

Turkey: Selected Issues

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TURKEY

Selected Issues

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Approved by the European Department

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I. INTRODUCTION

1. **Turkey has enjoyed a remarkable economic track record since the 2001 crisis.** Disciplined fiscal and monetary policies have produced a stable macroeconomic environment (including sharp reductions in inflation and the government debt ratio), which in turn has facilitated brisk growth, stronger bank balance sheets, and surging FDI.
2. **However, this success has brought new challenges, several of which are studied in this paper, including by borrowing from other country experiences.** As economic confidence has improved, capital inflows have surged while private saving has fallen. Together, these developments have produced current account deficits and a strong lira, raising concerns that Turkey may be exposed to sudden reversals in investor sentiment. At the same time, the environment for economic policymaking is evolving: (i) rapidly falling debt ratios may require a new fiscal anchor to replace the current 6.5 percent of GNP primary surplus target; and (ii) ongoing financial deepening is strengthening the monetary policy transmission mechanism. Improved confidence and financial liberalization (especially the recently approved mortgage law) have also laid the groundwork for rapid credit expansion, which should promote growth, but also create challenges for supervisors. This paper explores these developments and suggests possible policy responses.
3. **Chapter II uses time series analysis to examine a driving force behind the high current account deficits—the sharp fall in the private saving rate since 2001.** The chapter finds that this fall has partly been in response to higher public saving and increased consumer confidence in the context of falling inflation and macroeconomic stabilization. The findings suggest that the private saving rate may recover somewhat in the coming years, as Turkey continues to make progress in raising income levels. However, higher domestic saving (public plus private) could also be actively promoted to reduce dependence on volatile foreign saving. Continued fiscal discipline and pension reform are the most promising avenues in this regard.
4. **Chapter III discusses whether Turkey’s fiscal policy framework needs to be adapted over the medium term.** In Turkey’s case, the chapter suggests that a fiscal spending rule may be particularly helpful in anchoring fiscal policy around the medium-term objectives of reducing debt and creating fiscal space for growth-enhancing tax cuts—although deficit-based rules also have some advantages. To be effective, any rule needs to be accompanied by improvements in public financial management to ensure proper monitoring and enforcement.
5. **Chapter IV assesses whether the bank lending channel has become a significant source of monetary transmission as financial intermediation deepens.** The bank lending channel refers to the adverse effect of higher interest rates on bank loan *supply* (due to restricted liquidity), which can be distinguished from the standard monetary channel of a *demand*-driven decline in bank loans due to higher interest rates. The chapter examines the importance of this effect in Turkey using the exogenous shock of the May-June 2006 financial market turbulence and the associated monetary tightening. It finds that less liquid banks were more likely to reduce their lending in response to the interest rate shock, suggesting that a bank lending channel was at play. The central bank may thus wish to

consider banks' liquidity conditions in judging the expected impact of any given interest rate change.

6. **Chapter V analyzes how the recently adopted mortgage law and the emerging mortgage market may affect Turkey's economy.** Drawing on international experience, it notes that mortgage markets can support long-run growth and deeper financial intermediation. However, they can also affect macroeconomic management by reinforcing cyclicalities and contributing to swings in asset prices. The introduction of adjustable rate mortgages may also strengthen the effect of interest rate changes on economic behavior. The challenge for policymakers is thus to incorporate such changes into their policymaking and ensure proper regulation of the mortgage market so as to minimize macroeconomic and financial risks.

7. **A key theme that emerges from staff research is the need to continue strengthening Turkey's monetary, fiscal, and regulatory institutions.** Much progress has been made in this regard in recent years. Continued reform will pay significant dividends in terms of bolstering Turkey's resilience to shocks, entrenching macroeconomic stabilization, and raising living standards.

II. SAFE TO SAVE LESS? ASSESSING THE RECENT DECLINE IN TURKEY'S PRIVATE SAVING RATE¹

A. Introduction

1. **The recent large decline in the private saving rate is one of the key domestic trends underlying Turkey's widening current account deficit.** Over the last five years, the aggregate private saving rate, as conventionally measured,² has fallen by more than 20 percentage points of GDP (Table 1). Together with the simultaneous rise in investment, this has driven a sharp deterioration in the external current account, despite a considerable increase in public saving over the same period. The sharp fall in private saving stands out against comparator countries (Figure 1), and at its current 11 percent, Turkey's *private* saving rate is low by international standards. Turkey's *national* saving rate also falls into the low range, while its investment rate hovers closer to the cross-country average (Figure 2). The resulting reliance on foreign saving exposes Turkey to adverse shifts in external financing conditions.

B. Accounting for the Recent Fall in Private Saving

2. **The sharp fall in private saving since the 2001 crisis is arguably linked with other important trends that have marked Turkey's macroeconomic stabilization.** The remarkable post-2001 recovery of the Turkish economy has featured strong GDP growth and disinflation. This has driven down real interest rates, boosting confidence at home and abroad—strong capital inflows have caused the lira to appreciate—and underpinning a combined asset and credit market boom. On the policy side, the sharp reduction in budget deficits has been another major achievement. Several of these coincident developments are candidate explanations for the observed fall in private saving. In particular, private saving might have declined because of improved income prospects arising from macroeconomic stabilization; “Ricardian” effects from higher public saving; relaxed liquidity constraints; wealth effects, including from an appreciated real effective exchange rate (REER); and lower interest rates.

3. **Inflation-adjusted saving data confirm the basic trends seen in the unadjusted data.** High inflation rates distort conventional measures of private and public saving. We therefore compute inflation-adjusted saving data (Box 1). Although these adjusted data show a more limited decline in private saving since 2001, they confirm the basic pattern (Figure 3). Thus, recent saving dynamics reflect more than a spurious effect of disinflation.

¹ Prepared by André Meier.

² Private saving is computed as a double residual, from balance of payments, investment, and public finance data. As a result, saving data inherit and probably compound the existing weaknesses of those data sources, such as the implausibly high level of inventory investment in Turkey's national accounts. Moreover, a breakdown into household or corporate saving is not available.

4. **Formal regression analysis is conducted to quantify the impact of the different determinants of private saving.** Following De Serres and Pelgrin (2002), we use the dynamic error-correction model of Pesaran, Shin, and Smith (1999). The model specifies a long-run relationship between the private saving rate and its determinants but allows for gradual convergence and some short-run dynamics (Appendix I). Our choice of regressors is guided by theory and prior empirical work, although it must also cope with data limitations.³ Thus, we choose public saving, inflation, the real interest rate, per capita GDP growth, unemployment, terms of trade changes, REER deviations from trend, credit growth, and the old-age dependency ratio as regressors. As regressands, both unadjusted and adjusted private saving rates are considered (for data sources, see Appendix II). The sample comprises annual data from 1980–2005.

5. **The analysis points to public saving, inflation, and growth as the key determinants of private saving.** Essentially all of the coefficients have the expected sign (see Tables 2 and 3 for an overview of previous empirical studies), and several of them are significant (Table 4). The results are also remarkably similar across the two regressions for unadjusted and adjusted saving rates. In particular, a lower private saving rate tends to be associated with higher public saving, lower inflation, and lower growth.⁴ Negative terms of trade shocks, a high REER, low unemployment, low real interest rates, strong credit growth, and a high old-age dependency ratio would also contribute to a decline in private saving, although the corresponding coefficients are not statistically significant. Lastly, the private saving rate exhibits considerable inertia, adjusting only gradually to its equilibrium value. Table 5 shows what these estimates suggest about the origins of the recent fall in private saving: although Turkey's strong post-2001 growth would have actually favored a higher private saving rate (consistent with some transitory income component), this factor was more than offset by the strong negative impact of disinflation and higher public saving. The appreciated REER also contributed in an economically (if not statistically) significant way.

6. **These results suggest that lower private saving rates chiefly reflect the improved outlook for economic stability, in general, and fiscal policy, in particular.** Lower inflation arguably captures macroeconomic stability, whose positive effect on consumer confidence has been found in other studies to depress private saving rates. Likewise, the finding of a partial public-private saving offset matches previous results from the empirical literature.

³ In particular, we lack data on house prices (a possible source of wealth effects) and income expectations. The latter would be a valuable regressor, as modern consumption models imply an important role for expected future growth. Still, to the extent that recent high growth expectations derive from improved macroeconomic stability, it could be argued that their effect is at least indirectly captured in the regression. Another inevitable limitation of our exercise is the small number of annual observations available for the regression variables.

⁴ This statement is about statistical association and should not be construed as a causal attribution, given the joint endogeneity of the relevant variables. Instrumental variable (IV) techniques are not a promising solution, as valid instruments are elusive. Nonetheless, in trying to cope with one possible cause of endogeneity, i.e., measurement error in public saving data, we also ran IV regressions using lags of public saving as instruments. Although this increased standard errors, the qualitative evidence on the impact of public saving was unchanged.

C. The Case for Seeking a Higher National Saving Rate

7. **Based on the regression results, Turkey's current low saving rate may recover some ground as the income catch-up continues.** High real GDP growth appears to have dampened the fall in the private saving rate, suggesting that continued strong growth may also help in reverting to a higher saving rate. This outcome would be consistent with the notion of a catch-up process during which improved macroeconomic conditions temporarily depress private saving rates while laying the groundwork for sustained higher income in the future. As the expected growth materializes, the saving rate would go up again, the current account balance improve, and the country begin to repay its accumulated external liabilities.

8. **While this benign scenario suggests a hands-off approach, there may still be a case for policy action to raise national saving.** In principle, the fluctuation of private saving rates over time should be a self-regulating process, based on the rational decision making of private agents. The main task for policymakers would thus consist in limiting distortions that bias private saving decisions and/or give rise to a socially suboptimal national saving rate. Such distortions arise, for example, from the taxation of saved portions of income and the returns thereon, from the provision of means-tested basic pensions, or from excessively loose fiscal policy. Overall, the extent of Turkey's distortions does not stand out, except for the history of large public deficits. Nonetheless, Turkey's national saving rate appears low, relative to other countries and to its long-run investment rate. A considerable academic literature suggests that this situation may be detrimental, whatever its precise causes.

9. **In particular, the case for seeking higher national saving rates can be built on an apparent link with long-run economic development.** Irrespective of the deep causes for a given rate of national saving, researchers have long documented a positive association with long-run growth. Although this linkage is open to different interpretations, several arguments would suggest that the causality may (also) run from saving to growth rates. First, in the presence of volatile international capital flows, national saving provides a reliable source of finance for investment and reduces the potential fallout from a "sudden stop." From a different angle, Aghion, Comin, and Howitt (2006) argue that national saving serves as a catalyst for attracting critical FDI that spurs innovation and productivity growth. Lastly, Prasad, Rajan, and Subramanian (2006) hypothesize that strong reliance on external financing may erode competitiveness (through an overvalued currency) and thus worsen long-term growth prospects. This again underlines the value of domestic saving.

D. How Can National Saving Be Increased?

10. **Fiscal consolidation remains a natural instrument to increase national saving, but greater weight should be given to expenditure measures.** The findings of this chapter suggest that higher public saving is effective in raising national saving in Turkey, despite a considerable offset from the private sector. As noted above, this accords with the evidence for other countries, where authors have commonly estimated Ricardian coefficients below but sometimes close to 1. Interestingly, cross-country evidence also indicates that the private

sector response may depend on the nature of fiscal consolidation. Specifically, both Edwards (1996) and Lopez, Schmidt-Hebbel, and Serven (2000) have found expenditure cuts to be more successful than tax hikes in containing a private saving offset. Although there is no conclusive evidence for Turkey on this point, it appears consistent with recent experience—largely revenue-based consolidation and a very high apparent private saving offset.

11. By contrast, tax incentives do not seem very effective in raising saving rates.

Loayza, Schmidt-Hebbel, and Serven (2000) note the overall disappointing experience with special incentive schemes designed to promote private saving. The limited effectiveness is perhaps unsurprising, given the common finding—including in this chapter—of a small interest elasticity of saving.⁵ This is not to say, of course, that a reduction of antisaving distortions in the existing tax system should be disregarded. In fact, both Tanzi and Zee (1998) and Callen and Thimann (1997) point out the positive impact on saving of shifting taxation from income to consumption. In Turkey's case, however, indirect taxes already play a very important role. Moreover, a positive impact on saving rates has to be weighed against other considerations, notably the distortion of labor-leisure choices, automatic stabilizer effects, and distributional objectives.

12. The envisaged pension reform has the potential to raise saving rates. The reform package currently under discussion would gradually reduce replacement rates for Turkey's pay-go pension scheme. For the young generation, this change amounts to a negative wealth shock as entitlements shrink without a compensating fall in contribution rates. In response, individuals are likely to put aside additional private savings for retirement. Securing a positive impact on overall national saving requires, however, that the improved funding of the pension system not be offset by lower public saving elsewhere. This is, in fact, one of the key insights emerging from cross-country empirical evidence, including the studies cited in Bosworth and Burtless (2004).

13. Financial sector reform may also have a positive effect on saving rates under certain conditions. On the one hand, as Jappelli and Pagano (1994) have argued, the short-run effect is often negative because financial liberalization tends to facilitate access to credit and thereby reduce borrowing constraints. On the other hand, Li (2001) demonstrates for the particular case of mortgage lending that greater availability of credit resulting from mortgage liberalization may actually increase saving rates, because more households will start saving toward the purchase of a home (see Chapter V). Positive effects on saving could also arise from the further development of Turkey's capital markets as households would gain access to a more attractive range of financial investment opportunities. Finally, there is promise in creating a more favorable institutional setup for private retirement saving plans, which currently play only a very limited role.

⁵ There is, however, some evidence that psychological aspects, such as the framing or packaging of retirement saving options, can have a sizable impact on individuals' saving decisions. See Beshears et al. (2006).

Box 1. Adjusting Private and Public Saving Rates for Inflation

As first discussed by Jump (1980), national accounts data focus exclusively on revenues generated from current production flows and abstract from changes in net worth due to capital gains or losses. The data may, therefore, miss important reallocations of saving between the private and public sector arising from inflation. Specifically, for a given real return on financial assets, higher inflation raises nominal interest receipts but simultaneously erodes the real value of the underlying assets. However, only the rise in nominal interest payments is reflected in measured income. In the case of government debt, this asymmetry will cause private saving to be overstated at the expense of public saving in high-inflation periods. Likewise, it will lead to a spurious fall of the private saving rate in periods of disinflation, as witnessed in Turkey over recent years.

In light of this problem, we estimate inflation-adjusted private saving rates using time-series data on the stock of net domestic public debt. Although we are interested in adjusting the composition of national saving between private and public, we will abstract throughout from the possibility that national saving itself might also be mismeasured as a consequence of capital gains/losses vis-à-vis nonresidents. Thus, we are concerned only with the market value of net public debt held by residents. Following World Bank (1998), we make the further simplifying assumption that this is equal to the book value of net public debt denominated in domestic currency. The public sector consolidates the general government, including public enterprises, with the central bank, and hence their joint net domestic liabilities include the money base and exclude any net government debt held by the central bank.

The World Bank's (1998) Private Saving Database provides time series for Turkey through 1994. For our study, we import the series for the domestic inflation adjustment (computed as outlined above) for the years 1980–94. For 2001–06, we calculate the adjustment accordingly. The intermediate period 1995–2000 is more problematic, because data for the required debt concept are not available. We thus estimate net domestic public debt by assuming that it corresponds to a certain share β of overall domestic public debt, for which a long time series of data is available. In the years preceding the end of the World Bank sample, β turns out to be fairly stable, close to 0.8. On this basis, we extrapolate for 1995–2000.

Despite the need for some approximation, the inflation-adjusted series likely provides a more accurate measure of recent movements in private versus public saving than the unadjusted data. In essence, the adjustment leads to a sizable downward revision of the private saving rate—mirrored, of course, by an equal *upward* revision of the *public* saving rate—and implies a more moderate decline since 2001 (Figure 3). Nonetheless, the basic feature of a marked fall in private saving remains.

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APPENDIX

I. THE REGRESSION MODEL

We start from the following unrestricted specification:

$$PS_t = \mu + \lambda PS_{t-1} + \beta X_t + \gamma X_{t-1}^{(2)} + \varepsilon_t,$$

where PS stands for the private saving rate, X is the vector of all explanatory variables, and $X^{(2)}$ is the subvector containing the variables that also enter with a lag, thereby generating additional short-run dynamics. The choice of variables to be included for the short-term dynamics is based on model selection criteria. Specifically, the Schwarz criterion suggests including only the lagged public saving rate. This relative parsimony also helps to preserve (scarce) degrees of freedom for the regression.

The above equation can be written in an error-correction form as follows:

$$\Delta PS_t = \phi (PS_{t-1} - \eta - \theta X_t) + \delta \Delta X_t^{(2)} + \varepsilon_t,$$

where $\eta = -\frac{\mu}{\phi}$; $\delta = -\gamma$; $\phi = -(1 - \lambda)$ is the adjustment coefficient; and $\theta^i = \beta^i / (1 - \lambda)$ is the vector of long-run coefficients for all regressors i except the public saving rate, whose coefficient is $\theta^j = (\beta^j + \gamma) / (1 - \lambda)$.

II. DATA SOURCES

The data used in the regression analysis are obtained from the following sources:

CEIC: Real effective exchange rate.

Data Insight: Nominal interest rate (on 12-month deposits).

IMF, *International Financial Statistics*: Claims on private sector.

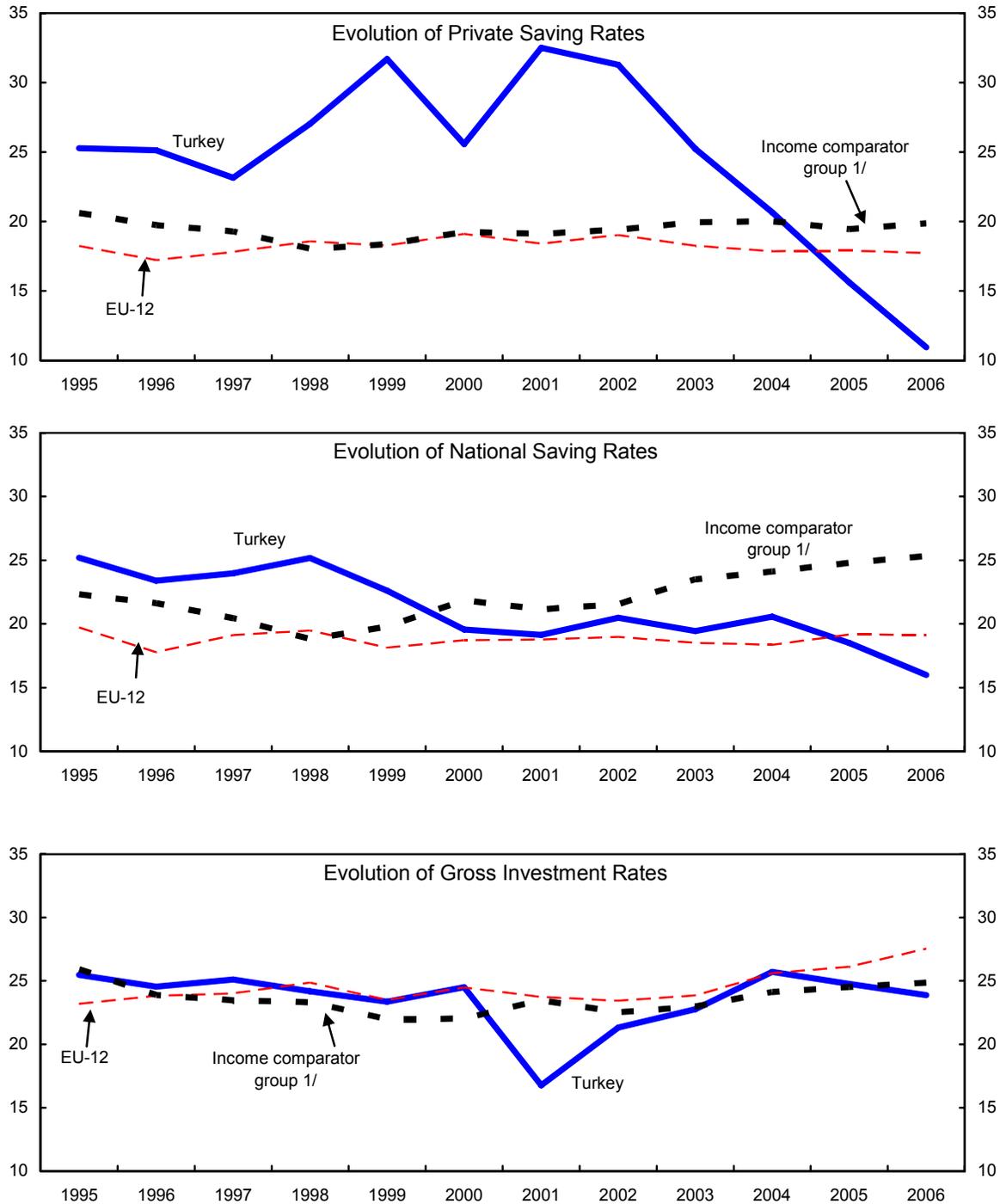
IMF, *World Economic Outlook*: (Unadjusted) gross private and public saving; GDP deflator; terms of trade for goods and services; real GDP per capita; unemployment rate.

Turkish Treasury: Domestic debt (for computing the inflation adjustment, see Box 1).

World Bank, *World Development Indicators*: Population ages 15-64 and population ages 65 and above (for old-age dependency ratio).

World Bank, *World Saving Database*: Inflation adjustment for saving rates (see Box 1).

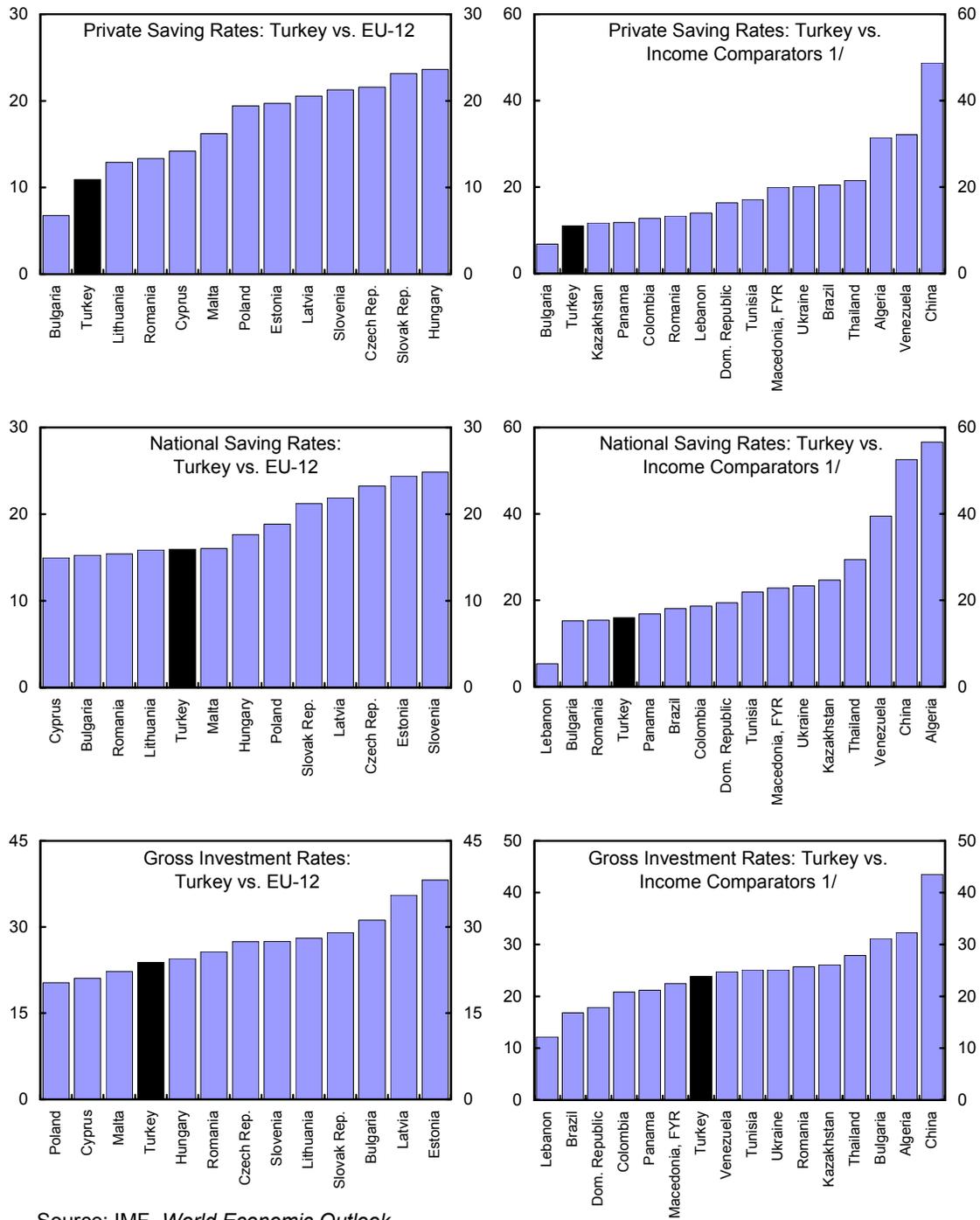
Figure 1. Turkey: Evolution of Saving and Investment in International Comparison, 1995–2006
(Percent of GDP)



Source: IMF, *World Economic Outlook*.

1/ Average PPP-adjusted GDP per capita in 2000–2005 within US\$ 1,500 of Turkey's.

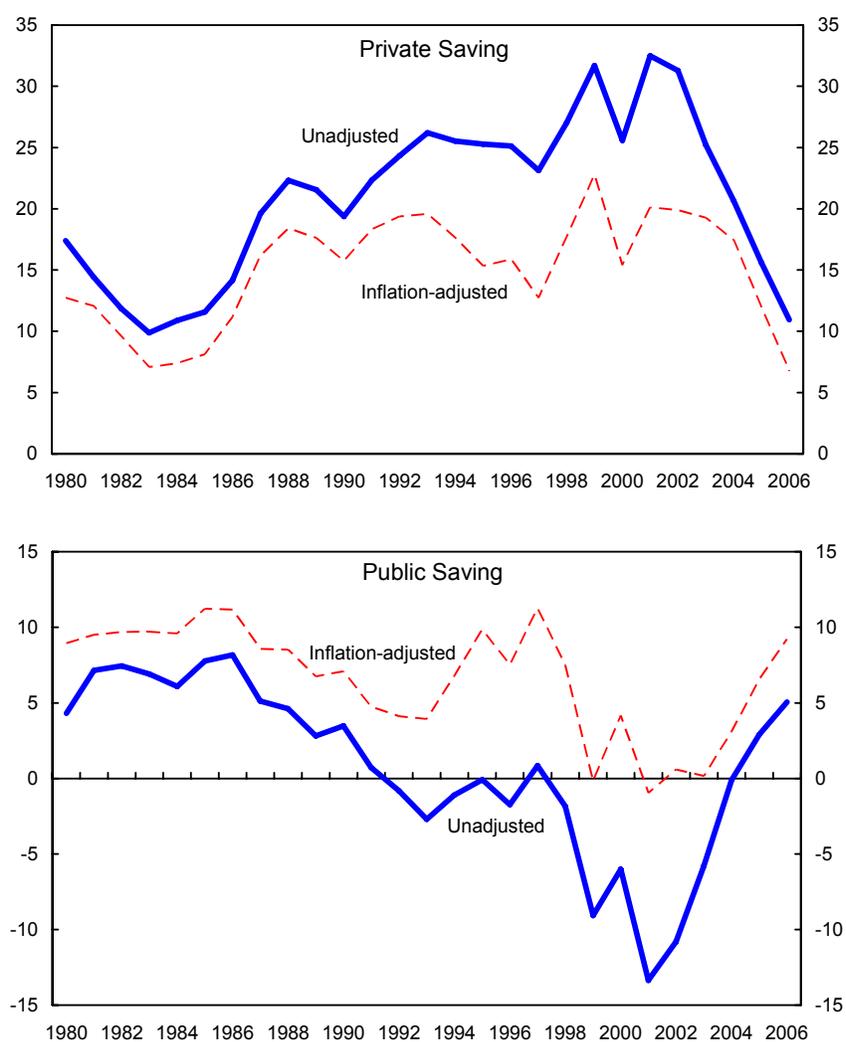
Figure 2. Turkey's Saving and Investment Rates in International Comparison, 2006
(Percent of GDP)



Source: IMF, *World Economic Outlook*.

1/ Average PPP-adjusted GDP per capita in 2000–05 within US\$ 1,500 of Turkey's.

Figure 3. Turkey: Unadjusted vs. Inflation-Adjusted Measures of Private and Public Saving, 1980–2006
(In percent of GDP)



Sources: World Bank Saving Database; Treasury of the Republic of Turkey; and IMF staff calculations.

Table 1. Turkey: Changes in Saving and Investment Between 2001 and 2006
(Percent of GDP)

	Change 2001–06	Value in 2006
Current account balance	-10.3	-7.9
Gross national saving	-3.2	16.0
Private saving	-21.6	10.9
Public saving	18.4	5.1
Gross investment	7.1	23.9
Private investment	8.4	19.6
Public investment	-1.3	4.3

Source: IMF, *World Economic Outlook*.

Table 2. Selected Empirical Panel Studies on Saving Rates 1/

No. Authors	Sample	Method
1) Edwards (1995)	36 countries 1970–1992	Instrumental variables
2) Callen and Thimann (1997)	21 OECD countries 1975–1995	Cross-sections and static fixed effects
3) Masson, Bayoumi, and Samiei (1998)	21 OECD countries 1971–1993	Cross-sections and static fixed effects
4) Haque, Pesaran, and Sharma (1999)	21 OECD countries 1971–1993	Pooled mean group, mean group, and static effects
5) Loayza, Schmidt-Hebbel, and Serven (2000)	20 OECD countries 1966–1995	GMM, systems estimators
6) De Serres and Pelgrin (2002)	15 OECD countries 1970–2000	Pooled mean group, mean group, and static effects
7) Ozcan, Gunay, and Ertac (2003)	Turkey 1968–1994	OLS
8) Schrooten and Stephan (2005)	25 EU countries 1973–2000	GMM

1/ This table is an expanded version of Table 1 provided by De Serres and Pelgrin (2002).

Table 3. Determinants of the Private Saving Rate in Previous Panel Studies

Variable category	Specific variable	Expected sign	Empirical finding 1/
Fiscal policy	Gross public saving	-	- (1, 2, 6, 7, 8)
	Government net lending	-	- (3, 4, 5)
Rate of return	Real interest rate	Ambiguous	0 (1, 5, 7, 8) + (2, 3, 4) - (6)
Uncertainty	Inflation rate	+	0 (1, 2, 4, 6, 8) + (3, 5, 7)
Income	Growth rate of GDP per capita	0 or +	+ (1, 5, 8) 0 (7)
	GDP growth	0 or +	+ (2) 0 (3, 4)
	Labor productivity growth	0 or +	+ (6)
Terms of trade	Percentage change	0 or +	+ (3, 4, 5, 6, 7)
Borrowing constraints	Private credit flows	-	+ (1)
	Credit-to-GDP ratio	- (unclear)	0 (7, 8)
Demographics	Old-age dependency ratio	-	- (2, 6) 0 (7)
	Dependency ratio	-	0 (4, 5, 7, 8) - (1, 3)

1/ The numbers refer to the different studies listed in Table 2.

Table 4. Turkey: Results for Baseline Regression (1980-2005) 1/

Dependent Variable	Unadjusted Private Saving Rate		Inflation-adjusted Private Saving Rate	
Long-run determinants				
Public saving rate	-0.77 ***	(0.19)	-0.72 **	(0.30)
Inflation (GDP deflator)	0.11 *	(0.05)	0.10 *	(0.05)
Real interest rate	0.06	(0.08)	0.04	(0.08)
Real GDP growth per capita	0.58 **	(0.26)	0.51 **	(0.22)
Change in terms of trade	0.26	(0.15)	0.25	(0.15)
REER (deviation from trend)	-0.12	(0.09)	-0.09	(0.07)
Unemployment rate	1.37	(1.10)	1.44	(1.21)
Old-age dependency ratio	0.50	(2.51)	-0.57	(2.08)
Change in credit to GDP ratio	-0.33	(0.39)	-0.25	(0.46)
Adjustment parameter	-0.32 *	(0.15)	-0.34 *	(0.16)
Short-run dynamics				
Public saving rate	-0.75 ***	(0.14)	-0.75 ***	(0.15)
Goodness of fit: R ²	94.3%		92.5%	

1/ White heteroskedasticity-consistent standard errors in parentheses. The significance level of coefficient estimates (two-sided t-distribution) is indicated by asterisks: *** 1 percent; ** 5 percent; * 10 percent.

Table 5. Turkey: Contributions to the Change in the Private Saving Rate
Between 2001 and 2005 1/
(Percentage points of GDP)

Change in:	Unadjusted Private Saving Rate	Inflation-Adjusted Private Saving Rate
	-16.9	-8.2
Contributions from:		
Public saving rate	-14.8	-7.0
<i>Of which</i> : short-term dynamics	-7.4	-4.2
Inflation (GDP deflator)	-3.5	-3.2
Real interest rate	0.2	0.1
Real GDP growth per capita	6.8	6.2
Change in terms of trade	-0.6	-0.6
REER (deviation from trend)	-3.1	-2.5
Unemployment rate	2.1	2.3
Old-age dependency ratio	0.1	-0.1
Change in credit to GDP ratio	-1.6	-1.2
Existing error correction dynamics 2/	-2.6	-2.2
Unexplained	0.1	0.1
Total	-16.9	-8.2

1/ Based on the regression results reported in Table 4.

2/ Indicates the impact of gradual error correction starting from the private saving rate "error" already present in 2001, i.e. the endogenous change of the private saving rate during 2001-05 absent any changes in explanatory variables from their respective 2001 values.

III. SHOULD TURKEY ADOPT A FISCAL RULE?¹

A. Introduction

1. **Since 2002, fiscal policy—hitherto a key source of macroeconomic volatility—has become the cornerstone of Turkey’s macroeconomic program.** High primary surpluses (the “rule” under the IMF-supported program being no less than 6.5 percent of GNP) have led to sharply lower debt and real interest rates and strong private-sector driven growth.
2. **Going forward, however, the fiscal policy framework may need to be adjusted.** In particular, the 6.5 percent of GNP primary surplus target may become less relevant over time as debt is brought down to safer levels. The key challenge will increasingly be to manage pressures to ease the tax burden or expand public investment in a way that is most conducive to high and stable growth.
3. **Thus, this chapter asks two questions:** Could a formal fiscal rule help credibly reconcile the authorities’ competing medium-term fiscal goals? And, if so, what type of rule would be best for Turkey?

B. The Pros and Cons of Fiscal Rules

4. **Fiscal rules are advocated in the literature as a response to excessive policy flexibility that may bias fiscal policy in practice** (Kopits and Symansky, 1998).² Due to voters’ fiscal illusion, policymakers’ opportunism, and/or other incentive problems, unconstrained fiscal policies all too often diverge from normative benchmarks, resulting in large and persistent deficits, electoral cycles, and procyclicality (especially in upturns).
5. **Of course, limiting policy flexibility has also costs.** These may be especially high when monetary policy discretion is also curtailed (e.g., in a monetary union). Rules may directly promote procyclical fiscal policies—e.g., a deficit ceiling may require a contractionary response to a recession-induced revenue shortfall. Finally, the need to abide by numerical rules may also lead politicians to low-quality measures and creative accounting.
6. **Many countries have introduced fiscal rules over the past two decades.** For example, in a recent survey, the European Commission (2006) (henceforth, EC) finds that, at the different levels of government, 60 numerical fiscal rules were in place during 1990–2005. Moreover, over the past 20 years, fiscal rules have increased steadily both in number and in terms of the share of general government covered in each country (the latter grew from an

¹ Prepared by Davide Lombardo.

² For the purpose of this chapter, a fiscal rule is a permanent constraint on fiscal policy, expressed in terms of a summary indicator of fiscal performance, such as the government budget deficit, borrowing, debt, or a major component thereof (Kopits and Symansky, 1998). Hence, this chapter does not address the questions related to the desirable characteristics of budget formulation/approval/implementation, which have been shown to have potentially important effects on budgetary outcomes—see Von Hagen and Harden (1995), Gleich (2003), Fabrizio and Mody (2006), and references therein. For Turkey, a good reference on these matters is IMF (2006).

average of 25 percent in 1990 to 75 percent today). Presently, almost all EU members have some form of national fiscal rule. Outside the EU, IMF staff research (FAD, forthcoming) identifies 11 other countries as having some form of fiscal responsibility legislation, including several emerging markets (e.g., Argentina, Brazil, Colombia, Ecuador, Panama, Pakistan, and Peru).

7. **Fiscal rules are usually found to be associated with better fiscal outcomes.** While causal interpretations of regression results is complicated by potential endogeneity problems (jurisdictions with greater backing for prudent policies are more likely to introduce fiscal rules) the evidence does seem to point to beneficial effects of fiscal rules. For example, EC (2006) finds a significant reduction in the ratio of cyclically adjusted primary expenditure to GDP in the years following the introduction (or tightening) of an expenditure rule. Dában and others (2003) emphasize improved public finances in Finland, the Netherlands, and Sweden following the introduction of spending rules. In the same vein, Poterba (1996) shows that United States states with balanced-budget rules have smaller deficits on average.

8. **The cross-country experience offers important lessons on which features increase the effectiveness of a rule.** Rules should: (i) build on a *prior* record of sound policies (e.g., Australia, Brazil, the United Kingdom, and New Zealand), rather than attempt to “buy” policy credibility (FAD, forthcoming);³ (ii) be easy to understand and monitor (with unambiguous definitions, clear attribution of responsibilities, and well-defined escape clauses); (iii) be supported by transparent and reliable data and strong public financial management systems (FAD, forthcoming); (iv) set out realistic targets, functional to ultimate policy goals, and consistent with other policy objectives; (v) come with prespecified (and, if possible, automatic) sanctions for noncompliance; (vi) be enshrined in suitably high-level legislation (EC, 2006); and (vi) avoid introducing its own biases (e.g., incentives to shift operations off-budget or play with definitions and accounting standards, and procyclicality).

C. Should Turkey Adopt a Fiscal Rule?

9. **Since the 2001 crisis, the fiscal position has improved markedly, however the task of shifting it to safe ground is not yet complete.** In the run-up to the 2001 crisis, a secular increase in deficits led to a fast buildup of debt (Figure 1). Moreover, fiscal policy turned increasingly discretionary, adding to macroeconomic volatility and hampering long-run growth (as showed by Mody and Schindler, 2005).⁴ Since 2002, as the government has progressively delivered on its commitment to achieve high primary surpluses, interest rates have declined, growth has picked up, the lira has appreciated, and debt ratios have declined by more than 40 percentage points (helped as well by high privatization receipts). Even so, debt remains high compared to other countries, constraining further improvements in credit ratings and risk premiums (Figure 2).

³ A case in point is the failure of Argentina’s 2001 deficit rule, a last attempt to restore market confidence in the face of a quickly deteriorating fiscal outlook.

⁴ In addition to 2001, there were sharp contractions of economic activities in 1994 and 1999 as well.

10. **Looking further ahead, a transition to a lower primary surplus may nevertheless be justified—although this process needs to be managed carefully.** As debt and interest rates decline, lower primary surpluses should become affordable. Yet, after several years under a de facto 6.5-percent-of-GNP primary surplus rule, market participants might interpret any loosening of the primary surplus target as a return to the discretionary and volatile fiscal policies of the past.

11. **From this perspective, a fiscal rule could help.** A formal rule, and the associated communication and transparency requirements, could anchor market expectations during the transition. If well-designed, it could also support key medium-term fiscal priorities, such as rapidly reducing public debt towards relatively “safe” levels and lowering Turkey’s heavy tax burden.

D. What Kind of Rule Should Turkey Adopt?

12. **Deficit-based rules have some advantages, but also important drawbacks.** On the positive side, they directly constrain debt accumulation. In the special case of a primary surplus-based rule, there would be the added benefits of public familiarity and strong prior track record over the past few years. On the negative side, however, these rules can be procyclical, unless either complicated cyclically-adjusted or multiyear targets are introduced, which would come at the cost of a significantly more complicated monitoring and thus lower credibility of the rule.⁵ Moreover, these rules may not prevent—in fact, they may actually encourage—a further worsening in budget quality since, in the face of growing expenditure pressures, the targets could be secured with ad hoc revenue measures.

13. **While affording only partial control on debt accumulation, a spending rule could ensure that fiscal space is created to lower particularly distortive taxes (Box 1).**^{6,7} A spending rule has inherent merits. First, expenditure-based consolidations may be more sustainable than those based on tax increases (Alesina and Perotti, 1996). Second, since (primary) spending is directly controlled by the government, the latter’s accountability is maximized. Third, under a spending rule incentives for optimistic revenue projections are minimized, and ex-ante monitoring of compliance is thus made easier.⁸ In Turkey’s case, a key virtue of a cap on spending growth is that it would focus politicians and the general public on the need for rigorous expenditure prioritization and rationalization, an essential prerequisite to create room for tax cuts while reducing debt in an environment of growing demand for income-elastic public services (e.g., health and education). Moreover, differently from the case of a deficit-based rule, failing to adjust a spending rule for the cycle would not

⁵ On this basis, Fatas (2005) argues strongly against cyclically adjusted-based rules.

⁶ Dában and others (2003) advocate an expenditure rule for France, Germany, Italy, and Spain, possibly supplemented by a medium-term debt target, based on the need to reduce these countries’ high tax burden.

⁷ For some preliminary considerations on the design of a spending rule for Turkey, see Box 1.

⁸ Anderson and Minarik (2006) lean in favor of spending rules over budget deficit rules mainly for this reason.

be too costly in practice, since cyclical spending (e.g., unemployment insurance) is quite small in Turkey.

14. **A key issue to address is whether investment should be covered by the rule.** A comprehensive deficit or spending rule could penalize investment spending, as this is usually less costly to curtail when adjustments are needed. Hence some countries exclude public investment from their fiscal rules. On the other hand, such “golden rules” may lead to opportunistic reclassification of current into capital spending, thereby creating scope for debt accumulation.

E. What Should Turkey Do to Make a Fiscal Rule Credible?

15. **Turkey’s public financial management system and fiscal transparency should be strengthened before introducing any rule.** Turkey needs to implement fully the new Public Financial Management and Control law and improve budget reporting to strengthen financial management and control systems. Increasing fiscal transparency is also critical for the public to assess compliance with a rule, especially if the latter were complex.

16. **An independent fiscal council could be put in charge of monitoring compliance with the rule.** EC (2006) documents that among the EU members there are several independent institutions/councils explicitly charged with monitoring compliance with existing fiscal rules ex ante (budget plans) and/or ex post (budget implementation).⁹ These institutions can increase the reputational cost of noncompliance for policymakers. Indeed, EC (2006) finds that these councils can influence fiscal policy for the better, especially through their impact on public debate, provided its members’ financial independence, integrity, and professional qualifications are guaranteed.

17. **The rule could be enshrined in high-ranking legislation.** However, there is a trade-off between increasing the strength of the rule and allowing for flexibility as circumstances change. Flexibility could be introduced by allowing the government to set new caps at the start of each legislature. These would then last for the duration of the legislature (normally, 5 years), unless escape clauses are triggered.

18. **Sanctions could also be considered to increase costs (reputational and otherwise) of violating the rule.** Financial sanctions could be difficult to enforce on a sovereign State, unless it is bound by supranational treaties (e.g., the EU). The extent to which personal sanctions can be levied on responsible officials depends on the legal context (cross-country experience shows that personal sanctions are rare, but not unheard of—they are envisaged, for example, in support of Brazil’s Fiscal Responsibility Law). At a minimum, any rule should be supported by requirements (akin to those imposed on the central bank under the

⁹ These are the High Council of Finance in Belgium, the Economic Council in Denmark, the State Audit Offices in Estonia and Hungary, the Cour de Comptes in France, the Courts of Auditors in Spain and in Portugal, the National Institute for Economic Research in Sweden, and the National Audit Office in the United Kingdom. The functions of the other institutions (there are a total of 23 in the EU) range from analyzing proposals to designing or vetting the budget’s macroeconomic framework. In the case of Turkey, the IMF-supported programs have, in the eyes of market participants, served as anchor and monitoring device of the “primary surplus rule.” The current Stand-By Arrangement is, however, slated to expire in May 2008.

inflation-targeting framework) for the government to issue open letters explaining any failure to stay within spending or deficit limits as well as describing proposed remedial measures.

F. Conclusions

19. **In sum, a fiscal rule could help, but should not in itself be viewed as a panacea.** A rule with appropriate mechanisms to monitor its compliance should deliver predictable policies, thus allowing further reductions in debt and risk premiums, thereby contributing to macroeconomic stability. Ultimately, however, the cross-country experience shows that, no matter how well designed, a fiscal rule cannot by itself deliver strong fiscal performance if the government and the population at large are not fully committed to it.

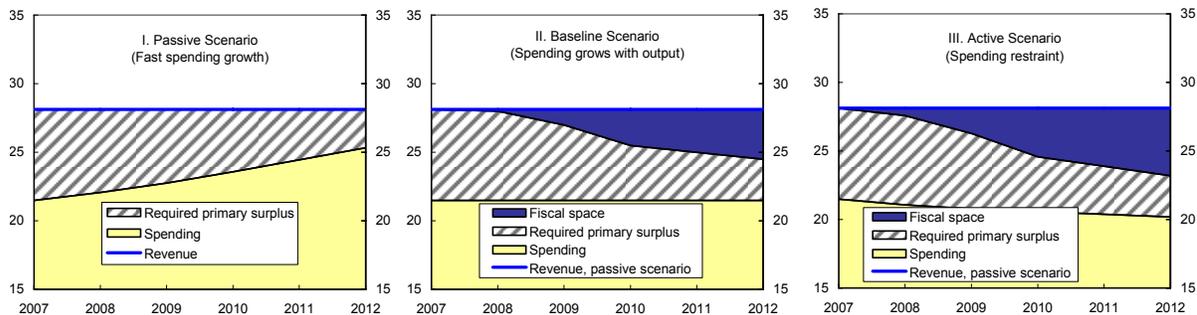
Box 1. Spending Restraint and Fiscal Space

It is proposed that a spending rule be parameterized based on an implicit debt target. This would ensure that fiscal policy continues to support a reduction in the net debt ratio toward “safe” levels, which the literature puts somewhere below 30 percent (40 percent for gross debt).

As the three illustrative scenarios below show, for a given (implicit) debt target (e.g., 27.5 percent in net terms by 2012), there is a trade-off between spending restraint and room for revenue-losing, but efficiency enhancing, tax cuts:

- **Spending continues to grow faster than GNP (Panel I):** In this passive scenario, meeting the debt target would require maintaining the existing revenue ratio, leaving no room for revenue-losing tax reforms.
- **Spending growth is kept in line with GNP (Panel II):** Here fiscal space would be created to allow payroll tax cuts of some 6 percentage points in 2009 and an additional 10 percentage points in 2010. Financial transaction taxes could also be eliminated by 2010.
- **Real spending growth is kept below GNP growth** for the next few years, say, at 4 percent (Panel III): In this active scenario, more aggressive tax cuts would be affordable (payroll taxes could be cut by 22 percentage points) while still meeting the overall debt target.

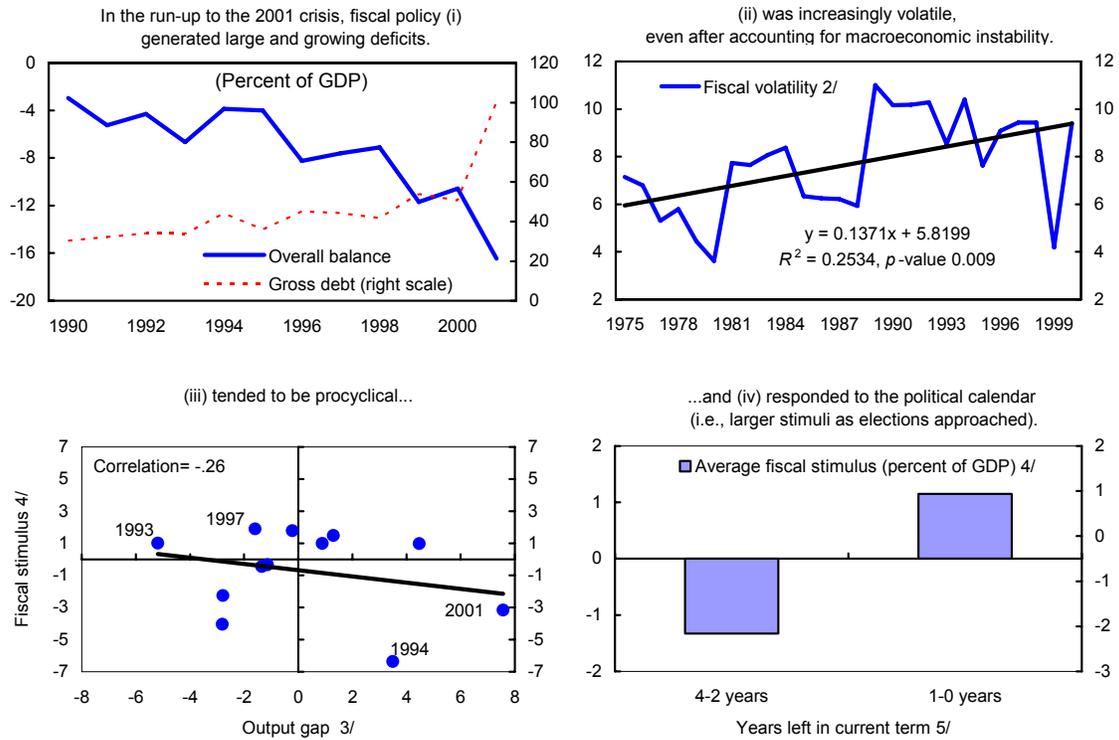
Fiscal Space for Tax Reforms under Alternative Assumptions on Spending Growth 1/
(Percent of GNP)



1/ All scenarios are consistent with achieving a net debt ratio of 27.5 percent by 2012.

The above scenarios, which envisage some relaxation of the fiscal stance over the medium term, are subject to risks. First and foremost, even though lower primary surpluses could become affordable starting from 2009 onwards on debt sustainability grounds, such relaxation of the fiscal stance may not be advisable if inflation continues to remain above target or the current account deficit fails to settle firmly on a declining path. In terms of other risks, on the positive side, these scenarios assume no privatization receipts after 2007, no revenue buoyancy, no increase in formalization from cuts in payroll taxes, and a high real interest rate (10 percent). Faster debt and risk premium reductions, because of higher privatization receipts or a more favorable macroeconomic environment, could make larger tax cuts affordable. On the negative side, heavier spending pressures or a combination of adverse shocks would quickly worsen the debt dynamics, making tax cuts potentially unaffordable.

Figure 1. Turkey: Fiscal Policy Biases Through 2001 1/



Sources: General Directorate of Public Accounts for Turkey; IMF, World Economic Outlook; Central Bank of Turkey; World Bank, *Database of Political Institutions*; and IMF staff estimates.

1/ Data for overall balance, primary balance, and fiscal stimulus refer to consolidated budget. Gross debt data are for central government. General Directorate of Public Accounts. Available via internet at:

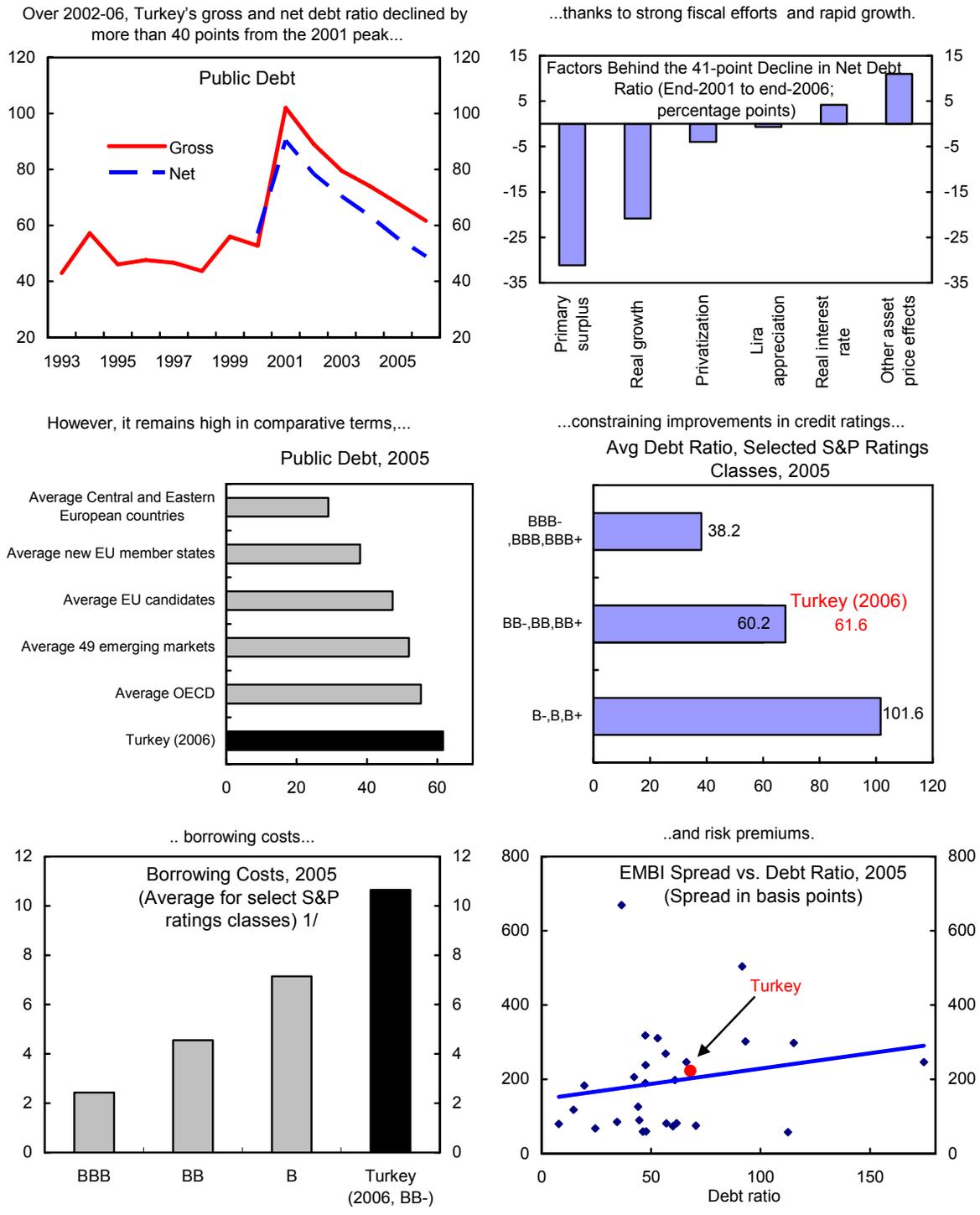
<http://www.muhasibat.gov.tr/indexE.php>

2/ Backward-looking five-year standard deviation (in percent) of error terms from a regression of increase in real government spending over its lagged value, lagged GDP growth, change in terms of trade, and a time trend. See IMF, Mody and Schindler (2005) for details.

3/ Output gap: positive means potential greater than actual. Sample 1990-2001. Central Bank of Turkey.

4/ Fiscal stimulus is defined as the change in the cyclically adjusted primary balance.

Figure 2. Turkey: Recent Improvements Still Leave Turkey's Debt High from a Comparative Perspective, 1993–2006 (Percent of GDP, unless otherwise indicated)



Source: Bloomberg; S&P; IMF, *World Economic Outlook*; and IMF staff estimates.

1/ Interest bill divided by previous year's debt stock, in percent.

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IV. DO BANKS MATTER FOR TURKEY'S MONETARY TRANSMISSION MECHANISM?¹

A. Introduction

1. **Does the bank lending channel of monetary transmission work in Turkey?** The bank lending (or “narrow credit”) channel refers to the adverse effect of higher interest rates on bank loan *supply*, which may suppress economic activity if firms and consumers cannot replace completely the “missing” loans with other sources of credit.² This effect should be distinguished from the operation of the standard interest rate channel, which prompts a *demand*-driven decline in bank loans due to higher interest rates.
2. **The question of whether there is a bank lending channel in Turkey has come into focus recently.** In recent publications, the Central Bank of Turkey (CBT) mentions that this channel may have become more important for monetary transmission, as the banking sector has started to perform its intermediation role more effectively (Inflation Report I, 2006). Indeed, the view that the bank lending channel plays a role in Turkey is implicit in the CBT's expectation that the supply of bank credit would subside due to the higher short-term interest rates and liquidity withdrawal following the May–June turbulence (Inflation Report III, 2006). Nonetheless, empirical evidence in support of the view remains scarce.
3. **Establishing the existence of a lending channel in any country is hard for two reasons.** First, changes in interest rates usually occur in response to changes in economic conditions, which makes it difficult to recover from the data the pure effect of the interest rate change on economic activity. Second, all channels of monetary transmission tend to work at the same time, which complicates their separate identification. Following an interest rate increase, for instance, bank credit may decline due to either lower demand for loans (the interest rate channel and, possibly, the balance sheet channel), or reduced supply of loans (the bank lending channel), or both.
4. **Circumventing most identification problems, this chapter addresses the question in the case of Turkey.** Using the May-June financial turbulence as an exogenous shock that prompted a significant tightening of monetary policy, the chapter examines the loan supply response of Turkey's banks, depending on their balance sheet characteristics. The key question is whether the effect of monetary policy in Turkey is amplified by the banking sector, depending on its financial position.

¹ Prepared by Petya Koeva Brooks.

² Monetary policy operates through several other channels as well. The *interest rate* channel refers to the negative effect of higher (real) interest rates on consumption and investment. In an open economy like Turkey's, the *exchange rate* channel can also be important, as monetary policy can bring about changes in the level of the exchange rate and, consequently, inflation, trade volumes, and investment. The *balance sheet* (or broad credit) channel can operate through the effect of higher interest rates on asset prices that determine the value of collateral used by firms and consumers to obtain credit.

B. Previous Literature

5. **Theory suggests that two key conditions must be satisfied for the bank lending channel to operate.** The *first* essential element is that banks should not be able to fully shield their loan portfolios from changes in monetary policy. The presumption is that banks cannot offset completely the decline in liquid funds (due to restrictive monetary policy) by resorting to alternative sources of funding without incurring additional costs. As a result, banks reduce their loan supply. The *second* crucial element is that there is a substantial group of borrowers, firms or consumers, that cannot insulate their spending from the reduction in bank credit. This, in turn, can depress real investment and consumption (Bernanke and Blinder, 1988; Bernanke and Gertler, 1995; Farinha and Marques, 2001). *The remainder of the chapter examines whether the first (but not the second) condition holds in Turkey.*

6. **On theoretical grounds, bank size, liquidity and capitalization are expected to matter for loan supply.** As small banks may find it more difficult to raise external funds in times of monetary tightening, they may be forced to reduce their lending relatively more than large banks (Kashyap and Stein, 1995, 2000). As more liquid banks can draw down on their liquid assets to shield their loan portfolios, they are less likely to cut back on lending in the face of monetary tightening (Kashyap and Stein, 2000; Ashcraft, 2001). Lending of highly-leveraged banks is expected to be more responsive to monetary policy than lending of well-capitalized banks (Kishan and Opiela, 2000).

7. **In Turkey, the empirical evidence on the bank lending channel is scarce.** To our knowledge, existing studies cover the pre-crisis period only. Using annual bank-level data, Cavusoglu (2002) finds no evidence in support of a bank lending channel during the 1988–99 period. Based on a different empirical approach, however, Sengonul and Thorbecke (2005) establish that liquidity had an effect on bank supply during the 1997–99 period.

C. Empirical Strategy³

8. **Our methodology involves exploiting the variation in loan supply across banks following the May–June turbulence.** The retrenchment of investors' risk appetite triggered a sell-off of emerging market assets. Though Turkey's financial markets suffered disproportionately, it is reasonable to assume that the May-June turmoil was an exogenous event. In the aftermath of the turbulence, the CBT increased the policy interest rate by 425 basis points and started to actively withdraw liquidity from the system through deposit auctions. This contraction of monetary policy can be viewed as a large, exogenous and persistent shock. Under the assumption that the decline in loan demand was uniform across banks, the variation in banks' responses is used to identify shifts in loan supply.

³ See Appendix for a detailed description of the data used to obtain the empirical results.

9. **A “difference-in-difference” approach is adopted to test whether a bank lending channel could be operational in Turkey.** The more restrictive monetary policy is assumed to affect loan supply between June and September. Therefore, for each bank and loan type, the loan growth rate is computed as the percentage change from June (before the shock) to September (after the shock). To eliminate any bank-specific effects, the loan growth rate between March and June is subtracted from the June-September growth rate.⁴

10. **Three alternative specifications of the model are estimated.** In the first case, the differenced loan growth rates are regressed on bank-specific variables (size, liquidity, and capitalization) as of end-June. In the second case, the same dependent variable is regressed on the *change* in all bank-specific characteristic between end-June and end-March. In the third case, the difference loan growth rates are regressed only on the *change* in the liquidity and capitalization variables between end-June and end-March. In other words, the corresponding regression equations take the form:

$$\Delta\Delta I_i^{(s,j),(j,m)} \equiv \Delta I_i^{(s,j)} - \Delta I_i^{(j,m)} = \beta_o + \beta_1 Size_i^j + \beta_2 Liq_i^j + \beta_3 Cap_i^j + \varepsilon_i \quad (1)$$

$$\Delta\Delta I_i^{(s,j),(j,m)} \equiv \Delta I_i^{(s,j)} - \Delta I_i^{(j,m)} = \beta_o + \beta_1 \Delta Size_i^{(j,m)} + \beta_2 \Delta Liq_i^{(j,m)} + \beta_3 \Delta Cap_i^{(j,m)} + \varepsilon_i \quad (2)$$

$$\Delta\Delta I_i^{(s,j),(j,m)} \equiv \Delta I_i^{(s,j)} - \Delta I_i^{(j,m)} = \beta_o + \beta_2 \Delta Liq_i^{(j,m)} + \beta_3 \Delta Cap_i^{(j,m)} + \varepsilon_i \quad (3)$$

where $\Delta I_i^{(s,j)}$ is the percentage change in loans for bank i in the period from June to September; $\Delta I_i^{(j,m)}$ is the percentage change in loans for bank i in the period from March to June; $\Delta\Delta I_i^{(s,j),(j,m)}$ is the difference between the previous two variables; Liq_i^j is the liquidity ratio of bank i as of end-June; $\Delta Liq_i^{(j,m)}$ is the change in liquidity ratios of bank i from end-March to end-June; and other variables are defined similarly.

D. Main Findings

11. **The main findings of this chapter can be summarized as follows** (Appendix Table). First, *liquidity* has a significant effect on loan supply in Turkey. The positive coefficient of the liquidity variable in all regressions suggests that less liquid banks are more likely to reduce their lending than more liquid banks. Second, *capitalization* does not have a significant effect on bank loan supply. The coefficient of the capitalization variable is insignificant in two of the specifications and statistically significant only at a 10 percent level in the third. Third, the impact of *bank size* is not robust. The coefficient of the size variable is insignificant in one of the specifications and significant (with the wrong sign) in another.

⁴ There was little change in policy interest rates during the period.

12. **These results provide partial evidence that the bank lending channel of monetary transmission operates in Turkey.** In line with previous findings for other emerging market countries, we establish that more liquid banks are less responsive to monetary shocks than less liquid ones. This illustrates that, in addition to loan demand, loan supply is also affected by the tightening of monetary policy. Therefore, one key condition for the bank lending channel to operate is satisfied (¶ 5).

Table. Regression Results

	(1)	(2)	(3)
Liquidity	0.325 (0.158)**	-	-
Capitalization	0.554 (0.326)	-	-
Size	-0.028 (0.018)	-	-
Change in liquidity	-	1.772 (0.571)***	1.224 (0.636)*
Change in capitalization	-	0.286 (0.702)	1.556 (0.849)*
Change in size	-	-0.656 (0.162)***	-
Constant	-0.052 (0.200)	-0.139 (0.031)***	-0.107 (0.041)**
Number of observations	31	31	31

Notes:

1. The dependent variable is the difference between the June-September and the March-June growth rates in total bank loans.
2. Estimation is done using least absolute deviations method.
3. Standard errors are reported in parentheses, * significant at 10 percent level and ** significant at 5 percent level, and *** at 1 percent level.
4. Liquidity is defined as the sum of cash, Central Bank, other financial institutions securities, trading government securities and government securities available for sale, divided by total bank assets. 5. Capitalization is the ratio of shareholders' equity to bank assets.

13. **The findings are subject to several important caveats.** *First*, the overall levels of liquidity and capitalization in Turkey's banking system are still very high in most banks. As such, the estimated effect of liquidity and capitalization on bank lending may not be constant over time. *Second*, the identifying assumption that all banks face the same loan demand shock could potentially lead to biased results (Appendix). It is unlikely, however, that banks with lower liquidity have customers whose loan demand is more responsive to interest rate shocks. Hence, the positive effect of liquidity on loan supply is likely to hold even if the assumption does not hold perfectly. *Third*, the sharp movements in the exchange rate during the May–June turbulence could be an additional factor that affected banks' loan supply.

14. **Our analysis does not prove conclusively that the bank lending channel plays an important monetary transmission role in Turkey.** Recall that for this channel to have an impact on real activity, firms and consumers should not be able to substitute completely the loss of bank credit with other sources of finance (¶5). Whether this condition is satisfied in Turkey remains an open question. On the one hand, empirical evidence suggests that (large) Turkish firms depend heavily on bank finance (Aydin, et al., 2006). On the other hand, Turkey's economy is still largely cash-based, particularly on the consumer side, suggesting that bank credit may not be as an important source of finance as personal savings and informal (intra-household) borrowing. Therefore, the issue is left for further research.

E. Policy Implications

15. **The presence of a bank lending channel suggests that the impact of a given change in the monetary stance could be propagated by the banking sector, depending on its liquidity position.** For example, the overall impact of a 100 basis point increase in the policy rate on the real economy may be smaller if banks had very strong liquidity positions. (This is because banks would be less likely to cut back on their loan supply in this case.) Therefore, the overall level and distribution of liquidity across banks should be monitored closely. While incorporating explicitly a bank lending channel in the CBT model is premature, the information on the banking sector could be used as an input to form judgment about the likely impact of future interest rate changes on the economy.

APPENDIX**DATA**

Bank-level balance sheet data are used to construct the variables needed for the empirical analysis. The sample covers all 33 deposit-taking banks in Turkey. The quarterly data are available from the Banks Association of Turkey. For each bank, the dataset contains information on the total loan amount provided by the each bank (as well as the split between short- and medium-term lending and domestic and foreign currency lending). The balance sheet data also allow us to construct the explanatory variables used in the analysis. Size is defined as the logarithm of total bank assets. Liquidity is the ratio of liquid holdings to total assets. Capitalization is defined as the ratio of shareholders' equity to total assets.

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V. ECONOMIC IMPLICATIONS OF TURKEY'S NEW MORTGAGE LAW

A. Introduction

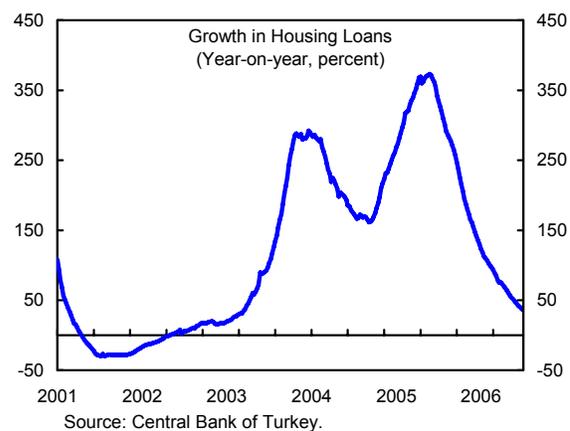
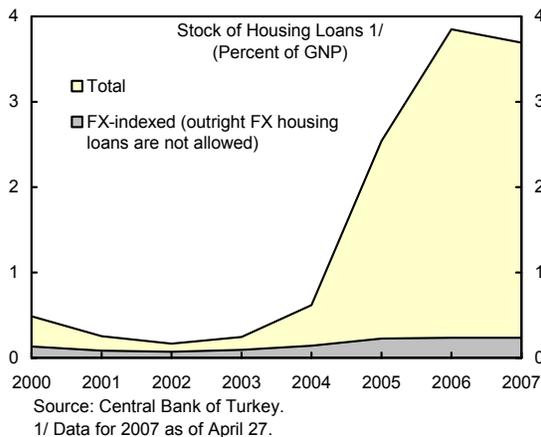
1. **Turkey recently passed important new mortgage market legislation.** The new law improves, and in part liberalizes, the regulatory infrastructure for the origination of loans. It strengthens the legal protection of mortgages and, at the same, widens the range of permitted instruments (adjustable interest rate mortgages). Importantly, it also establishes the framework for a secondary market, providing mortgage lenders with new funding options via the pooling and securitization of mortgage-backed loans (Box 1).

2. **This chapter analyzes how the emerging mortgage market may affect Turkey's economy.** The international experience shows that mortgage finance not only plays an important role in the functioning of housing markets, but can also affect a country's financial and overall economic performance. Mortgage markets can support long-term growth, but they can also reinforce cyclical and possibly contribute to swings in asset prices. This implies new challenges for policymakers and financial regulators.

B. Growth Prospects for Turkey's Mortgage Market

3. **The international experience suggests that Turkey's mortgage market could expand rapidly if macroeconomic stability and low inflation become entrenched.** There are many country examples where the liberalization, or introduction of mortgage legislation, combined with favorable macroeconomic and certain other conditions have led to rapid mortgage market growth (Box 2). All the factors that seem relevant for such growth could also come into play in Turkey:

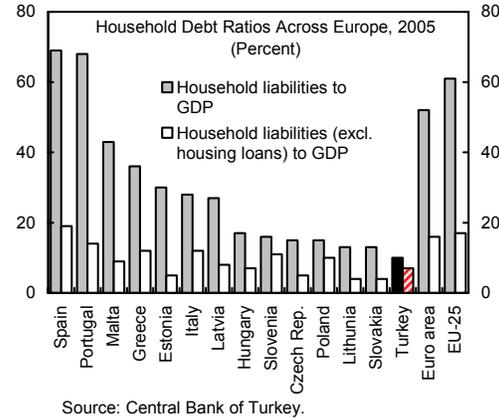
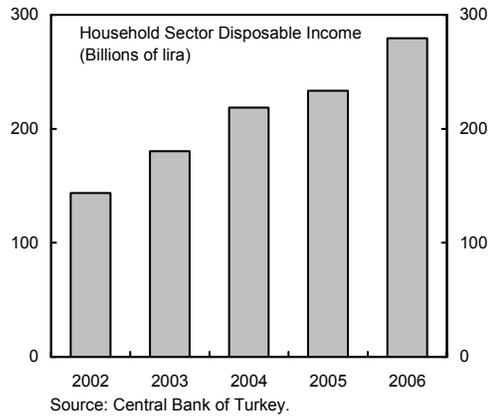
- **Adequate legal framework for mortgage lending.** The new legislation improves the conditions for mortgage lending and introduced new options to fund such lending. While necessary sub-regulations must still be issued, the law has prepared an adequate legal basis for a well functioning mortgage market.



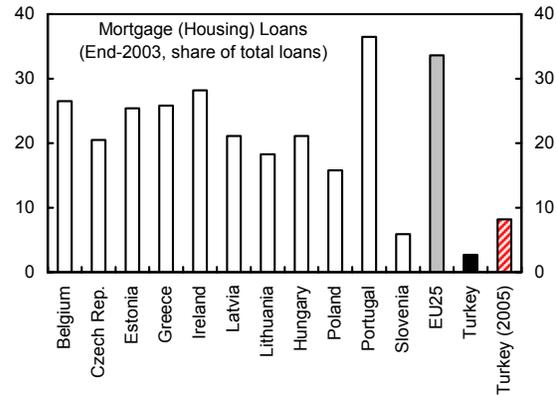
- **Lower interest rates as inflation declines.** Housing loans reached year-on-year growth of over 300 percent in 2005, when inflation had dropped to single digits for

the first time in over 30 years and interest rates were still relatively high.¹ Lending slowed after interest rates were hiked in mid-2006 in response to rising inflation and financial market turbulence. However, the earlier boom gives some indication of the potential mortgage lending surge if inflation and interest rates return to a declining path.

- Rising disposable income.** Disposable income is rising in Turkey on the back of robust economic growth and rising employment. This raises households' capacity to service mortgage debt, an important factor driving mortgage growth in the EU accession countries.



- Competition in a growing financial sector.** Turkey's banking sector is expanding rapidly and switching from holding government bonds to private sector lending. The entry of foreign banks has intensified competition particularly in consumer lending, where mortgages plays a central role.



- Housing needs fueled by demographic pressures.** Much of Turkey's existing housing stock is inadequate, while an annual population growth of 1½ percent creates large needs for new dwellings. Migration from rural to urban areas, which also tends to reduce household size, further adds to this demand.

Turkey: Housing Needs

	2002	2003	2004	2005
Housing units in urban areas (thousand)	594	600	634	680

Source: CBT Financial Stability Report

¹ At their lowest, monthly interest rates for a 10-year lira loan came down to about 1 percent.

C. Possible Macroeconomic Implications

Long-term economic development

4. **A mortgage market can foster the development of the financial sector and raise economic growth.**² Mortgages not only permit extending larger, longer-term lending but also expand lenders' funding options and allow a re-allocation of risks through the securitization of mortgage loans. If supported by reforms that promote the domestic demand for long-term debt—the development of private pension funds, for example—mortgage-linked debt instruments can become the basis for deeper capital markets.

5. **The creation of a mortgage market may affect the private saving rate.** Although financial liberalization generally tends to relax households' borrowing constraints, lowering the private saving rate, the impact of mortgage reform is less clear. Some empirical studies have indeed found that the deregulation of mortgage markets in the early 1980s contributed to falling saving rates, and saving rates are often higher in OECD countries with less-developed mortgage markets.³ However, other studies argue that introducing mortgage markets would raise saving rates in countries where the previous absence of mortgage lending made households extremely liquidity constrained, and where housing demand is large due to population growth.⁴ Under these conditions, the sudden availability of mortgage finance can induce households to save more in order to make a downpayment on a first home purchase.

6. **A functioning housing market could also create positive spillovers for growth.** Currently, almost 50 percent of Turkey's housing stock is "informal," which has negative repercussions on housing conditions and urban planning in fast growing urban settlements (World Bank, 2007). Mortgage finance should help to formalize the housing market and upgrade its quality.⁵ This could positively contribute to human capital (health, child raising, shelter), promote organized urban growth, reduce earthquake exposure, and increase labor mobility (Joint Center for Housing Studies, 2004).

Cyclical effects

7. **Mortgage lending, house prices, and economic cycles are closely correlated in many economies.** Research for industrialized countries shows household consumption to be significantly influenced by house price developments. Moreover, house prices have become increasingly correlated with mortgage lending activity, as mortgage markets were liberalized.⁶ Because households can use their housing wealth as a basis for borrowing,

² IMF (April 2004).

³ Jappelli and Pagano (1994). Koskela et al. (1992) find the same for Finland.

⁴ Li (2001). The simulations are done for Middle Eastern countries, excluding Turkey.

⁵ For example, for lenders to securitize their mortgage loans, the underlying housing collateral must fulfill regulatory license requirements.

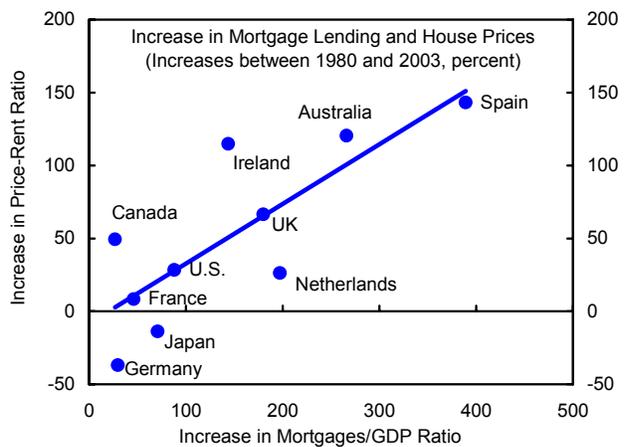
⁶ Co-movements in property prices and mortgage borrowing were comparatively weak in the 1970s but have become stronger in the 1980s and 1990s (OECD, 2000).

changes in house prices may affect consumption not only by changing households' wealth, but also by raising their capacity to borrow. Empirical evidence largely supports the presence of a wealth effect on consumption (Campbell and Cocco, 2005). A consumption-driven expansion of domestic demand may itself feed back into rising house prices. As a result, in most developed countries house prices and mortgage lending are closely correlated with economic cycles—and at times have been associated with overheating followed by recessions.⁷

8. **How these effects could play out in Turkey depends critically on the potential magnitude of house price increases and the strength with which these would affect households' behavior.**

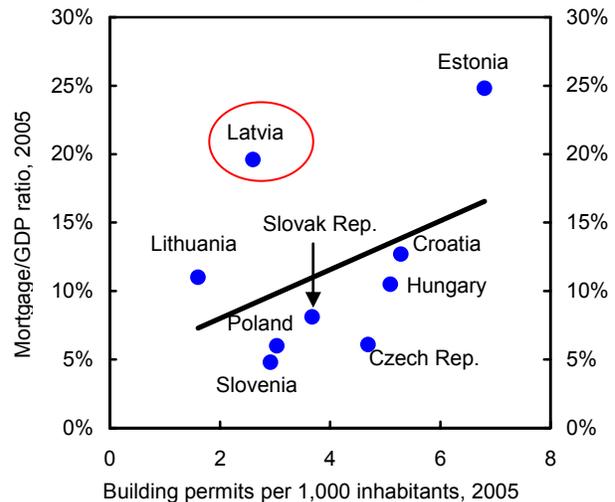
- **Indications are that the room for further real estate price increases is substantial.**

There are no readily available house price data in Turkey. However, using real estate prices from a large real estate broker for the region of Ankara from 2000 to 2005, Binay and Salman (2006) conclude that real estate prices have only just recovered to their pre-crisis levels in real terms. Also, local real estate developers typically point to low prime real estate rents in Istanbul compared to other European commercial centers (Goyhder, 2005).



- **The impact a mortgage-induced demand increase may have on house prices will also depend on supply side conditions.**

A growing mortgage market in Turkey will fuel demand for housing. If supply cannot keep pace, house prices are likely to surge. For example, data from the CEE transition countries show larger mortgage markets to be associated with higher construction activity. Yet, in Latvia, high mortgage lending has coincided with only moderate new construction, and instead seems to have mainly driven up house prices. They more than tripled in only five years, which is high

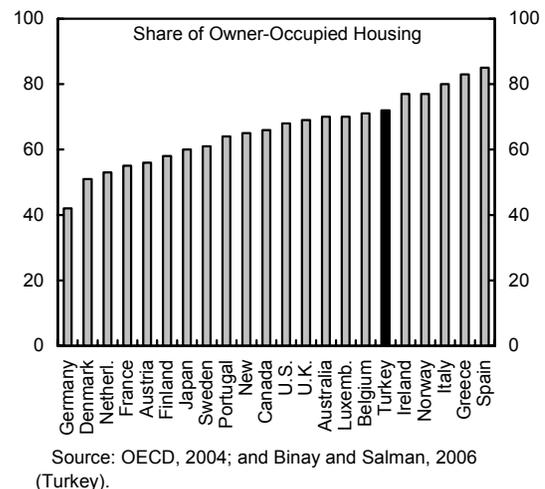
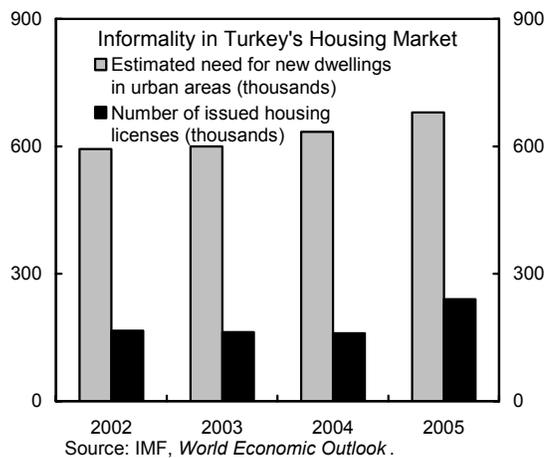


⁷ For example, UK, Sweden and Finland experienced severe recessions when house price booms ended in the late 1980s. However, research also shows that real house price movements differ markedly across countries. Furthermore, whether these movements lead, or lag, cycles differs across countries and between cycles. See OECD (2004; 2000).

even among the new EU member states. Supply side constraints seem to have played an important role in this, including slow zoning and building authorization, land shortages in main markets and an apparent lack of competition in the developer industry. Such factors could also become relevant in Turkey, where the planning, zoning and building permission system is also considered slow, the land market is complicated by large public ownership, and migration pressures are concentrated on a few metropolitan areas.⁸

- **Households' consumption response to housing wealth effects is likely to depend on structural factors in the mortgage and housing market.** Research finds that the impact of housing wealth on consumption is higher in countries with (i) a high rate of owner occupancy; (ii) easy access to mortgage finance, and in particular to mortgage products that facilitate housing equity withdrawal (e.g., low downpayment, high loan-to-value ratio, and repayment terms that keep debt service low);⁹ (iii) low housing transaction costs (which make housing a more liquid assets); and (iv) a predominance of adjustable rate mortgages. How does Turkey fit into these categories?¹⁰

(i) **Owner occupancy** is reported to be around 72 percent in Turkey, which is relatively high by international standards. In principle, this would suggest potentially strong wealth effects. The use of increased housing wealth for mortgage collateral could be limited by the high share of informality in the existing housing stock. However, as the availability of mortgages provides a new incentive to formalize housing ownership (titles, licenses etc), this may change over time.



⁸ Dübel (2006, a); Hansabank (2006).

⁹ Housing equity withdrawal is defined as the amount by which the net increment in a household's mortgage debt exceeds the household's residential investment.

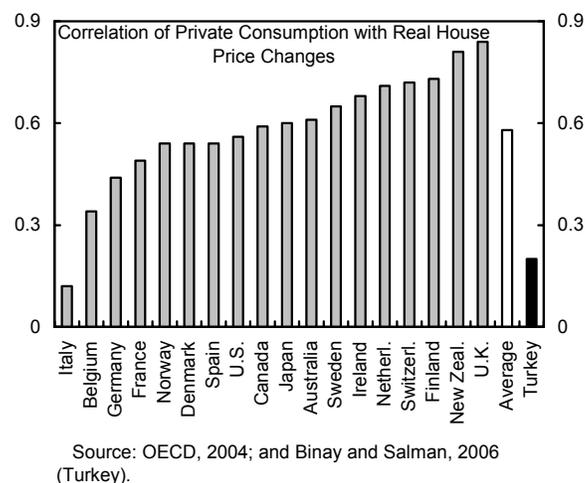
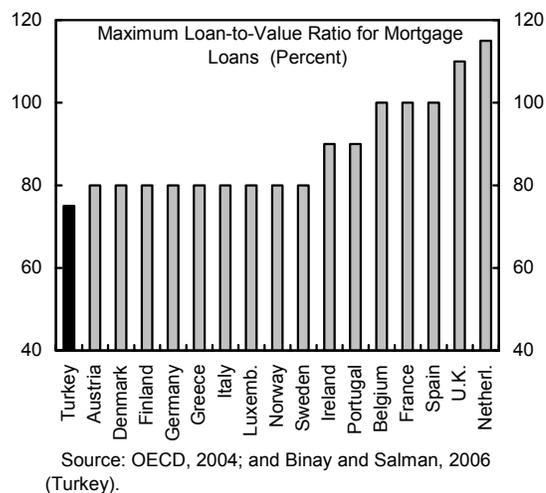
¹⁰ These structural differences are very significant also in developed markets. As a result, changes in housing wealth strongly affect household consumption in countries like Australia, Canada, the Netherlands, the United Kingdom and the United States, but have relatively little impact in France, Germany, Italy and Japan (OECD, 2004).

(ii) **Access to mortgage finance.** The mortgage law sets the maximum loan-to-value ratio at 75 percent, which is lower than in most of the more advanced countries. Maturities and repayment structures of mortgage products will much depend on macroeconomic developments. However, sub-regulations to the mortgage law will have to determine to what extent banks can offer products that encourage equity withdrawal for consumption purposes (e.g., interest only or zero downpayment products).

(iii) **Housing transaction costs** in Turkey are reportedly high by international standards, due to high taxes and a burdensome fee structure (Dübel, 2006). This makes houses less liquid assets, which theoretically should dampen the consumption response to housing wealth effects.

(iv) **Relative importance of adjustable vs. fixed rates.** Countries with predominately adjustable-rate mortgages (ARMs) have typically experienced higher house price growth and volatility than countries with fixed-rate mortgages (FRMs). Since lenders typically promote the type of mortgage that best serves their balance sheet needs, ARMs are prevalent in countries where funding for mortgages is based on short-term deposits (e.g., Australia, Spain, United Kingdom).¹¹ This is an important finding for Turkey: the introduction of ARMs is a key feature of the new mortgage law and banks are likely to advertise ARMs to match their short-term lira deposits. The future stock of household mortgage debt may thus mainly be in ARMs. While this reduces the lender's interest exposure, it may imply stronger fluctuations in household consumption and house prices.

9. **While these effects will take time to be fully felt, it is important for policymakers to follow them from the start.** For example, based on past data, Binay and Salman (2004) estimate a correlation of private consumption with real estate wealth of 0.2 percent. This correlation may rise, as Turkey's mortgage market grows. Similar calculations for OECD countries show this correlation coefficient at 0.58 percent on average. It reaches over 0.8 percent in countries where mortgage access is easy, loan-to-value ratios are high, downpayments low, ARMs widespread, and home equity withdrawal products common.



¹¹ In contrast, countries with well-developed markets for covered bonds or mortgage-backed securities have a high proportion of FRMs (e.g., the United States, Germany, Denmark). See IMF (2004) and OECD (2004).

D. Implications for Monetary Policy and Financial Sector Regulation

Monetary policy

10. **Higher household mortgage indebtedness, in particular at adjustable rates, can significantly impact monetary policy transmission.** Households with high ARM debt become more sensitive to changes in interest rates. Rising interest rates will not only raise their immediate debt service costs, but also reduce their perceived wealth position as higher interest rates put downward pressure on house prices. This increased sensitivity could boost the potency of monetary policy to counter cycles. If FRMs present the larger share in household debt, interest rate policy still has an effect, because households try to refinance their FRM when interest rates fall. The maximum refinancing fee permitted under Turkey's new mortgage law is 2 percent of the remaining debt under loans. This is still considered to be low and may not deter refinancing in the case of declining interest rates (Debelle, 2004).

11. **Also, a housing boom funded by foreign savings would further complicate the difficult question of how to respond to capital inflows.** This involves the issue of central bank intervention and sterilization in the face of a large current account deficit and above-target inflation. While the issue is not new in that it applies to capital inflows in general, a foreign financed mortgage boom could amplify existing pressures, adding real estate as a new asset class for foreign investors.

Financial sector regulation and supervision

12. **The growth of a mortgage market brings important new challenges for financial regulation and supervision.** In the extreme, the above-described effects can take the form of excessive asset price valuations, which fuel unsustainable lending booms based on inflated real estate collateral. Indeed, the liberalization of domestic financial markets, increased competition and the emergence of new financial institutions—without an accompanying strengthening of regulations and supervision—have been common factors behind financial crises in other emerging and industrialized economies (Hilbers et al., 2001).

13. **Therefore, the new mortgage law must be supplemented with sound sub-regulations and the supervisory responsibilities must be defined clearly.** To ensure that the new law's principles are effective in practice, further specificity must be provided through sub-regulations (e.g., on the appraisal process and profession, pre-contractual information for consumers, and procedures for refinancing and prepayments). Moreover, the supervisory responsibilities between the Capital Markets Board (CMB) and the BRSA must be made clear. The law establishes that the BRSA will supervise primary lending and is in charge of consolidated supervision, while the CMB takes charge of secondary lending, including the licensing of the new mortgage finance corporations. This shared supervisory responsibility requires close cooperation, although it must always be clear which agency is ultimately responsible in any problem case.

14. **Developments in some transition economies exemplify the challenges posed by rapid changes in mortgage markets.** In most transition economies, mortgage lending started off with small-size, local-currency bank loans, mainly for housing purposes. However, strong economic performance combined with positive confidence effects of EU

accession (including prospects of Euro adoption) and the entry of foreign banks, have given rise to dramatic changes in the mortgage market: wider range of loan purposes, higher loan-to-value ratios, foreign currency mortgages, and new loan distribution channels. While in principle beneficial to consumers, some of these developments have started to raise concerns among regulators. Turkey can learn from these experiences and avoid some undesirable developments (such as, the fast spread of mortgages in foreign currency).

Poland: Mortgage Product Development over 10 years

	1995	2005
Purpose	Housing only	All housing related (renovation; buy-to-let; real estate purchase)
LTV	70%	80% (exceptions up to 100%; LTVs on fx loans often higher than on local currency loans!)
Currency	Local currency only	PLN, CHF, EUR, USD
Availability	Through banks only	Alternative distribution channels

Source: Dübel, 2006.

15. **Collection of the relevant data is a prerequisite for effective supervision.** To further research and monitor the effects discussed in this chapter, it is crucial to have access to relevant data, in particular house prices. Research for many countries has clearly recognized house prices as a key indicator for demand pressures. Yet, availability of adequate data is also identified as an important area where further efforts are necessary, including in more advanced economies.¹² Reported efforts to start collecting Turkish house price data in a systematic way are, therefore, welcome and deserve continued attention and resources.

¹² For instance, see recommendations by the BIS—Committee on the Global Financial System (2006).

Box 1. Key Elements of the New Mortgage Law

Improvements in the regulatory infrastructure for the primary market (loan origination).

- Legal protection of mortgages is strengthened by introducing new registration requirements and accelerating enforcement and foreclosure procedures.
- Primary market infrastructure is improved by defining the principles of the professional appraisal process.
- Range of available instruments and options is widened by permitting banks to offer adjustable rate mortgages and to charge prepayment fees for fixed rate loans (up to 2 percent of the remaining debt).
- Competition is increased by allowing non-bank lenders to enter the market for mortgage loan origination after a phase-in period.

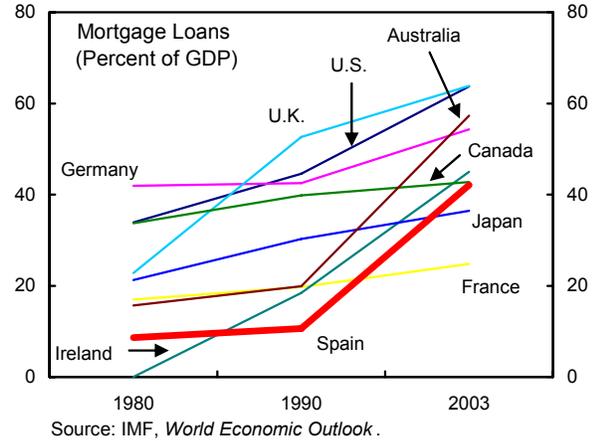
Introduction of secondary market framework (funding and risk management).

- The law introduces Mortgage Finance Corporations (MFCs), which can provide funding to the primary lenders (loan originators). They may function either as liquidity facilities or as conduits for securitization.
- The law also creates two types of new capital market instruments: mortgage-covered bonds and mortgage-backed securities.
 - Mortgage-covered bonds allow loan originators to pool their mortgages and fund mortgage lending activity by selling the bonds. The original loans remain on the institutions' balance sheets.
 - Mortgage-backed securities enable the institution that originates the loan to move the original loans, and the associated risk, off its balance sheet.

Box 2. Examples of Mortgage Market Liberalization and Mortgage Growth

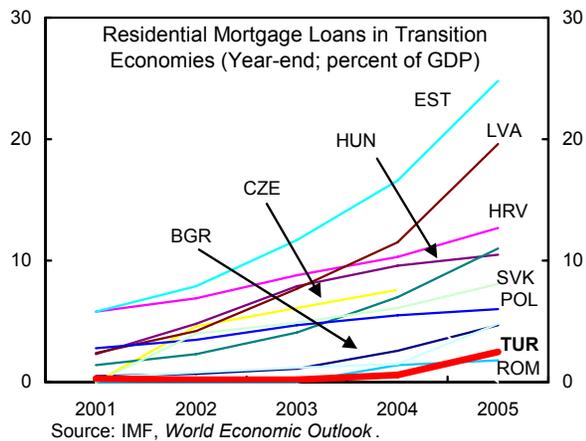
In the 1980s, a wave of mortgage market liberalization led to a fast expansion of lending.

Industrialized countries' efforts to liberalize financial markets in the 1980s eliminated many of the restrictions that previously limited the scope of mortgage lending (e.g., regulations with respect to the terms and conditions of loans as well as to lenders' funding capacities). This expanded the scope to use housing wealth as a basis for mortgage lending. At the same time, many countries made successful efforts to reduce inflation from the elevated levels reached in the 1970s, which also brought down long-term interest rates. In this environment, mortgage lending soared, causing house prices to rise.¹



EU accession added further impetus in some countries. Joining the EU in 1986 significantly changed the prospects for future macroeconomic and political stability in Spain. In addition to lower inflation and declining interest rates (in particular after the launch of the EMU), Spain also experienced relatively higher growth in the process of converging with the richer EU members. Mortgage lending soared in the 1990s after being negligible until the early 1980s.²

Many of the transition economies, which became EU member states in 2004 (and 2007), are experiencing mortgage market booms. Most of these countries had introduced mortgage legislation as part of their transition to market economies. As the economies stabilized, for which the EU accession process provided an important anchor, the combination of falling interest rates, households' rising disposable income, a growing banking sector fueled by foreign capital, and large demand for better housing, drove mortgage lending higher. As in other cases, this was also associated with strong house price increases.³



¹ OECD (2000).

² IMF (2006 b).

³ OECD (2002); World Bank (2006).

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