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**Turkey's Improving
Integration with the Global
Capital Market: Impacts on
Risk Premia and Capital
Costs**

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Saygin Sahinöz,
Ozge Tuncel**

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TURKEY'S IMPROVING INTEGRATION WITH THE GLOBAL CAPITAL MARKET: IMPACTS ON RISK PREMIA AND CAPITAL COSTS

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By Rauf Gönenç, Saygin Şahinöz and Özge Tuncel

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ABSTRACT/ RÉSUMÉ

Turkey's Improving Integration with the Global Capital Market: Impacts on Risk Premia and Capital Costs

Turkey has considerably improved its terms of access to the global capital market. Progress in macroeconomic fundamentals has enhanced credibility and reduced risk premia and capital costs. This has had broad effects on capital supply conditions in the entire economy. Real interest rates have declined, and funds of lengthened maturity are becoming available for a broader range of borrowers and fund users, offering a basis for broader-based long-term growth. Estimations in the paper suggest that reinforcing fiscal institutions, price stability, governance quality, political stability and trade and growth performance would help Turkey to continue to improve its integration with the international capital market and reduce durably its capital costs. This paper relates to the *2010 OECD Economic Review of Turkey* (www.oecd.org/eco/surveys/turkey).

JEL classification: E43 ; E44 ; E62 ; F34 ; F43 ; G15

Keywords: Open economy; capital markets; risk premia; interest rates; capital costs; fiscal institutions; credit rating; economic growth

L'Intégration Croissante de la Turquie avec le Marché Global des Capitaux : Effets sur Les Primes de Risque et Cout du Capital

La Turquie a considérablement amélioré ses conditions d'accès au marché global des capitaux. Des progrès dans les fondamentaux macroéconomiques ont renforcé la crédibilité et réduit les primes de risque et le coût du capital. Cela a eu des conséquences considérables sur les conditions de financement de l'économie tout entière. Les taux d'intérêt réels ont diminué, et des fonds à plus longue maturité deviennent disponibles pour un plus large éventail d'utilisateurs de fonds, offrant une base plus large pour la croissance à long terme. Les estimations dans le document suggèrent que le renforcement des institutions budgétaires, de la stabilité des prix, de la qualité de la gouvernance, de la stabilité politique et de la performance du commerce extérieur et de la croissance aiderait la Turquie à continuer à améliorer son intégration avec le marché global des capitaux et à réduire durablement ses coûts en capital. Ce document se rapporte à l'*Étude économique de Turquie de l'OCDE, 2010*, (www.oecd.org/eco/surveys/turkey).

Classification JEL: E43 ; E44 ; E62 ; F34 ; F43 ; G15

Mots clés: Économie ouverte ; marchés des capitaux ; primes de risque ; taux d'intérêt ; coût du capital ; institutions budgétaires ; notation de crédit ; croissance économique

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TURKEY'S IMPROVING INTEGRATION WITH THE GLOBAL CAPITAL MARKET: IMPACTS ON RISK PREMIA AND CAPITAL COSTS

By Rauf Gönenç, Saygin Şahinöz and Özge Tuncel¹

Introduction

Greater recourse by catching-up economies to global savings promotes faster capital formation and growth. As they succeed in achieving credit rating upgrades and are admitted to the upper segments of global investment indexes, fast-growing emerging markets benefit from reductions in market risk premia, declines in equity capital costs and sustained falls in domestic real interest rates. Turkey has made substantial progress in these areas through the 2000s.

This working paper evaluates Turkey's international capital market credibility and resulting gains in the economy's funding costs. It reviews the key drivers of recent reductions in capital costs, and compares Turkey's progress with achievements in other fast-growing emerging markets. It emphasises three key areas for further consolidating international capital market status: making fiscal policy fully predictable, consolidating the credibility of monetary policy, and further reinforcing the quality of financial supervision.

Turkey's terms of access to international capital markets have improved

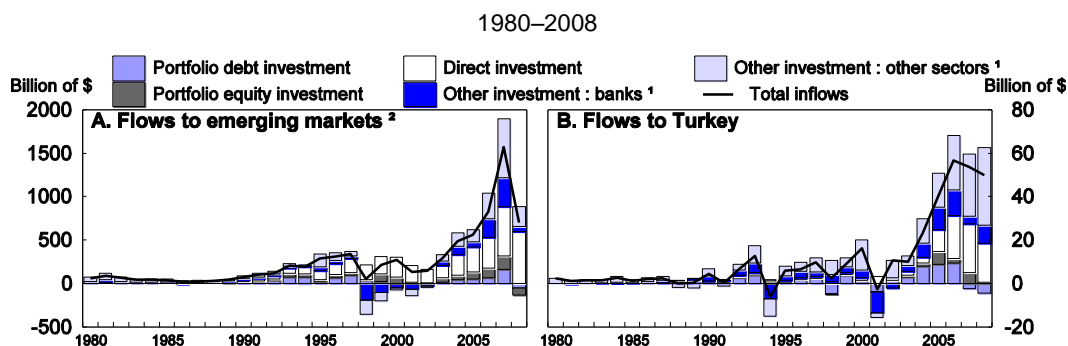
Catching-up countries had sharply increased their capital absorption from global markets in the decade preceding the global crisis. Inflows have taken a variety of forms, including foreign direct investment, bank and inter-enterprise loans and cross-border investment in public and private securities. The total volume of these gross capital flows into the fastest growing 23 emerging markets accelerated sharply in the 2000s. Inflows collapsed in the exceptional circumstances of 2008 and 2009 but there are signs that trend growth is now resuming. A recent study based on financial firms' data concluded: "The crisis will cause no more than a pause in the development of emerging market financial systems. Some indicators suggest that emerging markets may already be rebounding. This represents a far stronger comeback than in mature economies and one that reflects stronger GDP growth" (McKinsey Global Institute, 2009). The Bank for International Settlements (BIS) provided also a detailed discussion of the participation of emerging countries in the global capital market (BIS, 2009) (Figure 1).

Turkey is one of the countries where gross foreign capital inflows grew particularly strongly before the crisis. The most dynamic items were inter-enterprise loans and direct investment, but other forms of inflows also grew rapidly. Turkey faced a sharp contraction in these inflows during the crisis but this was

1 This paper was originally produced for the *OECD Economic Survey of Turkey* (<http://www.oecd.org/eco/surveys/turkey>) published in September 2010 under the authority of the Economic and Development Review Committee. The authors are respectively from the OECD Economics Department (Rauf Gönenç), and the Research and Monetary Policy Department of the Central Bank of the Republic of Turkey (Saygin Sahinöz and Özge Tuncel, secondees to the OCDE Secretariat in the context of the *OECD Economic Survey of Turkey 2010*) and would like to thank OECD staff members Andrew Dean, Robert Ford, Andreas Wörgötter, Vincent Koen, Felix Hüfner and Lukasz Rawdanowicz for highly useful comments and inputs. Excellent statistical assistance from Béatrice Guérard and secretarial assistance from Josiane Gutierrez and Pascal Halim are gratefully acknowledged.

partially offset by the repatriation of Turkish funds abroad and no significant gap arose in the funding of the current account deficit (Figure 1). Box 1 provides a short review of recent insights on the impacts of growing participation in the global capital market on catching-up economies.

Figure 1. Gross capital flows to emerging markets and Turkey



1. Includes loans from abroad to respectively banks and non-financial enterprises.
2. Emerging markets cover Argentina, Brazil, Chile, China, Hong Kong (China P.R.), Colombia, the Czech Republic, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russian Federation, Singapore, South Africa, Thailand, Turkey, and Venezuela. Note that coverage may vary over time and indicator depending on data availability.

Source: IMF, Balance of Payments Database and OECD calculations.

Box 1. Impact of integration with the global capital market on catching-up economies

The impact of foreign capital inflows on emerging economies depends on the recipient country being a net saver or a net dissaver (Feldstein and Horioka, 1980; Johnson, 2009). Net saver countries generate more internal savings than their own investment needs and produce current account surpluses. In these economies, as in many Asian emerging markets in the 2000s¹ capital inflows contribute mainly to the quality of capital allocation. In contrast, in the net dissaver countries national savings fall short of investment needs and there is a current account deficit. Foreign savings are indispensable to achieve the intended quantity of capital utilisation. Turkey is at present in the latter position together with most central and eastern European and South American economies (Figure 2).

The use that the Turkish economy has made of foreign savings has evolved over recent years. While until the early 2000s capital inflows had chiefly financed public sector deficits, in the following period they financed mainly a strong acceleration in business sector investment, and, secondarily, household borrowing. Thanks to improved macroeconomic balances, restrictive fiscal policies and sound financial intermediation Turkey was able to make a productive use of foreign savings during this period.

The benefits and costs of integration with the global capital market for emerging countries is a controversial topic among academics and policymakers. Two recent studies reviewed theoretical arguments and empirical studies on hand (BIS, 2009; Prasad *et al.*, 2006). They confirm that, while one stream of research highlights benefits for business investment, growth and consumption smoothing, a second stream insists on the risks and vulnerabilities raised by high dependence on foreign savings. Detailed analyses may lead to a more consensual view: emerging countries with sound macroeconomic balances, strong productivity growth and sound financial intermediation tend to benefit highly from foreign savings, whereas countries with persisting macroeconomic imbalances, low productivity and poorly regulated financial sectors become vulnerable to boom and bust cycles and face an amplification of their macroeconomic volatility.

Even though reformers in emerging countries may aim at attaining a minimum level of institutional and financial development before liberalising, financial integration itself is a springboard for domestic institutional and financial development. Better understanding how to increase the absorption capacity of foreign savings without undermining financial stability would help emerging countries to draw further on this synergy.

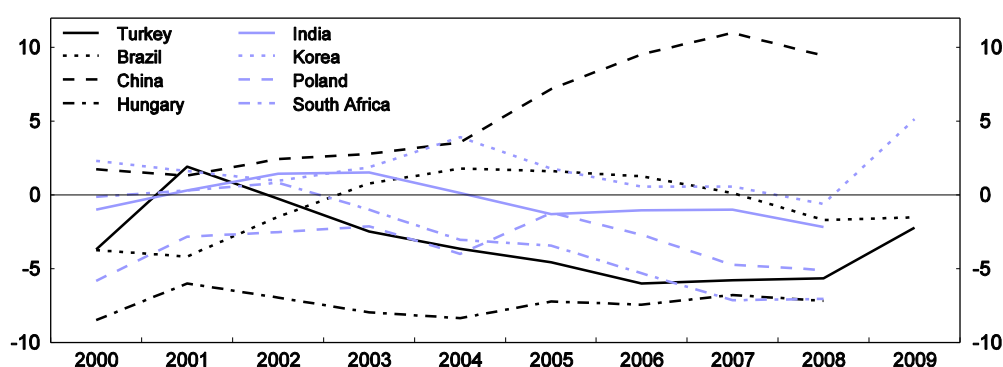
Financial integration creates challenges for monetary policy. Long-term interest rates start to follow global rather than local influences. As monetary policy works via changes in short-term interest rates, short-term capital flows

become highly sensitive to domestic short-term rates, increasing the volatility of the exchange rate.

All in all, it is a combination of stable macroeconomic policy, sound domestic financial supervision, and prudent foreign exchange reserve levels which permit emerging countries to reconcile integration with the global capital market and financial stability. The international crisis of 2008–09 reinforced these lessons. It showed that countries with open capital accounts should always be prepared to cope with the volatility of the global environment. Exchange rate flexibility is a good buffer, and together with effective prudential regulation in the financial sector, deters the build-up of imprudent private sector risk exposures. Sufficient foreign exchange reserves are also useful to cushion the shocks entailed by capital movements.

Figure 2. Investment-saving gap in selected countries ¹

As % of GDP



1. Savings and investment aggregates are not available for all countries. The gap is measured by the current account balance for all countries.

Source: IMF, World Economic Outlook, April 2010.

1. This differs from conditions in the 1990s. Until the 1997 crisis many Asian economies were net dissavers and ran current account deficits.

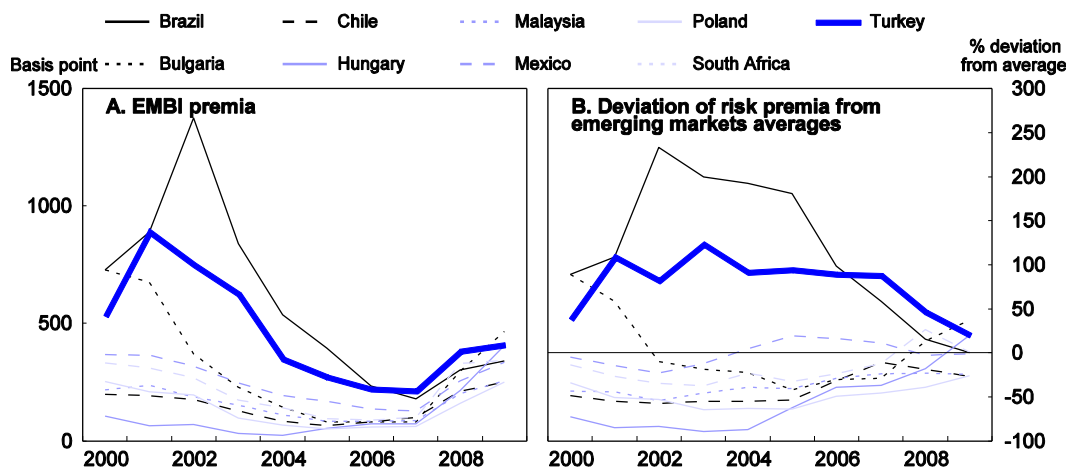
Capital costs are declining

International risk premia

Turkey absorbed foreign savings with diminishing risk premia through the 2000s. This reflected not only the supportive conditions in global capital markets, but also Turkey's success in reducing its perceived country-specific risk. Turkey was not the only country reinforcing its credibility during this period, but was part of a narrow group of reform-driven economies which have been particularly successful in attracting foreign savings at lower costs.

Estimating the average cost of imported capital raises difficulties because certain cost components are not observable. Each type of capital inflows entails different capital cost (such as dividend expectations, capital gain expectations and different forms of interest rates). Capital costs for successful emerging countries declined across the full range of instruments, but are best documented through the most widely available measurement of country risk premia: interest-rate spreads on the long-term foreign currency borrowing of their governments (Figure 3).

Figure 3. Lower country risk premia in emerging markets



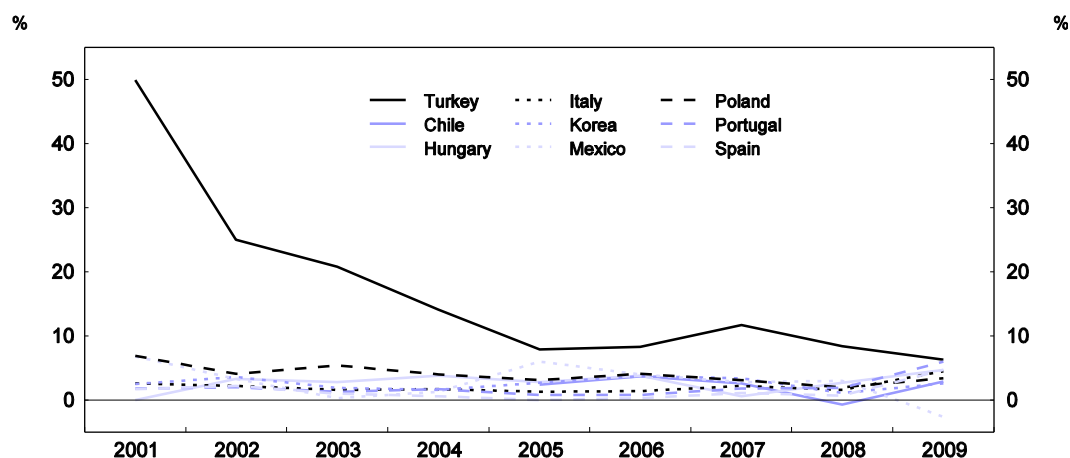
Source: Bloomberg.

Domestic real interest rates

Increased participation in the global financial market is having deep impacts on the Turkish economy. First of all, it facilitates Turkey's domestic real interest rates beginning their long-awaited convergence with global real interest rates. Such a "conditional convergence" process has permitted the most advanced catching-up economies to align gradually with international interest rates by avoiding excessive risk premia (Arghyrou *et al.*, 2009; Ferreira and Leon-Ledesma, 2007). More supportive funding conditions for financial intermediaries permit them to extend longer-term credits to a larger population of local borrowers. Equity capital also becomes more widely available. The process may now have been set in motion in Turkey (Figure 4).

Well before this convergence, Turkey had liberalised its capital account in 1989 and had shifted to fully floating exchange rates in 2001. Yet, the domestic real interest rates had remained disconnected from global capital costs. The relationship between external and internal capital markets were distorted by highly unstable inflation and exchange rate expectations. The covered interest rate parity principle was in action (as in all economies with an open capital account) but in the presence of severe uncertainties concerning future inflation and exchange rates. As a consequence real interest rates had turned extremely volatile, both *ex ante* and *ex post*. Long-term financial transactions had become entirely dollarised, or foreign currency-indexed. This made long-term funding costly or inaccessible for companies lacking hedges against exchange rate risks, especially for small and medium-sized enterprises. Investment and growth were therefore taxed in large segments of the economy (OECD, 2006). This environment had prevailed before the mid-2000s.

Figure 4. Real long-term interest rates in selected countries



Source: OECD, OECD Economic Outlook Database.

Macroeconomic and institutional credibility accelerates convergence

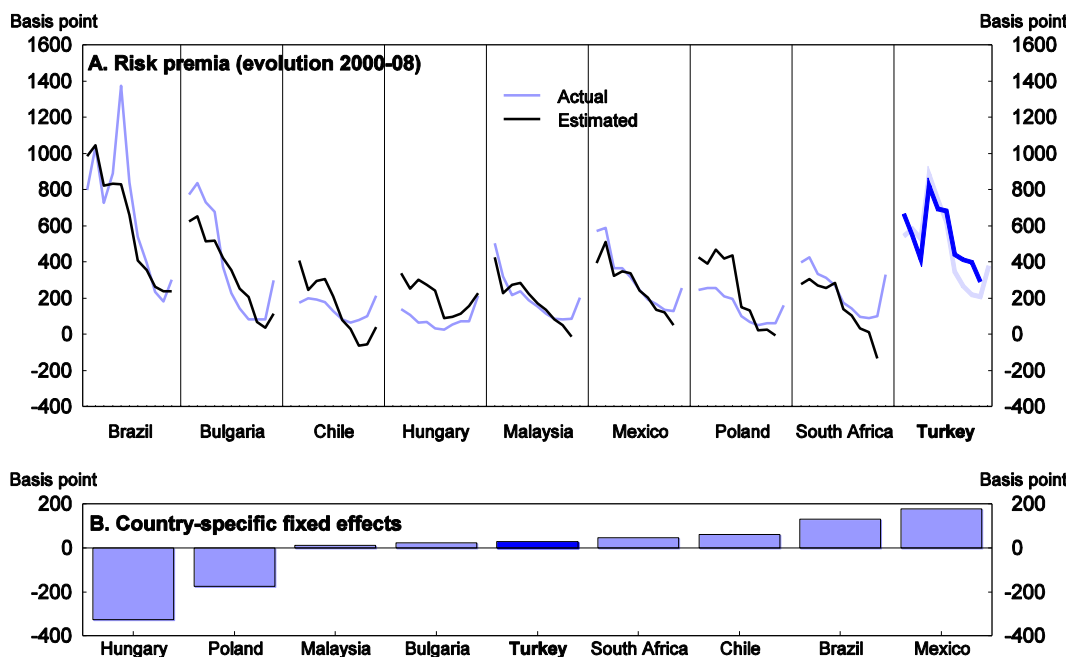
Turkey's strong and more credible macroeconomic policy framework gave a new impetus to the convergence of real interest rates. The interest rate parity principle started to operate under more stable inflation and exchange rate expectations, generating more moderate risk premia. The process heralds a much more supportive capital cost environment for the entire Turkish economy. Fiscal and monetary predictability, trade and growth performance and progress with political stability are the driving forces of this course (Box 2).

Box 2. What determines emerging countries' risk premia?

A large empirical literature highlights two main streams of influences on emerging countries' risk premia: *i*) international and regional common factors which depend on global capital market conditions (factors related to global risk appetite); and *ii*) individual country's credibility rooted in its political stability, quality of market institutions and fiscal and monetary framework (country-specific factors). Among country-specific factors, a small number of factors explains the lion's share of variation in risk premia across countries and through time.

Some important research insights are:

- McGuire and Schivers (2003) found that a small set of variables explains up to 80% of the variance of emerging market risk premia. The largest part of the variance is explained by regional and global conditions, whereas country-specific variables account for a smaller part of the explained variance.
- Subsequent studies, including Uribe and Yue (2006), Culha *et al.* (2006) and Maier and Vasishta (2008) confirmed the co-determination of spreads by common global factors and country-specific fundamentals.
- Hilscher and Nosbuch (2007) found that, all other conditions being equal, spreads vary according to geographical location. They are lower in Eastern Europe and Asia than in South America.
- Mati *et al.* (2008) found that the composition of fiscal policy matters for spreads. For instance, spending on public investment rather than on current expenditures lowers spreads, provided that the aggregate fiscal balance is preserved. Moser (2007) confirmed that policy news have a direct impact on spreads when they affect the future course of economic policy.

Figure 5. Actual and estimated country risk premia¹

1. EMBI risk premia (for definitions see Annex A1).

Source: Datastream, Standard & Poor's and CBRT.

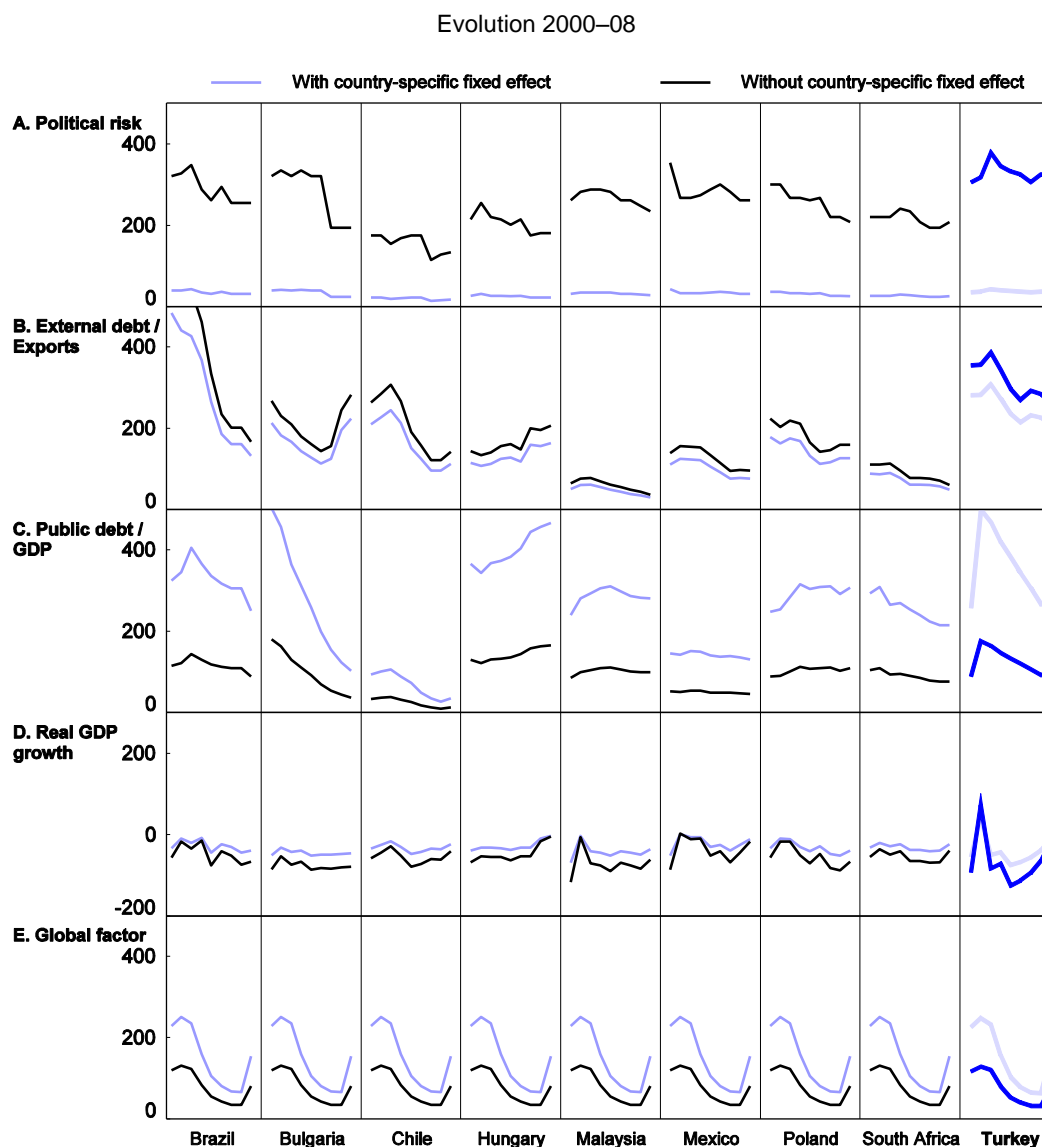
To assess the degree to which macroeconomic and institutional reforms in the 2000s have affected Turkey's access to the international capital market, a panel model is estimated for Turkey and eight comparable countries (Annex A1). It regresses risk premia on macroeconomic, fiscal, monetary and political stability indicators. The quality of the estimation proved satisfactory (the selected factors explaining about 70% of the variation in risk premia across countries and across time) and confirms that Turkey's reform efforts through the 2000s considerably improved the costs of foreign borrowing. Additional improvements appear nevertheless possible (Figures 5 and 6).

Seven findings are worth stressing:

- Political stability has a particularly strong bearing on catching-up countries' risk premia. It is the first factor differentiating their comparative standing in international markets. According to the indicators utilised in the estimation (Annex A1), most of the reviewed countries have enhanced their perceived political stability in the 2000s, but somewhat in contrast, Turkey's perceived political stability has not tangibly improved
- The second key influence is external exposure. Approximated by the ratio of external debt to exports, it improved in all countries, including Turkey. However, Turkey's balances have remained comparatively more exposed than in the other countries. Despite strong export growth, the current account deficits remained high, not allowing a reduction in foreign debt as much as in the benchmark countries.
- Fiscal performance, approximated by the level of the public debt/GDP ratio, exerts a strong impact. This is the area where Turkey has achieved the fastest progress in comparison with other countries, with a very significant positive impact on its risk premia.

- GDP growth has also a strong influence as it affects all financial ratios. In this area, while other countries have achieved relatively steady and regular performances, Turkey had a more uneven record: the collapse of GDP growth in 2000–01 was more than offset by following rapid growth, but fell behind other countries after 2007.
- European Union membership offers a “bonus” for the credibility of fast-growing economies. Turkey has not benefitted from this EU halo effect.
- Comparing each country’s actual risk premium to its statistically expected level (the so-called country residual) also provides some lessons. Turkey’s risk premia had stayed above their statistically expected level for the most part of the 2000s, but fell sharply below their expected level at the end of the period. According to the estimated model, Turkey has enjoyed a credibility “bonus” in the most recent period.
- Country-specific influences are also detected through the so-called country-specific fixed effects. Individual countries feature either a genuine “handicap” or a “bonus” against the other common determinants of their position. Viewed from this perspective, and in the period as a whole, Turkey appears to have faced a handicap but this does not capture the recent improvement.

Figure 6. Main determinants of Turkey's and selected countries' risk premia¹



1. Contribution of explanatory variables (in the estimated model).

Source: Datastream, Standard & Poor's and CBRT.

Credit ratings bear on international capital market standing

International capital flows diversify, shifting from large-size bank lending to various forms of security investing and inter-enterprise credits. The number of potential investors increases and as a result their individual market share in the total supply of funds declines. When arms-length investors are less inclined to invest in the proprietary analysis of borrowing countries, this generates demand for third-party information on the economic fundamentals of emerging countries. This demand is behind the role devoted to credit rating agencies. Improving credit rating is becoming an important objective for all emerging borrowers participating in the global capital market.

The nature of the information and analysis provided by rating agencies had been reviewed through the 2000s, and appeared to be initially better understood (Setty and Dodd, 2003; Canuto *et al.*, 2004). However, their failure to detect the inherent risks of asset-based securities before the international financial crisis created new controversies and scepticism on the quality of their analyses. Their role remains nonetheless quasi-institutional, as was officialised by the US regulators under the label of *Nationally Recognised Statistical Rating Organisations* (NRSROs).² European authorities also envisage providing agencies with an official status, in exchange for compliance with additional quality norms (European Commission, 2008, 2010). Irrespective of policy discussions on possible additional requirements for their certification (Merkel, 2010; Lagarde, 2010), financial regulations in all OECD economies attach more importance to agency ratings in the investment regulations for financial institutions. The position granted by agencies to individual countries in their credit risk class-tables influence the international capital flows also through this channel.³

Rating agencies have been disseminating information on emerging markets for more than two decades. It is important to note however that this information does not match the amount of statistical information that they have compiled on private corporations. Information on the payment history of the population of security-issuing firms is indeed their key statistical input, and permits them to select the most relevant statistical indicators for assessing borrower quality. In contrast, the lack of sufficiently long statistical series was recognised as a major factor in the rating failures of the asset-based securities before the 2008–09 crisis. Similar information on emerging markets is only available for smaller populations (a few tens of countries) and shorter periods (two or three decades). The statistical usefulness of this information is also reduced by discontinuities in these countries' growth dynamics, which tend to alter their structural sources of risks.⁴ In these circumstances, credit rating agencies try to develop *ad hoc* methods of assessment that they aim at formatting into systematic risk evaluation systems. Box 3 summarises the procedures utilised by two main agencies in rating emerging markets and discloses how Turkey is positioned in the scoring map of one of them.

2 There are at present five nationally recognised statistical rating organisations (NRSRO): Standard & Poor's, Moody's, Fitch, A.M. Best, and Dominion Bond Rating Service. They are certified by the Securities and Exchange Commission. Among the five only Standard & Poor's, Moody's and Fitch offer global rating services.

3 As an example, Basel II guidelines recommend to set capital adequacy coefficients for government securities in bank portfolios according to the ratings granted by certified agencies. Basel I regulations used OECD membership as the key criterion for risk provisioning for government securities.

4 For example, the 1997 Asian crisis revealed that the key source of shocks for certain emerging markets had moved from external imbalances to the accumulation of domestic private financial liabilities.

Box 3. How do rating agencies rank emerging markets and Turkey?

A set of economic, financial and political information is utilised in the determination of sovereign ratings. The data are processed according to agency-specific procedures and are updated from time to time. The structure of the rating criteria used by Standard & Poor's and Moody's, and Turkey's position in the scoring map of Moody's are summarised below.

Standard & Poor's rating criteria

Standard & Poor's has an analytical framework for sovereign countries including ten key categories (Standard & Poor's, 2010). Each country is ranked on a scale of 1 to 6 for each of these criteria. Variables are interrelated but they do not have constant weights:

- *Political risk*: This category documents issues such as the stability and legitimacy of political institutions, transparency in economic policy decisions and objectives, public security and geopolitical risk.
- *Income and economic structure*: The degree to which the economy is market-oriented, the competitiveness and profitability of the business sector and labour flexibility.
- *Growth prospects*: The rate and pattern of economic growth and the composition of savings and investment.
- *Fiscal flexibility*: Public revenue, expenditure and balance, revenue raising flexibility and expenditure effectiveness.
- *Debt burden*: Gross and net public debt as a share of GDP, the currency composition of debt and the maturity profile of debt.
- *Off-budget liabilities*: The size and health of the non-financial public sector and the robustness of the financial sector.
- *Monetary stability*: Price behaviour in economic cycles, the range and efficiency of monetary policy tools and central bank independence.
- *External liquidity*: The structure of the current account, the composition of capital flows and reserve adequacy.
- *Public external debt*: Gross and net public external debt as a share of current account receipts, the maturity profile and currency composition of public external debt and access to concessional funding.
- *Private external debt*.

Moody's rating criteria and Turkey's position in its scoring map

Moody's states that a sovereign rating is determined through three steps (Moody's, 2008):

Step 1: Evaluating economic resiliency

The shock absorption capacity of a country is assessed based on two factors:

- Factor 1: *Economic strength* (captured in particular by its GDP *per capita* level) and the shock-absorption capacity.
- Factor 2: *Institutional strength*, i.e. whether the quality of the institutional framework (including property rights, transparency, predictability of government action, and the degree of consensus on the goals of political action) supports respecting contracts.

Combining these two indicators helps rank each country on a "scale of resiliency" which spans five levels: very high, high, moderate, low or very low (Figure 7).

Step 2: Evaluating financial robustness

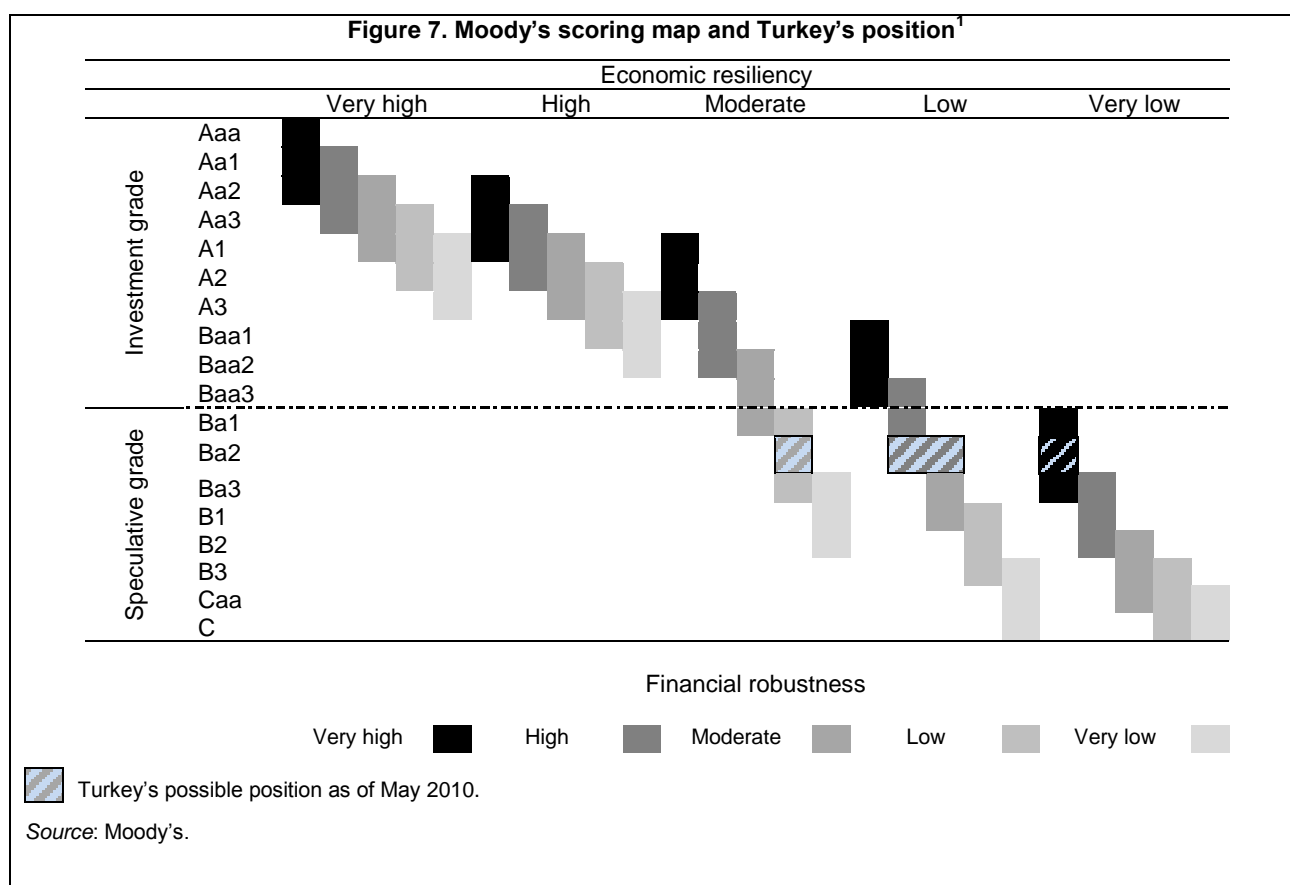
The second stage focuses on the public debt level and sustainability on the basis of two considerations:

- Factor 3: *Financial strength* of the government, taking account of the public debt level and of the ability of the government to mobilise resources (raising taxes, cutting spending and selling assets).
- Factor 4: *Susceptibility to event risk*, i.e. the degree to which debt might increase as a result of economic, financial or political events.

By combining these two indicators, each country is placed on the same scale as in Step 1.

Step 3: Rating decision in the Committee

A Rating Committee "adjusts" each country's economic resiliency to its degree of financial robustness. The scores are decided by deliberation. The rating decision is reached on the basis of a peer comparison and weighing additional factors that may not have been adequately captured earlier (Figure 7).



The present rating of different emerging markets by main agencies is summarised in Table 1 and Figure 8. Turkey has obtained a sub-investment grade by all rating agencies over the past decade, in contrast to some emerging markets which graduated to investment grade (India and Morocco in 2007 and Brazil in 2008). However, an upgrading momentum has started for Turkey. In December 2009, Fitch increased Turkey's rating by two notches, lifting it to the highest position before graduation. Moody's followed in January 2010, providing an upgrade from three to two notches below investment grade. Then in February 2010, Standard & Poor's granted an upgrade to two notches below the investment grade. All three agencies made detailed announcements on their view of Turkey's strengths and weaknesses with respect to their rating criteria (Box 4).

Box 4. Turkey's perceived strengths and weaknesses

Fitch

Fitch upgraded Turkey's Long-Term Foreign Currency Rating by two notches to BB+ in December 2009.¹ The agency said that "Turkey's resilience in the global crisis revealed that credit fundamentals and debt tolerance were stronger than previously thought".

Turkey's relative strengths

- GDP *per capita* is the second highest in the "BB" range and above the BBB range.
- The business climate, institutions and governance are relatively strong. There is a customs union with the EU.
- Debt tolerance is enhanced by strong banking sector, relatively deep local markets, strong debt management capacities and good debt service record.

- The banking sector is well capitalised, with a balanced net external and foreign exchange position and a loan/deposit ratio of only 80%. Households have very low foreign debt and are long in foreign exchange.
- The floating exchange rate and inflation targeting regime are strong points. The country has a track record of successful fiscal consolidation in 2001–06.
- Prior to the current downturn, GDP growth averaged 6.9% in the five years to 2007, above the “BB” range median of 5.8%.
- Demographics are favourable for growth and public finances.

Weaknesses

- EU defined general government debt rose to 45.5% of GDP at the end of 2009, above the “BB” range median of 41%. Yet, only about 35% of this debt is in foreign currency, compared with 66% for the “BB” range median.
- Turkey faces large gross external financing requirements, projected at \$ 115 billion for 2010 (including \$ 48 billion of short-term debt). This amounts to 150% of official foreign exchange reserves for 2009, compared with the “BB” median of 82%.
- The unemployment rate rose to an annual average of 14% in 2009, well above rating peers.
- Fiscal transparency is weak: International-standard general government data are not available, control and reporting of local authority budgets is poor, and the quality of the administrative infrastructure for fiscal policy has weaknesses.
- Political risk weighs on Turkey’s rating. The country is ranked in the bottom 21st percentile in the World Bank’s political stability index, even below the “B” range (the group which is below Turkey’s present grade).

Moody’s

When announcing Turkey’s rating upgrade to Ba2, Moody’s made the following points:

Performance in the crisis

- The upgrading reflects Moody’s growing confidence in the government’s financial shock-absorption capacity. Although Turkish growth has contracted very sharply – even more sharply than was seen in its 2001 financial crisis – the resilience of the public finances relative to past such crises has been notable.
- The Turkish economy’s ability to rebound from shocks, whether external or domestic, is the product of a significant improvement in the policy credibility over the last decade. The recent financial crisis is a kind of “stress test” for these policy reforms.
- The ability of the government and the country more generally to regroup when faced with a very significant economic and financial challenge indicates that Turkey has reached a higher level of resiliency.

Growth outlook

- The economy is starting to recover and capital inflows have resumed. The government has proven access to foreign capital, as was demonstrated by a recent \$2 billion 30-year Eurobond issue. This was the largest-ever emerging market sovereign transaction of that maturity.
- The government’s fiscal exit strategy has begun with passing the 2010 budget. The budget was in line with the Medium Term Programme, announced in September 2009 and represents a first step towards reining in the budget deficit and returning to a primary surplus position.
- Foundations for long-term growth are robust, even if growth may not achieve the same pace as in the mid-2000s due to both global and domestic factors. The industry used the financial crisis to expand into new export markets and to reduce its dependence on EU markets.
- The population dynamics are favourable.

Vulnerabilities

- Debt affordability metrics are still poor by international standards. The ratio of interest/revenues is estimated at 27% and of debt/revenues at 219% in 2009. External vulnerability improved in recent years but remains in the bottom quintile of the distribution for emerging countries.
- Turkey lacked, as of the first quarter of 2010, policy rules that would impose additional discipline to the

budget process. Such rules would make the improvements in debt dynamics more durable and predictable. This is a decisive factor for any sovereign country to eventually become investment grade.

- A fiscal rule targeting budget restraint would enhance Turkish authorities' fiscal credibility, particularly given the slippage that occurred prior to the onset of the crisis and the absence of an external anchor like the IMF or EU.
- Turkey may not benefit in the coming years of the same degree of government stability that it enjoyed during most of the decade. Policy volatility may be greater in the light of the electoral calendar. The rating also factors the political noise that comes with long-standing internal and external tensions.

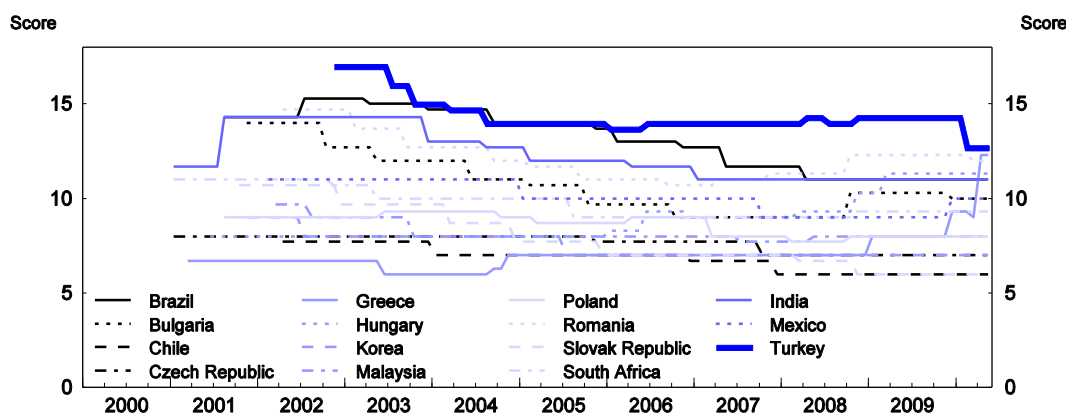
Standard & Poor's

Standard & Poor's raised Turkey's long-term rating from BB- to BB on 17 February 2010. It kept the outlook positive, implying that further upgrades are possible in the coming period. When announcing the upgrade Standard & Poor's made the following points:

- The Turkish government's policy flexibility has improved as a result of its track-record in steadily reducing the debt burden.
- Turkey's regulatory institutions have been successful in preserving the solidity of the financial sector, despite external adversity. The banking sector is one of the strongest and least-leveraged in Eastern Europe.
- Turkey's local capital markets are continuing to develop, enabling the government to lengthen maturities of local currency debt.
- The ratings on Turkey remain supported by the government's overall track record of sound economic and fiscal management.
- A further upgrade is likely over the next 12–24 months if the country returns to its prior rates of growth with less dependence on external funding.
- In contrast, the rating may be lowered if external pressures mount, if medium-term fiscal plans suggest fiscal loosening, or if the domestic political environment deteriorates significantly.

1. This has taken Turkey in a peer group including Colombia, Indonesia, Philippines, Egypt, Latvia and Costa Rica.

Figure 8. Rating upgrades of emerging markets and Turkey in the 2000s



Note: Standard & Poor's ratings of long-term foreign currency liabilities of sovereign governments were used as reference. Alphanumeric ratings were transformed into a numerical scale: AAA rating has the value 1, AAA- has the value 2 and so on.

Source: Datastream and OECD calculations.

Table 1. Current credit ratings of emerging markets

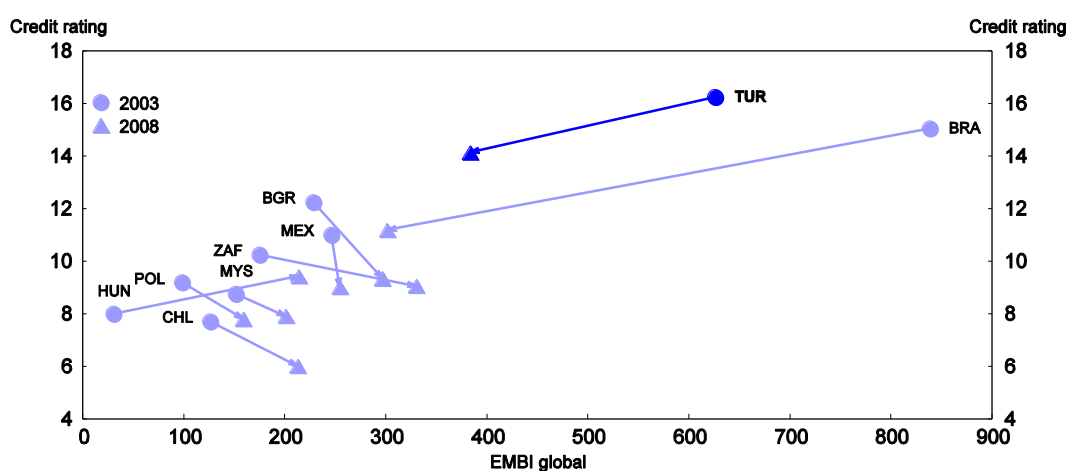
As of 21 May 2010

		Moody's		Standard & Poor's		Fitch
Investment grade countries	A2	Bahrain, Poland	A	Bahrain, Czech Republic, Israel, Malta, South Korea	A	Bahrain, Chile, Israel
	A3	Malaysia, South Africa, Greece	A–	Malaysia, Estonia, Poland, Portugal	A–	Malaysia, Poland
	Baa1	Mexico, Montenegro, Lithuania, Russia, Thailand, Hungary	BBB+	South Africa, Thailand	BBB+	Estonia, South Africa
	Baa2	Azerbaijan, Kazakhstan, Tunisia	BBB	Bulgaria, Croatia, Mexico, Russia, Tunisia, Lithuania	BBB	Hungary, Lithuania, Mexico, Russia, Tunisia, Thailand
	Baa3	Armenia, Bulgaria, Croatia, India, Iceland, Latvia, Romania, Brazil, Peru	BBB–	Brazil, Colombia, Iceland, India, Kazakhstan, Macedonia, Morocco, Peru, Hungary	BBB–	Azerbaijan, Brazil, Bulgaria, Croatia, Greece, India, Morocco, Panama, Peru, Kazakhstan
Sub- investment grade countries	Ba1	Albania, Colombia, Costa Rica, Egypt, El Salvador, Morocco, Panama	BB+	Azerbaijan, Egypt, Greece, Panama, Romania	BB+	Turkey (stable) , Colombia, Egypt, Guatemala, Latvia, Macedonia, Romania, Iceland
	Ba2	Turkey (stable) , Belarus, Guatemala, Jordan, Indonesia, Papua New Guinea, Suriname	BB	Turkey (positive) , Cook Islands, Costa Rica, Indonesia, Guatemala, Jordan, Viet Nam, El Salvador, Uruguay, Latvia, Macedonia	BB	Costa Rica, Indonesia, Philippines, El Salvador
	Ba3	Philippines, Uruguay, Viet Nam	BB–	Gabon, Mongolia, Philippines, Serbia, Venezuela	BB–	Gabon, Lesotho, Nigeria, Serbia, Viet Nam, Uruguay, Armenia
	B1	Fiji, Lebanon, Mongolia	B+	Bosnia and Herzegovina, Georgia, Ghana, Mozambique, Nigeria, Suriname	B+	Georgia, Iran, Sri Lanka, Venezuela, Ghana
	B2	Bosnia and Herzegovina, Bolivia, Venezuela, Turkmenistan, Ukraine	B	Belize, Bolivia, Kenya, Paraguay, Sri Lanka, Lebanon, Ukraine	B	Bolivia, Lebanon, Mongolia, Mozambique, Suriname
B3	Argentina, Belize, Jamaica, Pakistan, Paraguay	B–	Argentina, Fiji, Jamaica, Madagascar, Pakistan	B–	Argentina, Ukraine, Ecuador, Jamaica	

Source: Bloomberg.

Irrespective of ongoing discussions on the quality and pertinence of emerging country credit ratings in the present economic environment (Reisen, 2010), securing an investment grade would undoubtedly further Turkey's participation in the global capital market. As mentioned above this is a condition for having low-cost access to a large number of regulated international capital sources (such as commercial banks, pension funds and insurance companies). The correlation between emerging countries' credit ratings and risk premia is also well established (Figure 9). Research on reciprocal influences between credit ratings and risk premia suggest that causality links operate more strongly from the former to the latter (ECB, 2004), but feedback effects are also in force, and differences between ratings and risk premia never persist very long.¹ This is to be expected, as risk premia and rating decisions appear to respond to the same economic fundamentals (Box 5).

Figure 9. Credit rating and risk premia



Source: Bloomberg, Datastream, Standard & Poor's and CBRT

Box 5. Findings on the determinants of credit ratings

Existing research generally confirms the principal factors that rating agencies emphasise as shaping their decisions. Four main blocs of factors appear to determine statistically the credit rating of a country: *i*) macroeconomic performance (GDP *per capita* and real GDP growth); *ii*) quality and performance of the public sector (government debt, fiscal balance and perceived government effectiveness); *iii*) external balance (external debt, foreign reserves and current account balance); and *iv*) geographical position (EU membership and regional location). Each country has strengths and weaknesses in individual areas and performance improves or weakens in each of them through time. Country rating results from a combination of these influences.

Some main research results are:

- The reference study by Cantor and Packer (1996) documented that credit ratings were shaped by five main factors: the *per capita* income level, GDP growth, inflation, external debt and default history. This finding was subsequently updated and confirmed by Canuto *et al.* (2004) and Afonso *et al.* (2007).

5. Sy (2002) provided a detailed examination of these gaps and concluded that when gaps between credit ratings and market risk premia become significant, excessively high spreads are generally followed by episodes of spread narrowing. This adjustment is more frequent than credit downgrades. In contrast, observations with excessively low spreads are generally followed by rating upgrades, rather than episodes of spread widening. Any substantive disagreement between markets and rating agencies is viewed as a signal that further technical and sovereign analysis is warranted.

- Mulder and Perrelli (2001) confirmed that ratings were predicted by macroeconomic fundamentals but tended to overshoot in crisis periods.
- Mora (2006) found that macroeconomic fundamentals explained the largest part of variations in ratings, but there was also a degree of stickiness in these decisions: ratings tended to stay above their predicted level before crises, match predictions during crises, and lag the improvement in fundamentals after crises.
- Bissoondoyal–Bheenick (2005) found that key macroeconomic ratios affected the rating of low *rated* countries more than that of high *rated* countries. Deviations from macroeconomic benchmarks by institutionally credible countries are more easily tolerated.
- Jaramillo (2010) corroborates that ratings granted by all three agencies were explained by five core variables: external public debt, domestic public debt, political risk, exports and financial depth. Her specification correctly predicts nearly 90% of investment grade status in all observations and two thirds of the upgrades and downgrades to and from investment grade.

To assess to what degree Turkey’s rating reflects the improvement in macroeconomic fundamentals a multivariate model was estimated (Annex A1). The ratings for Turkey and a set of comparable countries were statistically analysed on the basis of key fiscal, monetary, political governance and growth variables. The model explained a large share of the variation in ratings across countries and through time. Figures A1.1 and A1.2 in Annex A1 summarise the results of the estimation. The main findings are:

- “Institutional effectiveness” for emerging countries and Turkey has the strongest influence on credit ratings. It encompasses factors such as the rule of law, the government’s effectiveness, the presence of safeguards against corruption.² This is consistent with rating agencies’ claim that institutional quality is becoming more important in evaluating emerging markets.
- Political stability has the second strongest influence on ratings. Emerging countries still inspire uneven degrees of confidence in the stability of their political institutions. Many countries improved their political credibility in the 2000s, but this was not the case in all of them. Political situations are more heterogeneous at the end of the 2000s and this contributes to the differentiation of ratings.
- GDP *per capita* growth matters strongly. This is congruent with rating agencies’ insistence on the benefits of growth for fiscal and financial sustainability.
- Fiscal performance plays an important role. This impact increases when country–specific effects are taken into account. This may reflect the fact that the evolution of the fiscal indicator (of the public debt to GDP ratio) within each country may matter more for ratings than level differences across countries (rating agencies seem to display country–specific “degrees of tolerance” for the amount of the public debt burden, as corroborated by the empirical literature reviewed in Box 5).
- Monetary stability contributes to the improvement of ratings. Disinflation in emerging markets through the 2000s contributed positively across the board.
- EU members enjoy a supplementary rating premium.
- When comparing Turkey’s actual rating to its statistically expected level, a negative residual is visible throughout the period. A negative “country fixed effect” confirms this discount. However,

6 The “institutional effectiveness” indicator is compiled by the Economist Intelligence Unit. It draws notably on sub–indicators taken from the World Bank database on public governance.

the handicap is not as large as sometime assumed: at end–2008 it amounted to two notches in Standard & Poor’s rating (two notches that Fitch eliminated in December 2009, and that both Moody’s and Standard & Poor’s eliminated partly –by one notch– in January and February 2010). As of the end of 2008, Turkey’s statistically expected rating position was not high enough to qualify for the investment grade. However, a continuing narrowing of Turkey’s EMBI and credit default swap spreads in 2009 and in the first half of 2010 has confirmed its improving standing, and may herald future rating upgrades.

The estimation results help identify areas where further progress could improve Turkey’s rating. Findings corroborate recent statements by credit rating agencies:

- Turkey’s growth rate has slowed below potential since 2007. Resuming stronger growth would raise financial ratios to safer levels.
- Turkey has significantly improved its economic institutions (government effectiveness and the rule of law) in the 2000s, but their internationally perceived level is still weaker than in comparable countries. There appears to be room for additional progress.
- Political stability appears less robust than in benchmark countries. International and domestic surveys confirm this perception of persisting political uncertainties. This situation penalises Turkey’s credit rating.
- Fiscal balances and public debt levels have improved significantly. At the same time, many other emerging markets have also improved theirs, and some of them performed outstandingly. Turkey has further room for relative improvement.
- The strength and transparency of fiscal institutions is a core area where additional progress by Turkey will matter for its future international capital market standing. Rating agencies have recently re–asserted the importance that they assign to the quality and transparency of fiscal institutions (Box 6).

Box 6. Additional emphasis on fiscal transparency

Rating agencies have recently re–asserted the role assigned to fiscal fundamentals. They mentioned new factors gaining weight in assessing fiscal strength. They have notably stated that they are broadening evaluations from “mechanical debt metrics” to the “quality of the fiscal environment and institutions”.

In the 2008 version of its rating methodology, Moody’s stressed that “each country’s fiscal strength results from an intertemporal balance between liabilities and resources. The question is not so much whether the headline debt measures (such as debt/GDP or debt/revenues) are “high” or “low”, but whether the debt is affordable or not, given all the other demands on public financial resources” (Moody’s, 2008).

Standard & Poor’s also included additional fiscal–institutional criteria among the ten parameters driving rating decisions (Standard & Poor’s, 2010). The new fiscal criteria taken into account by Standard & Poor’s are precisely areas where Turkey aims at making progress:

1) Fiscal flexibility

Standard & Poor’s states: “Scores in this category are a function not only of surpluses and deficits, but also of revenue and expenditure flexibility, and the effectiveness of expenditure programs. General government is the aggregate of national, regional, and local government sectors, including social security. Off–budget and quasi–fiscal activities are included to the extent possible, with significant omissions noted.”

“Sovereigns with strong scores are those which can adjust tax bases and rates without serious constitutional, political, or administrative difficulties. On the side of spending, effective spending programs provide the services demanded by the population and the infrastructure and education levels needed to underpin sustainable economic growth, all within the confines of affordable financing. Procurement and tendering procedures must be transparent. Arrears should be quantified and deficits reconciled to trends in debt.”

Singapore receives the top score in Standard & Poor’s fiscal flexibility indicators, despite significant financing needs in the past. “This is due to astute investment in public infrastructure and in education. Lower scores are given where government money is not spent as effectively.”

Standard & Poor’s adds that “looking forward, pension obligations are a pressure of growing significance for countries in which the population is ageing. The rating of some highly rated EU members could come under pressure if there is no further fiscal consolidation and no structural reform to counter the related financial problems.”

2) Public debt burden

“Taxation and monetary powers of sovereigns permit them to manage varying debt levels over time. A sovereign such as Canada (with substantial debt but an unblemished record of honouring obligations and a strong capital market providing low-cost financing) receives a better score than some sovereigns in South America, which may have lower debt to GDP ratios, but also higher and more variable debt servicing burdens. Several investment grade countries have fairly high levels of debt, but also the wealth, the level of development, and the revenue-raising ability that allow them to support such debt levels.”

3) Off-budget and contingent liabilities

“The size and health of non-financial public sector enterprises (NFPEs) and the robustness of the financial sector matter. NFPEs pose a risk because they have been generally formed to further public policies and often suffer from weak profitability and low equity bases. The indebtedness of non self-supporting NFPEs is a useful measure of this contingent liability.”

“The financial sector is also a contingent liability, because problems impair a sovereign’s standing when they lead to rescues of failing banks. Public banks may weigh heavily when they engage in subsidised lending, bank rescue operations, or exchange-rate guarantees that are not provided for in the government’s budget.”

“If such quasi-fiscal activities are sizeable, the usefulness of general government statistics as an indicator of fiscal performance is diminished.”

Limited off-budget and contingent liabilities provide New Zealand with a top ranking in this category.

Emerging countries’ financial sector risks have not been included in the estimations but are known to play a growing role in ratings. The balance sheet strength and the managerial quality of Turkish banks and the rigour of banking supervision have been enhanced following deep banking sector reforms after the 2000–01 crisis. At the same time, banks are possibly exposed to certain risks related to rapid credit growth before the global crisis and to interest rate risks. The pace of development of the banking sector justifies close prudential scrutiny. Fitch, which has developed special expertise in the assessment of banking sector risks, remarks that Turkish banks’ very strong operating profits after the global crisis should not obfuscate the vulnerabilities arising from very rapid growth (Fitch, 2009).

Other enhancements in international capital market status would bring additional benefits

Turkey’s position in international equity investment indexes is also important. Growing numbers of investment funds make equity portfolio decisions according to positions in these indexes (Northern Trust, 2007). Recent research documents that upgrades in a country’s position in international indexes influences directly equity risk premia, the price/earnings ratios, and therefore the equity capital costs (Hacibedel and

Van Bommel, 2007; Bankovica and Pranevics, 2007). These effects should intensify with larger numbers of equity investors entering the global capital market.³

Prospects for Turkey's graduation in FTSE Global Equity Indexes illustrate the stakes.⁴ The next stage for Turkey is to upgrade from "Secondary emerging" to "Advanced emerging" category. If and when this migration takes place, demand for Turkish equities is expected to increase and the equity capital costs of Turkish listed corporations are expected to decline (Box 7).

Fostering sound integration with the global capital market

Three major areas where ongoing progress in Turkey's economic policy institutions is relevant for Turkey's international capital market status are reviewed below: the predictability of fiscal policy, the effectiveness of monetary policy and the soundness of the financial system.

-
7. This so-called "radar screen effect" identified by Merton (1987) arises from the fact that more visible stocks attract more distant investors and thus require lower returns.
 8. FTSE indices are used extensively by investors worldwide. Other widely followed emerging market indexes include MSCI by Morgan Stanley and WII by JP Morgan. FTSE is particularly communicative on its country classification principles, their shortcomings and their evolution. See: FTSE Emerging Market Indexes on www.ftse.com/indices.

Box 7. Upgrading Turkey from “Secondary emerging” to “Advanced emerging” indexes

FTSE Global Equity Indexes cover 48 countries with open equity capital markets. Over 7 000 large, medium and small capitalisation stocks are included, representing 98% of the world’s total “investable” market capitalisation. Countries are classified into four categories: Advanced, Advanced emerging, Secondary emerging and Frontier.

Countries’ position among the four categories evaluates their level of “investability” for foreign investors. Criteria utilised include economic size, wealth, market quality, and market depth and breadth. All together, 25 factors are taken into account. Committees of senior fund managers, actuaries and other practitioners review classification decisions and migrations. Evaluations are shared with relevant national regulators and stock exchanges to establish a “pattern of dialogue”. If a country is considered for an update or downgrade, it is put in a watchlist before a decision is made.

As of May 2010, Turkey is in the Secondary emerging group but FTSE has recently announced its inclusion in the watchlist for an upgrade to Advanced emerging. Together with Turkey, the Czech Republic and Malaysia are considered for an upgrade to Advanced emerging, Taiwan is considered for an upgrade from Advanced emerging to Advanced, Greece for a downgrade from Advanced to Advanced emerging, and Ukraine for possible inclusion as Frontier (Table 2).

Table 2. Advanced, Advanced emerging, Secondary emerging and Frontier countries in FTSE indexes

Advanced	Advanced emerging	Secondary emerging	Frontier
Australia	Brazil	Argentina	Bahrain
Austria	Hungary	Chile	Bangladesh
Belgium/Luxembourg	Mexico	China	Botswana
Canada	Poland	Colombia	Bulgaria
Denmark	South Africa	Czech Republic	Côte d’Ivoire
Finland	Taiwan	Egypt	Croatia
France		India	Cyprus ¹
Germany		Indonesia	Estonia
Greece		Malaysia	Jordan
Hong Kong		Morocco	Kenya
Ireland		Pakistan	Lithuania
Israel		Peru	Macedonia
Italy		Philippines	Mauritius
Japan		Russia	Nigeria
Netherlands		Thailand	Oman
New Zealand		Turkey	Qatar
Norway			Romania
Portugal			Serbia
Singapore			Slovakia
South Korea			Slovenia
Spain			Sri Lanka
Sweden			Tunisia
Switzerland			Viet Nam
United Kingdom			
United States			

1. *Note by Turkey:* The information in this document with reference to Cyprus relates to the southern part of the island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the “Cyprus issue”. *Note by all the European Union Member States of the OECD and the European Commission:* The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: FTSE.

Predictability of fiscal policy

The new fiscal rule

To put Turkey's fiscal stance on durably sustainable ground, on 10 May 2010 the authorities announced introducing a formal fiscal rule (Box 8). The rule will support the targets of the Medium Term Programme and should provide a durable anchor in the longer run. The draft law was sent to Parliament on 26 May and was expected to be adopted in June 2010, and apply immediately in the preparation of the 2011 budget. The draft was however not legislated as planned, and its discussion was postponed.

Box 8. The new fiscal rule

The fiscal rule announced by the authorities on 10 May 2010 can be classified as a “growth-based balance rule”. It sets a ceiling for general government budget deficit as a per cent of GDP, in relation to *i*) the deficit in the previous year; *ii*) the deviation of previous year's deficit from the long-term deficit target (this is a benchmark consistent with declining public debt: the public debt stock as a share of GDP, in Maastricht definition, is planned to decrease to about 30% in the long-run); and *iii*) deviations of GDP growth from the benchmark GDP growth rate in the current year. The rule therefore seeks to ensure convergence to the target deficit while making room for automatic stabilisers. The rule is formally given by:

$$\Delta a_t = -0.33(a_{t-1} - 1) - 0.33(b_t - 5)$$

where Δa_t denotes the adjustment required in the general government deficit to GDP ratio in year t , a_{t-1} is the general government deficit/GDP ratio in previous year ($t-1$) and b_t is the real GDP growth rate. The benchmark general government deficit/GDP ratio is set at 1% and the benchmark GDP growth rate is set at 5%. The coefficient determining the speed of adjustment in general government deficit with regard to the difference from the benchmark deficit target is set at -0.33 . The coefficient providing room for lengthening the deficit if the current year's GDP growth deviates from the trend growth rate is also set at -0.33 . This reflects the share of general government revenues in GDP and permits to offset revenue losses arising from the deviation (automatic stabilisation).

Policymakers have three “windows” for adjusting year t 's fiscal policy and outcomes to the requirements of the rule: *i*) in the spring of year $t-1$, when preparing the background medium-term economic framework for the draft budget for year t ; *ii*) in the fall of year $t-1$, when finalising the budget before submitting it to Parliament; *iii*) in the spring of year t , when growth and fiscal projections become more precise. Spending and revenue adjustments for the current year can still be undertaken at this point.

Three complementary regulations back the rule. They provide additional safeguards in the areas outside central government control. They aim at ensuring that spending and revenue surprises in other general government layers do not undermine aggregate fiscal outcomes:

- Budgets of revolving funds will be in balance.
- There will be no net borrowing requirement by state-owned enterprises on an aggregate basis.
- An annual report will document the actuarial balances of pension and general health insurance systems.

The realisation of the fiscal rule, based on annual fiscal data, will be announced to the public in the Fiscal Rule Monitoring Report by the Ministry of Finance by the end of April after the closing of the fiscal year. The Turkish Court of Accounts (TCA) will audit all accounts and check their conformity with standards. The Planning and Budget Commission of the Grand National Assembly of Turkey will be informed about targets, updates, and any deviations from the target and underlying reasons in a special-agenda meeting within 15 days after the publication of the Medium Term Programme and the Fiscal Plan. This should provide a platform of political and technical accountability on the implementation of the rule.

The proposed rule appears robust in design and well adapted to Turkey's present circumstances. At the same time, it is demanding in terms of fiscal information at the general government level, and policymakers' ability to adjust revenues and spending in the course of a budget year. When implementing the rule the authorities should take into account other countries' experiences with similar rules and their own earlier experience with multiyearly fiscal management. Both set of experiences contain precious lessons (Box 9).

Box 9. Lessons for implementing fiscal rules

The IMF reviewed fiscal rules applied in 80 countries and analysed their implementation history and outcomes (IMF, 2009a). Four lessons deserve particular attention in the Turkish context:

- Rules are more effective when they are put into force after basic fiscal consolidation is completed. They should be implemented once public finances are on a stable and sustainable path. In Turkey, some degree of additional consolidation will still be needed during 2010–12, however, its size is relatively small and this should permit smooth implementation.
- A rule should not be introduced in an environment of heightened macroeconomic uncertainty. Policymakers should not be confronted too early with a trade-off between the strict enforcement of the rule and the needs of macroeconomic stabilisation. The majority of fiscal rules which were in application around the world when the global crisis hit were suspended to give way to anti-crisis policies. Turkey is on better ground in this respect, as the rule will be implemented when the global and domestic recovery should be in train.
- Fiscal rules as such do not reduce countries' risk premia. Nonetheless, they help countries which are already fiscally credible to reduce risk premia. In the light of the analysis in this working paper, a credible fiscal rule should be expected to accelerate Turkey's transition to investment grade. However, the introduction of a rule should not prompt any doubts on the integrity of fiscal transparency. The experience of other OECD countries suggests that fiscal transparency may tend to deteriorate in the presence of a fiscal rule.¹
- A robust financial management infrastructure is a prime requisite for the credible implementation of a rule. Critical elements include: *i*) fiscal reporting systems comprehensive enough in terms of general government aggregates; *ii*) timely end-year and intermediate fiscal reports; *iii*) audit systems ensuring that all utilised resources are accounted for (including in sub-national governments, social security accounts and public companies); and *iv*) a pre-announced calendar of fiscal reports to facilitate the external monitoring of the rule.

Turkey's own experience with implementing a multi-year fiscal framework as mandated by the Public Financial Management and Control Law since 2006 (Box 10) provides also lessons for the implementation of the rule. The Annex A3 summarises this experience and provides the following highlights:

- Turkey's macroeconomy is more volatile than in other OECD countries. Even if the planned fiscal rule is robust to GDP surprises (*i.e.* difference between projected and realised GDP growth), under the assumption that revenues are a constant share of GDP, other shortfalls against revenue targets may entail demanding adjustments in spending objectives.
- Certain spending and revenue items show specific cyclical patterns. The authorities may wish to re-evaluate these patterns when implementing the rule. They can accommodate them or try to reduce their influence.
- Long-term spending pressures are in force, independently from cyclical variations. This is clearly the case in pension and health spending. Long-term projections are needed in these areas, to prepare adjustment strategies in other spending or revenue items.
- Irrespective of GDP fluctuations, revenues are difficult to project. Rate variations in taxes with the highest yields make this calculation difficult. Revenue planning will become more accurate with transition to a more stable tax structure (Annex A3).

1. Koen and Van der Noord (2005) documented that "fiscal gimmicks" came into play when fiscal rules start to bite or threaten to do so. A detailed analysis of general government accounting practices in Europe shows that this occurred on three occasions: *i*) in the run-up to the monetary union, *ii*) in the context of the sale of UMTS licenses, and *iii*) during cyclical downturns which worsened headline deficits. The distortions identified and corrected by Eurostat alone during 1993–2003 amounted to up to 1% of GDP or more per year in some of the most advanced OECD countries.

The rule does not prevent adjustments in spending and revenue structures

It is important to implement the fiscal rule without slowing the re-prioritisation of expenditure and the reduction of distortive taxes. Turkey has indeed compelling resource needs in a number of key public services (OECD, 2008). The detailed analysis in the previous *OECD Economic Survey of Turkey* suggested that several percentage points of GDP of additional public spending will likely be needed in education, health and physical infrastructure in the medium term. Figure 10 confirms that Turkey currently devotes a significantly lower share of its GDP to such services than other OECD countries. Medium-term fiscal policy will need to create room for such resource reallocation.

The tax structure also raises important challenges (Figure 10). A high proportion of the tax take may need to be maintained on consumption, but the heavy burden of social security contributions on the formal sector will need to be reduced by enhancing enforcement and broadening the tax base. Both corporate and personal income tax revenues could be considerably increased if regulatory reforms would make formalisation feasible. Improving spending and revenue structures is a necessary goal for Turkey's fiscal policy after the implementation of the rule.

One related area which should be monitored closely to avoid an uncontrolled expansion of fiscal spending is the financial position of the social security system. Despite the advantageous demographic structure and recent pension reforms (OECD, 2008), the social security funds are in deficit (above 3% of GDP in 2009). This is primarily due to a drastic fall in effective retirement ages following various policy decisions in the 1980s and 1990s. The age limit for retirement was reduced to 38 and 43 for women and men respectively. As a result, on average, men pay premiums for 25 years and receive retirement pensions and free health insurance for 27 years, while women pay premiums for 20 years and draw benefits for 33 years (Zararsiz, 2010). The social security reform which was finalised in two steps in 1999 and 2008, after a difficult political process, raised the minimum retirement age to 60 for men and 58 for women applicable in principle from 2036, and to 65 for both genders, applicable in principle from 2048. However, actual retirement ages will increase more gradually and 65 will likely become the normal retirement age only in the mid-2060s.⁵ Increasing the effective retirement age at a faster pace could considerably improve public finances as argued in OECD (2006) but this is admittedly not on the political agenda (OECD 2010).

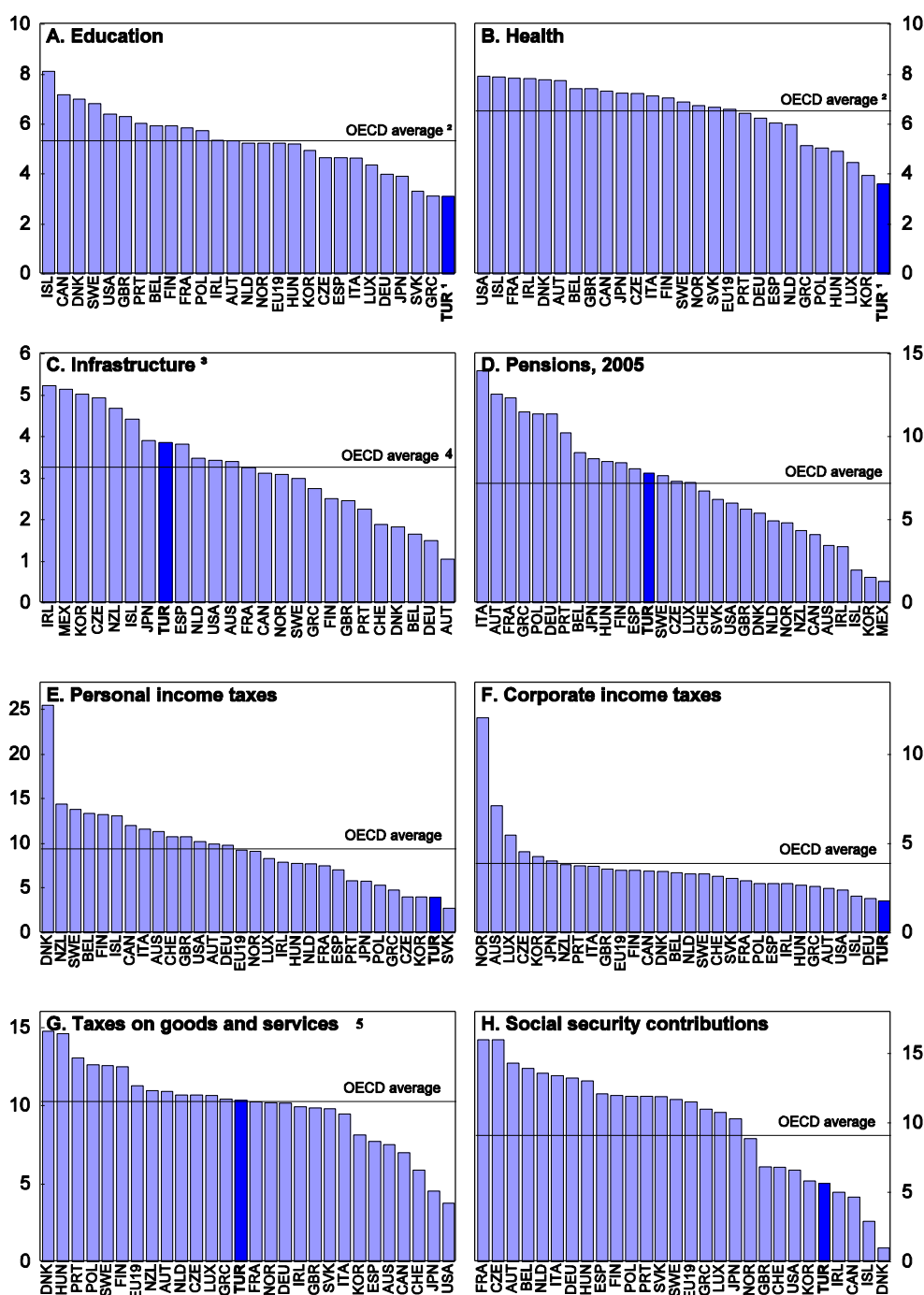
5 More gradual transition to an effective retirement age of 65 is due to the provision in the pension law stipulating that individuals can retire at the minimum legal retirement age *prevailing in the year when they have completed 20 years of contributions*. For example, a man who starts work at age 20 in 2016 will complete 20 years of contributions in 2036 at age 40. On that year, the legal retirement age will be 60. This individual will therefore be able to retire when he reaches age 60 in 2056. As a result, many people will be retiring before 65 after 2048.

The financial position of the social security system also depends on the growth and employment performance of the economy and the evolution of benefits and costs in the pension and health legs of the system. These are difficult to predict. Although pension benefits are entirely parametric and are enshrined in the Social Insurance and General Health Insurance Law (SIGHL), the government can change them with a new law every year. This was the case in 2009. Following pension adjustments in January and July 2009 according to SIGHL (solely in line with CPI indexation), the government granted a discretionary increase in December 2009, which was not provided for in SIGHL and was not appropriated in the 2010 budget. This is estimated to entail additional expenditures worth 0.3% of GDP per year. Health costs for those insured by the social security institution, as well as for the beneficiaries of the newly introduced universal health insurance (equally managed by the Social Security Institution SGK) depend also on the evolution of the benefit package. In response to drifts in health spending in 2007–08, the government introduced drastic rationing measures in 2009, including user fees, annual budget caps for public and university hospitals, and mandatory reductions in pharmaceutical prices. However, the social consequences of such rationing are not easy to manage and policies may be expected to evolve in the future. Implications for public health costs are difficult to predict.⁶

10. OECD (2006, 2008) provided projections for the social security system, based on Turkish government and World Bank scenarios – both produced with the help of the World Bank’s PROST model. These projections are in need of reconsideration. The distribution of total employment between formal and informal jobs will notably alter with the “Plan of Fight against the Informal Economy”, with implications on spending (as the number of beneficiaries will increase) and revenues (as contributions collected will increase). The President of SGK estimated in mid-2010 that thanks to increased efforts to register informal workers, 500 000 new contributors were registered in 2009 and 2010, but 9 million workers had remained still unregistered (Zararsiz, 2010). He estimated that if these 9 million workers contributed to social security financing, despite additional health costs, the deficit of the social security system would be divided by ten and fall to 0.3% of GDP.

Figure 10. Structure of main general government spending and revenue

% of GDP, 2008 (or latest available)



1. Year 2006.
2. Excludes Australia, Mexico, New Zealand and Switzerland.
3. Government investment.
4. Excludes Chile, Hungary, Italy, Luxembourg, Poland and the Slovak Republic.
5. Include taxes on production, sale, transfer of goods and services, and taxes on specific goods and services.

Source: OECD, National Accounts Database; SPO; and OECD, Revenue Statistics – Comparative Tables Dataset.

Box 10. Ambitions and challenges of high quality general government accounting

The fiscal accounting infrastructure of the fiscal rule is based on the Public Financial Management and Control Law (PFMCL) which has been in force since 2006. The PFMCL sets essential fiscal transparency objectives:¹

- The central budget is maintained as the core instrument of fiscal policy. Its objectives and economic assumptions are made fully transparent. The central budget is monitored on a monthly basis.
- Quasi-fiscal activities are made transparent. Financial losses of state-owned entities implied by their policy responsibilities (“duty losses” in the Turkish parlance) are explicitly budgeted and reported.
- The accounts of the social security institutions, extra-budgetary funds and local governments are prepared together with the central budget.
- The Ministry of Finance is responsible for publishing quarterly consolidated general government accounts according to the ESA 95 standards.
- The budget codification system is overhauled. Each spending item will be identified in “institutional”, “administrative”, “economic” and “functional” terms. This will help re-classify the current 34 500 line items of the budget (a far higher degree of detail than in any other OECD country) into meaningful spending programmes.
- To bridge fiscal policy with long-term economic policy, all ministries and government agencies are required to prepare strategic plans. These will be based on the national priorities outlined in national development plans.
- A three-yearly Medium Term Programme and Fiscal Plan will back the budget every year, providing a macroeconomic and fiscal framework for the period ahead. This framework has to include spending ceilings for each government department. Targets will be binding for the budget year and be indicative for the following two years.
- General government accounts will be audited by the Turkish Court of Accounts (TCA). A draft law was prepared to equip TCA with the necessary legal powers to audit comprehensively all general government entities (central government, local governments and social security funds). The draft law has been adopted by the Plan and Budget Commission of the Parliament and it is expected to be enacted soon.

The PFMCL was passed in 2003 and has been in principle fully in force since 2006.² Yet, as of May 2010, the full degree of transparency in fiscal accounts does not yet match its initial objectives. Major progress was achieved at the central government level. The Ministry of Finance started to publish many components of general government accounts. However, a consolidated set of general government accounts are not yet published. A useful proxy is provided by the “general state sector statistics” compiled by the State Planning Organization (SPO) every year. These statistics are published in the *Pre-Accession Economic Programme* prepared by the SPO and submitted to the European Commission. In addition, the Annual Programme prepared by SPO includes a description of fiscal developments based on “general government statistics”. The Ministry of Finance confirmed in May 2010 that the relevant set of accounts according to international standards had already been forwarded to Eurostat for verification and their publication was imminent.

When general government accounts start to be published according to the ESA 95 standards, a range of specific challenges will likely be faced given the experience of other OECD countries (Annex A3). The most important of these challenges are:

- The central government does not dominate the fiscal scene in Turkey (OECD, 2010). It is compounded by other sizeable general government layers. The quality of fiscal reporting by these layers significantly influences the overall quality of general government accounts.
- The full implementation of the principle of accrual-based reporting may be difficult at the level of local governments and the social security institution.
- Exceptional revenue items played a major role in Turkey in certain years (such as voluntary settlements in tax amnesties), their accrual-based allocation across years should be done carefully
- Making quasi-fiscal activities fully transparent, in the spirit of the 2006 PFMCL, is not easy. State-owned entities carry on various policy responsibilities outside the realm of the general government sector. The financial costs of these duties should be reported as additional information.
- Total public liabilities should be reported as part of the (already high quality) public debt statistics. Fully reporting local government debt, debt by municipally-owned corporations, the outstanding stock of government guarantees provided in the past to public-private partnerships, and the long-term liabilities of the public pension and health systems is still an ongoing task.

1. See OECD (2005) for a detailed analysis of this law.

2. The PFMCL was also accompanied by a number of supporting innovations: *i)* an on-line budget management system (Say 2000) put in application in more than 1 500 government entities in 81 provinces and 850 districts; *ii)* a Public Debt Management Law (PDML): After years of decentralised and unstructured management, the monitoring of public debt is centralised. The Treasury is made responsible for most public borrowing and for producing quarterly and annual debt reports. From their very inception, these reports have been welcomed by all stakeholders (OECD-Sigma, 2008); *iii)* a Law on Metropolitan Municipalities capped the debt stock of metropolitan municipalities to 150% of their annual revenue and the debt stock of other municipalities is limited to their annual income. All municipal borrowing in excess of 10% of annual income will necessitate a formal authorisation by the Ministry of Interior.

Transparency requirements

The primary requirement for the effective implementation of the fiscal rule is timely and fully reliable general government accounts. Turkey has ambitious objectives in this area. At the same time, consolidated government accounts according to international standards are not yet published. Both Turkey's and other OECD countries' experience indicates that generating such statistics at the required level of quality is challenging. It implies solving a number of intricate technical issues (Box 10 and Annex A3). The authorities have already started creating the required infrastructure, notably through close co-operation with Eurostat. They recently reiterated that full general government accounts according to ESA 95 will be at hand when the rule starts to function in 2011.

The IMF also helped produce comprehensive fiscal information under the Stand-By Arrangements between December 1999 and May 2008. It monitored fiscal developments through frequent reviews. These examinations involved occasional investigations on specific areas of fiscal risks, including financial balances of state-owned enterprises, of public banks and of the agricultural purchasing board. "Programme definitions" (or "IMF-definitions") of central government and consolidated public sector have been developed in this context – as proxies to replace fully-fledged general government accounts. Domestic and international investors and the general public relied on this hands-on monitoring of fiscal outcomes and Turkey built up its fiscal credibility and reputation under such close surveillance.

The monitoring of fiscal policy by independent research institutions, a common practice in many other OECD countries, is not yet well developed in Turkey. One of the sources of independent analysis of fiscal outcomes is the Fiscal Surveillance Reports published by the Economic Policy Research Foundation (TEPAV).⁷ These reviews screen government published fiscal data and offer an independent evaluation of the fiscal stance. Authorities express, at times, technical disagreements with TEPAV's judgements. Nevertheless, this work remains a main source of independent technical analysis regarding fiscal developments. Recently, the Civil Society Center at Istanbul Bilgi University has started publishing handbooks to help the public to better monitor fiscal outcomes. This was a useful third-party innovation and four handbooks have already been published: Handbook to read budget documents, Handbook to read medium-term fiscal plans, Handbook to read social expenditures, Handbook to read defence expenditures.

Possible improvements after the early experience with the rule

If early experience with the implementation of the rule reveals a need for additional supporting measures, the authorities could envisage introducing *i)* a multi-year spending ceiling; *ii)* a reserve account monitoring cumulated deviations from rule targets; and *iii)* an independent fiscal council evaluating objectives, achievements and outcomes.

- **Spending ceiling:** The OECD budget policy department emphasises that to be effective fiscal rules should not require an excessive degree of sophistication in fiscal monitoring (Anderson and Minarik, 2006). Multi-year expenditure ceilings are suggested as simple complementary tools.

11. TEPAV is an economic research organisation sponsored by the Turkish Union of Trade and Industry Chambers (TOBB). It is located at TOBB University in Ankara.

The Turkish authorities could support the fiscal rule with a nominal aggregate spending ceiling. Such a ceiling can be adopted by the Parliament as a stand-alone law complementing the budget every year.⁸

- **Reserve account:** The rule does not have at present a mechanism to acknowledge and smooth the impact of past projection mistakes on the deficit ceiling. A possible remedy is to set up a virtual “reserve account”, keep count of deviations, and ensure that this account stays within pre-defined limits. This mechanism may also make fiscal policy more efficient and reliable, by making drastic spending cuts or revenue increases less compelling (in response to spending or revenue surprises occurring in a budget year). The recently enacted fiscal rule in Germany has an account of this type that Turkish authorities may wish to consider after monitoring the magnitude of any projection mistakes.
- **Fiscal council:** An independent fiscal policy council can evaluate fiscal objectives and outcomes. It can produce a *Fiscal Policy Report* in the same spirit as the *Inflation Report*. Such institutions are in operation in several OECD countries (Annex A4). In Turkey’s current circumstances such a council may be established under Parliament, as in the United States and Canada, and report directly to the Plan and Budget Commission which has special responsibility in monitoring the fiscal rule (Box 8). Since thoroughly audited fiscal accounts are still in the making and quasi-fiscal activities continue to play an important role, such a watchdog should have a strong political weight and adequate legal powers. According to an OECD assessment (Anderson, 2009) successful parliamentary fiscal watchdogs are effective in: *i*) simplifying complexity in fiscal information, *ii*) promoting transparency of outcomes; *iii*) enhancing credibility of budget forecasts, *iv*) serving both majority and minority legislators and the general public by offering non-partisan services; and *v*) providing rapid responses to fiscal policy inquiries than are usually given by the executive branch.

Inflation targeting framework

Turkey’s monetary policy gained strong credibility by cutting inflation from high double to single digit levels in the 2000s. An initially implicit, then explicit inflation target underpinned the action (OECD, 2008). Strengthening the inflation targeting regime would further consolidate the credibility and effectiveness of the CBRT:

- **Continuous inflation targeting.** Turkey could shift to a continuous inflation target from 2012. In the present framework, the inflation target is set for three years ahead, for December of each year (currently 6.5% for end-2010, 5.5% for end-2011 and 5.0% for end-2012). As the target level for the end-2012 is quite low, suggesting the imminent end of the disinflation in the following years, switching to a continuous target afterwards becomes feasible. This would require choosing the appropriate level of the inflation target and the width of uncertainty bands. The frequency of reviewing inflation target should also be set (the international practice in this respect varies considerably, Rezessy, 2006). It will be useful to communicate these decisions, together with the underlying reasoning, early in advance.

Shifting to continuous inflation targeting could help sustain permanently lower inflation, facilitate communication and better anchor long-term inflation expectations. Currently, if end-year inflation deviates by more than 2 percentage points from the target (*i.e.* it falls outside the so-called uncertainty band), the Central Bank of the Republic of Turkey (CBRT) must submit an

12. The ceiling should be set in conformity with the three-yearly fiscal framework accompanying the budget. This does not imply that the framework cannot be changed from year to year. There are only a few OECD countries that maintain ceilings unchanged from year to year.

open letter to the government explaining the reasons for the deviation and the measures to be taken to bring inflation closer to the target. Similar explanations are published in the quarterly Inflation Report, when quarterly inflation deviates from the end-year target by more than 2 percentage points. There is thus already a *de facto* mechanism of more continuous accountability without having a continuous inflation target. Adopting the continuous target would be in line with the common practice of developed and emerging inflation targeters (Rezessy, 2006). Continuous inflation targets, which are set in principle indefinitely but are subject to possible changes, may also facilitate the tasks of the monetary authorities (including communication) when inflation deviates significantly from the target due to a temporary supply shock. In such circumstances, a central bank may be in a better position to keep inflation expectations anchored by explaining reasons for inflation deviation and taking appropriate action without actually changing the inflation target.

- **Structural policies in support of disinflation.** Structural and microeconomic policies should support the inflation target. Counter-cyclical monetary policy is facilitated when wages and prices respond flexibly to the cyclical situation. The downward adjustment of wages is likely to be stronger in the informal sector, as wages there are not bound by the minimum wage. Thus, the burden falls more on the already-disadvantaged informal workers. To remedy this, wage setting mechanisms in the formal sector should be made fully responsive to market conditions. Price competition in service activities is equally important for the efficient operation of inflation targeting. Recent developments suggest that price rigidities in services have diminished, but competition authorities should ensure that price competition remains effective. This is particularly important in markets where underlying price pressures remain strong, such as education, health, housing, transportation and wholesale food distribution. Also, pricing and indirect taxation practices in network industries where many prices are set administratively should be managed by taking the inflation target into account, minimising volatility unrelated to input costs.
- **Foreign reserve accumulation.** International reserves provide insurance against financial instability and the policy of gradually increasing reserves should be sustained as currently intended by the CBRT (2009). High reserves indeed proved useful for limiting exchange rate depreciation in emerging markets in the 2008–09 global crisis. Turkey, as many other emerging markets, has been accumulating foreign reserves in the past decade. This was possible thanks to foreign exchange purchase auctions of the CBRT with pre-announced terms and conditions (Table 3).⁹ Reserves amounted to around 22% of M2 at the end of 2009 (12% of GDP), but remained significantly below levels observed in countries like Argentina, Brazil, Bulgaria, Hungary and Romania. They were at a similar or higher level than in the Czech Republic, Korea, Mexico and Poland. There are no universal guidelines regarding the optimal level of reserves. For instance, Obstfeld *et al.* (2009) argue that the reserves should be proportional to the size of banking system, taking into account the exchange rate regime, trade and financial openness, and not just short-term external debt as was previously stressed in the literature.

13. Since the introduction of the floating exchange rate regime, the CBRT also retains the option to conduct discretionary interventions to prevent unhealthy price formations that might occasionally arise from decreases in market depth. It has however not intervened since 2006 (Table 3) as the actual ability of the CBRT to affect exchange rate volatility is debatable. For instance, Çaşkurlu *et al.* (2008) show that between 2002 and 2005 the auctions actually increased exchange rate volatility, whereas the direct interventions reduced it.

Table 3. Foreign exchange operations by the CBRT (USD million)

	FX buying auctions	FX selling auctions	FX buying interventions	FX selling interventions	Total net FX buying
2002	795	–	16	12	799
2003	5 652	–	4 229	–	9 881
2004	4 104	–	1 283	9	5 378
2005	7 442	–	14 565	–	22 007
2006	4 296	1 000	5 441	2 105	6 632
2007	9 906	–	–	–	9 906
2008	7 584	100	–	–	7 484
2009	4 314	900	–	–	3 414

Source: SPO (2009), Pre-Accession Economic Programme 2009.

Financial supervision

Prudent financial supervision is crucial for sound integration with the global capital market. Turkey painfully learned the lesson in the 2001 crisis and significantly strengthened its prudential regulations. Turkish authorities have also demonstrated their readiness to adjust prudential regulations pre-emptively. Despite the low level of foreign currency exposure of households (around 4% of total consumer loans in 2009), in mid-2009 households were forbidden to take foreign exchange and foreign exchange index loans from foreign and domestic banks.¹⁰ This regulation limits currency risks for households and slows credit growth given a still large interest rate differential. It is a welcome decision given the recent experience with pro-cyclical credit growth in foreign currency in several European emerging countries. Safeguards against foreign exchange rate exposure have therefore been developed, but there are still some challenges as fast innovation in the financial markets requires constant vigilance. An excessive growth of housing loans should also be avoided and minimum downward payment rules should be kept prudent.

Adopting Basel II and its new amendments should remain a prime objective of regulators. Basel II is likely to result in lower risk-adjusted capital ratios, particularly due to the required re-pricing of Turkish government securities which constitute a significant share of banks' assets. According to Basel I rules, government securities of the OECD countries are priced as riskless assets, whereas in Basel II they are valued according to their credit rating. The timing of Basel II adoption has not been decided yet, but the progress with implementing required rules continues. Turkey has also a strong interest in complying with amendments to Basel II aiming at countercyclical prudential supervision because it will face more such risks as its integration with the global capital market proceeds. The task should be made easier thanks to the admission of the Turkish Banking Regulation and Supervision Agency (BRSA) to the Basel Committee on Banking Supervision in May 2009 and Turkey's participation in the Financial Stability Board.¹¹

Policy recommendations

Box 11 summarises the policy recommendations of this working paper.

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14. In contrast, the access to foreign currency credit for companies, which was very strict, was relaxed. This was motivated by concerns about foreign debt statistics. Many companies were taking loans from foreign branches of domestic banks, which inflated foreign debt.
 15. The Financial Stability Board, comprising G-20 countries, was established to coordinate at the international level the work of national financial authorities and international standard setting bodies and to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. In April 2009, it replaced the Financial Stability Forum that involved G-7 countries.

Box 11. Fostering sound integration with the global capital market

- Continue to emphasise the full set of factors of macroeconomic performance and credibility as drivers of international capital market standing: fiscal credibility, monetary stability, sound financial supervision, external balances, high trend growth and political stability.
- Consider the full set of areas as forming an integrated agenda, as co-determinants of Turkey's standing. Weaknesses in specific areas are not compensated by superior performance in others.
- Indicators of international capital market standing – including country risk premia, credit ratings, and investment index positions – should be publicly monitored and discussed. They may be used and checked as benchmarks of economic policy performance.
- Pursue a dialogue with rating agencies' on Turkey's perceived strengths and shortcomings.
- Further improve Turkey's economic policy framework by:

Fiscal policy

- Improving fiscal sustainability by putting in place the announced fiscal rule and its fiscal management infrastructure.
- Ensuring that the fiscal rule does not hinder the re-prioritisation of spending and the reduction of distortive taxes.
- Publishing, as planned, quarterly and yearly complete and consolidated general government accounts according to the ESA 95 standards.
- Keeping the actuarial balances of the social security system in check.
- Adopting the new draft law on Turkish Court of Accounts to empower it for comprehensive general government auditing.
- If a need arises after initial experience with the implementation of the rule, be ready to phase in:
 - i. a multi-year spending ceiling,
 - ii. a reserve account keeping track of accumulated deviations from deficit ceilings, and
 - iii. an independent fiscal monitoring agency.

Inflation targeting

- Consolidating the credibility of monetary policy and of the inflation targeting framework by shifting to continuous inflation targeting.
- Phasing in structural reforms enhancing wage flexibility in the formal sector and further price competition in non-tradable services.
- Continuing the policy of foreign reserve accumulation, as planned.

Financial stability

- Consolidating the rigour of prudential surveillance in the financial sector by aligning it with the international best-practice regulations. This calls for implementing Basel II regulations and adopting any new

amendments for countercyclical prudential policy that are likely to be introduced following the global crisis.

- Continuing, and updating as needed, the current safeguards against excessive growth in housing loans and foreign currency exposure by households and enterprises.

BIBLIOGRAPHY

- Afonso, A. (2002), “Understanding the Determinants of Government Debt Ratings: Evidence for the Two Leading Agencies”, *Working Papers 2002/02*, Department of Economics at the School of Economics and Management (ISEG), Technical University of Lisbon.
- Afonso, A., Gomes, P., and P. Rother (2007), “What Hides Behind Sovereign Debt Ratings?”, *European Central Bank Working Paper Series*, No. 711, Frankfurt.
- Allen, R. (2009), “The Challenge of Reforming Budgetary Institutions in Developing Countries”, *IMF Working Papers*, No. WP/09/96, IMF, Washington, DC.
- Anderson, B. (2009), “The Changing Role of Parliament in the Budget Process”, *OECD Journal of Budgeting*, Vol. 1, Paris.
- Anderson, B., and J. Minarik (2006), “Design choices for fiscal policy rules”, *OECD Journal of Budgeting*, Vol. 5, Paris.
- Argyrou, M., A. Gregoriu, and A. Kontonikas (2009), “Do Real Interest Rates Converge?”, *Journal of International Financial Markets, Institutions and Money*, No. 19.
- Baldacci, E., S. Gupta, and A. Mati (2008), “Is it (Still) Mostly Fiscal? Determinants of Sovereign Spreads in Emerging Markets”, *IMF Working Papers*, No. 08/259, International Monetary Fund, Washington, DC.
- Banerjee, A., and S. Manmohan (2006), “Testing Real Interest Parity in Emerging Markets”, *IMF Working Papers*, No. 06/249, International Monetary Fund, Washington, DC.
- Bankovica, S., and J. Pranevics (2007), “How Does Inclusion in an Index Affect Stock Prices?”, bachelor thesis, Stockholm School of economics in Riga.
- Bernoth, K., J. von Hagen, and L. Schuknecht (2006), “Sovereign Risk Premiums in the European Government Bond Market”, *Discussion Papers No. 151, SFB/TR 15 Governance and the Efficiency of Economic Systems*, Free University of Berlin, Humboldt University of Berlin, University of Bonn, University of Mannheim, University of Munich.
- BIS (2009), “Capital Flows and Emerging Market Economies”, Committee on Global Financial System, January, Bank for International Settlements, Basel.
- Bissoondoyal-Bheenick, E. (2005), “An Analysis of the Determinants of Sovereign Ratings”, *Global Finance Journal*, Vol. 15(3), pp. 251–280.
- Borensztein, E., K. Cowan, and P. Valenzuela (2007), “Sovereign Ceilings ‘Lite’? The Impact of Sovereign Ratings on Corporate Ratings in Emerging Market Economies”, *IMF Working Papers*, No. 07/75, International Monetary Fund, Washington, DC.
- BRSA (2009), “From Crisis to Financial Stability (Turkey Experience)”, *BRSA Working Paper*, Banking Regulatory and Supervision Agency, Ankara.
- Cantor, R., and F. Packer (1996), “Determinants and impact of sovereign credit ratings”, *Economic Policy Review*, October, Federal Reserve Bank of New York, New York.

- Canuto, O., Santos, P.F.P., and P.C. Porto (2004), “Macroeconomics and Sovereign Risk Ratings”, World Bank and University of Sao Paolo, *mimeo*.
- Çaşkurlu, T., M. Pinar, A. Salih, and F. Salman (2008), “Can Central Bank Interventions Affect the Exchange Rate Volatility? Multivariate GARCH Approach Using Constrained Nonlinear Programming”, *Central Bank of Turkey Working Papers*, No. 806, Ankara.
- CBRT (2009), *Monetary and Exchange Rate Policy for 2010*, Central Bank of the Republic of Turkey, 10 December, Ankara.
- Ciarlone, A., P. Piselli, and G. Trebeschi (2007), “Emerging Markets Spreads and Global Financial Conditions”, *Temi di discussione (Economic Working Papers)*, No. 637, Bank of Italy, Economic Research Department, Rome.
- Culha, O., F. Ozatay, and G. Sahinbeyoglu (2006), “The Determinants of Sovereign Spreads in Emerging Markets”, *Working Papers*, No. 0604, Research and Monetary Policy Department, Central Bank of the Republic of Turkey, Ankara.
- Die Bank (2009), “The role of credit rating agencies”, www.die-bank.de/service/internet-translation-service/the-role-of-credit-rating-agencies.
- ECB (2004), “Market Dynamics Associated With Credit Ratings: A Literature Review” (by F. Gonzales, F. Haas, R. Johanness, M. Persson, L. Toledo, R. Violi, M. Wieland, and C. Zins), *European Central Bank Occasional Paper*, No. 16, June, Frankfurt.
- Eichengreen, B.J., and A. Mody (1998), “What Explains Changing Spreads on Emerging–Market Debt: Fundamentals or Market Sentiment?”, *NBER Working Papers*, No. 6408, National Bureau of Economic Research.
- Ekinci, A. (2009), “Belediyelerin Mali Yapisi ve Borc Durumu Uzerine”, Muhasebenet, 14.05.2009.
- El–Erian, M. (2008), *When Markets Collide: Investment Strategies for the Age of Global Economic Change*, McGraw–Hill Professional.
- Emil, M.F., and H.H. Yilmaz (2009), “Mali Saydamlik Izleme Raporu VII”, TEPAV, Ankara.
- Ersel, H. (2010), “Kamu Harcamalarinin Toplumsal Denetimi Gerekiyor”, Referans, 15.02.2010.
- European Commission (2008), “Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies”, 12 November, Brussels.
- European Commission (2010), “European Commission Warns Rating Agencies on Greek Downgrades”, *ForexPlaybook*, 4 May, <http://forexplaybook.com/2165/european-commission>.
- Feldstein, F., and C. Horioka (1980), “Domestic Saving and International Capital Flows”, *The Economic Journal*, Vol. 90 (358).
- Ferreira, A.L., and M. Leon–Ledesma (2007), “Does the Real Interest Parity Hypothesis Hold? Evidence for Developed and Emerging Markets”, *Journal of International Money and Finance*, No. 26.
- Ferrucci, G. (2003), “Empirical Determinants of Emerging Market Economies’ Sovereign Bond Spreads”, *Bank of England Working Papers*, No. 205, Bank of England, London.
- Fitch (2009), Statement on Turkish Banking, July, www.fitchratings.com.
- Fortune (2009), “TOKI: Pandora’nin Kutusu”, *Fortune*, March 2009.
- Fuentes, M., and S. Godoy (2005), “Sovereign Spread in Emerging Markets: A Principal Component Analysis”, *Working Papers Central Bank of Chile*, No. 333, Central Bank of Chile, Santiago.

- González–Rozada, M., and E.L. Yeyati (2008), “Global Factors and Emerging Market Spreads”, *Economic Journal*, Vol. 118(533), pp. 1917–1936.
- Grandes, M. (2007), “The Determinants of Sovereign Bond Spreads: Theory and Facts from Latin America”, *Cuadernos de Economía (Latin American Journal of Economics)*, Instituto de Economía. Pontificia Universidad Católica de Chile, Vol. 44(130), pp. 151–81.
- Hacibedel, B., and Van Bommel (2007), “Do Emerging Market Stocks Benefit from Index Inclusion?”, *Saïd Business School Working Paper*, University of Oxford.
- Hallerberg, M., and G. Wolff (2008), “Fiscal Institutions, Fiscal Policy and Sovereign Risk Premia in EMU”, *Public Choice*, Springer, Vol. 136 (3), pp. 379–396, September.
- Haug, D., P. Ollivaud, and D. Turner (2009), “What Drives Sovereign Risk Premiums? An Analysis of Recent Evidence from the Euro Area”, *OECD Economics Department Working Papers*, No. 718, OECD, Paris.
- Hilscher, J., and Y. Nosbusch (2007), “Determinants of Sovereign Risk: Macroeconomic Fundamentals and the Pricing of Sovereign Debt”, *EFA 2007 Ljubljana Meetings Paper*.
- IMF (2007), *Manual on Fiscal Transparency*, International Monetary Fund, Washington, DC.
- IMF (2009a), “Fiscal Rules: Anchoring Expectations for Sustainable Public Finances”, *Public Information Notice*, No. 09/139, International Monetary Fund, Washington, DC.
- IMF (2009b), “Fiscal Rules–Anchoring Expectations for Sustainable Public Finances”, Fiscal Affairs Department, International Monetary Fund, Washington, DC.
- Jaramillo, L. (2010), “Determinants of Investment Grade Status in Emerging Markets”, *IMF Working Papers*, No. 10/117, International Monetary Fund, Washington, DC.
- Johnson, K. (2009), “Gross and Net International Financial Flows”, *Council on Foreign Relations Working Paper*, Washington, DC.
- Kamin, S.B., and K. Von Kleist (1999), “The Evolution and Determinants of Emerging Markets Credit Spreads in the 1990s”, *BIS Working Paper*, No. 68, Bank of International Settlements, Basel.
- Kannan, P. (2008), “Perspectives on High Real Interest Rates in Turkey”, *IMF Working Papers*, No. 08/251, International Monetary Fund, Washington, DC.
- Kirsanova, T., L. Campbell, and S. Wren–Lewis (2007), “Optimal Debt Policy, and an Institutional Proposal to Help in its Implementation” in J. Ayuso–i–Casals, S. Deroose, E. Flores, and L. Moulin (eds.), “The Role of Fiscal Rules and Institutions in Shaping Budgetary Outcomes”, *European Economy Economic Papers* 275, April.
- Kizilot, S. (2009), “2010 Yili Butce Degerlendirmesi, Vergi Politikalari ve Vergi Gelirleri”, Isveren, Kasim.
- Kizilot, S. (2009), “Yeni Tesvik Paketinin Getirecegi Mali Yukler, Butce Performansina Muhtemel Etkileri ve Alinabilecek Tedbirler”, Isveren, August.
- Koen, V., and P. van den Noord (2005), “Fiscal Gimmickry in Europe: One–off Measures and Creative Accounting”, *OECD Economics Department Working Paper*, No. 417, OECD, Paris.
- Lagarde, C. (2010), “French Pushes for Stricter Control over Rating Agencies”, CriEnglish.com, 5 April, <http://english.cri.cn/6966/2010/05/04/1721s567366.htm>.
- Lombardo, D. (2010), “A Fiscal Rule for Turkey: The MTP Proposal”, *CBRT Seminar*, Ankara.
- Loungani, P., and A. Razin (2001), “How Beneficial is Foreign Direct Investment for Developing Countries”, *Finance and Development*, Vol (38)2.

- Maier, P., and G. Vasishtha (2008), “Good Policies or Good Fortune: What Drives the Compression in Emerging Market Spreads?”, *Bank of Canada Working Papers*, No. 08–25.
- Mati, A., E. Baldacci, and S. Gupta (2008), “Is It (Still) Mostly Fiscal? Determinants of Sovereign Spreads in Emerging Markets”, *IMF Working Papers*, No. 08/259, International Monetary Fund, Washington, DC.
- McGuire, P., and M.A. Schrijvers (2003), “Common Factors in Emerging Market Spreads”, *BIS Quarterly Review*, December, Bank for International Settlements, Basel.
- McKinsey Global Institute (2009), “Global Capital Markets: Entering a New Era”, Washington, DC.
- Mello, M., and R. Scherre (2008). “Real Interest Rates, Budget Deficits, and the Public Debt in Emerging Markets”, paper presented at LAMES meeting in Rio de Janeiro 2008.
- Merkel, A. (2010), “Merkel Backs Creation of European Credit Rating Firm,” Bloomberg Business Week, 10 May, www.businessweek.com/globalbiz/content/may2010/gb2010055_734001.htm.
- Merton, R. (1987), “A Simple Model of Capital Market Equilibrium with Incomplete Information”, *Journal of Finance*, Vol. 42(3).
- Min, H.G. (1998), “Determinants of Emerging Market Bond Spread: Do Economic Fundamentals Matter?”, *Policy Research Working Paper Series*, No. 1899, World Bank, Washington, DC.
- Moody’s (2008), “A Guide to Moody’s Sovereign Ratings”, www.moodys.com.
- Mora, N. (2006), “Sovereign Credit Ratings: Guilty Beyond Reasonable Doubt?”, *Journal of Banking and Finance*, Vol. 30(7), pp. 2041–2062.
- Moser, C. (2007), “The Impact of Political Risk on Sovereign Bond Spreads – Evidence from Latin America”, *Proceedings of the German Development Economics Conference*, Göttingen 2007 24, Verein für Socialpolitik, Research Committee Development Economics.
- Mulder, C., and R.A. Perrelli (2001), “Foreign Currency Credit Ratings for Emerging Market Economies”, *IMF Working Papers*, No. 01/191, International Monetary Fund, Washington, DC.
- Nickel, C., P.C. Rother, and J.C. Rülke (2009), “Fiscal Variables and Bond Spreads, Evidence from Eastern European Countries and Turkey”, *ECB Working Paper Series*, No. 1101, European Central Bank, Frankfurt.
- Nomura (2009), “Turkey: The Curious Case of Sovereign Ratings”, Country View, 24 September, London.
- Northern Trust (2007), “Emerging Market Investing: An In-Depth Analysis”, Chicago.
- Northern Trust (2009), “Rebalancing the World – Determining Appropriate Allocations in a Dynamic Equity Landscape”, Chicago.
- Obstfeld, M., J.C. Shambaugh, and A.M. Taylor (2009), “Financial Instability, Reserves, and Central Bank Swap Lines in the Panic of 2008”, *American Economic Review*, Vol. 99(2), p. 480–86.
- OECD (2002), “OECD Best Practices of Budget Transparency”, *OECD Journal of Budgeting*, Vol. 1(3), OECD, Paris.
- OECD (2005), “Reforming Turkey’s Public Expenditure Management”, *OECD Economics Department Working Papers*, No. 418, OECD, Paris.
- OECD (2006), *OECD Economic Surveys: Turkey*, Vol. 2006/15, OECD, Paris.
- OECD (2007), “OECD Budget Practices and Procedures Database”, www.oecd.org/gov/budget/database.
- OECD (2008), *OECD Economic Surveys: Turkey*, Vol. 2008/14, OECD, Paris.
- OECD–SIGMA (2008), “Turkey Public Expenditure Management System Assessment”, *mimeo*, Paris.

- OECD–SIGMA (2009a), “Turkey Public Expenditure Management System Assessment”, *mimeo*, Paris.
- OECD–SIGMA (2009b), “Turkey Public Internal Financial Control”, *mimeo*, Paris.
- OECD (2010), *OECD Economic Surveys: Turkey*, Vol. 2010/13, OECD, Paris.
- Ozatay, F. (2008), “Expansionary Fiscal Consolidations: New Evidence from Turkey”, *Department of Economics Working Papers*, No. 08–05, TOBB University of Economics and Technology, Ankara.
- Prasad, E., R. Rajan, and A. Subramanian (2006), “Patterns of International Capital Flows and Their Implications for Economic Development”, IMF Research Department, September, Washington, DC.
- Reisen, H., and M. Soto (2000), “The Need for Foreign Savings in Post–Crisis Asia”, in *Sustainable Recovery in Asia: Mobilizing Resources for Development*, OECD Development Centre, Paris.
- Reisn, H. (2010), “Boom, bust and sovereign ratings: Lessons for the Eurozone from Emerging–Market Ratings”, *Vox Economics*, 19 May. www.voxeu.org/index.php?q=node/5061.
- Rezessy, A. (2006), “Considerations for Setting the Medium–term Inflation Target”, *Magyar Nemzeti Bank Bulletin*, Vol. 1(2), p. 35–40, Budapest.
- Rowland, P., and J.L. Torres (2004), “Determinants of Spread and Creditworthiness for Emerging Market Sovereign Debt: A Panel Data Study”, *Borradores de Economia* 295, Banco de la Republica de Colombia.
- Setty, G., and R. Dodd (2003), “Credit Rating Agencies: Their Impact on Capital Flows to Developing Economies”, Financial Policy Forum.
- Sevig, V. (2010), “2010 Yilinda Gelir Vergisi Uygulaması”, Referans, 5.01.2010.
- SPO (2009), *Pre–Accession Economic Programme 2009*, State Planning Organization, December 2009, Ankara.
- Standard & Poor’s (2010), “Sovereign Credit Ratings: A Primer”, www.standardandpoors.com/products-services/RatingsDirect-Global-Credit-Portal/en/us.
- Sy, A. (2002), “Emerging Market Bond Spreads and Sovereign Credit Ratings: Reconciling Market Views with Economic Fundamentals”, *Emerging Markets Review*, Vol. 3(4), pp. 380–408.
- Tandberg, E., and M. Pavesic–Skerlep (2009), “Advanced Public Financial Management Reforms in South East Europe”, *IMF Working Papers*, No. WP/09/102, International Monetary Fund, Washington, DC.
- TC Maliye Bakanlığı (2007), “Butce Sonuclarinin Aciklanmasi ve Mali Saydamlik Calisma Raporu”, TC Maliye Bakanlığı Butce ve Mali Kontrol Genel Mudurlugu, Ankara.
- TC Maliye Bakanlığı (2008), *2008 Yili Merkezi Yonetim Butce Gerceklesmeleri ve Beklentiler Raporu*, Ankara.
- TC Maliye Bakanlığı (2009), *2009 Yili Merkezi Yonetim Butce Gerceklesmeleri ve Beklentiler Raporu*, Ankara.
- Teksoz, T., and K. Helvacioğlu (2009), “Genel Saglik Sigortasi’nin Mali Surdurulebilirlik Acisindan Analizi”, *mimeo*, TEPAV, Ankara.
- TEPAV (2009), “2009 Yili Mali Izleme Raporu”, TEPAV, Ankara.
- Uribe, M., and V.Z. Yue (2006), “Country Spreads and Emerging Countries: Who Drives Whom?”, *Journal of International Economics*, Vol. 69 (1), pp. 6–36, June, Elsevier.
- White, H. (1980), “A Heteroskedasticity–Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity”, *Econometrica*, Vol. 48(4), pp. 817–38.

- Yenturk, N. (2009), Cok Yilli Butce ve Orta Vadeli Mali Plan Izleme Kilavuzu, STK Calismalari–Egitim Kitaplari Butce Izleme Dizisi, No. 2, Istanbul Bilgi Universitesi STK Egitim ve Arastirma Birimi, Istanbul.
- Yenturk, N. (2009), Sosyal Koruma Harcamalarini Izleme Kilavuzu 2009–2010–2011, STK Calismalari–Egitim Kitaplari Butce Izleme Dizisi, No. 3, Istanbul Bilgi Universitesi STK Egitim ve Arastirma Birimi, Istanbul.
- Yilmaz, D. (2009), “Kamu Mali Durusu”, 26 Ekim 2009 Tarihinde Butce–Plan Komisyonu’nda yapılan konusma, CBRT, Ankara.
- Yilmaz, H.H. (2009), “Son Donem Ekonomik Gelismeler Cercevesinde Kamu Saglik Harcamalarinin Surdurulebilirliigi: Muhtemel Riskler Belirliyeciliginde Bir Degerlendirme”, TC Saglik Bakanligi Strateji Gelistirme Baskanligi Seminer Sunumu, Ankara.
- Yukseler, Z. (2009), “Gayrimenkul Sektorunde Gelismeler ve Olasi Sorunlar”, *mimeo*, CBRT, Ankara.
- Yukseler, Z. (2010), “Ortulu Mali Kuraldan Acik Mali Kurala Gecis”, *mimeo*, CBRT, Ankara.
- Zararsiz, E. (2010), “Social Security Institution Head Zararsiz: We Have Exceptional and Advanced Practices”, Zaman Online, www.securities.com/doc.html.

ANNEX A1. ESTIMATED MODELS FOR EMBI SPREADS AND CREDIT RATINGS

Empirical determinants of emerging market countries' bond spreads and credit ratings have been extensively tested in the economic literature. Studies vary with respect to the estimation techniques, country coverage and the use of explanatory variables. The estimations presented in this Annex draw on the most common approaches applied in the literature, with an aim to assess the degree to which Turkey's bond spreads and credit ratings are explained by standard determinants and to what extent and in which direction they differed from their predicted level in the 2000s.

The following panel estimations were run for credit ratings and bond spreads:

$$SPRating_{it} = \alpha + c_i + \beta_1 GDPcap_{it} + \beta_2 Inf_{it} + \beta_3 Pubdebt_{it} + \beta_4 Inst_{it} + \beta_5 Polrisk_{it} + \beta_6 EUDummy_{it} + u_{it}$$

$$EMBIG_{it} = \delta + \mu_i + \gamma_1 Global_t + \gamma_2 Growth_{it} + \gamma_3 DebtX_{it} + \gamma_4 Pubdebt_{it} + \gamma_5 Polrisk_{it} + \gamma_6 EUDummy_{it} + v_{it}$$

where the dependent and explanatory variables are defined in Table A1.1, c_i and μ_i are country-specific effects and u_{it} , and v_{it} are error terms, i denotes the cross-sectional unit (countries), t indicates the time period. Country-specific effects account for the unobservable and time-invariant characteristics of the countries in the sample. The country coverage differs between the spread and credit rating estimations: the former includes nine countries,¹² while the latter 18 countries.¹³ Both models are estimated over the 2000–08 period. The panels were estimated with OLS using White (1980) heteroskedasticity correction for calculating standard errors. Similar estimations were also undertaken for specifications without country-specific effects, which account for country-variability not explained by the explanatory variables.

12 . Brazil, Bulgaria, Chile, Hungary, Malaysia, Mexico, Poland, South Africa and Turkey.

13 . Argentina, Brazil, Bulgaria, Chile, the Czech Republic, Greece, Hungary, India, Malaysia, Mexico, Poland, Portugal, Romania, the Slovak Republic, South Africa, South Korea, Spain and Turkey.

Table A1.1. Definitions of models' variables

Mnemonics	Definition	Data Source
SPRating	Standard & Poor's long-term country sovereign external debt rating. On the Standard & Poor's rating scale, the highest rating is AAA and the lowest is D. A lower rating indicates a higher probability of default. Letter-grades are transformed into numerical scores using a linear scale. The AAA rating has the value 1, AAA- has the value 2 and so on.	Bloomberg
EMBIG	J.P. Morgan's Emerging Markets Bond Index Global (EMBI Global) country spreads. EMBI Global tracks total returns for US-dollar denominated debt instruments issued by emerging markets sovereign and quasi-sovereign entities (Brady Bonds, Loans, Eurobonds, etc.).	
GDPcap	GDP <i>per capita</i> in US dollars, according to market exchange rates.	Statistical offices, central banks and the OECD
Growth	Annual growth in real GDP.	
DebtX	External debt to exports ratio.	
Pubdebt	Public debt to GDP ratio.	
Inf	Annual change in consumer prices.	
Polrisk	The Economist Intelligence Unit's (EIU) Political Risk Indexes measuring perceived political stability. The index covers the measures of government stability, internal violence, perceived corruption, military influence in politics, ethnic tensions, democratic accountability and the quality of the bureaucracy. The index ranges between 0 and 100, with 0 indicating the lowest and 100 the highest political risk.	Economic Intelligence Unit
Inst	The EIU institutional effectiveness rating. It ranges between 1 (the lowest) and 10 (the highest).	
Global	An indicator of global co-movement in EMBI's spreads estimated by principal component analysis.	OECD calculations
EUdummy	EU dummy which takes the value 1 for countries after their accession to the European Union and 0 otherwise.	

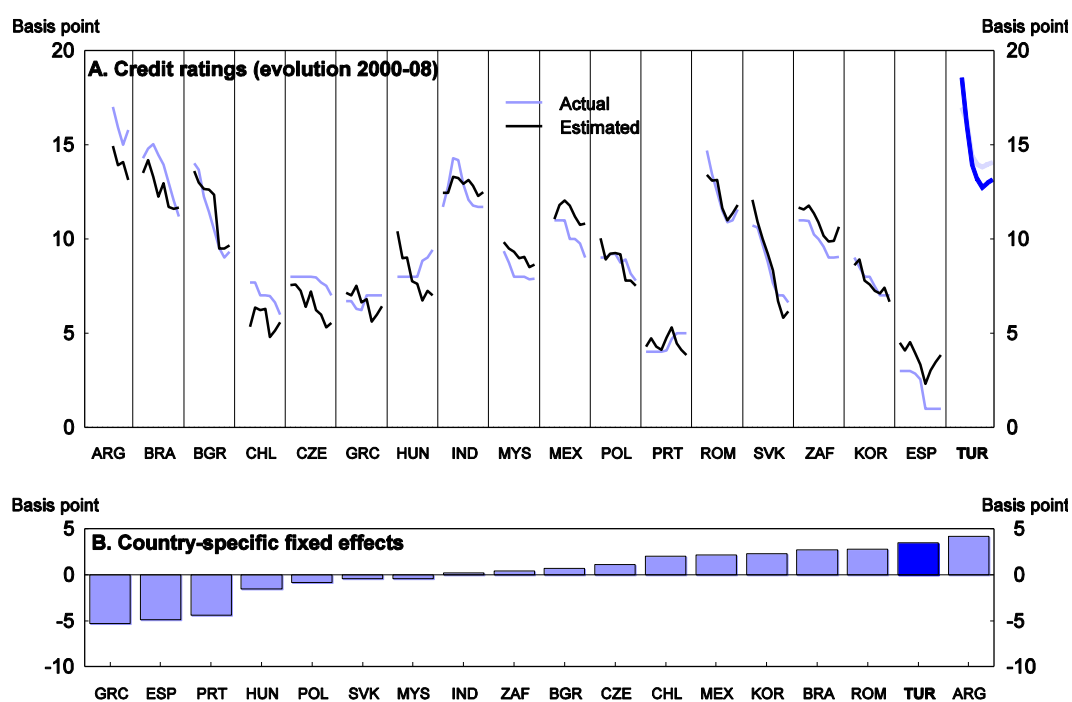
There are two assumptions that can be made about the country-specific effect: the random effects assumption and the fixed effects assumption. To use random effects estimation, country-specific effects should be uncorrelated with the other explanatory variables, otherwise the random effects estimation gives inconsistent estimates and fixed effects estimation is preferable. The fixed effects approach was selected for these estimations, on the basis of Hausman specification tests.

Table.A1.2. Estimation results for EMBI spreads

	Without country fixed effects			With country fixed effects		
	Coefficient	S.E.	t-stat.	Coefficient	S.E.	t-stat.
Global	0.31	0.13	2.47	0.59	0.08	7.47
Growth	-13.23	5.67	2.34	-7.82	4.28	1.83
DebtX	1.76	0.21	8.34	1.40	0.33	4.27
Pubdebt	2.41	0.91	2.64	6.81	0.87	7.86
Polrisk	6.68	1.87	3.58	0.80	2.49	0.32
EUdummy	-112.63	48.24	2.33	60.23	29.26	2.06
Constant	-287.04	73.33	3.91	-313.56	104.08	3.01
Number of observations	97			97		
Adjusted R-squared	0.76			0.84		
F-test (country-specific effects)	F(8,66) = 7.29 (p-value = 0.00)					
Hausman specification test	$\chi^2_6 = 12.9$ (p-value = 0.04)					

Table A1.3. Estimation results for Standard & Poor's credit rating

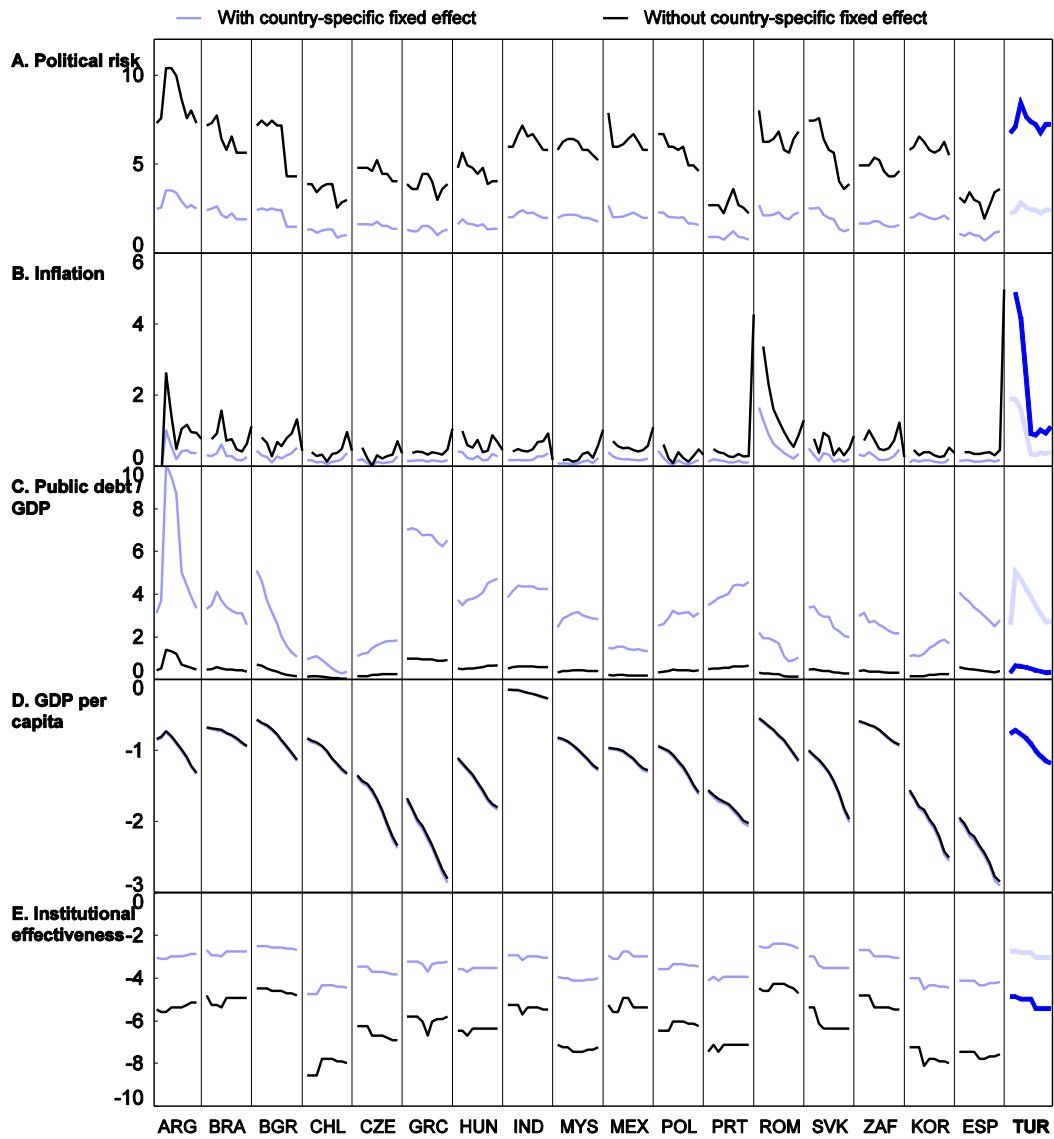
	Without country fixed effects			With country fixed effects		
	Coefficient	S.E.	t-stat.	Coefficient	S.E.	t-stat.
GDPcap	-0.0001	0.00	-4.11	-0.0001	0.00	-6.05
Inf	0.11	0.03	4.31	0.04	0.01	3.76
Pubdebt	0.01	0.00	2.02	0.07	0.00	17.03
Inst	-1.10	0.15	-7.15	-0.61	0.22	-2.80
Polrisk	0.15	0.01	11.28	0.05	0.01	5.21
EUdummy	-1.09	0.25	-4.38	0.60	0.27	2.17
Constant	10.93	1.17	9.35	8.63	1.29	6.68
Number of observations	140			140		
Adjusted R-squared	0.90			0.98		
F-test (country-specific effects)	F(17,116) = 27.2 (p-value = 0.00)					
Hausman specification test	$\chi^2_6 = 60.9$ (p-value = 0.00)					

Figure A1.1. Actual and estimated credit ratings¹

1. Standard & Poor's credit ratings converted to numerical values. A numerical decline indicates an improvement in rating.

Source: Datastream, Standard & Poor's and CBRT.

Figure A1.2. Estimated contributions to credit ratings



Source: Datastream, Standard & Poor's and CBRT.

ANNEX A2. LESSONS FROM TURKEY'S PAST EXPERIENCE WITH MULTI-YEAR FISCAL PLANNING

Turkey's experience with implementing a multi-year fiscal framework, as mandated by the Public Financial Management and Control Law, provides lessons for the future implementation of the fiscal rule. Figure A2.1 compares the targets set in multi-yearly fiscal frameworks and annual budgets, with actual outcomes. The comparison highlights four main facts:¹⁴

- Turkey's macroeconomy is more volatile than in other OECD countries – independently from the impact of the last crisis. GDP growth was difficult to project all through the 2000s. Market forecasters had as much difficulty in projecting growth as the government authorities. In such circumstances, fiscal revenues are more difficult to plan and the operation of a growth-based balance rule may be more demanding. Revenue deviations from targets, especially if they go beyond the automatic stabilisation provided by the fiscal rule (which implicitly assumes a constant share of revenues in GDP) may entail additional adjustments in yearly spending objectives. Reconciling such fiscal policy responsiveness with the planned stability of the fiscal framework will be a challenge.
- Certain spending and revenue items show specific cyclical patterns in Turkey. The authorities may wish to re-evaluate these patterns when implementing the rule. They can accommodate them, or try to reduce their influence. This refers in particular to:
 - Personnel expenditures, which face pro-cyclical spending pressures.
 - Infrastructure investment and repairs, which systematically carry the burden of spending cuts.
 - Local government spending, which realises at above target levels in upturns and below target levels in downturns (both in real terms and as a share of GDP).
 - Corporate tax yields, which are sensitive to banks' profits, in turn depend on interest rate developments. Banks pay roughly one third of the corporate income taxes.
 - Value-added and other special consumption tax yields are very sensitive to energy prices. The effect arises from two channels: *i*) value-added and consumption tax rates on energy are very high; and *ii*) when administered energy prices are kept below-cost, energy enterprises withhold the taxes that they collect to off-set their financial losses.
 - Taxes for products with low demand price elasticities (like tobacco, alcohol and energy), are systematically increased in downturns.

14. Not all information used for these comparisons are displayed in Figure A3.1. More specific data on spending and revenue targets and realisations were utilised. In addition, by construction, the multi-yearly targets included in Figure A3.1 concern only the year following the issuance of the framework (for instance, targets for 2008 of a multi-yearly framework issued in 2007 are reported in the figure, but not the targets for 2009 and 2010).

- Tax administration plays a revenue-increasing role through *ad hoc* amicable settlements.
- Factor incomes play a similar discretionary role through administrative increases in public utility prices.
- Long-term spending pressures are in force in general government balances, independently from cyclical variations. This is notably the case in pension and health spending. Long-term projections are needed in these areas to prepare adjustments in other spending or revenue items.
- Revenues are also difficult to project in terms of elasticity to GDP growth. Frequent rate variations in taxes with the highest yields make this calculation difficult (Table A2.1). Revenue planning in Turkey can only be stabilised with transition to a more stable tax structure.

Table A2.1. Variations in tax rates

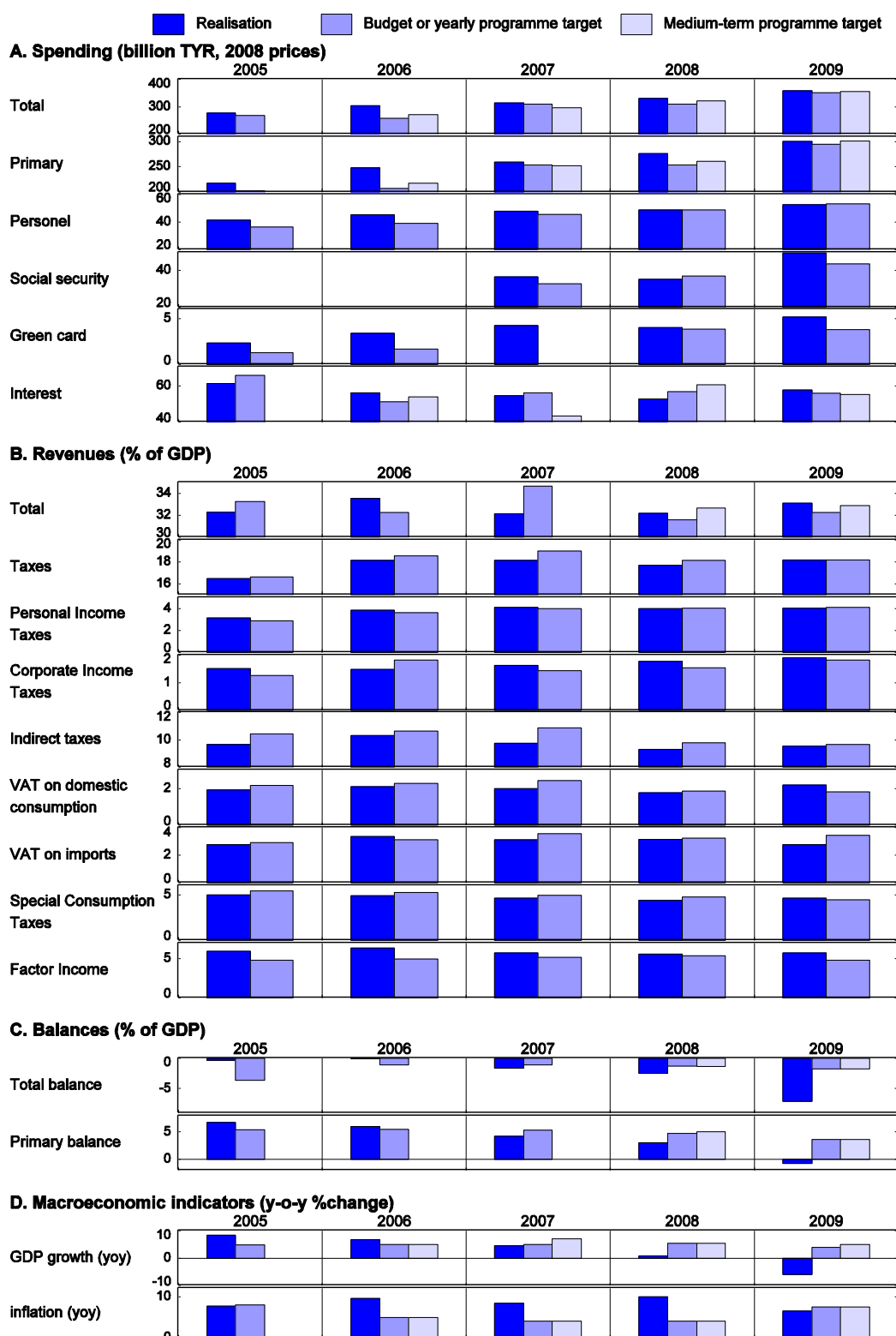
	Cigarettes (%)	Beer (TL per litre)	95-octane unleaded gasoline (TL per litre)	LPG (TL per kg)	Motor vehicles ¹ (%)
2002	Aug.: 49.5		Aug.: 0.793	Aug.: 0.370	Aug.: 27.0
2003	Jan.: 55.3	Oct.: 0.750 Aug.: 0.796			Oct.: 30.0
2005	Aug.: 58.0	Jan.: 0.159 Feb.: 0.238 Feb.: 0.159 ² Aug.: 0.238		Jan.: 0.615	
2006				Mar.: 0.743 Oct.: 0.794	
2007			Nov.: 1.477	Nov.: 0.930	
2008			July: 1.492		
2009	Dec.: 63.0	Apr.: 0.260 Dec.: 0.350	July: 1.692	July: 1.030	Mar.: 18.0 June: 27.0 Oct.: 37.0

1. With engines of less than 1 600 cc.

2. In February 2005, the tax rate was modified twice.

Source: Ministry of Finance.

Figure A2.1. Objectives and outcomes: recent experience



Note: General government data presented in these figures are not yet published according to international accounting standards.

Source: SPO, Ministry of Finance and Turkstat.

ANNEX A3. SOME CHALLENGES OF COMPREHENSIVE GENERAL GOVERNMENT ACCOUNTING ACCORDING TO RECENT EXPERIENCE

OECD countries' and Turkey's own experience suggests that standard general government accounting may face a number of technical challenges. The authorities may wish to pay special attention to these challenges when they start to publish consolidated general government accounts in 2010:

Fully accrual-based recording of yearly spending: The Public Financial Management and Control Law (PFMCL) improved the accuracy of spending information on an accrual basis but certain omission risks remained: *i*) social security and local government spending are difficult to keep in line with *ex ante* appropriations and over-spending occurs, without being fully recorded in the respective years' expenses; *ii*) some *accrued* central government spending is underreported, notably in the area of construction. Certain construction projects are initiated without sufficient budget appropriation: when this happens, the corresponding expenditure is recorded on the following year's accounts.

These underreporting risks were reduced at the central government level after the adoption of the PFMCL, and are now estimated to be probably small, in the range of decimal points of GDP. However, risks persisting at the local government level have not been researched and cannot be estimated.

Underreporting risks also exist in the social security system. Health spending by the social security institution (SGK) is still not reported on accrual terms but on a cash basis. The insured have been given access to private health services, making the accrual-based recording of spending more difficult. In 2009, unrecorded yearly health arrears were estimated at TRY 2 billion (0.2% of GDP). The ongoing transition to universal health insurance may increase delays in the recording of spending.

Precise reporting of revenues: Exceptional revenue items play a particularly important role in Turkey, especially in certain years. Privatisation proceeds, real estate sales, sales of telecommunication licenses and transfers to central government budget from the Unemployment Insurance Fund (which has accumulated reserves amounting to 3% of 2009 GDP between 2004 and 2009) have been registered as "above-the-line" revenues to date, except in the "IMF programme" definitions and in pre-accession fiscal reporting to Eurostat (*e.g.* ESA Tables 2 and 9, and EDP Notification Tables). Also, revenues generated through voluntary settlements in tax amnesties are registered as ordinary income. In 2006, revenues arising from the clearance of overdue social security contributions generated 0.7% of GDP and have been recorded as current income. In 2009, corporate taxpayers were able to legalise past unreported incomes, taxed at rates determined in the law. The ensuing revenues were recorded as ordinary income. Finally, transfers to the central budget from the *Deposit Insurance Fund* (which is in charge of resolving the assets of the banks liquidated in the 2001 crisis) are routinely recorded as current revenues. These items were however adjusted for in the recent ESA and EDP tables, in line with the international standards.

Full accounting for quasi-fiscal activities: State-owned banks, enterprises and other public entities may undertake policy-driven spending but, as these activities take place in the commercial sector, they are not reported as government spending. Such quasi-fiscal activities were a major concern until the 2001 crisis but have come under better scrutiny after the adoption of the PFMCL. All financial costs for policy responsibilities ("duty losses" in the Turkish parlance) should in principle be financed from the central budget and recorded as such. The Treasury publishes a complementary report on the financial balances of

all enterprises in which the government has more than 50% of the stakes, which is an important step in documenting the financial costs of their policy responsibilities.

¹ However, these channels of transparency face also enforcement challenges: *i*) certain state-owned enterprises (SoEs) are asked to fulfil policy responsibilities, notably in energy distribution, agricultural purchases and housing development without this being fully reported in the budget; *ii*) the number and size of municipally-owned enterprises (MoEs) have grown in the 2000s, but little information has been available on their financial position until their inclusion in Treasury's report on SoEs starting from 2010; and *iii*) SoEs and MoEs appear to have utilised additional off-budget borrowing in the recent period:

- The Agricultural Purchasing Agency (TMO), has resumed “support purchases” since 2007. When the national marketing co-operative of the hazelnuts industry hit a financial impasse in 2006, TMO resumed support purchases in this large sector of Turkish agriculture (Turkey is the world's largest hazelnuts producer). It has already accumulated stocks of nearly 500 000 tonnes. Much of this stock represents excess production relative to world demand. Its purchase value (*i.e.* the book value) of about TRY 2.5 billion (0.25% of GDP), risks remaining notional. TMO faces a similar financial burden with cereal purchases. It was directed to purchase 5 million tonnes of cereals coming from excessive production in 2009 for TRY 2.5 billion (0.25% of GDP). These purchases were partly funded by “duty losses” paid from the budget and partly via off-budget “onlent” borrowing provided by the Treasury. Direct borrowing by TMO has not been registered as general government debt, according to standard practice, because TMO is formally a commercial entity. It is only included in the total public sector debt (which includes commercial borrowing by all state-owned enterprises). The additional potential liability it represents for the general government sector (because TMO is more financially dependent on general government than other more self-sustained state-owned enterprises) is presently not separately identified.
- Several large-size SoEs operate in the energy sector: TEDAŞ's regional affiliates – retail electricity distributors, TETAŞ – a wholesale electricity distributor, TEİAŞ – an electricity transmission company, EUAŞ – an electricity producer, and BOTAŞ – a natural gas importer, transporter and wholesaler. They carry out policy obligations. TEDAŞ faces large technical losses (*i.e.* power illegally drawn by unauthorised users, of about 15%) in electricity distribution, and a low collection rate of its bills (of around 90%). These losses reflect a *de facto* public support to electricity consumption in disadvantaged regions and sectors (such as low income provinces and agriculture). However, they have not been funded from the budget and have led to an accumulation of large debt arrears in the energy sector.² Other policy duties by energy SOEs included BOTAŞ's long-term “take or pay” contracts with foreign natural gas suppliers, which are geared to secure Turkey's energy security and entail large costs on certain years.³

-
1. The Treasury's report on SoEs provides standard financial indicators for 57 large SoEs and five MoEs. Two groups are distinguished. The first refers to in service SoEs which are not on the privatisation list and operate normally. They generated revenues of about 7.1% of GDP in 2009, and a positive net financial return of 0.54% of GDP. The second group refers to SoEs on the privatisation list: they achieved revenues of 2.6% of GDP in 2009, and a net financial balance of –0.09% of GDP. The net balance of the entire SoE sector was 0.06% of GDP in 2008, 0.45% of GDP in 2009, and is projected to be 0.23% of GDP in 2010.
 2. TEDAS' impossibility to fund its technical losses and to collect fees forced it to build arrears *vis-à-vis* TETAS and EUAS, and through it to BOTAS. The total volume of energy arrears through these SoEs was estimated to reach almost TRY 30 billion at the end of 2009 (3.2% of GDP).
 3. Some contracts led to financial losses in 2009 as a result of reduced energy demand in the economy. A similar outcome may occur in 2010. “Take or pay” compensation to Iran alone might reportedly attain

- Following an important decision by the government in July 2008, electricity prices are in principle “cost-recovering” in the entire energy chain. TEDAŞ, which recorded net financial loss of TRY 382 million, TETAŞ, which recorded net financial loss of TRY 983 million and BOTAŞ, which recorded net financial surplus of TRY 293 million in 2008, are expected to become financially viable after this decision. However, the decline in natural gas demand and the increase of gas supply through low priced spot LNG imports have prevented a rise in natural gas prices.
- The Public Housing Administration (TOKI) also raises a transparency issue. TOKI is a public establishment with a unique legal status. It operates as a SoE producing and selling houses on long-term leases. It is provided free access to public land,⁴ on which it builds housing via joint-ventures with private contractors. Its annual production has reached about 75 000 apartment flats. This includes subsidised “low-cost flats” (83% of TOKI’s production and 53% of costs) and also higher quality “market-priced flats” (17% of production and 47% of costs). Most TOKI houses are available through long-term leases of about 20 years, financed by TOKI. The total balance sheet of the agency reaches TRY 20 billion (2% of GDP) but it is not clear if the total market value of its assets and all its liabilities are included. TOKI was initially under the scope of the PFMCL but was excluded by a special law in 2005. It is also exempted from the rules of the National Procurement Act. Its special status offered TOKI a large franchise and space of action, and permitted it to develop its activities very rapidly, but at the cost of financial and fiscal transparency.
- The last strand of quasi-fiscal activities is carried out by MoEs. They have grown throughout the country in local utilities, transportation, natural gas distribution and construction. The nature of their businesses (commercial versus quasi-fiscal) has not yet been analysed systematically. There are reports that their total debt stock has increased in the 2000s, despite recurrent arrangements with the Treasury which cleaned and took over periodically part of their debt (Ekinci, 2009). An important *communiqué* published by the Treasury in 2009, according to a Council of Ministers decree, gives the Treasury the authority to collect and publish annually the key financial and non-financial data of these enterprises. This initiative is expected to help disclose relevant information in the report on SoEs, starting from 2010. The *communiqué* covers all SoEs, including MoEs and enterprises in which the government has more than 50% of the stakes such as TOKI and state owned banks.

Full reporting of activities by extra-budgetary and revolving funds: Extra-budgetary funds have been reduced in size and their activities are now more transparent. In contrast, revolving funds in the public sector, which play a particular role in the health sector, are only monitored in cash terms.

- Since December 2000, 61 budgetary funds benefitting from special management arrangements and eight extra-budgetary funds (XBFs) have been closed. Five XBFs remain active: Deposit Insurance Fund, Privatisation Fund, Defence Industry Fund, Social Solidarity Fund and Promotion Fund. These entities in principle do not raise fiscal risks, because they are not authorised to borrow. In 2007, total spending by all five funds amounted to TRY 17 billion (1.9% of GDP).
- Most of the revolving funds operate in public and university hospitals, to offer “for fee” services. The amendment to PFMCL stipulated that all these funds should be closed by the end of 2007.

\$ 700 million in 2009 and \$ 520 million in 2010. However, these losses could also be gradually reduced through time by consuming the gas surplus subject to the take or pay clause.

4. Government ownership of land is very large in Turkey.

However, this could not be realised because these structures help adjust service supply to demand and permit a more intensive utilisation of public assets. More than 40% of total public health spending is devoted to health service purchases from these funds. Revolving funds raise fiscal risks because they may engage spending without *ex ante* budget appropriations. The social security institution has also questioned the integrity of their pricing practices.⁵ Total spending by revolving funds accounted for 2.1% of GDP in 2007, 2.3% in 2008 and 2.4% in 2009.

Comprehensive reporting of public liabilities. Documenting existing debt and projecting its future level is an essential component of fiscal transparency. The adoption of the Public Debt Management Law (PDML) and the publication of debt reports was a major step forward. However, additional improvements in debt reporting are needed. This regards primarily information on incompletely chartered public liabilities: *i*) the debt position of all general government layers including the non-guaranteed and domestic debt of local governments and their municipally-owned corporations (MoEs);⁶ *ii*) public liabilities arising from the outstanding stock of public guarantees other than current Treasury guarantees, including those granted to public-private partnerships in the past (PPPs);⁷ and *iii*) the long-term financial balances of the social security system, which are currently not measured as an outstanding public liability.

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5. The social security institution argues that revolving funds' pricing practices are not disciplined and are at times abusive. Revolving funds retort that delays in the collection of receivables from the social security institution and the rest of the public sector increase funding costs, and impose off-setting mark-ups.
 6. PFMCL added a "risk account" to the budget as provision for risks from newly granted guarantees, but the total exposure arising from past commitments is not known. In the framework of pre-accession fiscal notifications to the EU, Eurostat has observed that information submitted on public guarantees (the so-called Table 3 in fiscal notifications) is not fully coherent for Turkey. The Turkish authorities have confirmed that they are working on reconciliation between different data sources.
 6. PFMCL added a "risk account" to the budget as provision for risks from newly granted guarantees, but the total exposure arising from past commitments is not known. In the framework of pre-accession fiscal notifications to the EU, Eurostat has observed that information submitted on public guarantees (the so-called Table 3 in fiscal notifications) is not fully coherent for Turkey. The Turkish authorities have confirmed that they are working on reconciliation between different data sources.

ANNEX A4. EXPERIENCE OF OECD COUNTRIES WITH FISCAL POLICY COUNCILS

The term fiscal policy council is generally used to describe a specialised institution funded by government which provides public advice on fiscal issues.¹ Such councils perform diversified tasks which vary across countries. They involve projections of national fiscal balances and public debt, microeconomic analyses of the budgetary impacts of specific projects. They therefore play the role of a fiscal watchdog. By disseminating fiscal analyses, fiscal councils can prevent governments inadvertently or deliberately concealing the extent of future imbalances implied by current policies or prevent adopting overoptimistic assumptions on the fiscal outlook. Thus, they provide objective and independent opinions on fiscal issues, supporting public discussions and decisions of the legislative bodies.

Fiscal councils are usually “independent,” but the degree and type of independence from the executive authorities, and the Ministry of Finance in particular, vary across countries. Sixteen countries among 38 OECD and non-OECD members reviewed by the OECD Secretariat in 2007 indicated that they had either a specialised unit or some other kind of body to offer fiscal council services (OECD, 2007). However, a smaller number of national councils have built to date a minimum degree of influence at the domestic level, and ensuing international visibility. A first conference bringing representatives from most of these councils together was held in Budapest in March 2010.² The most internationally recognised fiscal watchdogs are:

- *Canada*: The Parliamentary Budget Office provides independent analysis to Parliament on the state of the nation’s finances, the government’s estimates and trends in the Canadian economy, and upon request estimates of the financial cost of any specific proposals.
- *Hungary*: The Fiscal Council of the Republic of Hungary was set up in 2009 as “an independent state institution that endeavours to ensure the responsible management of public resources”; It prepares macroeconomic forecasts which represent the baseline for budgetary decisions. It also provides comment and advices on fiscal planning more generally, within the context of existing fiscal rules.
- *Netherlands*: The Netherlands Bureau for Economic Policy Analysis (CPB) was founded in 1945. It is an independent research institute and has its own independent external advisory body. It provides economic and fiscal forecast as inputs into the budgetary planning process. It evaluates (at the political parties’ request) the election programme of government and opposition parties.
- *Sweden*: the Swedish Fiscal Policy Council was established in 2007. The Council consists of eight members and is assisted by a secretariat with four professional economists. The mission

1 See for useful and internationally comparative information on fiscal councils, the “Fiscal Councils Webpage” maintained by Prof. Simon Wren-Lewis at Oxford University: www.econ.ox.ac.uk/members/simon.wren-lewis/fc/fiscal_councils.htm.

2 The programme and papers of the Budapest conference can be found at: <http://www.mkkt.hu/conference-on-independent-fiscal-institutions>.

of the Council is to provide an independent evaluation of the Swedish government's fiscal policy.

- *United States:* The Congressional Budget Office (CBO) has a mandate to provide the United States Congress with “objective, nonpartisan, and timely analyses to aid in economic and budgetary decisions on the wide array of programs covered by the federal budget and information and estimates required for the congressional budget process”. Established in 1974, it provides non-partisan assessments of policy proposals that have a significant influence on decision making.
- *United Kingdom:* It should also be noted that the new United Kingdom government has set up an Office of Budget Responsibility, which will be the UK's Fiscal Council. The case for such a council in the UK was presented in detail in Kirsanova *et al.* (2007).

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