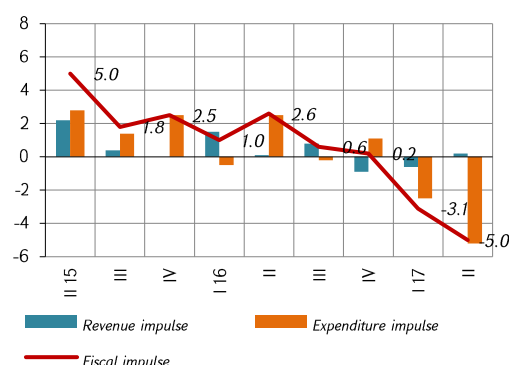
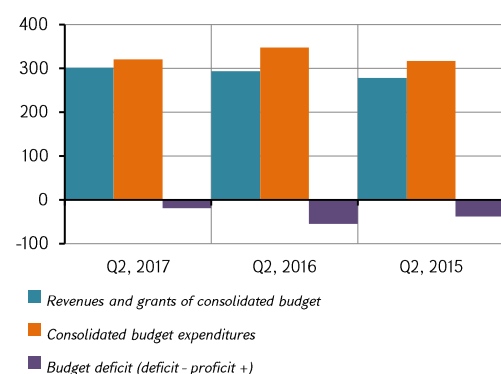


Chart 3.10

Consolidated budget indicators dynamics (billion AMD)



### 3.2.3. Labor market<sup>18</sup>

In the second quarter of 2017 the nominal wage growth in the **private sector** amounted to 3.4% – consistent with the Central Bank's previous forecasts. In the same period of time the nominal salary growth in the **public sector** has trended more positively compared to the Central Bank expectations, amounting to 0.4% instead of the projected 1.5% decrease.

As a result, in the second quarter of 2017 the **average nominal wage growth rate** has run higher than the previous forecasts of the Central Bank, amounting to 2.8%.

In the second quarter of 2017 the **unemployment rate** is an estimated 17.9%, which does not notably vary from previous predictions. In the second quarter of 2017 the productivity growth outpaced the growth rate of wages thus diminishing the inflationary effects in the consumer market by 0.1 pp. As a result, the inflationary effects from the labor market is estimated to be within 0.1-0.2 pp.

### 3.2.4. Fiscal policy<sup>19</sup>

In the second quarter of 2017 the State Budget was performed with expenditures running below and revenues collected almost in line with the Central Bank projections<sup>20</sup>. The fiscal sector's estimated impact on aggregate demand was 5.0 contractionary for the quarter, which exceeds the value of 4.1 projected for the second quarter.

In the second quarter of 2017 consolidated budget generated 0.3% more revenues against the projection. As a result, the revenues impulse reached 0.2 expansionary, commensurate with the projection.

In the second quarter of 2017 there were about 3% less budget expenditures compared to the projections by the Central Bank. The **public spending** has outgrown the projected value by 18.6% whereas the expenditures on item **"Transactions with non-financial assets"** run below the projection by as much as 44%. As a result, the expenditures impulse amounted to 5.2 contractionary instead of the projected 4.1 contractionary.

With revenue and expenditure performance described above, the state budget generated a deficit of roughly AMD 19.0 billion in the second quarter of 2017, which is 27% less than the Central Bank's projection for the quarter.

<sup>18</sup> The labor market data for the second quarter of 2017 are the Central Bank estimates which are based on the first quarter 2017 data and actual January-June 2017 figures. The growth indicators provided in this sub-section are relative to the same reference period last year, unless otherwise specified.

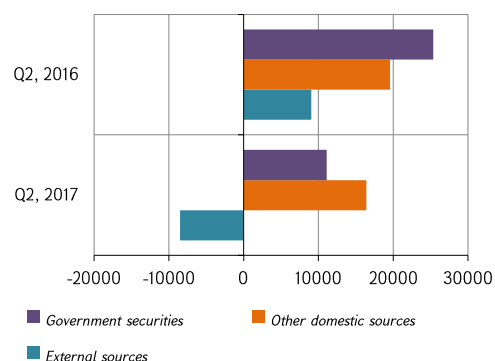
<sup>19</sup> The review of the fiscal sector was done using preliminary actual consolidated budget indicators (local budgets as an estimate) prepared on the basis of preliminary actual indicators of the second quarter of 2017 (PIU funds included), excluding off-budgetary funds. The impact of revenues was calculated in respect of the nominal GDP indicator while the impact of expenditures, in respect of an estimated economic potential.

<sup>20</sup> The revenue forecast coincided with the adjusted quarterly budgetary plans.

**Summary: private spending has grown amid increased private transfers from Russia, expansionary monetary policy and high economic activity. Yet, private spending ran below the equilibrium, creating weak inflationary pressures. Taking also into account the fiscal policy's contractionary impact and the labor market's inflationary pressures, one may conclude that the aggregate demand and labor market are estimated to have jointly created 0.5-0.7 pp of deflationary pressures in the second quarter of 2017, which is softer in comparison with the previous estimation of 0.7-0.9 pp.**

Chart 3.11

In the second quarter of 2017 the deficit was financed by domestic sources (billion AMD)



In the second quarter of 2017 the refinancing rate was left unchanged.

### 3.3. Money and financial market developments

#### 3.3.1. Financial market, money and credit

In the second quarter of 2017 the Board of the Central Bank left the refinancing rate unchanged.

Positive developments as a result of continued easing of monetary conditions by the Central Bank in the last two years, the forecasts for inflation and balanced risks to inflation all have served a basis for the Board to keep the refinancing rate at a 6.0% level. It was also assessed that the changes in monetary conditions have proved sufficient for the inflation to further recover and move to the target in the forecast horizon.

**In the meantime, the Central Bank Board had signaled to the financial market about leaving the interest rate unchanged for a while if macroeconomic developments would proceed with the predicted scenario.**

Chart 3.12

In the second quarter of 2017 short-term market rates decreased (%)

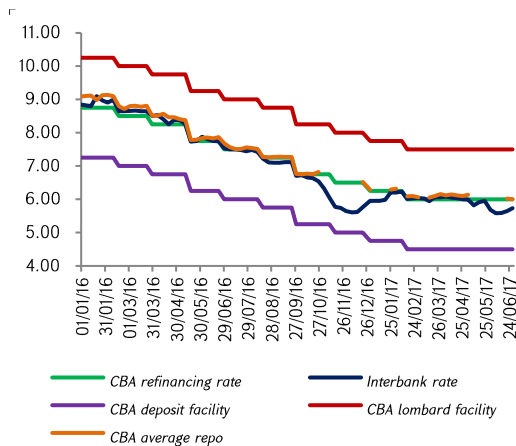
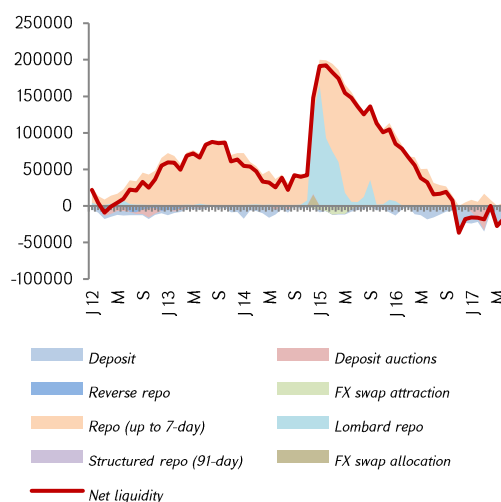


Chart 3.13

Liquidity injection and absorption through the CBA operations (average monthly value, million AMD)



| Average quarterly market rates in Armenia      |          |          |          |          |          |
|------------------------------------------------|----------|----------|----------|----------|----------|
| Item                                           | Q2, 2016 | Q3, 2016 | Q4, 2016 | Q1, 2017 | Q2, 2017 |
| Central Bank refinancing rate (end of quarter) | 7.50     | 6.75     | 6.25     | 6.00     | 6.00     |
| Central Bank repo rate                         | 8.13     | 7.35     | 6.54     | 6.13     | 6.05     |
| Interbank repo rate                            | 8.01     | 7.27     | 6.19     | 6.06     | 5.86     |
| Short-term treasury bill yield                 | 10.25    | 7.87     | 6.65     | 7.21     | 6.56     |
| Medium-term notes yield                        | 13.88    | 11.36    | 10.13    | 9.97     | 8.76     |
| Long-term bonds yield                          | 16.37    | 14.16    | 13.65    | 13.18    | 13.03    |

In the time of high liquidity in the domestic banking system in the second quarter of 2017, there was little demand for the repo tool offered by the Central Bank. The short-term market rates continued

Chart 3.15

In government securities market in the second quarter of 2017 yields notably sloped down on the 2 to 10-year segment

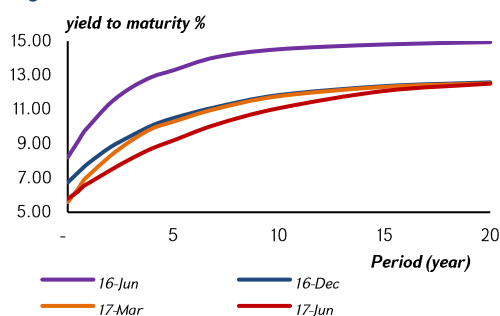


Chart 3.16

Interest rates of deposits of and loans to legal persons

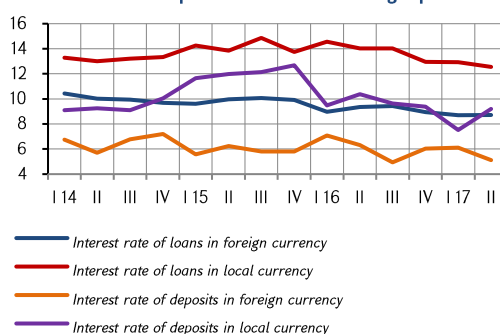


Chart 3.17

Interest rates of deposits of and loans to natural persons

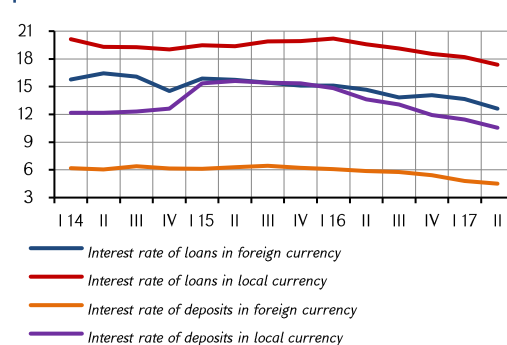
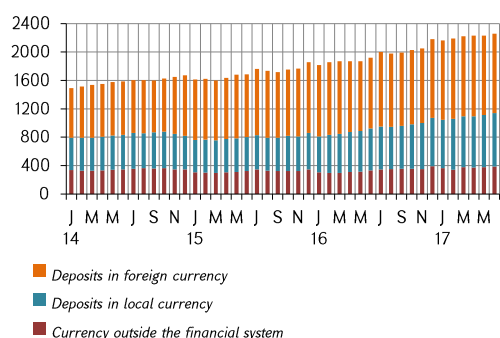


Chart 3.18

In the second quarter of 2017 deposits in local currency grew but deposits in foreign currency shrank (billion AMD)



trending down: interbank repo rate reduced by 0.2 pp during the quarter to 5.86%; in June the average quarterly indicator was 5.64%, decreasing by 0.39 pp against March. In June the up to 14-day interbank repo rate was 0.39 pp smaller from the refinancing rate of the Central Bank<sup>21</sup>.

In the financial market, the falling of interest rates has affected the government securities market, too. Although the yield curve of government bonds denotes no significant change in the long-term dynamics from end-June to end-March, most prominent change in market participants' expectations has been for a 2-10 year segment of the curve, as yields followed a downward path.

Relative stability in financial and currency markets was further observable during the quarter. Driven by the lingered impact of implemented expansionary monetary policy, the financial market rates have fallen along with the decline in inflation expectations, reflecting growing confidence in the monetary policy the Central Bank conducts. Competition between banks and other financial institutions and the current level of liquidity have also contributed to continued reduction of interest rates of deposits and loans in the second quarter of 2017.

Falling interest rates of deposits notwithstanding, attracting of deposits continued to grow. During the quarter, dram deposits grew by 5.3% but foreign currency deposits reduced by 1.1%, pushing the level of dollarization down by 1.1 pp.

The falling of interest rates and easier lending procedures further contributed to the growth of lending, as was expected; the growth amounted to 3.6% during the quarter mainly owing to dram loans provided to firms. In June 2017 the 12-month growth in total lending was 7.8%, which is above the Central Bank estimation.

## Box 2

### Survey on the Terms of Lending by Banks and Credit Organizations in Armenia

According to the results of the second quarter 2017 survey on terms of lending by local banks and credit organizations, there has been further easing of terms in all aspects of lending. Competition between banks and other financial institutions and growing liquidity, which led to the falling of loan interest rates and extending of maturities, remain factors that determine the easing of terms. The actual credit demand for all types of loans has increased.

For the third quarter of 2017, banks and credit organizations anticipate both further easing of procedures and a notable increase in demand. The survey results are aligned with recovery of demand in the economy estimated by the Central Bank.

<sup>21</sup> Repo transactions with 1-14-day maturities constituted 93% of interbank repo transactions in the second quarter of 2017.

### 3.3.2. Exchange rate

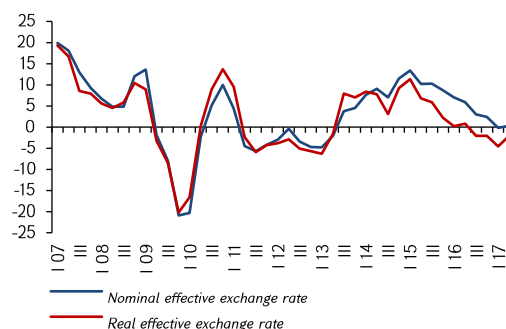
In the second quarter of 2017 the average weighted nominal exchange rate in currency markets of trade partners to Armenia appreciated by about 2.5% mainly owing to the appreciation of the euro, Russian ruble and Georgian lari. The Armenian dram behaved similarly as it appreciated versus the US dollar by about 0.8% on average during the quarter. To absorb short-term volatilities deriving from balance of payments seasonality in the foreign exchange market, the Central Bank has bought nearly USD 11.5 million in net terms.

In the second quarter of 2017, relative to the previous quarter, the nominal effective exchange rate of the Armenian dram has depreciated by about 1.7% on average. As a result, the real effective exchange rate<sup>22</sup> has depreciated by nearly 2.4%, fueled also by the inflation main trade partners (EU, Iran, Turkey, etc.).

Compared to the same reference period last year, the real effective exchange rate has depreciated by 2.1%.

Chart 3.19

In the second quarter of 2017 the real effective exchange rate depreciated, y/y

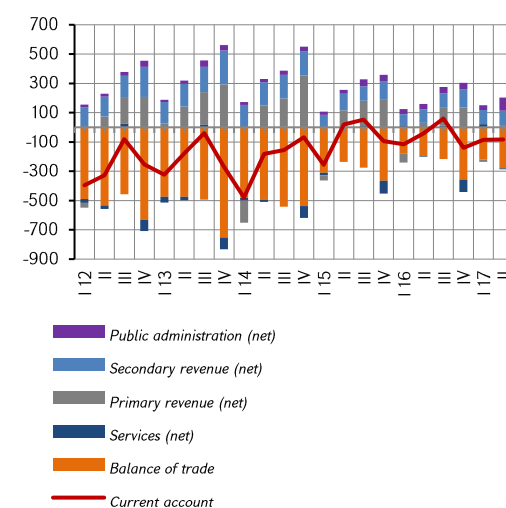


| Growth y/y, (%)                                                                                    | Q2, 2015 | Q3    | Q4    | Q1, 2016 | Q2   | Q3   | Q4   | Q1, 2017 | Q2   |
|----------------------------------------------------------------------------------------------------|----------|-------|-------|----------|------|------|------|----------|------|
| Real effective exchange rate (+ means appreciation)                                                | 6.8      | 5.9   | 2.2   | 0.2      | 0.8  | -2.1 | -2.1 | -4.6     | -2.1 |
| Average inflation in Armenia                                                                       | 5.1      | 4.4   | 1.0   | -1.5     | -1.8 | -2.4 | -1.0 | -0.3     | 1.3  |
| AMD/USD average nominal exchange rate (+ means appreciation)                                       | -13.4    | -14.8 | -10.1 | -2.3     | -0.5 | 0.8  | 0.1  | 0.6      | -0.6 |
| Average weighted inflation in trade partner countries                                              | 7.8      | 7.4   | 6.9   | 5.0      | 3.1  | 3.2  | 3.5  | 4.1      | 3.7  |
| Trade partners' average weighted nominal exchange rate (+ means appreciation versus the US dollar) | -27.2    | -29.4 | -20.7 | -9.5     | -6.5 | -2.1 | -2.3 | 0.8      | -0.9 |

*Real exchange rate appreciation = Inflation in Armenia + Nominal exchange rate appreciation – Trade partners' average weighted inflation – Trade partners' average nominal weighted exchange rate appreciation.*

Chart 3.20

In the second quarter of 2017, relative to the second quarter of 2016, the current account deficit has increased (million USD)



### 3.4. Balance of payments<sup>23</sup>

In the second quarter of 2017, improvement in the terms of trade notwithstanding, the trade balance deficit has widened compared with the previous quarter's prediction. Despite a slightly more increase in export of goods, the deficit has widened because of much higher-than-anticipated growth in import of goods.

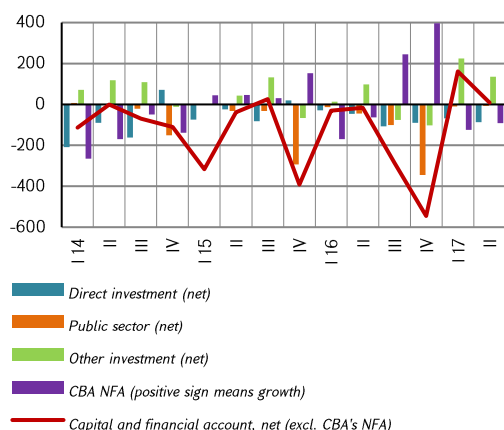
Thus, a 26.1% y/y increase in the dollar value of export<sup>24</sup> of goods in the second quarter of 2017 was around 5.0 pp above the predicted

<sup>22</sup> The second quarter 2017 indicator of the real exchange rate is the Central Bank estimate.

<sup>23</sup> The second quarter 2017 balance of payments will be published at the end of September 2017, according to the timetable. The second quarter 2017 indicators are the Central Bank's forecasts and estimates.

Chart 3.21

Private sector's NFA growth versus the Central Bank's NFA decrease



value, which was mostly due to strong growth in export of raw materials.

In the second quarter 2017 the dollar value of import of goods grew by 31.0% y/y, which exceeded the predicted value by as much as 23.0 pp. This was largely driven by more than anticipated increase in import of intermediate consumption (investment goods and raw materials) amid higher economic activity as well as an import of medicines received under unexpectedly high humanitarian aid<sup>25</sup>.

In the second quarter of 2017, relative to the same reference period last year, the current account deficit has grown to USD 84.0 million as a result of broadened trade balance deficit amid the aforementioned developments, slower growth rate in net inflow of remittances and reduced investment income.

In the second quarter of 2017, the “Capital and Financial Account” posted a substantial increase (roughly 90%) in net inflow of foreign direct investment compared with the same reference period last year, according to the Monetary Policy Program estimates<sup>26</sup> by the Central Bank. On the other hand, other private sector has reported a growth of net foreign assets.

### 3.5. External environment

*In the second quarter of 2017 economic activity trended upward in the main trade partners to Armenia.*

***A trend of faster reviving economic activity was observable in the main trade partners to Armenia, the Eurozone and Russia, in particular, while economic growth has slowly accelerated in the USA.***

Chart 3.22

In the second quarter of 2017 the rate of inflation in the USA slowed down (%)



According to preliminary estimates of the Bureau of Economic Analysis of the U.S. Department of Commerce, the y/y economic growth in the **United States** in the second quarter of 2017 was 2.0% against the forecast of 2.5% growth. The deviation owed mainly to lower-than-expected investments and a sluggish external demand (previous quarter's y/y growth was 2.0%). The average quarterly inflation in the second quarter was 2.2% instead of the projected indicator of 2.5%, and it continued running above the target. The deviation of inflation from the projected value is mainly attributable to lower prices of commodities. Consistent with previous forecasts, the US Federal Reserve System raised the policy rates to 1.0-1.25% in the second quarter of 2017 from 0.75-1.0% in the previous quarter.

According to preliminary estimates provided by the Eurostat, economic growth in the **Eurozone** in the second quarter of 2017 was

<sup>24</sup> The export and import indicators are represented on a balance-of-payments basis, i.e. by credit and debit, respectively.

<sup>25</sup> A considerable amount of humanitarian aid in the amount of USD 70.0 million received in the second quarter of 2017 was opposed to that of USD 17.0 million received in the same period last year.

<sup>26</sup> The second quarter 2017 actual indicators of the “Capital and Financial Account” will be published in end-September of 2017, according to the timetable.

2.2% against the forecast 1.5% growth. The difference between actual and forecasted economic growth has arisen as both domestic and external demands had strengthened more than anticipated and because of adjustment to historical series of economic growth. In the Eurozone in the second quarter of 2017 the average quarterly inflation decelerated to 1.6%, instead of predicted value of 1.7%, largely driven by fallen energy prices. Note that the inflation still runs below its long-term target. In the second quarter the European Central Bank kept the policy rates at the level of 0.0% for refinancing rate and -0.4% for deposit facility rate, as was expected. At the same time, the ECB continued its program of asset purchases, with smaller purchase volumes though, in the amount of EUR 60 billion a month (previous quarter's figure: EUR 80 billion a month).

In the currency market in the second quarter of 2017, the European currency unit, the euro, appreciated against the U.S. dollar by 3.3% q/q (y/y depreciation: 0.5%); the average exchange rate reached 1.1 dollars for one euro instead of forecast value of 1.08 dollars. The euro's appreciation followed as political uncertainties in the EU came in at a lesser extent amid expectations for continued recovery of the Eurozone economy.

According to preliminary estimates of State Statistics Service of the **Russian Federation**, economy recovered at a faster pace in the second quarter of 2017, amounting to 2.5% y/y against the prediction of 0.8% growth (previous quarter's economic growth: 0.5%). This was determined by a sharp growth in investment and domestic consumption. The Russian ruble kept on appreciating during the quarter by 2.6% q/q, with the y/y appreciation reaching 15.3%. In the second quarter of 2017 the inflation further decelerated to 4.0%, instead of the previous forecast of 3.4%. Though inflation expectations continued reducing, the inflation rate is still high. Under such circumstances, the Bank of Russia reduced the policy rate, as expected, by 0.75 pp to 9.0% in the second quarter.

In the second quarter of 2017 the **price of Brent crude oil** at Intercontinental Exchange fell by 7.2% against the previous quarter, averaging USD 50.2 a barrel, in response to increased production volumes in the United States and Libya. The price runs at a level higher than predicted in the previous quarter.

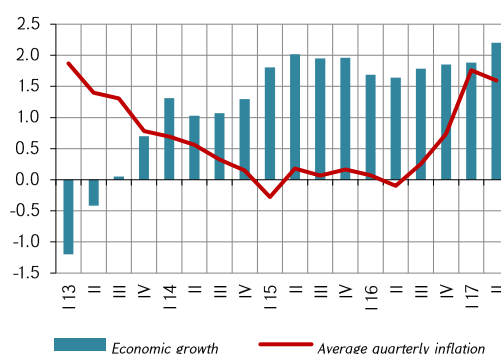
In the second quarter of 2017 the **price of copper** at the London Metal Exchange decreased by 2.9% to USD 5668 per ton on average, somewhat at a lower level than expected in the previous quarter, mostly driven by reduced demand in the USA.

The export price of **hard red wheat** grew during the second quarter by 2.5% (y/y price decrease: 7.5%) to USD 4.01 a bushel on average in anticipation of somewhat reduced harvest. The wheat prices are consistent with forecasts.

In the second quarter of 2017 the price index of **unprocessed sugar** at the New York Board-Intercontinental Exchange was lower than predicted in the previous quarter, driven by expectations for abundant

Chart 3.23

In the second quarter of 2017 the economic growth rate in the Eurozone speeded up (%)



crops in Brazil and Thailand – principal producer and exporter countries.

***Summary: in the second quarter of 2017 inflationary trends in the world's commodity and food product markets stabilized and persisted at levels slightly below the previous forecasts.***

## **BOARD OF CBA MINUTES**

**(15.08.2017)**

### **Refinancing Rate of August 15, 2017**

**The CBA Board Meeting of August 15, 2017 attended by Chairman Arthur Javadyan, Deputy Chairmen Nerses Yeritsyan and Vakhtang Abrahamyan, and Board Members Ashot Mkrtchyan, Armenak Darbinyan and Oleg Aghasyan**

The Board meeting opened with presentation of Situation Report as of August 15, 2017. It addressed current developments on inflation, external environment and real, fiscal and monetary sectors of the economy.

As summed up in the record, inflation in the first half of 2017 has been slightly higher than expected. Driven by a seasonal sharp drop in prices for agricultural products, certain fall in prices was recorded in July, as compared to the same period of the previous year, and the 12-month inflation rate has reduced, as a result. Meanwhile, core inflation has been increasing since the beginning of the year; this bears the impact of rebounding domestic demand, which is primarily driven by expansionary monetary policy implemented by the Central Bank, while the fiscal policy implemented in the first half of the year has been contractionary.

Discussing the economic situation at the meeting, the Board admitted that economic activity has been high enough over the first half of 2017, largely due to the supply factors, such as high productivity growth registered in the industry and services sectors. In view of these developments, the Central Bank has revised the economic growth forecast upside in the third quarter's Monetary Policy Program, too. With domestic demand bouncing back, considerably high growth rates in import of goods, which have outpaced those of export of goods, leading to a slowdown in growth rates of net external demand.

For external sector, it was stated that the developments, which, too, were mostly in line with the scenario during the second quarter of 2017. Economic growth trends persisted, while prices sought to stabilize in the world's raw material and food product markets. Following the discussion, the Board assessed that in the coming months these trends will be maintained and, in such a situation, no significant inflationary effects from the external sector are likely.

The Board also discussed the developments in financial market, admitting that short-term market rates have dropped due to a high level of excess liquidity in the banking system, and that these interest rates were rather lower from the policy rate.

Following presentation of the Situation Report and the developments in external and domestic macroeconomic environments,

the Board began discussing the monetary policy directions and the interest rate decision-making. The Board stated in a consensus that actual macroeconomic developments are mainly in line with the scenario as outlined in the second quarter's program, no significant inflationary effects from both external and domestic environment are expected and inflationary risks remain balanced. On the basis of the statement mentioned above, the Board found it reasonable to leave monetary conditions unchanged, maintaining that they contribute to further restoration of inflation and attainment of the target in the forecast horizon. As a result, it is estimated that the **negative GDP gap** will phase out at the start of 2018 and the **12-month inflation rate** will be within the confidence band by the end of the year while in the remaining part of the forecast horizon it will continue to grow, stabilizing around the 4% target.

The Board believes that should macroeconomic developments unfold as predicted, the policy rate would remain expansionary for some time, and in the event inflation and macroeconomic indicators essentially deviate from their projection, the monetary policy directions will be adjusted accordingly, ensuring the fulfillment of inflation target in the medium run.

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 RESOLUTION

#### Interest rates of operations by the Central Bank in the financial market

By virtue of Article 20 (c) of the Republic of Armenia Law on the Central Bank, 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 6.0%.

2. To the Financial Department of the Central Bank of the Republic of Armenia to carry out operations in the financial market of the Republic of Armenia, using the interest rates, as follows:

2.1 Lombard facility rate offered by the Central Bank to be 7.5%.

2.2. Deposit facility rate offered by the Central Bank to be 4.5%.

3. This resolution shall take force on the day following the adoption thereof.

**Arthur Javadyan,**

**Chairman of the CBA**

## **PRESS RELEASE**

**15.08.2017**

On the August 15th of 2017 meeting the Board of the Central Bank of Armenia decided to leave the refinancing rate unchanged, at the 6.0% level.

At the end of the second quarter of 2017 the 12-month inflation rate was 1.1%, which was 0.3 pp higher than the level as anticipated in the monetary policy program for the second quarter. In July 2.6% deflation was recorded due to the seasonal fall in prices of agricultural products, and the 12-month inflation rate has reduced slightly, amounting to 0.9% as of end-July.

In the external environment, the global economic growth outlook is further improving, and prices in international commodity markets have shown trends of stabilization. Based on this, the Board of the Central Bank expects no significant inflationary effects from the external sector in the forthcoming months.

The Board notes that, according to the actual second quarter of 2017 data, the economic activity remained strong and domestic demand continued recovering. This, under the currently implemented contractionary fiscal policy, is determined by expansionary monetary policy of the Central Bank.

In consideration of this situation, the Board of the Central Bank finds it reasonable to leave the monetary conditions unchanged. This will gradually increase the inflation as a result – it will be shaping within the confidence band by the end of 2017 and will stabilize around the target in the forecast horizon. The Central Bank believes that if the macroeconomic developments proceed with the predicted scenario, the monetary conditions will remain expansionary for a while.

However, should there emerge risks to the economic growth outlook and inflation deviating from its recovery path, the Central Bank would react by adjusting its monetary policy directions accordingly, while fulfilling the inflation target in the medium run.

***Press Service of the Central Bank of Armenia***