

Report No. 66301-TR

Turkey

Country Economic Memorandum (CEM)

Sustaining High Growth: The Role of Domestic Savings Synthesis Report

December 23, 2011

Poverty Reduction and Economic Management Unit
Europe and Central Asia Region



Document of the World Bank

CURRENCY AND EQUIVALENTS UNITS

Currency Equivalents

(Exchange Rate Effective January 2, 2012)

Currency Unit: Turkish Lira (TL)

USD 1 = 1.8768 TL

Government Fiscal Year

January 1 - December 31

Weights and Measures

Metric System

ABBREVIATIONS AND ACRONYMS

ARDL	Autoregressive Distributed Lag	ISE	Istanbul Stock Exchange
BIS	Bank for International Settlements	IPO	Initial Public Offering
BRSA	Banking Regulation and Supervision Agency	IRA	Individual Retirement Account
CAD	Current Account Deficit	£	British Pound
CBRT	Central Bank of the Republic of Turkey	LAC	Latin America and the Caribbean
CEM	Country Economic Memorandum	MENA	Middle East and North Africa
CMB	Capital Markets Board	NBFI	Nan-Bank Financial Institutions
CPF	Central Provident Fund	NPS	National Pension Services
CTF	Child Trist Fund	OECD	Organization for Economic Cooperation and Development
ÇTTH	Account to Encourage Employee Savings	PF	Publicly Managed Fund
DB	Defined-Benefit Schemes	R&D	Research and Development
DC	Fully-Funded Schemes	RMF	Retirement Mutual Fund
ECA	Europe and Central Asia	SCF	Survey of Consumer Finances
EPF	Employee Provident Fund	SG	Saving Gateway
ETF	Exchange Traded Funds	SME	Small and Medium Enterprises
EU	European Union	SOE	State-Owned Enterprises
FX	Foreign Exchange	SSA	Sub-Saharan Africa
GDI	Gross Domestic Income	TFP	Total Factor Productivity
GDP	Gross Domestic Product	TL	Turkish Lira
GIC	Government Investment Corporation	TPSA	Tax-Preferred Saving Accounts
GMM	Generalized Method of Moments	TUBITAK	The Scientific and Technological Research Council of Turkey
GNDI	Gross National Disposable Income	TURKSTAT	Turkish Statistics Agency
GPDI	Gross Private Disposable Income	UK	United Kingdom
HBS	Household Budget Survey	US	United States
KOSGEB	Small and Medium Enterprises Development Organization	VAR	Vector Auto-Regression
KRW	South Korean Won		

Vice President: Philippe H. Le Houérou

Country Director: Martin Raiser

Sector Director: Yvonne Tsikata

Sector Manager: Satu Kahkonen

Task Team Leader: Kamer Karakurum Özdemir

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ACKNOWLEDGEMENTS

The Country Economic Memorandum on Domestic Savings was undertaken jointly by the Ministry of Development and the World Bank. The World Bank team included Kamer Karakurum Özdemir (co-TTL, ECSP2 and the main author of this synthesis report), Cihan Yalçın (co-TTL, Central Bank), Muammer Kömürcüoğlu, Constantino Hevia (DECRG) and Pınar Baydar (ECCU6). The Ministry of Development team consisted of Erhan Usta, Ahmet Çelenkoğlu, Salih Köse, Dr. Ahmet Sabri Eroğlu, Kağan Saygılı, Eser Pirgan Matur, Ali Sabuncu, Sema Bahçeci, Aşkın Türeli, Ertan Apaydın, Sefa Çavdaroğlu, Çağatay Telli, Fatih Kaya, Ahmet Yılmaz, Seda Yurtsever, Hakan Erten, Kutluhan Taşkın, Yusuf Ziya Türk and Murat Keleş. The team also benefited from significant contributions by officials from the Undersecretariat of Treasury, Capital Markets Board and consultations with various private sector agencies.

The background papers were prepared by Ercan Uygur (Turkish Economic Association), Gökçe Uysal Kolaşın, Arda Aktaş, Duygu Güner, Seyfettin Gürsel (all at Bahçeşehir University), Tansel Yılmazer (University of Missouri), Ismail Dalla (George Washington University), Erdal Özmen (METU), Cihan Yalçın (Central Bank), Saygın Şahinöz (Central Bank), Eser Pirgan Matur, Ali Sabuncu, Sema Bahçeci (all at the Ministry of Development). SAM Research and Consulting conducted focus group discussions with households.

Valuable contributions were made by Bernard Funck (MNSPR), Mark Roland Thomas (AFTP4), Selin Sayek (Bilkent University), Eduardo Ley (PRMED), Marina Wes (ECSP2), Inessa Love (DECFP) and Klaus Schmidt-Hebbel (Catholic University of Chile).

Overall guidance was provided by Yvonne Tsikata (ECSPE), Satu Kahkonen (ECSP2) and Ulrich Zachau (EAPVP). Peer reviewers were Rauf Gönenç (OECD), Hasan Ersel (Sabancı University) and Zafer Mustafaoğlu (LCSPR).

EXECUTIVE SUMMARY

1. **Domestic savings in Turkey declined significantly in the 2000s** (Figure ES1). The domestic saving rate declined from an average of 23.5 percent of gross national income in the 1990s to an average of 17 percent over the 2000-2008 period, and further to 12.7 percent in 2010. This decline was driven by the sharp fall in private saving, while public saving increased through most of the period.¹

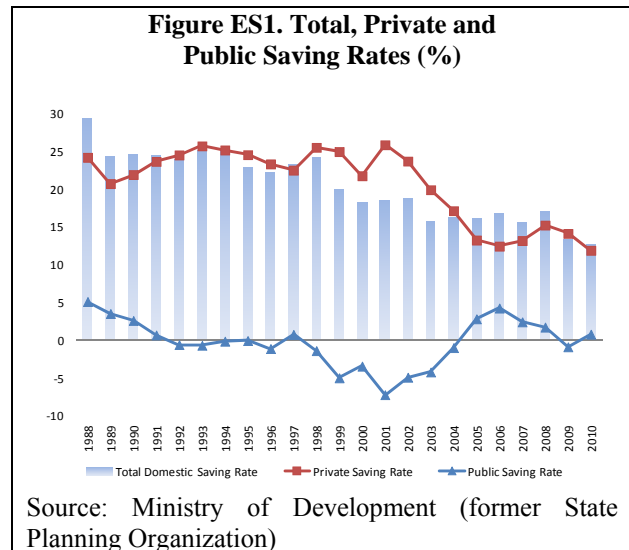
2. **A strong fiscal adjustment underpinned the improvement in public savings in the post-2001 period.** The adjustment was pursued to correct the fiscal expansion of the previous decade, and it led to a sharp reduction in the public debt to gross domestic product (GDP) ratio. This improved the public saving-investment balance and helped reduce the vulnerability of the economy to external shocks. With an expected increase in future investment needs, continued fiscal discipline will be vital for sustainable growth.

3. **The fall in private savings after 2001 was mostly a result of the decline in macroeconomic vulnerabilities.** While the

economy was growing fast, the positive impact of income growth on savings was overridden by an acceleration of private consumption stimulated by the increased availability of credit, fall in interest rates and previously postponed consumption. As the economy normalized and interest rates and inflation declined, so did household precautionary motives for saving. Eventually, however, continued economic stability and implementation of reforms discussed below should encourage saving by raising incomes.

4. **Structurally, Turkish households have a strong precautionary motive for savings.** Macroeconomic vulnerabilities and the resulting unstable income streams, the risk of unemployment, and health risks are obvious reasons for household decisions to save. Declining interest rates (as in the 2000s) that reflected reduced risk premium and hence vulnerability reduced precautionary savings motives. Households where the head is an employer or self-employed rather than a wage earner tend to save more, while households where there is a green card holder (a non-contributory health program) save less, controlling for the income effect.

5. **Households with a high young dependency ratio have low saving rates.** A high young dependency ratio (the ratio of the number of 0-14 year old children to the number of working members of the household) leads to decreased savings, as families with more children have a



¹ This study benefits from the new saving data generated by the Ministry of Development on domestic, private and public savings. In the future, publication of household and corporate savings in the framework of national accounts would greatly facilitate further analysis.

greater need for current consumption. At the same time households are either unable to plan their savings or do not fully realize the need to plan for future expenses.

6. **The low level of female labor force participation also contributes to low household and private saving rates.** Given low employment rates in Turkey, the dependency ratio among the working age population is high compared to OECD countries, mainly due to the low female labor force participation rate. Households in which more women work tend to save beyond the additional income effect. This suggests that increasing female labor force participation from the 2010 rate of about 28 percent may help increase the savings rates.²

7. **Considerable amount of savings are kept “under the mattress”, mostly in the form of gold.** Informal instruments of saving include gold, cash and foreign currency, as well as loans to family/friends and businesses. The micro level data shows that about 30 percent of households have bought gold, jewelry or watches in the past year. Participants of focus groups also declared to have a significant amount of saving, mostly in the form of gold, “under the mattress”, which does not enter the banking system. Policies to stimulate saving or to attract saving into the financial sector need to take this into consideration.

8. **Low domestic saving adversely affects Turkey’s growth prospects.** First, domestic saving finances investment and thus growth. Cross-country data—especially for developing countries—suggest a positive association between saving, investment, and growth. Second, low domestic saving increases dependence on foreign financing, fueling a rise in the external current account deficit and jeopardizing the sustainability of growth. With domestic saving low, Turkish investments have increasingly been financed by foreign capital, which has raised concerns about external sustainability as the current account deficit has widened. Dependence on foreign savings has exposed Turkey to the risk of capital reversal, with its attendant adverse impact on economic growth. As a result, increasing domestic saving is critical for promoting sustainability of growth in Turkey.

9. **The level of a country’s development (primarily its income and education levels) may be one of the most important determinants of its domestic saving rates.** The household income level is the main factor that influences saving. Education levels are, not surprisingly, also closely related to household saving. The small group of highly educated has a saving rate of more than 20 percent, while the large group of least educated saves about 10 percent, which pulls down average saving rates. The analysis also shows that the more educated have larger holdings of financial assets than the less educated ones. Therefore, increasing education nationwide is a goal that would make people not just more employable, promote their livelihood and welfare, but also raise national saving rates.

10. **An enabling environment for long-term growth is thus the key.** It is critical to improve the environment for firms to grow and innovate and for labor to be more productively used, particularly to generate higher corporate savings. Simulations show that in the absence of productivity growth, the required saving rate to reach a GDP growth rate of 5 percent is exceedingly high (30 percent and higher). Thus, to achieve sustainable growth, a combination of saving and productivity growth is required. Improving skills, enhancing competitiveness, enhancing the business climate, and reducing informality would all support this agenda.

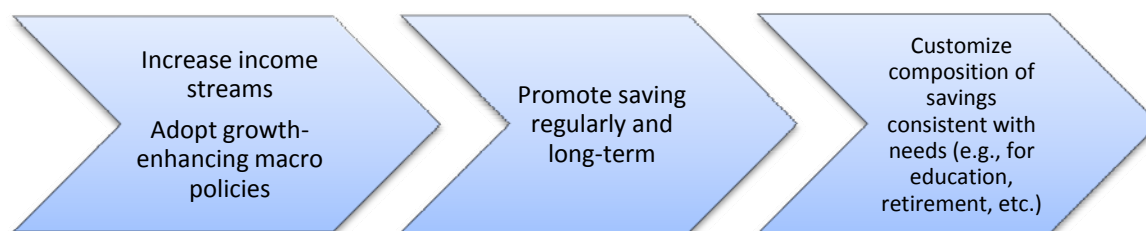
² World Bank Female Labor Force Participation in Turkey: Trends, Determinants and Policy Framework (2010).

11. **Sound macro policies that help increase incomes and reduce economic vulnerabilities would promote saving.** Many studies have found a negative relationship between private saving and the real exchange rate. An analysis of corporate saving in Turkey also suggests that real exchange rate appreciation may reduce the profitability of large and exporting firms. Rapid credit expansion deters saving when it is not channeled to productive activities and pushes low-income households to increase consumption at the expense of saving. Thus, monetary and exchange rate policies to control credit growth and excessive appreciation are essential. Recent attempts of the Central Bank of the Republic of Turkey (CBRT) may help here, although they may need to be complemented by other macro-prudential, fiscal and monetary policy measures. In particular, specific policies and measures intended to limit the growth in credit card and consumption loans that encourage growth in consumption could be effective in promoting saving. Potential measures for consumer loans and credit cards could be the following:³

- Introduction of maturity limitations for personal finance and vehicle loans provided by banks under the consumer loans category would reduce the amount of loans and thus curb consumption.
- Further reducing the loan/value ratio in mortgage loans and introducing a similar measure for vehicle loans would reduce the growth in consumer loans.
- Introducing maturity limitations for credit cards would contribute to the use of credit cards as a payment rather than a borrowing instrument.
- The minimum payment rate for credit cards could be raised to 40 percent, from the current rate of 20 percent.
- Extending the number of years (from the existing 2 years) in setting credit card limit caps for households could reduce the credit limit as a share of their incomes.

12. **However, savings do not automatically generate investment—channeling increased savings to productive investments is crucial.** In this context, the mix of gross capital formation in terms of construction, machinery and equipment is important. In Turkey, perceptions of housing as an investment instrument is dominant and this may not be growth-enhancing. In this regard, policies to change such perceptions could be pursued, including increased taxation of second houses and unused land, as well as development of a system for monitoring housing prices. Future work could analyze specifics of such policy options.

Figure ES2: Policies Promoting Household Saving



13. **Promoting higher and longer-term domestic saving also calls for a policy package targeted specifically towards promoting savings.** The analysis in this study suggests that policy interventions could help increase household savings (Figure ES2) and bring them into the

³ As this report was being finalized in June 2011, the Banking Regulation and Supervision Agency (BRSA) put in place measures to curb credit growth with a specific focus of “consumer loans”.

system. Policy options can be grouped in two categories: demand-side policies to inform household saving decisions; and supply-side policies to improve regulatory, institutional, and other conditions in which saving decisions are made.

14. **There could be high returns on policies that raise awareness about the benefits of saving, particularly long-term, and elevate the financial literacy of households.** Many households do not currently plan for saving and thus may confront an income gap later in life and be unable to maintain their living standards. Changing consumption habits and the easy availability of credit steer households, which are often unaware of the importance of saving for the future, toward high consumption. Furthermore, household decisions about the allocation of savings are frequently taken without enough information about alternative options. The knowledge of the general public about financial markets beyond bank deposit and government securities is limited, and the number of shareholders in the stock exchange is small. High interest on government securities over the past decade has also reduced the need for diversification. Traditionally, household saving has been shaped by personal and family history and saving culture and a desire to own physical assets. As interest rates on government bonds decline and returns are low, better portfolio allocation will now become more important for households.

15. **A national financial literacy strategy could establish a systematic approach to increasing financial literacy in Turkey.** Increasing the financial capability of households, starting early in the life cycle, and helping them make informed financial decisions could increase saving. The government is aware of the need to raise financial literacy and developing such a strategy is on the agenda; CBRT and the Capital Markets Board (CMB) of Turkey sponsored a high-profile conference on the subject in March 2011. Implemented effectively, a national financial literacy strategy is likely to promote financial literacy nationwide and have a significant impact on the decisions of Turkish citizens to save.⁴ Such a strategy would be most successful if it is effectively managed and supported by dedicated contributions from all stakeholders. In the short term, promoting financial literacy among the 2.3 million private pension members already in the system and potential members could attract additional funds into that currently small system. This would be most effective if designed based on contributions from stakeholders. One policy option would be to provide information about the tax exemption for contributions to the private pension system to both beneficiaries and administrators in workplaces.

16. **On the supply side, the intermediation role of financial markets is central.** Policy options to enhance intermediation can be divided into three groups: (i) better use of existing products (such as private pensions and corporate bonds), including, but not limited to, taxation of different instruments; (ii) more investment in new products and better regulatory framework; and (iii) special saving schemes.

17. **The private pension schemes recently introduced in Turkey have the potential to expand significantly.** Besides raising the awareness of households about planning for retirement, making the private pension scheme attractive could help the sector grow and generate long-term savings. One option would be to increase the threshold for exemption from the current 10 percent of monthly salary, which is capped at the annual gross minimum wage. The fiscal cost

⁴ The World Bank Team has secured a grant to finance a nationwide financial literacy survey, to be implemented in cooperation with CBRT and CMB of Turkey. The survey will provide valuable information for the preparation of a national strategy, now in its early stages.

of the increased exemption would likely be more than offset by the reduction in the interest on public debt and wider tax base due to the increase in long term funds. Any policy intervention of this kind needs to be designed with participation from interested public and private agencies to maximize mobilization of new savings into the private pension system. In addition to increasing tax incentives, the government might also consider increasing the vesting period to at least 3 years with no withdrawal permitted except for medical emergencies. Another policy option is to introduce direct government contributions. Clearly, there are pros and cons of different incentive schemes. The follow-up work will focus on alternative options to redesign the private pension scheme to attract more savings into the system, and the respective cost of these options.

18. **Efforts to promote saving will be most effective if complemented by reforms to reinforce the financial markets.** Empirical evidence suggests that the degree of financial development is important in channeling savings to growth-enhancing activities. Although Turkey's financial markets have been growing rapidly since 2003, the system is heavily dominated by banking. Turkey would benefit from more diversified financial markets; further developing the corporate bond market might be one policy option.⁵ Malaysia and Thailand both have highly developed financial markets and high saving rates; their experiences may be relevant for Turkey.

19. **A new comprehensive capital market law can be expected to help deepen financial markets.** Turkey's Capital Market Law has proved useful in providing a general framework for regulating domestic capital markets, but the rapid developments in domestic and international financial markets demand a thorough review to bring the law up to international standards. A comprehensive new capital market law is also relevant for European Union (EU) convergence and the Istanbul International Financial Center Project. Such a law could reduce the need for rule-making through communiqués. Arrangements to protect investors in capital markets would also contribute to raising the confidence of households in capital market instruments and increasing the number of investors. In this regard, more effective use of the existing "Investor Protection Fund" may be considered.

20. **The government might also consider removing financial market distortions created by taxation.** Treating all financial instruments equally regardless of investor will create a level playing field that will enable financial markets to grow and become more robust. Equalizing the tax burden on similar instruments could also help achieve more balanced financial market development. For instance:

- *Mutual Funds.* Investments in mutual funds are currently subject to 10 percent withholding tax, but investments in individual stocks are exempt. This creates a disincentive for individual investors who are not equipped to invest in shares directly through stockbrokers.
- *Exchange Traded Funds (ETFs).* There is a withholding tax on ETFs, though trading in individual stocks is tax-exempt.
- *Bank Deposits.* Bank deposits are subject to 15 percent withholding tax; for investments in government securities the tax is 10 percent.

⁵ Policy options for development of the corporate bond market can be found in the forthcoming World Bank study "Corporate Bond Market Development – Priorities and Challenges."

The estimated tax loss from removing the 10 percent withholding tax on mutual funds with more than 50 percent equity content is about TL 25 million, based on an assumption of 20 percent return. A more detailed analysis of the potential fiscal impact of the above policy options is warranted, although benefits from increased mobilization of savings would likely outweigh foregone tax revenues.

21. **Special saving schemes, based on good examples from other countries, could help attract new savings into the system.** While Turkey had an unfavorable experience with a mandatory saving scheme, well-designed and effectively administered new schemes, mandatory or voluntary, could bring household savings into the financial system. Turkey's significantly improved financial system and stable macroeconomic environment provide an improved environment for designing and implementing such schemes. Tax-preferred savings accounts, such as the Saving Gateway and the Child Trust Fund in the United Kingdom (UK) and 529 plans in the United States (US) (covering future education expenses of children), are examples of voluntary schemes. Government contributions to the savings accounts of individuals and favorable tax treatment of contributions and earnings could be considered. An OECD evaluation of the impact of tax-preferred saving accounts found that they did generate additional savings and suggests that it is important to appeal to moderate-income households, which given the opportunity are more likely to increase savings. Furthermore, since moderate-income individuals have a lower tax rate, the more they participate in comparison to high-income individuals the lower the foregone tax revenues.

22. **Establishment of a severance pay fund, which is currently on the agenda of the government, could contribute to increasing savings.** The existing practice of the severance pay, which calls for a lump sum payment, is a significant obligation to employers, and a right that cannot be exercised in case of voluntary termination of employment. Reforming the severance pay involves reducing the pay (while increasing coverage of unemployment insurance) and introducing pre-funded severance accounts (to make it more efficient and ensuring workers are actually paid), as in Austria. Such a system consisting of premium contributions to individual severance accounts and where the accumulated amount in the fund is to be paid to employees when they quit work, would both address the rigidity in the labor market and promote domestic savings.

23. **Finally, increasing public saving might increase domestic saving to the extent that extra savings are generated by cutting unproductive expenditures and encouraging formalization of the economy.** The less than full Ricardian equivalence (public saving increases reducing private savings by less than one-to-one) in the case of Turkey suggests that there is potential for the public sector to contribute to increasing domestic saving. The quality of public spending and reform of state-owned enterprises are important here. There is evidence, especially from OECD countries, that fiscal consolidation that relies primarily on tax increases and cuts in public investment has not been sustainable because higher tax revenues sooner or later boost spending, and infrastructure maintenance and spending cannot be postponed forever. More lasting effects have come from fiscal consolidation supported by cuts in structural public spending— downsizing public employment and the wage bill and cutting back transfers. Furthermore, formalization of the economy through increased reliance on direct taxes, such as

personal and corporate income taxes, could also promote saving by making tax collection more efficient and reducing tax evasion.⁶

24. The above policy options are summarized in the policy matrix below.

⁶ World Bank Turkey Country Economic Memorandum, Informality: Causes, Consequences, Policies (2010).

Table ES1. Policy options to promote long-term domestic savings

Policy Area	Short Term	Medium to Long Term
<p><i>Policies to increase income levels and growth, such as those aiming at enhanced competitiveness, improved business climate and formalization of the economy would also promote domestic savings. In addition, improving the skills of the work force and achieving increased labor force participation, particularly for women, are likely to contribute to increasing saving rates. Specific policy options to address these areas are discussed in other World Bank studies, citations of which are provided in the Bibliography.</i></p>		
Data availability	<ul style="list-style-type: none"> ➤ Initiation of work towards publication of household and corporate accounts in the framework of national accounts 	<ul style="list-style-type: none"> ➤ Quarterly publication of household and corporate accounts in the framework of national accounts
Financial Literacy	<ul style="list-style-type: none"> ➤ Assessing the level of financial literacy of Turkish households through a nationwide survey 	<ul style="list-style-type: none"> ➤ Regularly monitoring the level of financial literacy ➤ Designing a national level strategy and action plan for financial education
Availability of alternative instruments	<ul style="list-style-type: none"> ➤ Evaluating good international examples of tax-preferred saving accounts 	<ul style="list-style-type: none"> ➤ Designing new saving schemes, targeted particularly towards households with moderate income ➤ Establishment of pre-funded severance accounts
Private pension scheme ⁷	<ul style="list-style-type: none"> ➤ Increasing awareness about private pension schemes as a tool for retirement ➤ Providing more widespread information about the tax exemption currently applicable to beneficiaries and administrators in workplaces 	<ul style="list-style-type: none"> ➤ Redesigning the incentive scheme for participants (such as increasing the threshold for tax exemption) ➤ Increasing the vesting period to 3 years
Financial and capital markets	<ul style="list-style-type: none"> ➤ Further development of the corporate bond market (specific policy options can be found in a recent World Bank report on the subject) ➤ Removing distortions on taxation of similar financial instruments 	<ul style="list-style-type: none"> ➤ New Capital Market law ➤ More effective use of the “Investor Protection Fund”
Credit growth – Macro-prudential measures	<ul style="list-style-type: none"> ➤ Introducing installment limitations for personal finance and vehicle loans provided by banks under the consumer loans category ➤ Further reducing the loan/value ratio in mortgage loans (currently at 75 percent) and introducing a similar measure for vehicle loans ➤ Introducing installment limitations for credit cards ➤ Raising the minimum payment rate for credit cards to 40 percent ➤ Extending the number of years for which a cap exists for the overall credit card limit of households. 	
Housing markets		<ul style="list-style-type: none"> ➤ Establishment of a housing price monitoring system ➤ Higher taxation of second homes and unused land

⁷ Follow-up work will investigate alternative options to redesign the private pension scheme to attract more savings into the system, and the respective cost of these options.

I. INTRODUCTION

1. **Domestic saving in Turkey fell to a low of 12.7 percent of GDP in 2010, the lowest rate since 1980.** After a temporary rise in the 1990s when the economy was in transition and inflation was high, the saving rate has declined substantially in the last 10 years. Although Turkey has had solid GDP growth, which is traditionally linked to increasing saving, the saving rate has in fact declined sharply, mainly because of a drop in household saving. The positive impact of income growth on saving was thus dominated by the acceleration of private consumption since 2001 as increased availability of credit and postponed consumption boosted private consumption.

2. **Low domestic saving matters for at least two reasons.** First, domestic savings finance investment and thus growth. Cross-country data suggest a positive association, especially for developing countries, between saving, investment, and growth. Second, the low level of domestic saving has increased dependence on foreign financing of Turkish investments, fueling an expansion in the external current account deficit and jeopardizing the sustainability of growth. This dependence on foreign savings has exposed Turkey to the risk of capital reversal, with attendant adverse impact on economic growth.

3. **But raising domestic saving alone is not enough for sustainable growth.** The role of domestic savings in achieving sustainable high growth cannot be considered apart from productivity growth. Although recently there has been an increase in the contribution of total factor productivity to growth, Turkey's main source of growth has traditionally been capital accumulation. Turkey may further benefit from productivity growth by improving labor skills, promoting innovation, and adapting new technologies, in addition to investing more productively. Policies to increase domestic saving might promote sustainable high growth, particularly if complemented by productivity-enhancing policies.

4. **This report analyzes the determinants of domestic saving in Turkey and provides policy options for increasing saving, particularly long-term saving.** It summarizes work on household, corporate, and public sector saving. The first module, which was shared with the Turkish authorities in June 2010, analyzed saving trends in Turkey in an international context, the saving behavior of households, and the saving-investment relationship. This report brings these results together with findings from work carried out since. This includes household focus group discussions, time series analyses of determinants of private saving, analysis of corporate saving, the role of financial markets in intermediating saving, and public saving.

5. **This joint report with the Ministry of Development also incorporates valuable contributions from CBRT.** CMB of Turkey, the Undersecretariat of Treasury, the Ministry of Finance, and representatives of the financial sector provided valuable insights.

6. The report has six sections: Section 2 presents trends in Turkey for public, private, household, and corporate saving, making international comparisons where available. Section 3 discusses the role of domestic saving in generating growth and possibly reducing the vulnerability created by increased dependence on foreign financing. With the importance of promoting domestic saving established, Section 4 discusses determinants of saving in Turkey. Section 5 assesses the role of financial markets in intermediating saving in Turkey, and Section 6 presents policy options to promote domestic saving, particularly long-term saving.

II. SAVING TRENDS IN TURKEY IN INTERNATIONAL COMPARISON

II.1 Total, Public and Private Saving

7. **Total domestic saving in Turkey, which is the sum of public and private saving, has declined since 1988**, after a sharp increase between 1980 and 1988 linked to policy-making uncertainties and high inflation. The decline thereafter was steady, reaching 12.7 percent in 2010, the lowest saving rate since 1980 and before then 1975 (Figure 1).⁸

Figure 1. Domestic Saving in Turkey, 1975–2010

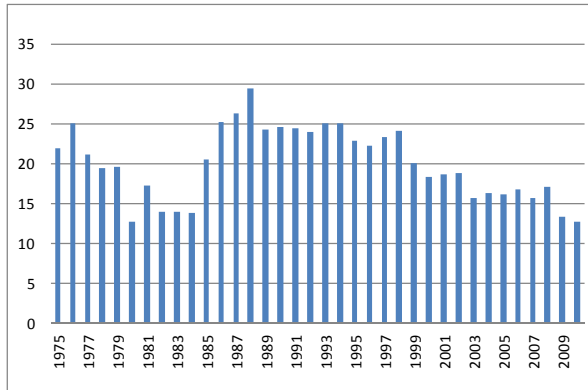
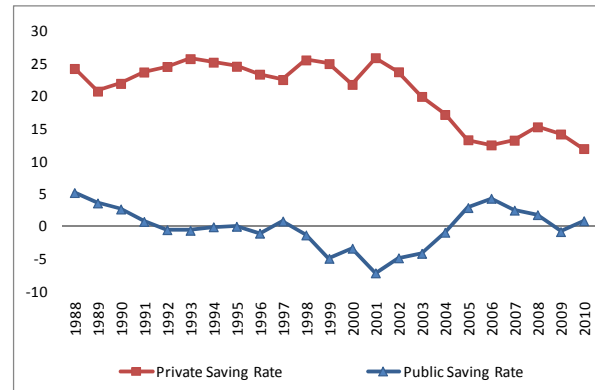


Figure 2. Private and Public Saving in Turkey, 1988–2010 (%)



Source: Ministry of Development

8. **During the earlier period (1988-2001) the decline in the saving rate was driven by the public sector.** Throughout the 1990s, the public deficit, which is the sum of the deficits of the consolidated budget, extra-budgetary and revolving funds, social security organizations, and state-owned enterprises (SOEs), rose. The ratio of the public deficit to GDP expanded from 5.5 percent in 1990 to 11.7 percent by the end of 1999. The ratio of public saving to gross national disposable income (GNDI), which was 2.6 percent in 1990, declined to -3.4 percent in 2000 and again to -7.2 percent in 2001.

9. **During the later period (2001-2010), by contrast, the decline was driven by the fall in private saving which more than offset an increase in public sector saving.** Private saving rates declined from an average of about 24 percent in 1991–2001 to 13.4 percent in 2005–10, eventually pulling aggregate saving down to 16 percent. A range of factors explain the decline in private saving, particularly increased consumption driven by a rise in credit flows, in an environment of reduced interest rates and inflation. In parallel, however, public saving increased. In the aftermath of the 2001 crisis, fiscal policy was tightened to stabilize the public debt stock and a new framework for monetary and exchange rate policy was put in place. In contrast with past stabilization attempts, the focus was on improving public financial management and the budgetary system and attaining relatively high primary surplus targets. As public balances improved, the public saving rate increased substantially, from -7.2 percent in 2001 to over 4 percent in 2006, though a decline followed.

⁸ There seems to be a break in the data in 2001. However, the short time series makes it difficult to econometrically test for a structural break.

Box 1. Data on Savings in Turkey

This study uses the annual estimates for total domestic saving, private and public, produced by the Ministry of Development.* The Ministry of Development has revised the annual series for savings; the new series is used for the first time in this study.

A decomposition of private saving by households and by firms, however, is not available. Therefore, this study uses different data sources to analyze these subcomponents of private saving. For households, two main data sources are used. First, TurkStat generates household disposable income and consumption figures from the household budget survey (HBS). The study calculates household saving as a residual using these disposable income and consumption figures. Second, the survey of consumer finances, described in detail in Box 3, is used. For firms, two different data sources are used: (i) CBRT of the balance sheets of about 7,000 firms; and, (ii) Istanbul Stock Exchange (ISE) database.

* The Turkish Statistics Agency (TurkStat) currently does not produce savings data as a component of national accounts.

10. **Turkey's domestic saving rates are comparable to those of Latin America but lower than in most other regions (Figure 3).** The aggregate world saving rate⁹ was remarkably constant for the entire sample at about 19 percent of GNDI. Saving rates by region show substantial dispersion both over time and relative to other regions. Turkey's saving rate is below most regions except Sub-Saharan Africa (SSA) but is comparable to that of Latin America and Caribbean (LAC), where Chile is a good example of an economy that has succeeded in permanently increasing its saving rate. Chile's saving rate rose from an average of 12 percent in the 1980s to 23 percent in the 1990s and then to 24 percent in the 2000s. In the 1980s and 1990s the median country in the Middle East and North Africa (MENA) region showed stable saving rates during the 1980s and 1990s, of about 21 percent of GNDI, but then increased to over 25 percent of GNDI during the 2000s. By contrast, the Europe and Central Asia (ECA) region showed declining national saving rates over time: from more than 25 percent of GNDI in the 1980s to 21 percent in the 1990s and 18 percent in the 2000s—between the 1980s and the 1990s there was a savings collapse in transition countries in Eastern Europe.

11. **Turkey's average saving rate, though it has plunged in recent years, is still generally in line with rates in middle-income countries (Figure 4).** High-income countries have the highest saving rates in the world. Moreover, the median non-OECD high-income country increased its saving rate significantly between the 1990s and the 2000s, from 23 percent of GNDI to 33 percent of GNDI. It should be noted, however, that the number of observations in this country group is relatively small. The saving rate in OECD high-income countries declined slightly, from 22 percent to 21 percent from the 1980s to the 1990s but increased to 23.5 percent in the 2000s. The median upper-middle-income and lower-middle-income countries have similar saving rates of somewhat less than 20 percent of GNDI. In the upper-middle-income countries the savings rate has decreased over time, as has Turkey's. Finally, low-income countries have the lowest saving rates. Turkey's saving rate is higher than the low-income group but lower than the OECD countries.

⁹ The world saving rate is computed as the median rate in a sample of 104 developing and developed countries. Saving rates by regions are also computed as the median rate of the countries in a given region.

Figure 3. Saving Rates by Region

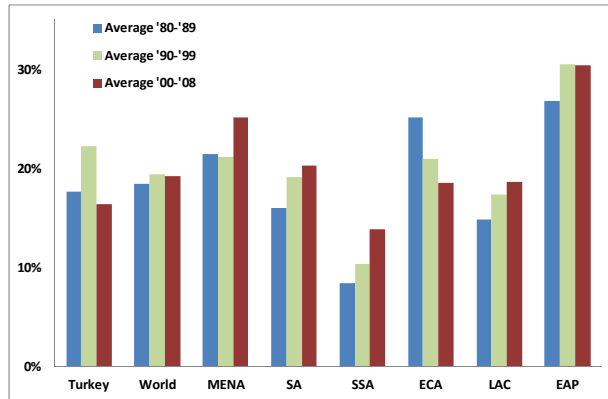
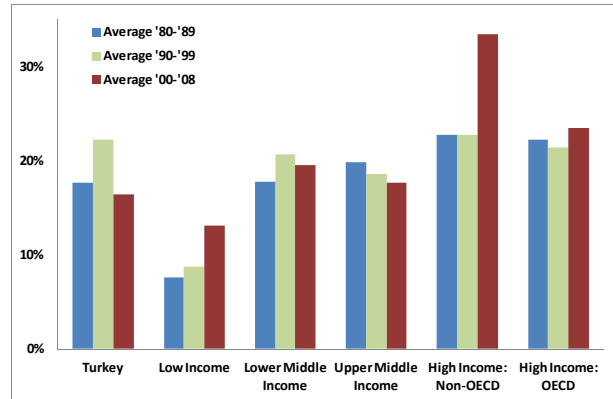


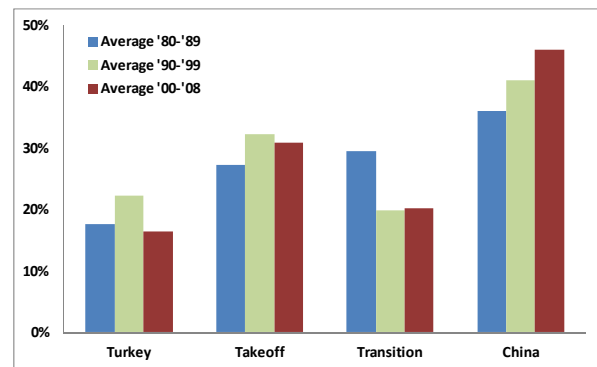
Figure 4. Saving Rates by Income Group



Source: World Bank

12. **Turkey's saving rates are far below those of high-growth countries.** Figure 5 shows saving behavior in takeoff countries, transition countries, and China.¹⁰ Takeoff countries are defined as developing countries that achieved high and sustained growth rates in 1980–2008.¹¹ China's saving rate, which was already very high, increased substantially during that period, from an average of 36 percent for 1980–89 to 46 percent for 2000–2008. The median takeoff country shows large saving rates throughout the period, from 27 percent in the 1980s to 31 percent in the 2000s. On the other hand, between the 1980s and the 1990s saving rates in transition countries collapsed with the onset of the economic transformation that started around 1990 in Eastern European countries. There are two possible explanations for the collapse: (a) the end of involuntary savings due to the movement from a centrally planned to a market economy (Denizer and Wolf, 2000), and (b) the decline in short-term income, especially in real terms, together with the prospects of future higher economic growth and the adjustment of consumer durables, which may have depressed the national saving rate (Schmidt-Hebbel and Servén, 1998).

Figure 5. Saving Rates by Transition, Takeoff Countries



Source: World Bank

II.2 Household Saving

13. **The previous section gave a profile of aggregate saving rates (total, public and private).** From a policy perspective, it is important to investigate trends in and determinants of the individual components of private saving; household and corporate saving. This section will lay out the profile of household saving, while the next section will focus on corporate saving.

¹⁰ The transition countries in our sample are Belarus, Bulgaria, Czech Republic, Estonia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovenia, Turkmenistan, Ukraine, and Uzbekistan.

¹¹ The group of takeoff countries includes China (considered separately); Chile; Hong Kong, SAR China; Indonesia; Korea; Malaysia; Mauritius; Singapore; Taiwan, China; and Thailand.

14. **TurkStat HBS establish a basis for calculating saving rates for households.**¹² Saving is commonly defined as the difference between income and consumption, denoted below by S_1 .¹³ A broader definition of saving treats durable goods purchases as another form of saving and excludes their purchases from total consumption, denoted as S_2 . Conceptually, saving corresponds to postponement of consumption into the future, in other words, to a substitution of future for present consumption.



15. **Household saving in Turkey declined between 2003 and 2008 (Figure 6).** For both definitions of saving, Figures 6a and 6b provide both the mean (using household income as the weight) and the median for 2003–2008. Both show a decline in household saving by either definition, with the decline in the mean more pronounced. A sharp decline in the mean savings rate is consistent with the general drop in private saving in 2005. However, because the distribution is skewed, mean saving rates may not reflect the central tendency well. Because median rates are more stable across different definitions and years, they seem to be less influenced by outliers. According to S_1 , where saving is the difference between income and consumption, median savings are lowest in 2008 at 1.8 percent and highest in 2004 at 8.0 percent. As expected, saving increases as the scope of saving is expanded. With S_2 , saving rates increase by more than 5 percentage points, which is the ratio of household durable consumption to disposable income.¹⁴ Note that decreases in saving are not as pronounced when the wider definition of saving is used. Figure 7, based on national accounts data, shows that consumption of durables increased starting in 2003 while private saving declined.¹⁵ In fact, the decline in saving rates that consider durable consumption to be part of saving was moderate in the 2000s (Figure 6).¹⁶

¹² Further details on measurement of household saving and a brief literature on household saving in Turkey can be found in the background work for this study.

¹³ A broader definition of saving used in the literature treats durable goods purchases as another form of saving and excludes them from total consumption.

¹⁴ There are significant differences between saving rates calculated here and those calculated from HBS headline figures on income and consumption expenditures. The main reason is that this study adjusts HBS monthly consumption expenditures for inflation to match year-end income.

¹⁵ Because the durable consumption to GDP ratio is not available in the new GDP series, the ratio from the old national income series is reported here.

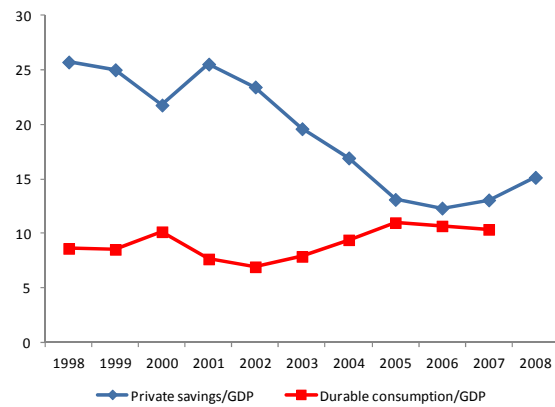
¹⁶ Using somewhat older data sets Denizer and Wolf (1998) calculate saving rates of 24.8 percent for Bulgaria, 11.2 percent for Hungary, and 16.5 percent for Poland. Kulikov, Paabut, and Staehr (2007) calculate saving rates

16. **Higher-income groups in Turkey save more.** Figure 8 displays saving rates by income quintile. While the lowest 20 percent group has dissavings, the saving rate for the highest group was well above the average. The global crisis triggered a sharp reversal in the shift toward less dissaving for the first quintile and improvement in the saving rates for the second and third quintiles as disposable incomes shrank.

17. **In Turkey, saving increases with the age of the household head** (Figure 9).¹⁷ There were not enough observations for the first age group to yield significant and stable rates.

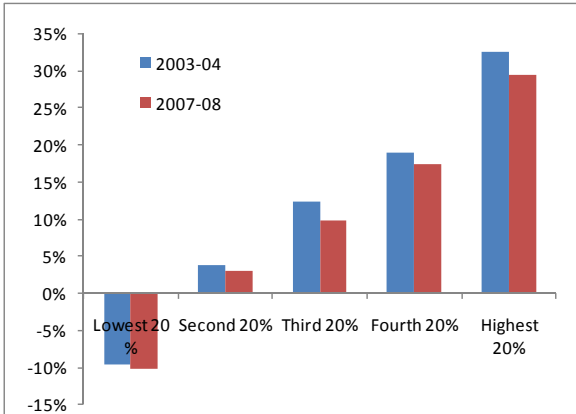
However, other data point to a stable and increasing relationship between saving and the age of household head, though there was a slight decrease in the saving rates of the elderly between 2004 and 2007. Thus, the age profile for saving may be hump-shaped. However, findings from econometric estimations indicate that, contrary to the life cycle theory, the pattern in Turkey is not hump-shaped—that is, savings do not decline with age and dependency ratio, evidence of a bequest motive, or a selection bias in the data. (Such a bias could arise if some elderly who had saved for retirement could afford to stay as household heads while others move in with their children.) Studying age-saving profiles with cross-section data may cause substantial bias due to cohort effects. Unfortunately, the data sets used in this study span too short a period to allow for the study of cohort effects.

Figure 7. Consumption of Durable Goods and Private Saving (%)



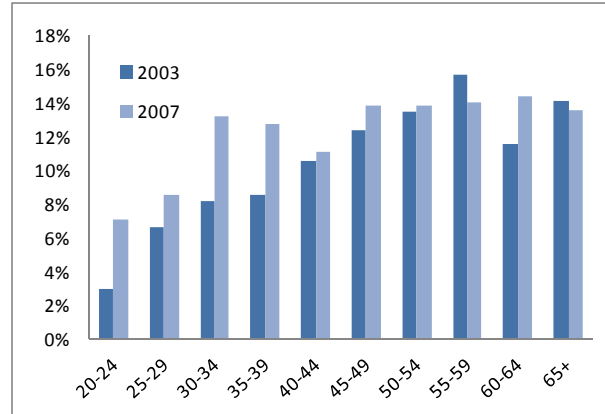
Source: TurkStat

Figure 8. Saving Rate by Income



Source: Turkstat

Figure 9. Saving Rate by Age

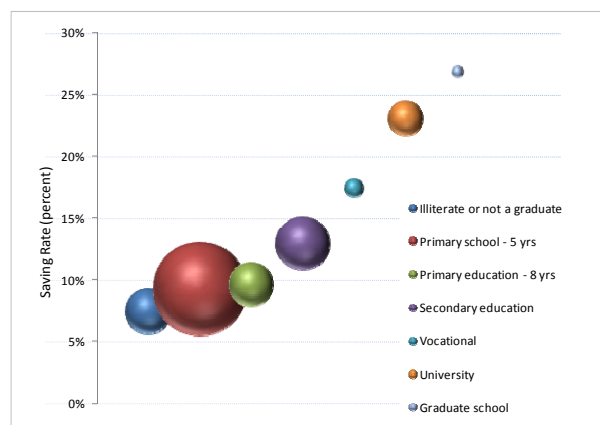


between 5.6 percent and 15.1 percent for Estonia, and Chamon and Prasad (2008) calculate rates of 14.3 percent to 22.4 percent for China from 1990 through 2005.

¹⁷ The pattern of saving in Turkey across income groups, age groups and educational attainment groups is consistent with the world experience.

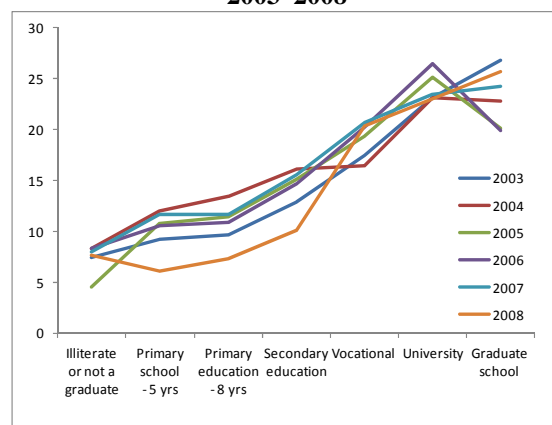
18. **Level of education is closely correlated with household saving in Turkey** (Figure 10).¹⁸ Saving rates steadily increase by the level of education.¹⁹ The largest group (roughly half) has five years of primary schooling²⁰ and a relatively low saving rate of about 12 percent. On the other hand, the small group with graduate degrees (0.7 percent of the population) has a saving rate of close to 25 percent (Figure 10a). Education-savings profiles are more stable than age-savings profiles; at any given education level, the variance in saving rates from year to year is relatively small (Figure 10b). For a given education level rates were almost identical in 2005, 2006 and 2007.

Figure 10a. Saving Rates by Level of Education, 2007



Source: HBS 2007

Figure 10b. Saving Rates by Level of Education 2003–2008



II.3 Corporate Saving

19. **Gross corporate savings are typically defined in national accounts as the sum of the undistributed profits of enterprises and the amortization of fixed capital.**²¹ Net corporate savings in turn refer to undistributed profits—retained earnings (OECD, 2007). The definition refers to a specific enterprise, where net saving is defined as net profit (after tax and net interest payments) minus dividend payments (Figure 11). Few countries, mostly high-income, calculate economy-wide corporate saving figures in their national accounting systems; Turkey is not one of them.²²

¹⁸ The educational attainment of the household head is measured by degree completion rather than years of schooling. The study assigns the minimum years of schooling required for completion to each individual and then averages household levels to calculate average years of schooling.

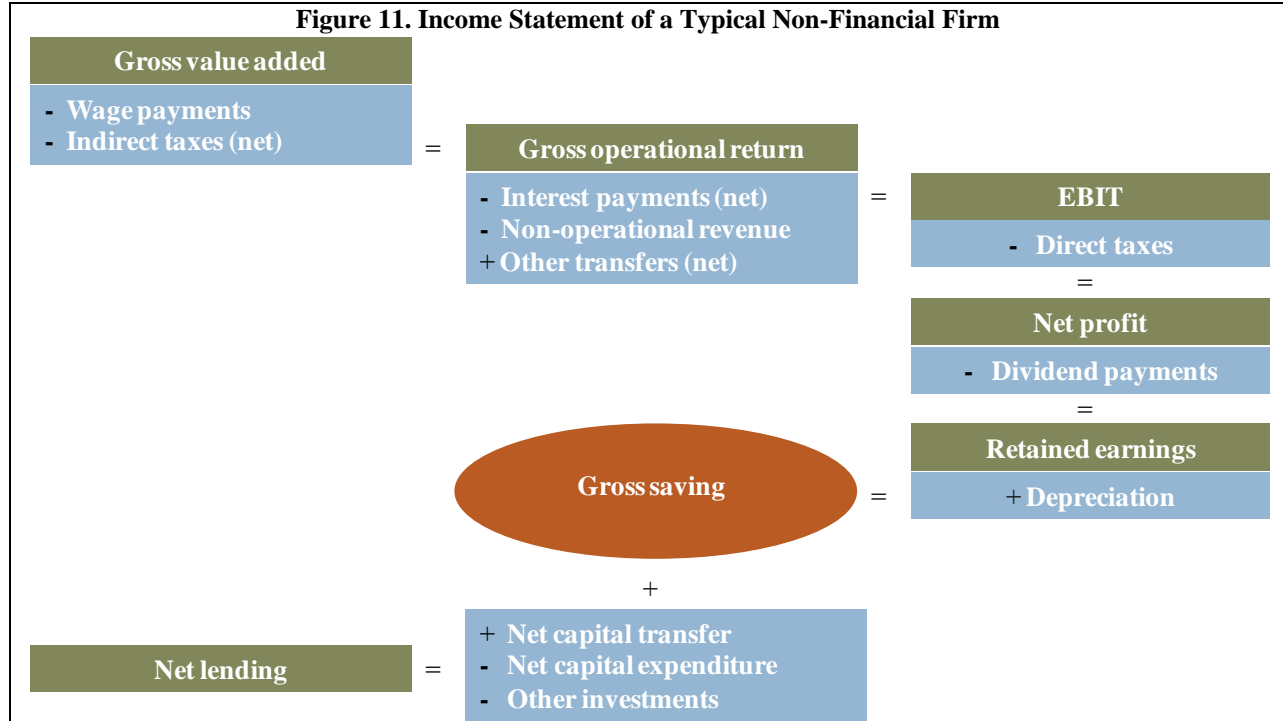
¹⁹ Education may be a proxy for income as well as for wealth.

²⁰ This is the group that graduated from primary school before eight years of primary education were mandated in 1997.

²¹ It is also defined as the sum of net lending, gross fixed capital formation, and other capital expenditure, minus net capital transfers received.

²² Decomposing private savings in terms of corporate and household savings by using flows fund methodology was among the purpose of this study but it did not materialize due to the lack of data.

Figure 11. Income Statement of a Typical Non-Financial Firm



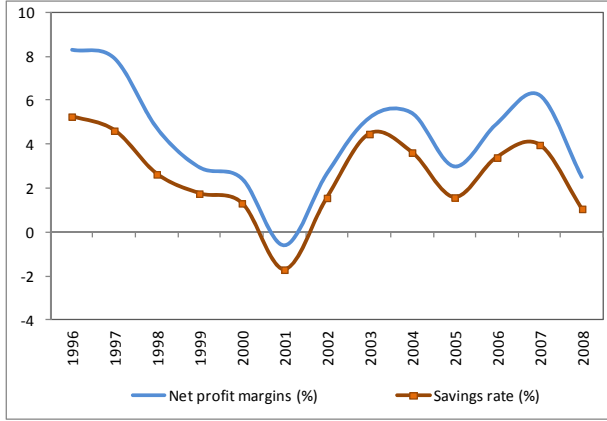
20. **Two different data sets are used to investigate trends in corporate saving and its determinants.** The corporate saving analysis is primarily based on the balance sheets and profit-loss accounts of nonfinancial firms listed on ISE. That data set covers about 170 firms that reported dividend payments continuously from 1996 through 2008. The analysis also uses a larger data set compiled by the CBRT that contains the balance sheets and profit-loss accounts of over 6,000 nonfinancial firms. Unlike the ISE data set, the CBRT balance sheet data set does not include information on dividend payments,²³ so the analysis using the CBRT data is based on net profits rather than corporate savings.

21. **Despite a decline in 2008, corporate saving rates and profit margins on average rose during the period, though private saving rates declined (Figure 12).** Both ISE and CBRT data show that for 2002–2007, net profit margins (net profits as a share of net sales) increased. The saving rate (net profits minus dividends as a ratio of net sales) calculated as an average for ISE-quoted firms shows a pattern similar to net profit margins. Corporate saving rates are thus closely linked to profit margins. This relationship is implied by the relatively stable dividend payout ratios (dividend payments as a share of net profits).²⁴ A higher profit margin implies that more funds are available for investment and/or dividend payments.

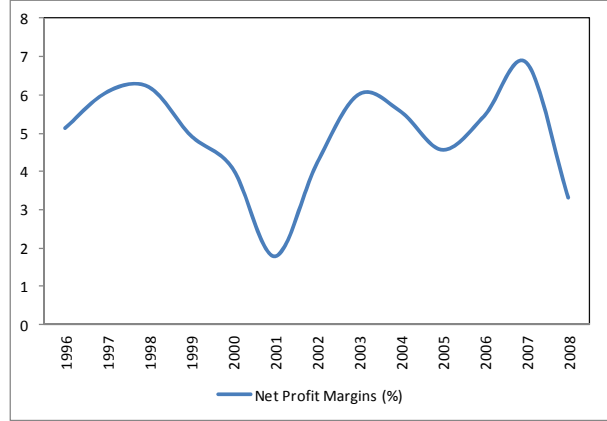
²³ As a complementary analysis, the CBRT firm-level data set, the largest set available in Turkey on firm balance sheets, is used to analyze the determinants of investment and net profit margins. More than 6,000 firms employing more than 10 workers reported continuously for 2002–2007; the firms on average employ about 200 employees. The sample covers companies responsible for over 66 percent of total exports from Turkey and about 75 percent of employment (in firms with 10 or more employees) for 2002–2007.

²⁴ Dividend payments by ISE-listed firms are the only information available on dividend payments in Turkey. Dividend payments as a percent of net profits (dividend payout ratios) are rather stable, which suggests that the share of corporate savings in net profit does not change significantly. The stable dividend payout ratios are mainly driven by manufacturing firms; the mean ratios of nonmanufacturing firms are more volatile. The gradual decline

Figure 12. Net Profits and Saving Rates of Turkish Firms, 1996–2008



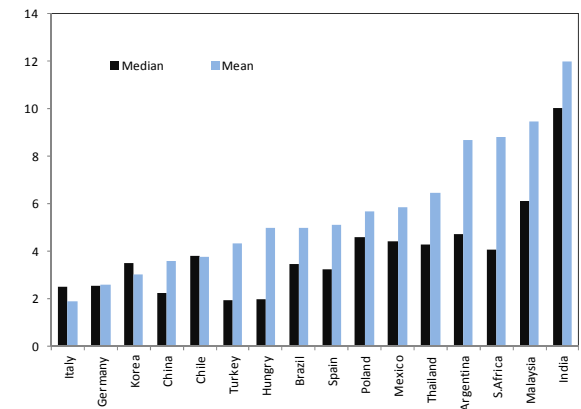
Source: ISE



Source: CBRT

22. **However, ISE-listed nonfinancial firms have relatively low average savings compared to many other emerging countries** (Figure 13). Their average saving rates are lower than in emerging market comparators like India, Malaysia, South Africa, Argentina, Brazil, Thailand, Mexico, Poland, and Hungary, though higher than Italy, Germany, and China.²⁵ Bayoumi et al (2010) suggest (consistent with these findings) that corporate savings of ISE-listed firms are also high with respect to high-income countries and China but low compared to emerging countries.

Figure 13. Mean and Median Saving Rates of Firms Selected Countries (2003–2009)



Source: Worldscope database

in dividend payout ratios from 2002 to 2007 was muted by a sharp rise in 2008 as the global crisis hit the corporate sector and profits plunged.

²⁵ The comparison is carried out for 1,575 firms from 16 countries for 1998–2009 using the Worldscope database.

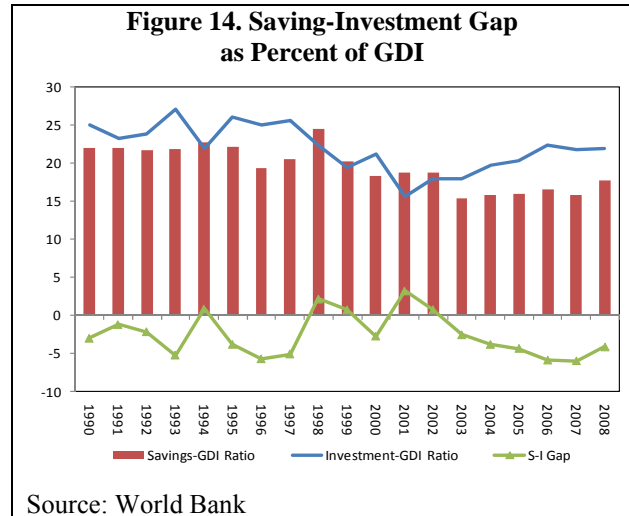
III. WHY DOES DOMESTIC SAVING MATTER FOR TURKEY?²⁶

23. **The analysis so far suggests that saving rates plunged in the 2000s, mainly due to the drop in household saving.** It also established that saving in Turkey is low by international standards. This section addresses the implications of low saving for Turkey before discussing its determinants in Section 4. As will be explained, domestic saving or the lack thereof matters for two reasons: (i) domestic saving finances investment and thus growth; and, (ii) the substitute for domestic saving, foreign capital, creates vulnerabilities for the economy.

III.1 The implications of low savings on growth

24. **Low domestic saving jeopardizes the sustainability of high growth in Turkey.** The relationship between saving and investment (depending on its nature and strength) constitutes a potential channel for transmitting savings into growth. However, irrespective of this degree of association, an increase in the share of domestic financing of growth has also a potentially important role of mitigating external vulnerability.

25. **The decline in domestic savings in the 2000s was matched by an increase in the current account deficit (CAD).** CAD rises from 2002 through 2007 were largely led by the recovery of investments. The average for CAD as a share of Gross Domestic Income (GDI) increased from nearly one percent in the 1990s to 3.4 percent by 2008, largely because average saving rates dropped. The saving-investment gap, which is the mirror image of the current account balance, increased substantially after the 2001 crisis and was sustained over the decade (Figure 14).

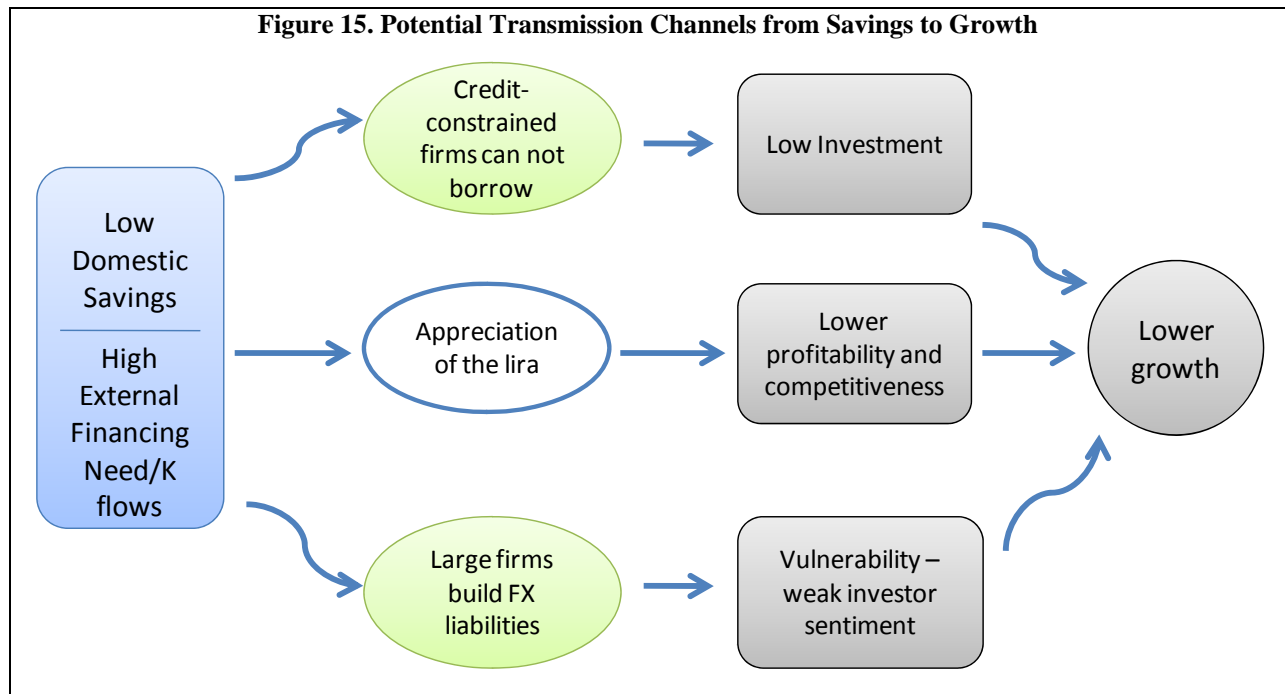


26. **To the extent low domestic savings imply higher external financing of investment for a developing country, sustainability of growth faces a significant risk.** Figure 15 illustrates conceptually the potential transmission channels from low domestic savings and high external financing to lower growth. There are three main transmission channels:

- i. For credit-constrained firms (small and medium enterprises (SMEs)) with little or no means of external financing, lack of domestic saving lowers investment (the Feldstein-Horioka puzzle) and thus lowers growth of the economy.
- ii. For larger firms, financing investments in good times is not difficult, but the possibility of a reversal in capital inflows creates economic vulnerability. In the extreme event of a sudden stop, for example, not only are investments hit directly by the sudden absence of financing but investor sentiment also declines, further undermining investment and growth.

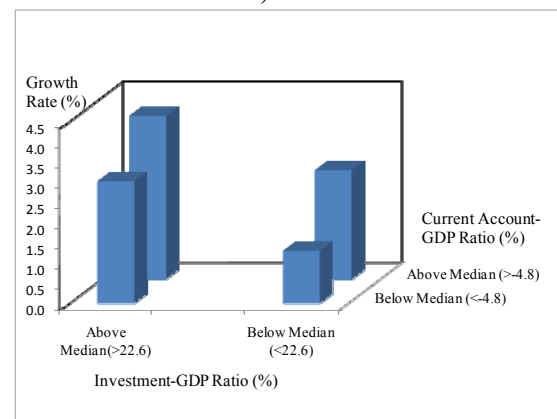
²⁶ A more detailed analysis of the transmission channel between saving and growth and the significance of low domestic saving can be found in the background work for this study.

- iii. The continuous flow of foreign capital causes the local currency to appreciate, putting pressure on the profitability and competitiveness of tradable sectors.



27. **In the 2000s, countries with higher investment-GDP ratios and smaller CADs grew faster.** Figure 16 shows investment to GDP ratios and current account balances for developing countries with GDP per capita of less than USD 12,000. Turkey is one of the countries with an investment-GDP ratio that is below the median and a CAD above the median, based on averages for 2000–08. Countries with large CADs and below-median investment ratios had the lowest average per capita GDP growth in 2000–08. Among countries with high investment-GDP ratios, those with smaller CADs grew significantly faster than those with large CADs. This may suggest that foreign capital is not a perfect substitute for domestic savings. In essence, (following corporate finance terminology) domestic savings may be considered *internal finance*, which does not impose a cost on the economy in the form of an external finance premium.

Figure 16. Average Growth Rates of Developing Countries by CAD-GDP and Investment-GDP Ratios, 2000-2008



Source: World Bank staff calculations

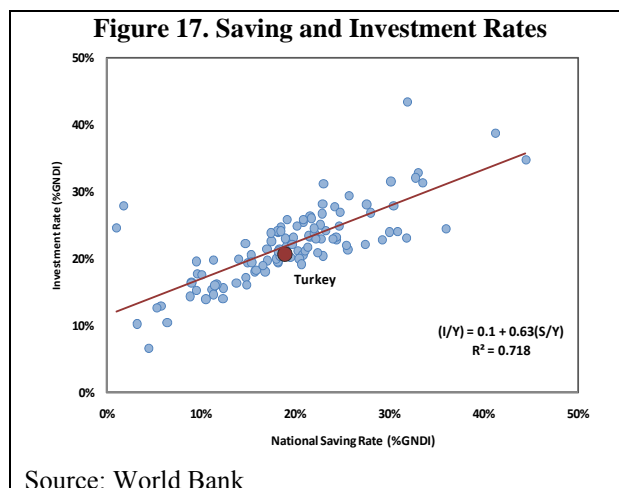
28. **Heavy reliance on foreign capital inflows may jeopardize the sustainability of growth in Turkey.** Empirical evidence suggests that financing the expanding foreign exchange debt and CAD is a binding constraint on economic growth in Turkey. Econometric analysis²⁷

²⁷ Both a recursive vector auto-regression (VAR) model and an autoregressive distributed lag (ARDL) bound testing approach were used.

suggests a robust positive association between capital inflows and economic growth in Turkey. A simulation found that a shock to capital flows in the form of a sudden stop would produce large fluctuations in output through both direct and indirect channels. Fewer capital inflows reduce the resources available for investment, and the currency depreciation associated with a sudden stop would deteriorate the balance sheets of firms with high foreign exchange exposure, reducing their net worth. Subsequently, investment and output would fall. This suggests a close relationship between capital flows and output in Turkey.²⁸

III.2 Evidence on the Investment-Saving Relationship in an Open Economy: International Perspective

29. The previous section identified transmission channels for the low savings rate: the resulting lack of sufficient funds leads to less investment; appreciation of the domestic currency erodes competitiveness; and the building up of foreign exchange liabilities creates vulnerability in the economy, all of which constrain growth. It also showed the relationship between high current account deficits and growth. This section presents cross-country evidence of the saving-investment relationship. Given Turkey's continued high need for investment, establishing a close positive relationship between saving and investment will underscore the importance of increasing domestic saving in Turkey.



30. **Cross-country data suggest a positive association between domestic saving and investment.** Although there is no consensus on the direction of causality between national savings and growth, a robust the association between national savings and investments has been found. Figure 17 displays scatter plots and the regression line between investment and saving rates from a sample of 104 developed and developing countries, averaged for 1980–2008. Two points deserve emphasis: First, there is a highly positive and significant correlation between investment and saving rates.²⁹ Second, Turkey lies very close to the regression line, suggesting that its saving rate is typical for a country with its investment rate.

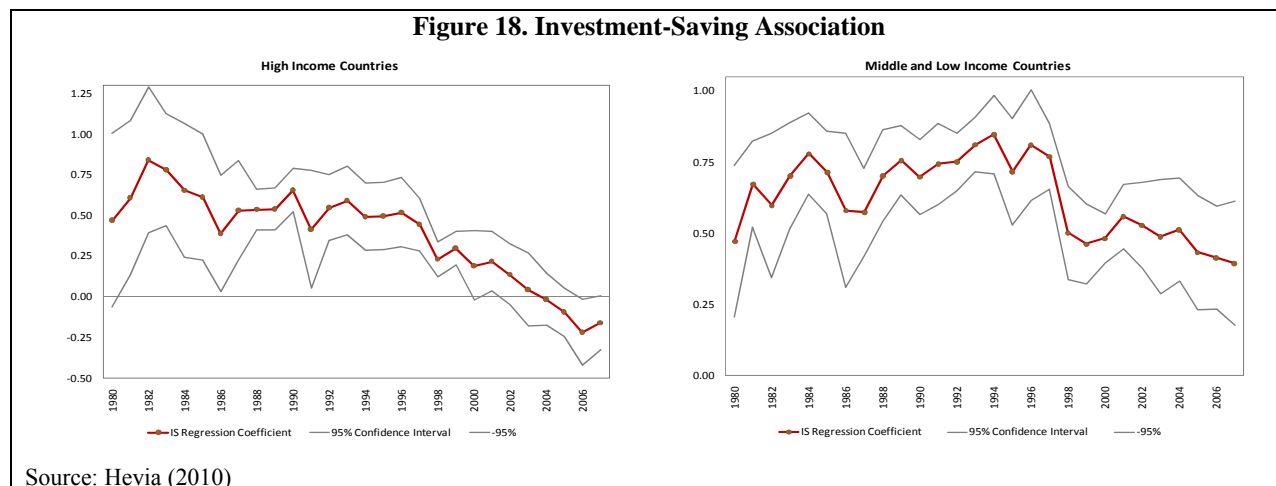
31. **This study updated and extended the Blanchard and Giavazzi (2002) analysis to cover 104 countries, 68 of which are middle- and low-income countries.** Blanchard and Giavazzi (2002) present evidence for the euro area and OECD countries showing that the close correlation between investment and savings might be weakening. The updated work shows that the relationship may be weakening after 1997. These coefficients, however, hide major

²⁸ Kılınç (2006) finds that Turkish producers of both tradables and nontradables are financially constrained; nontradable sector investment is more sensitive to international capital flows; and there is a sizable currency mismatch in the nontradable sector. Therefore, exchange rate depreciations caused by sudden stops would profoundly impact balance sheets and thus the activity of nontradable firms especially.

²⁹ The R^2 of the regression of average investment on average savings is 0.72, the coefficient of the regression is 0.63 with a standard error of just 0.04.

differences in the relationship between savings and investment between developed and developing countries.

32. **The close relationship between saving and investment (the Feldstein-Horioka puzzle) can no longer be observed in advanced countries.** Figure 18 reports the coefficient on the investment-savings regression but differentiates high-income from middle- and low-income countries. For high-income countries (Figure 18, left panel), the result is striking: the decline in the regression coefficient since 1997 is pronounced, and by 2007 it had become negative. This finding is consistent with the view that in the short run saving and investment became perfectly decoupled in high-income countries.



33. **In developing countries, however, investment-saving association can still be observed albeit somewhat weaker than before.**³⁰ The right panel of Figure 18 shows the coefficient for middle- and low-income countries. Although it does decline substantially after 1998, it remains positive and statistically significant until 2007, with a point estimate value of 0.39. Although the Feldstein-Horioka fact seems to be less of a puzzle in advanced countries, it is still alive in developing countries, at least in the short run. If there is indeed a short-run causality from savings to investment, these results suggest that in developing countries policies to change domestic saving behavior may affect aggregate investment and therefore growth.³¹

III.3 Attaining Sustainable High Growth: A Growth Accounting Perspective

34. **Higher savings alone are not enough to promote sustainable growth.** International evidence suggests that productivity may be the main driver of sustainable growth. The role of domestic savings in achieving sustainable high growth therefore cannot be considered in isolation from productivity growth. This section describes simulations which suggest that growth can only be feasible with a reasonable combination of savings and growth in total factor productivity (TFP).

35. **Whether savings are allocated to productive activities depends on the quality of the financial system and public institutions in general.** Without an efficient financial system, the best investment opportunities will not be matched with available savings (Levine, 2005).

³⁰ Yentürk, Ulenin, and Çimenoglu (2009) and Kaya (2010) are among the few studies that have investigated the association between savings and growth in Turkey.

³¹ See the background paper for this study by Hevia (2010) for details of the analysis.

Likewise, without strong public institutions that guarantee economic stability and contract enforcement, for instance, accumulated capital may remain idle or be used ineffectively (Hall and Jones, 1999). These points to the importance of using physical capital, human capital, and labor efficiently in the production process.

36. **A stylized model is calibrated to illustrate the link between national savings and economic growth in Turkey in various productivity growth scenarios.** Two simulations are carried out (Table 1). Table 1.a is designed to measure the saving rate required to obtain a 4 percent growth rate in GDP per worker assuming no saving-investment gap. The second provides economic growth rates that can be attained for three different TFP growth rates if the national saving rate is fixed at 20 percent. Both simulations are dynamic in the sense that they follow the evolution of the economy for an extended period, here 25 years. This exercise clarifies the relationship between saving, productivity, and growth and reveals limits and possibilities for maintaining or improving economic growth in Turkey by using savings as a policy tool (see Havia, 2010 for the methodology and calibration of the model).

Table 1. Simulations of Savings and Growth Rates, Various Scenarios		
a. Saving Rate under TFP Growth Scenarios (GDP per Worker Growth Rate = 4%)		
	Moderate (TFP Growth=1%)	High (TFP Growth=2%)
Initial	24.9	19.5
5 Years	26.0	18.3
10 Years	27.2	17.2
25 Years	31.1	14.2
b. GDP per Worker Growth under TFP Growth Scenarios (Saving Rate = 20%)		
	Moderate (TFP Growth=1%)	High (TFP Growth=2%)
Initial	3.00	4.10
5 Years	3.03	4.33
10 Years	3.05	4.51
25 Years	3.09	4.88

Source: Hevia (2010)

37. **Simulation results imply that a reasonably high growth rate is attained only if there is a reasonable combination of saving and productivity growth.** In a moderate TFP growth scenario, the required investment (capital accumulation) to achieve 4 percent per worker growth would require a 25 percent saving rate in the beginning and 31 percent over 25 years. In the high TFP scenario, where TFP growth increases to 2 percent, the necessary saving rates are much lower: 19 percent at the beginning and 14 percent at the end of the simulation period. But even in the high scenario, the saving rate would have to rise from its current level to attain growth of 4 percent GDP per worker—not far from Turkey’s own medium-term growth target. Alternatively, assuming a fixed 20 percent saving rate (Table 1.b) and 2 percent TFP growth, growth in GDP per worker is projected to be 4.5 percent over 10 years. This GDP per worker growth is significantly below the 2002-2007 average growth rate of 5.7 percent, which was not sufficient to reduce unemployment rate below 10 percent.³² Rodrik (2009) has recently argued that an

³² Pressures from a growing labor supply and sectoral transformation were instrumental in keeping unemployment sticky. In this period, average TFP growth was close to 2 percent.

increase in domestic savings by nearly 10 percentage points is necessary to achieve growth rates that will absorb excess labor supply and reduce unemployment in Turkey.

38. **Further improving the investment climate in Turkey is crucial to promoting productivity growth.** Analysis of investment climate survey data confirms a significant association between the quality of the investment climate and productivity. Productivity analysis shows that almost one-third of the variation in the performance of the business sector in Turkey is explained by investment climate factors. Among these factors, the regulatory environment is the area with the largest relative contribution to productivity. Other relevant investment climate areas include infrastructure bottlenecks, access to finance and corporate governance, the availability of skilled labor and innovation.³³

³³ For a detailed discussion of reforms, see World Bank Turkey Country Economic Memorandum, Informality: Causes, Consequences, Policies (2010).

IV. 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.

IV.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.**³⁴ 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.
- 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.

³⁴ A more detailed analysis of the estimation of this model can be found in the background work for this study.

41. **Time series analysis and findings from Turkey-specific analyses³⁵ 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 capital 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 Saving³⁶

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).

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.

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.

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.

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.

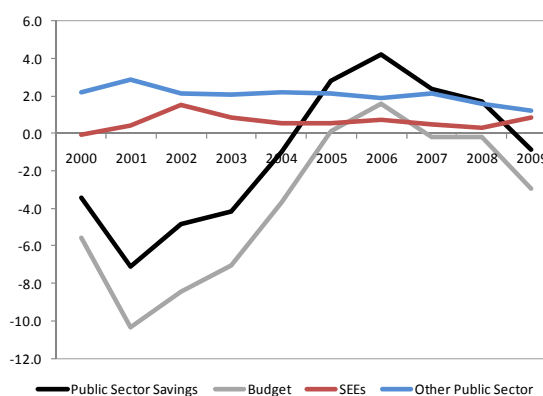
Thus, the difference between the overall balance and public saving is investment expenditure and capital transfers.

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).

Figure 19. Public Saving (Percent of GDP)



Source: Ministry of Development, Presentation at the CEM workshop by Fatih Kaya on March 24, 2011

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.³⁷ 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.³⁸ 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 -0.77.³⁹

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.

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.

This result supports the findings that identified interest rates as a major determinant of private saving.

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,⁴⁰ 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.

IV.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.**⁴¹ 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.

⁴⁰ See Alesina & Peroti (1997), Alesina & Ardagna (1998), and Peroti (1996).

⁴¹ 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.**⁴² 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.

IV.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.

Saving 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)

⁴² This paragraph relies on the background paper by Aktaş et al. (2010) and refers to the work of Kulikov, Paabut and Staehr (2007), Butelmann and Gallego (2000), Burney and Khan, (1992) Bersales et al. (2006), Székely and Attanasio (2000) and Chamon and Prasad (2008).

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.”⁴³

Saving Throughout the Lifecycle

“I started working when I was 16. Following my mother’s advice, I gave some to my family, kept some to spend, and bought some gold. When I was getting married, I had gold.” (Istanbul, wage earner, male)

“We thought that the children are going to go to college, we need to save for that, we put TL 150 in the bank every month.” (Antep, wage earner, male)

“When our child was born, we started putting away some money for (him/her). We save USD 100 a month. We started with USD 50, we will keep adding. We have been putting money aside for eight years now.” (Istanbul, wage earner, male)

“We had children, and then we could not save any more.” (Antep, wage earner, male)

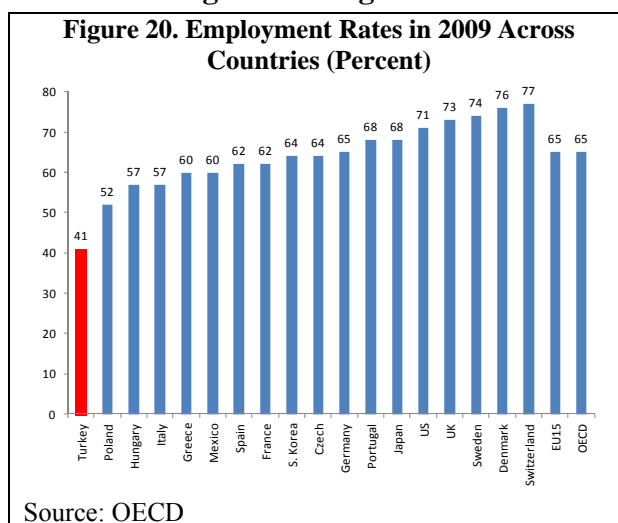
“I did not want to have children before buying a home. For me, having children means higher spending. You have to have a home.” (Antep, wage earner, female)

“I have social security; so does my wife. We are thinking about living off our retirement benefits.” (Istanbul, self-employed, female)

“Our retirement benefits will be enough.” (Antep, wage-earner, female)

⁴³ Aviva (2010) provides an estimate of the pension gap for Turkey.

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 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 finances⁴⁴, 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.



Women, Especially Working Women, Tend to Save More

“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)

59. **Cross-country panel data estimations confirm the highly positive association between employment rate (and the female labor force participation rate) and saving rates.** Panel regressions⁴⁵ 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. **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

⁴⁴ See Box 3.

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.

smaller in comparison to other variables, they are surprisingly consistent across years, both in terms of magnitude and significance. Kirdar and Cilasun (2009) also find a consistently positive relationship between education levels and 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.⁴⁶ 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)

IV.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.

⁴⁶In 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.⁴⁷ 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).

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

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.

(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.

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

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. Yilmazer, Adaman, and Kaytaz (2009) investigate the impact of financial development on homeownership.

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

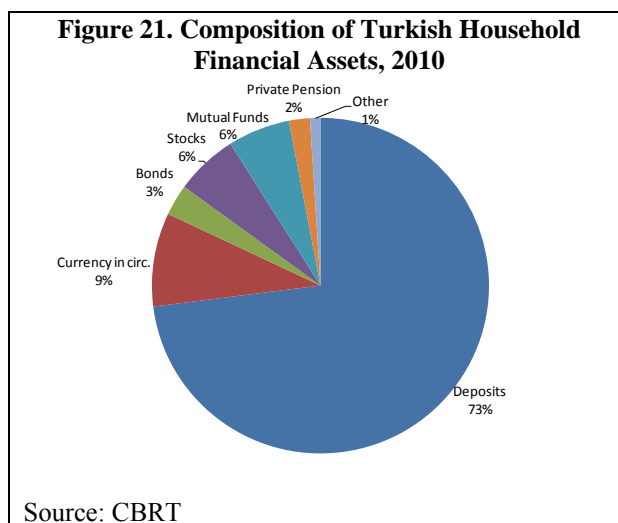
73. Turkish households hold a mix of financial and nonfinancial assets. Although it is not easy to estimate assets outside the financial system (such as gold and foreign exchange holdings under the mattress), from micro level data and focus group discussions it appears that the amounts involved are not 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 2. Household Financial Assets in Turkey: Percent of GDP and Decomposition									
	TL billion	Percent of GDP	Decomposition of Household Financial Assets (percent)						
			TL Deposits	FX Deposits	Government Securities	Shares	Money in Circ.	Private Pensions	
2003	157.6	34.7	29.1	35.2	22.4	5.1	6.4	0	
2004	190.5	34.1	33.3	32.2	20.5	6.5	6.5	0.2	
2005	219.5	33.8	41.2	27.2	14.9	7.2	8.3	0.5	
2006	279.7	36.9	40.6	26.8	10.1	5.6	8.8	1	
2007	313.6	37.2	45.4	25.0	6.3	5.6	8.4	1.5	
2008	366.9	38.6	51.3	24.1	5.4	2.9	8.3	1.7	
2009	420.4	44.1	49.9	23.4	3.3	5.9	8.4	2.1	
2010*	463.3	41.9	51.1	21.7	2.2	6.5	9.4	2.5	

Source BRSA
*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.

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.

	Gross	Tax	Net
Bank deposits	20.1	15.0	17.1
Benchmark bonds	15.2	10.0	13.7
Mutual funds			
Type A (equity)	16.9	10.0	15.2
Type B (fixed Income)	9.3	10.0	8.4
Equity (ISE)	28.3	0.0	28.3

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

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 policies⁵⁰ that could inform the design of similar programs in Turkey.

⁴⁹ OECD (2007).

⁵⁰ Several other country cases are summarized 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.

Period	Withholding Rate for Wage-Earners (Percent)	State/Employer Contribution (Percent)
April 1988–January 1989	2.0	3.0
January 1989–July 1989	3.0	4.5
July 1989–July 1994	4.0	6.0
July 1994–June 2000	2.0	3.0

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.⁵¹ A second program is the Child Trust Fund (CTF), launched in

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,

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.
- 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.

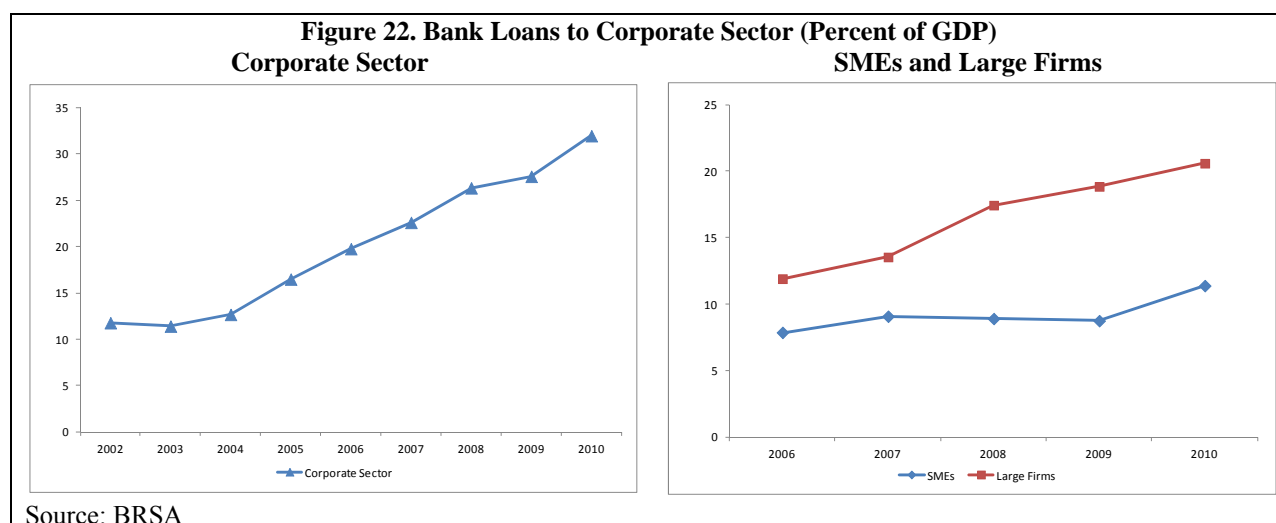
eligibility criteria were (i) qualifying for and receiving unemployment benefits; (ii) being employed and earning less than £25,000 annually with household earnings of less than £50,000.

IV.3 Corporate Saving

83. **This section discusses determinants of firm saving rates and net profit margins in Turkey.**⁵² 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 2007.⁵³ A favorable macro environment—a declining cost of external finance and high overall demand—contributed to the rise in SME profits.



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).⁵⁴ Firm-level econometric analysis using both ISE and CBRT data suggests that in Turkey SMEs

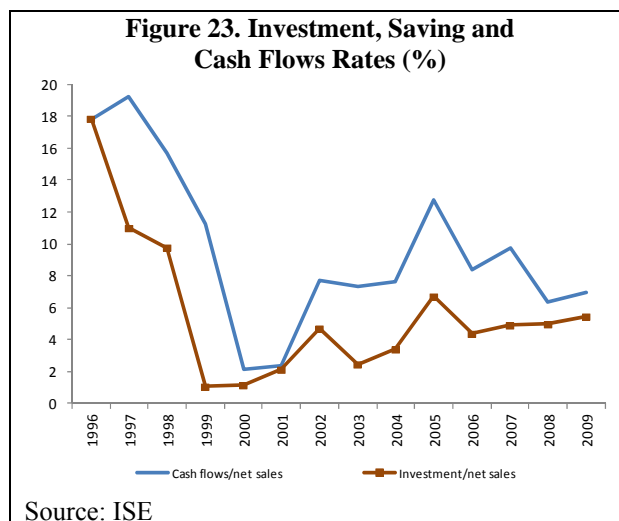
⁵² Specifications for both saving rate and net profit margin equations are similar when the regressions use GMM dynamic panel methodology. ISE data are used for modeling the determinants of the saving rate because saving data is available only for listed firms. CBRT data are used for modeling net profit 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.

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.

are financially constrained.⁵⁵ 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.⁵⁶ 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 Kılınc (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.⁵⁷ 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.⁵⁸



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 Turkey⁵⁹. Also, because SMEs are mostly run by families, their growth is closely linked to intra-

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).

⁵⁸ Few studies analyze the determinants of firm saving rates, but Bates, Kahle and Stulz (2006), IMF (2006) and IMF (2009) are among them.

⁵⁹ For details on informality in Turkey, see World Bank Turkey CEM, Informality: Causes, Consequences, Policies (2010).

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.⁶⁰ 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.**⁶¹ 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

⁶⁰ Estimation results confirm that the coefficient of leverage ratio in the regression of large firms is smaller in absolute terms than the coefficient in the regression using the ISE SME sample. It is often argued that large firms are not financially constrained because they are rich in collateral options.

⁶¹ 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.

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.

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.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.⁶³ They also argue that the change in the tax treatment of retained earnings was central to promoting corporate savings in Chile (Box 5).

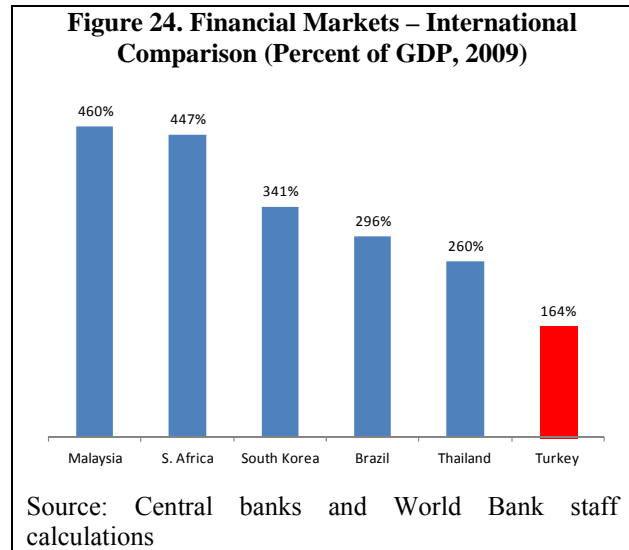
⁶²Real exchange rates may affect profitability and investments through domestic revenues if import competition or potential wealth effects shift demand for domestically produced goods. A real depreciation may be expansionary by increasing operating profits for firms that are primarily exporters by boosting 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).

⁶³There 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 Servén (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 "neomercantilist" views on the positive impact of depreciated real exchange rates

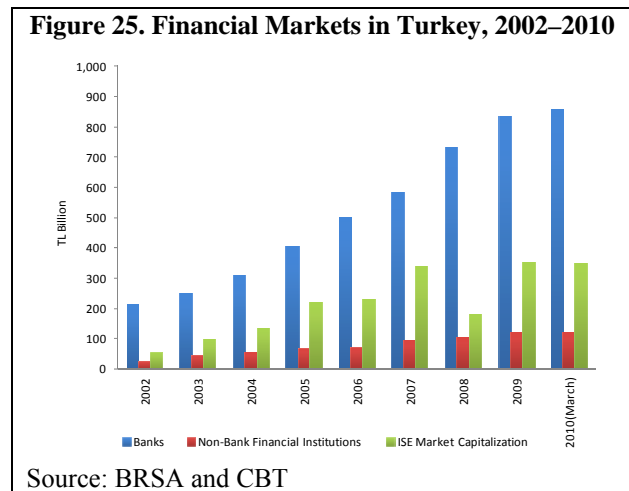
V. THE ROLE OF FINANCIAL MARKETS IN INTERMEDIATING SAVINGS IN TURKEY

V.1 Overview of Financial Markets

94. **A major feature of well-developed financial markets is the availability to investors of a range of financial products and instruments.** These instruments and fiscal incentives can boost savings. Examples in the USA are the individual retirement account (IRA) and simplified retirement plans, such as the “individual 401 (k)”, which enable individuals to save substantial amount of money through an upfront tax deduction and deferral of earnings until retirement age is reached. A well-developed financial market also offers investors multiple vehicles for investing within their risk tolerance, among them venture capital funds, hedge funds, and other alternative investments. Investment in equity and bond markets is facilitated by online transactions through a wide array of intermediaries. Investors are also protected by investor protection funds that the investment industry manages under the supervision of such authorities as the Securities and Exchange Commission and self-regulatory organizations (the exchanges).



95. Section 4 above provided the composition of household assets, and showed that bank deposits and government securities have been the main saving instruments for households in Turkey. This section looks at the different segments of the financial and capital markets to identify potential areas for growth and attracting domestic savings.



96. **International comparison suggests there is room for Turkish financial markets to grow.** At the end of 2009, the size of Turkey’s financial markets as percentage of GDP was 164.1 percent compared with 460 percent for Malaysia and 260 percent for Thailand (Figure 24). Turkey’s financial markets are also smaller than in G-20 countries, such as Brazil (295.8 percent) and South Korea (341.4 percent). While South Korea, Malaysia, and Thailand have high saving rates (over 30 percent); Brazil’s saving rate is comparable to Turkey’s. The segments that are substantially smaller in Turkey are the equity and bond markets: corporate bond markets are large in South Korea, Malaysia, and Thailand and growing in Brazil. Turkey

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).

has also taken steps to build its corporate bond market and stimulate growth of its stock markets. Growth in both would be greatly facilitated if the domestic investor base was expanded at the same time.⁶⁴

97. **Turkish financial markets have experienced an impressive growth following the major economic reforms in the post-2001 period—although they are still dominated heavily by the banking sector.** The size of the financial markets has more than tripled, from TL 316 billion at the end of 2002 to TL 1,127 billion by the end of March 2010 (Figure 25). A unique feature of Turkish financial markets is the absolute dominance of the banking system. Banks accounted for 87.9 percent of the financial markets and nonbank financial institutions (NBFIs) for 12.1 percent. However, if ISE market capitalization is added, the share of banking in the financial system declined steadily from 72.7 percent in 2002 to 64.9 percent in 2009. Although the banking sector is dominant in Turkish financial markets, its size to GDP ratio is not far out of line with other emerging market countries. At the end of 2009, it accounted for 90.4 percent of GDP, compared to 127.1 percent in Korea and 204 percent in Malaysia. There is still potential for Turkish banks to grow by expanding branch networks and offering innovative financial products in rural areas.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Securities	18.5	60	86.1	106.8	123.7	143	158.9	164.7	194	241.5
Loans	31.8	38	49	66.2	99.3	156.4	219	285.6	367.4	375.7
Inv. in subsidiaries	4.2	6.6	8.7	9.2	11.8	11.1	9.2	10.9	10.3	12.1
Fixed assets	2.5	6	7.7	8.3	8.5	7.7	7.4	7.9	9.6	9.7
Total assets	104.1	173.4	212.7	249.7	306.4	406.9	499.7	581.6	732.5	798.4
Deposits	58.9	110.4	138	155.3	191.1	251.5	307.6	356.9	454.6	488.9
Funds from abroad	3.8	2.8	11	17	22	36	49	61	62	58
Own funds	7.2	18.3	25.7	35.5	46	54.7	59.5	75.8	86.4	105.4
Profit	-3.1	-10.5	2.9	5.6	6.5	6	11.4	14.9	13.4	15.7
Off-balance sheet	105	87.5	75.3	107.2	527.6	206	277.4	385.5	476	638.6

Source: BRSA

98. **Turkey’s banks are well- capitalized.** Table 4 provides key indicators for the banking sector in Turkey. The banking sector performed exceedingly well during the global financial crisis and the entire financial system experienced no major distress. The Turkish banking sector is highly concentrated with five banks accounting for 63 percent of the banking sector assets in 2010. It relies heavily on deposits that have a relatively short maturity and on borrowing from abroad, mainly in the form of syndicated loans and short-term bonds. As of June 30, 2010, 92.5 percent of deposits had a maturity of less than 90 days. Since November 2010, BRSA and CMB of Turkey have permitted domestic banks to issue TL-denominated bonds in domestic financial markets within specified limits.

99. **About a third of banking assets consist of government securities.** Turkish banks have traditionally invested heavily in government securities because the government offers high

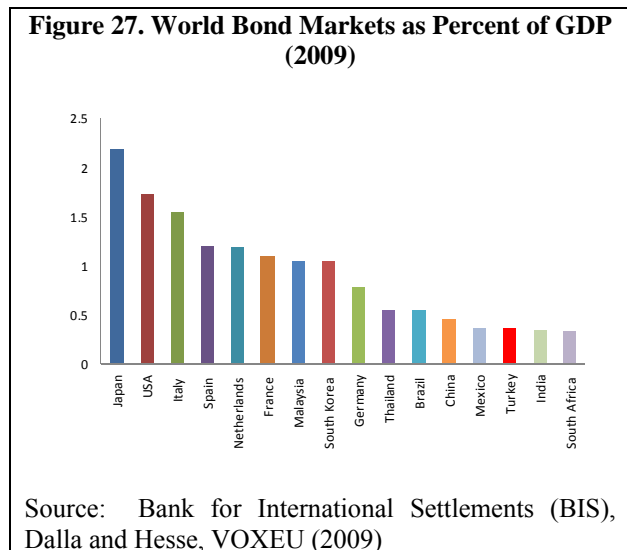
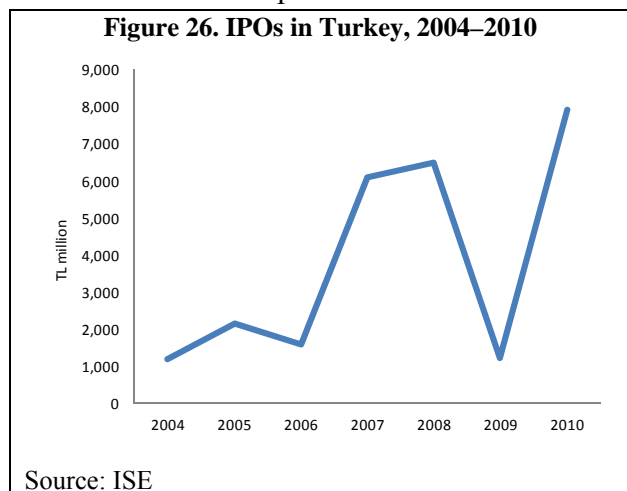
⁶⁴ Recent efforts by ISE to increase market capitalization resulted in increased IPOs (in 2010, 22 companies went public). ISE is applying a 25% discount on initial listing fees, which will be in effect until end-2012. Turkey was promoted to “advanced emerging” status in the FTSE Global Equity Index series country classification.

interest rates and the risks of lending to the private sector are high. Another large segment of bank assets is loans (Table 4). For the first half of 2010, interest income from consumer and credit card loans amounted to 58.4 percent of total interest income. Lending to corporate sector accounts for a small part of commercial banking activities. The focus is on non-interest income and services. As a result, corporations rely heavily on FX borrowing from international markets; the relatively large net foreign currency exposures heighten vulnerability. Further development of the corporate bond market in Turkey will enhance the opportunities for funding in the domestic market. Declining interest income from government securities is likely to put pressure on bank profit and motivate them to increase their fee-based business.

100. **The stock market in Turkey has grown rapidly but is small compared to countries with similar per capita income.** Market capitalization increased 600 percent between 2002 and 2010. At the end of 2009, total ISE capitalization was 37.7 percent of GDP—very low even compared with countries that have lower per capita income, such as Malaysia and Thailand. Moreover, foreign investors dominate the equity market and account for more than 60 percent of market capitalization.

101. **For the past three years the ISE has been one of the top-performing stock markets in emerging markets.** The ISE index rose from 24,972 in 2004 to 66,004 in 2010. However, its volatility has been similar to that of other emerging stock markets. The total amount of funds raised in the period 2004–2009 was USD 18.7 billion (Figure 26). In 2010 the amount of funds raised on the ISE surged to USD 7.9 billion, reflecting better market conditions and a brisk rise in the ISE index. The relatively buoyant domestic equity market has lowered the cost of capital for issuing equity rather than debt for most listed Turkish companies.

102. **However, the stock market has not been a major source of funds for the corporate sector.** Turkish companies have been slow to access the ISE for several reasons. For one thing, corporate ownership in Turkey is highly concentrated; a few families having controlling interests in numerous large listed companies. Also, the tax rate for dividends is 15 percent, so there is double taxation compared to borrowing. Because interest paid by corporations is deductible, debt is more attractive to them than equity. In Malaysia and Singapore, among other countries, investors can get credit on dividend income when filing tax



returns. The domestic market also lacks such quasi-equity instruments as convertible bonds and preference shares.

103. **The government bond market is well-developed.** The bond market has grown rapidly since the government made a strategic decision to replace foreign currency debt with domestic currency bonds. At the end of 2009 the local currency bond market (government and private sector) was USD 222 billion—the 14th largest in the world (Figure 27) when measured as a percentage of GDP. This was about the same as Mexico and slightly behind China. The Turkish government issues a broad range of instruments that are available to domestic and international investors. However, the benchmark instrument is zero coupon bonds, the issuance of which amounted to 54.6 percent of borrowing in 2009, followed by floating rate notes (24.1 percent); inflation-indexed bonds (15 percent); fixed coupon TL auction bonds (5.4 percent); and revenue-index (0.8 percent) and foreign exchange revenue bonds (0.1 percent).

104. **Capital markets in Turkey were heavily dominated by the government until the mid-2000s.** Between 2000 and 2005 government securities averaged over 90 percent of total issues. In the 1990s the ratio was even higher, averaging about 95 percent. During tranquil periods, such as 2005–07, the government issued less paper even in nominal terms. In the 2008–09 crisis, however, the large increase in issues by investment and pension funds resulted in a relatively low share of government securities.

105. **The corporate bond market accounted for less than 1 percent of financial markets in 2009.**⁶⁵ Although Turkey has the sixth largest local currency bond market among emerging market countries, at the end of 2009 its corporate bond market amounted to only TL 481 million (USD 400 million). This is far smaller than in other major emerging markets. The corporate bond market has been slow to develop because of such factors as low domestic savings, crowding out by government borrowing, bank dominance of the financial system, lack of a liquid sovereign yield curve beyond 22 months, and a small investor base. What is essential for a growing and vibrant corporate bond market are sound capital market intermediaries, risk management products, stronger credit rating agencies, enhanced creditor rights, equitable taxation, a functioning market infrastructure, sovereign benchmark yield curves, a large domestic investor base including institutional investors, encouragement for blue-chip companies to enter the market, and a coordinated effort by government and private counterparts. Since 2007 corporate bonds have gained momentum as macroeconomic conditions improved and domestic interest rates declined. In October 2010, the corporate bond market got a major boost when the BRSA decided to permit banks to issue TL debt instruments in domestic markets. By the end of 2010 the corporate bond market had increased fivefold, to TL 2.5 billion. The improvement was also a result of measures taken by the CMB of Turkey and the ISE to lower transaction costs, remove tax distortions, reduce issuing costs, and reduce the costs of trading in the secondary market. In January 2011 the government reduced the secondary market transaction cost on corporate bonds from 5 percent to 1 percent to align the cost with that of government securities and stimulate secondary market trading.

⁶⁵ The corporate debt market in Turkey was relatively active between 1992 and 1997, with bank bills dominant. However, the market vanished after 1997 because of such factors as unstable economic conditions, high inflation, and crowding out by the public sector as the government became the major bond seller to finance growing deficits.

106. **Further growth of the corporate bond market will be critical to the evolution of financial markets in Turkey.** The government programs indicate that the private sector should be the engine for future growth. Therefore, it is important that Turkey broaden the base of the financial market and reduce reliance on the banking sector as the dominant intermediation channel. The corporate sector should be able to raise investment funds from a variety of sources so that they can produce high-quality goods and services that compete globally. Building a robust corporate bond market will require the authorities to make concerted efforts.⁶⁶

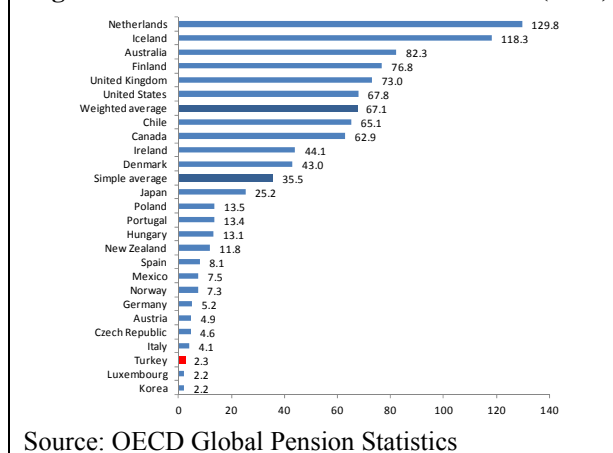
107. **Turkey has a reasonably well-developed mutual fund industry.** At the end of 2009, total assets managed by the mutual fund industry amounted to TL 38.7 billion including TL 9.1 billion in pension mutual funds. Turkey has three types of mutual funds: Type A, Type B, and private pension funds. Type A funds must invest at least 25 percent of their assets in equities issued by Turkish companies; Type B funds do not have such a requirement. For the last five years mutual funds in Turkey have consistently underperformed their benchmarks for bonds and stocks. The lion’s share of the mutual fund industry continues to be invested in government securities and reverse repos that are liquid and provide attractive returns. It is interesting to note that performance of both types of funds substantially lagged behind their respective benchmarks. Underperformance by these funds may be due to early stage of fund management industry, high management costs and risk aversion of fund investors who were seeking safe assets with short duration. Taxes on mutual fund capital gains were probably also a major factor in limiting the growth of Type A funds.

V.2 The Private Pension Scheme

108. **The relatively new private pension scheme (personal pension system) has grown rapidly since its launch in 2003.** Total contributions have risen to TL 9.5 billion, and at year-end 2010 funds accumulated in the system stood at TL 12 billion. The number of plan participants has risen from 15,245 in 2003 to 2.3 million in 2010. These funds are offered by 13 companies licensed by the Undersecretariat of Treasury. At the end of 2010, equities constituted 12 percent of their investments.

109. **The private pension plan was introduced to supplement the public social security system.** It is a voluntary, defined contribution system. The retirement fund accumulated and invested in each participant’s account is based on regular contributions by the participant. Thus retirement earnings depend solely on contributions, administrative expenses, and investment returns. The private pension system aims to diversify pension risks and increase earnings during retirement by directing individual pension savings into the system. The second objective is to create a large pool of funds that will in turn create new jobs and help build up

Figure 28. Pension Funds as Percent of GDP (2009)



⁶⁶ The discussion on corporate bond markets draws on the forthcoming World Bank Study “Corporate Bond Market Development – Priorities and Challenges.”

capital markets by generating long-term resources for the financial system. The system is regulated by both the Undersecretariat of Treasury and CMB of Turkey. In addition, the Pension Monitoring Center was set up in July 2003 to provide daily information on activities of private pension funds.

110. **Despite its rapid growth, the private pension system in Turkey is quite small.** Although its size has increased, at the end of 2010 it accounted for only about 1 percent of GDP. As a percentage of GDP, the Turkish pension system is one of the smallest among developed and major emerging market countries (Figure 28). However, the demographic structure is very much in favor of Turkey and with necessary reforms there is great potential for building a large pension base.

111. **The private pension system in Turkey is facing major challenges.**

First is the large number of early withdrawals. Reportedly about one-third of plan participants withdraw after three years, despite a withholding tax of 15 percent is applied on the amount accumulated. Second, asset allocation is severely skewed (about 70 percent in 2010) toward government securities; most accounts are invested in money market funds. Third, its operating expenses are among the highest in the world (Table 5), 2.29 percent in 2010 compared to less than 0.5 percent for most developed countries. This may be attributed to the voluntary nature of the system and its recent introduction. The average contribution in 2010 was TL 165 and average account size was TL 4,739. Fourth, all pension fund companies work with the portfolio companies under the same holding company, which may create conflict-of-interest and lack of competition. Finally, the amount of the contribution eligible for tax credit is limited to 10 percent of annual income subject to annual minimum wages (TL 9,800 or USD 6,150 in 2011). Since 38.1 percent of contributors in 2010 were aged 25-34, there is significant potential for increasing the size of the private pension fund.⁶⁷

	2007	2008	2009
Australia	0.03	0.07	0.18
Belgium	0.00	0.00	0.00
Canada	0.13	0.17	0.19
France - FRR	0.17	0.19	0.16
Mexico	0.04	0.03	0.03
Norway	0.05	0.09	0.09
New Zealand	1.04	0.64	0.57
Poland	0.04	0.01	0.02
Portugal	0.06	0.06	0.06
Sweden - AP3	0.13	0.14	0.17
Turkey			2.29
United States	0.25	0.24	0.24

Source: OECD Global Pension Statistics.

*The figures include the public pension reserve funds for comparators and only the private pension system for Turkey.

⁶⁷ Insurance companies, especially life insurance companies, are also underdeveloped and seem to have no role in mobilizing long-term domestic savings in Turkey.

VI. POLICY OPTIONS

112. **The analysis has shown that domestic savings in Turkey are low and falling, creating multiple challenges to sustained high growth.** Low—and declining—savings imply fewer funds for investment. Moreover, low domestic saving increases dependence on foreign financing, fueling a rise in the current account deficit and jeopardizing the sustainability of growth. Over the past decade a significant portion of investment in Turkey has been financed through foreign savings, often short-term. The recent decline in household saving rates and the low level of domestic savings (12.7 percent of GNDI in 2010) is of particular concern.

113. **A stable and enabling economic environment is crucial for raising saving rates.** Section 4 reviewed the determinants of saving in Turkey. Private saving is closely linked to the real interest rate, gross private disposable income, the young age dependency ratio, and inflation. Although transition towards economic stability post-2001 led to a fall in precautionary motives for saving, in the future, a stable and enabling macroeconomic environment, building on Turkey's robust macroeconomic policy performance over the past decade, will be critical to raising domestic saving by increasing incomes.

114. **Education and higher female labor force participation have also been linked to increased private savings** (Section 4). World Bank (2010) discusses policies that can help improve women's opportunities for more and better jobs, for example, through more flexible labor market regulations, more affordable child care, and sustained investment in education.

115. **Clearly, the low and declining saving rate is primarily due to a plunge in household savings.** There are a number of policy tools that can help promote higher and longer-term household savings. These are the core of this report and can be grouped in two main categories: demand-side policies to inform household saving decisions and supply-side policies that improve the regulatory, institutional, and other conditions in which saving decisions are made.

116. **There could be high returns to policies that (i) raise awareness about the benefits of saving, particularly long-term, and (ii) elevate the level of financial literacy of households.** Because households do not generally plan for saving, they may end up suffering from an income gap later in life and become unable to sustain their living standards. In the absence of awareness about saving for the future, changing consumption habits and the easy availability of credit steer households to higher consumption expenditures than they otherwise would have made. Moreover, the household savings portfolio is frequently allocated without sufficient information on alternative options. The knowledge of the general public about financial markets beyond bank deposit and government securities is limited and the number of shareholders in the stock exchange is small. The availability of high-interest government securities for the last decade has reduced the need for diversification. Traditionally, household saving has often been shaped by personal and family history and saving culture and a desire to own physical assets. Improving portfolio allocation will become more important as interest and returns on government bonds decline.

117. **A national financial literacy strategy would establish a framework for a systematic approach towards increasing the level of financial literacy.** Increasing the financial capability of households, starting early in the lifecycle, and helping them make informed financial decisions could increase savings. The government is aware of the need to raise financial literacy, and a high profile conference sponsored by CBRT and CMB of Turkey was held in March 2011. Implemented effectively, a national financial literacy strategy is likely to have a significant

impact on the saving decisions of Turkish citizens.⁶⁸ Such a strategy would be most successful if there is effective management by the designated lead agency and participation by all relevant stakeholders. In the short term, promoting the financial literacy of the 2.3 million private pension holders who are already in the system and potential participants could attract additional funds into that system. This would be most effective if based on contributions from stakeholders. One policy option could be to provide information about the tax exemption for contributions to the private pension system not only to its beneficiaries but also to administrators in workplaces. Efforts in the context of the “Istanbul International Financial Center Strategy and Action Plan” which includes informing the investors about capital markets, capital market entities and instruments, investor protection systems, risks and similar matters, are also important.

118. On the supply side, the intermediation role of financial markets is central. There are three types of policy option to enhance intermediation: (i) using existing products better (e.g., private pensions, corporate bonds), including, but not limited to, taxation of different instruments; (ii) investing more in product innovation and improving regulation; and, (iii) designing special saving schemes.

119. The private pension schemes recently introduced in Turkey have the potential to grow significantly. Besides raising household awareness about planning for retirement, making the private pension scheme more attractive could help the sector generate more and longer-term savings. One option to consider is increasing tax exemption limit and different parameters (for tax exemption) could be determined to maximize the possibility of attracting new savings into the private pension system, with participation from the relevant public and private agencies. In addition to increasing tax incentives, the government could also consider increasing the vesting period to a minimum of three years with no withdrawal permitted except for medical emergencies. The follow-up work will focus on alternative options to redesign the private pension scheme to attract more savings into the system, and the respective cost of these options.

120. Efforts to promote savings would be most effective if complemented by reforms to increase the overall development level of the financial markets. Turkey’s financial markets have been growing rapidly since 2003. However, the system remains highly dominated by the banking system. Turkey will benefit from a more diversified financial market which can mobilize and allocate savings more effectively and a lower cost. Further development of the corporate bond market is one potential policy option.⁶⁹ More generally, in Turkey the level of financial development seems to play an important role in channeling savings to growth-enhancing activities. The experiences of Malaysia and Thailand, which have both well-developed financial markets and high saving rates, may be relevant for Turkey. It is worth noting that although in the cross-country evidence the simple unconditional correlation between financial depth and domestic saving is positive, the marginal contribution of financial depth (or deepening) on saving is often found to be negative (for example, Loayza et al. 2000). One interpretation to this is that financial liberalization and deepening first reduces saving, because constraints on credit-constrained households and SMEs are lifted, and then, over the long term, raises saving indirectly through higher growth.

⁶⁸ The World Bank team is working on a grant to finance a nationwide financial literacy survey, to be implemented jointly with CBRT and CMB of Turkey. This survey will provide valuable input for preparation of a national strategy.

⁶⁹ Policy options for development of the corporate bond market can be found in the forthcoming World Bank study “Corporate Bond Market Development – Priorities and Challenges.”

121. **On the regulatory side, a new comprehensive capital market will contribute to deepening of financial markets.** The Capital Market Law in Turkey has performed a useful function in providing a broad framework in regulating domestic capital market. Rapid developments in domestic and international financial markets require a comprehensive review of the capital market law to bring it to international standards. The new law is also relevant for EU convergence and Istanbul International Financial Center Project. It will also reduce the need for rule making through communiqués.

122. **The government might consider removing the distortions in the financial markets created by taxation.** Providing equal treatment for all financial instruments regardless of investors will create a level playing field that will enable financial markets to grow and become more robust. Equalizing the tax burden on similar instruments could help achieve a more balanced financial market. For instance:

- i. *Tax on Mutual Funds.* Investments in mutual funds are currently subject to 10 percent withholding tax; investment in individual stocks is tax-exempt. This creates a disincentive for individual investors who are not equipped to invest through stockbrokers.
- ii. *Tax on ETFs.* There is a withholding tax on ETFs but not on trading in individual stocks.
- iii. *Tax on Bank Deposits.* Bank deposits are subject to 15 percent withholding tax; while the investment in government securities is subject to 10 percent withholding tax.

The estimated tax loss from removing the 10 percent withholding tax on mutual funds with more than 50 percent equity content is about TL 25 million, based on an assumption of 20 percent return. A more detailed analysis of the potential fiscal impact of the above policy options is warranted, although the benefits from increased savings would likely outweigh foregone revenues from removing tax distortions.

123. **Special saving schemes, based on successful examples elsewhere, could be instrumental in attracting new savings.** While Turkey previously had a bad experience with a mandatory scheme, well-designed new saving schemes, mandatory or voluntary, that are effectively administered could attract household savings into the financial system. TPSAs like the Saving Gateway and the Child Trust Fund in the UK and the 529 plans in the US (developed for covering future education expenses of the children) are good examples of voluntary saving schemes. The government contribution to individual saving accounts and favorable tax treatment of contributions and earnings might be considered primary elements in program design. The OECD evaluation of the impact of TPSAs shows they did create additional savings. It also suggests that attracting moderate-income households is important for account efficiency because they are more likely to increase saving when given the opportunity to invest in tax-favored accounts. Moreover, since the tax rate is lower on moderate-income individuals, the larger the proportion in which they participate compared to high-income individuals, the lower the cost of foregone tax revenues.

124. **Saving does not automatically generate investment and a sound enabling environment is critical, particularly for the corporate sector.** Additional policy measures could be considered to enhance internal fund generation of the corporate sector, including enhancing operating profits and retaining profits within the firm. In the 1980s and 1990s private

saving exceeded private investment. Hence, it is critical to enable firms to grow and innovate and for labor to be used more productively. Improving work skills, enhancing competitiveness, improving the business climate, and discouraging informality will all help raise savings. These issues, however, are the subject of other studies and thus are not discussed here.

125. Sound macro policies to raise incomes and further reduce economic vulnerabilities would complement other attempts to promote domestic saving. Many studies suggest there is a negative relationship between private saving and the real exchange rate. The analysis of corporate saving in Turkey also suggested that real exchange rate appreciation may have reduced the profitability of large and exporting firms. Rapid credit expansion also suppresses savings to the extent that it is not channeled to productive activities and pushes low-income households into dissaving. Thus, it is essential that monetary and exchange rate policies be designed to control credit growth and excessive appreciation. Recent CBRT attempts may help but they may have to be complemented by other macroprudential and fiscal measures. In particular, policies and measures intended to limit the growth in credit card and consumption loans that encourage growth in consumption, could be effective in promoting saving. Potential measures for consumer loans and credit cards could be the following.⁷⁰

- Introduction of installment limitations for personal finance and vehicle loans provided by banks under the consumer loans category would reduce the amount of loans used via this channel and thus curb consumption.
- Further reducing the Loan/Value ratio in mortgage loans, which is currently 75 percent and introducing a similar measure for vehicle loans, would reduce the growth in mortgage loans.
- Introducing installment limitations for credit cards would contribute to the use of credit cards as a payment instrument rather than a borrowing instrument.
- The minimum payment rate for credit cards could be raised to 40 percent, from the current rate of 20 percent.
- Extending the number of years (from the existing 2 years) in setting credit card limit caps for households could reduce the credit limit as a share of household incomes.

126. The degree of a country's development may be one of the most important determinants of its domestic saving rates. Household income level is clearly a major influence on savings, as suggested by the dissaving of the lowest-income quintiles and the high saving rates for the top quintiles. Not surprisingly, education is closely related to household saving behavior. The very small group of highly educated saves more than 20 percent, while the large group of the least educated saves about 10 percent, pulling down average saving rates. The more educated have also been found to hold more financial assets. Increasing education nationwide is of course a goal in itself to increase employability, promoting livelihood and welfare but would also raise saving rates.

127. Finally, increasing public sector savings may increase domestic savings to the extent extra savings are generated by cutting unproductive expenditures, and they rely on the formalization of the economy. The less than full Ricardian equivalence (public saving increases reducing private savings by less than one-to-one) in the case of Turkey suggests that there is potential for the public sector to contribute to increasing domestic saving. The quality of public

⁷⁰ As this report was being finalized in June 2011, the BRSA put in place measures to curb credit growth with a specific focus of “consumer loans”

spending and reform of the SOE sector are important in this respect. There is evidence, especially from OECD countries, that fiscal consolidation that relies primarily on tax increases and cuts in public investment has not been sustainable because higher revenues sooner or later boosted expenditures, and maintenance and expenditures on infrastructure could no longer be deferred. By contrast, fiscal consolidations underpinned by structural public expenditures cuts have had more lasting effects. Furthermore formalization of the economy through increased reliance on direct taxes, such as personal and corporate incomes taxes, by increasing the efficiency of tax collection and reducing tax evasion, could also promote savings.⁷¹

128. Addressing the current account deficit entails not only studying domestic saving but also an analysis of foreign trade patterns and dynamics. The next CEM to be prepared jointly with the authorities will discuss this subject.

⁷¹ World Bank Turkey Country Economic Memorandum, Informality: Causes, Consequences, Policies (2010).

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**ANNEX I. FINANCIAL MARKET DEVELOPMENT AND MANDATORY SAVING SCHEMES:
COUNTRY EXPERIENCES**

1. Turkey's saving rate is low by international standards and lower even than countries with lower per capita income. Table A1 presents information on saving rates, financial market depth, inflation (as a proxy for uncertainty), type of pension scheme, and its coverage for selected developed and middle-income countries. Countries with deeper financial markets tend to save more, except for the UK and the US. The examples may be helpful in understanding how financial market development and mandatory saving schemes promote saving.¹

Table A1. International Comparison: Saving, Financial Market Development, Growth, Pensions									
Countries	Gross Domestic Saving Rate (% of GDP)	GDP Per Capita (USD)	M2/GDP	Domestic Credit to Private Sector (% of GDP)	Inflation (annual average)	Public Pension Spending (% of GDP)	Type of Mandatory Pension	Pension System	Active Coverage (% of LF)
China	49.6	2,151	142.8	110.5	2.7	2.5	Pub	DB	26.8
Singapore	48.3	33,628	104.0	88.2	1.2		Pub	PF	61.6
Malaysia	42.7	6,135	125.4	107.9	2.9	0.3	Pub	PF	48.9
Chile	33.6	8,682	74.0	83.5	3.6	2.9	Prv	DC	53.8
Thailand	32.3	3,160	105.4	103.0	3.8	0.8	Pub	DB	22.8
South Korea	31.4	19,637	63.0	94.0	2.5	1.6	Pub	DB	49.6
Indonesia	29.7	1,623	39.1	25.5	10.0		Pub	PF	11.7
Austria	27.6	40,187	166.2	116.7	2.0	12.6	Pub	DB	93.7
Japan	25.1	34,680	204.5	178.5	0.0	8.7	Pub	DB	95.4
Australia	24.3	36,997	80.9	114.7	2.8	3.5	Prv	DC	90.7
Mexico*	23.8	9,039	25.7	19.4	3.9	1.3	Pub&Prv	DB&D C	30.3
Germany	23.7	36,570	177.7	108.6	1.8	11.4	Pub	DB	86.8
Brazil	19.8	5,904	53.8	39.9	4.9	12.6	Pub	DB	53.8
Turkey	16.7	7,672	38.2	25.9	8.9	6.2	Pub	DB	58.6
UK	14.4	41,337	112.6	172.9	3.4	5.7	Pub	DB	93.2
US	14.2	44,608	74.3	204.5	3.2	6.0	Pub	DB	92.2

DB: Defined-benefit schemes, with a formula directly relating retirement incomes to the individual's earnings
DC: Fully funded schemes.
PF: Publicly managed funds where benefits depend on amounts contributed and the investment returns they earn.
*Mexico has phased out its mandatory publicly managed pension system. The public pension system is based on DB and the optional private pension system is based on DC.
Note: Macro data is the annual average for 2005–2007 and pension indicators are from the latest available year.

Source: World Development Indicators for macro data and *International Patterns of Pension Provision II: A Worldwide Overview of Facts and Figures,* study (forthcoming) for pension data.

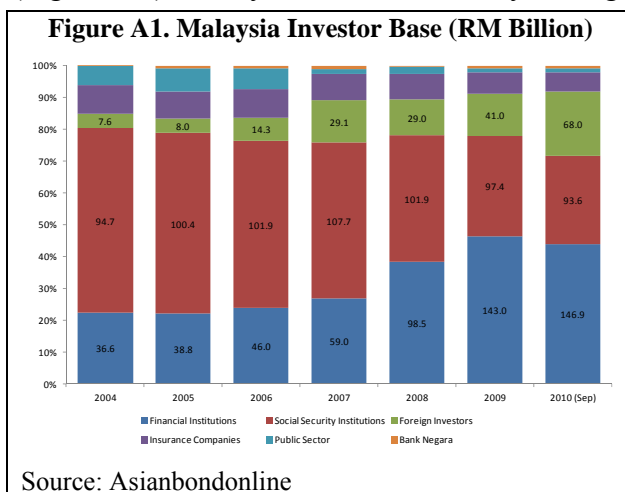
Malaysia

2. Malaysia is a middle income country with lower per capita income than Turkey. However, its savings rate is considerably higher at 42.7 percent in 2005–07. Malaysian financial markets are very diversified and comparable to developed markets. It has a large and vibrant banking sector that specializes in consumer lending and international trade. The Malaysian capital market consists of the Bursa Malaysia (the stock exchange) and a large corporate bond

¹ More examples are provided in Dalla (2011).

market. Malaysia also has a very large domestic mutual fund industry and a growing insurance industry. Given the sizable domestic capital market, Malaysian corporations have been able to meet their funding requirements locally and avoid currency and maturity mismatch. Malaysia has also recently opened up its domestic capital markets to issuers from abroad to deepen the market and increase the range of instruments available domestically to Malaysian investors.

3. Malaysia’s investor base is large and diversified. At the end of 2009, it was MR308.3 billion (USD 90.1 billion), 47.1 percent of GDP (Figure A1). Malaysia has a mandatory saving program,² the Employee Provident Fund (EPF), formed in 1991 and now one of the largest funds in the world with assets over USD 100 billion. Contribution rates are 11 percent for the employee and 12 percent for the employer. The fund is centrally managed, with some outsourcing to local and international fund managers. Annual dividends are declared for members based on how the fund has performed. Earnings are not guaranteed but principal is. Annual dividends have ranged from 5 to 9 percent. The EPF invests in government bonds, equity, and infrastructure projects.



4. Besides having robust conventional financial markets, Malaysia has also built an Islamic market and it has become a hub for *sukuk* (Islamic bonds). The large investor base that the government has fostered for three decades has greatly facilitated development of the Malaysian economy and its financial markets, especially bond market both conventional and Islamic.

Thailand

5. Thai financial markets went through a radical transformation after the 1997 Asian financial crisis. In July 1997 the government was forced to devalue massively against USD and other currencies. Thai financial markets were dominated by the banking system, which intermediated short-term foreign currency borrowing and lent in Thai baht with a large margin. This led to a serious currency and maturity mismatch. With devaluation the financial system collapsed and many corporations went bankrupt. Thailand had no institutional investor base. At the time there was no government or local corporate bond market and no social security system.

6. There is now a robust domestic bond market that is the major funding source for the government, state enterprises, and the corporate sector. Thailand has a large investor base consisting of contractual savings institutions, financial institutions, mutual funds, and international investors. At the end of 2009 the base was worth Baht 2.3 trillion (USD 77 billion.)

² Singapore has a similar mandatory program. It started through the Central Provident Fund (CPF) program to both employees and employers contributed a large sum. Current contribution rates are 15.5 percent for employers and 20 percent for employees. The extensive forced savings are managed by the Government Investment Corporation (GIC). Investors in the CPF are not at risk because there is a guaranteed return. They are also offered several investment options and life insurance and have the right to withdraw for education and housing loans. The CPF fund (www.cpf.gov.sg) currently amounts to Singapore Dollars 185.8 billion (USD 145 billion).

up from Baht 1.4 trillion in 2004 (Figure A2). The largest segment is the contractual saving institution sector (the government employee pension fund and the social security fund), which accounted for 31 percent of the investor base.

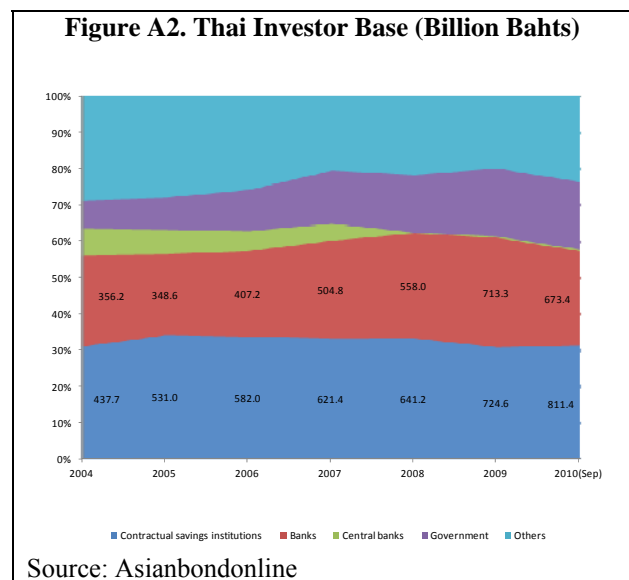
7. Unlike Malaysia and Singapore, Thailand has a three-pillar pension system. The first pillar for private sector employees and the second pillar for government officials³ are complemented by the provident funds (pillar III). Provident funds are offered by corporations and state enterprises to their employees. Under the pillar III, employee's contributions must be at least 3 percent of wages but must not exceed 15 percent of wages. Employer contributions must not be less than employee contributions. The employees receive lump sum proceeds when they resign or retire. The fund must be segregated from the company and the plan sponsor. Funds are generally placed in the custody of major financial institutions licensed by the Ministry of Finance. Contributions to the provident fund by both employees and employers are tax-deductible, and benefit payments are tax-exempt. As of November 30, 2010, there were 2,224,243 members from 10,952 companies in provident funds, which together totaled Baht 566 billion (USD 19 billion).⁴

8. In addition to the provident funds, Thailand has retirement mutual funds (RMFs) that are similar to US IRAs. An individual can set up a personal account with any authorized financial institution. Contributions are tax-deductible up to the stipulated limit. RMFs were introduced in Thailand in March 2001 to provide a means of voluntary retirement savings for employees not in the provident fund or wanting to make additional contributions. Investors are given broad freedom in fund asset allocation. However, withdrawal is not permitted until age 55.

South Korea

9. Since 1997, Korea has made concerted efforts to develop its **domestic institutional investor base**. The rapid development of government controlled contractual saving institutions (National Pension Services (NPS) and other pension funds) and insurance

companies has created a solid investor base for bond market. At the end of 2009, the size of the investor base was South Korean Won (KRW) 420.2 trillion (Table A2). The size of the largest domestic investor in the NPS, has increased dramatically from KRW 65.0 trillion in 2002 to KRW 317.0 trillion in 2010 (USD 281 billion). NPS has thus far been quite conservative with seventy-two percent of assets being invested in fixed income securities—mainly government bonds. Investment in corporate bonds has been less than five percent. Insurance industry is the second largest investor in Korea and has grown rapidly.



³ Pillar I is a compulsory defined benefit old-age pension scheme

⁴ Thai Investment and Securities Company Limited Investment Services

Table A2. Korea-Investor Base (KW billions)							
	2004	2005	2006	2007	2008	2009	2010(June)
Contractual savings institutions	57,206	66,625	75,976	78,879	81,946	94,282	102,242
Government	64,849	80,019	88,207	88,493	110,473	126,599	124,421
Banks	68,388	72,535	77,085	71,317	76,401	83,201	86,891
Central Bank	2,941	5,342	8,102	10,586	11,992	12,907	13,852
Others	61,212	58,254	63,338	74,810	77,663	103,291	131,562
Total	254,596	282,775	312,708	324,085	358,475	420,280	458,968

10. The NPS is a defined benefit program similar to the US social security system. Employer and employee each contribute 4.5 percent of income or a total of 9 percent contribution. Individual or self-employed person contributes 9 percent. The NPS covers old age pension, health insurance, employment insurance and industrial accident compensation. The fund is designed to function as an appropriate income protection system against a wide range of social risks including old age, disability and death. Under the Scheme, present value of the income of the insured person earned during the insured period is recalculated and the real value of benefits is also guaranteed through a price-based sliding scale indexation mechanism even after the pension amount is determined. Foreigners aged between 18 and 59 working and residing in Korea are also subject to the compulsory coverage of the national pension scheme.

11. The NPS has a sound governance structure. The Ministry of Health, Welfare and Family Affairs supervises the NPS Fund under the National Pension Act. National Pension Fund Management Committee is the top decision making committee that has the power to approve policy matters. The Fund Management Committee consists of 20 members from a broad range of professionals. The NPS fund is managed by investment professionals. NPS outsources a part of its assets to fund managers domestically and abroad. The NPS has consistently generated positive returns since its inception in 1988.

