



*Monko Bank*



BANK OF MONGOLIA

INFLATION REPORT

2016

Dec

*“Inflation report” has been prepared and become publicly available in accordance with the flexible inflation targeting monetary policy framework and under the guidance of article 34.1 of the Law on Central bank (The Bank of Mongolia). This report will be prepared on a quarterly basis and published on the website of the Bank of Mongolia in every March, June, September and December.*

**CONTACT INFORMATION:**

*Bank of Mongolia, Public education and information center*

*Tel: 976-11-310081*

*Fax: 976-11-311471*

*Email: [communication@mongolbank.mn](mailto:communication@mongolbank.mn)*

*Website: [www.mongolbank.mn](http://www.mongolbank.mn)*

# TABLE OF CONTENTS

<b>Executive summary</b>	<b>3</b>
<b>I. ECONOMIC OUTLOOK</b>	<b>5</b>
<b>I.1 External assumptions for the forecast</b>	<b>5</b>
<b>I.2 Forecast, uncertainties</b>	<b>8</b>
<b>II. CURRENT ECONOMIC DEVELOPMENTS</b>	<b>11</b>
<b>II.1 Inflation</b>	<b>11</b>
II.1.1 Inflation targets, performance	11
BOX: Inflation, its components and characteristics	13
<b>II.2 Demand and supply</b>	<b>16</b>
II.2.1 Domestic demand	16
II.2.2 Supply	19
II.2.3 Potential output and output gap	21
<b>II.3 Labor market</b>	<b>22</b>
II.3.1 Employment and unemployment	22
II.3.2 Wage and productivity	23
<b>II.4 Money and financial market</b>	<b>25</b>
II.4.1 Monetary and credit indicators	25
II.4.2 Interest rate	28
II.4.3 Exchange rate	30
II.4.4 Real estate market	31
<b>II.5 Balance of payments</b>	<b>33</b>
II.5.1 Current account	33
II.5.2 Capital and financial account	34
<b>II.6 External environment</b>	<b>35</b>
II.6.1 Economic developments of main trading partners	35
II.6.2 Prices of Mongolia's main exporting commodities	38

## EXECUTIVE SUMMARY

Mongolia's external demand in Q3 was slightly higher than in forecasts based on previous quarter performance, and was similar to Q2 performance. Despite the marginal improvement compared to previous forecasts, external demand is still expected to decrease in the coming years. Mongolia's main trading partners are projected to have slightly higher economic growth than previously expected in 2016, but China, Russia, and the Eurozone are expected to have minimal growth in 2017. The Chinese government's soft budgetary policy has promoted consumption and sustained the Mongolian economy. However, the economy is expected to remain stagnant due to investments and industrial activity below anticipated levels. The Eurozone and Russia's shift towards recovery has contributed to an increase in the external demand forecast. Industrial sector recovery in the Eurozone, particularly in the Netherlands, Austria, Spain, and Germany, led to increased production and employment than projected and improved the economic forecast for 2016 and 2017. Although facing unfavourable external conditions, the Russian economy is expected to recover and grow by 1.3% through government measures to reduce budget deficits.

Terms of trade in Mongolia saw moderate improvement in the reporting year due to an increase in export prices, especially in coal. While export prices are expected to improve terms of trade in 2016 and the first half of 2017, it could worsen again in the second half if export prices stagnate and import prices increase. Reduced domestic extraction in China is likely to raise coal prices through the end of 2016, but experts say prices will fall again as China announced that it will replace coal with natural gas over the next five years and focus on solar and wind energy. Intensive development of the Chinese construction industry, alongside China's notice that it will work with Saudi Arabia and Russia to stabilize their oil markets, have raised metal and copper prices. However, copper prices are expected to remain below the last decade's average for several years. Meanwhile, recoveries of the global securities market and expectations that the Federal Reserve will increase its policy rate in the short-term have led to a decrease in gold prices since October. OPEC, Russia, and other oil producers' announcement to reduce supply may lead to a slight raise in prices in 2017.

Financial account deficits have raised balance of payment deficits in Q3. As of the end of 2016, reductions in the metal content of Oyu Tolgoi's open-pit mine has led to decreased exports, while the start of investments in the underground mine has led to an increase in foreign direct investment, resulting in both positive and negative impacts on the balance of payments.

Economic growth was lower than expected in Q3 and rapidly decelerated in comparison to previous quarters. The primary reason was stagnant growth in non-mining sectors due to shrinking demand, leading to the economy slowing more than expected. Second, reduced metal content in Oyu Tolgoi's underground mining led to lower growth than expected in the mining sector. Non-mining sectors have continued shrinking overall in the last six quarters, while the mining industry has seen a loss in the last quarter. Throughout the last two years, actual output of the non-mining sector remained below potential output. Now, the mining sector is also contracting.

Demand-side growth shows that in 2016Q3 growth was sustained by government expenditure exceeding the amount planned, and increased export due to positive changes in the prices of coal, gold, and copper. In contrast, increased imports and diminishing private investment and consumption have negatively affected growth. Diminishing private investment was caused by lack of recovery in foreign direct investment, slowing economic growth, and a worsening business environment.

The labor market has continued to worsen in Q3. Decreasing employment and increasing unemployment levels have occurred alongside slowed growth in nominal and real wages. Lack of investment has continued to worsen the demand for labor and labor market forecasts.

Annual inflation was lower than expected for Q3 and deflation was observed. As aggregate demand shrinks, food and non-food inflation both decreased. High supply of meat during periods of low demand played a key factor in decreasing prices for meat and food product over the last year. Non-food inflation has rapidly decreased since the second half of 2014, reaching 1.2% in 2016Q3.

Despite slowing in the beginning of 2014, money and credit indicators saw continuous growth in the last three quarters. On the asset side, an increase in fiscal and quasi-fiscal expenditures led to an increase in domestic net assets. On the liabilities side, rapid growth in foreign currency transactions and deposits in Q3 has increased money supply. In Q3, quasi-fiscal financing by the Bank of Mongolia (BoM) and the Development Bank of Mongolia (DBM) had a reduced impact on the increase in financial institution lending, while the impact of loans backed by bank funds have increased. Salary loans and pension loans constitute the majority of new loans. The contracting economy and decreased personal incomes may be attributed to this rise in consumption loans.

Stock market indicators, which have continuously declined since September 2014, experienced high fluctuations in the last three quarters. An average indicator of the TOP-20 index increased in July 2016, but has since declined. Meanwhile, property prices have fallen since early 2015.

Declining mining production is linked to the negative economic growth in the second half of 2016, but forecasts show a transition to positive growth in the second half of 2017. Non-mining production is expected to recover in 2017 when taking the Oyu Tolgoi underground mine investments into consideration, but is facing risk of decline otherwise. Although economic activity is expected to recover in 2017, production levels will remain below long-term trends. This also indicates less pressure caused by demand-side inflation. Deflation is projected to continue until 2017Q3, with price levels increasing afterwards and a tendency for low inflation. Food inflation will continue to decline until 2017Q3 due to lower meat prices, while non-food product prices will rise in the same quarter from foreign exchange rates.

# I. ECONOMIC OUTLOOK

## I.1 External assumptions for the forecast<sup>1</sup>

*Economic growth is projected to increase in China, the Eurozone, and Russia in 2016 compared to the previous forecast, with China maintaining its growth and the Eurozone and Russia's growth expected to increase in 2017. Despite the increased price forecast for copper and coal and favorable terms of trade in 2016 and the first half of 2017, coal prices are expected to decrease in the second half of 2017 while oil prices are expected to rise in a return to unfavorable terms of trade.*

### **External demand**

Compared to the previous forecast, 2016 projections for external demand growth<sup>2</sup> increased by 0.1 percentage points due to improved expectations for economic growth in Russia, China, and the Eurozone.

China's economic growth is expected to remain as previously forecasted due to structural reform in 2017 negatively impacting the economy, rising debts, and 2016Q3 nominal debts increasing at three times the rate of GDP growth. Meanwhile, the Eurozone and Russia are expected to see increased economic growth than previously projected, leading to a 0.1 percentage point increase in external demand in 2017. However, external demand growth is expected to continue declining and remain weak for the next two years.

The Chinese government implemented a soft budgetary policy that increased budget expenditures, retail sales, and infrastructure investments, leading to increased consumption and positive impacts on economic growth. However, declining investment growth and industrial growth below Q3 forecast led to negative impacts. Therefore, compared to the previous forecast, China's economic growth forecast in 2016 was increased by 0.1%, while for 2017 it remains unchanged at 6.3%. Meanwhile, the Eurozone economy is expected to improve in 2016 and 2017 compared to previous forecasts. Industrial activity has increased in the Netherlands, Austria, Spain, and Germany, with improved operating conditions, output quantity, and additional jobs. Due to Germany's economic structural reforms, private consumption, and investment growth being likely to support its neighboring countries'

Chart I.1.1

Change in external demand, in percentages



<sup>1</sup>Projections of economic growth and inflation in foreign economies are taken as averages of Roubini Global Economics 2016 November report, EIU 2016 November report, median values of Bloomberg analysts' forecasts, and IMF-WEO 2016 October forecasts. Relevant descriptions are summarized from these reports. The Bank of Mongolia analysts have not made any remarks or evaluations on these matters.

<sup>2</sup>Foreign demand is calculated as the weighted average of economic growth in Mongolia's main trading partners, with foreign trade shares as weights.

economies, its economic growth forecast was increased by 0.1% in 2016 and by 0.4% for 2017 for a total growth rate of 1.6%. Projections for Russia’s economic growth in 2016 and 2017 have also improved from previous forecasts. Despite unfavorable external conditions from extended sanctions by the EU and stagnant oil prices, analysts increasingly expect that the Russian economy will recover and grow by 1.3% in 2017 due to the Russian government’s measures to reduce budget expenditures and increase extractives taxes and excise taxes in an effort to reduce budget deficits by 1% of GDP per year.

### Foreign interest rate

The Federal Reserve announced a 0.25 percentage point increase in its policy rate in December 2015, and gave notice that the rate will be increased twice in 2016 based on the global economic outlook, financial market forecast, and domestic economic conditions. In 2016Q2, economic growth below the projected level and inflation 2% lower than the target level led to the Federal Reserve deciding to keep its policy rate of 0.5% in July.

Following the United States presidential election, the Federal Reserve announced that it would increase the policy rate shortly, as well as in 2017 if deemed necessary. Analysts expect that declining unemployment; rising inflation, increased net personal income, and the stabilization of global financial markets could be reasons for the Federal Reserve to raise its policy rate in December.

### Terms of Trade

Compared to the previous forecast, terms of trade are set to improve in 2016 due to an increase in copper and coal prices, only to weaken again in 2017 due to a decrease in copper and gold prices and an increase in oil prices.

Copper prices rose from increased construction sector activity in China and increased copper imports. At the G-20 summit, Saudi Arabia and Russia reached an agreement to freeze oil supply and announced they would work together to stabilize the market, leading to an increase in metal, particularly copper, prices. However, copper price forecasts remain uncertain due to an unstable forecast for China’s economy. As such, copper price forecast saw an increase of USD 54 in 2016, but decreased by USD 143 for 2017.

Chart I.1.2

The Federal Reserve rate, in percentages

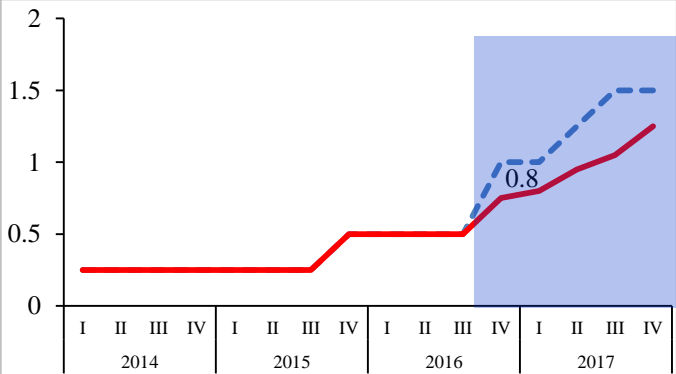
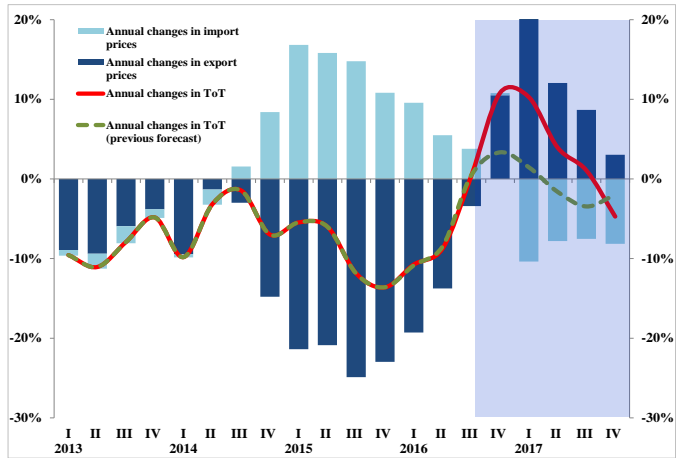


Chart I.1.3

Terms of trade, and changes in export and import prices



Meanwhile, recoveries of the global securities market and expectations that the Federal Reserve will increase its policy rate in the short-term have led to a decrease in gold prices since October. Therefore, gold price forecasts saw a slight decrease for the 2016Q4 and 2017. Reduced domestic extraction in China is likely to raise coal prices through the end of 2016, but experts say prices will fall again as China announced that it will replace coal with natural gas over the next five years and focus on solar and wind energy. The November 11 announcement that OPEC would reduce its oil production for the first time since 2008 by 1.2 million barrels a day while Russia and other oil producers would reduce by 600,000 barrels a day has led to a marginal increase in oil price forecasts in 2017.

In terms of inflation, forecasts for China, the Eurozone, and Russia show a decrease compared to previous forecasts. Inflation remains below target in China and the Eurozone despite the soft monetary policy of the People's Bank of China and the unconventional expansionary monetary policy by the European Central Bank. Meanwhile, Russia's low economic activity and tight monetary policy contributed to a decrease in inflation, with inflation forecasts at 5.9% at the end of 2016 and 5.3% in 2017.



## 1.2 Forecast, uncertainties

### Economic growth

Domestic economic forecasts are based on the assumptions that domestic fuel prices would not be affected by tax regulations and that meat supply would remain high without price shocks.

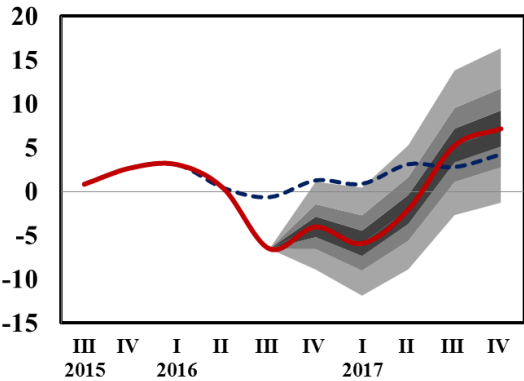
The economic growth<sup>3</sup> forecast is revised down from the previous forecast. First, shrinking demand in 2016Q3 led to slowed growth in non-mining sectors, causing the economy to contract further than expected. Second, reduced content in Oyu Tolgoi’s open-pit mine production resulted in lower growth in the mining sector than previously expected.

According to the base forecast, economic growth will continue to stall in 2016 and improve marginally in 2017. The tendency for mining and non-mining sectors to shrink in 2016 will likely affect the decline of the industrial<sup>4</sup> and commercial sectors. Mining production in 2016 is expected to sharply decline compared to the previous year, due to reduced metal contents in Oyu Tolgoi concentrates. Despite increased government expenditure, reduced investment and consumption will be the reason for the continuing decline in non-mining production in 2016.

Projections show economic growth in 2017. The mining sector is expected to continue declining in 2017 due to the reductions in the metal content of Oyu Tolgoi’s open-pit mine. However, investment in the underground mine will increase in 2017 and is expected to revive production. Economic growth will increase in 2017, but production level will remain below long-term production trends, signifying low demand-side inflation pressures.

Chart I.2.1

Quarterly GDP growth forecast



	2015	2016*	2017*
	<i>actual</i>	<i>forecast</i>	
GDP growth	2.3	(-2.8) - (-1.8)	0.6 – 2.6
Inflation, CPI <sup>5</sup>	1.6	(-1.6) - (-0.6)	1.9 – 3.9

<sup>3</sup> Quarterly indicators of annual GDP growth

<sup>4</sup> Mining, construction, manufacturing, energy

<sup>5</sup> Average inflation in Q4 of each year

## *Inflation*

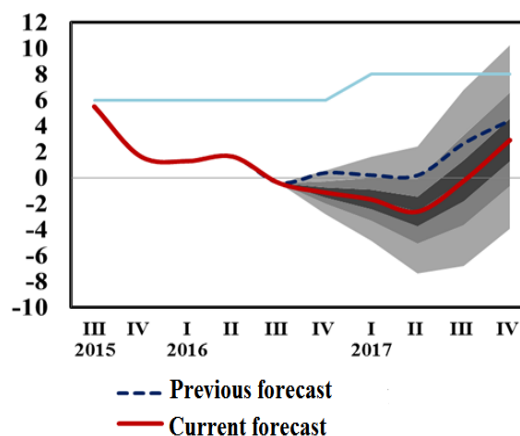
Inflation is projected to remain at a low level. Declining expectations for economic growth have led to a downward revision of the previous inflation forecast.

The base forecast shows that due to slowing economic activity for the year, deflation will continue until 2017Q3. Price levels will increase due to exchange rate devaluation, but inflation is expected to remain low.

Food and non-food inflation will continue to decrease until the second half of 2017, where it is expected to rise due to the base period effect. Food inflation will continue to decline until 2017Q3 mainly due to lower meat prices, while non-food product prices will rise in the same quarter from foreign exchange rates. Non-food inflation is expected to decrease in 2016 from declining economic activity. Projections for aggregate demand to decrease in 2017 may lead non-food inflation to remain at a low level. Therefore, inflation is expected to remain relatively stable in 2017.

Chart I.2.2

Inflation forecast



## *Forecast uncertainties*

Forecasts may differ from actual performance and across periods due to changes in economic policy, structural changes, shifts in the assumptions used, and/or other unforeseen circumstances. The following uncertainties may affect macroeconomic policy and external and domestic factors, and hence current economic conditions.

### *External economic uncertainties*

- China's economic growth remains the main source of uncertainty. As China's nominal debt grows at three times the rate of nominal GDP and the amount of non-performing loans increase, there is increased risk of debt crisis for companies, instability for banks and financial institutions, and slow economic growth.
- The construction sector may be at risk as China's real estate investment growth rate reaches a 15-year low. While the government helped real estate prices recover by increasing infrastructure investment and reducing the mortgage rate and the down payment to 20%, prices decreased again in the second half of 2016. If the construction sector slows, it may decrease copper and steel production as well as demand for steel's main components of iron ore and coking coal.
- Following the US presidential elections, the Federal Reserve increased its policy rate, leading to a decrease in gold prices.

### *Domestic economic uncertainties*

- In the forecasting period, global prices for petroleum products have gradually increased, creating expectations for the tugrug to depreciate. Petroleum importers will face declining profits if excise tax for petroleum remains the same, creating a risk of increased domestic prices.
- Slow economic activity causing disruptions to budget revenue, expanding budget expenditures, and challenges in financing budget deficits is negatively influencing the mid-term stability of the macroeconomy. Reducing the budget deficit and national debt and guiding the budget policy to the right

direction will be defining factors in guaranteeing the stability of the macroeconomy and the financial sector. Doubts on whether budgetary discipline can be maintained and whether the budget deficit can be reduced have added to the forecast uncertainty

- Foreign exchange rates may face volatility from external or domestic shocks and changes in public expectations. If the upcoming debt repayment is not managed well, foreign exchange reserves and exchange rates will be at risk of significant pressure.
- Slow economic growth and increased non-performing loans pose a risk of continued disruption to bank loans. In turn, this will negatively affect macroeconomy and the financial sector stability.
- There is continued uncertainty on whether foreign direct investments will increase, and on the start date or financing sources for large-scale projects related to investment and economic recovery plans, such as Development Bank financing and investments in Oyu Tolgoi and Tavan Tolgoi.
- Uncertainty may also arise from changes to economic policy without prior notice.

## II. CURRENT ECONOMIC DEVELOPMENTS

### II.1 Inflation

#### II.1.1 Inflation target, performance

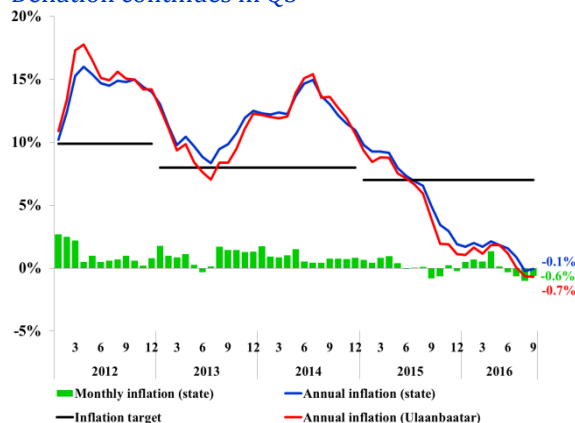
Consumer price index-based annual inflation reached -0.1% in September 2016, falling 1.6 percentage points QOQ and 5 percentage points YOY. The decline in annual inflation comes after three quarters of continuous deflation (chart II.1.1.1).

Low, stable inflation in the first half of 2016 was followed by falling prices and deflation in Q3, due to the following: 1) Meat prices declined 23.5% and had a negative impact on inflation. 2) Although state administrated service prices are increased in Q3 of every year, there was no price change this year, eliminating its effect on inflation. 3) Diminishing household incomes across the last five quarters has led to a decrease in demand-side inflation (Chart II.1.1.2).

The contribution of food prices to headline inflation also decreased in September 2016, by 0.6 percentage points YOY and 0.2 percentage points QOQ. The sharp fall in meat prices this quarter, adhering to its seasonal pattern, was the main influencing factor. As of the end of September, the price per kilogram for mutton and beef fell by 1500 – 1700 tugrugs compared to the previous quarter's end. The contribution of non-food product and service prices decreased by 1.7 percentage points QOQ and 5 percentage points YOY, due to the lack of price change in state administrated services this year and shrinking domestic demand. Food prices are not expected to rise much in the coming months. Cold winter forecasts and *zhud* warnings may increase meat supply and reserves. Price pressures of non-food product and service on inflation is not expected to rise much in the coming months. However, exchange rates may contribute directly and indirectly to increased inflation. (Chart II.1.1.3).

Chart II.1.1.1

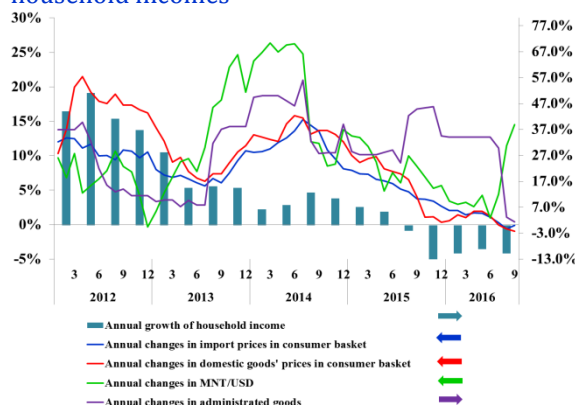
Deflation continues in Q3



Source: NSO

Chart II.1.1.2

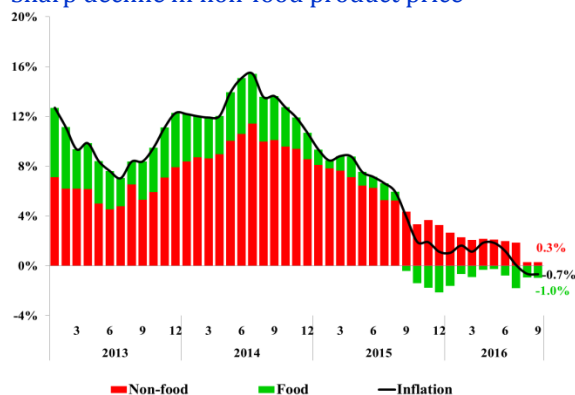
Demand-side inflation decreases due to falling household incomes



Source: NSO, Bank of Mongolia

Chart II.1.1.3

Sharp decline in non-food product price



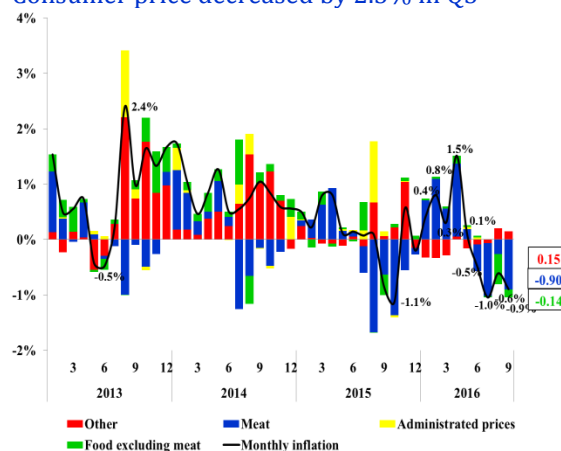
Source: NSO, Bank of Mongolia

## II.1.2 Inflation and its components

Inflation in Ulaanbaatar fell 2.5% in Q3. The consumer price rose 2.7% in the first half of the year due to fluctuations in meat price. Average monthly inflation was -0.8% for the reporting quarter, a decrease of 0.6 percentage points YOY and 1.2 percentage points QOQ. Majority of price changes in Q3 were related to food prices, especially meat prices. Following its seasonal pattern, meat and vegetable supply increased while price decreased. In the reporting quarter, food prices fell 9.3% or 0.8 percentage points YOY. While the price of state administrated services increased 12.3 percent in 2015Q3, there were no changes this year. Due to shrinking demand, fluctuations in the price of other products (in red in Chart II.1.2.1) decreased.

Chart II.1.2.1

Consumer price decreased by 2.5% in Q3<sup>7</sup>

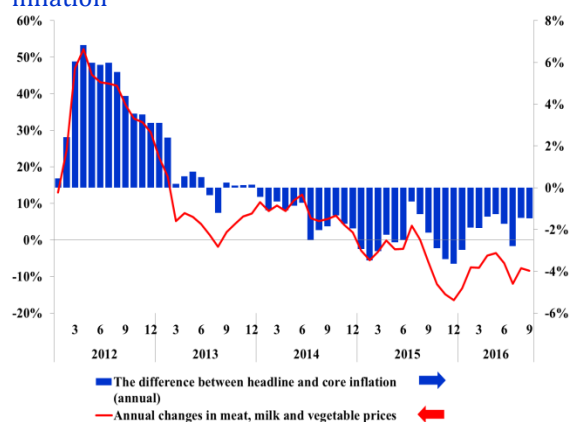


Source: NSO, Bank of Mongolia

Annual inflation in Ulaanbaatar reached -0.7% in September 2016, falling 1.9 percentage points QOQ and 4.6% YOY. Core inflation<sup>6</sup> was 0.8% in September 2016, 2.1 percentage points<sup>7</sup> lower QOQ and 5.3 percentage points YOY. Although core inflation has been higher than headline inflation through the last 33 months, the gap has narrowed in recent months. Average prices of meat, milk, and vegetables that are excluded from the calculation of core inflation declined in September 2016 by 8.4% YOY. The prices of these products have declined 2.1 percentage points QOQ (Chart II.1.2.2).

Chart II.1.2.2

Decrease in the difference of core and headline inflation<sup>8</sup>



Source: NSO, Bank of Mongolia

<sup>6</sup> Calculated through excluding a total of 37 types of products subject to high fluctuations from the consumer basket.

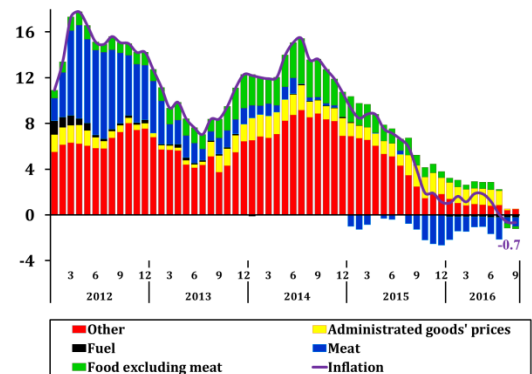
<sup>7</sup> Considering quarterly inflation in Ulaanbaatar

<sup>8</sup> Considering annual inflation in Ulaanbaatar

Analyzing the components of inflation in Ulaanbaatar shows that in 2016Q3 meat and meat products, non-meat food products, state administrated services, petroleum, and other products (illustrated in red in the chart) contributed 1.08, -0.16, 0.48, -0.23, and 0.58 percentage points, respectively. Compared to the Q2 average, the contribution of meat, non-meat products, petroleum, state administrated services, and other products declined by 0.01, 0.78, 0.05, 0.92, and 0.29 percentage points, respectively. The decline in each component indicates that both demand and supply side inflation is decreasing (Chart II.1.2.3).

Chart II.1.2.3

Food prices remain the main factor in decreasing inflation<sup>9</sup>

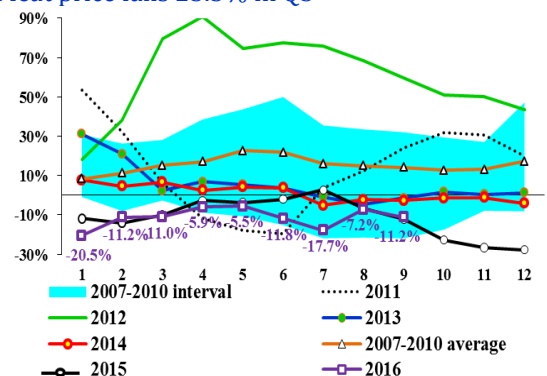


Source: NSO, Bank of Mongolia

Following its seasonal pattern, meat prices increased a total of 52.1% in the first half of 2016 (37.6% in Q1, 10.6% in Q2) and decreased 23.5% in Q3. In the reporting year, the average annual price growth of meat was -12%, lower by 0.5 percentage points from the 2015 average and 1 percentage points from the first half of 2016. Meat prices saw sharp fluctuations since 2015Q3. While fluctuations mostly adhered to seasonal patterns, the range was higher than previous annual averages. The sharp price rise in the first half of 2016 created opportunities for the price to fall again in a short time (Chart II.1.2.4).

Chart II.1.2.4

Meat price falls 23.5% in Q3



Source: NSO, Bank of Mongolia

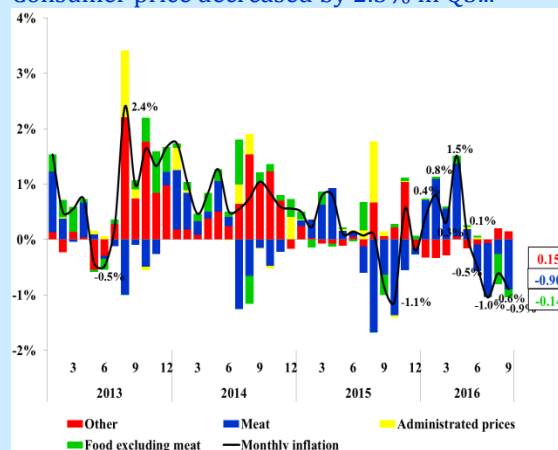
<sup>9</sup>Considering annual inflation in Ulaanbaatar, broken down by component

## BOX: Inflation, its components and characteristics

Inflation in Ulaanbaatar fell 2.5% YoY in Q3, while rose 2.7% in the first half of the year due to fluctuations in meat price. Average monthly inflation was -0.8% for the reporting quarter, a decrease of 1.2 percentage points QoQ and 0.6 percentage points YoY. Majority of price changes in Q3 were related to food prices, especially meat prices. Following its seasonal pattern, meat and vegetable supply increased while price decreased. In the reporting quarter, food prices fell 9.3% or 0.8 percentage points YOY. While the price of state administrated services increased 12.3 percent in 2015Q3, there were no changes this year. Due to shrinking demand, fluctuations in the price of other products (in red in Chart III.1) decreased (Chart III.1).

Chart III.1

Consumer price decreased by 2.5% in Q3...<sup>10</sup>

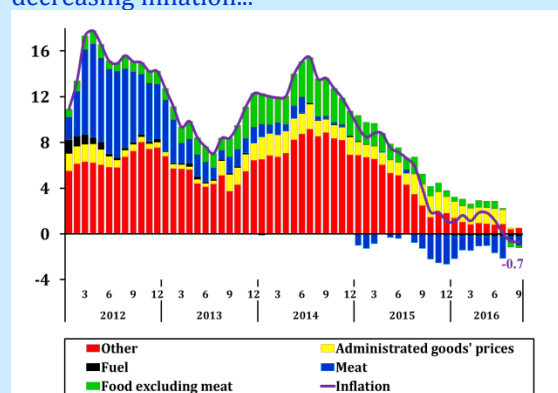


Source: NSO, Bank of Mongolia

Analyzing the components of inflation in Ulaanbaatar shows that in 2016Q3 meat and meat products, non-meat food products, state administrated services, petroleum, and other products (illustrated in red in the chart) contributed 1.08, -0.16, 0.48, -0.23, and 0.58 percentage points, respectively. Compared to the Q2 average, the contribution of meat, non-meat products, petroleum, state administrated services, and other products declined by 0.01, 0.78, 0.05, 0.92, and 0.29 percentage points, respectively. The decline in each component indicates that both demand and supply side inflation is decreasing (Chart III.2).

Chart III.2

Food prices remain the main factor in decreasing inflation...<sup>11</sup>



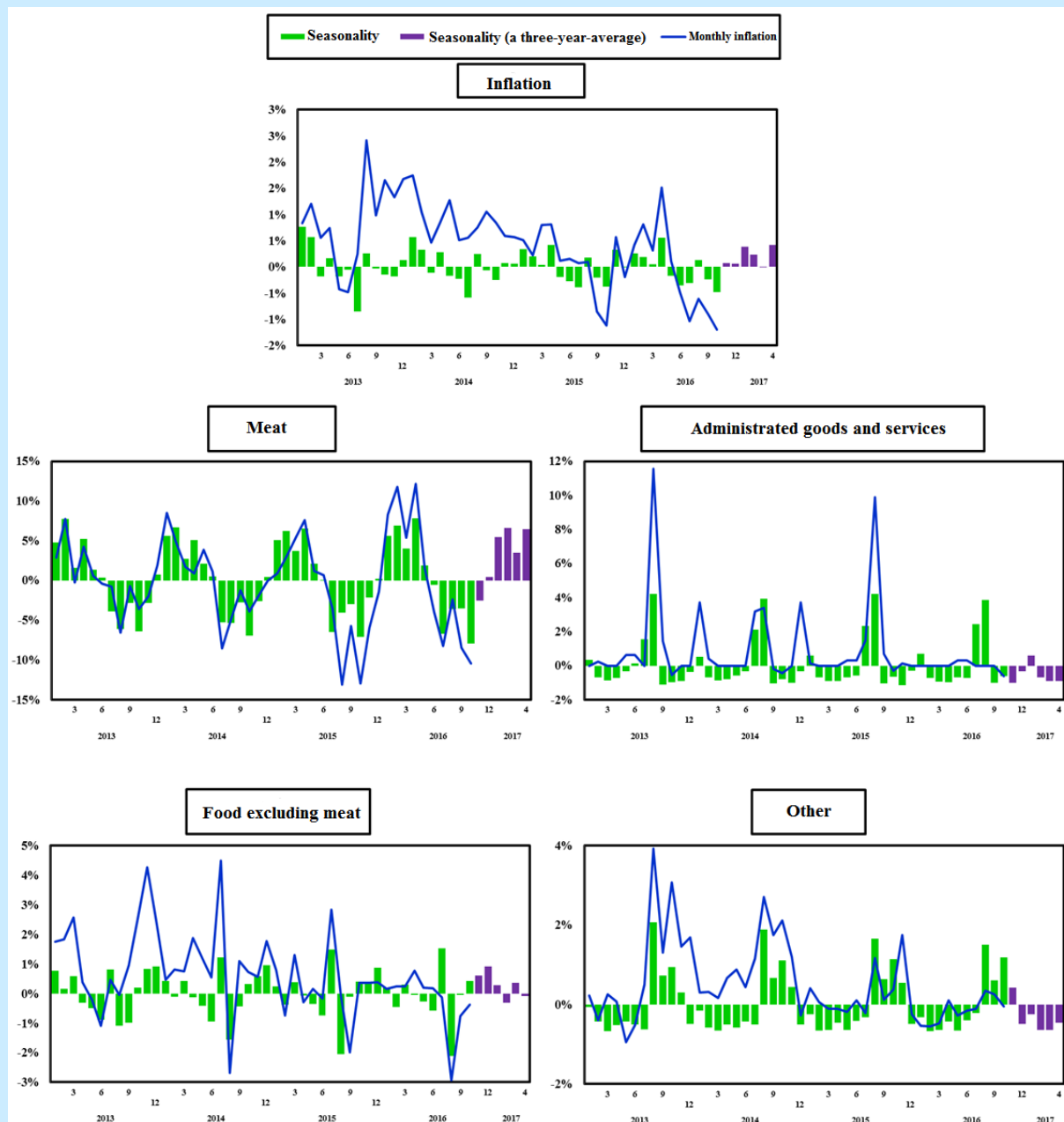
Source: NSO, Bank of Mongolia

<sup>10</sup> Considering quarterly inflation in Ulaanbaatar

<sup>11</sup> Considering annual inflation in Ulaanbaatar, broken down by component

Considering the monthly price changes in inflation components and the seasonal pattern of each component, price increase in each component remain lower than the seasonal pattern. It indicates the base effect of decline in prices by each component. However, in the reporting quarter meat and vegetable prices declined more as compared to its seasonal pattern, due to supply side effect.

Chart III.3



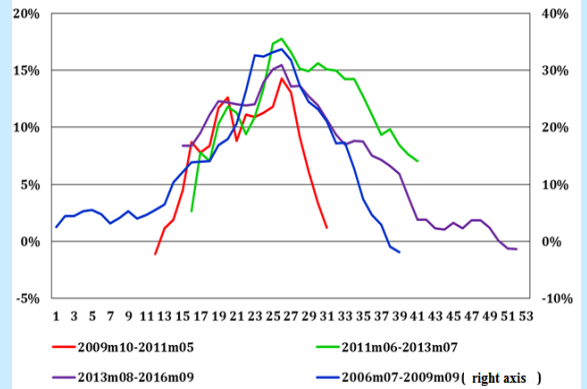
Source: NSO, Bank of Mongolia



The increasing volatility in the cycle of inflation leads to the difficulties of assessing and forecasting inflation. (Chart III.4). Dividing the inflation movement in the last 10 years into 4 cycles, the first cycle refers to the crisis of 2006-2009, the second and third cycle refer to the expansion period of 2010-2013 and the fourth cycle refers to the period from August 2013 until now. As seen from the macroeconomic activity and other indicators' trend, current cycle looks similar to 2006-2009 cycle, however the duration of annual low inflation is longer than the crisis cycle. Particularly, the current period of low inflation is taking unprecedented longer duration.

Chart III.4

Inflation movement in the last 10 years...

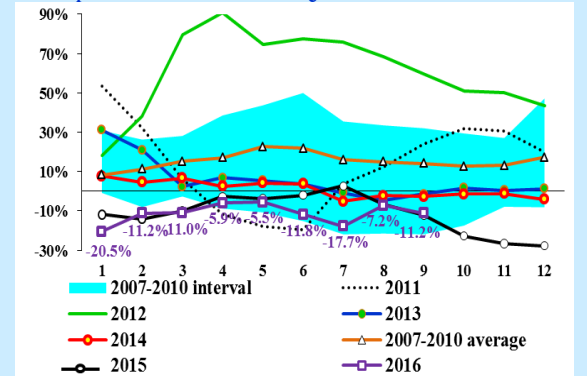


Source: NSO, Bank of Mongolia

Although meat price fluctuations have been consistent with its seasonal pattern, its amplitude has been higher than the long-run average. The rapid growth in price level in the first half of 2016 has facilitated room for decline in price level in a short period of time. (Chart III.5). Meat price rose by 52.1% in the first half of the year (37.6% in Q1, 10.6% in Q2), while declined by 23.5% in Q3, due to its seasonal pattern. In the reporting quarter, annual increase in meat price reached -12% on average, 0.5 percentage points lower than the average of 2015 and 1.0 percentage points lower than the average of the first half of 2016. Meat price has fluctuated sharply since March 2015.

Chart III.5

Meat price falls 23.5% in Q3...



Source: NSO, Bank of Mongolia

## II.2 Demand and supply

### II.2.1 Domestic demand

Total demand decreased 6.3% YOY in 2016Q3, and 1.6% YOY for the first 9 months of 2016. Government expenditure and investment had positive contributions to economic growth, while private consumption and net export had negative contributions in the reporting quarter.

#### Consumption

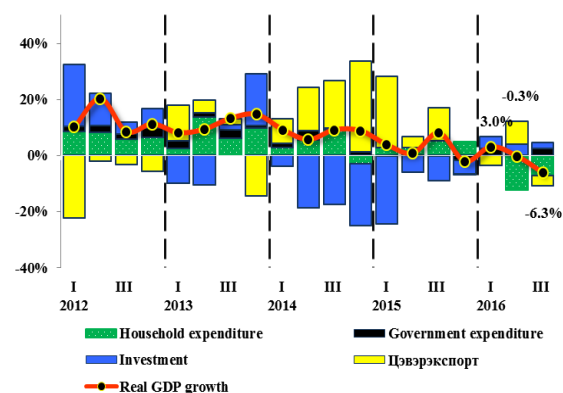
**Household:** Household consumption decreased 13.2% YOY and reduced quarterly GDP growth by 7.2 percentage points. Shrinking household consumption across the last two quarters can be attributed to declining food consumption.

The decline in household consumption was also affected by the household income decrease of 10.9% YOY. The decline in salary income and own business income (livestock farming, agriculture, etc.) contributed to a decrease in household income. As such, household income has continuously decreased across the last 7 quarters (Chart II.2.1.2)

Monthly household expenditure declined alongside income. This can be observed from the decline in average household consumption over six consecutive quarters from 2015Q2. In Q3, household consumption decreased 3.3% QOQ and 3.8% YOY. Non-food consumption increased 4.9% YOY while other consumption continued to decrease. Due to low economic activity and declining household income, household expenditure is not expected to recover for the next two quarters (Chart II.2.1.3)

Chart II.2.1.1

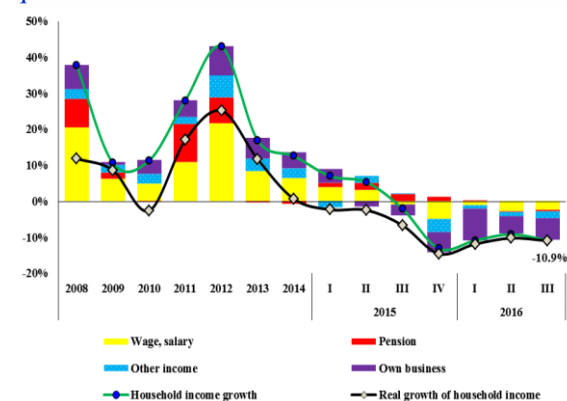
The economy contracted across two quarters



Source: NSO

Chart II.2.1.2

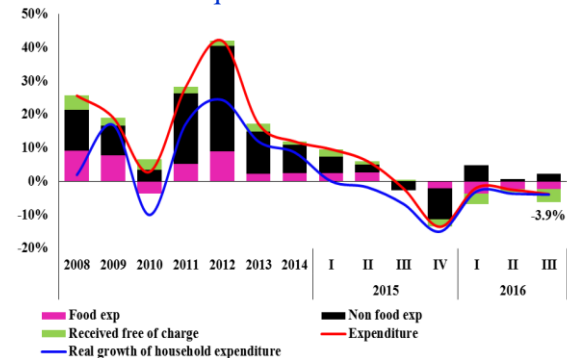
Household income decreased across the last 7 quarters



Source: NSO

Chart II.2.1.3

Average household consumption decreased across the last 6 quarters



Source: NSO

**Government:** 2016Q3 government expenditure increased 26% YOY and contributed 2.6 percentage points to the quarterly GDP growth. Despite low economic activity this year, government expenditure increased due to the unbudgeted parliamentary election expenses in the first half of the year. (Chart II.2.1.4)

### Budget

A budget amendment was made in Q3 due to the budget revenue falling below planned levels and increased expenditure. The amendment saw a downward revision of the equilibrated budget revenue by 23.7% (1665.7 billion tugrug) and an increased expenditure of 21.9% (1740 billion tugrug), with the total budget deficit approved as 18% of GDP. As of Q3, the equilibrated budget revenue collection was at 96% and total expenditure incurred was 82% (Chart II.2.1.1)

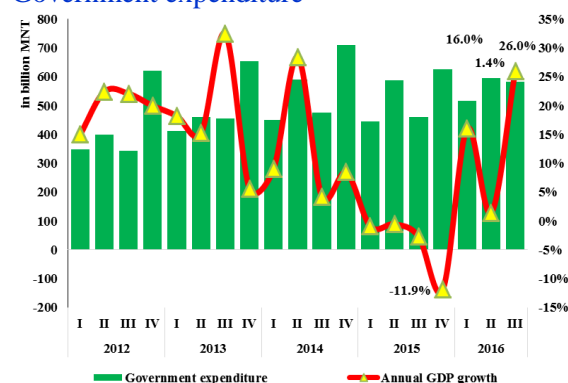
### Investment

Total investment (capital formation) increased 6.7% YOY in 2016Q3 and contributed 2 percentage points to quarterly GDP growth. Increase in inventories by 86.4% YOY in 2016Q3 was the main reason for an increase of 6.7% in investments. This change in inventories is also related to the increase in non-exported gold. (Chart II.2.1.5).

Investments in the construction sector contributed to the 7.6% decrease in private investment in 2016Q3. Investment in the coming year is expected to improve economic growth due to investments in the Oyu Tolgoi underground mine.

Chart II.2.1.4

### Government expenditure



Source: NSO

Table II.2.1.1

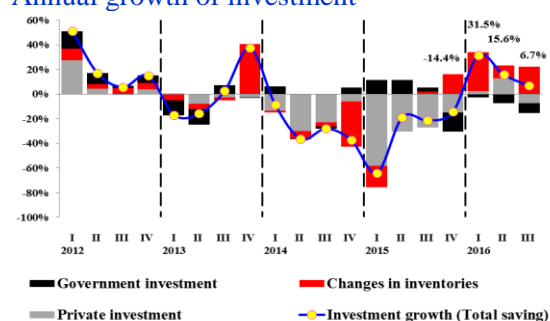
### Budget revenue and expenditure

In billion MNT	2014	2015	2016	2016 Q3	
	Actual.	Actual.	Amend.	Amend.	In percent
Balanced revenue	6277	5974	5348	4185	96%
Total expenditure	7145	7137	9694	7407	82%
Balanced budget	-868	-1163	-4346	-3222	64%
Contribution to GDP, in percentages					
Balanced revenue	28%	26%	22%		
Total expenditure	32%	31%	40%		
Balanced budget	-4%	-5%	-18%		
Nominal GDP	22227	23167	24200		

Source: Ministry of Finance

Chart II.2.1.5

### Annual growth of investment



Source: NSO

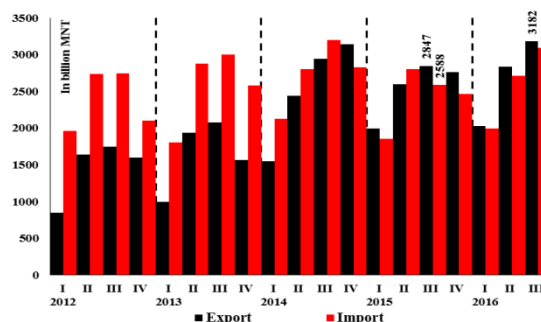
### Net export

Net exports decreased 66.1% YOY in 2016Q3, and contributed - 3.7 percentage points to economic growth. Although exports increased 11.8% YOY, imports increased 19.5%, leading to decreased net exports YOY.

The increase in the physical volume of exports in Q3 was due to increased exports of coal, iron ore, and zinc ore by 77.5, 73.1, and 38.3 percent YOY, respectively. (Chart II.2.1.6)

Chart II.2.1.6

Exports and imports, Экспорт, импорт, compared to 2010 prices



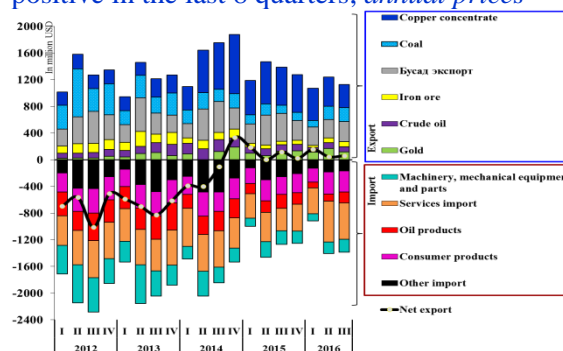
Source: NSO

While imports are projected to increase in 2017 due to Oyu Tolgoi imports, the reduced gold and copper contents of Oyu Tolgoi concentrates are expected to decrease exports.

Nominal exports of products and services decreased 3.5% YOY in 2016Q3. However, declining import of industrial, investment and petroleum products were the key causes for nominal imports decreasing 6.2% or USD 63.2 million YOY. (Chart II.2.1.7)

Chart II.2.1.7

Net export of goods and services remain positive in the last 8 quarters, annual prices

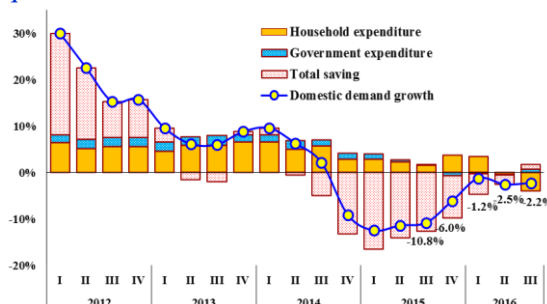


Source: Bank of Mongolia

Total investments led to a decrease in domestic demand for 9 consecutive quarters, but led to an increase in Q3. However, decline in household consumption in the same quarter led to domestic demand decreasing for the last 8 quarters. The impact of government expenditure, which used to contribute positively to domestic demand, has significantly decreased in the last 6 quarters.<sup>12</sup> (Chart II.2.1.8)

Chart II.2.1.8

Domestic demand is declining in the last 8 quarters



Source: NSO

<sup>12</sup> In chart II.2.1.8, growth contributions of household and government expenditure and total investments are calculated as the sum of the current quarter and the previous 3 quarters.

## II.2.2. Supply

Gross domestic product fell 6.2% YOY in 2016Q3 and the economy shrunk 1.6% as of the first three quarters of 2016. Non-mining sectors, in decline for the last 6 quarters, fell sharply in Q3. Mining sector growth fell to -12% while non-mining sector growth reached -4.2%, marking the first occasion where both are negative.

The 6.2% decline in economic growth in Q3 can be contributed to decreased activity in mining, commerce, and construction in amounts of 3.1, 2.5, and 1.7 percentage points, respectively. Other services<sup>13</sup> and information technology sectors contributed 0.3 percentage points to slowed growth.

Manufacturing and energy sectors did not contribute significantly to economic activity in Q3, while transportation, agriculture, and net taxes on products contributed to economic growth by 1.4 percentage points.

The decline in copper concentrates of Oyu Tolgoi's open-pit mine was the main factor behind a 12% decline in the mining sector and negative economic growth. Furthermore in Q3, petroleum production decreased 30% YOY and iron ore production by 2% YOY. Meanwhile, coal production increased 50% YOY and gold by 20% YOY, which contributed positively to sector performance.

Commercial sector indicators have been in decline since 2014Q4 and, despite a small recovery in Q2, saw a sharp decline of 17.6% in Q3. In particular, nominal wholesales and retail sales decreased 20.1% and 28.5% YOY, respectively.

Construction sector activity sharply declined by 40.4% in 2016Q3 due to slowed activity of residential and engineering construction. In particular, residential construction decreased at twice the rate YOY while road construction and dam and drainage network construction decreased 45% and 76% respectively.

Among the sectors with a positive contribution to the economy, agriculture grew by 1.6% in Q3. Despite growing by an average of 10% or higher over recent years, this sector slowed down in 2016 with a fluctuating growth rate of 2-3%, which can be explained by the sharp rise in the number of livestock used for food to 14 million and greatly increasing the base period effect. Furthermore, the irregular loss of 1.3 million livestock nationally as of the first 9 months of 2016, which is three times higher YOY, has negatively contributed to livestock farming performance. Meanwhile, the amount of grains and wheat harvested this year were 2.3 times higher YOY, contributing positively to agriculture growth.

The transport sector's growth (11.3%) in Q3 is attributed to increased rail and road transport activity. Total rail transport turnover increased 4.9% YOY, with a 17.7% increase in import transportation and 12.8% increase in transit transportation. Road

Chart II.2.2.1

Annual growth of GDP

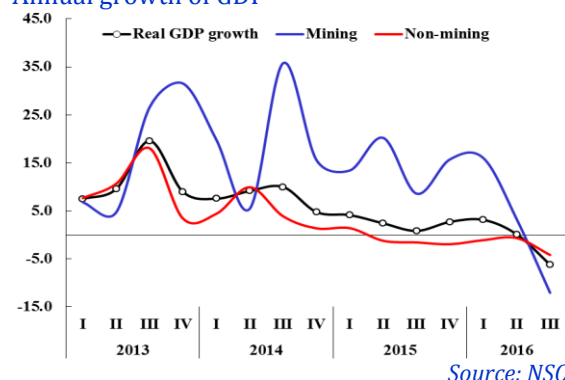


Table II.2.2.1

Annual and quarterly growth of production sectors

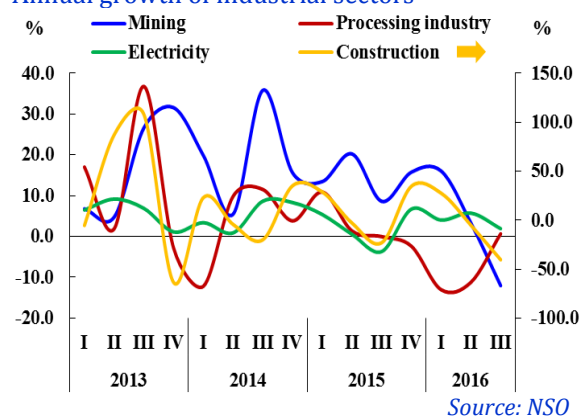
/In order of contributions to 2016Q3 growth/

	2015 YoY %	2016Q1-Q3 YoY %	2016Q3 YoY %	2016Q3 QoQ %*
<b>Real GDP growth</b>	<b>2.4</b>	<b>-1.6</b>	<b>-6.2</b>	<b>-19.4</b>
Transportation and storage	4.5	4.9	11.9	-11.6
Net tax on products	-22.7	-2.9	7.4	36.8
Agriculture	10.7	2.8	1.6	-10.8
Processing	1.3	-7.0	0.7	51.1
Electricity	3.1	4.0	1.9	-10.5
Information and communication	-2.1	-0.7	-6.5	-2.3
Other services	5.9	0.0	-0.9	68.4
Construction	-0.6	-20.3	-40.4	-90.5
Trade	-7.0	-8.0	-17.6	-50.8
Mining	14.1	0.1	-12.0	-24.4

\* seasonally adjusted

Chart II.2.2.2

Annual growth of industrial sectors

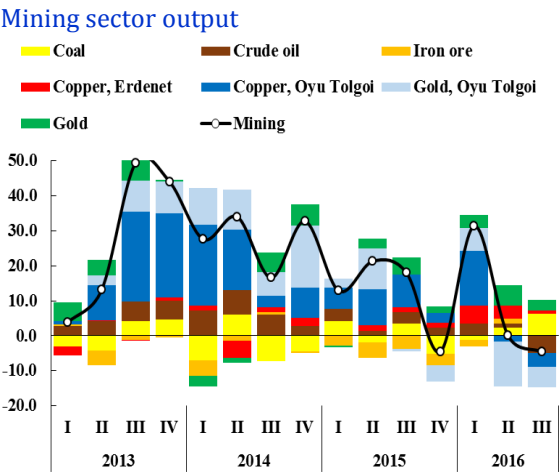


<sup>13</sup> The majority of the other services sector consists of activities related to financial, insurance, and real estate services.

transport also saw a sharp growth, at three times the growth rate YOY.

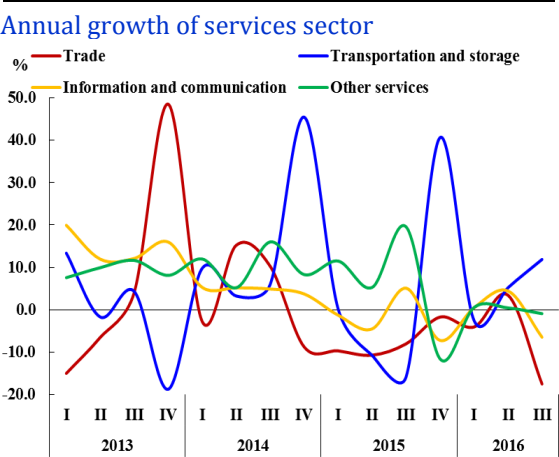
Net taxes on products, which had continuously declined since the end of 2013 alongside declining import and domestic manufacturing activity, grew 7.4% in Q3. The composition of taxes on products consist of a 38% growth of nominal VAT on domestic products and 50% or higher growth in excise tax of domestic alcohol, tobacco, and gasoline and fuel. Customs tax on import products, which have been in decline since the second half of 2014, grew approximately 3% in Q3.

Chart II.2.2.3



Source: NSO, Oyu Tolgoi LLC, additional estimations

Chart II.2.2.4



Source: NSO

## II.2.3 Potential output, output gap

Potential output growth<sup>14</sup> was high with over 10% growth from 2010-2013, but has become likely to halt due to non-mining output since 2014. Potential output growth declined sharply in the last quarter (Chart II.2.3.1).

Chart II.2.3.1

### Potential output growth

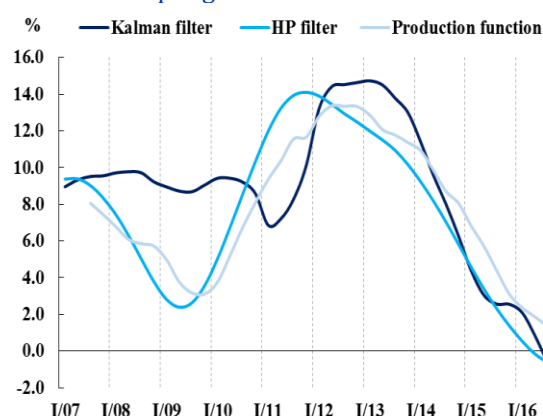
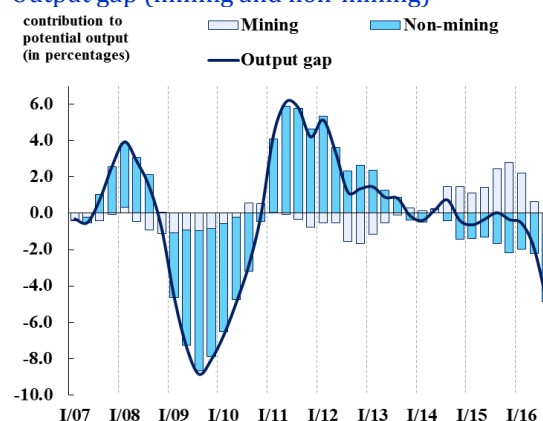


Chart II.2.3.2

### Output gap (mining and non-mining)



Total output exceeded its potential from 2011-2013 and the output gap<sup>15</sup> was positive due to the non-mining sector contribution. In the last two years, total domestic output remained below potential with a negative output gap. Although mining output exceeded its potential since the second half of 2014, the negative output gap of non-mining output has contributed negatively to the overall output gap. For 2016Q3, mining output fell below potential output, resulting in a short decline in the total output gap (Chart II.2.3.2).

<sup>14</sup> A combination of 1) the purely statistical HP filter, 2) the production function approach which takes into account each factors of production and 3) the multivariate Kalman filter based on macroeconomic indicators and their inter-relations are used.

<sup>15</sup> Computed by the multivariate Kalman filter.



## II.3 Labor market

*Employment decreased in all sectors except agriculture and unemployment increased 3.1% YOY. The declining trend in labor force participation has continued.*

*Nominal wage and productivity growth continues to slow. Productivity growth reached its lowest rate since 2012Q1.*

### II.3.1 Employment and unemployment

The labor market forecast has not improved.

Unemployment has increased by 2.2% YOY.

Although labor force participation in 2016Q3 increased 0.2% YOY, the overall declining trend has continued. The working age population<sup>16</sup> increased 5.3% (102,273) and the economically active population by 5.7% (67,819), which contributed to the 0.2 percentage point increase in labor force participation to 61.6%. A large proportion of the growth in the working age population is therefore attributed to the increase in the economically active population (employed and unemployed).

The unemployment rate reached 9.4% in 2016Q3, a 3.1 percentage point increase YOY. The number of both employed and unemployed people increased in Q3, but the growth of the latter was higher than the former, resulting in the unemployment rate continuing to increase. In 2016Q3 the number of employed people grew 2.2% YOY to reach 1,144,359, but the number of unemployed grew 57% YOY to reach 118,864. The number of newly registered unemployed people at the Labor Exchange decreased by 26% (7,494) while the number of unregistered unemployed people who became employed decreased by 65% (4,320). These results are in line with the conclusion that the unemployment rate has increased compared to the previous year.

Chart II.3.1.1

The declining trend in labor force participation continues

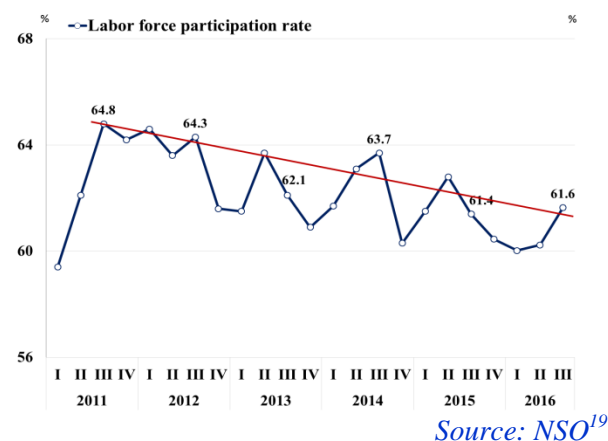


Table II.3.1.1

#### Labor market indicators

Year	2012	2013	2014	2015	2015Q3	2016Q3
Employees (thous. people)	1018.2	1038.2	1040.7	1067.6	1119.7	1144.4
Annual growth	-0.8%	2.0%	0.2%	2.6%	-2.5%	2.2%
Agriculture	318	305	322	335	321	385
Manufacturing	182	205	224	207	220	200
Trade	137	152	174	154	170	165
Service	381	377	384	371	409	394
Unemployed (thous.)	87.8	87.2	87.0	96.5	75.7	118.9
Annual growth	13.4%	-0.6%	-0.3%	10.9%	-3.1%	57.0%
LFPR*, %	61.6	60.9	60.3	60.5	61.4	61.6
Annual growth	-2.6	-0.7	-0.6	0.2	-2.3	0.2
Unemployment, %	7.9	7.8	7.7	8.3	6.3	9.4
Annual growth	0.9	-0.1	-0.1	0.6	-0.1	3.1

\*Labor force participation rate

Source: NSO

<sup>16</sup> The Labor Law of Mongolia defines the working age population as those aged 15-59. However, the National Statistics Office uses the international definition of the population over the age of 15 to calculate the working age population figures.

<sup>19</sup> Study of the labor force



The number of employed people in the service sector decreased by 3.6% (14,904), commercial sector by 2.8% (4,826), and industrial sector by 8.9% (19,456). The number increased for the agriculture sector by 19.9% (63,842), contributing positively to the total number of employed people. In a period of declining economic and business activity, the decrease in the number of those employed in commerce, industry, and service indicate decreasing employment in these sectors (Chart II.3.1.2). The employment status of employed people shows an increase for self-employed or members of partnerships and cooperatives. There was also an increase in unpaid or alternate forms of labor for salaried employees, employers, herders, and household production.

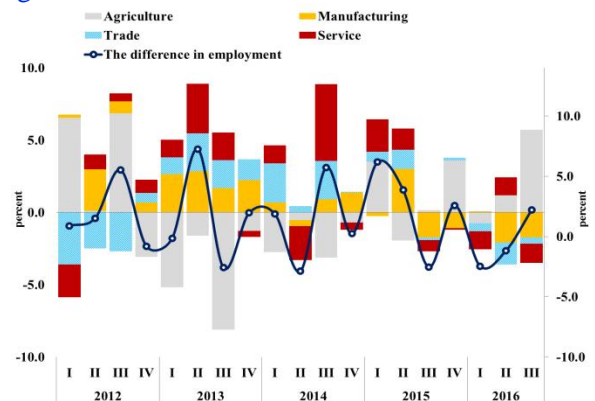
### II.3.2 Wage, productivity

Labor productivity growth reached -2.6% in 2016Q3 and was calculated by dividing real GDP<sup>17</sup> in Q3 by the number of employed people. The fall in productivity was influenced by the decrease in real GDP (6.2%) by the increase in employed people (2.2%) (Chart II.3.2.1).

The main indicator for the average labor cost required to produce one unit of production, the unit labor cost<sup>18</sup> (ULC) growth rate increased in 2016Q3. The increase in nominal wage (5.7%) and the decline in labor productivity growth (8.2%) contributed to the increase in ULC. (Chart II.3.2.2).

Chart II.3.1.2

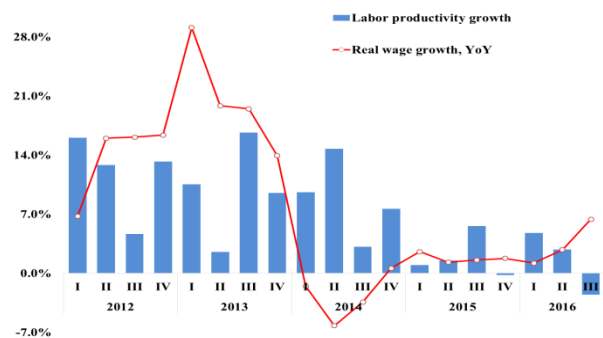
Employment decreased in all sectors except agriculture.



Source: NSO

Chart II.3.2.1

The labor productivity growth rate decreased.



Source: NSO, analysts' estimations

Chart II.3.2.2

The growth rate of unit labor cost is increasing again.



Source: NSO, analysts' estimations

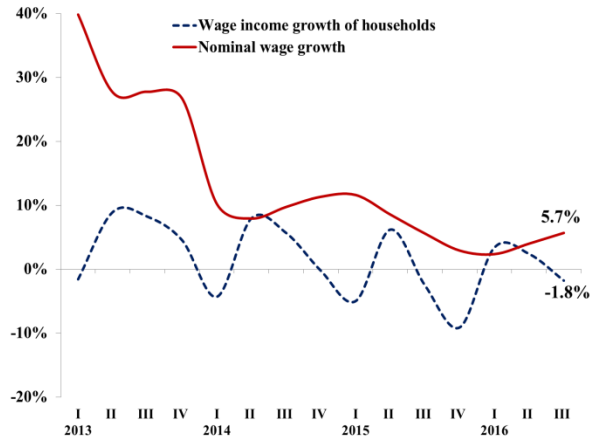
<sup>17</sup> Real GDP was calculated through adding the real GDP of the the previous 3 quarters to the current quarter.

<sup>18</sup> Unit labor cost = Employed people\*Nominal wage/Real production = Nominal wage/Labor productivity in real terms

The average nominal wage increased 5.7% YOY in 2016Q3, reaching MNT 884,300. Across sectors, nominal wages decreased for hired household employees (-7.3%) and other service activity (-6.6%), while increasing for manufacturing (16.3%), transport activity (11.4%) and construction (9.9%) YOY (Chart III.3.2.3).

Chart II.3.2.3

Household income growth is declining.



Source: NSO, analysts' estimations

## II.4 Money and financial markets

### II.4.1 Money and credit indicators

Money and credit indicator growths increased in 2016Q3. M2 increased by 15.3% and bank loans by 7% YOY.

The increase in money supply growth can be attributed to the 14% increase in net domestic assets growth YOY. In turn, increased government securities auctions were the main factor in increasing net domestic assets. The Government issued securities worth MNT 360 billion in Q3 to finance budget deficits and repay domestic bonds, raising net government credit in the banking system 10 times from the previous quarter. Money supply was also increased through joint quasi-fiscal programs and concessional mortgage loan financing by the Bank of Mongolia and Government.

The increase in money supply was mainly due to the increase in current and deposit accounts denominated in foreign currency of individuals and enterprises, which are the main sources of financing in the banking system. Deposit and current accounts in foreign currency denominations increased by 17% and 35% respectively YOY, leading to a 7.2 percentage point increase in the money supply. The increase in the outstanding balance of accounts denominated in foreign currency across the last 2 quarters is related to an increase in the number of individuals' deposits and enterprises with current accounts denominated in foreign currency. Current accounts and deposits denominated in tugrug increased money supply by 6.2 percentage points. Although the outstanding balance of current accounts and deposits denominated in tugrug increased YOY, it decreased QOQ.

Chart II.4.1.1

Contributions to the annual growth of M2, assets side

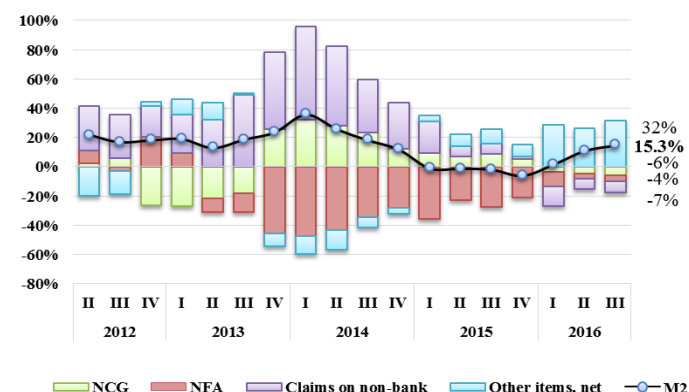


Chart II.4.1.2

Contributions to the annual growth of M2, liabilities side

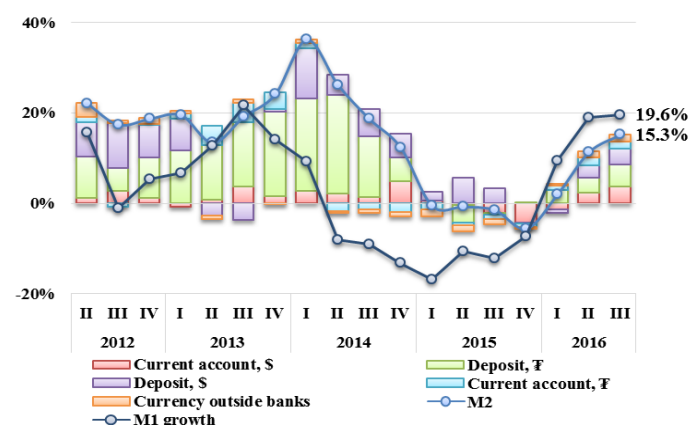


Table II.4.1.3

Money supply: assets and liabilities side

In billions of MNT	2013	2014	2015	2016Q3
<b>Net foreign assets</b>	934	-1702	-3909	-4144
<b>Net domestic assets</b>	8527	12338	13959	15595
<b>Money supply /M2/</b>	9461	10636	10050	11450
<b>M1</b>	2093	1817	1685	1930
<b>Currency outside banks</b>	582	499	459	566
<b>Current account, MNT</b>	1511	1317	1227	1365
<b>Quasi money</b>	7368	8819	8365	9520
<b>Deposit, MNT</b>	4917	5410	5434	5668
<b>Deposit, USD</b>	1476	1970	1949	2441
<b>Current account, USD</b>	974	1439	982	1410

The credit growth of financial institutions<sup>20</sup> reached 7.9% and the amount of outstanding loans issued by all financial institutions reached MNT 19.2 trillion as of 2016Q3. Banks represent 63% of the loans, the Development Bank represents 23%, and mortgage loans financed by the Bank of Mongolia represent 12%.

Quasi-fiscal financing by the Bank of Mongolia and the Development Bank constitute a large part of total credit growth. The Development Bank's outstanding loans to enterprises increased by 11% YOY and contributed a 3 percentage point increase to total credit issued by financial institutions. Mortgage loans financed by the Bank of Mongolia also increased by 1.2 times YOY and contributed a 2 percentage point increase to total credit issued by financial institutions.

Outstanding loans by depository institutions<sup>21</sup> grew 4.6% YOY. Across sectors, non-SME loans increased. Annual growth of consumer loans increased by 5% in Q3 and continues to sustain credit growth. Pension and salary loans, which have been increasing for some years, were the main contributors to the growth of consumer loans<sup>22</sup>. The decline in real and nominal household income is the main reason behind the increase in consumer loans. In the reporting year, mortgage loans increased by 12%. Mortgage loans continue to increase due to the growth in concessional mortgage loans and the steady demand by individuals for mortgage loans.

Chart II.4.1.4

Total credit issued by financial institutions, by contributions to growth

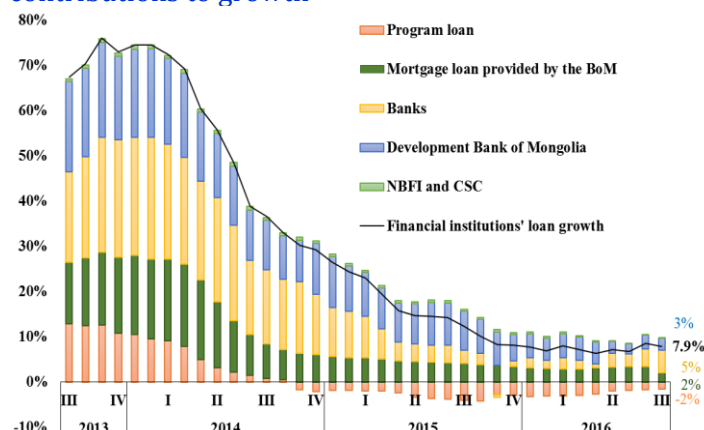


Chart II.4.1.5

Total credit issued by financial institutions, by contributions to level

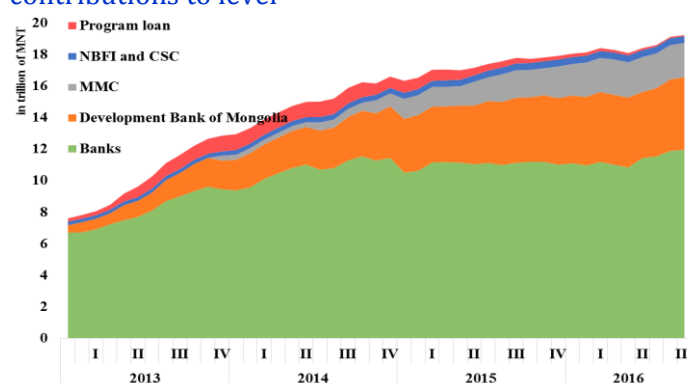
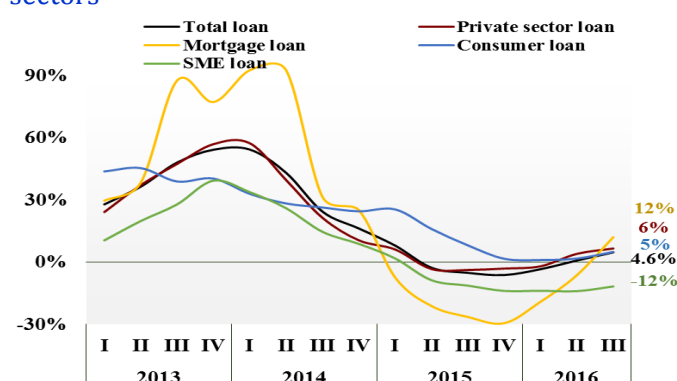


Chart II.4.1.6

Annual credit growth of depository institutions, by sectors



<sup>20</sup> Financial institutions are comprised of banks, savings and loan associations, Mongolian Mortgage Corporation (MMC), Development Bank of Mongolia (DBM) and nonbanking financial institutions (NBF).

<sup>21</sup> Depository institutions comprise of banks and savings and loan associations.

<sup>22</sup> Consumer loans are comprised of salary, consumer, pension, card, and savings secured loans.

Classifying by economic sectors shows that credit growth is continuing to decrease in most sectors. Construction and mining sector loans continue to shrink due to slowed economic activity and the increased frequency of over due loans. As there is no decrease in over due and non-performing loans for the manufacturing and commercial sectors, there has been no growth for these sectors.

Annual growth of newly issued bank loans increased 4.2 percentage points in 2016Q3. Growth of consumer loans is the main contributing factor to the growth in newly issued loans. Due to shrinking household income and limited financial funds, there was an annual growth rate of 43% for newly issued salary loans and 21% for new pension loans. As a result, newly issued bank loans increased by 10 percentage points. However, despite the sizeable increase in consumer loans, loans for the construction sector have decreased over the last two semesters. Excess supply and increasing over due loans in the construction sector have contributed to the decrease in total loans.

As economic growth and business activity slows, there is an increase in over due and non-performing bank loans. The proportion of over due and non-performing banks loans in total loans increased by 1 percentage point since the end of 2015, reaching 15%. Across sectors, the amount of over due loans in the mining and construction sectors is rapidly increasing, constituting 50% of total over due loans. The higher amount of over due loans and the continuously increasing non-performing loans in key economic sectors indicate that banking sector risks are growing. Mining and commercial sector loans comprise 53% of total non-performing loans.

Chart II.4.1.7

Annual credit growth of depository institutions, by sector

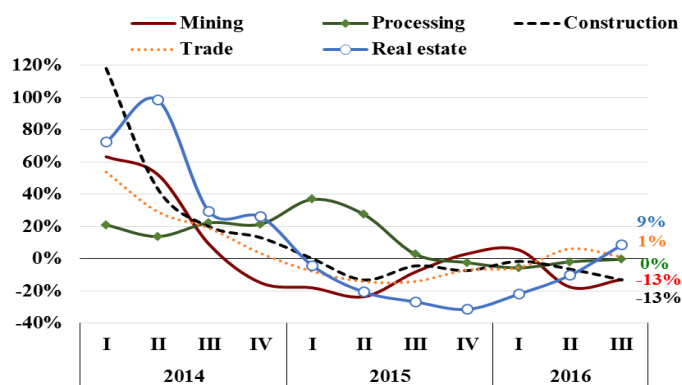


Chart II.4.1.8

Annual growth of newly issued bank loans, contributions by sector

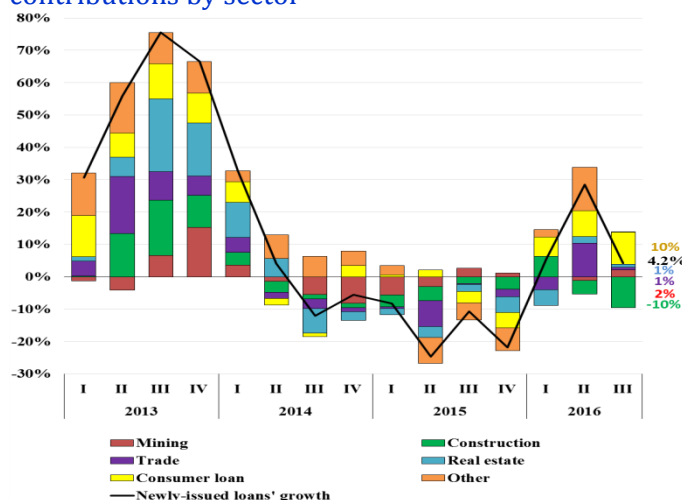
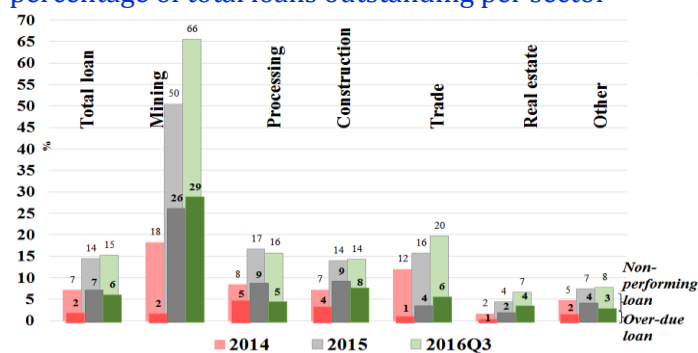


Chart II.4.1.9

Non-performing and over-due bank loans, by percentage of total loans outstanding per sector



## II.4.2 Interest rate

In August 2016, the Bank of Mongolia took measures to protect the tugrug exchange rate and to increase tugrug asset yields in order to ensure mid-term stability of the economy. In this framework, the policy rate was increased by 4.5 percentage points to 15% and a 12 week treasury bill was introduced. Furthermore, the interest rate corridor was made asymmetric by raising the ceiling by 1 percentage point to 3% and lowering the floor by 1 percentage point to -1%.

The short-term (less than one year) government treasury bill yield increased to 15.7%<sup>23</sup> in September 2016. The increase was due to the new policy rate and the increased requirements for government treasury bill auction arising from a high budget deficit. The government treasury bill auction had not been held by the Bank of Mongolia since April 2016, but was held again in September to auction a total of MNT 320 billion in government treasury bill with an average weighted rate of 16.6%.

Regarding bank loan and deposit rates, the tugrug loan rate<sup>24</sup> increased by 1.8% and the tugrug deposit rate by 0.1% YOY as of September 2016. Disregarding concessional loans show that the tugrug lending rate increased by 1.4% YOY to reach 20.1%. The rise in lending rates was due to the new policy rate and the decrease in the amount of quasi-fiscal, concessional loans issued by the Bank of Mongolia and the Development Bank. The increased lending rate, in contrast to the stable deposit rate, increased the interest rate gap to 6.2% in Q3.

Chart II.4.2.1

Interbank market rates remain at the upper limit of the interest rate corridor.

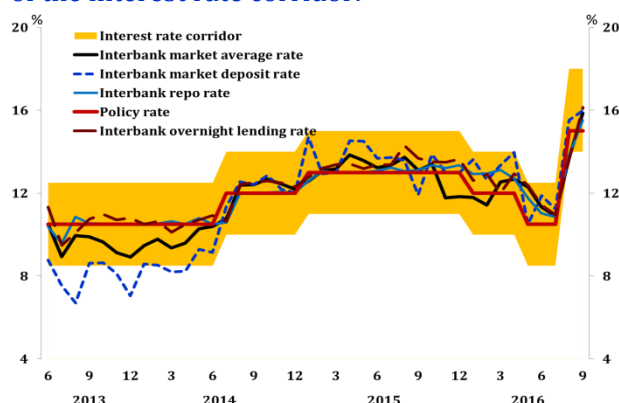


Chart II.4.2.2

Short-term government treasury bill yield increased.

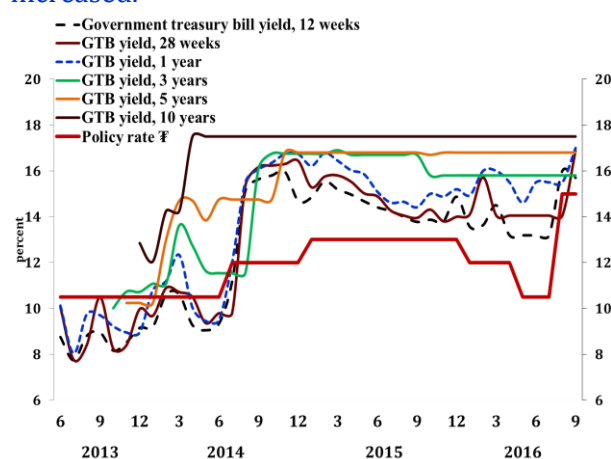
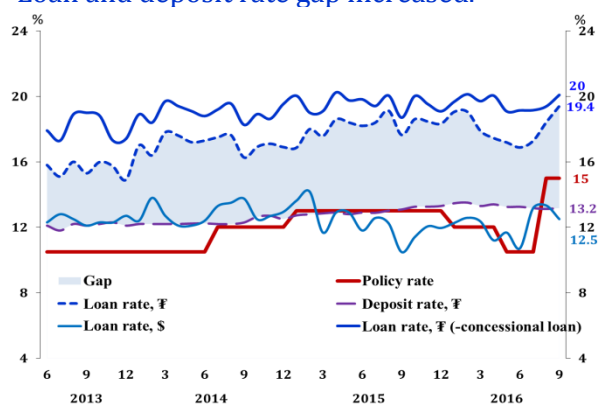


Chart II.4.2.3

Loan and deposit rate gap increased.



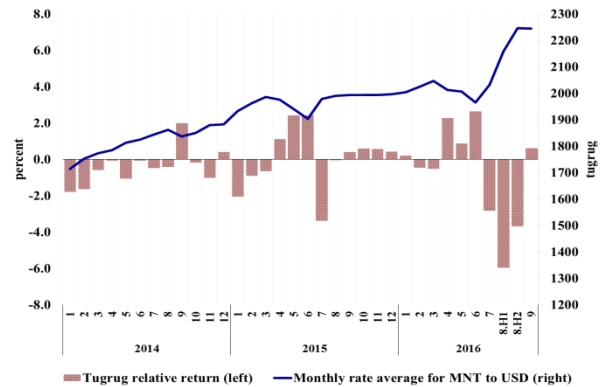
<sup>23</sup> Government treasury bill yield with the maturity of 12 weeks (3 months) in the primary market

<sup>24</sup> Loan rate including concessional loan rates

A foreign currency shortage arose from a sharp increase in tugrug supply and large amounts of foreign currency payments made abroad. In turn, this led to a rapid depreciation of the tugrug exchange rate in July and August 2016, volatile expectations, and a -6% decline in the tugrug return. After the policy rate was increased, the tugrug return became positive again in September. Meanwhile, the total amount of current accounts and deposits denominated in foreign currency shows a 1.1% increase YOY.

Chart II.4.2.4

Tugrug relative return was positive in September.





### II.4.3 Exchange rate

The tugrug depreciated sharply in the period leading up to 2016Q3. The MNT depreciated against the USD by 175.5 tugrug or 8.8% QOQ and 185 tugrug or 9.3% YOY, with the exchange rate reaching 2173.5 tugrug in Q3 (Chart II.4.3.1/.

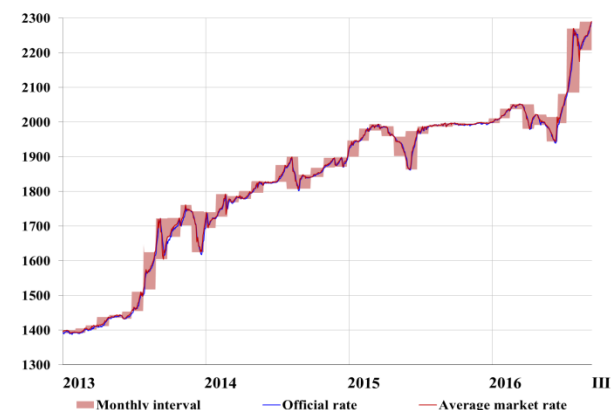
The MNT/USD exchange rate was the most volatile since March 2009. That month, the MNT/USD exchange rate spread was 184.5 tugrug.

The sudden depreciation of the tugrug without significant changes to base economic factors created unstable expectations for the exchange rate. This was related to large sum payments made abroad in foreign currency during a period of rapidly increased tugrug supply, resulting in decreased supply of foreign currency.

The nominal effective exchange rate (NEER) weakened 9.9%, relative price rose 2.1%, and the real effective exchange rate (REER) weakened 11.8%, YOY (Chart II.4.3.2). The MNT nominal rate weakened 12.5% against the USD, 36.3% against JPY, 9.2% against CNY, and 18.6% against RUB.

Chart II.4.3.1

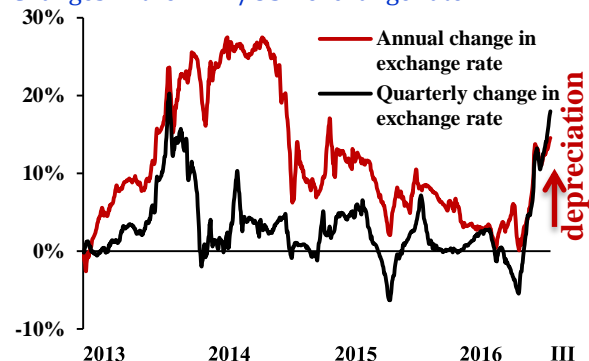
#### MNT/USD exchange rate



Source: Bank of Mongolia

Chart II.4.3.2

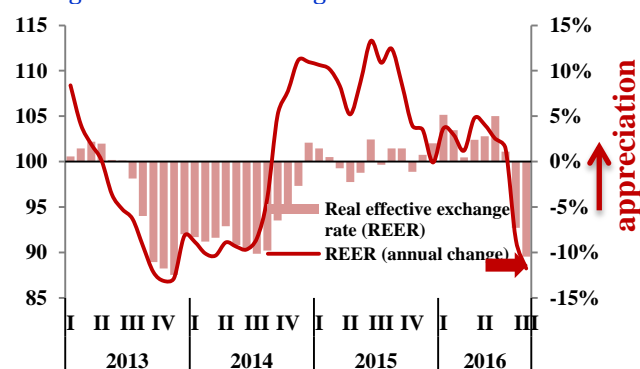
#### Changes in the MNT/USD exchange rate



Source: Bank of Mongolia

3ypap II.4.3.3

#### Changes in the real exchange rate of MNT



Source: Bank of Mongolia

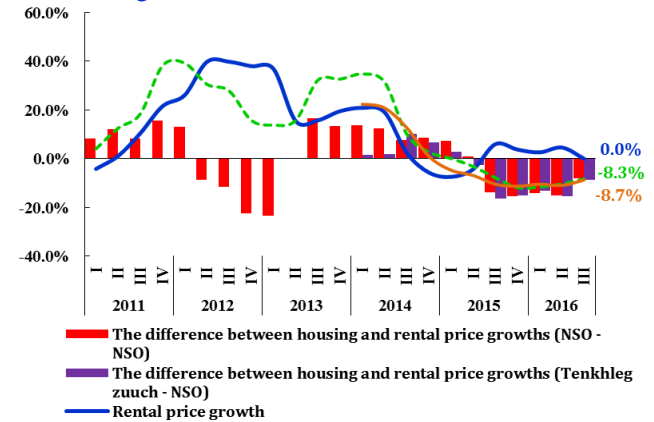


#### II.4.4 Real estate market

Housing prices continued to decrease and remained relatively stable. The housing price index published by the National Statistical Office declined 2.6% QOQ and 8.3% YOY. A similar index by Tenkhleg Zuuch LLC also showed a declining trend, with a 8.7% decline YOY in the reporting quarter. The price of old apartments fell by 13.9% and new apartments by 0.5% YOY. Meanwhile, rental prices showed a tendency to increase since 2015Q3, but has slowed and stabilized in the reporting quarter. Rental prices remained the same YOY and decreased 1.3% QOQ (Chart II.4.4.1).

Chart II.4.4.1

Rental prices are stable while housing prices have been falling.



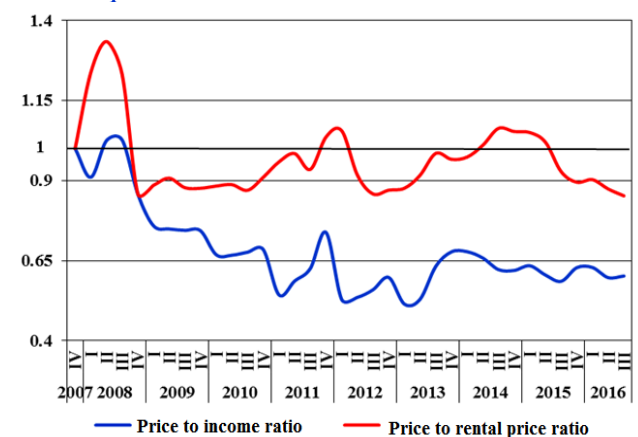
Source: NSO, analysts' estimations

The housing purchasing power of individuals has been decreasing, as observed from the stable levels of the housing price-to-income ratio and the decline in the price-to-rent ratio. These developments indicate that the housing bubble is subduing and demand is declining. As of 2016Q3, housing price decreased by 2.5%, rental price by 1.3%, and household income by 3.4%, YOY (Chart II.4.4.2).

According to the construction cost index, construction material costs have remained stable since 2015Q2 to Q4. However, the costs showed a tendency to increase in 2016. In the reporting quarter, the construction cost index increased 4% YOY and 1.9% QOQ (Chart II.4.4.3).

Chart II.4.4.2

The housing price bubble has been subdued across the last quarters.



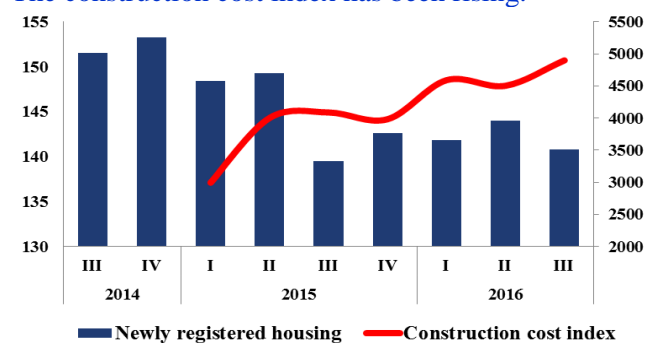
Source: NSO, analysts' estimations

Housing purchases by individuals have been decreasing. According to the Property Rights Registration Agency (PRRA), 3,513 new apartments were sold and issued certificates, a decrease of 11.1% QOQ.

Although the number of newly built apartments have decreased, it remains above housing demand. According to Tenkhleg Zuuch LLC, approximately 10,917 apartments will be entering the housing market in 2016Q4, an 8.2% decline QOQ.

Chart II.4.4.3

The construction cost index has been rising.



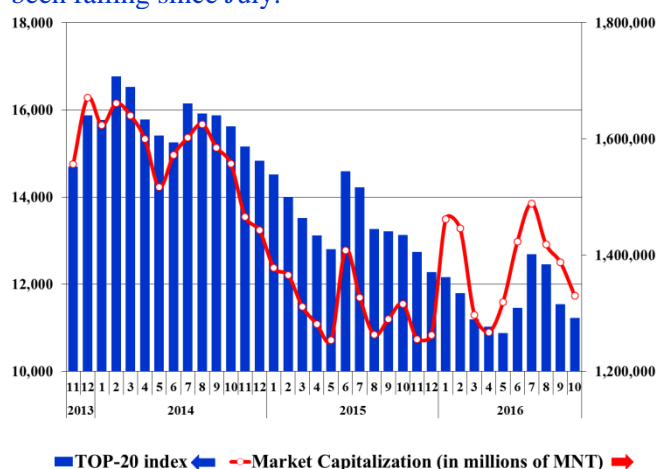
Source: NSO, PRRA

Stock market indicators have remained highly volatile across the last three quarters. Market capitalization and TOP-20 average indicators grew until July 2016 but began to decline in August. Market capitalization reached MNT 1.39 trillion in 2016Q3, which was a 7.6% increase YOY but a 2.5% decrease QOQ. The TOP-20 average indicators decreased by 11539.1 units or 12.7% YOY, but increased by 0.8% QOQ (Chart II.4.4.4).

In Q3, a total of 6.3 million shares amounting to MNT 32.5 billion were traded. Ordinary shares of MMC Holding LLC constitute 87.2% of trades, amounting to MNT 28.4 billion.

Chart II.4.4.4

Stock market capitalization and TOP-20 index has been falling since July.



Source: Mongolian Stock Exchange

There were no renewed securitizations this quarter for the mortgage loans with 8% discounted rate. The nine previous securitization operations were organized by the Mongolian Mortgage Corporation (MMC) and the securities were purchased by the Bank of Mongolia. The MMC last securitized a portfolio of MNT 143.3 billion worth of mortgage loans through MMC Assets 9 SPC in 2016Q2 (April 6). The MMC securitized the outstanding balance of mortgage loans with 8 percent discounted rate, out of which The Bank of Mongolia purchased 90 percent of the total. Through a total of nine securitization operations, loans amounting to MNT 2.5 trillion were transferred to MMC, from which securities worth of MNT 1.95 trillion or 90% of the total amount were purchased by the Bank of Mongolia. Bond repayments are being made in accordance with the mortgage loan repayment schedule and the outstanding balance stood at MNT 1.9 trillion as of 2016Q3 (Table II.4.4.1)

Table II.4.4.1

MNT 143.3 billion of mortgage loans were securitized by MMC in 2016Q2.

	Issued date	Volume (in millions of MNT)
1	December 16, 2013	322,901.700
2	June 25, 2014	222,051.700
3	October 21, 2014	324,595.800
4	January 14, 2015	452,278.100
5	May 20, 2015	294,343.300
6	August 5, 2015	261,699.200
7	November 23, 2015	293,862.300
8	January 20, 2016	186,330.300
9	April 6, 2016	143,300.000
	<b>TOTAL</b>	<b>2,501,362.400</b>

Source: MMC

## II.5 Balance of payments

Despite the current account of deficit amounting to 27% of GDP in 2011-2012, the capital and financial accounts surplus led to a positive balance of payments. Although the current account deficit has been decreasing since 2013, so has the capital and financial account surplus due to declining foreign direct investment, resulting in a negative balance of payments (Chart II.5). As of 2016Q3, the current account deficit amounted to USD 27.8 million and the capital and financial account to USD 212.9 million. As such, the total balance of payments was in a deficit of USD 186.2 million<sup>25</sup>.

### II.5.1 Current account

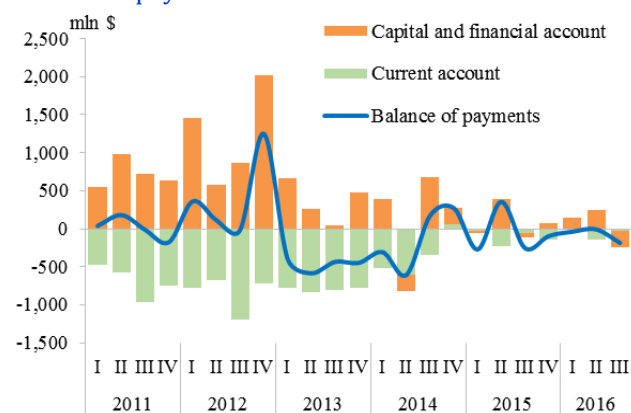
Declining global market prices of mining products, which constitutes approximately 90% of Mongolia's exports, have led to reduced total exports. However, the fall in foreign direct investment has led to a higher decline in investment-related imports than in total exports. As such, the balance of trade has been positive for 11 consecutive quarters and has contributed to lessening the current account deficit (Chart II.5.1.1).

Furthermore, bought services and outgoing transfer payments by Mongolian individuals and enterprises have outweighed the sold services and incoming transfer payments, contributing to the current accounts deficit.

Despite declining transport costs due to less imports, expert services bought from abroad have steadily increased and contributed to the services deficit. In 2016Q3, increase in the costs of other services such as business consultants for large mining companies, and construction, finance, architecture, engineering, and technical services have led to a services deficit increase of USD 148.5 million YOY (Chart II.5.1.2).

Chart II.5

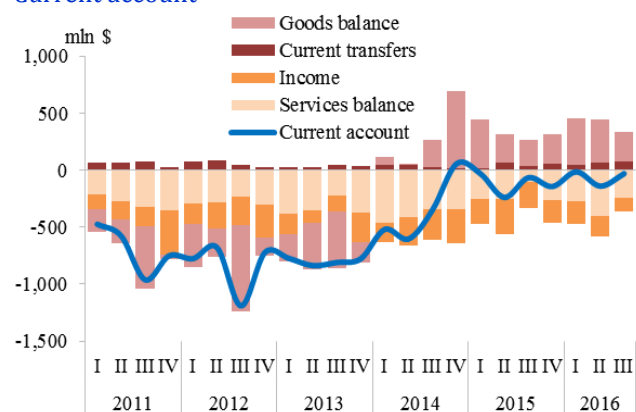
#### Balance of payments



Source: Bank of Mongolia

Chart II.5.1.1

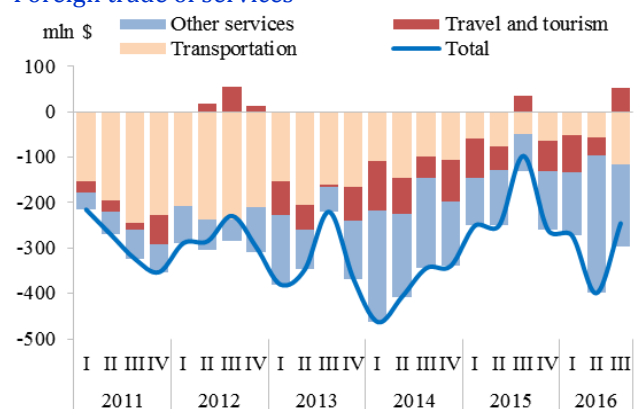
#### Current account



Source: Bank of Mongolia

Chart II.5.1.2

#### Foreign trade of services



Source: Bank of Mongolia

<sup>25</sup> Net statistical errors and omissions amounted to USD 54.6 million in the reporting period.

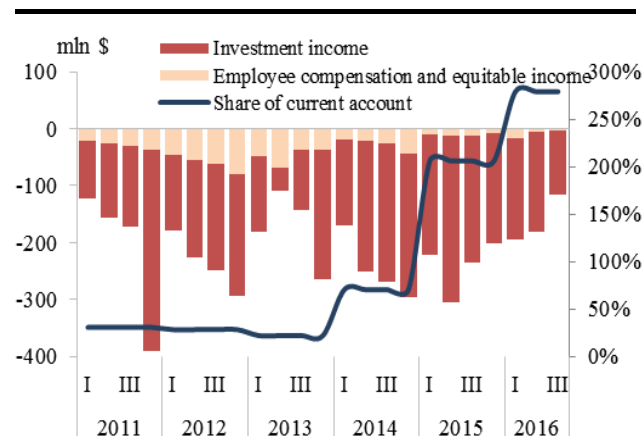
An increase in Mongolia's net international investment position has led to an increase in interest and dividend payments made abroad, contributing to the income account deficit. While the current account deficit has been decreasing overall, the proportion of income account deficit within it has continued to grow. For example, the income account deficit amounted to 22% of the current account deficit in 2013 and 70% in 2014, growing to 206% in 2015 and 419% in the first three quarters of 2016 (Chart II.5.1.3).

## II.5.2 Capital and financial account

The financial account saw a high surplus from 2011-2013 due to foreign direct investment (FDI) inflows and balanced the current account deficit. However, due to both foreign and domestic socioeconomic shifts, FDI and consequently the financial account surplus began decreasing in 2014. From 2014 to the first half of 2016, this decline was balanced by the portfolio and other investment account surplus. However, the portfolio and other investment account deficit were high in Q3, which resulted in a financial account deficit of USD 239.8 million (Chart II.5.2.1).

The balance of payments deficit amounted to USD 186.2 million in Q3 and the official foreign exchange reserves fell to USD 1,092 million as of September 2016, a 23% decrease YOY. The reserves are sufficient for 4.1 months of retained imports of goods payable in foreign currency that was measured as the average of last 3 months of imports (Chart II.5.2.2).

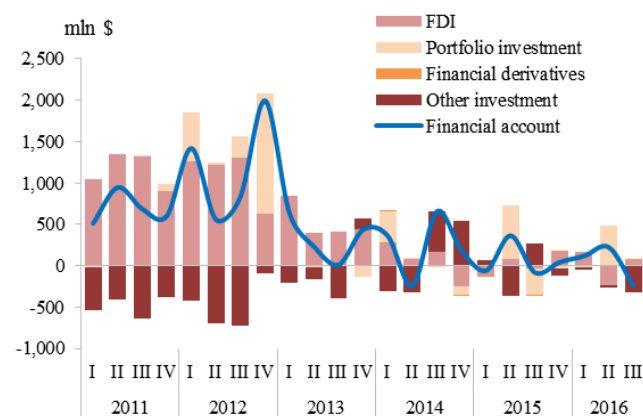
Chart II.5.1.3 Income account



Source: BOM, General Authority for Customs and Taxation

Chart II.5.2.1

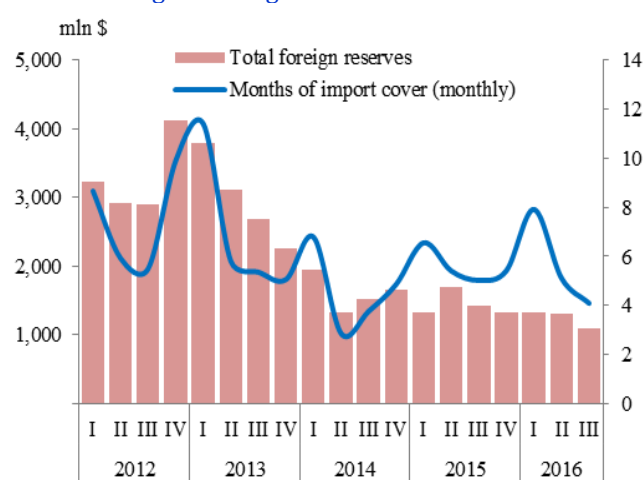
### Financial account



Source: Bank of Mongolia

Chart II.5.2.2

### Official foreign exchange reserves



Source: Bank of Mongolia

II.6 External environment

While China and the Eurozone’s economic growth remained the same QOQ in 2016Q3, USA and Russia’s economic growth increased. Chinese consumption and retail growth supported the economy, but falling exports due to weak external demand and declining investments in real estate have contributed to slow economic growth. Internal demand in the Eurozone grew due to low oil prices and the unconventional monetary policy and contributed to economic growth. USA also saw improved economic growth due to improved labor market forecasts and increased consumption. Russia’s economic growth will likely see recovery due to reduced inflation, labor market recovery, and increased construction activity.

Increased activity in the construction sector and increased copper imports in China led to higher demand for copper and an increase in price. Meanwhile, gold prices reached USD 1,336 per ounce on average in 2016Q3, but have fallen to USD 1,236 per ounce in November due to the Federal Reserve’s intention to increase its policy rate in the short term. Declining coal consumption and import by China has led to a decline in coal prices.

II.6.1 Economic developments in main trading partner countries

Chinese economy

The Chinese economy grew 6.7% in 2016Q3. The Chinese government has implemented a soft budget policy and alongside increased government expenditure, retail sales, and infrastructure investments, consumption has increased and positively contributed to economic growth. In contrast, declining investment has negatively contributed. Government expenditure for the first nine months of 2016 grew 12.5% and income grew 5.9% YOY. Retail sales, which had an average monthly growth rate of 10.7% in the first eight months of 2016, grew 10.6%<sup>26</sup> in September. The service sector grew 7.6% and industry by 6.1%, which was below expected.

The United Kingdom’s exit from the European Union and global political and social instability has slowed China’s external demand and resulted in the yuan’s devaluation. Declining import also slowed yuan outflows.

Russian economy

The Russian economy’s growth was -0.6% in 2016Q2, while a recovering construction sector and growing industry, transport, and agricultry sectors contributed positively to economic growth of -0.4%.

Inflation has been declining since the beginning of 2016, reaching 6.4% in September. As a result, the Monetary Policy Committee of the Central Bank of Russia lowered

Chart II.6.1.1

Chinese economic growth, in percentages (YOY)

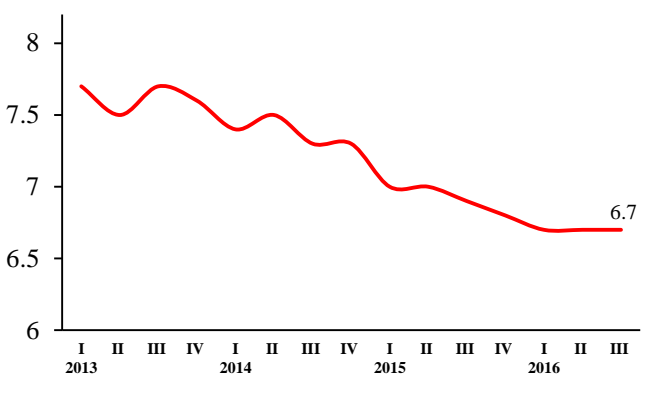
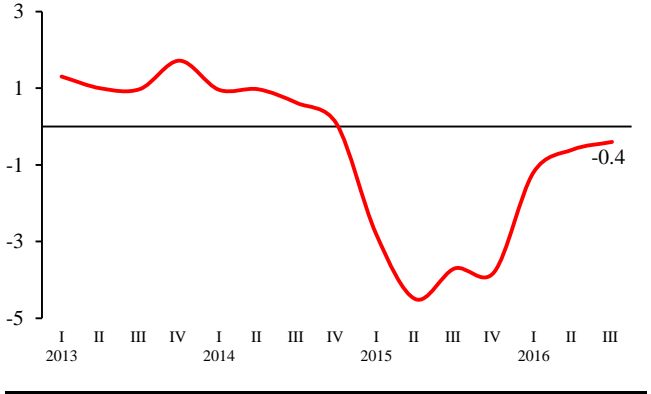


Chart II.6.1.2

Russian economic growth, in percentages (YOY)



<sup>26</sup> Year-on-year figure

the policy rate by 0.5 percentage points to 10%. It's expected that inflation will continue to fall and remain at the Central Bank's target rate of 4% in 2017. Despite an active labor market and slowly recovering construction sector, an increased budget deficit and unclear source of financing for the deficit has negatively impacted economic growth.

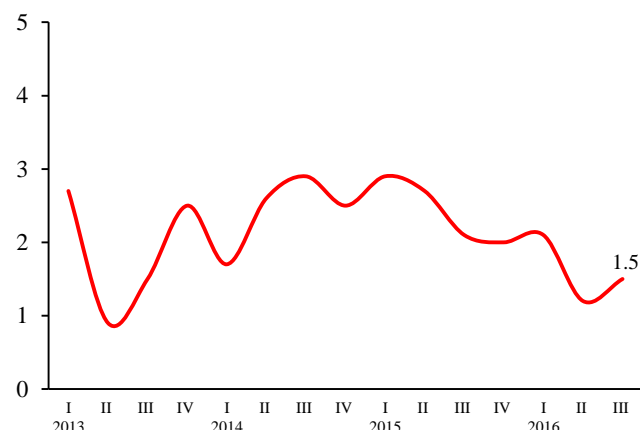
### US economy

The US economy grew 2.9% in 2016Q3, which was above expectations. An improved forecast of the labor market and increased consumption positively contributed to economic growth. Unemployment was at 4.9% in October and fell to 4.6% in November, the lowest it's been since August 2007. Labor force participation decreased by 0.1% from the previous month and reached 62.7% in November, while average wages and private consumption increased. Export increased by 1.5% in Q3 compared to the beginning of the year and consumption grew 1.9% in 2016Q1, 4.1% in Q2 and 2.1% in Q3.

Analysts expect the Federal Reserve to increase its policy rate in December due to a stabilizing global financial market, falling US unemployment, increased inflation, and increased real incomes. Following the US presidential election, Chair of the Federal Reserve Janet Yellen announced that the policy rate would be increased soon, and increased again in 2017 if deemed necessary.

Chart II.6.1.3

US economic growth, in percentages (YOY)



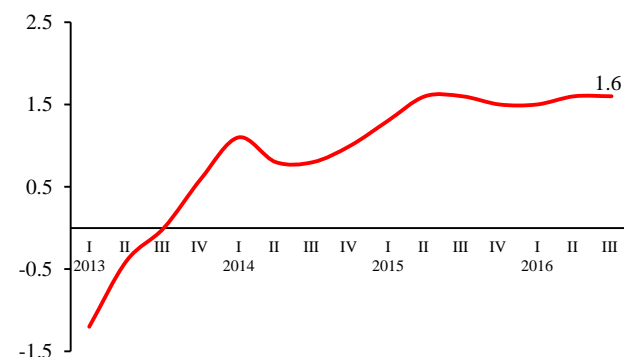
### Eurozone economy

The Eurozone economy grew 1.5% in 2016Q1 and continued to grow steadily by 1.6% in Q2 and Q3. Unemployment fell to 10% in Q3 and increased retail and domestic demand have supported economic growth. However, inflation still remains below the 2% target. Annual average inflation was zero in 2015, but grew to 0.4% in Q3 due to the euro's depreciation, low oil prices, and expansionary monetary policy.

The political uncertainties created by the Greek debt crisis, refugee crisis, and Brexit have negatively impacted Eurozone growth. In November 2016 the PMI index, which indicates industry activity, reached 53.7, its highest level since January 2014. The Netherlands, Austria, Spain, Germany and more saw improved industry activity, operating conditions, manufacturing output, and employment, leading analysts to increasingly expect economic growth for the Eurozone in 2017.

Chart II.6.1.4

Eurozone growth, in percentages (YOY)





## *II.6.2 Prices of Mongolia's main exporting commodities*

**Copper:** The price per 1 ton of copper was on average USD 4,777 in 2016Q3, approximately USD 4,731 in October, and grew to USD 5,217 in November. Increased activity in China's construction sector and increased copper imports increased the demand and price of copper. At the G-20 summit, Saudi Arabia and Russia reached an agreement to freeze oil supply and announced they would work together to stabilize the market, leading to an increase in metal, particularly copper, prices.

**Gold:** The average price per 1 ounce of gold was on average USD 1,336 in 2016Q3 and decreased to USD 1,236 in November. Demand for gold decreased following increased consumer tax and devaluations in the currencies of China and India, which provide a majority of gold jewelry demand. Meanwhile, political and social instability created by Brexit, coup in Turkey, and terrorist attacks in France drew investors to the low-risk investment in gold and resulted in the stable price increase in Q3. The revival of the global securities market in October and the Federal Reserve's policy rate increase announcement following the US presidential election led to a decrease in the price of gold.

**Brown coal:** The price of brown coal, which stood at USD 61 per ton in Q3, grew to USD 72 per ton in October before falling to USD 65 in November. Coal imports rose as China started to cut coal production in order to reduce air pollution, and reduced supply from Indonesia due to weather reasons led to increased demand and raised prices. However, China's coal consumption decreased as did India's coal import, resulting in a decline in coal prices.

**Coking coal:** The benchmark prices of Australian well-qualified coking coal supplied to Japan was USD 92 per ton in 2016Q3 and grew to USD 98 per ton in November, with the prices of coking coal in the Australian market reaching USD 111 per ton. Reduced domestic production in China led to increased import of coking coal and increased prices.

**Crude oil:** Brent crude oil prices were USD 46 per barrel in 2016Q3 and reached USD 50 per barrel in October following the G-20 summit, where Saudi Arabia and Russia reached an agreement to freeze oil supply and announced they would work together to stabilize the market. However, prices fell again to USD 45 per barrel in November. Saudi Arabia's Minister of Energy Khalid A. Al-Falih and Russia's Minister of Energy Alexander Novak reached an agreement to limit OPEC oil productions to 1.2 million barrels per day, the first since November 30, 2008. Russia and other oil producers also announced that production would be decreased by 600,000 barrels per day, leading to increased oil prices.



BANK OF MONGOLIA