6. Public Finance

In 2016, economic growth started to decelerate while fiscal policy was buoyed with growth, particularly through public consumption expenditures (Box 6.1). Furthermore, other fiscal policy instruments were also introduced in the form of consumption and investment incentives. In particular, tax subsidies have been applied to automobile and house purchases since the final quarter of 2016 to stimulate private demand. Additionally, on 8 December 2016, the Economic Coordination Committee announced a series of measures and incentives aimed at providing financial support for the real sector and encouraging investments, employment and exports. Meanwhile, the SCT rates on goods such as automobiles and tobacco products were hiked toward the end of the year in order to restrain possible deterioration in the budget due to growth-promoting fiscal policies and to maintain fiscal discipline. These adjustments brought consumer inflation higher in 2016 (Box 7.1).

Accordingly, despite posting a minor year-on-year increase in 2016, the central government budget deficit was broadly consistent with the MTP targets. The decelerating tax revenues amid sluggish economic activity and the troubled tourism industry as well as the rise in primary expenditures caused the budget deficit to widen. However, surging non-tax revenues, falling interest expenditures, the adjustments in SCT and the 13.7 billion TL generated by Law No. 6736 on the Restructuring of Certain Receivables brought the worsening budget situation under control.

6.1. Budget Developments

In 2016, the central government budget balance posted a deficit of 29.3 billion TL while the primary budget balance yielded a surplus of 21.0 billion TL (Table 6.1.1). Tax revenues were up by a modest 12.5 percent year-on-year, while non-tax revenues jumped by 33.1 percent, driving central government budget revenues up by 14.8 percent in 2016. Having soared at a much higher rate than budget revenues, primary budget expenditures increased by 17.7 percent in 2016, causing the primary surplus to decline slightly on a yearly basis. Meanwhile, interest expenditures registered a year-on-year decline in 2016, thereby limiting the widening in budget deficit.

Table 6.1.1.
Central Government Budget Aggregates
(Billion TL)

	2015	2016	Rate of Increase (Percent)	Actual/Target (Percent)	Target (Percent)
Central Government Budget Expenditures	506.3	583.7	15.3	102.3	12.7
Interest Expenditures	53.0	50.2	-5.2	89.7	5.7
Primary Expenditures	453.3	533.4	17.7	103.7	13.5
Central Government Budget Revenues	482.8	554.4	14.8	102.5	12.0
I. Tax Revenues	407.8	458,7	12.5	99.9	12.6
II. Non-Tax Revenues	56.4	75.0	33.1	108.4	22.7
Budget Balance	**-23.5**	**-29.3**	**-**	**-**	**-**
Primary Balance	**29.5**	**21.0**	**-28.8**	**79.8**	**-**

Source: Ministry of Finance.

The central government budget deficit to the GDP ratio is estimated to rise by a mere 0.1 percent year-on-year to 1.1 percent in 2016 (Chart 6.1.1). On the other hand, the primary budget surplus to the GDP ratio is expected to drop by about 0.5 points year-on-year to 0.8 percent.

Chart 6.1.1.
Central Government Budget Balance
(Annualized, Percent of GDP)

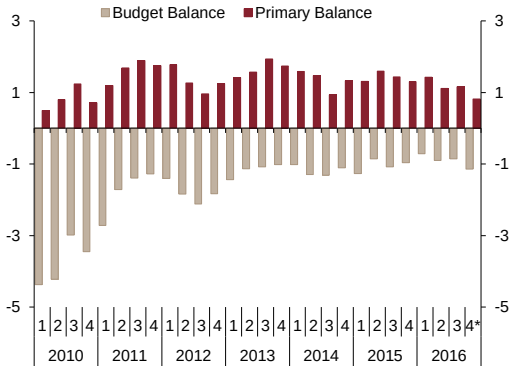
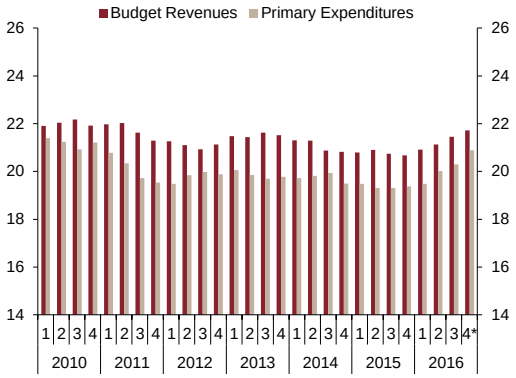


Chart 6.1.2.
Central Government Budget Revenues and Primary Expenditures
(Annualized, Percent of GDP)



* Forecast.
Source: Ministry of Finance.

The central government primary expenditures to the GDP ratio accelerated in 2016 and is expected to increase by 1.5 points year-on-year to 20.9 percent (Chart 6.1.2). On the other hand, the central government budget revenues to the GDP ratio is estimated to rise by 1 point from 2015 to 21.7 percent in 2016, mainly due to soaring non-tax revenues and adjusted tax revenues.

In 2016, central government primary expenditures grew considerably by 17.7 percent year-on-year, exceeding the budget target by about 4 points (Table 6.1.2). Personnel expenditures and purchases of goods and services, which are major items of central government primary expenditures, saw a dramatic escalation, suggesting that growth was largely spurred by government spending. On the other hand, despite overshooting the budget target, capital expenditures rose at a slower pace, pointing to a smaller contribution from public investments to growth.

Table 6.1.2.
Central Government Primary Expenditures
(Billion TL)

	2015	2016	Rate of Increase (Percent)	Actual/Target (Percent)
Primary Expenditures	**453.3**	**533.4**	**17.7**	**103.7**
1. Personnel Expenditures	125.1	148.9	19.0	100.7
2. Government Premiums to SSI	21.0	24.7	17.3	99.2
3. Purchases of Goods and Services	45.6	53.9	18.4	115.0
4. Current Transfers	182.7	224.9	23.1	103.3
a) Duty Losses	4.8	5.8	21.0	106.8
b) Health, Pension and Social Benefits	80.1	106.8	33.3	104.4
c) Agricultural Support	10.0	11.5	15.2	98.7
d) Reserved Share Revenues	55.6	62.7	12.7	99.5
e) Transfers to Households	10.0	12.6	25.8	123.0
5. Capital Expenditures	57.2	59.4	3.9	114.8
6. Capital Transfers	10.4	8.9	-14.9	118.1
7. Lending	11.3	12.8	12.6	98.6

Source: Ministry of Finance.

Across primary expenditures, current transfers, purchases of goods and services, and personnel expenditures surged by 23.1, 18.4 and 19.0 percent, respectively, in 2016. Health, pension and social benefits, a major component of current transfers that also includes social security deficit financing, soared by 33.3 percent in this period. This upswing was mostly driven by the massive year-on-year increase of 92.1 percent in the 5-point deduction for employer insurance premiums. As for public investment spending, capital expenditures increased modestly while capital transfers posted a notable decline, thereby curbing the rise in primary expenditures.

On the revenue front, central government budget revenues were up 15.0 percent year-on-year in 2016, exceeding the budget target by 1 point (Table 6.1.3). In this period, despite lackluster economic activity, tax revenues surged by 12.5 percent and met the budget target thanks to SCT adjustments and additional tax revenues generated by Law No. 6736. Meanwhile, non-tax revenues performed outstandingly with a sizeable increase of 33.1 percent in 2016 and surpassed the target by 8.4 points.

Table 6.1.3.
Central Government General Budget Revenues
(Billion TL)

	2015	2016	Rate of Increase (Percent)	Actual/Target (Percent)
General Budget Revenues	**464.2**	**533.7**	**15.0**	**101.0**
I-Tax Revenues	**407.8**	**458.7**	**12.5**	**99.9**
Income Tax	85.8	96.6	12.6	97.6
Corporate Tax	33.4	43.0	28.7	116.8
Domestic VAT	46.4	54.0	16.3	105.3
SCT	105.9	120.4	13.6	103.5
VAT on Imports	74.6	76.6	2.6	88.1
II-Non-Tax Revenues	**56.4**	**75.0**	**33.1**	**108.4**
Enterprise and Property Revenues	19.7	23.7	20.7	125.5
Interests, Shares and Fines	26.6	34.6	30.3	101.9
Capital Revenues	7.9	12.8	61.7	105.1

Source: Ministry of Finance.

Across tax revenues, the collection of income tax, which makes up the largest share of direct taxes, recorded a year-on-year growth of 12.6 percent in 2016. Income tax collection is mostly composed of deductions from wages. In this regard, the large-scale upward adjustment in public wages and minimum wages in 2016 had a favorable impact on income tax revenues. Corporate taxes, on the other hand, increased by a substantial 28.7 percent on the back of strong bank earnings and the surplus from restructured tax revenues. Among consumption-based indirect taxes, the SCT and the domestic VAT rose by 13.6 and 16.3 percent, respectively. The domestic VAT increased more sharply than the expected increase in economic activity and the consumer prices in 2016, mainly due to the surplus from restructured tax revenues, whereas the SCT hike appears to be driven by tax adjustments. As their income elasticity is less than 1, the items subject to the SCT yielded increased revenue despite tax hikes. The details of the SCT revenues show an upturn of 19.5 and 10.8 percent, respectively, in tax revenues from tobacco products and motor vehicles, and an increase of 10.8 percent in petroleum and natural gas products, which account for a major share of total SCT revenues. Higher tax revenues on tobacco products were attributable to both tax adjustments and reduced loss/leak rates. The VAT on imports, on the other hand, was up 2.6 percent year-on-year, yet fell substantially short of the budget target. The sharp rise in non-tax revenues was largely caused by the inclusion of an additional 11 billion TL of privatization revenues into the budget and the CBRT's profit transfer of 9.3 billion TL in 2016.

Having eased since the third quarter of 2015, the growth rate of real tax revenues amounted to 10.4 percent in the fourth quarter of 2016 (Chart 6.1.3). This large fourth-quarter growth in real tax revenues was driven by the tax adjustments in fuel, automobile and tobacco products in September, November and December, respectively, and by the resulting surplus that was mostly absorbed into the domestic VAT in the fourth quarter, rather than by stronger economic activity. In fact, across sub-items, revenues from the domestic VAT were up 19.8 percent year-on-year in real terms in the last quarter while the SCT revenues surged by 13.2 percent. Revenues from the VAT on imports, however, rose by a mere 2.4 percent in real terms due to weaker import demand amid slowing economic activity (Chart 6.1.4).

Chart 6.1.3.
Real Tax Revenues
(Annual Percent Change)

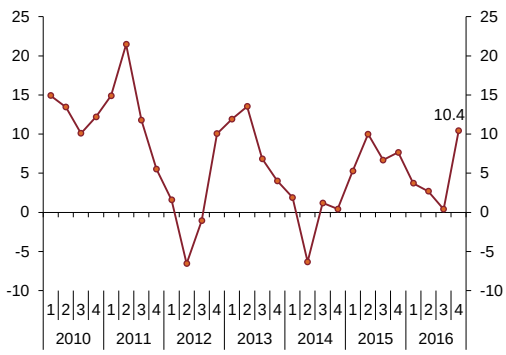
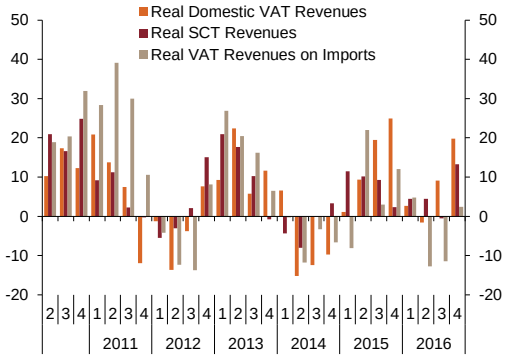


Chart 6.1.4.
Real VAT and SCT Revenues
(Annual Percent Change)

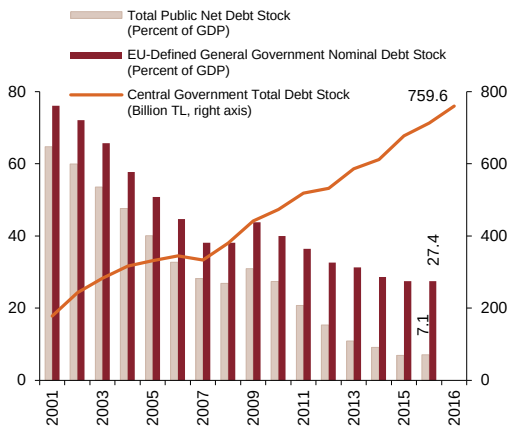


Source: Ministry of Finance.

6.2. Developments in the Public Debt Stock

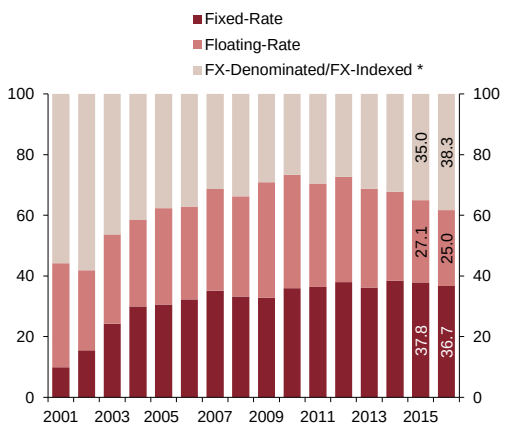
The central government debt stock ended the year at 759.6 billion TL (Chart 6.2.1). Total public net debt stock to the GDP and the EU-defined general government nominal debt stock to the GDP remained unchanged from end-2015 in the third quarter of 2016 (Chart 6.2.1).

Chart 6.2.1.
Public Debt Stock Indicators



Source: Treasury.

Chart 6.2.2.
Composition of the Central Government Debt Stock
(Percent)



* Includes external debt stock.
Source: Treasury.

In 2016, the share of fixed-rate securities in the total debt stock dropped slightly from 2015 (Chart 6.2.2). As for the exchange rate and interest rate structure of domestic borrowing, the share of fixed-rate borrowing registered a year-on-year increase in 2016. The average term-to-maturity of the domestic debt stock reached 51.9 months (Chart 6.2.3). External borrowing by bond issues amounted to 4.5 billion USD, with an average maturity of 16.5 years (Chart 6.2.4).

Chart 6.2.3.
Average Maturity of the Domestic Debt Stock and Domestic Cash Borrowing
(Month)

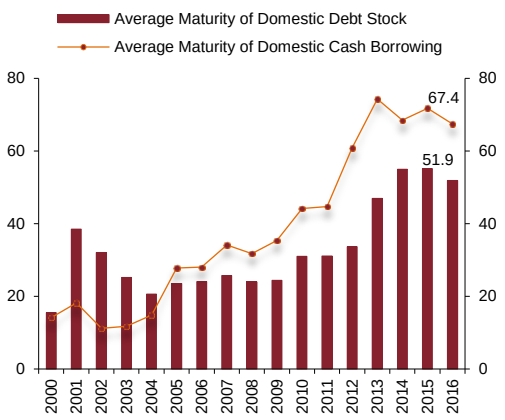
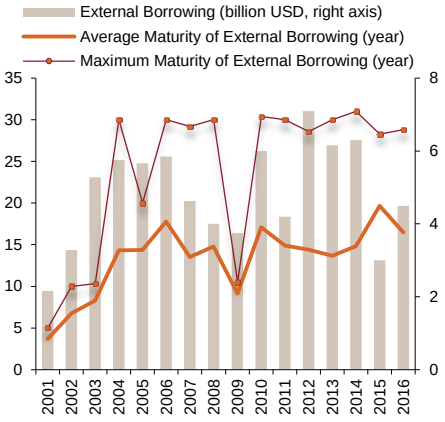


Chart 6.2.4.
Borrowing By Bond Issue



Source: Treasury.

The domestic debt rollover ratio stood at 91.1 percent at the end of November 2016 (Chart 6.2.5). The average real interest rate[1] has recently been on the rise (Chart 6.2.6).

Chart 6.2.5.
Total Domestic Debt Rollover Ratio
(Percent)

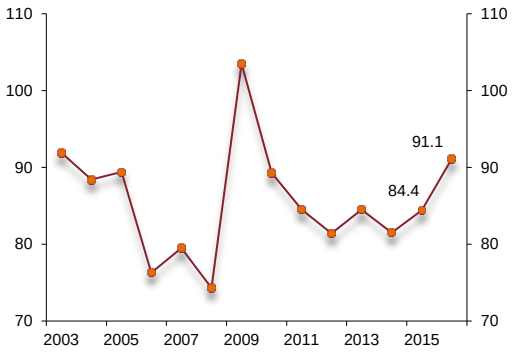
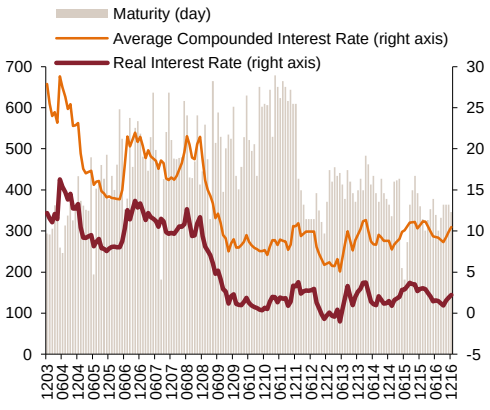


Chart 6.2.6.
Average Maturity and Interest Rates at Discount Auctions



Source: Treasury, CBRT.

[1] Real interest rates are calculated by subtracting the 12-month-ahead inflation expectations of the CBRT Survey of Expectations from nominal interest rates (average annual compounded interest rate at the Treasury's TL-denominated zero-coupon securities auction).

Box 6.1 The Sensitivity of Fiscal Multiplier to Business Cycles

The fiscal multiplier is defined as the effect of a 1-unit exogenous change in government spending on national income. The size of the fiscal multiplier is important in analyzing the effectiveness of fiscal policy on economic activity. Previous studies cite plenty of factors influencing the effectiveness of the fiscal policy. These studies indicate that the size and sign of the fiscal multiplier depends on the state of the business cycle, the exchange rate regime, the openness of trade, the nature of fiscal shocks, the coverage of automatic stabilizers, the fiscal balances, the monetary policy stance, the robustness of the financial system and uncertainty. Hence, it is important to accurately assess the state of the economy to determine the effects of these measures on economic activity when using fiscal policy instruments.

This box analyzes the sensitivity of the fiscal multiplier to business cycles in Turkey over the 1990Q1-2015Q4 period.[2] To this end, business cycles are classified as low-growth and high-growth episodes by analyzing how the respective GDP departs from the long-term national income growth, and accordingly, the fiscal multiplier is estimated for each episodes by the local projection method. Table 1 presents fiscal multiplier values estimated for public consumption, public investment and total public spending for each period. There are three different definitions for the fiscal multiplier in Table 1: the impact multiplier, the peak multiplier and the cumulative multiplier. The impact multiplier is the first-round GDP effect of a 1-unit increase in public spending (positive spending shock), while the cumulative multiplier is the ratio of the cumulative effects on the GDP to the total change in public spending. The maximum multiplier, on the other hand, represents the peak value that the cumulative multiplier can take over time.

Table 1. Sensitivity of Fiscal Multiplier to Business Cycles

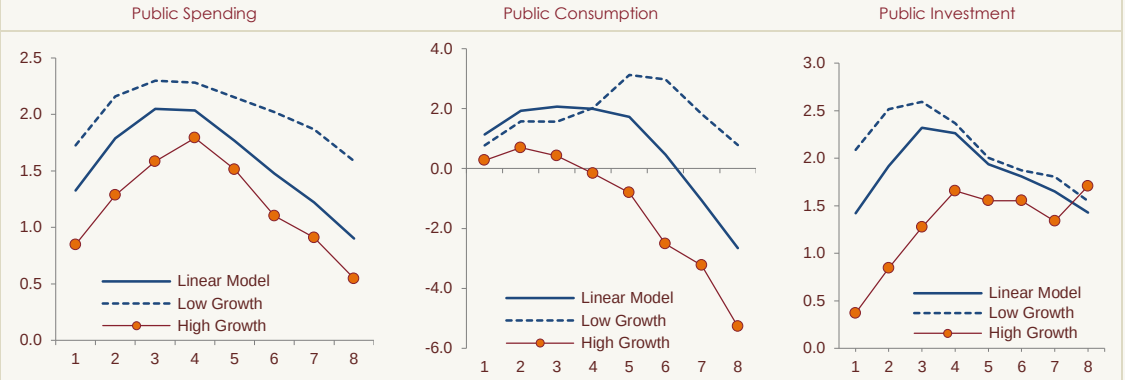
Type of Spending	Impact	1-Year Cumulative	2-Year Cumulative	Peak
Public Spending				
Low Growth	1.73	2.28	1.59	2.30
High Growth	0.85	1.79	0.55	1.79
Public Consumption				
Low Growth	0.77	2.02	0.78	3.13
High Growth	0.27	-0.16	-5.27	0.70
Public Investment				
Low Growth	2.09	2.37	1.55	2.59
High Growth	0.37	1.66	1.71	1.71

The results show that the fiscal policy is more effective in low growth than in high growth episode (Chart 1). The impact multiplier is estimated to be 1.73 during low-growth and 0.85 in high-growth periods. On the other hand, the 1-year cumulative multiplier is 1.79 and 2.28 in high-growth and low-growth episodes, respectively. In terms of spending components, the multiplier is higher for public investment than that for public consumption in both periods. This evidence confirms that an expansionary fiscal policy to be implemented via public investment will have a more stimulating effect on the GDP than that induced by public consumption. However, the size of cumulative multipliers indicates that public consumption has a significant effect on GDP in periods of low growth (Chart 1). Moreover, the fact that fiscal policy is more

[2] The study combines two real GDP series with base year 1987 and 1998.

effective in times of low growth than high growth suggests that as long as there is room for fiscal policy, expansionary fiscal policies should be implemented in low-growth periods. Hence, increases in public spending provide a major contribution to growth, and this contribution is sensitive to business cycles. These findings prove that fiscal policy is an effective short-term economic policy and that the size of the fiscal multiplier is often higher than 1.

Chart 1. Growth Periods and the Fiscal Multiplier*



* The linear model shows estimations for the overall sample.

The fiscal policy outlined in the MTP (2017-2019) and the 2017 budget involves a framework in which current spending is more limited and growth-stimulating spending is mostly provided by public investments. Considering that the size of the public investment multiplier is often larger than the public consumption multiplier and particularly higher in times of low growth, a re-distribution of public spending in favor of public investment would stimulate economic activity more strongly. Furthermore, as an effective economic policy for the short-term management of aggregate demand, public investment can be influential on the supply side of the economy over the long term, and thus, prioritizing public infrastructure investments in the 2017 budget would help increase the potential output of the economy in the long run.

REFERENCES

Çebi C. and K.A. Özdemir, 2016, Cyclical Variation of Fiscal Multiplier in Turkey, CBRT Working Paper No: 16/19.