

## SHARP BREAK IN DOMESTIC DEMAND REDUCES THE GROWTH RATE

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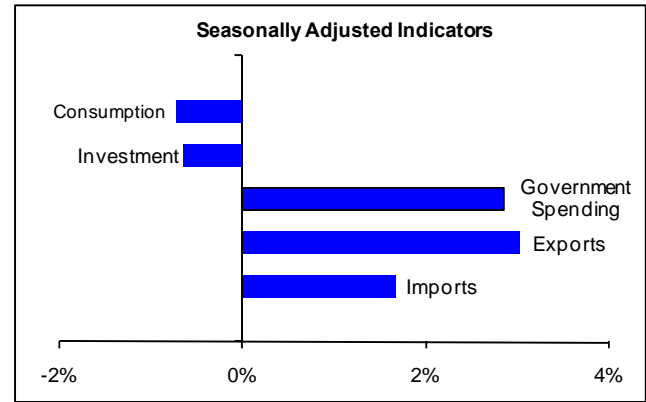
### Executive Summary

According to data released by Turkstat, Turkey's real GDP increased at an annual rate of 3.2 percent in the first quarter of 2012 from the same quarter of the previous year. In the last quarter of 2011, the year on year (YoY) growth had fallen to 5.2 percent from 8.4 percent. In this quarter, the fall in Turkey's GDP growth rate from 5.2 percent to 3.2 percent indicates that the high growth regime that began after the crisis has ended.

Turkstat announced that the seasonally adjusted GDP decreased by 0.4 percent from the last quarter of 2011 to the first quarter of 2012. Moreover in the last quarter, seasonally adjusted quarter on quarter (QoQ) growth rate was -0.4 percent. Therefore in the last two quarters, Turkish economy didn't grow at all.

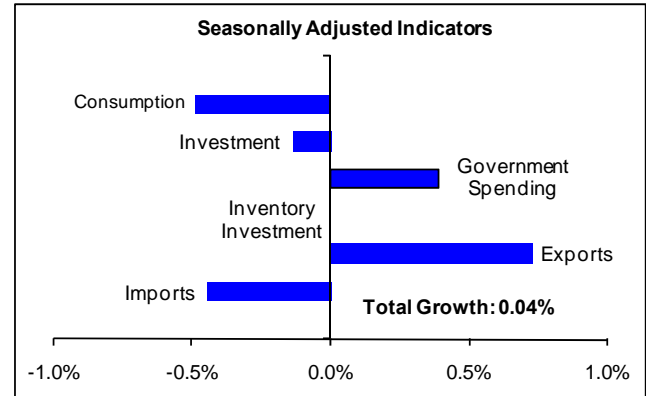
Unlike TUIK, Betam seasonally adjusts each GDP component separately. According to Betam's analysis, QoQ the changes in private consumption and private investment are negative in the first quarter. Positive contribution of net exports to real GDP, which is the main source of economic growth, declined as imports began to increase. In the following quarters, we do not expect net exports to contribute to growth as much as it did in the last two quarters. Therefore, our opinion is that the annual 2012 GDP growth rate may not exceed 3 percent.

**Figure 1: Change in GDP components in 2012-Q1 from the previous quarter**



Source: Turkstat, Betam. Quarterly indicators are seasonally adjusted and calendar day corrected.

**Figure 2: Contributions of GDP components to 2012-Q1 GDP growth**



Source: Turkstat, Betam. Quarterly indicators are seasonally adjusted and calendar day corrected.

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### **Contribution of net exports is declining**

To analyze the contributions of GDP components to the growth, Betam seasonally adjusts and calendar day corrects each component of GDP separately. Figure 1 and Figure 2 show the change in GDP components and their contributions to growth in the 1<sup>st</sup> quarter from the previous quarter.

In the first quarter of 2012, both private investment and private consumption declined. As exports increased more than imports, contribution of net exports to growth was positive. Exports increased by 3 percent and imports increased by 1.7 percent. The greatest contribution to growth came from the increase in net exports as it did in the last quarter. However, in this quarter, the contribution of net exports to growth was curbed because of the increase in imports. In the last quarter, net exports contributed almost 1 percentage points to the real GDP growth but in this quarter net exports contributed less than 0.5 percentage points.

Current account deficit to GDP ratio also fell as exports increased more than imports. In the last quarter, current account deficit to GDP ratio was 10 percent and it fell to 9.3 percent in this quarter as Betam predicted.

### **The decline in consumption continues**

Private consumption expenditure decreased by 1.5 percent in the last quarter compared to the previous quarter. In the first quarter of 2012, it continued to decline and decreased by 0.7 percent. There was no obvious change in inventory investment. The government's objective of 4 percent real GDP growth rate, stated in the Medium Term Program, is jeopardized by the ongoing decline in private consumption expenditure which is the largest expenditure component of GDP.

### **Investment declined**

In the first quarter of 2012, private investment expenditure slightly fell, by 0.6 percent only. Therefore, it subtracted nearly zero percent from the quarterly real GDP growth. Last year, especially during the first half, investments were the driving force of growth with an increase of nearly 40 percent. High rate of investment played a key role for the GDP growth to reach record levels. However, 2012 began with a decline in private investment expenditure. Although the decline is small, the change in pace from last year is quite significant.

### **Government expenditures increased**

From the last quarter of 2011 to the first quarter of 2012, government expenditures increased by 3 percent and contributed 0.4 percent points to GDP growth. The small contribution from government expenditures in the first quarter indicates that the government still pursues a tight fiscal policy to meet its budget targets. If growth rate remains low in the coming quarters, government may be forced to implement new expansionary policies.

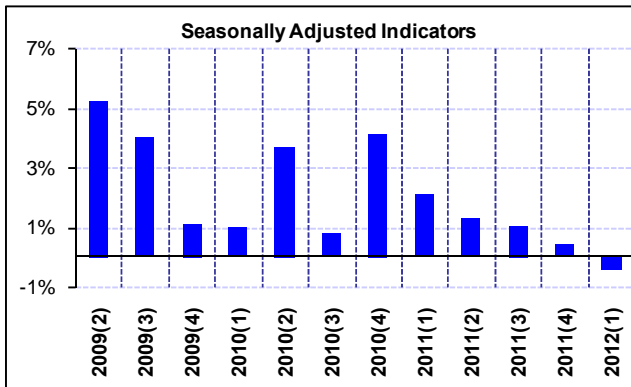
### **Growth perspective for the rest of 2012**

Since the second half of the last year, growth rate of the GDP has been declining as domestic demand decelerated. In the first quarter of 2011, YoY growth rate was 11.9 percent, but it reduced down to 3.2 in the first quarter of 2012. Our analysis indicate that domestic demand decelerated faster than expected and net exports contribution may not be enough to push annual growth rate up to 4 percent. Because although the contribution of net exports to quarterly GDP was positive, it declined significantly as imports started increasing again.

Now that the first quarter numbers are released, we see that in order to have a 4 percent annual GDP growth in 2012, Turkish economy should grow more

than 1 percent per quarter for the rest of the year. Even though Betam's second quarter QoQ growth forecast is 1 percent, if the decline in domestic demand continues and contributions of net exports to the growth remains limited in the third and fourth quarters, annual GDP growth in 2012 may end up below 3 percent.

**Figure 3: Quarter-on-quarter real GDP growth rate**



Source: Turkstat.

**Table 1. Changes in and contributions of GDP components for 4Q2011 and 1Q2012, compared to the previous quarters**

2012 – 1. Q	Change (%)	Contribution (pp)
Consumption	-0,7	-0,5
Investment	-0,6	-0,1
Government exp.	2,9	0,4
Inventory Inv.	----	0,0
Exports	3,0	0,7
Imports	1,7	-0,4
2011 – 4. Q	Change (%)	Contribution (pp)
Consumption	-1,5	-1,0
Investment	2,9	0,6
Government exp.	-4,1	-0,6
Inventory Inv.	----	-0,4
Exports	1,0	0,2
Imports	-2,8	0,8

Source: Turkstat, Betam.

**Table 2. Changes in and contributions of GDP components in 4Q2011 and 1Q2012, compared to the same quarter of the previous year**

2012 – 1. Q	Change (%)	Contribution (pp)
Consumption	0,0	0,0
Investment	1,6	0,4
Government exp.	4,7	0,6
Inventory Inv.	----	-2,3
Exports	13,2	3,0
Imports	-5,0	1,6
2011 – 4. Q	Change (%)	Contribution (pp)
Consumption	3,4	2,4
Investment	5,2	1,1
Government exp.	-5,7	-1,1
Inventory Inv.	----	-0,4
Exports	6,7	1,6
Imports	-5,1	1,5

Source: Turkstat, Betam.

**Box 1: Calculation of quarterly GDP growth and contributions.**

Sub-components of GDP are grouped into 3 categories:

1. Final domestic demand consist of final consumption expenditure of resident households (Consumption), sum of government final consumption and investment expenditure (Government expenditure), investment expenditure of private sector (Investment)
2. Net foreign demand for goods and services represents the difference between exports and imports of goods and services.
3. Change in inventories (stocks) shows how stocks changes with compared to previous quarter (for details look Box 2)

In order to find quarterly GDP growth, the following formulation is used for all sub components of GDP separately:

Since X represents 'Change in GDP component'

Contribution of X to growth can be calculated as follows:

$$= (X_t - X_{t-1}) / GDP_{t-1}$$

**Differences between the methodologies used by Betam and TurkStat in seasonally adjusting the real GDP**

TurkStat seasonally adjusts and calendar day corrects total GDP series but not its components separately. However, each component of GDP may show different seasonal characteristics. Therefore, Betam eliminates the effects of seasonality and calendar day from the components separately and constructs the adjusted GDP series as the sum of the adjusted components. These two methodologies yield quantitatively different results and both of them are used frequently in the related literature.

**Box 2: Change in inventories (stocks) and its contribution to growth**

'Stock change' shows that how stocks change compared to previous period

$$\text{Stock change}_t = \text{Stock}_t - \text{Stock}_{t-1}$$

Therefore increase (decrease) in inventories is caused by increase (decrease) in the difference between two period rather than increase (decrease) in stocks.

However, TurkStat estimates the change in stocks is as residual between production and expenditure accounts. Moreover this sub-component also includes statistical discrepancy.

Let's say the difference between production and expenditure account  $\varepsilon_{t-1}$ , 'stock change' in time  $t$  is as follows:

$$\text{Stock change}_t = \text{Stock}_t - \text{Stock}_{t-1} + \varepsilon_{t-1}$$

Finally, contribution of change in 'Stock change' can be found as follows:

$$\text{Contribution of 'Stock change } t \\ = (\text{Stock}_t - \text{Stock}_{t-1}) / GDP_{t-1}$$

or

$$\text{Contribution of 'Stock change } t \\ = ((\text{Stock}_t - \text{Stock}_{t-1} + \varepsilon_t) \\ - (\text{Stock}_{t-1} - \text{Stock}_{t-2} + \varepsilon_{t-1})) / GSYH_{t-1}$$