4. DETERMINANTS OF SAVING IN TURKEY

39. Domestic saving in Turkey declined in the 2000s and is low by international standards (Section 2). Section 3 showed how low saving translates into lower growth and the link between saving and investment; it argued that saving increases have to be supported by productivity growth to ensure that economic growth will be sustainable. At the core of this report is identifying policy areas for promoting domestic savings in Turkey. This section investigates determinants of domestic saving, focusing first on aggregate public and private saving and then on household and corporate saving. As discussed above, the decomposition of private saving figures (produced by the Ministry of Development) are not available and separate data sources are utilized to obtain an understanding of the dynamics behind household and corporate savings.

4.1 Private and Public Saving

Private Saving

40. A cross-country model estimation found that four variables explain most of Turkey’s private saving behavior: the real interest rate, gross private disposable income, the young age dependency ratio, and the inflation rate. The analysis of determinants of private saving uses the estimates in Loayza, Schmidt-Hebbel, and Servén (2000), one of the most comprehensive and detailed studies of world saving rates. In particular, using the estimated coefficients in that study and data from Turkey, mainly four variables explain Turkey’s private saving rate since 1998: the real interest rate, the gross private disposable income, the young age dependency ratio, and the inflation rate. The analysis compares the actual saving rate with an estimated saving rate by holding each of the four variables at its 1998 level throughout the period (1998–2008). If the estimated saving rate is lower than the actual, it can be concluded that the particular variable affected actual saving positively. If, however, the estimated saving rate is above the actual, the change in the particular variable affected actual saving negatively.

i. The decline in the interest rate lowered private saving. If the interest rate had remained at its 1998 level, private saving in 2002 would have been over 33 percent of Gross Private Disposable Income (GPDI) and by 2008 would have been over 23 percent rather than the actual 18.6 percent. Thus, the decline in the interest rate reduced saving.

ii. The increase in income promoted private saving, particularly after 2005. Had income remained at its 1998 level, the saving rate starting in 2006 would have been about 2 to 3 percentage points lower than was actually observed.

34 A more detailed analysis of the estimation of this model can be found in the background work for this study.
iii. The decline in the young dependency ratio absorbed part of the decline in the private saving rate. In effect, had the young dependency ratio remained at its 1998 value, private saving between 2005 and 2008 would have been close to 15 percent.

iv. Finally, the large decline in inflation during the 2000s was important for the drop in private saving. Had inflation remained at its 1998 value, private saving in 2008 would have been about 22.5 percent of GPDI. Moreover, because predicted and actual saving rates started to differ significantly in 2002, it is likely that the effect of inflation on the saving rate is capturing the decline in economic uncertainty over the last few years.

41. **Time series analysis and findings from Turkey-specific analyses** are generally consistent with the cross-country model findings. Analysis using new Ministry of Development data generated for 1975–2008 explores the importance of various potential determinants of savings. While the four variables noted (income, interest rate, young dependency and macroeconomic stability as proxied by inflation) are confirmed to be significant determinants, other factors could also be at play. More favorable terms of trade are expected to increase private saving, potentially through promoting exports and a subsequent positive impact on income and growth. It also appears that higher female labor force participation is likely to increase private saving; this is also an important finding in the household level analysis discussed separately below.

42. **Financial markets are critical in channeling private savings.** Turkey has great potential for developing financial markets that would do more than promote long-term savings. Analysis of the relationship between saving and financial market depth provides the estimated thresholds required if savings are to contribute to growth (Sayek, 2010). At the mean level of savings and financial market depth over the past 30 years, Turkey has not been able to benefit from domestic saving. At the 30-year mean of financial market depth, the savings rate has to be above 58 percent to contribute to growth in real GDP per capita growth, 67 percent to contribute to TFP growth, and 27 percent to contribute to capital per labor growth. These levels are far above Turkey’s aggregate savings rate over the past 30 years. However, they do have policy relevance: policies should target both improvements in the saving rate and financial deepening (or intermediation of savings into growth-related activities) for Turkey to benefit from saving in the economy (for a more detailed discussion, see Section 5).

**Public Saving**

43. **The fall in private saving in the 2000s was accompanied, as noted, by an improvement in public saving.** Conventionally, the public deficit is used to assess public sector fiscal performance. However, for the purpose of analyzing savings, “public saving” is more appropriate. Clearly, public saving is closely related to the public sector overall balance (deficit), but it differs from that balance by the amount of investment expenditures and capital transfers (Box 2). Before considering developments in the 2000s, it may be worthwhile to look into the earlier period (1975–2000).

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35 Two background studies used the Ministry of Development’s new time-series; Apaydın, Türeli and Yalçın (2011) and Pirgan, Matur, Sabuncu, and Bahçeci (2011).

36 This section draws on the background paper prepared by the Ministry of Development Budget and Local Administrations Department, Annual Programs and Conjuncture Evaluation Directorate General.
44. For 1975–89 public saving was in the range of 3 to 6 percent of GDP but then began to decline steadily. That was a boom-and-bust period brought about by both external and domestic factors. In the 1980s there was a radical shift toward a market economy, which involved a cut-back in the role of the public sector in the economy and a significant structural transformation. The new economic policies, however, did not achieve the desired reduction in the size of the public sector or increase privatization. Saving rates started to decline at the end of 1980s because rising current expenditures and interest costs could not be offset by revenue increases. In the 1990s public finances deteriorated mainly due to rising interest payments and increased consolidated budget transfers for agriculture subsidies and social security expenditures. Interest payments shot up, from close to 3 percent of GDP to over 10 percent by the end of the decade, contributing to the expansion of public expenditures and negative public savings.

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**Box 2. The Relationship between the Public Sector Overall Balance and Public Saving**

Overall balance = Total Revenues – Total Expenditures

Public saving = Public Disposable Income – Current Expenditures

where Public Disposable Income = Total Revenues – Current Transfers

and Current transfers includes interest payments, social security deficits, agriculture subsidies, SOE transfers, household transfers, and research and development (R&D) support.

Thus, the difference between the overall balance and public saving is investment expenditure and capital transfers.

Public Sector Saving = Overall Balance + Investment Expenditure + Capital Transfers
45. **A major fiscal adjustment was behind the improvement in public savings post-2001.** Between 2000 and 2008, the ratio of the primary surplus (IMF program definition) to GDP averaged 3.8 percent. Consequently, public debt stock, which had peaked during the 2001 crisis, declined steadily. The ratio of gross public debt to GDP, which was 78.9 percent at the end of 2001, had declined to 42.9 percent at the end of 2008. Tight fiscal policy brought about a change in risk perceptions and the public borrowing cost decreased substantially. As interest rates declined from the crisis peak of 99.6 percent to 19.2 percent at year-end 2008, interest expenditure came down significantly—from 17.1 percent of GDP (93.7 percent of tax revenues) in 2001 to 5.3 percent of GDP (30.1 percent of tax revenues). In 2005 public saving turned positive for the first time since 1997 and again rose in 2006, thanks to privatization proceeds and one-off tax revenues. In general, in the 2000s the increase in revenues (mainly consumption taxes) combined with the decline in interest costs allowed for an increase in public saving before it started to decline in 2007. The adjustment for the public sector came in the consolidated budget; saving of SOEs (0.5 percent) and the rest of the public sector (2 percent) was stable (Figure 19).

46. **In general it is not possible to link past government revenue or expenditure policies to savings generation.** While the fiscal and structural policies of the 2000s helped to significantly improve public saving rates, no systematic policy was targeted specifically toward increasing savings. Fiscal adjustment was pursued to correct the fiscal expansion of the previous decade and was aimed at reducing high public debt to GDP ratios. Doing so, although not intended to boost public savings, improved the public saving-investment balance and helped make the economy less vulnerable to external shocks.

### Interaction between Public and Private Saving

47. **The theory of Ricardian equivalence implies that public and private saving are fully complementary.** If households decide to maximize their lifetime utility given their lifetime budget constraint, assuming no shocks to preferences a consumption decision today will be affected only by factors that change the lifetime household budget constraint. Rational households will internalize the actions of the government in their budget constraint, so that changes in fiscal policy, such as decreasing tax rates today, will imply higher debt levels in the future and an accompanying tax increase to repay debt. In this situation, the discounted value of future taxes will not change and will not affect the lifetime...
household budget constraint, leaving today's household consumption decisions intact. The fact that consumption is not affected by changes in taxes (or government saving) implies that private saving is reduced by exactly the same amount as the change in government saving. This suggests a one-to-one negative relationship between private and public savings—full Ricardian equivalence. However, the assumptions underlying full Ricardian equivalence are very restrictive; in practice they are usually not satisfied and most empirical studies rejected them. Even though there is very little empirical support for full Ricardian equivalence, the degree to which the proposition is relevant is of interest to policy makers.

48. **There is no empirical evidence in Turkey for full Ricardian equivalence, which suggests there is room to stimulate total saving by increasing public saving.** Time series analyses of the determinants of private saving suggest that increasing Turkey's public saving by 1 percent will reduce private saving by 0.38 to 0.68 percent. In international studies of different developed and developing countries over varying periods, the estimated Ricardian offset coefficients (the percentage decline in private saving as a result of a 1 percent increase in public saving) encompass a wide range. Lopez, Hebbel, and Serven (2000) report a range of -0.35 to -0.77. In previous estimations for Turkey, Ricardian offset coefficients similarly range from -0.42 to -0.77.

49. **On the revenue side, a correction to the current heavy reliance on indirect taxes might have a positive effect on saving.** Indirect taxes in Turkey constitute about 70 percent of total tax revenues, up from 60 percent in the 1990s. This is a reflection of the informal economy that is observable throughout the value chain. For low- and middle-income households that have little flexibility to adjust their consumption, increased indirect taxes imply a higher cost of consumption (higher prices) and thus lower savings, and underreporting of revenues leads to a loss of revenues for the government and thus lower savings. As a result, making the economy more formal and tax composition more balanced is likely to promote savings.

50. **Increased public interest payments lead to higher private saving.** Throughout the 1990s real interest rates in Turkey rose dramatically and the interest payments to GDP ratio climbed to unsustainable heights. High real interest rates and high transfers in the form of interest payments severely affected economic decisions in Turkey for a long time. The empirical analysis shows that the ratio of interest payments to GDP has a positive and statistically significant relationship to private saving in Turkey. Furthermore, disaggregated, the estimates suggest that this relationship can be attributed to domestic rather than foreign interest payments. This result supports the findings that identified interest rates as a major determinant of private saving.

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37 See Corbo and Schmidt-Hebbel (1991) for a detailed literature survey.
38 Simulations using the Loayza, Schmidt-Hebbel, Serven model suggest that the decline of private saving due to an increase in public saving is not very significant: had the public saved at its 1998 rate, private saving would have been less than 1 percentage points higher than the actual 2008 rate. That is, the short- and medium-run Ricardian offset coefficient is very small, which suggests that public savings is a useful tool to increase the national saving rate.
39 Van Rijckeghem (2010) finds an offset coefficient of -0.63 in her key specification; Metin, Özcan, Günay, Ertaç (2003) finds an offset coefficient between −0.42 and −0.66; IMF (2007) finds an offset coefficient between −0.72 and −0.77.
51. In general, the quality of fiscal adjustment is critical for channeling increased public saving into growth-enhancing activities. Because increased saving generated by cutting productive investment will hurt long-term growth, the negative impact of the decline in investments will counteract the potential contribution to growth of increased domestic savings. There is evidence, especially from OECD countries,\(^4\) that fiscal consolidations that relied primarily on tax increases and cuts in public investment have not been sustainable because higher tax revenues eventually boosted spending, and maintenance and spending on backbone infrastructure could not be postponed forever. By contrast, fiscal consolidations underpinned by structural public spending cuts have had more lasting effects because they tackled types of spending that show a strong upward drift. Countries that implemented sustained fiscal adjustments grew faster over the medium term because measures perceived as lasting pushed down real interest rates that stimulated investment. Moreover, such measures may have been perceived as implying a reduction in the future tax burden, thus generating positive wealth effects, and may have also reduced precautionary saving by resolving uncertainties about future fiscal policy.

52. The extent to which the government pays for public services like education and health may also affect private saving. Higher proportional payments for such services by households will increase consumption spending and reduce savings. Privatization of public enterprises and the increasing number of private schools, universities, and hospitals since the early 2000s may have raised the private consumption rate.

4.2 Household Saving

53. Earlier this section argued, based on an analysis of total private saving, that lower interest rates and inflation put pressure on private saving and improvement in private disposable income and a decline in the young age dependency ratio promoted it. More favorable terms of trade and increased female labor force participation also enhance the saving rate. In what follows the objective is to identify the most effective policies for stimulating Turkish household saving (conceptually part of private saving but derived from a separate data source).

54. Empirical studies have identified a variety of determinants of household savings.\(^4\) Browning and Lusardi (1996) provide a comprehensive review of the household savings literature and make several useful observations about empirically estimating saving functions. They argue that the variety of determinants of savings implies significant heterogeneity between households. The determinants they cite are the discount factor, demographics, the real interest rate, and variation in consumption and liquidity constraints. Browning and Lusardi (1996) emphasize that while it is easy to identify savers in many societies, it is not trivial to establish the motivation for savings empirically.

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\(^4\) A summary of the literature on household savings in Turkey can be found in the background work for this study.
55. **Country-specific studies point to some common determinants of household savings.** These determinants are consistent with those identified for Turkey in Section 2: First, income has been found to be a key determinant of savings for Chile, the Philippines, and Estonia, among others. Second, education is a major contributor to savings in Chile, Pakistan and Latin America and East Asia generally. It has also been argued that lower fertility rates and the existence of extended families increase saving rates in East Asia. Finally, precautionary saving to cover health risk was a key factor in the rise in saving rates in China for 1992–2005.

4.2.1 **Determinants**

56. **Turkish households have a strong precautionary motive for savings.** There is ample evidence of precautionary saving (building reserves against unforeseeable contingencies) based on Turkey specific empirical analysis (see, for example, Ceritoğlu, 2009) and focus group discussions with Turkish households. The following are indications for the existence of precautionary motives among Turkish households,

i. Households in which the head is an employer or self-employed save more. Entrepreneurs may face more volatile income streams, which reinforce precautionary saving.

ii. Households with higher elderly dependency ratios also save more because the elderly have higher health risks and consequently higher health expenditures. On the other hand, households where pension payments constitute a higher fraction of income save less. This is due to the fact that retirement benefits also provide free health coverage to the retirees, allowing these households to save less.

iii. Households in which at least one member holds a green card save less. Green cards entitle holders to free health care, relaxing the need for precautionary savings. The fact that green card is a means-tested program makes it difficult to disentangle the income effects and weaker precautionary motives. However, households where the head is employed in the informal sector and where there is at least one green card save less than those households where the head is employed in the informal sector and there are no green cards. In other words, for similar levels of household income, green card decreases savings, building a case for precautionary savings.

iv. As with the regression analysis, the precautionary motive is the reason cited most in focus group discussions. Two common rainy day examples were health risks and unemployment. Some participants said they were depending on social security schemes to pay for health care but most agreed they needed to save because the health services provided by the social security system were of low quality.

**Savings for Rainy Days**

“Especially if you work in the private sector [you need to save more], you leave home to go to work in the morning, but when you get there, you might not have a job any more” (Denizli, wage earner, male)

“You should have money on the side for a rainy day. That is why people actually save. What happens if I get sick, if something happens, if I need to have surgery?” (Istanbul, self-employed, male)

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57. A second important motive for household savings appears to be certain “life cycle events”. Life cycle events of adults in Turkey seem to focus on marriage, having children and retirement. The life cycle motive entails saving for an anticipated future relationship between the income and the needs of the individual.

i. *Marriage.* The econometric evidence does not provide a clear answer to whether households save for marriage of their members. If households save for the marriage of its single members, the saving rates would increase with the dependency ratio of 15-30 year olds. However, the regression analysis suggests the opposite: Saving rates decrease as the dependency ratio of 15-30 year olds increases. The focus group discussions suggested that in many cases participants were residing with parents before getting married. Many said they began working before getting married and were saving part of their earnings for their adult lives, usually marriage. Young adults in a household who are working would imply both lower 15–30 dependency ratios and higher saving rates.

ii. *Having children/young dependency.* A higher ratio of 0–14-year-old children to number of working members in the household, according to the regression analysis, implies lower saving. In other words, having children in the household increases consumption and hence decreases savings. The participants of the focus groups talked a lot about the increased need for saving once children were born. Whether they actually saved more was not so clear. Many participants said they began saving as soon as a child was born, starting a savings account, life insurance scheme, and private retirement account for their children and putting money aside regularly. Others said, in line with the econometric evidence, that once their children were born, household expenditures increased so much that they were unable to save. Some participants stated that they delayed having children until after buying a home because it would have been impossible to save once they had children.

iii. *Retirement.* Focus group discussions suggested that households do not plan for retirement and do suffer from an income gap (to meet their expenditures) once they retire. The insufficient private pensions (see Section 5) offer one explanation for the existence of this “pension gap.”

58. **Higher female employment is correlated with higher saving.** Given the low employment rates in Turkey, the dependency ratio among the working age population is high compared to OECD countries, mainly due to a low female participation rate (Figure 20). Consistent with the dependency hypothesis (higher dependency implies lower saving), labor markets or policies that allow low labor force participation and employment rates are

![Figure 20. Employment Rates in 2009 Across Countries (%)](image-url)

Source: OECD

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43 Aviva (2010) provides an estimate of the pension gap for Turkey.
expected to suppress saving rates. Especially in Turkey, where the share of young population and the
number of children in school is high but the employment rate is low, the average consumption rate is
expected to be high controlling for income. The micro data analysis shows that the ratio of working
females has significant and positive effects on saving rates. Holding everything else constant including
income, households in which more women work, save more. This may have important implications
for policy in Turkey, especially because the female labor force participation rate is extremely low in
Turkey. Similarly, in the survey of consumer finances\textsuperscript{44}, the probability of dissaving declines significantly
with the number of employees in the family. The focus group discussions also provide evidence that
supports this finding. More than males, female focus group participants emphasized the need to save
for their children’s college and other expenditures. It appears that the stronger the voice women have
in household finances, the more they save for their children.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|}
\hline
\textbf{Women, Especially Working Women, Tend to Save More} & \\
\hline
“Girls need to have savings on the side. That is how I was taught to save. I saved more after I got
married. I invested in bangles, in gold. I provide for the children’s future.” (Denizli, wage earner, female) & \\
“My mother likes gold. When I need money, for example to buy a new car, she will give me gold
instead of withdrawing from the savings account in the bank.” (Antep, self-employed, male) & \\
“I used to give the money I saved to my father if he needed it or to my mother. But we usually
keep it a secret from our fathers. We give them to our mothers so that they save it and spend it
on us later on.” (Adana, self-employed, female) & \\
\hline
\end{tabular}
\caption{Women, Especially Working Women, Tend to Save More}
\end{table}

59. \textbf{Cross-country panel data estimations confirm the highly positive association
between employment rate (and the female labor force participation rate) and saving rates.} Panel
regressions\textsuperscript{45} suggest that high female labor force participation increases saving. In this analysis, a 10
percentage point increase in female labor force participation corresponds to a saving rate rise of about
1.5 percentage points.

60. \textbf{Education has a positive but limited effect on saving rates, when controlled for income
effects.} The education level of the household head and the average education level of household
members have similar effects on the saving rates. Even though these effects are smaller in comparison
to other variables, they are surprisingly consistent across years, both in terms of magnitude and
significance. Kırdar and Cilasun (2009) also find a consistently positive relationship between education
levels and saving rates.

\textsuperscript{44} See Box 3.

\textsuperscript{45} The panel regressions use data from the World Bank DDP database for about 150 countries for 1980–2008. Shares of industrial value
added, per capita income, GDP growth rate, young dependency ratio, female participation rate, terms of trade, CPI inflation rate, deposit
interest rates, private sector credit-GDP ratio, and time trend are used as independent variables in explaining saving rates.
61. Home ownership appears to be the single most important objective of household saving. The regression results show that ownership of a home and of a second property are positively correlated with saving rates. Since very few households owe on their homes, households appear to save to buy these items rather than take out mortgages. Households that save more are probably more likely to save enough to buy homes, explaining the positive relation between home ownership and saving rates. Similarly, many focus group participants stated that they were saving to buy homes. They said they save in small amounts and in different saving alternatives until they have enough for the down payment. Most also said they would buy property if their incomes were to double permanently; they consider it a way to invest. The general belief is that real estate never loses value and can always be rented. It is generally believed to yield the highest return of all alternatives.

62. There is indication of a bequest motive. The non-decreasing age profile of saving in the micro-level data may indicate bequest motives. Households may save more as the head of household ages if they would like to bequeath something to their younger members. Focus group participants were divided on this issue: some would like to leave something behind, and some believe their children should take care of themselves. Those with a bequest motive mainly want to bequeath a home. Some plan to leave their homes to their children; others try to buy them separate homes. International evidence also suggests that increasing life and health expenditure uncertainty explain why saving rates of elderly and retired people remain high.

### Buying Homes to Live in, Buying Homes for Children

“I bought my home in 2004 for TL 45,000. Now it is worth TL 250,000. No bank in the world will pay this return for cash.” (Istanbul, wage earner, male)

“My children should earn and buy, just like I earned and bought.” (Antep, wage earner, female)

“[If my monthly pay were to double permanently] I would buy real estate. I have two daughters; I would want both of them to have a home.” (Istanbul, wage earner, male)

“We would like to bequeath a home if not a business. Most probably we will not be able to bequeath a lot of money. Even if they work for minimum wage, they will be able to get by if they do not have to pay rent.” (Adana, wage earner, female)

### 4.2.2 Portfolio Choice

63. The previous sub-section discussed the main saving motives of Turkish households. There is evidence for precautionary savings, which largely explains the drop in the private saving rate in the 2000s. Certain life cycle events, such as having children, and participation of female members of the household into the work force also affect household saving behavior. There is also some indication of a bequest motive. Having explored determinants of household saving behavior, it is informative to investigate household portfolio allocation—how they make use of their limited savings. The discussion will first focus on allocation of savings between assets within the financial system and those outside (under the mattress) and nonfinancial; it will then decompose savings inside the financial system.

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46 In the raw data, out of about 5,500 home owners each year, 200-300 households owe on their current homes.
Financial vs. Nonfinancial Holdings and Saving Outside the Financial System

64. The portfolio allocation of Turkish households sheds some light on saving attitudes. A survey of consumer finances (SCF) was first conducted in Turkey in 2008 and is used in this report to complement analysis based on the HBS and focus group discussions. The SCF (Box 3) elicited rich information on assets, liabilities, income, attitudes toward saving and borrowing, and other financial characteristics of households in Turkey.

Box 3. The Survey of Consumer Finances*

The first SCF in Turkey was conducted in 2008. It found a comprehensive distribution of household assets and liabilities. The SCF combines portfolio data with information on demographics and income of each household and on household attitudes toward borrowing, lending, and liquidity.

Household data collected by Turkstat are more oriented toward income and consumption expenditures and do not include detailed information on assets and liabilities.

The Turkish SCF is one of the most detailed surveys of household portfolios outside developed countries. The design is similar to that of the SCF in the United States, the Survey on Household Income and Wealth in Italy, and the DNB Household Survey in the Netherlands.

The SCF is a comprehensive survey of 4,432 households. Like most surveys of consumer finances, it has a dual-frame sample design: A randomly selected area-probability sample of 4,031 households was interviewed in October-December 2007. It was supplemented by a sample of 401 high-income households representing the top 5 percent of the income distribution that was interviewed in January 2008. Samples were weighted to construct statistics. Details of the questionnaire, survey design, and calculation of the sample weights can be found in Adaman, Kaytaz, and Yilmazer (2008).

* The SCF in Turkey was undertaken by Fikret Adaman, Mehmet Kaytaz, and Tansel Yilmazer pursuant to a grant from the Scientific and Technological Research Council of Turkey (TUBITAK).

65. Households may invest in either financial or nonfinancial assets. Financial assets include transaction accounts in Turkish Lira (TL) and foreign currency, term deposits in TL and foreign currency, gold, savings outside of financial institutions, loans to others (friends, family, and businesses), and other financial assets (mutual funds, public fixed-income securities, Eurobonds, private fixed-income securities, stocks, shares in listed and unlisted companies, and savings in private pension plans). Nonfinancial assets include primary residence, other residential property, other real estate and land/farm, business, vehicles and other nonfinancial assets. Liabilities include loans utilized to purchase nonfinancial assets, credit card liabilities, installment debt and other debt (loans from friends/family, bank credit for personal use, loans from the employer and liabilities for utilities and taxes).

47 HBSs provide very little information on portfolio choice. There are no direct questions on gold or money under the mattress. Even though there are questions in the survey on life insurance, private health insurance and private retirement insurance ownership, there are very few households who seem to declare using them in the micro level data. However, in the focus group discussions, there is indication of wider usage.
66. **The fraction of households that have nonfinancial assets is higher than those holding financial assets.** In the SCF about 67 percent of households reported having nonfinancial assets, usually a primary residence (53.5 percent), a vehicle (25.6 percent), and other property and land (10.1 percent)\(^{48}\), while only about 30 percent of households reported that they hold any type of financial assets.

67. **As households grow older, resources are increasingly dedicated to accumulation of nonfinancial rather than financial assets.** While 48 percent of households headed by individuals younger than 30 had some nonfinancial assets, 82 percent of households headed by individuals older than 60 had such assets. Both types of assets increase with household income and education of the household head, consistent with the finding from analysis of the HBS that saving increases with income and education. Across net worth groups there is significant inequality in terms of holdings of financial and nonfinancial assets. Holdings of gold decrease with the age of the household head, but age has no effect on the amount of assets held in financial institutions. For example, gold accumulated at the beginning of the lifecycle might be used in emergencies or turned into down payments on real estate.

68. **At higher incomes households have a wider range of nonfinancial assets.** The percentage of households that report having different types of nonfinancial assets increases with income. In terms of asset types, households with higher incomes were more likely to have secondary homes, other property, and land and businesses.

69. **Households in Turkey seem to spend significant amounts on consumer durables.** The median amount spent on durables is equal to the median amount of financial assets and is about one-third of median annual household income. Spending on consumer durables increases with household income, education of household head, and net worth. Borrowing rather than accumulated savings seems to be used for purchasing consumer durables.

70. **Focus group participants declare a considerable amount of saving under the mattress.** Informal instruments of savings are typically gold, cash and foreign currency held under the pillow, loans to family/friends and business, rather than such formal savings as transaction accounts and time deposits. Participants of focus groups declared to have a significant amount of saving under the mattress that does not enter the banking system. The money under the mattress is usually in the form of local currency, foreign currency, gold coins (for both men and women) and jewelry (mainly for women).

71. **There is evidence that gold is popular for savings in Turkey.** About 30 percent of households bought gold, jewelry, or watches in the past year. Many focus group participants started saving in gold and still do so; only a few have “gold accounts.” The SCF found that 14.8 percent of households have savings in gold. Policies to stimulate saving or attract savings into the financial sector could take the popularity of gold into consideration.

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\(^{48}\) The homeownership rate in Turkey was 70.9 percent in 1994 and 71.95 percent in 2003 (TurkStat, 1994; Sarioğlu, 2007). In 2000, about 64 percent of the population resided in urban areas, where in 1994 the homeownership rate was 59.0 percent (TurkStat, 1994). In 2008, an estimated 70.5 percent lived in urban areas (TurkStat, 2008). The increase in households living in urban areas caused a decrease in homeownership. Yılmazer, Adaman, and Kaytaz (2009) investigate the impact of financial development on homeownership.
72. Many women and some men in the focus groups said they participated in “gold days” or “currency days” as a way of saving: A group forms a small lending / borrowing system in which every participant pays a fixed amount to one member every month. The participants take turns receiving the total amount. Participants said that they use the money to cover expenses and sometimes to save. It is interesting that they use this system instead of opening a savings account into which they put a fixed amount every month and on which they earn interest. It may be that the system is a good commitment strategy; it is possible to avoid putting money in a bank but not to avoid paying other gold day participants.

Allocation of Household Savings in the Financial System

73. Turkish households hold a mix of financial and nonfinancial assets. Although it is not easy to estimate assets outside the financial system (such as gold and foreign exchange holdings under the mattress), from micro level data and focus group discussions it appears that the amounts involved are not small. Details on the “registered” household financial asset holdings, on the other hand, are available and can inform the design of schemes to promote saving and divert nonfinancial and “unregistered” financial savings into the system.

<table>
<thead>
<tr>
<th>Year</th>
<th>TL billion</th>
<th>Percent of GDP</th>
<th>TL Deposits</th>
<th>FX Deposits</th>
<th>Government Securities</th>
<th>Shares</th>
<th>Money in Circ.</th>
<th>Private Pensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>157.6</td>
<td>34.7</td>
<td>29.1</td>
<td>35.2</td>
<td>22.4</td>
<td>5.1</td>
<td>6.4</td>
<td>0</td>
</tr>
<tr>
<td>2004</td>
<td>190.5</td>
<td>34.1</td>
<td>33.3</td>
<td>32.2</td>
<td>20.5</td>
<td>6.5</td>
<td>6.5</td>
<td>0.2</td>
</tr>
<tr>
<td>2005</td>
<td>219.5</td>
<td>33.8</td>
<td>41.2</td>
<td>27.2</td>
<td>14.9</td>
<td>7.2</td>
<td>8.3</td>
<td>0.5</td>
</tr>
<tr>
<td>2006</td>
<td>279.7</td>
<td>36.9</td>
<td>40.6</td>
<td>26.8</td>
<td>10.1</td>
<td>5.6</td>
<td>8.8</td>
<td>1</td>
</tr>
<tr>
<td>2007</td>
<td>313.6</td>
<td>37.2</td>
<td>45.4</td>
<td>25.0</td>
<td>6.3</td>
<td>5.6</td>
<td>8.4</td>
<td>1.5</td>
</tr>
<tr>
<td>2008</td>
<td>366.9</td>
<td>38.6</td>
<td>51.3</td>
<td>24.1</td>
<td>5.4</td>
<td>2.9</td>
<td>8.3</td>
<td>1.7</td>
</tr>
<tr>
<td>2009</td>
<td>420.4</td>
<td>44.1</td>
<td>49.9</td>
<td>23.4</td>
<td>3.3</td>
<td>5.9</td>
<td>8.4</td>
<td>2.1</td>
</tr>
<tr>
<td>2010*</td>
<td>463.3</td>
<td>41.9</td>
<td>51.1</td>
<td>21.7</td>
<td>2.2</td>
<td>6.5</td>
<td>9.4</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: BR SA

*As of October.

74. In Turkey the financial instruments available to households are relatively limited. Household balance sheets are dominated by deposits, which since 2003 have been shifting from foreign exchange (FX) to TL deposits (Table 2 and Figure 21). While government securities constituted about 22 percent of household financial assets in 2003, this share plunged to just above 2 percent in 2010. The relative declines in FX-denominated financial assets and government paper were offset, however, by the rise in other TL-denominated instruments, mainly deposits and stocks.
75. There are several explanations for the composition of assets, especially the large holdings of bank deposits. Since Turkish financial markets are at an early stage of development, banks are major players. Banks have traditionally offered competitive rates, and holding bank deposits has been perceived relatively safer (less risky) than other assets, such as listed stocks. Investing in government securities is generally difficult for individual investors because benchmark government securities have longer terms (22 months vs. 45 days for bank deposits) and other government debt instruments (such as inflation-linked bonds and floating rate notes) are highly complex. Though the stock market in Turkey has performed well for the last five to six years, it has been volatile. There is also a perception that the stock market lacks transparency and is manipulated. Investment in mutual funds has not been as rewarding because it involves a tax of 10 percent on capital gains while direct investing in the stock market is tax-free.

76. Household liabilities have increased almost twelvefold, though from a low base of TL 8.0 billion in 2003, to TL 135.2 billion at the end of June 2010, largely because consumer loans and credit cards have become popular. The general decline in the interest rate, rising income, and Turkey’s young demographic are the main drivers of the rapid growth in consumer borrowing. Banks have also been eager to attract consumers as borrowers because the margin is much higher than lending to the corporate sector. As a result, household liabilities as a share of assets shot up from 9.5 percent in 2004 to 31.5 percent in mid-2010.
Table 3. Turkey: Returns on Financial Instruments (2005–2010) (Percent)

<table>
<thead>
<tr>
<th></th>
<th>Gross</th>
<th>Tax</th>
<th>Net</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank deposits</td>
<td>20.1</td>
<td>15.0</td>
<td>17.1</td>
</tr>
<tr>
<td>Benchmark bonds</td>
<td>15.2</td>
<td>10.0</td>
<td>13.7</td>
</tr>
<tr>
<td>Mutual funds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type A (equity)</td>
<td>16.9</td>
<td>10.0</td>
<td>15.2</td>
</tr>
<tr>
<td>Type B (fixed Income)</td>
<td>9.3</td>
<td>10.0</td>
<td>8.4</td>
</tr>
<tr>
<td>Equity (ISE)</td>
<td>28.3</td>
<td>0.0</td>
<td>28.3</td>
</tr>
</tbody>
</table>

Source: ISE, BRSA, CMB of Turkey, and World Bank staff calculations

77. A relatively high return on bank deposits helps explain their predominance in household assets (Table 3). Calculations of returns are based on quarterly averages and may differ from monthly performance numbers. Between 2005 and 2010 bank deposits generated an annual gross return of 20.1 percent and a net return of 17.1 percent. Bank deposits substantially outperformed all other asset classes by a sizable margin except for returns on the ISE, which were 28.3 percent—11.2 percentage points higher than the return on bank deposits. However, returns on equity were much more volatile (a high standard deviation) than on bank deposits. Household asset allocation for 2005–2010 was based on the short duration and very high real interest rates on bank deposits. However, the same asset allocation is likely to generate substantially lower returns in future given the sharp decline in interest rates on government securities and bank deposits.

Saving Promotion Programs: International Experience

78. Specially designed saving promotion programs, mandatory or voluntary, could be used as tools to increase household savings. Turkey had its own mandatory saving (encouragement) scheme, which faced several design and implementation challenges and as a result, discontinued (Box 4). In the 1980s many OECD countries introduced measures to promote household savings; tax-preferred saving accounts (TPSAs) were the most common.\(^{49}\) The following describes successful saving promotion policies\(^{50}\) that could inform the design of similar programs in Turkey.

\(^{49}\) OECD (2007).
\(^{50}\) Several other country cases are summerized in Uygur (2011).
Box 4. The Account to Encourage Employee Savings (ÇTTH)*

Through Law No. 1457, effective April 1988, the Government of Turkey introduced a mandatory saving program for employees, the Account to Encourage Employee Savings (ÇTTH). The ÇTTH was intended to

- withhold part of employee wages/salaries as “compulsory” saving;
- secure contributions to this account from employers and the state;
- ensure that self-employed workers saved part of their income; and
- by using the funds accumulated in the best possible way, encourage employees to save.

Table B4 presents the withholding rates for wage-earners and contributions by the state and employers at different periods while the law was in effect.

<table>
<thead>
<tr>
<th>Period</th>
<th>Withholding Rate for Wage-Earners (Percent)</th>
<th>State/Employer Contribution (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1988–January 1989</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>July 1989–July 1994</td>
<td>4.0</td>
<td>6.0</td>
</tr>
<tr>
<td>July 1994–June 2000</td>
<td>2.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

The withheld amounts and contributions were collected in an account in the state-owned Ziraat Bank on behalf of the state. The number of beneficiaries from this account was around 5 million people. The authority for managing the funds accumulated in the account was given to the High Planning Council, with permission to invest in all kinds of instruments except real estate. As of end May 2001, the total amount of money collected in this account was TL 8 billion: TL 1.7 billion principal and 6.4 billion TL accretion. With an exit of 1.9 billion TL, net amount of money left in the fund was 6.1 billion TL. These compulsory cuts were ended and the collected money was decided to be distributed to the beneficiaries in June 2000.

The ÇTTH faced several problems during its 12 years of existence. On one hand, there were various cases where the contributions by the employer to the assigned Ziraat Bank account were not made. On the other hand, the management of the collected funds was questioned ex-post. Since the state had responsibility for to investing the money in the best possible way, this opened the door for challenges of the returns by beneficiaries once the account was being dissolved. Finally, widespread noncompliance by private employers created unfair competition between them and those that fulfilled the requirements.

* This discussion draws on Saygılı (2002).

79. The case of the UK. The UK has a long history of TPSAs; it has introduced at least five since the late 1980s. One major reason for TPSAs is that a significant proportion of the population saved very little or nothing. According to the OECD (2007, p. 70), in 1997 half the adult UK population hardly saved at all. One of the accounts the UK introduced is the Saving Gateway (SG). Established in 2002, this pilot project was targeted at low- to middle-income households through government matching rather than tax exemption. For every Great British Pound (£) an investor saves, the government matches 20 to 100 percent up to a maximum of £400. The account can be withdrawn after 18 months. A person can hold
only one account. The saver can withdraw the funds, but unless the withdrawn amount is redeposited it does not earn government contributions. To open an SG account, the investor must be of working age and satisfy certain conditions. A second program is the Child Trust Fund (CTF), launched in January 2005; the government provides a saving bonus of £250 to open an account and an additional £250 if family income is low. The objectives of the CTF are to (i) help people understand the benefits of saving and investing and contribute to their financial education; (ii) encourage parents and children to develop saving habits and engage with financial institutions; and (iii) ensure that in future all children have a financial asset at the start of their adult life. No taxes are paid on CTF. There is a maximum of £1,200 a year for contributions. Withdrawals of funds before the age of 18 are not allowed but thereafter withdrawals are tax-free.

80. The UK TPSAs have made many positive contributions, according to Collard and McKay (2006). First, the schemes encouraged participants to save, and to save regularly. A large proportion of SG participants said they tended to put money away for the longer term and to continue to save regularly. Then, as money management skills improved, psychological, attitudinal, and other longer-term changes in behavior were observed. There was a notable shift in attitudes in favor of saving: over 50 percent of SG participants said they felt more financially secure; many also reported an increased propensity to plan for retirement.

81. In the US, states began to set up 529 Plans, also called Qualified Tuition Plans, in the late 1980s and early 1990s. The goal was to help families at all income levels set aside funds for higher education for their children and relatives. There is no beneficiary age limit. Contributions are not tax-deductible, but earnings on the accounts are tax-free. There are practically no limits on contributions; in many states contributions per beneficiary exceed USD 300,000. Qualified withdrawals for education expenses incurred during the year are tax-free. Nonqualified withdrawals of amounts in excess of education expenses are subject to income tax plus a 10 percent penalty.

82. With regard to TPSA effectiveness, the OECD (2007) reports the following:
   i. Although wealthier households profit more from TPSAs, participation of low- and middle-income households is substantial.
   ii. Contributions increase with the holder’s income.
   iii. Contributions as a percent of income are highest for low-income earners.
   iv. It is likely that the effect of TPSAs on saving lies between the hypothesis that no 529 deposits are new saving and the hypothesis that all 529 deposits are new saving. The data indicate that TPSAs other than educational plans create new saving when moderate-income households participate.
   v. How much TPSAs cost depends on whether incentives are granted through tax credits or exemption from tax of accrued earnings. The most expensive accounts are those with a tax credit or payment of a generous saving bonus by the government.

51 For the first pilot eligibility depended on (i) having children, with annual household earnings less than £15,000; (ii) disability, with annual household earnings of less than £15,000; (iii) neither of the above but annual household earnings of less than £11,000; or (iv) being unemployed and receiving benefits. For the second pilot, eligibility criteria were (i) qualifying for and receiving unemployment benefits; (ii) being employed and earning less than £25,000 annually with household earnings of less than £50,000.
vi. The conclusion is that it is important for the efficiency of TPSAs to attract moderate-income households, which are more likely to save more when given the opportunity to invest in tax-favored accounts. Furthermore, since moderate-income individuals have a lower tax rate, the more they participate in comparison to high-income individuals, the lower the cost of foregone tax revenues.

4.3 Corporate Saving

83. This section discusses determinants of firm saving rates and net profit margins in Turkey. Like previous studies, the Turkey-specific estimations suggest that savings and profitability are closely associated. The corporate saving rate increases with net profit (see also Section 2). This section starts with a short description of nonfinancial firms.

Nonfinancial Firms in Turkey

84. In Turkey nonfinancial firms, specifically SMEs, grow slowly compared to firms in countries with similar characteristics (World Bank, 2010). The World Bank’s Investment Climate Assessment 2010 and consultations with firms during this study suggest that lack of access to external financing is a binding constraint on firm growth in Turkey. Consultations with corporations also suggest that smaller firms are less likely to report their activity in full to avoid administrative and tax burdens. They may therefore prefer not to use internal funds and to stay below a certain size threshold which constrains firm growth. Unlike employment and real assets, profits of SMEs relative to those of large firms grew rapidly between 2002 and 2007. A favorable macro environment—a declining cost of external finance and high overall demand—contributed to the rise in SME profits.

Figure 22. Bank Loans to Corporate Sector (Percent of GDP)

Corporated Sector SMEs and Large Firms

Source: BRSA

52 Specifications for both saving rate and net profit margin equations are similar when the regressions use GMM dynamic panel methodology. ISE data are used for modeling the determinants of the saving rate because saving data is available only for listed firms. CBRT data are used for modeling net profit margins. The results reported here are primarily findings from the savings rate regressions, which are in line with findings from net profit margin regressions.

53 Firm-level evidence from CBRT data.
85. **Limits on access to external finance appear to be a constraining factor for SME employment and real asset growth.** In fact, in GDP terms the share of loans to SMEs by banks has stagnated in recent years, while the share of large firms increased substantially (Figure 22). Firm-level econometric analysis using both ISE and CBRT data suggests that in Turkey SMEs are financially constrained. In other words, SME investments are highly sensitive to internal cash flows. For these terms internal and external funds are not perfect substitutes and their investments are limited by the magnitude of their cash flows or ability to generate internal funds. Because large firms with strong collaterals are more likely to substitute between internal and external funds at low cost, their investments are estimated to be less sensitive to internal cash flows. Figure 23 indicates a close association between the cash flows-net sales ratio and the fixed investment-net sales ratio. These findings are consistent with earlier studies of the Turkish corporate sector, such as those of Kaplan, Özmen and Yalçın (2006), Günay and Kilinç (2011), Yeşiltaş (2009).

86. **Generating internal funds is one of the options for promoting firm growth in Turkey.** The intermediary function of financial markets in Turkey is not sophisticated enough to attract external funds and allocate them to high-return investments. Besides the shallow financial system, such factors as low financial savings amplify the importance of internal funds generation in Turkey. Generating internal funds entails boosting firm profitability and retaining profits. An analysis of the determinants of firm saving rates and net profit margins could thus provide valuable information for identifying policies to increase the ability of firms to generate internal funds.

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54 Recent efforts to address this constraint include: (i) the establishment of the ISE Emerging Companies Market aimed at enabling SMEs to raise funds from the capital markets; and, (ii) Small and Medium Enterprises Development Organization’s (KOSGEB) introduction of the “Emerging Companies Market SME Support Programme” through which the Initial Public Offerings (IPO) costs are financed through non-repayable funds.

55 Dynamic panel data methodology (difference-generalized method of moments (GMM)) is used in the regressions to estimate the determinants of saving rate and profit margin. Only findings from manufacturing firms are reported.

56 To illustrate: findings based on listed firms show that the coefficient of cash flow variable is estimated to be 0.16 and statistically significant for SMEs while it is statistically insignificant and small, about 0.06, for large firms.

57 Internal funds (or cash flow) are defined as the sum of retained earnings (or savings) and fixed capital consumption (or amortization of fixed capital).

Firm Characteristics and Structure

87. Savings rate and net profit margin increase significantly with firm size. Large firms tend to save more, and firms that grow rapidly are more likely to save. This finding is consistent with the view that the corporate sector saves less in Turkey because of the large number of small firms, which often operate below optimal scale. In fact, the SME saving rate is more sensitive to asset size and the growth rate of assets. While policies that encourage mergers and enhancing firm capacity may contribute to savings and wealth accumulation, there may be other constraints on firm growth. In particular, consultations with corporations suggest that they tend to underreport activity due to the lack of inspection and the high administrative burdens in Turkey. Also, because SMEs are mostly run by families, their growth is closely linked to intra-family relations. Firms may have difficulties in reaching optimal scale due to splits of capital among the second generation.

88. Indebtedness (defined as the leverage ratio) reduces firm savings and profit margins. A high premium increases the cost of external finance. As a result, the wedge between net profit margin and operating margin enlarges, leading to a lower saving rate when the dividend payout ratio is stable. However, for firms that are not financially constrained and thus have a low external financing premium, an increase in the leverage ratio affects saving less. Two opposite effects might emerge as financial constraints ease: (i) A decline in the external financing premium will increase net profit margins and savings rates for a given level of debt; or, (ii) it will encourage use of external finance and thus reduce the need for retaining earnings, which will lower saving rates. Improving conditions for access to external finance would not only help increase the supply of funds but also reduce their cost. This might improve net profit margins.

89. The more tangible assets firms have, the fewer funds they tend to retain. Firms with a high tangibility ratio are likely to be large firms. For large firms, it is easier to substitute external funds given their rich collaterals, which is a factor undermining the link between tangibility and the saving rate. This finding suggests that firms in general can push up savings rates and profit margins by investing in intangibles like R&D rather than in buildings and land.

The Macroeconomic and Fiscal Environment

90. Given Turkey’s shallow financial markets, the government’s fiscal position has serious implications for financially constrained firms in Turkey. In the past large public deficits often crowded out private activity. High public deficits or debt increased the cost of financial intermediation, reduced the funds available to business (crowding out), threatened economic stability, and deteriorated investor
sentiment (Özatay, 2008; Kaplan, Özmen, and Yalçın, 2006). The evidence supports this argument: public debt as a percent of GDP is estimated to have a negative and significant impact on saving rates and net profit margins. Similarly, time series analysis shows that expansionary fiscal policy has a negative impact on private saving and investment.

91. Financial depth is estimated to have a positive and significant impact on saving by manufacturing firms. These results support the argument that the saving rate and profit margins increase with financial depth, which reflects the degree of financial system development. A developed financial market is assumed to relax firm financing constraints by increasing the quantity and quality of resources available to firms and by reducing capital market imperfections. Consequently, corporations may benefit from using investment opportunities more effectively, which increases profitability.

92. GDP growth is estimated to have a positive impact on saving rates and profit margins, which suggests that demand conditions promote internal fund generation. The positive and significant impact of GDP growth on firm profitability is consistent with the accelerator model of investment (Fazzari, Hubbard, and Petersen 1988). An increase in real output accelerates profits (and thus investments) for all firms, and in the CBRT sample the impact tends to be highest for small manufacturing firms. This result supports the argument that policies to improve output and macroeconomic conditions may have a conventional Keynesian multiplier/accelerator effect through firm profits and investments.

Box 5. Taxation of Retained Earnings in Chile

Saving and investment rates in Chile increased by some 10 percent of GDP in the late 1980s and 1990s. Hsieh and Parker (2007) explain that a main reason for this development and the accompanying growth boom was a reform that cut the corporate tax rate on retained corporate profits from about 50 percent to 10 percent between 1984 and 1986.

Hsieh and Parker (2007) state that when firms face credit constraints, taxation of retained profits is more distortionary than taxation of dividends because taxation of retained profits draws down internal funds and thus lowers investment by the amount of the tax. Firms not so constrained can largely avoid retaining profits and fund investment through other means. They argue that by reducing the tax rate on retained earnings, the tax reform that started in 1984 in Chile increased the internal funds of credit-constrained firms and led to a significant rise in corporate savings and investments.

ISE and CBRT data produce slightly different results on whether size of firm is a factor in determining how financial depth affects net profit margins; while ISE data suggest financial depth has no significant impact on relatively small listed firms, using the CBRT data, the impact is significant and larger for small firms.
93. **Estimations for large and exporting firms suggest that corporate savings and net profit margins decline as the currency appreciates.** The saving rates and profit margins of large manufacturing firms seem to be more sensitive to the real exchange rate. In addition, the negative impact of real appreciation increases with a firm’s export intensity. In other words, the saving rates and net profit margins of firms that have a high export share or are heavily involved in tradable activities seem to be more sensitive to the real exchange rate. This is consistent with previous studies suggesting that the impact of real exchange rates on corporate profitability and investments depends crucially on export and import intensities and net liability dollarization.\(^\text{62}\) The absence of firm-level data for import intensities and net liability dollarization (the difference between FX-denominated liabilities and assets) means that it is only possible to consider the competitiveness and domestic demand effects of real exchange rate changes. Consequently, the results discussed here may be biased upward for firms with higher import intensity or severe net liability dollarization. Morande (1998) argues that in Chile some tradable sectors benefited from currency depreciation, which induced them to save and invest. Hsieh and Parker (2007) argue that in Chile, along with reforms, a substantial currency depreciation had a positive effect on firm savings and investment.\(^\text{63}\) They also argue that the change in the tax treatment of retained earnings was central to promoting corporate savings in Chile (Box 5).

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\(^{62}\) Real exchange rates may affect profitability and investments through domestic revenues if import competition or potential wealth effects shift demand for domestically produced goods. A real depreciation may be expansionary by increasing operating profits for firms that are primarily exporters by boosting relative competitiveness; the reverse may be true for import sectors or the firms that use imported inputs intensively (Campa and Goldberg, 1998). Real exchange rate depreciations may undermine the net financial position of firms with significant liability dollarization through the balance sheet effect (Galindo, Panizza and Schiantarelli, 2003 and Kesriyeli, Özmen and Yiğit, 2011).

\(^{63}\) There is mixed evidence on the role of real exchange rates on growth in the literature. According to Rodrik (2008) undervaluation of domestic currency stimulates economic growth especially in developing countries. In the same vein, Hausmann et al (2005) finds that depreciated real exchange rates are important in growth accelerations. On the contrary, according to Montiel and Serven (2008), the argument that real exchange rate depreciations will stimulate savings and growth is yet to be adequately supported empirically and analytically. Levy-Yeyati and Sturzenegger (2009) notes that “neomercantalist” views on the positive impact of depreciated real exchange rates on growth tends to be supported by data in the absence of financial dollarization. Under the Mundell-Flemming framework, devaluations are contractionary in financially dollarized economies due to the balance sheet effects (Frankel, 2005).