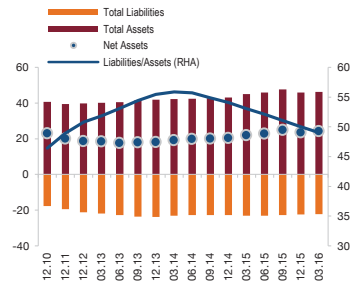
# II. Non-Financial Sector

*Although the household leverage ratio (household liabilities/assets) has slightly increased since the last Report period, the long-term downward trend maintains. The moderate growth in consumer loans continues on the back of the relatively rapid growth in household assets. The mild growth trend in consumer loans is mainly attributed to the implemented macroprudential measures and the course of the credit conditions. The rise in household assets was mainly driven by deposits and retirement savings funds.*

*The ratio of the total liabilities of the corporate sector to the GDP, which assumed a downtrend in the final quarter of 2015, started to increase as of January 2016 with the impact of domestic FX loans and external loans. The share of Euro-denominated loans in domestic FX loans rapidly increased owing to the cost advantages of borrowing in Euros and the rise in Euro-denominated export revenues, while the share of USD-denominated loans is declining. The share of non-bank financial institutions and foreign financing has been increasing in the resource distribution of total liabilities. The rise in the global risk appetite is facilitating foreign financing for firms; this has increased corporate bonds issued abroad and external debt rollover ratios. The extending maturities in FX loans, the declining ratio in FX loans utilized by SMEs and the downtrend in FX-indexed loans all show that firms' exchange rate risk has been declining. The rise in the profitability of BIST firms and the downtrend in leverage ratios observed in the final quarter of 2015 demonstrate that the financial structures of the corporate sector have been getting stronger.*

**Chart II.1.1**
Household Assets and Liabilities
(Percent of GDP)




(1) Liabilities/Assets, 12 month MA, Percent
Source: CBRT , CMB, MKK (Latest Data: 03.16)

## II.1. Household Developments

**Over the last six months, the ratio of household net assets to GDP remained flat, while the long-term household financial leverage ratio continued to decline.** The decline in the household leverage ratio was mainly driven by the rise in savings deposits outpacing the moderate increase in consumer loans (Chart II.1.1).

**Consumer loans, which constitute almost the entire household financial liabilities, remained weak on account of the implemented macroprudential measures and the developments in loan rates.** Meanwhile, the growth rate of savings deposits, which has the largest share in household financial assets, exceeded the consumer loan growth by a remarkable margin (Chart II.1.2).

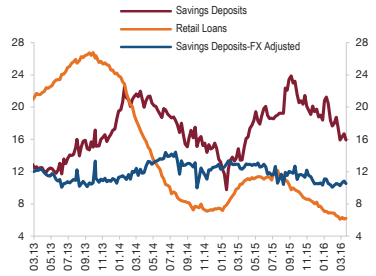
**There have been two remarkable changes in the composition of the households' financial assets since the last Report period.** First of these changes is the rise in FX savings deposits of households and second is the increase in the share of savings kept in retirement savings funds (Table II.1.1).

**In the first quarter of the year, households preferred to keep their deposits more in foreign currencies in tandem with market conditions compared to the last Report period.** The appreciation in Turkish lira restrained a further increase in the share of FX saving deposits in household financial assets. Nevertheless, the FX-adjusted savings deposits have significantly increased over the last 6 months. Meanwhile, the measures taken and the incentives introduced by the government towards increasing domestic savings have spurred the interest in retirement savings funds. Hence, the highest growing financial instrument among household assets have been the pention mutual funds parallel with the recent trends (Table II.1.1).

**The amount of gold held at banks by resident real people have been sensitive to gold prices (Chart II.1.3).** Recently, the amount of gold, in the household portfolio and in the banking system as retail investments, decreased as a result of profit sales amid rising gold prices (Table II.1.1).

**Another significant rise in household financial assets was observed in the value of equity securities in tandem with the increase in BIST Stock Index.** In March 2016, the portfolio value of households' stock investments reached a historically high level. Nevertheless, the observed rise in investments in stock investment mainly come from the rise in BIST Stock Index. When households' stock investment portfolio is deflated by the rise index, the rise in real terms remains limited (Chart II.1.4).

**Chart II.1.2**
Growth in Household Loans and Deposits
(Annual Percentage Change)



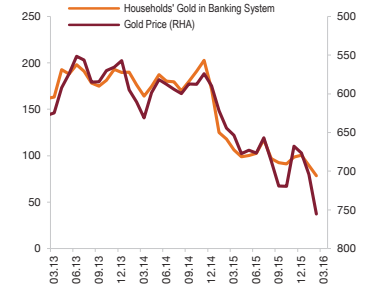

Source: CBRT, BRSA (Latest Data: 03.16)

**Table II.1.1**
Household Financial Assets

| | 09.15 | | 03.16 | | Percentage |
|---|---|---|---|---|---|
| | Billion TL | Share | Billion TL | Share | Change |
| **Total Assets** | **903,3** | **100,0** | **919,6** | **100,0** | **1,8** |
| **TL Savings Deposits** | 425,5 | 47,1 | 438,1 | 47,6 | 3,0 |
| **FX Savings Deposits** | 275,0 | 30,4 | 274,3 | 29,8 | -0,3 |
| *- (Billion USD)* | 91,5 | | 97,1 | | 6,2 |
| **Precious Metal Deposits** | 10,2 | 1,1 | 9,4 | 1,0 | -7,5 |
| *- (Billion USD)* | 3,4 | | 3,3 | | -1,6 |
| **Bonds and Bills** | 19,8 | 2,2 | 20,2 | 2,2 | 2,5 |
| - Public Sector | 6,2 | 0,7 | 6,2 | 0,7 | -1,3 |
| - Private Sector | 13,5 | 1,5 | 14,1 | 1,5 | 4,2 |
| **Mutual Funds** | 78,1 | 8,7 | 83,5 | 9,1 | 6,8 |
| Pension Mutual Funds | 44,2 | 4,9 | 51,0 | 5,5 | 15,3 |
| Other Mutual Funds | 33,9 | 3,8 | 32,5 | 3,5 | -4,2 |
| **Equity Securities** | 41,5 | 4,6 | 45,9 | 5,0 | 10,4 |
| **Repo** | 0,5 | 0,1 | 0,4 | 0,0 | -15,5 |
| **Currency in Circulation[1]** | 52,6 | 5,8 | 47,7 | 5,2 | -9,3 |

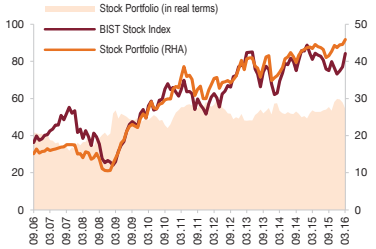
(1) It is calculated by taking the household share of currency in circulation in 2015-III Financial Accounts Report as constant.
Source:CBRT, CMA, MKK (Latest Date: 03.16)

**Chart II.1.3**
Households' Gold Portfolio in the Banking System and Gold Prices (Thousand Gram, TL (Reverse A.))




(1) Gold price represents the price of a Turkish Republican coin.
Source: CBRT (Latest data: 03.16)

**Chart II.1.4**
BIST Stock Index and Household Stock Portfolio
(Thousand, Billion TL)




(1) Stock Portfolio is deflated by CPI and a constant to obtain in real terms.
Source: CBRT (Latest data: 03.16)

The CBRT has been contracting the amount of currency in circulation since September 2015. In tandem with this decline, the households' cash preferences has also decreased and the share of currency in circulation in household financial assets has dropped slightly since the last Report period (Table II.1.1).

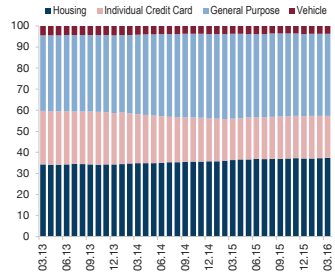
**Table II.1.2**
Household Financial Liabilities

| | 09.15 | | 03.16 | | Percentage |
|---|---|---|---|---|---|
| | Billion TL | Share | Billion TL | Share | Change |
| **Total (Based on Type)** | **430,2** | **100** | **441,1** | **100** | **2,5** |
| Housing | 154,8 | 36,0 | 160,5 | 36,4 | 3,7 |
| Vehicle | 15,1 | 3,5 | 16,0 | 3,6 | 5,7 |
| General Purpose | 164,6 | 38,3 | 167,1 | 37,9 | 1,5 |
| Individual Credit Cards | 83,9 | 19,5 | 85,1 | 19,3 | 1,4 |
| Asset Man.Comp' Rec. | 11,8 | 2,7 | 12,5 | 2,8 | 5,9 |
| **Total (Based on Counterparty)** | **430,2** | **100** | **441,1** | **100** | **2,5** |
| Banks | 396.9 | 92,3 | 406,0 | 92,0 | 2,3 |
| Financing Companies | 9,5 | 2,2 | 10,6 | 2,4 | 11,6 |
| TOKI | 12.0 | 2,8 | 12,0 | 2,7 | 0,0 |
| Asset Management Comp' | 11,8 | 2,7 | 12,5 | 2,8 | 5,9 |

(1) Housing loans include TOKİ's (Housing Development Administration of Turkey) receivables against house sales with installments. TOKİ data is as of April 2015.
Source: CBRT, TOKİ (Latest Data: 03.16)

**The growth in household financial liabilities outperforms the increase in assets compared to the last Report period, but falls behind the asset growth compared to the same period of the last year.** The enforced regulation prevents households from borrowing in foreign currency and the mild growth in consumer loans have remarkable effect on this situation. As a result of balance sheet developments, households are not in an excessive borrowing position.

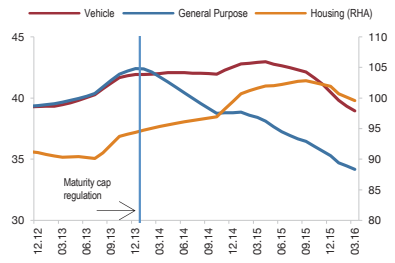
**Chart II.1.5**
Household Liabilities
(Percentage Share)




Source: CBRT, BRSA (Latest Data: 03.16)

**Vehicle and housing loans performed the largest growth in the household financial debt composition (Table II.1.2).** The 30 percent minimum wage increment in early 2016 is estimated to have made an upward impact on loans, especially on general purpose and vehicle loans, and thus have slightly pushed up consumer loans that had been subdued for a while. There has been no significant change in the shares of loan types in household financial liabilities (Chart II.1.5).

**Chart II.1.6**
Average Retail Loan Maturity
(3 Months MA) (Month)




Source: CBRT (Latest data: 03.16)

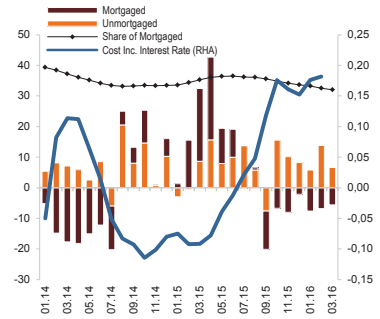
**A breakdown of household financial liabilities by type of creditor shows that banks still have the largest share as creditors.** Meanwhile, there has been a remarkable rise in loans obtained from financing companies. In Turkey, more than 90 percent of loans extended by financing companies are vehicle loans. Therefore, it is assessed that the ramped up in vehicle loans in tandem with minimum wage increment have an impact on the the rapid rise in loans extended by financing companies. (Table II.1.2).

**In the last period while household loans have been growing at a moderate pace, the average maturities of consumer loans has continued to shorten (Chart II.1.6).** This development can be attributed to the macroprudential measures introduced towards consumer loans and households' tendencies to borrow in shorter maturities due to high interest

rates. As a matter of fact, after the regulation limiting maturities on loans was introduced, especially the maturity of general purpose loans rapidly declined to the upper limit of 36 months. In line with the market conditions, maturities for vehicle and housing loans have shortened since the last Report period.

**Besides the shortening in maturities for housing loans, there has been a decline in mortgaged house sales.** Correspondingly, the share of mortgaged house sales in total house sales decreased as well (Chart II.1.7). Meanwhile, the rise in unmortgaged house sales observed since October prevented the decline in total sales and consequently, the increase in total house sales, albeit at a subdued pace, continued.

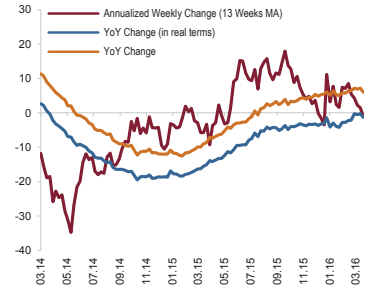
**Chart II.1.7**
Contribution to Housing Sales Growth and Housing Loan Monthly Interest Rate (Percent, 1 Percentage Point +)




(1) Mortgage share is 12-month MA, Percent
Source: CBRT, TURKSTAT (Latest Data: 03.16)

The regulation limiting the number of installments on spending with credit cards was introduced in February 2014 and credit card balances have been decreasing since then. Credit card spending, which assumed a gradual uptrend as of the second quarter of 2015, has maintained the uptrend since the last Report period. Nevertheless when price effects are adjusted, the household credit card balance has not increased since 2014 (Chart II.1.8). With the Regulation Amending the Regulation on Debit Cards and Credit Cards published by the BRSA on 25 November 2015, the number of installments for credit card spending on white goods, furniture and education expenses has been raised. Taking into account the seasonal factors affecting these types of spending, credit card spending is likely to move upwards in the second Report period.

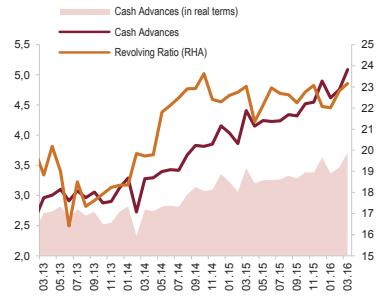
**Chart II.1.8**
Individual Credit Card Balance
(Percent)




(1) Credit card balance is deflated by CPI to obtain in real terms.
Source: CBRT (Latest data: 03.16)

**The rise in credit card cash advances observed since early 2014 continued in this quarter as well.** However, this rise remains limited when price effects are adjusted. The share of interest-bearing debts in credit card balances has been hovering around 22 percent since the second half of 2014 (Chart II.1.9).

**Chart II.1.9**
Credit Card Cash Advances and Revolving Ratio
(Flow Data, Billion TL, Percent)




(1) Cash advances are deflated by CPI and a constant to obtain in real terms.
Source: CBRT (Latest data: 03.16)

## Box II.1.I Automatic Enrollment in the Private Pension System

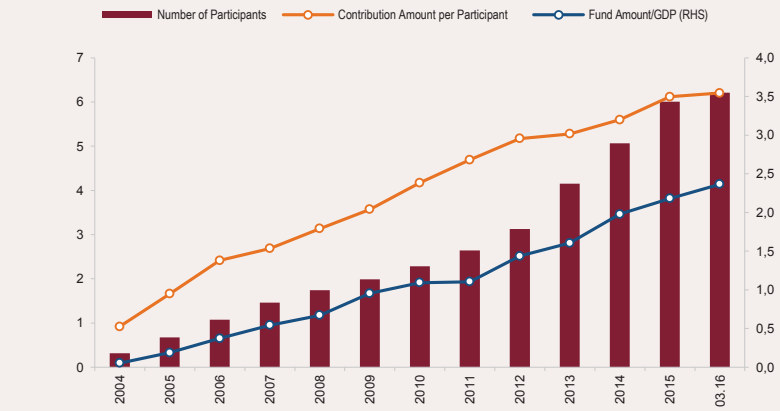
The private pension system is part of a social security system in which the paid personal retirement contributions are directed to investments. The funds collected in the system not only serve to elevate the welfare of the participants during the retirement period, but also to provide long-term financing for the markets. Private pension systems run by retirement companies are established besides the social security system mostly run by the state. Global practices suggest that enrollment in a pension system can be based on a voluntary enrollment basis or on a compulsory/ automatic enrollment basis.

In Turkey, the private pension system is called the personal pension system (PPS). The PPS was established as a complementary system of the existing state-run social security system. The main objective of establishing a PPS is to encourage individuals to save money while they are active in business life, increase these savings by turning them into investments and provide a higher welfare level to the contributors in their retirement. Another objective of the PPS system is to contribute to the narrowing of the savings deficit. Since 2003, when the PPS system was first launched in Turkey, the number of participants has exceeded 6 million, displaying a significant development. The low domestic savings to GDP ratio pushes the current account deficit higher. The state contribution to pension accounts, which was designed to increase domestic savings, became effective in 2013 and has provided a remarkable support for the system.

In Turkey, the PPS operates on a voluntary basis. The participants become eligible for retirement when they have stayed in the system for a minimum period of 10 years and have reached the age of 56; retirement can be postponed on demand. The government contributes by 25 percent of the amount paid by the employees in their pension accounts. The maximum amount that a participant can receive as government contribution shall not exceed 25 percent of the annual gross minimum wage of the related year. Effective as of 1 January 2013, participants who stay in the system for 3 to 6 years may receive 15 percent ; those who stay for 6 to 10 years can receive 35 percent and those who stay in the system for 10 years and longer can receive 60 percent of the government contribution. In case of retirement, demise or disability, the participant becomes eligible to receive all of the government contribution.

By the end of March 2016, the total amount of funds collected in the PPS was TL 46.2 billion and the total number of participants was 6.2 million. In the same period, the total amount of government contribution reached TL 5.5 billion and TL 38 billion of the total funds accumulated in the system was turned into investments. In the first quarter of 2016, the contribution per participant increased by TL 84.4, and the ratio of the total amount of funds to GDP reached 2.4 percent (Chart II.1.I.1).

**Chart II.1.I.1**
Private Pension System Number of Participants, Contribution per Participant and Amount of Funds/GDP1[1]
(Million People, Thousand TL, Percent)




(1) 12.15 data is used for GDP of 03.16 data.
Source: PMC, TURKSTAT

In countries which are implementing automatic enrollment in a PPS, individuals are obliged to start paying contributions to the system as soon as they start working. In some countries, only employees pay contributions to the retirement system, while in others both the employee and the employer pay contributions. Unlike the state-run pension funds, the PPS does not make a commitment to pay a certain amount to the participants in their retirement, but instead the participants become eligible to receive an income proportionate to the size of their funds. Countries implementing automatic enrollment in PPS are: Australia, Chile, Denmark, Estonia, Iceland, Israel, Mexico, Netherlands, Norway, Slovakia, Sweden, Switzerland, Indonesia and Russia. In countries implementing compulsory enrollment in PPS, a significant part of the total contribution comes from the PPS (Table II.1.I.1). In most of the countries, the automatic enrollment is not a newly established system, but has a long history.

**Table II.1.1.1**
Enrollment Rates to Mandatory Pension Systems
(End of 2014, Percent)

| | Public | | Private | | |
|---|---|---|---|---|---|
| | Employee | Employer | Employee | Employer | Total |
| Italy | 9.2 | 23.8 | - | - | 33.0 |
| Switzerland | 4.2 | 4.2 | 7.7 | 10.4 | 26.6 |
| Israel | 3.8 | 3.8 | 5.5 | 12.0 | 25.0 |
| Finland | 7.1 | 17.8 | - | - | 24.8 |
| Sweden | 7.0 | 11.4 | | 4.5 | 22.9 |
| France | 6.8 | 8.5 | 3.0 | 3.0 | 21.3 |
| Netherlands | 17.9 | 0.0 | | 16.0 | 20.9 |
| Turkey | 9.0 | 11.0 | | | 20.0 |
| Iceland | - | 7.8 | 4.0 | 8.0 | 19.8 |
| Poland | 9.8 | 9.8 | - | - | 19.5 |
| Germany | 9.5 | 9.5 | - | - | 18.9 |
| Japan | 8.7 | 8.7 | - | - | 17.5 |
| Belgium | 7.5 | 8.9 | - | - | 16.4 |
| Luxemburg | 8.0 | 8.0 | - | - | 16.0 |
| Denmark | 0.5 | 0.8 | | 12.0 | 13.4 |
| Chile | - | - | 11.2 | 1.2 | 12.3 |
| Canada | 5.0 | 5.0 | - | - | 9.9 |
| Australia | - | 9.5 | - | - | 9.5 |
| S.Korea | 4.5 | 4.5 | - | - | 9.0 |
| Mexico | - | - | 1.1 | 5.2 | 6.3 |
| New Zealand | - | - | 3.0 | 3.0 | 6.0 |

Source: OECD, Pensions at a Glance 2015 Report

In Turkey, a pilot study was conducted towards automatic enrollment of new employees in the PPS system and recently, spreading the implementation is on the agenda. If automatic enrollment in the PPS becomes effective, the number of participants and the amount of funds will naturally increase. Employees will be automatically enrolled in the system on the day of employment. Even if those who are not willing to participate in the PPS or those with a high marginal propensity to consume exit the system, the automatic enrollment is expected to boost the growth of the system and contribute to the increase in savings.

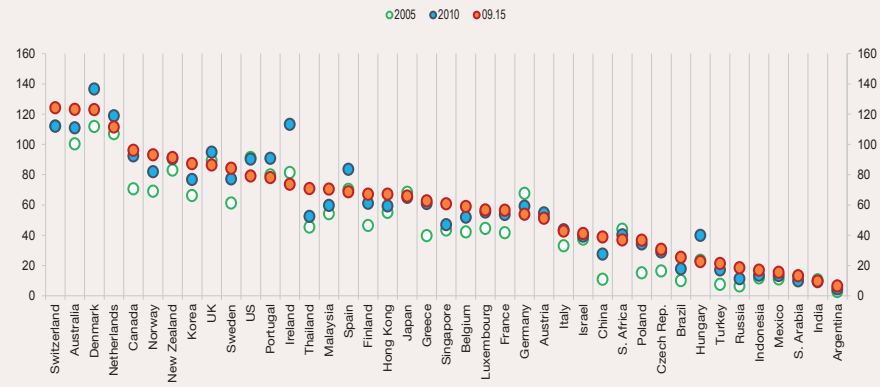
Box II.1.II

## Income-Based Macroprudential Tools Used to Contain Household Indebtedness

The high level of or the rapid increase in household indebtedness is deemed risky for economic and financial stability. The increased indebtedness in ordinary times pushes the consumption expenditures up via the demand channel and leads to an upsurge in asset prices. In times of financial stress, households with high indebtedness levels curb their expenses more drastically than those with less debt, which deepens the economic contraction and delays recovery. With the shrinking consumption, asset prices can display slumps. Moreover, in the event that households with high debt fail to meet their financial obligations, financial institutions incur loan losses and the reductions in the value of collaterals make it hard to cover these losses.

The global crisis highlighted the extent to which the economy was affected by the adverse effects of excessive household indebtedness. Advanced economies with a ratio of household indebtedness to the GDP standing at some 80 percent in the pre-crisis period were affected more severely from the crisis and the economic recovery in those countries lasted longer. Whereas emerging economies with the same ratio at some 20 percent during the same period recorded a faster recovery after the crisis (Chart II.1.II.1). Turkey stands out with low levels of household indebtedness.

**Chart II.1.II.1**
Household Indebtedness[1,2]
(Percent of GDP)




(1) Household's total loans have been used.
(2) Due to the data deficiency for the year 2005, 12.06 for China, 06.07 for India, 12.06 for Malaysia and 03.08 for S. Africa have been used.
Source: BIS (Credit to the non-financial sector)

In view of the risks posed by high levels of household indebtedness during the global financial crisis, many countries took macroprudential measures in an effort to minimize these risks. Among them, limiting the debt levels, specified as a ratio to income, aiming directly at reducing the household indebtedness was adopted widely. Though generally named as debt-to-income ratio or debt service ratio, several ratios are employed across countries, the definition and application framework of which are tailored to country-specific circumstances. It is possible to group them into two main categories as ratios implying the leverage level or debt service capacity of households (Table II.1.II.1).

**Table II.1.II.1:**
Income-Based Household Debt Indicators

**Indebtedness (Leverage)**

| Numerator / Denumerator | Loan/Debt Amount | |
|---|---|---|
| | Single Loan Type | Total Loans |
| Annual Income | LTI | DTI |

**Debt Service Capacity**

| Numerator / Denumerator | Monthly Loan/Debt Payment | |
|---|---|---|
| | Single Loan Type | Total Loans |
| Monthly Income | PTI | DSTI |

Loan-to-income (LTI) ratio and debt-to-income (DTI) ratio are used to contain the household indebtedness (leverage) level. The LTI is the ratio of a single loan and the DTI is the ratio of total loans or debts divided by the annual income of a household. These ratios are expressed as a multiple of the annual income.

Another widely-implemented measure is limiting the payment-to-income (PTI) ratio and debt service-to-income (DSTI) ratio that are among the indicators of households' monthly debt service capacity. The PTI is the ratio of a monthly debt service obligation (principal and interest payments), arising from a single loan, to monthly income, whereas the DSTI is the ratio of total monthly debt service obligations to the monthly income. These ratios are also called debt service ratio and expressed as a percentage of the monthly income.

Country practices reveal that the ratios denoting households' debt service capacities (PTI, DSTI) are used more often than leverage indicators. A significant portion of the countries examined, primarily the US, Australia, the Netherlands, Hong Kong, Canada, Lithuania, Hungary, Malaysia and Singapore, have put a cap on the debt service ratios of households. Yet, in a few countries that employ measures to limit households' leverage ratios, limits are imposed only for specific types of loans, usually housing loans, rather than capping all consumer loans. For instance the UK, Norway and Ireland have limited the LTI ratios for housing loans.

As lower DSTI ratios reduce the likelihood of a default or bankruptcy, capping them bolsters the resilience of borrowers against interest rate and income shocks. However, in the cases where interest rates stand at low levels for an extended period, the interest burden declines, which might lead to an increase in households' risk-taking behavior and an excessive leverage by reducing the DSTI ratios. In such cases, policy-makers might implement tighter DSTI caps or employ ratios containing the leverage like LTI and DTI ratios as a complementary tool. Moreover, some countries also impose limits on the maturity of loans in addition to the DSTI ratios so as to prevent any decrease in the monthly debt service by way of extending borrowing maturities (as in Estonia, the Netherlands, Lithuania and Slovakia).

On the other hand, in almost all countries reviewed, the limits on Loan-to-Value (LTV) and DSTI (or PTI) ratios are used as complementary tools in dampening mortgage loan demand. In times when housing prices outpace household income, as the effectiveness of the limits on the LTV ratios decreases, the cap on the DSTI ratio can smooth the excessive credit growth through the channel of credit demand. In addition, limiting the DSTI ratio including all consumer loans enhances the effectiveness of the LTV cap further, by containing the use of unsecured loans to meet the minimum down payment.

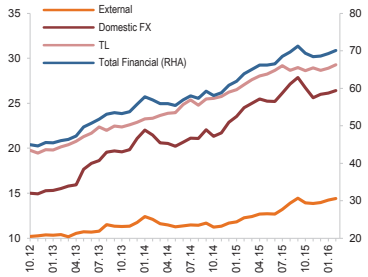
The debt-to-income or debt service ratios can be differentiated based on several criteria. For instance, these ratios can be applied higher for higher income groups and lower for others (as in Hungary), higher in regions where increases in house prices are deemed riskier and lower in other regions (as in South Korea), higher in initial purchases (of residence) and lower in later purchases (as in Ireland), and higher for local currency denominated loans and lower for others (as in Hungary). Besides, in some countries, no limit is set for these ratios by the respective regulatory authority. Instead, financial institutions implement the limits set by their internal models (as in Poland and Romania).

Many studies reveal that the macroprudential tools (along with the LTV ratio) used to curb household indebtness help contain the procyclical feedback between credit and asset prices and increase the resilience of the financial system by minimizing losses in times of economic slowdown.[1]

[1] Staff Guidance Note on Macroprudential Policy, December 2014, International Monetary Fund.

## II. 2 Corporate Sector

**Chart II.2.1**
Financial Liabilities of Corporate Sector
(Percent of GDP)



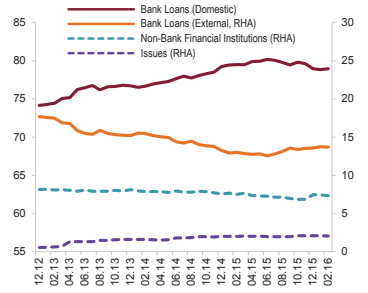

(1) Composed of loan liabilities and issues. External liabilities include data from foreign branches and affiliates of resident banks. External TL liabilities are included in total FX liabilities.
Source: CBRT, BRSA (Latest Data: 02.16)

**Table II.2.1**
Currency Decomposition of Corporate Sector
(As of 2016 January)

| Billion (% share) | ABD Dollar | Euro | TL | Other | Total /GDP |
|---|---|---|---|---|---|
| External | 143.4 (%51) | 108.3 (%38.8) | 16.8 (%6.0) | 10.3 (%3.7) | %14.2 |
| Domestic | 329.6 (%30.1) | 202.8 (%18.5) | 557.1 (%50.8) | 5.2 (%0.5) | %56.0 |
| Total | 472.9 (%34.4) | 311.1 (%22.6) | 573.9 (%41.8) | 15.5 (%1.1) | %70.3 |
| Open Position | | | | | 545.9 (%27.9) |

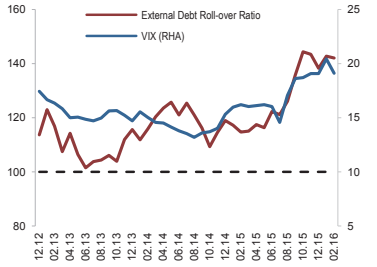
Source: CBRT, BRSA

**Chart II.2.2**
Structure of Corporate Sector Financing Sources[1]
(Percentage Share)




(1) Foreign branches of domestic banks have been included under foreign bank data.
Source: CBRT, BRSA

**Chart II.2.3**
External Debt Roll-over Ratio and VIX
(6-Month Moving Average, Percentage)




Source: CBRT, BRSA

**Corporate sector's total financial liabilities/GDP ratio, which had followed an uptrend until September 2015, started rising again in the first two months of 2016 (Chart II.2.1) despite a short fall during the previous FSR period.** The uptrend mainly stemmed from the acceleration in domestic and external FX loans. The TL-denominated corporate loan growth is close to the average of the recent months. After adjusting for the exchange rate effect, the domestic FX loans assumed a mild uptrend that had remained flat until November 2015. This uptrend was mainly driven by firms' tendency towards FX-denominated corporate loans as a result of eased volatility in exchange rates. As of January 2016, TL- denominated loans had the largest shares in total domestic corporate borrowing and USD-denominated loans did in external borrowing (Table II.2.1). In the same period, the FX open position of the corporate sector increased compared to the previous FSR period and reached 28 percent of GDP.

**The most significant change in the funding structure of the corporate sector since the last FSR period has been the decline in domestic banks' share in total funding in favor of non-bank financial institutions (NBFI) (Chart II.2.2).** While loans extended by financing companies played a pivotal role in rising domestic NBFI funding, factoring companies' share of corporate financing is on a downtrend. This rise can be attributed to the tendency towards financing companies in financing commercial vehicle purchases. On the other side, bond purchases by foreigners have indicated a moderate increase thanking the rise in the global risk appetite, which is expected to continue in the upcoming months. In fact, the private sector's debt roll-over ratio has remained high since the last FSR period (Chart II.2.3). The improvement in external financing conditions is expected to continue parallel to the rise in risk appetite.

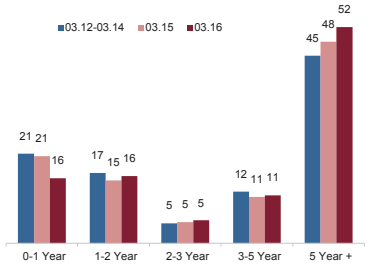
**Maturities of FX loans borrowed by the corporate sector from domestic banks have extended.** Compared to March 2015, the share of short-term FX loans decreased by 5 percent to 16 percent, while the share of loans with maturities longer than 5 years exceeded 50 percent in March 2016 (Chart II.2.4). A similar trend is observed also in the maturities of loans obtained from abroad (Chart II.2.5). The share of long-term external loans with a maturity longer than 5 years has increased by 5 percentage

points to 34 points over the last twelve months. Conversely, the share of external loans with maturities between 1-3 years has decreased, while the share of those with maturities shorter than 1 year has slightly increased in the same period. As for TL loans, maturities have shifted from maturities of 0-1 year to 1-2 years. These favorable developments in FX loans are expected to lower firms' short-term FX liquidity risk.

**As usual, commercial loans are generally concentrated in sectors with high GDP shares and the structural differences across sectors have continued to be an important determinant of firms' currency choices (TL or FX) in loans.** Accordingly, while FX loans are more common in sectors with high FX income (i.e. manufacturing industry, hospitality sector), sectors with high domestic sales (wholesale and retail) opt for TL loans (Chart II.2.6). The breakdown of loans among sectors and FX/TL distribution of loans remained close to the previous years' levels. Another sector with relatively high shares of FX-denominated borrowing is the electricity, gas and water sources sector due to the energy investments. Even though this sector seems to have very little FX revenues, pricing of their products is mostly indexed to external developments and foreign exchange rates. In this regard, significant overlaps between asset and liability currency denomination suggest that exchange rate volatility-oriented credit risks (e.g. currency mismatches) are at manageable levels.

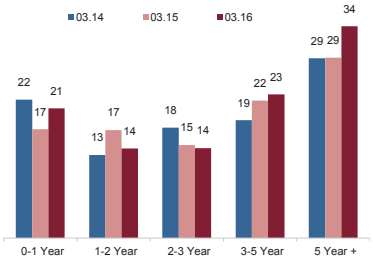
**A breakdown of corporate loans by firm size has continued to be similar to the previous FSR period.** While FX loans are more commonly used by large-scale firms, share of SMEs and micro-scale firms is higher in TL loans (Chart II.2.7 and Chart II.2.8). As of March 2016, the share of TL loans borrowed by SMEs was 54 percent while it was only 18 percent for FX loans. The low share of SMEs in FX loans can be attributed to their low FX income and banks' cautious stance in extending FX loans. The regulations in force allow firms without foreign exchange income to use only FX-indexed loans, but total loan utilization for such loans is still quite low. Despite the recent minimal pick-up, FX-indexed loans have been growing negatively since April 2015 (Chart II.2.9). When loans are analyzed by currency types, a trend similar to that of FX loans is observed in FX-indexed loans as well. Since March 2015, growth of USD-denominated FX-indexed loans has been negative while that of euro-denominated loans has been positive.

**Chart II.2.4**
Maturity Breakdown of the Corporate Sector's FX Loans in Domestic Banks[1,2] (According to Original Maturity, Percentage Share)



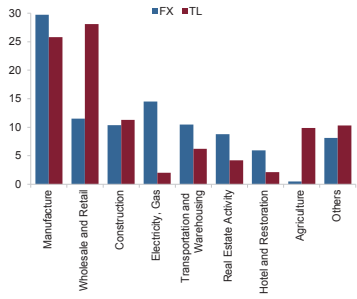

(1) Maturity distribution of the loans which comprises 1 percent of FX loans and less than reporting limit is not available, thus those loans are excluded in this analysis.
(2) Blue column represents the average of 2012, 13 and 14 March values.
Source: CBRT

**Chart II.2.5**
Maturity Breakdown of Corporate Sector's External Financial Liabilities (Percentage Share)



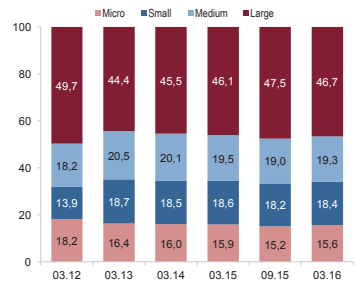

Source: CBRT

**Chart II.2.6**
Sectorial Breakdown of Corporate Loans[1]
(February 2016, Percentage Share)



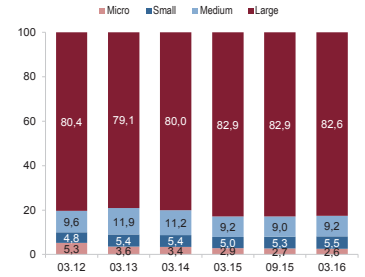

(1) Loans extended abroad and used via the intermediacy of domestic banks are included.
Source: TBA Risk Center

**Chart II.2.7**
Firm Size Breakdown of Domestic TL Corporate Loans (Percentage Share)




Source: CBRT, BRSA

**Chart II.2.8**
Firm Size Breakdown of Domestic FX Corporate Loans (Percentage Share)

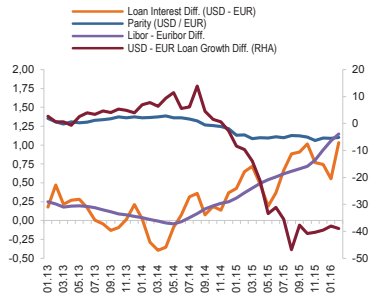



Source: CBRT, BRSA

**Chart II.2.9**
FX-Indexed Loans
(Y-o-y Percentage Change, FX Adjusted)

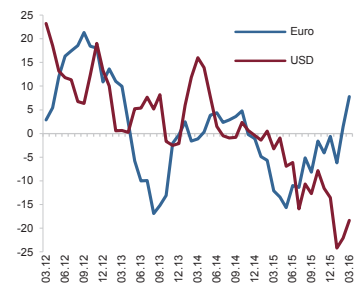

Source: CBRT, BRSA

**Chart II.2.10**
USD – Euro Corporate Loan Interest Spreads, USD – Euro Loan Growth Differences, Libor-Euribor Spread and USD/EUR Parity[1,2,3] (Percent, Percentage Share)




(1) Interest rates are 3-month moving averages. Loan interest rates are annual weighted average rates of domestic loans.
(2) FX indexed loans are included and participation banks are exluded.
(3) Parity is the USD dollar value of 1 Euro.
Source: CBRT, Bloomberg

**Chart II.2.11**
Currency Breakdown of Monthly Export Revenues
(Yearly Percentage Change)




Source: TURKSAT

**An analysis of FX commercial loans by currency type reveals a serious divergence between USD-denominated and euro-denominated loans since the beginning of 2015.** The difference between annual growth rates of USD-denominated and euro-denominated loans was almost 40 percent at the beginning of 2016, while the USD-denominated loan stock displayed high negative growth rates (Chart II.2.10). Even though some of this rapid increase in euro-denominated loans can be partly explained by the base effect, the significant drop in USD-denominated loans observed since the beginning of 2015 indicates that there has been a shift from USD to Euro-denominated loans. Such transition can be explained by different factors in credit demand and supply. Firstly, the divergence between the Libor-Euribor rate spread coupled with increased euro liquidity in global markets has been supporting the euro-denominated credit supply. In fact, the Libor-Euribor rate spread, which was at negligible levels until the end of 2014, has grown steadily and reached 115 basis points in February 2016. The cost advantage in euro-denominated funding influenced loan rates and thus, the weighted average annual loan rate spread between USD and Euro-denominated commercial loans exceeded 100 basis points. As a consequence of the contradicting monetary policies implemented by the ECB and the Fed, the USD/Euro parity expectations were also updated downwards, supporting firms' tendency towards Euro-denominated FX loans. In this regard, the USD/Euro parity, which remained at around 1.30 until the end of 2014, assumed a downtrend then and went as low as 1.10 (Chart II.2.10).

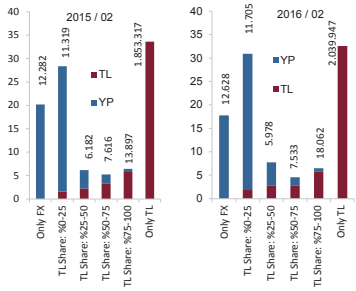
Firms' efforts to match the currencies of their assets and liabilities (i.e. natural hedge) influence currency preferences in the corporate sector's credit demand. In this respect, the recent rise in foreign trade activities with EU countries supports the tendency towards Euro-denominated FX loans. While there has been a rapid rise in export revenues in Euros since mid-2015, export revenues in USD has been declining due to the recent geopolitical developments (Chart II.2.11). However the shares of Euro and USD in export revenues have generally been close, the share of Euro has been higher since the second half of 2015, which indicates that the basis effect in these developments has been low. Similarly, import expenditures are also believed to have been influential on the rise in Euro-denominated loans.

Even though the share of USD-denominated imports has been historically higher than that of Euro-denominated imports, the USD-denominated import expenditures have assumed a negative growth trend whereas the Euro-denominated import expenditures assumed a positive growth trend since mid 2015.[1] Besides financing import debt, many importers also export to international markets or index their domestic price to foreign currencies, which overall support the tendency towards Euro in FX borrowing.

**FX commercial loans are used by a limited number of firms and high-amount loans are concentrated in long maturities (Chart II.2.12 and Chart II.2.13).** While TL loans are used by all types of firms, there does not appear to be a significant concentration in certian amounts or maturities (Chart II.2.12 and Chart II.2.14). Despite the fact that there has not been a remarkable change in the concentration of debts since February 2015 until now, the total volume of loans owed by firms using either only FX or TL has decreased significantly. Affomentioned concentration of FX loans taking place amongst large firms with presumably strong financial structures, and that have natural hedge with high export revenues and that can have additional protection with derivative positions keeps potential risks at manageable levels.[2]

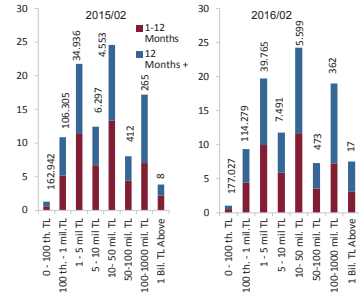
**As of December 2015, profitability of corporate sector is on an uptrend.** While this trend was more stable in the operating profit – earnings before interest, taxes, depreciation and amortization (EBITDA) – the net end-of-period return on assets displayed a fluctuating trend due to financial expenses stemming from exchange rates and interests. The weighted average of EBITDA/asset ratios of companies listed on the BIST has been rising since the first quarter of 2015. During this period, rise in financial expenses stemming from exchange rate fluctuations and interest rate levels had negative impact on the net return on assets (Chart II.2.15). As a result of the relatively stable course of exchange rates in the final quarter of 2015, the financial expenses decreased, making a positive contribution to the net return on assets.

**Chart II.2.12**
Distribution of Firms by TL Denominated Loan Share in Their Loan Portfolio and in Total Loans[1,2,3]
(Percentage Share)



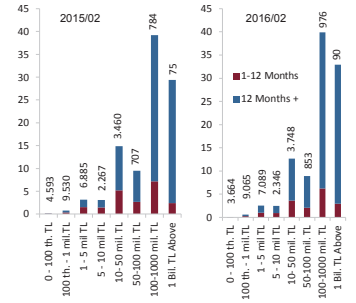

(1) The values above the columns represent firm numbers.
(2) Loans extended abroad and used via the intermediacy of domestic banks are included.
(3)Loans less than 1000 TL are excluded.
Source: TBA Risk Center

**Chart II.2.13**
Amount and Maturity of TL Loans[1,2,3]
(Percentage Share)




(1) The values above the columns represent firm numbers.
(2) Loans extended abroad and used via the intermediacy of domestic banks are included.
(3)Only the corporations which represent %99 of the corporate loans are included in the analysis. Sole Proprietors are excluded.
Source: TBA Risk Center

**Chart II.2.14**
Amount and Maturity of FX Loans[1,2,3]
(Percentage Share)

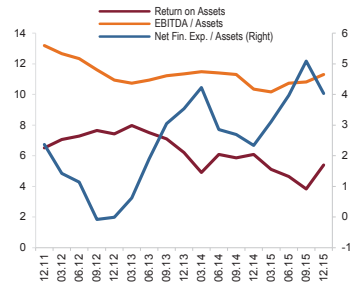



(1) The values above the columns represent firm numbers.
(2) Loans extended abroad and used via the intermediacy of domestic banks are included.
(3)Only the corporations which represent %99 of the corporate loans are included in the analysis. Sole Proprietors are excluded.
Source: TBA Risk Center

1 Even though a fall in commodity prices led by oil prices might have had a downward impact on USD-denominated import expenditures, the negative growth in USD denominated imports persists when energy and gold imports are excluded.

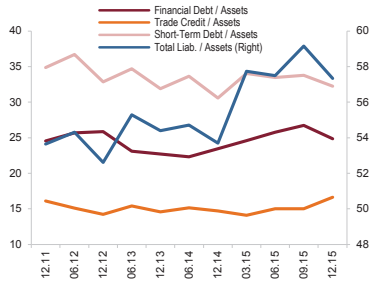
2 The regulations in effect stipulate that firms with FX revenues or firms that are eligible to use loans more than USD 5 million, can utilize FX loans. In literature, it has been emphasized that risk management capacities of such firms are stronger. For more information, please see Hulagü and Yalçın (2014) "FX-denominated indebtedness of firms in Turkey and micro-evaluations on exchange rate risk" CBRT Working Paper No: 2014-13/25.

**Chart II.2.15**
Profitability and Financial Expense Indicators for Firms Listed on BIST[1,2,3]
(Annual, Percent)



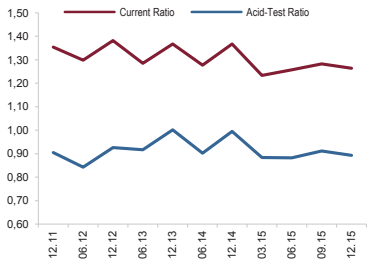

(1) Return on assets: Net profit / Assets
(2) EBITDA: Net Profit + Financial Expenses + Tax Expense + Depreciation and Amortization Costs
(3) Financial companies, holdings, companies that use FX as a functional currency in their balance sheets, and firms in BIST emerging companies are excluded. In total, 264 listed firms are included.
Source: FINNET

**Chart II.2.16**
Indebtness and Leverage Indicators for Firms Listed on BIST[1]
(Percent)




(1) Financial companies, holdings, companies that use FX as a functional currency in their balance sheets, and firms in BIST emerging companies are excluded. In total, 264 listed firms are included.
Source: FINNET

**Chart II.2.17**
Liquidity Indicators for Firms Listed on BIST[1,2,3]




(1) Current Ratio: Current Assets / Short term Liabilities
(2) Asit-test Ratio: (Current Assets – (Inventories+Other Current Assets)) / Short-term Liabilities
(3) Financial companies, holdings, companies that use FX as a functional currency in their balance sheets, and firms in BIST emerging companies are excluded. In total, 264 listed firms are included.
Source: FINNET

**Although the leverage ratio (calculated by using total liabilities) of the companies listed on Borsa Istanbul (BIST) had been following an uptrend, in the final quarter of 2015, there was a moderate decline in the leverage owing to the short-term debt payments affected in the final quarter of 2015 (Chart II.2.16).** While short-term liabilities are on a slow downtrend, the long-term liabilities are increasing. An analysis of liability structures reveals that there has been some decline in financial debts while trade credits have been increasing. The legal arrangement introduced in July 2015 that provides tax adventages to firms increasing equity finance is also expected to support the decrease in corporate leverage ratios over time.[1]

**While the current liquidity ratio is slightly lower than the generally-accepted level of 1.5, the acid-test ratio is very close to the adequacy ratio of 1 (Chart II.2.17).** Taking into account the above-mentioned downtrend in firms' short-term FX and TL liabilities, the liquidity risk contunies to be manageable in the short run, which will presumably further ease as maturities continues to lengthen.

[1] In most general terms, as per the law, tax registered private firms are allowed to record the opportunity cost - that is the interest loss- of their newly raised equity as expense. Moreover, the scope of this law has been extended by a Council of Ministers decree to cover the companies listed on Borsa ıstanbul (BIST). Please see decree No: 2015/7910 dated 26.06.2015.