

III. Non-financial Sector

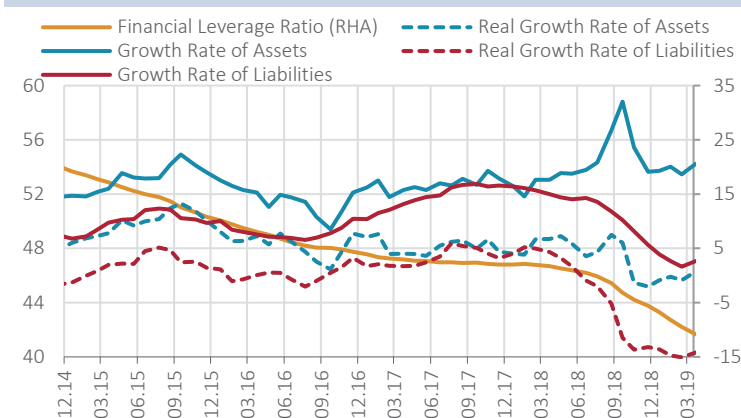
Over the last few years, household financial assets have grown faster than household liabilities thanks to additional effect of the macroprudential measures taken. In real terms, household financial assets grew by 1% annually while household financial liabilities decreased by 15%. With the impact of the significant drop in household financial liabilities, the household financial leverage ratio came down to 42%. The key drivers of the decline in household financial liabilities have been: the indifference of the current indebtedness level to exchange rate developments in response to the macroprudential measures and the fact that new borrowing remained limited due to tight credit supply conditions and subdued credit demand. In the first quarter of 2019, retail loan growth was mostly driven by general purpose loans and credit cards, while housing and vehicle loans remained weak. At the end of 2018, the household indebtedness ratio in Turkey, which was 14.8%, was well below the EME average of 39%.

Capacity utilization rates and industrial production, which fell in 2018 due to slow down in economic activity, exhibited a monthly increase in the first quarter of 2019. The leading indicators suggest that the downtrend in economic activity observed throughout the second half of 2018, has been moderating. Meanwhile, real exchange rate developments contribute to FX-denominated income and international competitiveness of firms operating in export-oriented sectors', thus underpinning those firms' volume of activity and profitability. The decline in the corporate sector's FX open position in 2018 continues in 2019 as well. Firms' total financial debt leverage ratio, which increased in the third quarter due to the rise in the TRY equivalent of FX loans, decreased and converged to the long-term averages on the back of the decline in exchange rates, contraction in economic activity and the decrease in financing requirement for investment purposes. Credit standards, which were tightened in 2018, became slightly looser in the first quarter of 2019 with the effect of the measures and incentives introduced and the partial recovery in economic activity.

III.1 Household Developments

Three-fourths of household financial assets are composed of savings deposits and almost all of the financial liabilities are composed of retail loans. The slowdown and weak outlook in financial assets and liabilities of households that started in the third quarter of 2018 continued in the current Report period as well. In March 2019, households' financial assets grew by 1% year-on-year in real terms, while liabilities contracted by 15%. With the significant impact of the decline in liabilities, the household financial leverage ratio dropped to 42% (Chart III.1.1). The drivers in the decline in household financial liabilities were the macroprudential policies that blocked new FX borrowing by households, thereby making the current debt level immune to exchange rate developments, the tight credit supply conditions, and limited new borrowings due to weak demand. As household assets are mostly composed of financial instruments with capital protection, they are not affected by negative price developments such as decrease in stocks and bonds and thus real growth on the asset side stood at an almost neutral state.

Chart III.1.1: Growth Rates of Households' Financial Assets and Liabilities, and Financial Leverage Ratio (Annual % Change, % Share)



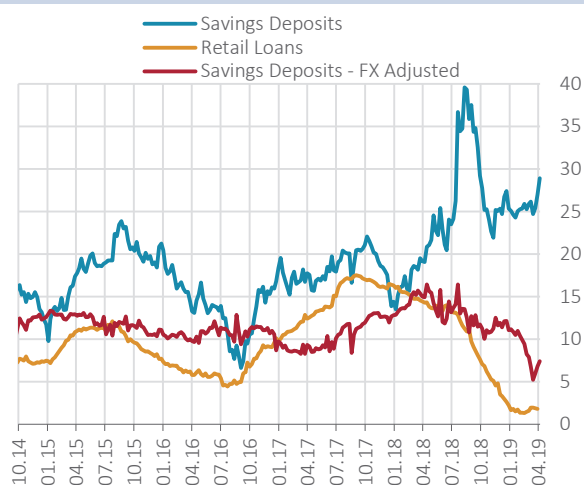
Source: CBRT, BRSA, CMB, MKK, TOKİ

Last Observation: 03.19

Note: The leverage ratio refers to the ratio of average financial liabilities to average financial assets in the last twelve months. Real growth rates have been calculated using the CPI.

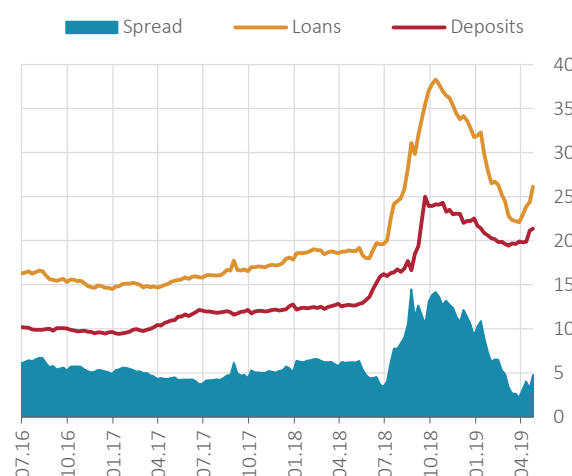
While the most important component of household financial liabilities, retail loans, dropped to 2% growth level, this development was mainly driven by the 3%-decrease in housing loans. The nominal growth in savings deposits became flat in the 25-30% range (Chart III.1.2). The deposit growth was mostly driven by exchange rate developments and depositors' increasing preference for foreign currencies. Whereas, in the same period, growth of savings deposits adjusted for exchange rate effects decreased to 7%. The drop in TL deposits played a role in this decline while the depositors' preferences for FX curbed further decline in this item. In the current report period, at the backdrop of the economic rebalancing process, interest on general purpose loans decreased until the end of March owing to decreasing funding costs of the financial sector and the restructuring campaigns. Factors affecting savings deposits prices were decreased funding needs due to credit developments, the sector's assets-liabilities management implementations, and profitability motives. As a result of these developments, the interest rate spread between consumer loans and savings deposits came closer to the historical lows (Chart III.1.3). A moderate increase started to be observed in consumer loan and savings deposit interest rates as of April.

Chart III.1.2: Growth in Loans and Deposits of Households (Annual % Change)



Source: CBRT, BRSA
Last Observation: 26.04.19
Note: FX savings deposits have been adjusted for exchange rates with the (0.6 USD + 0.4 euro) currency basket.

Chart III.1.3: Interest Rates on Consumer Loans and Savings Deposits (%)



Source: CBRT
Last Observation: 26.04.19
Note: Weighted average interest rates on loans and deposits extended by banks.

As of September, the FX and gold deposit balance increased by USD 13 billion to reach USD 109 billion because of depositors' growing preferences for FX and gold in deposits (Table III.1.1). In this period, the growth in TL deposits remained at 2.8%, while nominal growth of FX deposits stood at 56 percent with the additional impact of the rise in exchange rates.

Table III.1.1: Households' Financial Assets

	03/18		03/19		Percentage Change	Cont. to Change (Point)
	Billion TL	Perc. Share	Billion TL	Perc. Share		
Total Assets	1239.4	100	1505.8	100	21.5	21.5
TL Savings Deposits	591.0	47.7	607.6	40.4	2.8	1.3
FX Savings Deposits	350.6	28.3	547.4	36.4	56.1	15.9
- (Billion USD)	90.3		100.6		11.3	
Precious Metal Deposits	23.0	1.9	47.5	3.2	106.3	2.0
- (Billion USD)	5.9		8.7		47.1	
Bonds and Bills	27.7	2.2	43.5	2.9	57.2	1.3
- Public Sector	7.3	0.6	14.2	0.9	95.0	0.6
- Private Sector	20.4	1.6	29.3	1.9	43.7	0.7
Mutual Funds	122.0	9.8	139.9	9.3	14.6	1.4
Pension Mutual Funds	75.7	6.1	85.7	5.7	13.2	0.8
Other Mutual Funds	46.3	3.7	54.2	3.6	17.0	0.6
Equity Securities	70.4	5.7	63.2	4.2	-10.1	-0.6
Repo	0.9	0.1	1.8	0.1	106.1	0.1
Currency in Circulation	53.8	4.3	54.7	3.6	1.8	0.1

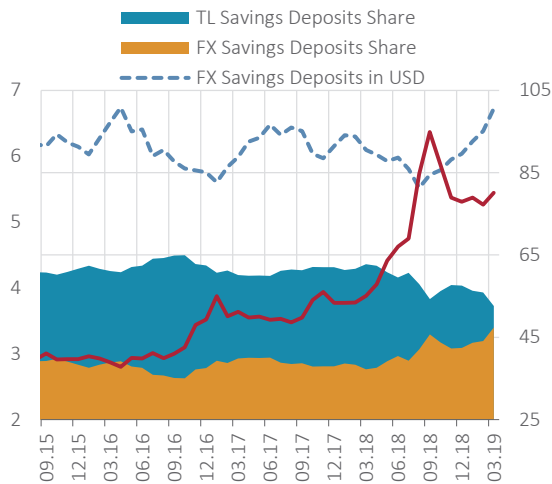
Source: CBRT, CMB, MKK

Last Observation: 03.19

The share of FX and gold deposits in total household asset composition reached 40%, thus, the shares of FX and TL deposits converged (Chart III.1.4 and Chart III.1.5). Dollarization in deposits increased due to the interest rate developments in the current Report period, the limited deterioration in expectations, rise in uncertainties, and depositors' motivation to hedge against inflation.

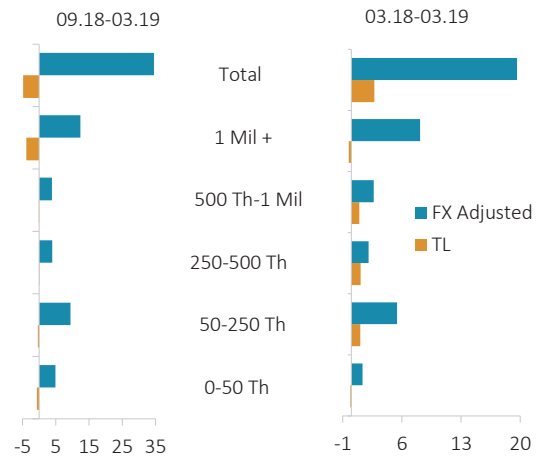
The 21.2% annual rise in household financial assets was mainly driven by the increase in FX deposits at 15.9% including the exchange rate effects. In the same period, the precious metal accounts increased by 106.3% making a 2 percentage point-contribution to the change in assets. The share of investments in stocks and bonds sensitive to goods prices in total asset composition stood at 7%, helping the negative impact of price developments in investment instruments on the existing value of financial assets remain low.

Chart III.1.4: Breakdown of Resident Households' Savings Deposits by TL and FX (% , Billion USD, TRY)



Source: CBRT Last Observation: 03.19
 Note: FX savings deposits in USD denotes USD equivalent of FX deposits and does not include precious metals held by resident real persons. Monthly average exchange rate data has been used for calculations.

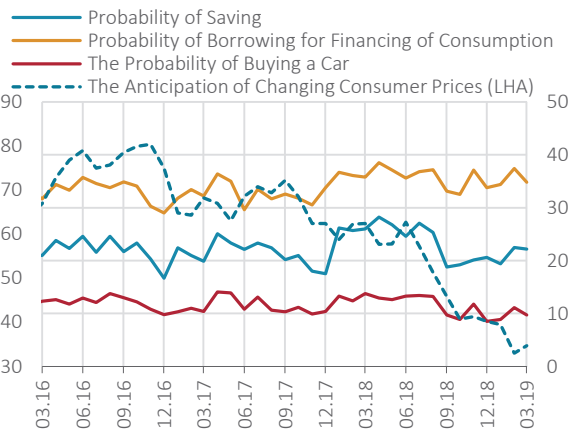
Chart III.1.5: Change in Households' Deposits across Amounts (% Points)



Source: CBRT Last Observation: 03.19
 Note: FX deposits of domestic households have been adjusted for exchange rates with the (0.6 USD + 0.4 euro) currency basket. Monthly average exchange rate data has been used for calculations.

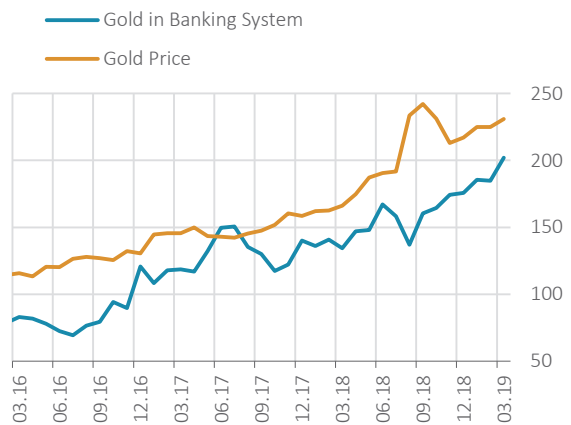
A closer look at the consumer confidence index and the consumer tendency survey, which explain households' spending and saving patterns, and expectations for the overall economy reveals that in March 2019, the outlook for CPI remained unchanged and other series remained flat (Chart III.1.6). Households' probability of saving inched up in the first quarter of 2019, indicating that households have a tendency to increase their assets. Meanwhile, since the last report period, gold prices have been fluctuating and households' gold portfolio has increased (Chart III.1.7).

Chart III.1.6: Indices Regarding Consumer Confidence Index and Consumer Tendency Survey Questions



Source: TURKSTAT Last Observation: 03.19
 Note: A downward movement in the series denotes deterioration in expectations, while an upward movement indicates an improvement in expectations. Series for the next twelve months, next three and twelve months, and past twelve months.

Chart III.1.7: Households' Gold Portfolio in the Banking System and Gold Prices (Tons, TRY)

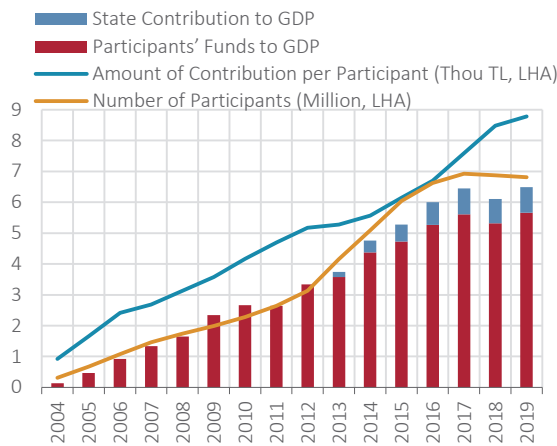


Source: TCMB Last Observation: 03.19
 Note: Gold bar selling price per gram. Covers real persons' gold in Turkey and abroad.

Since 2013, a state contribution has been made to the private pension system (PPS) to encourage domestic savings, and households' savings in the PPS system continued to grow in this Report period, whereas the number of contributors stabilized at around 6.9 million (Chart III.1.8). Over the last one year, the PPS funds including state contribution grew by 15 percent to a total of TRY 93.5 billion. Moreover, the number of employees enrolled in the Auto-Enrollment Pension Scheme (AEPS) introduced in 2017 to

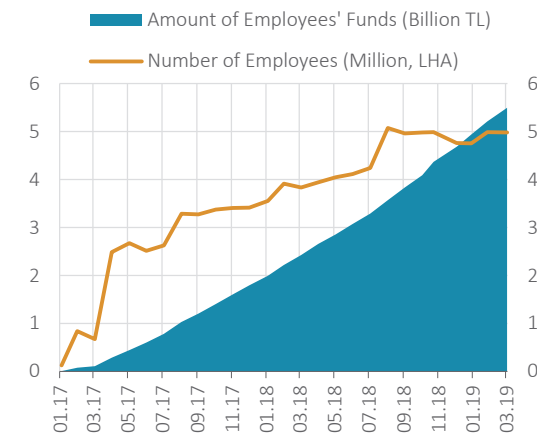
boost individual savings stabilized at approximately 5 million and the amount of funds in this system displayed a stable growth and reached TRY 6 billion (Chart III.1.9).

Chart III.1.8: Private Pension System (% , billion TRY, Million People)



Source: EGM Last Observation: 05.04.19
 Note: State contribution is paid by the Government for each private pension contract at the amount of 25% of the amount paid by the contractor and it requires 10-year enrollment in the system.

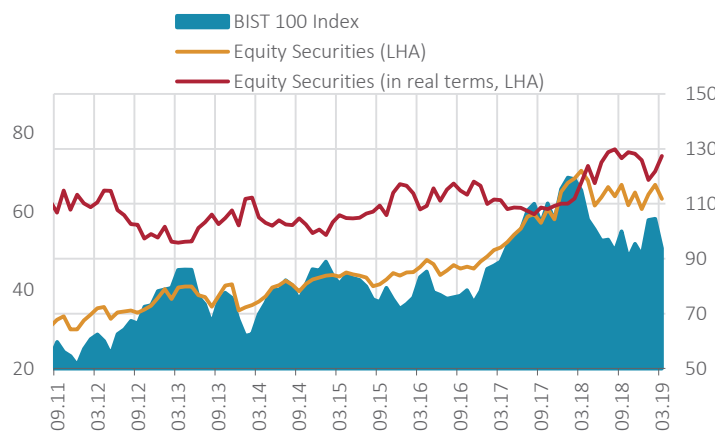
Chart III.1.9: Auto-Enrollment Pension System (Million People, Billion TRY)



Source: EGM Last Observation: 03.19

The size of households' equity securities portfolio has been fluctuating within a horizontal band since September 2018 (Chart III.1.10). The real equity portfolio exceeded the historical average in this period.

Chart III.1.10: BIST All Index and Households' Equity Securities Portfolio (Thousand, Billion TRY)



Source: CBRT, Bloomberg Last Observation: 03.19
 Note: Real equity portfolio has been adjusted for value changes by using stock market index.

Households' financial liabilities increased at a slower rate than in the previous Report period, but the distribution of liabilities was roughly the same. Personal credit cards (PCC) made the most significant contribution with 2.3% to the 2.6% rise in household financial liabilities (Table III.1.2). Another important contributor to the growth in liabilities was general purpose loans with a 1.1 percentage contribution, while housing and vehicle loans made a decreasing contribution. Vehicle loans contracted as vehicle prices are sensitive to exchange rates and demand for vehicles was deferred. Meanwhile, amid weak housing market and with commercial purposes, banks tried to be more active in general purpose loan and PCC markets that have a broader customer base. Public banks' credit card balance restructuring campaigns allowed a moderate rise in general purpose loans. Moreover, with the help of maturity and cost conditions of these credits, these campaigns make the credit payment scheme consistent with the

borrower's income; and restrict credit card limits. All those implementations are expected to decrease households' debt service burden and thus contribute to financial stability. Moreover, by February 2019 the maturity cap for general purpose loans was increased from 36 months to 60 months and public banks' campaigns offering housing and general purpose loans with lower interest rates played an important role in the recovery. There has been no significant change in households' choice of source of funding and they rely mostly on banks as a source of funding.

Tablo III.1.2: Household Financial Liabilities

	03/18		03/19		Percentage Change	Contributions to Change
	Billion TL	Percentage Share	Billion TL	Percentage Share		
Total Liabilities (Based on Type)	575.5	100.0	590.7	100.0	2.6	2.6
Housing	215.7	37.5	210.0	35.6	-2.7	-1.0
Vehicle	18.6	3.2	15.3	2.6	-17.8	-0.6
General Purpose	222.5	38.7	229.0	38.8	2.9	1.1
Individual Credit Cards	97.6	17.0	111.0	18.8	13.7	2.3
Asset Management Comp' Rec.	21.2	3.7	25.4	4.3	20.1	0.7
Total Liabilities (Based on Counterparty)	575.5	100.0	590.7	100.0	2.6	2.6
Banks	516.1	89.7	526.8	89.2	2.1	1.9
Financing Companies	17.3	3.0	14.2	2.4	-18.2	-0.5
TOKİ	20.9	3.6	24.3	4.1	16.1	0.6
Asset Management Comp'	21.2	3.7	25.4	4.3	20.1	0.7

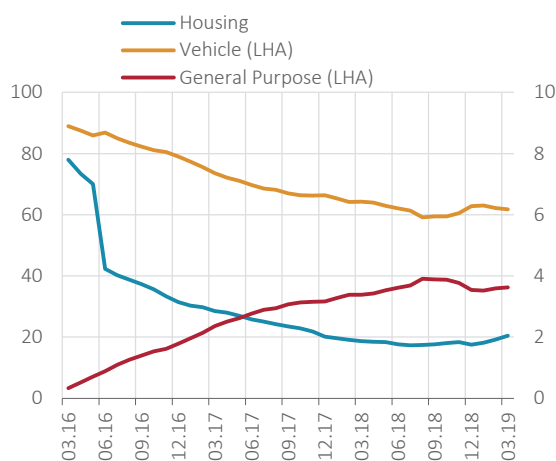
Source: CBRT, TOKİ

Last Observation: 03.19

Note: Total liabilities include NPLs.

Households generally use loans from finance companies to buy vehicles. Loans from finance companies have been increasingly preferred by consumers for purchases that are the subject of general purpose loans since 2016 (Chart III.1.12). The share of general purpose loans in total loans granted by finance companies has increased from 3% to 36% and flattened out at this level.

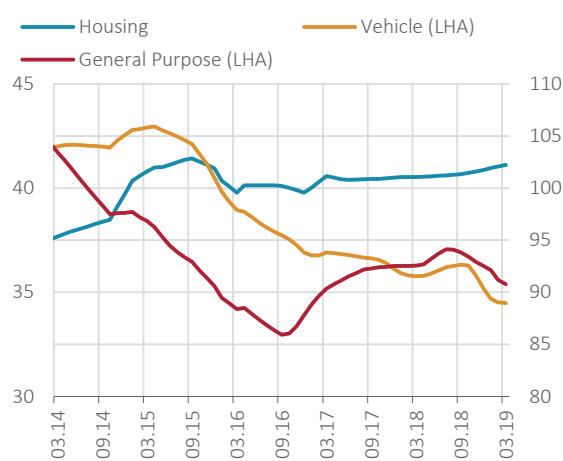
Chart III.1.11: Consumer Loans Extended by Finance Companies Based on Type (% Share)



Source: CBRT

Last Observation: 03.19

Chart III.1.12: Average Retail Loan Maturity (3-Month MA, Month)



Source: CBRT

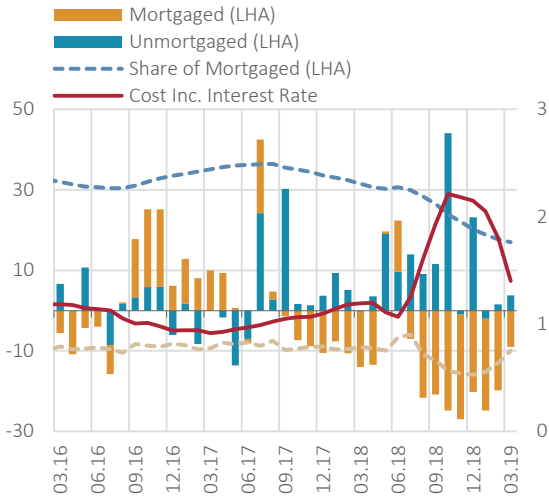
Last Observation: 03.19

As for consumer loans, there has been a moderate decline in average maturities for vehicle and general purpose loans while maturities for housing loans assumed an uptrend (Chart III.1.12). As the maturity cap for general purpose loans was extended to 60 months in this Report period, average maturities are expected to increase.

In this report period, there has been a decrease in cost-included interest rates and there has been a moderate rise in banks' credit approval ratios for housing loans. Nevertheless, despite some uptick in March, house sales with installments remained weak (Chart III.1.13). The weak outlook despite the decline in cost-included interest rates mainly stemmed from weak demand conditions in the house market and in this period, house prices displayed a flat course contrary to the historical trends.

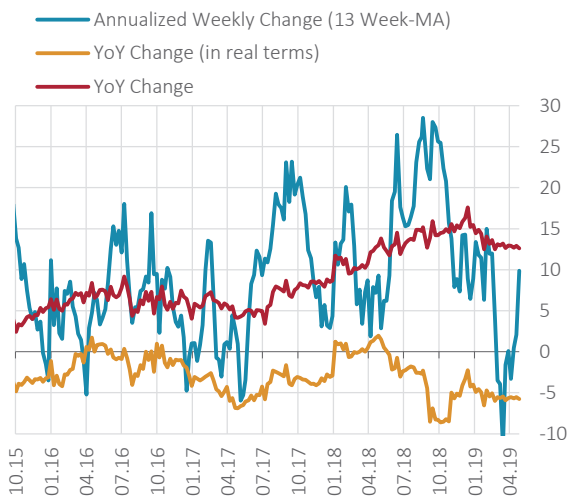
The annualized weekly change in PCC balances has been volatile while the nominal annual change in PCC spending hovers above the historical averages (Chart III.1.14).

Chart III.1.13: Contribution to Housing Sales Growth and Monthly Cost-Included Interest Rate for Housing Loans (% , Points)



Source: CBRT, TURKSTAT Last Observation: 03.19
 Note: The mortgaged share is the share of mortgaged sales in total house sales over the last 12 months; and the approval rate is the ratio of approved housing loans to the number of applications submitted. Cost-included interest rates includes costs other than the interest (all fees, expenses and commission charged).

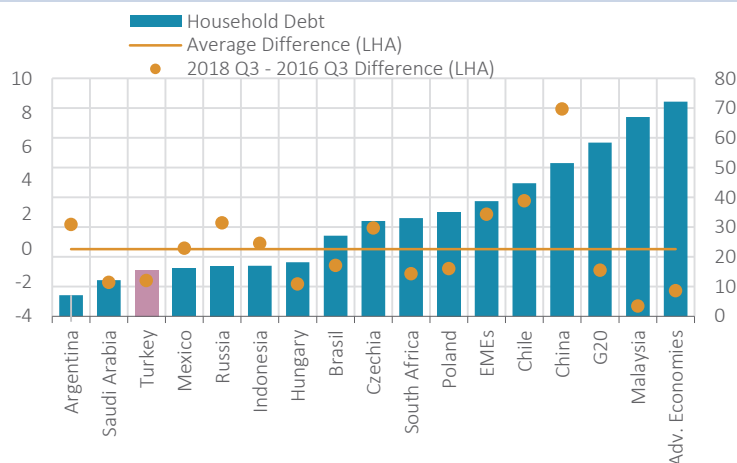
Chart III.1.14: Change in PCC Balance (%)



Source: CBRT, TURKSTAT Last Observation: 26.04.19
 Note: Deflated by CPI.

By March 2019, the ratio of loans used by households from the Turkish banking sector to GDP is about 13%. Turkey’s total household indebtedness ratio, which was 14.8% as of end-2018, ranks below the EME household indebtedness of 39%. This can be attributed to the macroprudential measures and the toolkit towards household indebtedness. Moreover, an analysis of the changes in household indebtedness over the last two years suggests that Turkey’s household indebtedness decreased at a faster rate than the average for selected EMEs.

Chart III.1.15: Household Indebtedness Ratios of Selected EMEs (% , Points)



Source: BIS, CBRT Last Observation: 09.18
 Note: Spreads denote the two-year change in household indebtedness. Household indebtedness denotes the formula: total of bonds and loans of households and non-profit institutions serving households/ GDP.

Box III.1.1

Maturity, Amount and Currency Preferences in FX Deposits

The ratio of FX deposits to total deposits monitored as an indicator of asset dollarization in the non-financial sector, which has been on a steady uptrend since 2011, approached to 55 percent in March 2019. The related literature diagnoses various factors such as exchange rate movements, inflation expectations and market uncertainties as the cause of dollarization¹. Besides these factors, the rise in the ratio of FX deposits in Turkey since 2011 can be attributed to some additional factors such as firms' motivation to meet their FX liabilities and manage their exchange rate exposure, and households' motivation to retain the value of their financial assets and expectations of yield. This Box analyzes the recent rise in FX deposits with respect to maturity, amount and currency, and briefly explains the changes in legal arrangements.

Maturity Preference

Although generally, deposit maturities become shorter in periods of increased exchange rate volatility, this trend varies slightly for savings and commercial deposits. While the shares of TL and FX sight demand deposits in total deposits are almost the same for savings and commercial deposits, the share of commercial time-deposits with a maximum maturity of one month is more than savings deposits with the same maturity (Chart III.1.1.1 and Chart III.1.1.2). In this context, while the maturity composition of the relatively short-term FX commercial deposit accounts is more sensitive to exchange rate volatility, it is considered that the transition to shorter maturities in FX saving deposit accounts at times of volatility is more limited.

Chart III.1.1.1: Maturity Breakdown of FX Savings Deposits (% Share)

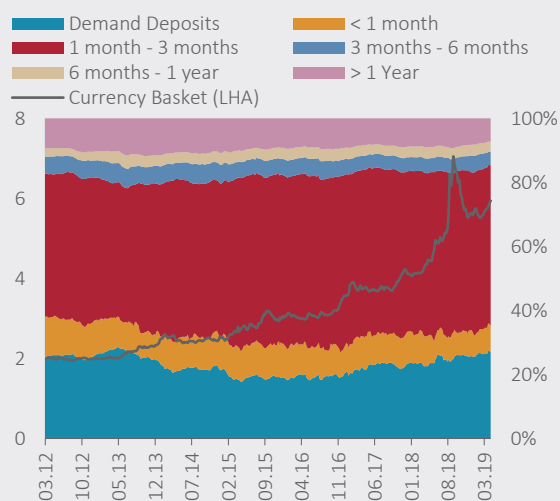
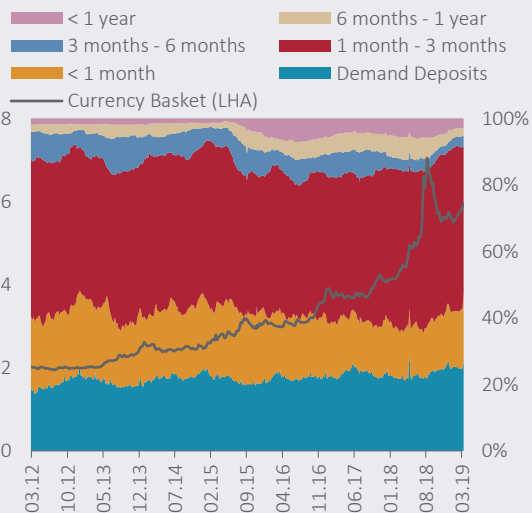


Chart III.1.1.2: Maturity Breakdown of FX Commercial Deposits (% Share)



Source: BRSA

Latest Observation: 03.19

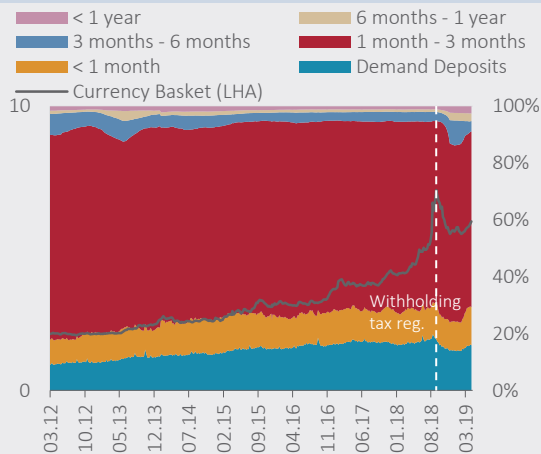
Source: BRSA

Latest Observation: 03.19

Note: Deposit accounts of residents and non-residents in banks' domestic and foreign branches have been included.

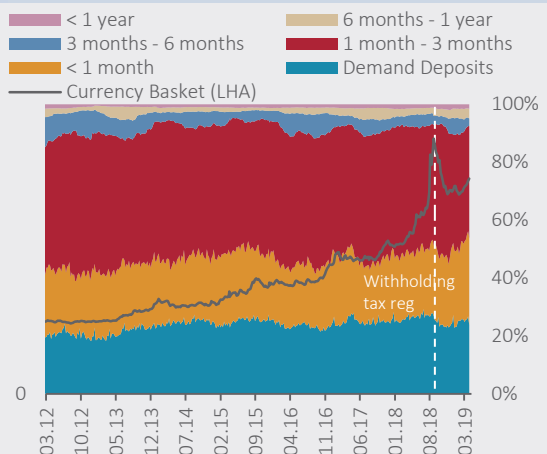
There are many factors affecting maturity composition of FX deposits such as exchange rate developments, inflation expectations etc., while the primary factor affecting TL deposit maturities is real interest revenue expectations. In this framework, the incentive introduced in September 2018 particularly for long-term maturities for TL deposits by reducing withholding tax ratios contributed to extension of maturities (Chart III.1.1.3-4).²

Chart III.1.1.3: Maturity Breakdown of TL Savings Deposits (% Share)



Source: BRSA Last Observation: 03.19

Chart III.1.1.4: Maturity Breakdown of TL Commercial Deposits (% Share)

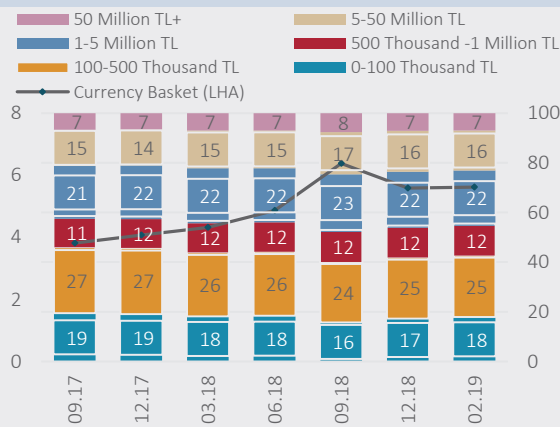


Source: BRSA Last Observation: 03.19

Amount Preferences

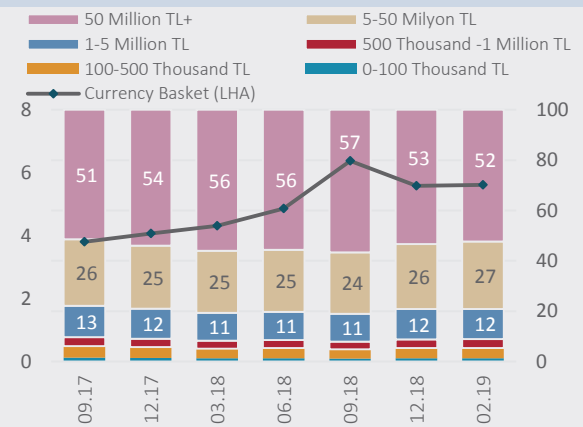
More than half of FX savings deposits are amounted to TRY 1 million or less breakdown, while commercial deposits have an amount of TRY 50 million or above. The share of FX saving deposit accounts of TRY 50 million or less increased after September 2018. Meanwhile, the share of FX commercial deposits with a balance of TRY 50 million or above has decreased and these balances have been shifted to accounts with smaller amounts, particularly accounts with a balance between TRY 5 and 50 million (Chart III.1.1.5 and III.1.1.6). This confirms that recently, depositors have been preferring FX accounts with smaller balances.

Chart III.1.1.5: Breakdown of FX Savings Deposits by Amount (% Share)



Source: BRSA Last Observation: 02.19

Chart III.1.1.6: Breakdown of FX Commercial Deposits by Amount (% Share)



Source: BRSA Last Observation: 02.19

Note: Analysis has been based on basket amounts equivalent to breakdowns in TRY.

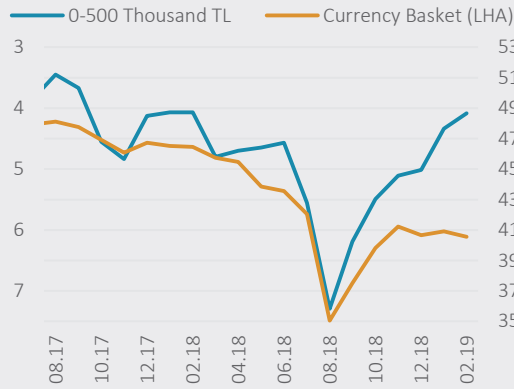
As shown on the chart, account balances between TRY 0 and TRY 500.000 for saving deposit and of TRY 50 million and above for commercial deposit have an important share in FX deposit accounts.

¹ Reinhart et al. (2003) recommend policies decreasing FX borrowing and encouraging local currencies: Ize and Yeyati (2003, 2004) state that inflation expectations affect asset dollarization. Ergun et al. (2017) have analyzed various countries and make various recommendations about policies focusing on decreasing dollarization ratios and highlight that inflation-indexed products are one of the most effective tools.

² The blog post on “The Effect of Amendments to Withholding Tax Regulation on Maturity of Deposits” posted on the CBRT Blog in January 2019 includes further details about the analysis.

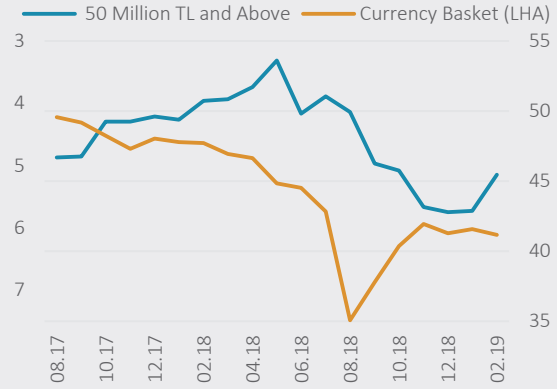
When the reaction of these balances to currency basket movements is analyzed, it is observed that real persons' reaction to these movement is simultaneous, while there is no significant reaction pattern for legal persons (Chart III.1.1.7 and III.1.1.8).

Chart III.1.1.7: FX Savings Deposits (Billion Basket) and Currency Basket



Source: BRSA Last Observation: 02.19

Chart III.1.1.8: FX Commercial Deposits (Billion Basket) and Currency Basket



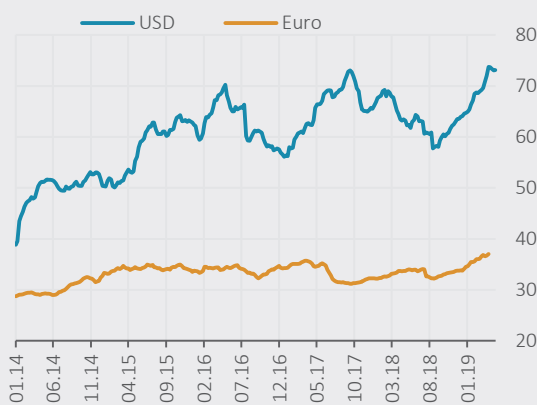
Source: BRSA Last Observation: 02.19

Currency Preference

As of April 2019, 56 % of the total FX deposits in the Turkish banking system was composed of US dollars, 37% of euro and the rest was composed of gold and other currencies. While the share of US dollars in FX savings deposits was 58%, that in FX commercial deposits was 53%. The discrepancy between currency preferences of commercial and savings deposits can be attributed to the fact that firms trade mostly with European countries.

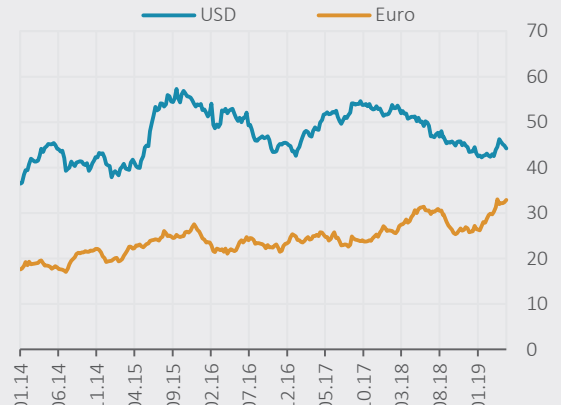
As for the recent rise in FX deposits, the rise was mostly in euros in FX commercial deposits and in US dollars in FX savings deposits. Compared to end-2018, on the commercial deposits side, deposits in euros increased by 24% and deposits in US dollars by 2%. For savings deposits, these ratios were 10% and 13%, respectively (Chart III.1.1.9 and III.1.1.10). The rise in savings deposits in euros was driven by the euro/dollar parity developments as well as financing needs for trade with the Euro area.

Chart III.1.1.9: Breakdown of Savings Deposits by Currency Type (Billion USD/ Billion euro)



Source: BRSA Last Observation: 04.19

Chart III.1.1.10: Breakdown of Commercial Deposits by Currency Type (Billion USD/ Billion euro)



Source: BRSA Last Observation: 04.19

Conclusion

An analysis of the rise in FX deposits revealed that the rise was more significant in deposits with shorter maturities and smaller balances, and displayed different patterns for savings and commercial deposits. As of end-2018, the rise in FX commercial deposits was mostly driven by an increase in euro deposits and the rise in savings deposits by US dollars. It was also observed that recently, similar to currency preferences of legal persons, real persons' demand for deposits in euro increased as well. There are several factors affecting dollarization such as exchange rates, inflation developments and market volatility and the uptrend in dollarization continues, although recently, new instruments have been developed to protect depositor against inflation as well as interest rate movements and new arrangements encouraging saving in local currency have been introduced. The withholding tax arrangement introduced in August 2018 encouraging TL deposits and particularly long-term deposits had some positive impacts. Moreover, instrument diversification has increased with the introduction of inflation-indexed and interest-protected deposit accounts with a minimum maturity of three months offering withholding tax exemption for maturities longer than one year.³ These new facilities are expected to have a positive impact on depositors' preferences for TL deposits and long maturities.

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³ The Inflation-Indexed & Interest Protected Deposit Account is a type of deposit account, the interest rate of which equals whichever is higher of "the interest rate offered at the time of opening the account" and "CPI-indexed annual percentage change at maturity + additional interest rate".

Box III.1.II

A New Approach to Measuring Dollarization: Exchange Rate and Interest Rate-Adjusted Dollarization Index

Deposit dollarization is defined as residents' tendency to prefer FX as a store of value. Financial conditions as well as economic and geopolitical conditions may affect dollarization. Various indicators are employed while measuring dollarization tendency. The most common of these indicators are the share of FX deposits/ total deposits and the share of FX deposits -calculated with a fixed rate in local currency- in total deposits. It should be noted that these indicators, which are used for determining the dollarization level, have significant shortcomings with respect to measuring currency preferences.

An efficient dollarization indicator is expected to be immune to exchange rate fluctuations, to be adjusted for effects stemming from the level of interest rates and to allow a consistent comparison between different periods. When the shortcomings of the available indicators are taken into account, it is obvious that a dollarization indicator that is not affected by market pricing is needed.

Even if there is no change in residents' preferences of currencies for deposits, the FX deposits/ total deposits ratio may decrease or increase due to price changes (exchange rates or interest rates). In related literature, there are some approaches aiming to offset these effects. These approaches propose calculating the local currency equivalent of the FX deposits based on a fixed exchange rate determined for a reference period.

Nevertheless, this approach has shortcomings with respect to calculating dollarization accurately and comparably. When the fixed exchange rate employed in this approach is higher than the exchange rate of the period of calculation, dollarization rate is higher than it actually is; and in an opposite case, dollarization rate is lower than the actual level. Therefore, the ratio of FX deposits to total deposits calculated by employing a fixed exchange rate does not produce a dollarization parameter that is consistent and comparable in the long run.

This Box suggests an alternative dollarization index intended to fulfill all three criteria. In the banking system, TRY and FX deposits are expected to increase by the interest rate applied to the related currency. Any change incurred by a factor other than interest rate can be attributed to a change in depositors' preferences for TL or FX. For instance, in a banking system with FX deposits of USD 100 and TL deposits of TRY 100, the dollarization index would be the ratio of FX deposits to TL deposits: USD 100/ TRY 100. At the beginning, the USD 100/ TRY 100 ratio is indexed at 100 level. When banks offer net 2% interest rate for TL deposits and net 0.5% interest rate for FX deposits, TL and FX deposits would be expected to increase by the offered rates. Let us assume that in the following period, TL deposits increase by 5% and FX deposits based on USD decrease by 1%, then, TL deposits adjusted for the interest rate effect would increase by 3% (5-2) and FX deposits adjusted for interest rate effect would decrease by 1.5% (-1-0.5). In such a case, the amount of FX deposits decreases to USD 98.5, while the amount of TL deposits increases to TRY 103. Thus, the dollarization index drops down to 95.6 (98.5/103*100). Thus, we can assert that the dollarization index adjusted for exchange rate and interest rate effects have decreased due to depositors' currency preferences (Table III.1.II.1).

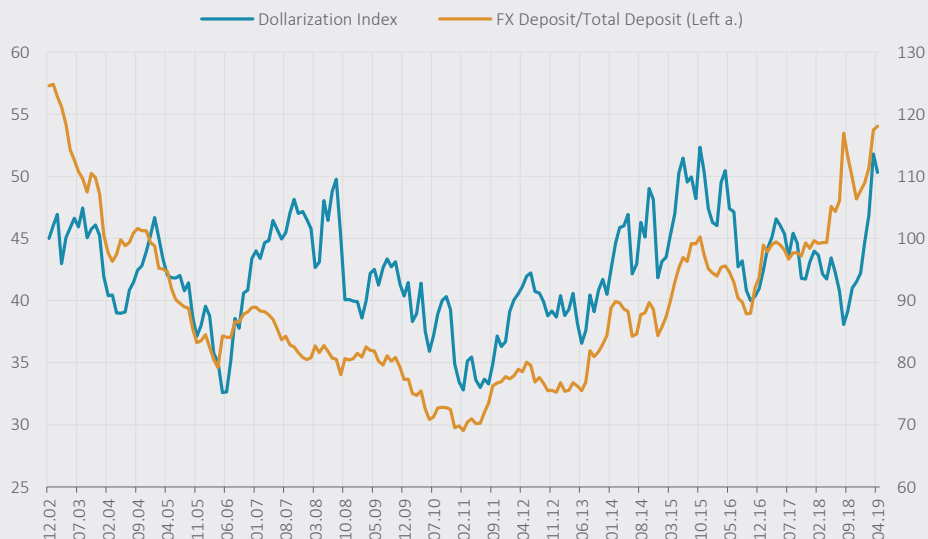
Table III.1.II.1: Calculating the Dollarization Index

Time	t	t+1 (inc. interest)	t+1 (excl. interest)
TL Deposits	TRY 100	TRY 105	TRY 103
FX Deposits	USD 100	USD 99	USD 98.5
Dollarization Index	100	-	95.6

The same approach has been applied to find out currency preferences of depositors in the Turkish banking system. The dollarization index was set at 100 in December 2002, the base year we designated, and the value of the index was calculated for subsequent periods. The average of the interest rates applied to TL and FX deposits was used as the (reference) interest rate in the each period. Our calculations revealed that the tendency to keep FX deposits reached the highest level in October 2015. Transition to FX deposits started to accelerate as of August 2018 and this trend slightly reversed in April 2019 (Chart III.1.II.1).

When our index is compared with the dollarization index using the FX deposits/ total deposits ratio, we observe a discrepancy between the two indices in August 2018. Compared to July 2018, in August 2018, TL deposit balance increased by TRY 12 billion while FX deposits decreased by 10 billion FX baskets.¹ While the dollarization index adjusted for exchange rate and interest rate effects moves downward and can accurately reflect this trend, the share of FX deposits to total deposits moves upward due to the rise in exchange rates. Therefore, the dollarization index that we have calculated for measuring dollarization can reflect currency preferences more accurately.

Chart III.1.II.1: Dollarization Indicators over Time (Units, %)



Source: CBRT

Last Observation: April 2019

¹ FX basket is composed of 60% USD and 40% euro.

To conclude, the dollarization index adjusted for exchange rate and interest rate effects allows comparison between periods and generates more clear information about depositors' currency preferences.

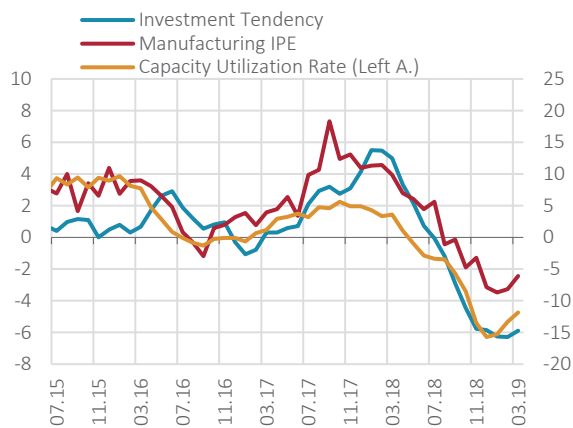
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III.2 Corporate Sector Developments

Following the rise in the volatility of exchange rates and the risk premium in financial markets in the second half of 2018, tightening in the financial conditions and balancing in the economic activity has become more significant. The effect of the coordinated measures to support economic activity became visible in the first quarter of 2019. In the current reporting period, sectors with the capability of generating FX income recorded a robust improvement. Industrial production data and leading indicators of the first quarter of 2019 indicate that the overall deceleration trend in economic activity lost pace in the second quarter of 2018.

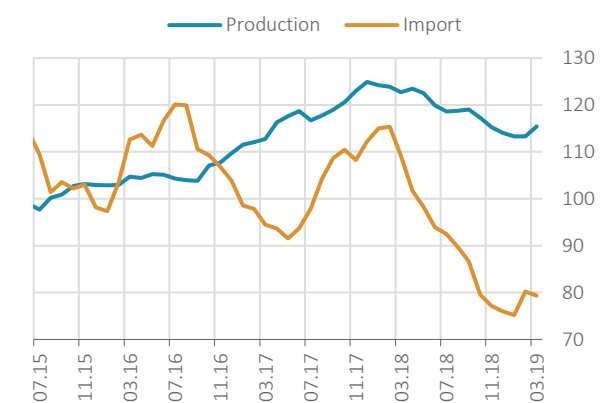
Chart III.2.1: Industrial Production, Capacity Utilization and Investment Tendency (3-Month Moving Average, Annual Percentage Change)



Source: TURKSTAT, CBRT Latest Data: 03.19

Note: The investment tendency is obtained by adding the difference between those who expressed a higher (manufacturing industry) investment expectation for the next 12 months and those who expressed a lower investment expectation to 100.

Chart III.2.2: Capital Goods Production and Import Quantity Indices (Seasonally Adjusted, 2015=100)



Source: TURKSTAT Latest Data: 03.19

In the first quarter of 2019, the IPI (Industrial Production Index) for the manufacturing industry registered a decline on an annual basis in contrast to an increase on a quarterly basis (Chart III.2.1). The capacity utilization ratio, which fell in 2018 amid the slowing economic activity, rose modestly in the first months of 2019. Weak prospects for the 12-month-ahead investment trend in the manufacturing industry coupled with other leading indicators such as capital goods production and import quantity indices show that recovery in investments may take time (Chart III.2.2).

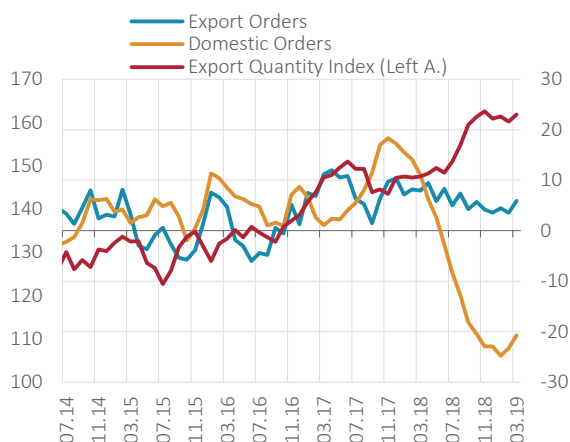
The recent real exchange rate level boosts the competitive power and FX income of exporter firms, thereby contributing to the activity volume and profitability of these firms. Increasing export orders and the export quantity index reveal that the positive effect of the real exchange rate level continues. Following an increase on a monthly basis in the first quarter of 2019, the weak outlook for domestic market orders continues (Chart III.2.3). Domestic demand and financial conditions besides foreign demand factors will determine the course of investment expenditures in the period ahead.

III.2.1 Corporate Sector Indebtedness

In March 2019, the ratio of loans provided to corporate firms by the domestic banking system to GDP turned out to be 51%. The total financial indebtedness ratio, which includes external loans and bond issues as well as domestic loans, followed a course sensitive to the exchange rate developments in this reporting period. This ratio climbed to 78% in August 2018 due to the increased TL equivalent of FX loans despite the ongoing decline in TL-denominated liabilities. In the ensuing period, the downside movement

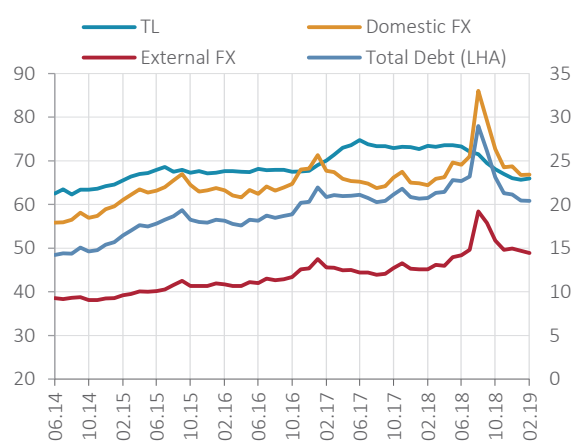
of the exchange rate and the slowdown in economic activity drew down financing needs with investment purposes. As a result, this ratio registered a decline and receded to 61% in February 2019. Financial indebtedness of the corporate sector moved in line with economic growth when adjusted for the exchange rate effect, and indebtedness indicators hovered around long-term averages. Capacity utilization ratios of corporate sector firms receded amid the slowdown in economic activity, and the TL financial indebtedness ratio declined in response to the decreasing financing needs. TL credit growth had been boosted by the KGF-backed loans in the previous reporting periods, but decelerated later due to the base effect. This downtrend in TL credit growth flattened in this reporting period. Domestic and external financial indebtedness ratios of firms also registered a limited decline. In February 2019, the shares of domestic and external financial indebtedness ratios within GDP stood at 23% and 15%, respectively (Chart III.2.4).

Chart III.2.3: Imports and Domestic Market Orders
(% Difference, Level)



Source: TURKSTAT Latest Data: 03.19
End Note: Orders data indicate the difference between the shares of firms expressing export and domestic market orders as upside and downside in the last three months in the business tendency survey. Values above zero indicate increases in the amount of orders.

Chart III.2.4: Share of Corporate Sector's Financial Debt in GDP (%)

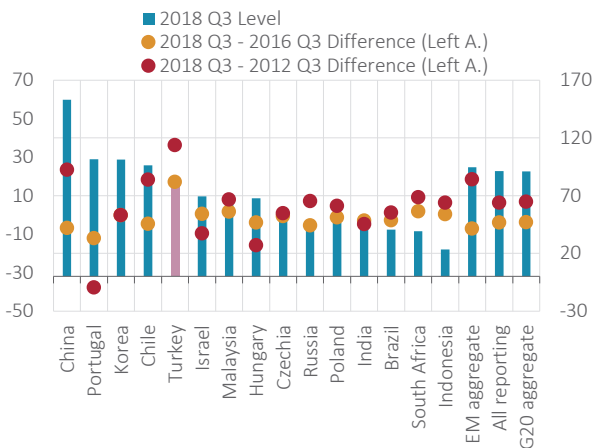


Source: CBRT, BDDK Latest Data: 02.19
End Note: GDP is calculated on a monthly basis. GDP data for February 2019 is the CBRT's forecast.

The ratio of corporate sector loans to GDP continued to hover below G20, EME and world averages in the third quarter of 2018 (Chart III.2.5). In this period, this ratio became 80% and remained below the EME average of 95%. As of 2012, the increase in the share of corporate sector loans within GDP became 18 points on average in EMEs, while it amounted to 36 points in Turkey in the same period, due to the increase in TL equivalent of FX loans amid exchange rate developments. This difference is projected to decline in the Q4 data of 2018, in which the exchange-rate driven effect in TL equivalent of FX loans waned.

The corporate sector's FX short position, which decreased across 2018, maintained this trend in 2019. In February, the short position amounted to USD 197 billion. As a result of the amendment to the Decree No 32 on Protection of the Value of the Turkish Currency, awareness of the need for exchange rate risk management increased in the financial and corporate sectors. In addition, due also to the subdued import demand, total FX liabilities fell to USD 315 billion in February 2019. The composition of FX liabilities of firms indicate that import debts receded to USD 41 billion and FX-denominated loans stood at USD 275 billion. The decline in FX liabilities was driven by the FX-indexed loans not renewed following the amendment to the Decree No 32 and shrinking domestic FX loan balance (Chart III.2.6). The decline in domestic FX loan balance was led by interest rate developments and decelerated investments.

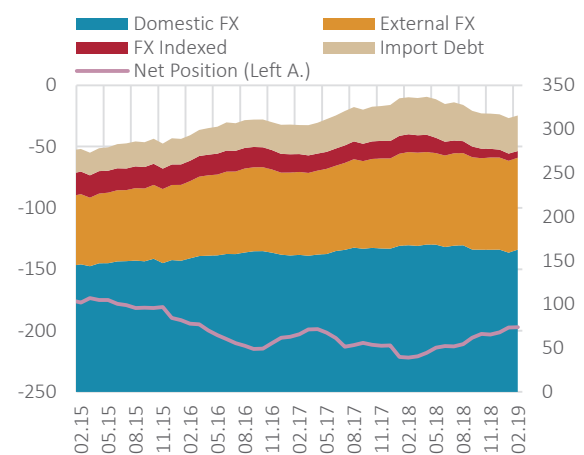
Chart III.2.5: Corporate Sector Loan / GDP Ratio International Comparison (% , % Difference)



Source: BIS

Latest Data: 09.18

Chart III.2.6: Corporate Sector's FX Liabilities and Net FX Position (Billion US Dollar)

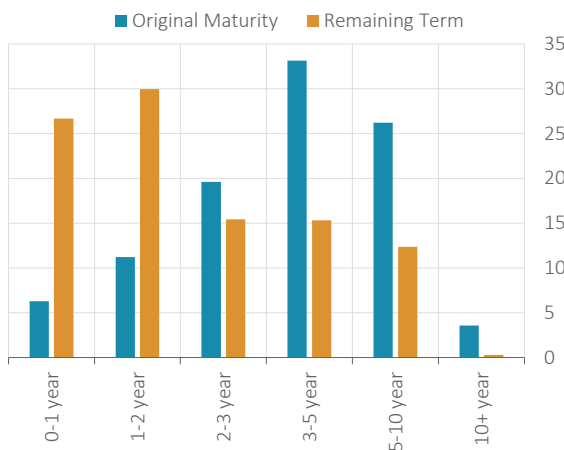


Source: CBRT

Latest Data: 02.19

In February 2019, total FX-indexed loans balance declined to USD 8 billion. A decline in the FX-indexed loans balance, 74% of which will be due in three years contains the exchange rate risk borne by small and medium-sized enterprises with relatively limited capability of FX income generation (Chart III.2.7). On the other hand, maturity structures of domestic TL and FX loans utilized by the corporate sector remained at the level of the previous year in this reporting period (Chart III.2.8). FX loans, which are known to be closely related to the firms' investment behavior, clustered at maturities longer than five years, while TL loans used mostly for working capital concentrate in shorter than one-year maturities in the last two years. Treasury-backed KGF loans and TL loans with maturities of 3-5 years, the weight of which increased in 2017 and 2018, preserved their share of 25% within total in this reporting period.

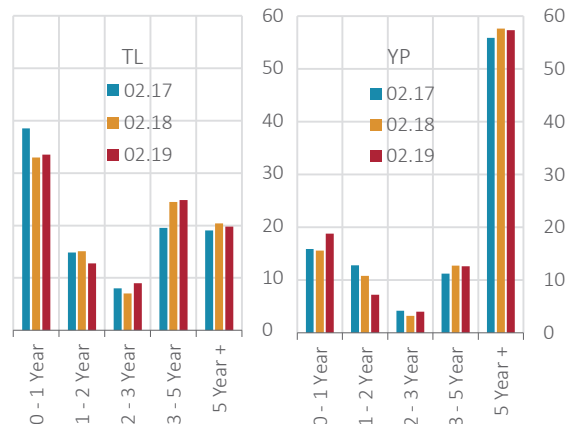
Chart III.2.7: Maturity Breakdown of FX-Indexed Loans (%)



Source: CBRT

Latest Data: 03.19

Chart III.2.8: Maturity Breakdown of Domestic TL and FX Loans (%)



Source: CBRT

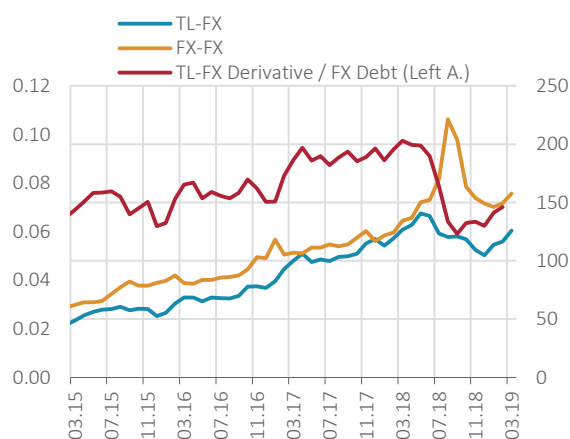
Latest Data: 02.19

Derivative transactions that firms perform with domestic banks provide information on the corporate sector's positions and risk attitudes towards exchange rate and interest rate. In March 2019, the derivative transaction volume of the corporate sector with the banking sector (notional contractual amount) climbed to TL 286 billion TL (Chart III.2.9). Out of this amount, TL 158 billion is FX buy-sell transactions against FX, while TL 126 billion is FX transactions against TL and a minor portion is TL transactions against TL. The ratio of TL-FX derivative transaction amount to firm's total FX debt, which is

important to the exchange rate risk management, is 7%. In the previous reporting period, TL equivalent of firm FX debt leverage grew due to the increasing exchange rate and the regulations to limit the transactions, in which banks are TL sellers at maturity, led to a decline in this ratio.

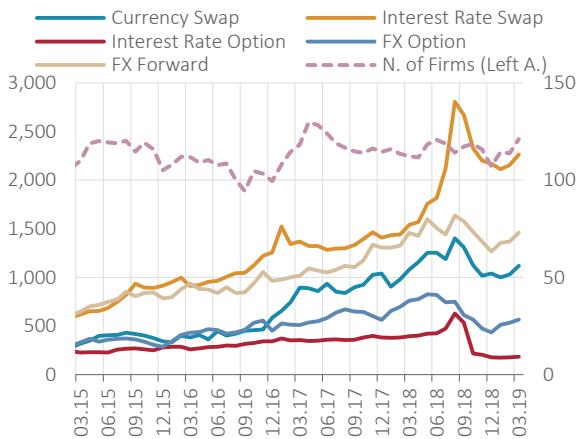
Among derivative transactions, the highest share in volume belongs to interest rate (swap) and forward FX transactions. In periods of increased exchange rate volatility, firms opt for purchasing forward FX to hedge against the exchange rate risk. Moreover, in these periods, firms increased FX-denominated interest rate swap amounts as well. That way, firms convert variable loan rates determined by FX reference rates and the risk premium into fixed rate loans. In the last reporting period, the decline in the exchange rate level and volatility pulled down the volume of all derivative products to some extent (Chart III.2.10). Meanwhile, amounts of derivative transactions grow in time, yet the number of firms performing these transactions is limited. In March 2019, the number of firms being parties to derivative transactions with domestic banks hovered around the average of the period at 2,424. Accordingly, forward FX and swap transactions launched at the BIST and the CBRT to support the exchange rate risk management of the corporate sector are expected to provide the domestic derivatives market with depth and facilitate the access of firms to financial products designed to allow exchange rate management.

Chart III.2.9: Breakdown of Derivatives Transactions by Currency (Billion TL, Ratio)



Source: CBRT Latest Data: 03.19

Chart III.2.10: Breakdown of Derivatives Transactions by Type (Billion TL, Level)



Source: CBRT Latest Data: 03.19

III.2.2 Loan Standards

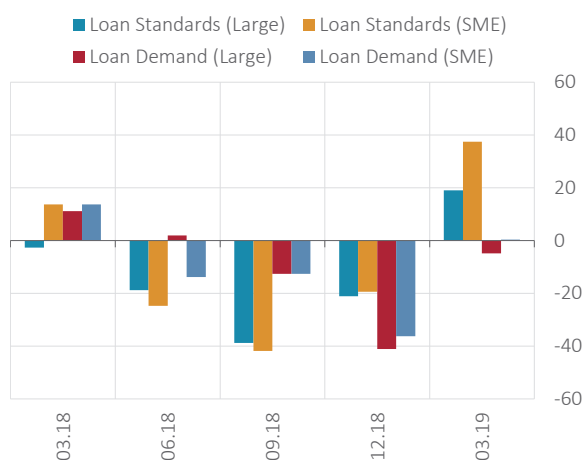
According to the results of the Bank Loans Tendency Survey, the tightening trend in loan standards, which emerged in the second quarter of 2018, lost pace in the first quarter of 2019 due to a partial improvement in economic activity led by incentives and measures. In this period, public incentives and measures caused some easing in loan standards that grew tighter in the previous reporting period and in the last quarter of 2018. Loan standards of large firms and SMEs indicate that banks stepped towards easing in the first quarter of 2019.

On the other hand, the downtrend in loan demand, which started in the third quarter of 2018 and deepened in the last quarter, got weaker in the first quarter of 2019. Loan demand from SMEs remained almost unchanged, while the fall in demand for large scale loans remained limited (Chart III.2.11). The easing in the loan standards of SMEs and the partial improvement in the loan demand were led by SME Loans.

Newly-extended TL loan rates have trended downwards since the previous reporting period (Chart III.2.12). The TL loan rate spread between micro-scale and large-scale firms, which hovered above 6% until the second quarter of 2018, shrank on account of a series of incentives put into effect. In the second half of the year, the interest rate spread changed in favor of micro firms as banks opted for spreading the

risk and firm sizes were redefined. Due also to the incentives and measures, banks extended new loans in short terms and small volumes to SMEs with low exchange rate risk in this period.¹

Chart III.2.11: Loan Standards and Loan Demand (% Difference)

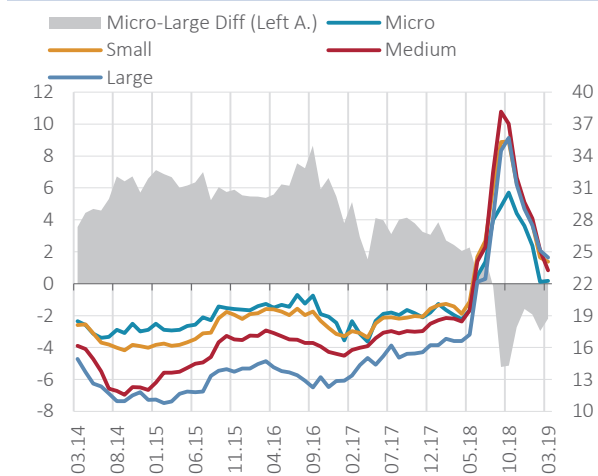


Source: CBRT

Latest Data: 03.19

Note: Refers to the difference between the share of those who answered "increased" and those who answered "decreased" to the questions about loan demand and loan standards for the last 3-month period. Values above zero mean easing in loan standards, and values below zero denote tightening.

Chart III.2.12: Average TL Funding Costs of SMEs and Large Firms (4-Week Moving Average, %, Difference)



Source: CBRT

Latest Data: 03.19

III.2.3 Sectoral Developments

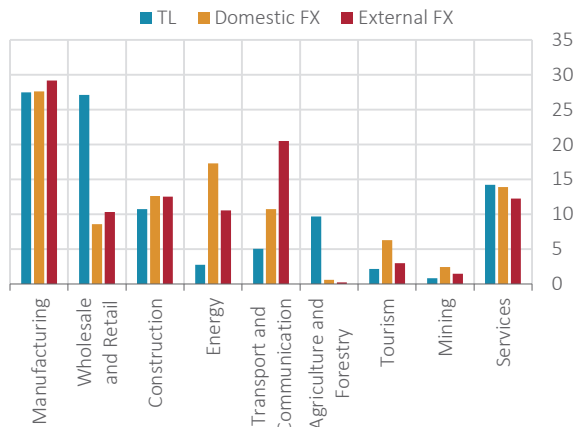
The sectoral distribution of firms' loans continued to move in tandem with sectors' contributions to economic activity in this reporting period. Exporter firms and the manufacturing sector took the highest shares in TL, domestic FX and external FX loans amid the limited recovery in economic activity (Chart III.2.13). On the other hand, FX loans were mostly provided from abroad in the transport-communication sector, which includes multinational and large-scale airline and telecommunication companies, while they were mostly provided from domestic channels in the energy and tourism sectors, the prices of products and services in which are FX-indexed.

Sectoral distribution of (flow) loans extended since the last reporting period entails information on the risk appetite of banks towards sectors and the financing provided by banks in the current period. The manufacturing sector holds highest share within newly-extended loans as 37%, while the wholesale and retail trade sector ranks the second as 24%. The shares of flow loans stood above stock loans in these sectors, supporting their relative contribution to economic activity in the upcoming period (Chart III.2.14).

Loan utilization of energy, tourism and mining sectors lagged behind the shares of these sectors within total stock loans. This is attributed to the increased costs in the energy sector and dampening of new investments amid falling electricity prices. On the other hand, the increased activity volume in the tourism sector is believed to push up its share of loan utilization in the period ahead. This may give a boost to economic activity in other sectors through the supply chain.

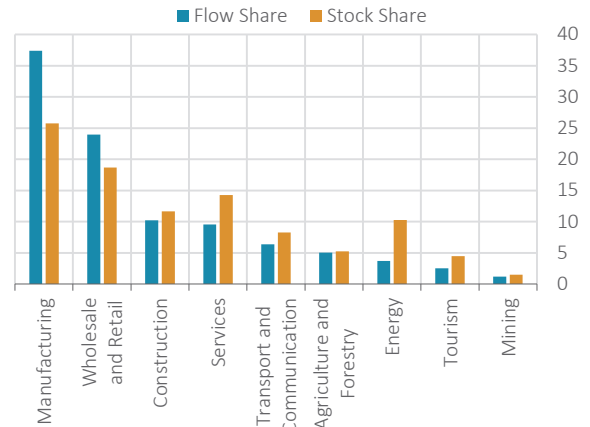
¹ For information on alternative financing opportunities offered to SMEs, please refer to Box III.2.1.

Chart III.2.13: Sectoral Breakdown of Loans (% Share)



Source: CBRT Latest Data: 03.19
 Note: Loans include domestic loans and intermediated external loans via domestic banks.

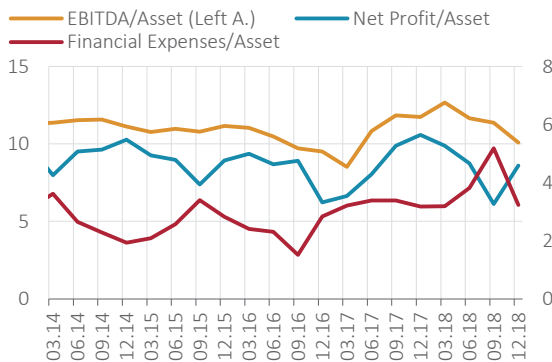
Chart III.2.14: Sectoral Breakdown of (Flow) Loans Extended Since the Last Reporting Period (09.18) (%)



Source: CBRT Latest Data: 03.19
 Note: Flow data shows loans extended between 09.18 and 03.19, and stock data shows the loan breakdown in 09.18.

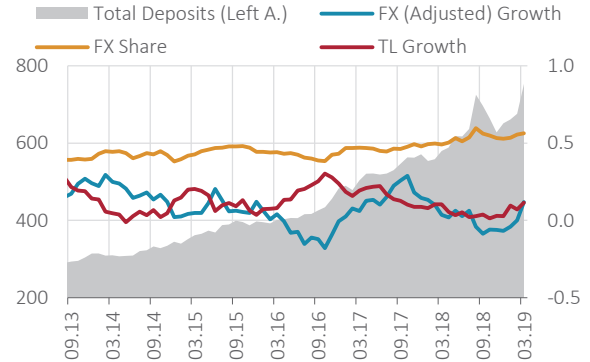
Profitability of firms, which declined following the exchange rate volatility in the second half of 2018, trended upwards in the last quarter of the year (Chart III.2.15). This rise in firms’ profitability was led by the improved profitability ratios of firms upon the support of the exchange rate level. Financing expenses, which played a role in the fall in profitability ratios, declined as the market volatility waned and amounted to 4.6%, the level before the exchange rate volatility. Financing expenses increased due to the volatile and high course of the exchange rate and interest rates in the third quarter of 2018, but declined in the last quarter converging to its long-term average. EBITDA/Asset ratio affecting the firm’s market value stood at 10% in the last quarter of 2018.

Chart III.2.15: Profitability Indicators of BIST Firms (%)



Source: CBRT Latest Data: 12.18
 Note: EBITDA: Net Profit + Financial Expenses + Tax Expenses + Depreciation and Amortization costs. As of the latest data, 284 corporate sector firms were included in the analysis.

Chart III.2.16: Deposit Developments of Domestic Firms (% , Billion TL)



Source: CBRT Latest Data: 03.19
 Note: FX deposits are calculated in terms of TL basket rate using weights 0.6 for TL / USD rate and 0.4 for TL / euro.

Total domestic firm deposits, which trended upwards as of the last quarter of 2018, maintained this trend in the last reporting period (Chart III.2.16). FX deposits adjusted for the exchange rate effect recorded a decline in the second half of the year on an annual basis amid the sales led by increased exchange rate level. However, domestic firms continued with deposit dollarization and the FX deposit ratio stood at 56% in February 2019. Sustaining a limited uptick in amount, the annual growth rate of TL deposits has been unchanged since the second half of 2018.

Box III.2.1

Alternative Financing Methods

Non-bank alternative financing methods are increasingly used all around the world. Considered an opportunity particularly for startups with high potential and fast-growing SMEs, these new financing types draw down firms' dependency to classic banking through credits and act as a stabilizer against potential financial risks. These methods, which rely on the principle of peer-to-peer (P2P) lending or directly equity-based investment in general, may diminish systemic risks by providing more efficient financial diversity. On the other hand, these methods constitute a considerable alternative also to the capital markets that allow limited access to small-sized firms.

The leading alternative financing instruments are venture capital, angel investment and crowdfunding models. Used relatively less than conventional financing sources, these methods have currently become more widespread. Another notable feature of these funds is their contribution to financial inclusion by playing an active role in social investments. Implementing positive discrimination in projects developed by women entrepreneurs, and supporting the projects in the least-developed regions are some examples. Particularly angel investment and crowdfunding have an effective role mostly in the funding of individual projects, while venture capital is influential in financing projects with high volume such as infrastructure.

Regulatory infrastructure regarding alternative financing sources in Turkey and other countries are summarized and data-based comparisons are presented in this box.

Regulatory Infrastructure

Varying regulations in countries were put into effect to strengthen the legal background of alternative financing methods and assure investors. Regulations mostly intend to improve the investor profile and enhance the credibility of the respective platform. It should be noted that these fledgling practices around the globe are new in our country as well.

1. Venture Capital

Venture capital in Turkey is regulated under two headings set by the Capital Markets Board (CMB) in 2014 as Venture Capital Investment Trust (VCIT) and Venture Capital Investment Fund (VCIF). What is common in these formations is the obligation to allocate 51% of their capital to enterprises. A Venture Capital Investment Fund is an asset with no legal entity that uses the capital obtained from investors to run a portfolio, while a Venture Capital Investment Trust is a corporation with legal personality that is established to issue shares. Tax incentives are also provided to venture capital. For example, VCIT and VCIF earnings are exempted from corporate taxes. Moreover, the withholding tax applied to earnings from stocks or equity participation for those who invest in these firms is 0%.

Many advanced or emerging countries such as the US, the UK, France and China developed legislation on venture capital, which is more common globally compared to other methods. Regulations on venture capital on the one hand impose obligations such as investing a certain portion of funds to venture firms and establishing investment committees of experienced staff, and introduce tax incentives, on the other. Particularly in the US, where venture capital funding is quite common, advantages to the firms invested in are offered at the time of going public by the regulation of Jumpstart Our Business Startups in 2012.

2. Angel Investment

Angel investors establish partnerships by sharing their experience and capital accumulation with firms that are in need of financing. Thus, these firms are provided with not just money but also experience and connections of the investors they become partners with. This is the main distinction between angel investment and venture capital.

The angel investment system in Turkey was regulated under the name “Individual Participation Investor” (IPI) by the Ministry of Treasury and Finance in 2013. To get an IPI license, investors are required to have revenue, wealth or experience. However, investors with the IPI license are allowed to use their licenses by subscribing to angel investment networks recognized by the ministry. Tax incentives are offered to IPIs in Turkey. Licensed IPIs are allowed to deduct from 75 to 100% of their shares of investment from the tax base.

Regulations on angel investment in the world mostly intend to arrange the angel investor profile directly. European countries, the US and India stipulate revenues, capital or wealth to become an angel investor, as is the case with the Turkish legislation. In many countries, tax incentives are offered to angel investors as well as the firms they invest in.

3. Crowdfunding

The first draft communique on crowdfunding was published by the CMB in January 2019. The draft communique covers only crowdfunding against share bills for online platforms, and does not include any funding in the form of rewards and donation. These online platforms are obliged to pay a capital of TL 1 million in cash, to establish an investment committee as well as units of internal control and risk management to be included in the platforms list that are accredited for crowdfunding by the CMB. These conditions are important for online platforms in terms of possessing a strong capital structure and raising confidence in investors.

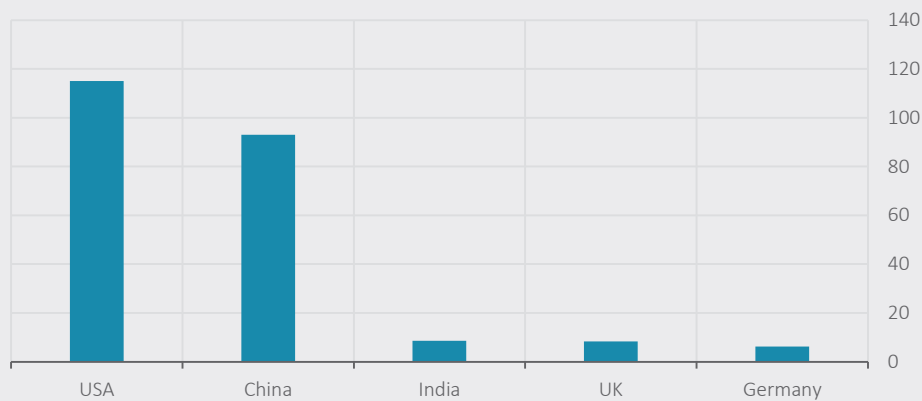
In many countries, regulations on crowdfunding models based on equities or debts are in the lead as in our country. Nevertheless, the same depth in regulations does not apply for crowdfunding models based on rewards and donation. Incentives on crowdfunding concentrate mostly on taxes. Pioneering in terms of the market size, the UK and the US offers tax privileges in crowdfunding. Turkey has not adopted any tax incentives on crowdfunding.

Alternative Financing Methods with Data

Almost no country is able to supply reliable and systematic data on alternative financing methods through official resources. Offering the most comprehensive details and the latest data, startups.watch is the leading online entrepreneurship platform on venture capital and angel investment in terms of comparisons between Turkey and the world. According to these data on the total investments made under the scope of venture capital and angel investment in the world, the US ranked the first with investments of USD 115 billion in 2018 (venture capital or angel investment) (Chart III.2.I.1). The US is followed by China and India. The OECD Report 2017 also confirms this ranking.¹

¹ Source: <http://www.oecd.org/sdd/business-stats/entrepreneurship-at-a-glance-22266941.htm>

Chart III.2.1.1: 2018 Angel Investment and Venture Capital Investments
(Highest 5 Countries, Billion USD)

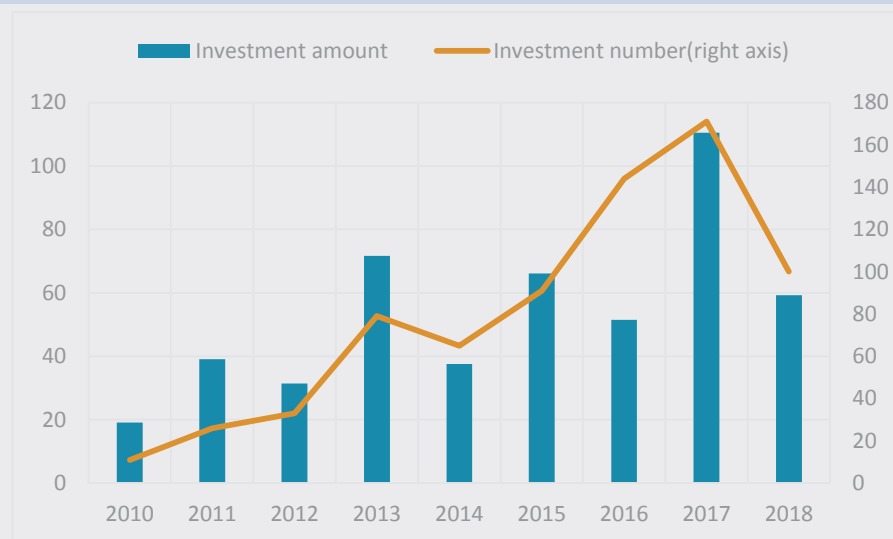


Source: Startups.watch

Latest Data: 2017

The same source supplies figures for Turkey that indicate an increase in the total amount and number of venture capital and angel investment in the last decade (Chart III.2.1.2). Investments concentrate mostly in sectors such as FinTech, cloud technologies, software, e-commerce and retail technologies.

Chart III.2.1.2 Evolution of Angel Investment and Venture Capital Investments in Turkey
(Million USD, Level)



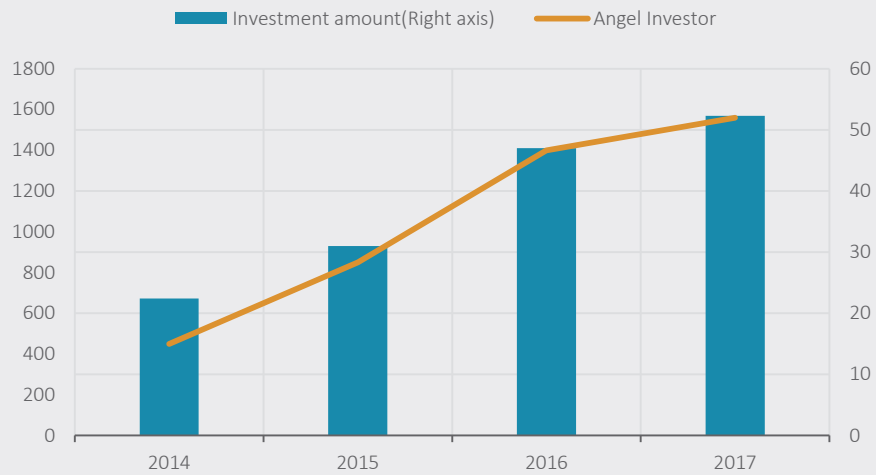
Source: Startups.watch

Latest Data: 2018

European Business Angel Network (EBAN) is an investor network working closely with European Union and candidate countries.² EBAN also publishes statistics on angel investments in the respective field it covers. EBAN figures reveal that around half of the total of venture capital and angel investments, which is presented in aggregates in Chart III.2.1.2, is made in the form of angel investment in Turkey (Chart III.2.1.3). This suggests that Turkey accommodated 15 angel investor networks and 1,560 investors registered in 2017. Turkey ranked the fifth with angel investments totaling 52.3 million euro among the EU members and EU candidates in the same year.

² <http://www.eban.org/2017-annual-eban-statistics-compedium>

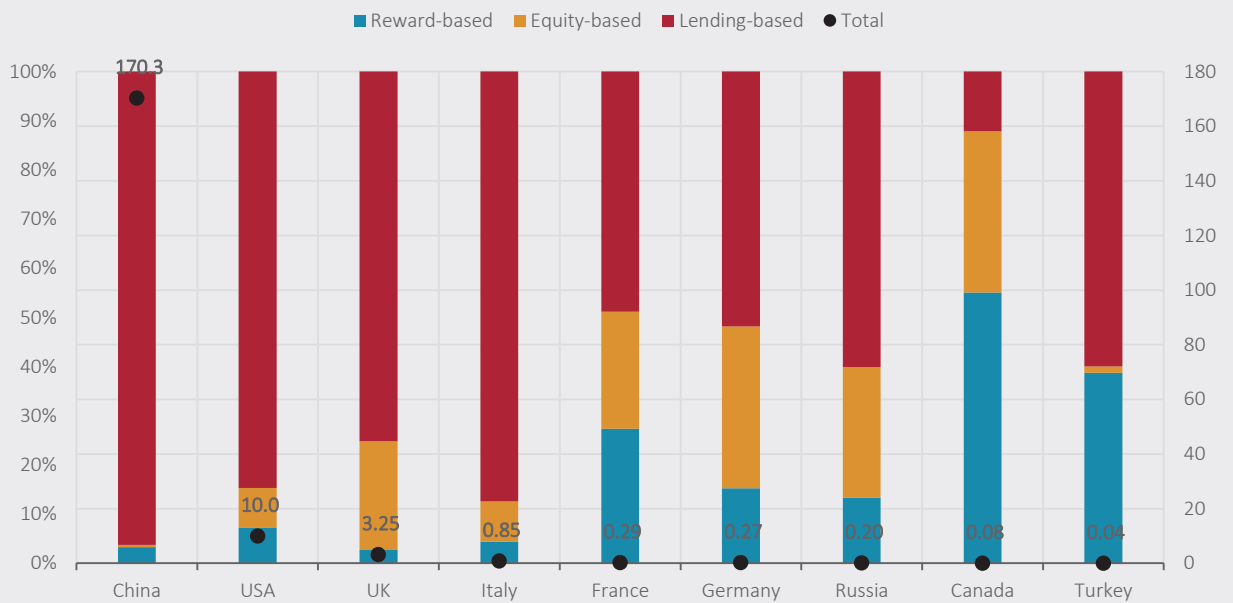
Chart III.2.1.3 Development of Angel Investment in Turkey (Million Euro, Level)



Source: EBAN

Latest Data: 2017

Chart III.2.1.4 Crowdfunding World and Turkey (% , Billion USD)



Source: Statista

Latest Data: 2018

China takes the lead in crowdfunding by a considerable margin. According to the online data platform Statista.com, the total amount of funds (USD 170 billion) that China provided through crowdfunding was almost 17 times that of its closest follower, the US, in 2018 (Chart III.2.1.4). Turkey managed to produce funds of USD 39 million in the same year. Distribution of funds in terms of types suggests debt-based funding come to the fore. In addition, the equity-based crowdfunding method is also commonly used.

Conclusion

Alternative financing methods are improving rapidly all around the world. Technological improvements and more common use of the internet accelerate this improvement. In this context, construction of

reliable data sources is important to establish the infrastructure for analyses that will contribute to the implementation of timely policies.

Strengthening and supervising the legal infrastructure of financing methods implemented completely through online platforms such as crowdfunding is significant. This type of funding is made mostly through lending around the world, yet regulations mostly concentrate on equity -based crowdfunding methods. This also applies to Turkey. Therefore, improving the scope simultaneously with the market demand will prove beneficial.

Venture capital and angel investment channels are particularly important instruments to boost investments of foreign investors in Turkey through international networks. Examples of firms recently purchased via these channels can be found. Therefore, these methods are considered as foreign investment channels as well as financing instruments.