



THE WOODROW WILSON SCHOOL'S
GRADUATE POLICY WORKSHOP

The External Current Account in the Macroeconomic Adjustment Process in Turkey

January 2012

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Acknowledgement

The authors would first and foremost like to thank all the experts who graciously helped us by sharing their insights. We also wish to extend our special gratitude to our professor, Dr. Iqbal Zaidi and Süleyman Aytuğ Göksu, Chief of Staff at the Ministry of Economy for their never ending support and guidance. Finally, we wish to thank the staff of the Woodrow Wilson School who made this workshop possible.

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EXECUTIVE SUMMARY

Turkey has experienced impressive economic growth following substantial reforms in the wake of its 2001 economic crisis. One remaining concern is the very large current account deficit, which threatens the sustainability of this growth. The Turkish government is making efforts to address the current account deficit.

To assist in this task, the Ministry of Economy of the Republic of Turkey enlisted a team of graduate students from the Woodrow Wilson School of Public and International Affairs at Princeton University to explore the external current account in the macroeconomic adjustment process in Turkey.

This report conducts an economic analysis of the Turkish balance of payments accounts and offers policy recommendations to reduce the current account deficit. Our findings show:

- The savings rate in Turkey has declined substantially over the past 10 years. This has been driven by a large fall in household savings, which has more than offset an improvement in public saving.
- Large portions of savings held “under the mattress” and the relative underdevelopment of many aspects of financial markets in Turkey help explain the low private savings rate.
- While export promotion and diversification policies are progressing well, Turkey’s trade remains geographically concentrated in Europe and the Middle East and North Africa, exposing it to the risk of negative events in those regions.
- Productivity growth over the past decade has been substantially outstripped by nominal wage growth, negatively affecting Turkey’s external competitiveness.
- Turkey’s dependence of imported energy and intermediate inputs for production makes it challenging to increase exports without a corresponding increase in imports. Any efforts to address the trade deficit will need to be mindful of the strong interconnectedness of imports and exports.
- There is a clear link between Turkey’s position in the business cycle and the size of its current account deficit. This suggests an important role for counter-cyclical fiscal and monetary policy to manage cyclical swings in the current account.
- The innovative policies pursued by the Central Bank of the Republic of Turkey have likely helped stabilize short-term capital inflows. However, the plethora of policy objectives creates confusion and makes it more difficult to form expectations about future policy.
- Although abundant global liquidity has lowered Turkey’s borrowing costs and allowed it to sustainably carry a higher level of debt, there is a non-trivial risk that markets will impose a sudden current account adjustment on Turkey with adverse consequences for output growth.
- The marked change in the composition of Turkey’s external liabilities towards short-term debt over the past few years has increased the economy’s vulnerability to foreign investor sentiment, as future changes in borrowing costs or availability of capital will have a more pronounced effect.

Based on our findings, we make the following 14 recommendations.

Increase private savings

1. Develop domestic bond and stock market; create strong institutions and transparency to attract increased domestic savings into the financial system.
 - a. Open the stock and bond markets to small and medium size enterprises, helping to grow the economy and create legitimacy in these markets.

2. Promote the 2003 private pension schemes as a vehicle for savings, and continue reforms to make the program appeal to a wide range of Turkish citizens, including those employed in the informal sector. Emphasize increasing financial literacy as a part of this marketing campaign.
3. Improve data collection around private savings in Turkey, focusing on household and corporate savings rates

Promote Turkish exports abroad

4. Continue to increase the geographical diversity of Turkey's export partners, including large, relatively underdeveloped export markets such as the U.S. and China.

Boost Turkey's external competitiveness

5. Improve labor productivity
 - a. Increased foreign direct investment (FDI) and trade openness can ease technological transfer processes.
 - b. A more flexible legal and regulatory framework is needed to improve the functioning of labor markets.
6. Manage nominal wage growth
 - a. Nominal wage growth in export industries above productivity significantly undermines Turkey's international competitiveness
 - b. Restricting rises in the minimum wage and keeping inflation at the CBRT's target may help address wage pressures.

Reduce reliance on imported intermediate goods and energy

7. Facilitate domestic sourcing of manufactured inputs to reduce the dependence on imported raw materials.
 - a. The Investment Scheme implemented by the Ministry of Economy could help diminish the reliance on intermediate raw materials.
 - b. Identify industries with large trade deficits and assess whether it is efficient to produce those goods locally
 - c. Improve business environment to attract investments.
8. Promoting renewable energy use and increasing energy efficiency is vital to helping contain energy imports.
 - a. A diversification of the energy supply, particularly towards renewable resources, could help reduce the import dependency over time.
 - b. Channel investment for the research and development of renewable energy.
 - c. Implement energy efficiency legislation.
 - d. Modernization of the energy infrastructure.

Enhance the effectiveness of monetary policy

9. Within its inflation targeting framework, the primary goals of Central Bank of the Republic of Turkey (CBRT) are price stability and financial stability. Use of monetary policy to deliberately affect capital flows may generate uncertainty around the CBRT's actions, so greater reliance on other policy tools to manage capital flows may be desirable.
10. Clearer communication regarding how the CBRT views the current account balance and how this affects the stance of monetary policy may be helpful for promoting greater transparency.

Exchange rate policy

11. Using the exchange rate might not be a desirable strategy to reduce the current account deficit.
 - a. Boosting exports through a nominal depreciation alone will not be sufficient. Turkey's structural dependency on intermediate import goods needs to be addressed.
 - b. A nominal depreciation could translate into higher inflation. Attempting to depress the nominal value of the lira might fail to durably improve competitiveness given high pass-through to wages and prices.

Manage vulnerabilities arising from short-term capital flows

12. While the interest rate corridor may be a useful part of the policy mix to manage very short-term capital inflows, greater reliance on other tools may enable monetary policy to better target domestic conditions and respond less to external pressures.
13. Increase official reserves to provide a greater buffer against external shocks and foster more confidence by foreign investors.
14. Consider introducing measures such as taxes on short-term capital inflows or higher reserve requirements for short-term foreign-denominated liabilities.

1. INTRODUCTION

Turkey has experienced impressive economic growth in recent years, especially since it instituted praiseworthy reforms following its 2001 economic crisis. Reforms included an expansion of trade relationships abroad, a diversification of exports, effective fiscal consolidation, an improved monetary policy framework, and the establishment of a large manufacturing sector, all of which have helped Turkey to become one of the fastest growing economies in the world. This growth has transformed Turkish society and increased GDP per capita more than threefold.¹ However, the ballooning current account deficit threatens the sustainability of this growth. Turkey's reliance on foreign short-term capital flows to finance its current account deficit makes its economy vulnerable to exogenous shocks and sudden stops, events that appear to be a troublesome pattern in recent history.

This paper provides an economic analysis of the Turkish balance of payments and makes policy recommendations to reduce the current account deficit. In the short term, both a tight monetary policy and a balanced fiscal budget are necessary to dampen Turkish demand for foreign goods and services. However, these reforms are not sufficient. Making the Turkish current account deficit sustainable in the long run requires structural changes to the economy over the long term. We recommend policies directed at increasing the private savings rate, reducing export good production reliance on intermediate inputs, and expanding the use of renewable energy. Even in the best-case scenario, these policies changes will take years to implement and take effect. In the meantime, to guard against the vulnerabilities created by the build-up of external debt associated with ongoing current account deficits, we recommend Turkey bolster its official foreign exchange reserves and consider the use of capital controls or prudential controls on banks to alter the composition of capital flows by lengthening the maturity.

This report is divided into six main sections: Section 1 provides a background to Turkey's current account; Section 2 analyses current account sustainability; Section 3 provides an analysis of ways to improve structural factors underlying the current account deficit, including domestic savings, further increasing export growth and address import dependency; Section 4 considers ways to manage the cyclical component of the current account through the use of fiscal and monetary policy; Section 5 outlines the vulnerabilities generated by the persistent current account deficit and examines the potential to address these with capital controls; Section 6 provides a summary of recommendations and concludes.

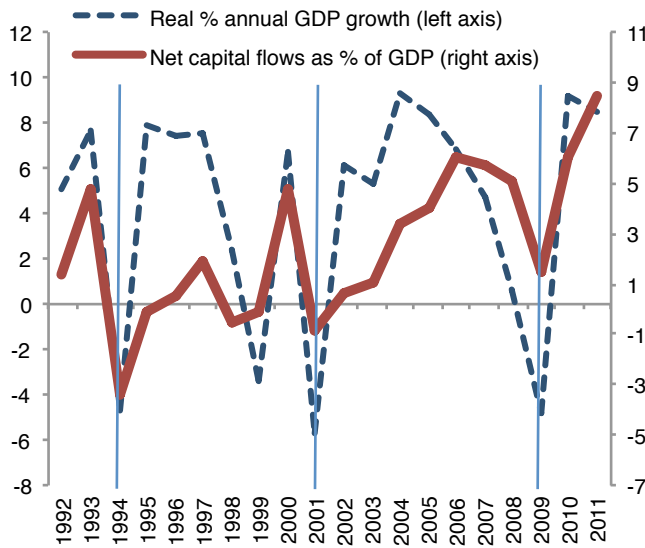
1.1 HISTORY

In the post-war period, Turkey has experienced volatile boom and bust cycles that have hindered stable growth. While the East Asian "Tigers" rocketed forward, Turkey's macroeconomic instability thwarted a similar convergence with the world's advanced economies.² Academics and policymakers have attributed Turkey's historical growth instability to a range of factors including monetary policy, financial liberalization, fiscal profligacy, inadequate financial regulation, and exchange rate policies.³ Whatever the underlying causes have been in the past, the economy's volatility has been a problem for sustainable growth.

During the 1980s and 1990s, Turkey transformed its industrial model away from import substitution policies toward more export-led growth, significantly opening up its economy to foreign capital and goods. Following the liberalization its capital account, the country saw large inflows of capital from abroad and became increasingly dependent on them for economic growth.⁴ In the twenty years preceding the 2001 financial crisis, foreign direct investment (FDI) was not a large component of those flows.⁵ FDI inflows have improved substantially over the latest decade, due in large part to increased macroeconomic stability.⁶

Since 1989 the Turkish economy has experienced three "sudden stops" in which external financing rapidly dried up – in 1994, 2001 and 2008. These withdrawals of foreign capital were associated with GDP contractions (Graph 1).⁷

Graph 1. Net Capital Flows and Real GDP growth



Source: World Development Indicators and Central Bank of Turkey

The first sudden stop occurred during Turkey’s 1994 banking crisis. Turkish policymakers and academics have pointed to the surge of “hot money” into Turkey following financial account liberalization, without correspondent financial reforms and high quality supervision and regulations, as an important source of this crisis.⁸ The economy experienced instability and recovered slowly over the next few years. A second crisis in 2001 was precipitated by souring confidence in the country’s exchange-rate based stabilization program.⁹

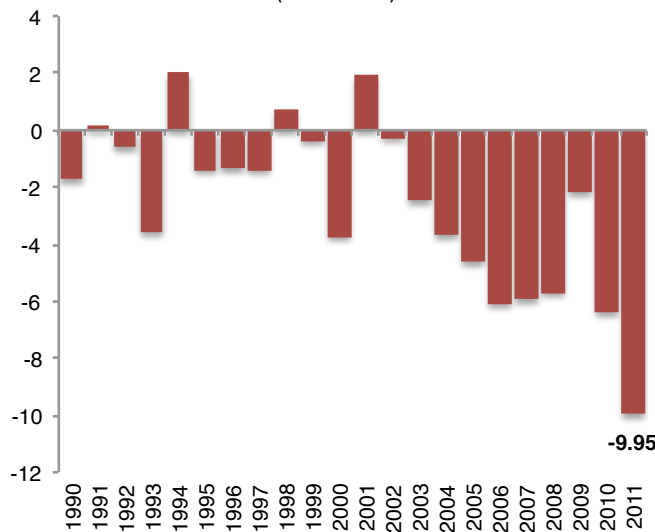
Since the 2001 economic crisis, however, the Turkish government has worked to address past sources of instability by pursuing new economic policies. The government undertook significant fiscal consolidation, halving the public debt-to-GDP ratio from around 80 percent in 2001 to under 40 percent in 2012.¹⁰ It established an independent Central Bank with an inflation

targeting framework,¹¹ and dramatically expanded its foreign trade relations, especially in the Middle East and North Africa.

The third sudden stop in foreign capital flows occurred as a result of the 2008 global financial crisis. GDP contracted by a staggering 14.7% in the 2009Q1 and unemployment increased to 15% in April 2009.¹² Yet, starting in the second quarter of 2009, the Turkish economy began what became an enviably rapid recovery. Akat and Yazgan (2012) contend that abundant global liquidity and an “explosion of credit in the banking system” fueled this recovery.

Looking at the current account over this period, Turkey experienced relatively small current account deficits and even occasional surpluses during 1990s; on average the current account balance was a little smaller than

Graph 2. Current Account Balance (% of GDP)



Source: World Development Indicators

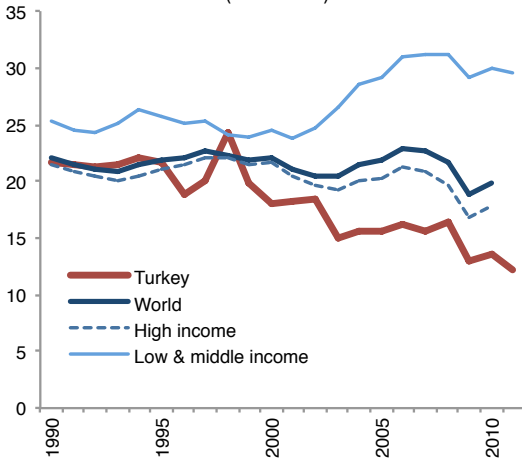
-1% GDP, falling to -3.2% and -3.7% in the years before the 1994 and 2001 crises respectively (Graph 2). A different trend emerged after 2002, with large persistent current account deficits, which peaked in 2011 near -10% – a level never before seen by the country.

1.2 THE CURRENT ACCOUNT

The current account is typically thought of as the total value of an economy’s exports less the total value of its imports: $CA = (X-M)$. Current account deficits therefore occur when an economy imports more than it exports.

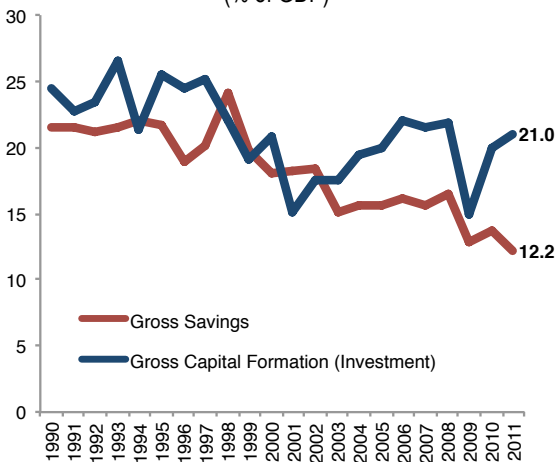
An equivalent formulation can be taken from the national income identity, with the current account expressed partly as a function of national savings less domestic investment: $CA = (S-I) + (T-G)$. Unlike in closed economies, where investment must always equal savings, in

Graph 3. National Savings Rate
(% of GDP)



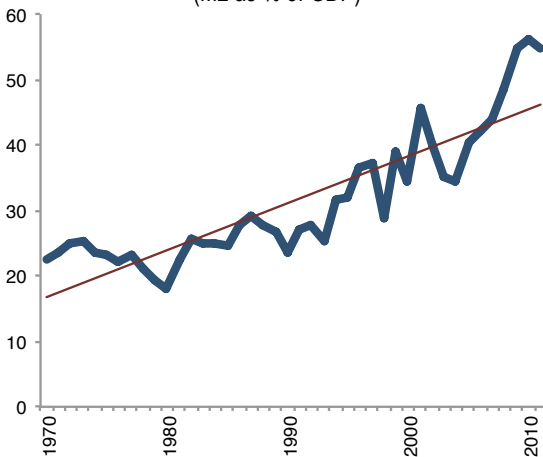
Source: World Development Indicators

Graph 4. Savings and Investment
(% of GDP)



Source: World Development Indicators

Graph 5. Credit Expansion
(M2 as % of GDP)



Source: World Development Indicators

open-economies a country may accumulate net financial claims against the rest of the world by running a current account deficit or surplus. In this view, a current account deficit is an issue of insufficient national savings to finance desired domestic investment. For developing countries, which are capital poor, a current account deficit may reflect a relative abundance of investment opportunities compared to available domestic savings. Shortfall in domestic savings can be driven by public or private savings, or a combination of the two.

1.2.1 SAVINGS AND INVESTMENT

For the last thirty years Turkey's national savings rate has been lower than that for countries with similar levels of income (Graph 3).¹³ Since 1998 this trend has led to a widening savings-investment gap (Graph 4). While investment has hovered around 20% of GDP on average, savings as a per cent of GDP declined from 24% in 1998 to 12% in 2011 – the lowest level since 1980.¹⁴

A World Bank report (2012) attributes the decline in national savings to dramatic reductions in the private savings rate during that period, spurred by a drop in household savings.¹⁵ Using econometric analysis, Rijckeghem (2010) suggests primary drivers behind this decline were improving macroeconomic conditions and reduced economic uncertainty (using inflation as a proxy), expanded consumer credit and Ricardian offset effects of fiscal consolidation.

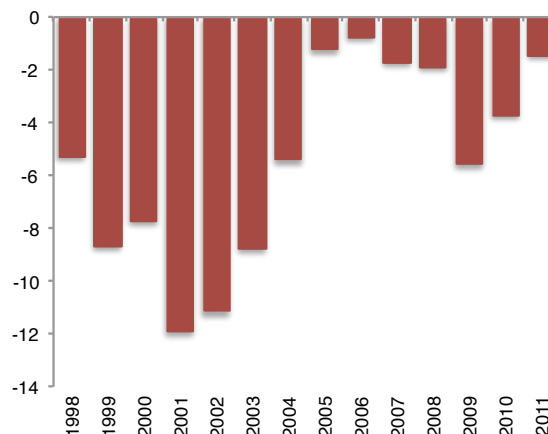
Improved access to consumer credit reduces private savings and negatively affect the current account.¹⁶ In the case of Turkey, using M2/GDP as a proxy for credit expansion in line with Dalgin and Gupta (2012), we see that credit has increased significantly since 2000 (Graph 5), at nearly the same time that the current account deficit began to grow substantially and private savings began its fall. Credit expansion works through several channels- it reduces the need for precautionary saving, or the need to save for investments¹⁷, and or creates a wealth effect generated by increased home ownership and housing prices.¹⁸

Under perfect Ricardian Equivalence any increase in public savings is completely offset by a decrease in private savings, which would mean that public policy aimed at increasing national savings via public savings is ineffective. In reality, estimates for the Ricardian offset for Turkey vary considerably from around -0.35 to -0.77¹⁹ suggesting that increasing public savings may be a useful policy tool. Dalgin (2012) notes that tighter fiscal

policy may be an effective policy tool, if accompanied by tighter monetary policy and prudential mechanisms to control credit growth to limit any drop in private savings.²⁰ Fiscal balance has improved substantially from -11.9% of GDP in 2001 to -1.4% in 2011 (Graph 6).

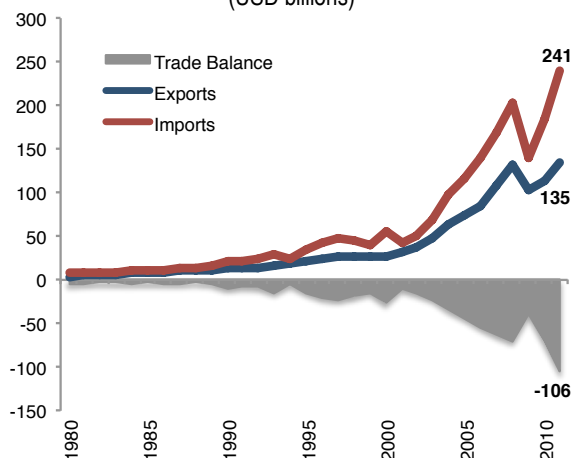
While running a current account deficit allows Turkey to cover the shortfall in domestic financing necessary to achieve its growth potential, the arrangement requires that the capital be directed to high-quality investments. However, in the case of Turkey, a major driver of the current account deficit appears to be lower savings, rather than increased investment. In light of the substantial consumer credit expansion, this seems to suggest capital is directed instead toward excessive consumption.²¹ In Section 3.1 we further examine how a drop in national savings drives the current account deficit, as well as policy recommendations aimed at correcting the savings-investment imbalance.

Graph 6. Fiscal Balance
(% of GDP)



Source: International Financial Statistics (IMF)

Graph 7. Trade Balance
(USD billions)



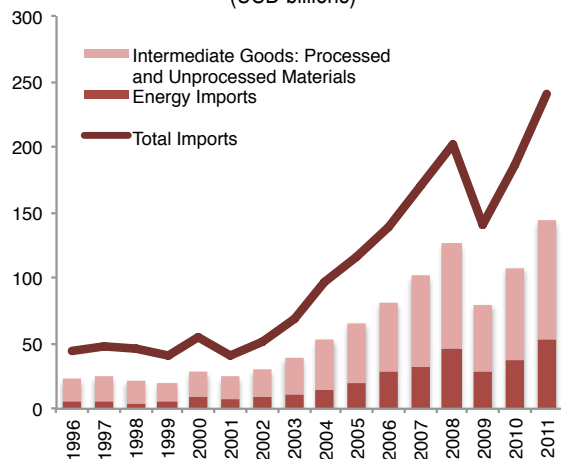
1.2.2 THE TRADE BALANCE

In the last 10 years Turkey’s exports and imports have grown substantially but imports have grown at a faster rate, resulting in a declining overall trade balance and a growing current account deficit. Between 2001 and 2012 the trade balance fell from approximately -\$10 billion to -\$100 billion (Graph 7).

Turkey’s export/import divergence is atypical compared to other upper-middle income economies. While Turkey’s export growth from 2002-2008 was 1 percentage point below the average for upper-middle-income economies, import growth exceeded the average by 4 percentage points.²²

In order to address the trade deficit Turkey needs to not only focus on improving export competitiveness, but also on managing excessive internal demand for imports. Overall imports since 1996 have increased more than five fold (Graph 8). This growth in imports is primarily due to Turkey’s heavy dependence on imported energy (in the context of large oil price rises), imported intermediate goods for the manufacturing industry, and the large consumer credit boom over the last 20 years.

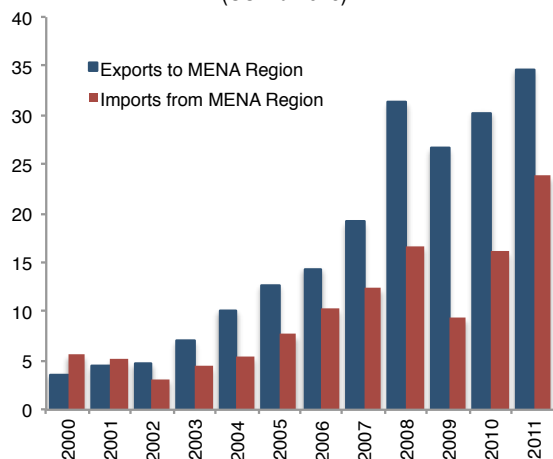
Graph 8. Imports (energy, intermediate)
(USD billions)



Source: Turkstat

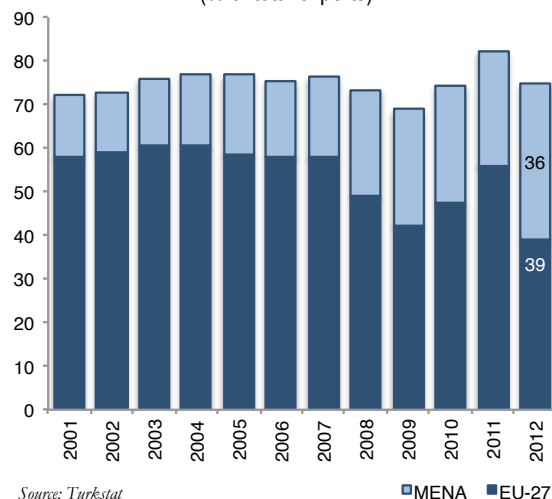
Turkey’s export performance over the past decade has still been strong, in part due to changes in the composition of Turkey’s trade partners. The country has expanded its export sales into new countries over the same time period from 180 in 1996 to 236 in 2011. In 2002, the government reshaped its diplomatic relations with neighboring countries under its “Zero Problems with Neighbors” policy. Since the implementation of the

Graph 9: Turkey-MENA Trade Flows
(USD billions)



Source: Ministry of Economy of Turkey

Graph 10: Share of Exports, MENA and EU-27 Countries
(% of total exports)



Source: Turkstat

policy Turkey's net exports to nearby Middle Eastern and North African (MENA) countries has increased substantially (Graph 9). In 2001 Turkey was running a trade deficit with MENA countries and now is a net exporter to the region. Efforts to diversify geographically have allowed Turkey to weather the demand shocks resulting from the economic crises of the past years in the EU and the US.

Turkey's export markets remain heavily concentrated in Europe (39% of exports) and MENA (36%) (Graph 10). This degree of concentration may be worrying given the recent financial and political turmoil in the Euro Area and MENA respectively. The Turkish government is currently pursuing a strategy of diversification of trading partners by signing free trade agreements to help to alleviate this problem. However, these agreements have so far been concentrated in Turkey's geographic proximity.²³

1.2.3 THE EXCHANGE RATE

According to conventional economic theory, exchange rate fluctuations affect the current account through effects on the trade balance. A real depreciation results in foreign goods becoming more expensive relative to domestic goods, which all else being equal increases export demand and decreases import demand, improving the current account.²⁴

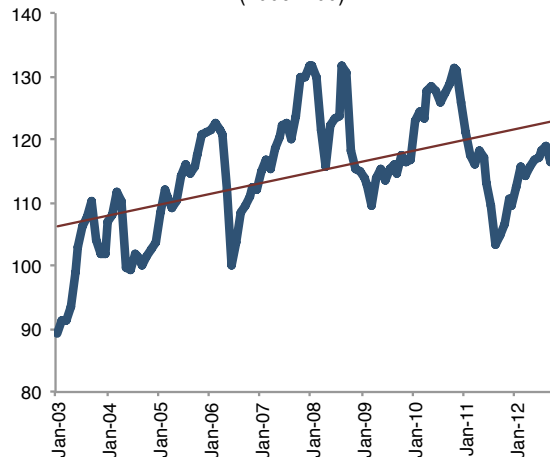
The Turkish lira has experienced a trend real appreciation of around 30% from January 2003 to September 2012. More recently it observed a short-term depreciation between November 2010 and August 2011, but has since resumed appreciation (Graph 11).

1.3 CAPITAL FLOWS

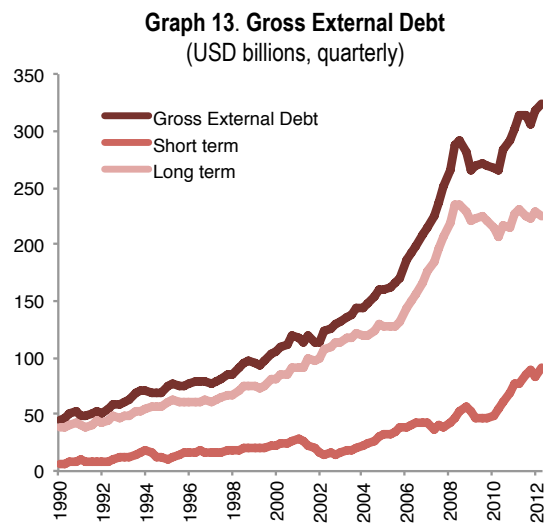
Current account deficits reflect a country spending more on foreign goods and services than it receives from its exports. To finance this difference, it must obtain funds from abroad. Capital inflows are thus the mirror image of the current account balance.

Beginning in the early 2000's, net capital flows to Turkey increased substantially in line with the increasing current account deficits. Because a portion of these flows fund

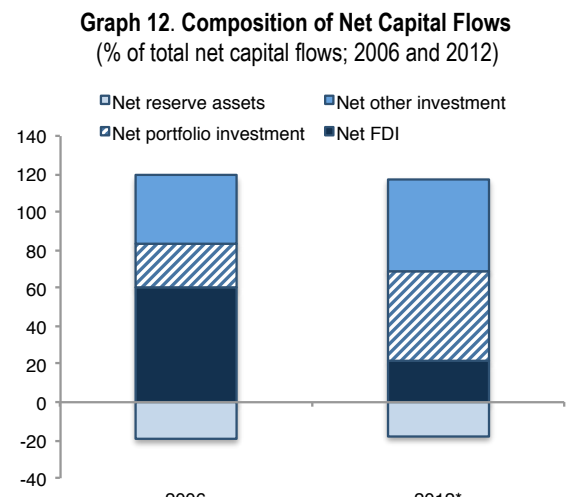
Graph 11. Real Effective Exchange Rate, CPI-Based
(2003=100)



Source: Central Bank of Turkey



Source: Central Bank of Turkey



* Up to August 2012

Source: Central Bank of Turkey

domestic investment, they are important for fuelling and sustaining growth. Foreign capital inflows that are short term and speculative in nature, however, may leave Turkey especially vulnerable to economic shocks if they result in sudden stops in capital inflows.

FDI inflows, which are long-term and relatively stable, comprised a significant portion of capital inflows earlier in the decade but have since declined to only 50% of their 2006 peak (Graph 12). Since that peak, shorter-term portfolio and other investments have become relatively more important, together making up 49.8% of net inflows in 2012.²⁵ The structure of capital flows has thus become more short term in nature, raising concerns about economic vulnerabilities that this may introduce

With many of these capital flows fueling borrowing, Turkey's external debt has nearly tripled over the past decade. Of particular note, since the financial crisis there has been a change in the maturity structure of Turkey's debt stock, with the proportion of short-term debt in total gross debt increasing from 12.7% at the end of 2002 to 30.6% in June 2012 (Graph 13). To the extent that the private sector is more likely to borrow short term than the government, this may reflect that a much larger portion of Turkey's external debt is now owed by the private sector than has historically been the case. The government's share of outstanding debt fell from around 45.4% December 2002 to just 26.1% in June 2012.

2. CURRENT ACCOUNT SUSTAINABILITY

A widely used rule of thumb is that current account deficits above 5% of GDP begin to raise doubts about long-term sustainability.²⁶ However it is unclear whether this arbitrary risk metric should be applied to Turkey given its unusually rapid growth. In this section we look at a few different approaches that have been taken to look at this issue, ranging from empirical research to Debt Sustainability Analysis (DSA).

2.1 A BRIEF REVIEW OF THE LITERATURE

Milesi-Ferretti and Razin (1996) note that Australia, Ireland, Israel, Malaysia and South Korea were able to sustain large CAD's for years but that Chile and Mexico suffered severe external crises.²⁷ Based on a study of these countries, these authors cast doubt on whether the 5% threshold should be taken seriously in isolation and postulate a better measure of sustainability would also emphasize willingness to lend and ability to pay. They conclude that in addition to the size of the current account imbalance, one must consider exchange rate policy, and structural factors including degree of openness of the economy, levels of savings and investment and overall health of the financial system.

Edwards (2005) assigns particular importance to the debt to GNP ratio and nominal GNP growth rate. He notes that very few countries have had persistently high current account deficits for more than five years and that historically imbalances tend to be short lived and followed by current account adjustment²⁸

Using the work of both Milesi-Ferretti and Razin (1996) and Mussa (2005), Dalgin (2012) finds that long term sustainability of the Turkey's current account is "very questionable" but concludes there is no immediate risk assuming Turkey can maintain its current growth. Using Mussa's criterion, Dalgin concludes that a CAD around 6% is sustainable, which is not too far from Turkey's current level. This author further suggests that Turkey's geopolitical positioning may be responsible for its ability to continue financing such a high deficit – but that ultimately Turkey needs to increase both private and public savings.²⁹

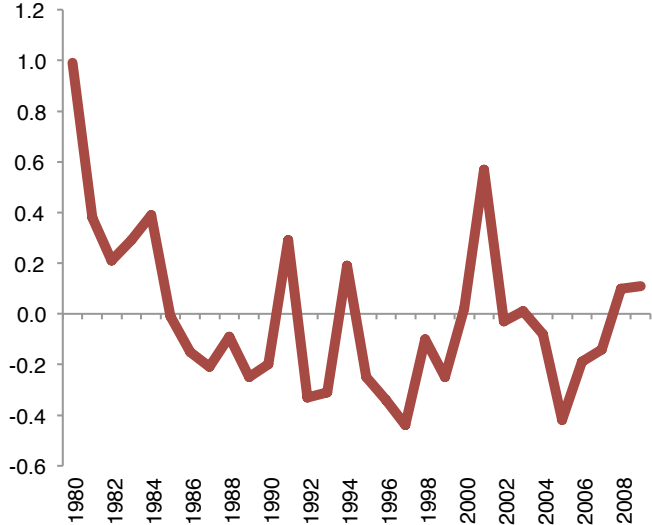
2.2 DEBT SUSTAINABILITY ANALYSIS

Sovereign external debt sustainability is said to exist when two conditions are fulfilled: 1) foreign exchange flows associated with foreign trade and finance are balanced for a time horizon 2) any foreign exchange mismatches that may arise can be expected to be financed by international capital markets.³⁰ These conditions can also be expressed in terms of solvency and liquidity of a debtor country, where solvency indicates that the present discounted value of a country's expected primary surpluses is greater than or equal to the present discounted value of its debt servicing obligations, and liquidity refers to the ability to meet any unexpected imbalances with resources from international capital markets, either through lending or rolling over of maturities.

Ignoring for a moment the very real possibility of liquidity crisis and capital flight, (which we discuss in Section 5), it can be informative to look at the sustainability of Turkey's current account through the lens of DSA. The IMF has performed external DSA for Turkey, looking at both the highest current account deficit that can be run keeping debt levels sustainable, as well as the impact of potential shocks on external debt levels.³¹ IMF projections for Turkey indicate that by 2016, external debt will rise to 48% of GDP, with GDP growth and the current account deficit settling around 4.1% and 6.2% respectively. The IMF calculates the debt-stabilizing current account level is around -4.4% to -6.8% (depending on projections for key variables), indicating that lower current account deficits would result in a continued build-up of external debt. Looking at potential shocks, they find that external debt will remain below 60% GDP even in the face of a combined permanent $\frac{1}{4}$ standard deviation shock to external interest rates, GDP growth and the current account balance provided there is not a real depreciation of the lira. A real depreciation of 30% in the lira would result in external debt quickly increasing to 70%.

Taking a different approach, Ucal and Oksay (2012) developed the concept of Solvency Ratio of External Debt (SRED), which is the ratio of the sums of current account and capital account balances to debt service obligations (interest and principal payments).³² Using data from 1980-2009, the authors argue that negative ratios, or those approaching zero, are indicative of a potential crisis, while ratios approaching or above 1 indicate stability.³³ Their analysis shows that the SRED has on average been negative.

Graph 14. Solvency Ratio of External Debt

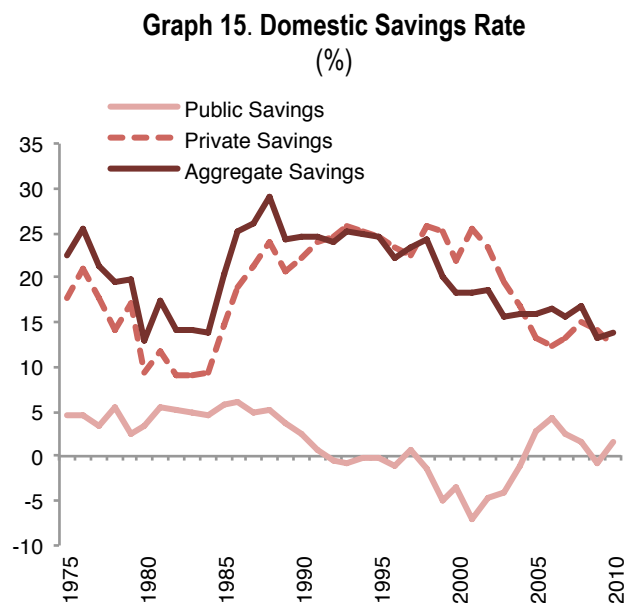


Source: Ucal and Oksay (2012)

3. STRUCTURAL AND LONG-TERM DRIVERS OF THE CURRENT ACCOUNT DEFICIT

In the long run, bringing Turkey's current account to a sustainable level will require that the structural (or non-cyclical) component of the deficit be addressed. This section describes the main structural concerns behind the current account deficit, namely the low domestic savings rate in Turkey and the trade imbalance with a focus on Turkey's export landscape, external competitiveness and reliance on energy and other intermediate input imports.

3.1 SAVINGS AND INVESTMENT



Source: Ministry of Development

The gap between domestic savings and investment is a key determinant of the current account balance. While public savings in Turkey have increased dramatically since 2001, private savings have experienced a sharp decline. After the 2001 financial crisis, the Turkish government took many important steps to reform its economic policy in order to successfully set the groundwork for sustainable growth. The fiscal consolidation effort reduced the government deficit by 8.7% of GDP, improving public savings and reducing the public debt. However, the simultaneous decline in the private savings rate from 25.5% of GDP in 2001 to 11.9% of GDP in 2012 more than offset these gains. As a result, the aggregate savings rate in Turkey has decreased by 4.1% over the past decade (Graph 15). This is now well below the average for other middle-income economies and stands out as a key area for improvement.

Savings, converted through the banking system and financial markets into investment, are an important driver of growth in the economy. Policies to encourage a larger share of Turkey's investment to be funded domestically, through increased domestic savings, should be considered when trying to manage Turkey's large current account deficit position.

Although lower than that of other middle-income countries, Turkey's investment as a percentage of GDP is very similar to the world's average, at just over 20%.³⁴ As a fast growing, middle-income economy, it is entirely reasonable for Turkey to have a high level of investment, so the current rate is not a cause for concern. Nevertheless, policy makers must always be mindful of the quality of investment being undertaken.

3.1.1 THE IMPORTANCE OF DOMESTIC SAVINGS

Investment is the driver of growth in any economy, and must ultimately be funded either by domestic savings or external borrowing. However, because foreign capital can be more volatile than domestic savings – as it tends to flee the country during a crisis – an economy that can fund investment out of domestic savings may have a smoother investment profile over time.

Economists have found a home bias in capital investment, where individuals on average invest a proportionally larger amount in their home country than theory would suggest. Especially in developing countries that lack full goods and services market integration, domestic savings rates are highly correlated with domestic investment rates.³⁵ For this reason, increasing domestic savings may increase investment in Turkey.

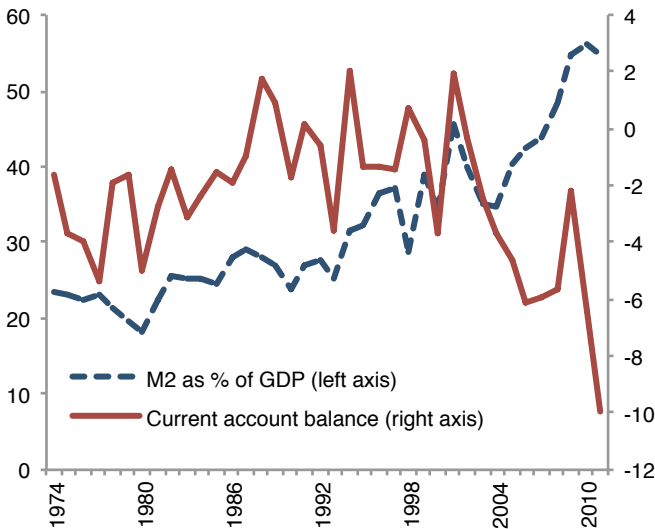
High domestic savings rates may have other positive effects on the current account as well. In the absence of monetary policy intervention, foreign capital causes local currency appreciation, making exports less competitive. For small and medium enterprises without access to foreign capital, lower domestic savings restricts growth in these businesses, which employ nearly 80% of the country’s workforce.³⁶

3.1.2 DETERMINANTS OF SAVINGS

Research using Turkish data suggests that savings is positively correlated with income and education.³⁷ The intertemporal rate of substitution is low at low levels of income, as people in poverty often do not have the ability to save.³⁸ Therefore, as Turkey develops, savings rates should increase.

Findings also show that savings is negatively correlated with the youth-dependency ratio, which is ratio between non-working youth and working adults.³⁹ Chinn and Prasad (2002) show that there is a link between youth dependency ratios and current account balances for developing countries (excluding Africa). In the case of Turkey, a time trend analysis indicates that the youth-dependency ratio has declined steadily over time (consistent with development theory of middle income countries). Yet since youth dependency ratios are higher in Turkey than in its major trading partners, this will, other things equal, lead Turkey to run smaller current account surpluses or even deficits.⁴⁰

Graph 16. Financial Deepening and Current Account (% of GDP)



Source: World Development Indicators

The level of financial market development is an important determinant of the savings rate. Financial deepening (defined by Edwards (2004) as the proportion of broad money M2 to GDP) could have two effects working in opposite directions. On the one hand, as markets deepen, households have more opportunities to save in the formal sector; on the other hand, as financial markets develop, and borrowing constraints are reduced, households have less incentive to save. Applying estimates to Turkish data, the evidence suggests that, post-2002, financial deepening has had a negative effect on the current account balance due to the removal of borrowing constraints (Graph 16).⁴¹ The correlation coefficient between M2 as a percentage of GDP and the current account as a percentage of GDP was found to be -0.47.

Overall, the recent decline in private savings is likely due to a decline in macroeconomic vulnerabilities, a rapid expansion of credit, and increasing house prices (Van Rijckeghem & Ucer, 2009; Ministry of Development, 2012). As Turkey’s economy became perceived as less risky and access to credit increased, which reduced consumers’ liquidity constraints, individuals reduced their precautionary savings. Expansion of consumer credit also fueled a consumption boom, leading to further declines in savings rate and increasing household debt in Turkey. Household liabilities as share of assets grew from 10% in 2004 to 32% in 2010.⁴² Spending on consumer durables doubled during the mid-2000s and a larger portion were funded by consumers borrowing rather than from accumulated savings.

3.1.3 INCREASING TURKEY'S SAVING RATE

3.1.3.1 CHANGES TO PUBLIC SAVINGS

Increased saving by the public sector is a clear way to increase aggregate savings. As outlined in Section 1.2.1, the idea that increased public savings will simply be offset by a decrease in private savings – Ricardian equivalence – does not hold perfectly in Turkey. That said, the fiscal consolidation of the past decade was very large. Further consolidation may be politically difficult and potentially economically undesirable. Even though higher public savings are not a focus of this report it is worth mentioning that targeting a fixed structural budget deficit, which increases public savings at precisely the time in the economic cycle when the private sector saves least, could be considered.

The successful fiscal consolidation of the past decade was achieved primarily through reduced expenditures, notably through privatizing government run enterprises.⁴³ Reforms promoting central bank independence, along with various other financial market improvements, led to lower interest payments on Turkish sovereign debt and also encouraged higher private investment, which helped compensate for lower public investment. Yet, despite this impressive transformation, little reform has been enacted on the revenue side.⁴⁴ Tax reform that expands the formal sector may further reduce distortions and increase economic growth.

Still, it is unclear at this time whether substantially more fiscal tightening of the structural budget would be desirable or politically feasible. Some argue for the importance of Turkish government public investment in upcoming years, particularly in services such as education, rule of law, and infrastructure.⁴⁵

3.1.3.2 IMPROVING FINANCIAL INTERMEDIATION

Effective financial intermediation, in the form of a well-functioning banking sector and capital markets, is necessary for savings to be put to productive use. Currently, Turkish citizens keep a significant amount of their savings “under the mattress” and financial markets outside of the banking sector are underdeveloped. Increasing transparency and trust in Turkish financial markets is an important way to increase savings invested in formal channels so it can be directed towards investment.

“Under the mattress” savings includes gold, cash, foreign currency, and loans to family and friends. Micro level data from the Ministry of Development (2012) show that 30% of households bought gold, jewelry or watches in the past year and focus group participants said that they have a significant amount of savings in gold. Individuals discussed home ownership and buying real estate as investments, which are less risky and more profitable than investing in financial instruments. While 54% of the respondents own property, only 30% of households own some form of financial assets.

The Turkish financial sector is dominated by the banking sector, which accounts for 88% of financial sector assets (Ministry of Development, 2012). The equity market continues to be small compared to the size of Turkey’s economy, with the total market capitalization of the stock market at the end of 2009 at only 38% of GDP, much lower than other similarly developed countries. Foreign investors accounted for 60% of market capitalization (Ministry of Development, 2012). The Turkish stock market has performed incredibly well, growing 600% between 2002 and 2010 but remains volatile, and there is the perception among Turkish citizens that the stock market lacks transparency and is subject to manipulation (Ministry of Development, 2012). In 2009, the private bond market accounted for less than 1% of GDP, far smaller than other emerging market economies.⁴⁶

Research suggests that a lack of access to external financing has slowed the growth of small and medium sized enterprises (SMEs) in Turkey (Ministry of Development, 2012). Working to develop financial markets should focus in part on increasing SMEs access to capital and debt financing through the stock and markets respectively. These efforts are ways to both provide legitimacy to these financial markets and increase economic growth.

Given the Chilean experience (Box 1), the Turkish government should continue working towards developing its domestic bond and stock market in order to increase its savings rate. Strong institutions and transparency serve to attract increased domestic savings into the financial system. Better financial intermediation also steers savings towards productive uses domestically, which ultimately grows the domestic economy in a more robust and stable way. In addition, the government should seek to open the stock and bond markets to small and medium size enterprises in order to diversify their sources of funding, which will also help grow the economy. Inclusion of a broader set of companies into the stock and bond markets will give domestic markets more legitimacy.

BOX 1. ENCOURAGING SAVINGS: THE CHILEAN EXPERIENCE

Chile is an example of a middle-income country that pursued policies to successfully increase its private savings rates. In the early 1980's, Chile had extremely low savings rate of around 6% of GDP at its lowest point (Morande, 1998). Yet by the early 1990's, Chile's savings rates surpassed 20% of GDP and remained high (Morande, 1998).

Morande (1998) argues that sustainable growth and the development of capital markets were responsible for the rise in Chile's private savings rate. This was achieved in part through social security reform in the early 1980's, which made social security fully-funded and a compulsory savings system. The new policy encouraged the emergence of private pension funds, which deepened and brought credibility to Chilean capital markets. Tax reform during the mid-1980s, which encouraged corporate savings, probably encouraged the growth of the private savings rate as well. In addition, some economists emphasize how the development of financial markets in Chile was supported by a system of prudential regulation, which improved banking supervision (Cifuentes, Desormeaux, Gonzalez, 2002).

De Mesa and Mesa-Lago (2006) attempt to uncover lessons from Chile's experience that can be applied to other countries. They describe how the Chilean experience influenced similar reforms in other Latin American countries, particularly in promoting privatization of pension systems, and study to what extent these similar reforms were effective. They find that the nine other Latin American countries they study did not achieve the same results as Chile after reform. On average, pension companies in these countries tend to be a concentrated industry that lacks competition, with high administrative costs and difficulty in diversifying outside their home countries. This evidence does not mean that Chile's experience should not be replicated. To the contrary, this paper highlights the importance of developing effective markets in order to promote savings.

3.1.3.3 PENSION REFORMS

Increasing savings in pension funds should be seen as one of the key channels for increasing the household savings rate. In 2003, the Turkish government introduced a voluntary private pension plan in order to encourage private savings for retirement. While the initiative is commendable, participation needs to increase dramatically in order for it to significantly increase the private savings rate in Turkey.

Participation in this voluntary pension scheme is low compared to other countries at similar levels of development, in part due to the fact that in Turkey these funds only started operating recently. As of 2011, there are 2.6 million contributors to private pension plans total over 14 billion Turkish lira or just over 1% of GDP.⁴⁷ Even though the private pension scheme has grown rapidly since its creation, there are concerns surrounding the scheme. The voluntary pension plan has high operating costs, and a large number of participants withdraw deposits within a few years of creating their pension, despite a penalty for doing so (Ministry of Development, 2012).

Increasing private savings through pension schemes depends on the legitimacy of fund management and trust in domestic financial institutions. The Chilean example (Box 1) indicates that one of the most important factors in encouraging pension participation may be the development of financial markets, to increase transparency and trust. The mutual fund market is a reasonably well-developed market, in part due to pensions programs. Yet, mutual funds tend to contain large share of government debt, and therefore

underperform the stock and bond markets (Ministry of Development, 2012). Reforming mutual funds to hold more longer-term investments yielding a higher rate of return may encourage pension participation.

In the past, another barrier of widespread private pension participation was the large informal sector in Turkey. The tax deductions used to incentivize Turkey's voluntary pension scheme are likely to be far less effective for workers in the informal sector, who do not pay taxes. In order to encourage increased private pension participation, the Turkish government announced this summer that, starting January 2013, new reforms would be enacted. These changes include government funded matching, including for pension plans established by an individual rather than an employer (Towers and Watson 2012). With these reforms, the government is attempting to incentivize savings for workers in the informal sector, as well as the formal sector. However, informality is likely to remain a barrier to participation and reducing the size of Turkey's informal sector is a worthwhile goal in this regard.

These private pension reforms are a step in the right direction. A marketing campaign should be a part of the effort in order to publicize financial market reforms to citizens and encourage private pension fund participation. Financial literacy efforts should be included in this campaign to educate the public about the safety and benefits of starting a private pension fund. Although evidence is mixed on the effectiveness of financial literacy campaigns⁴⁸, this approach might still be useful in the context of promoting private pensions.

3.1.3.4 OTHER POLICY OPTIONS

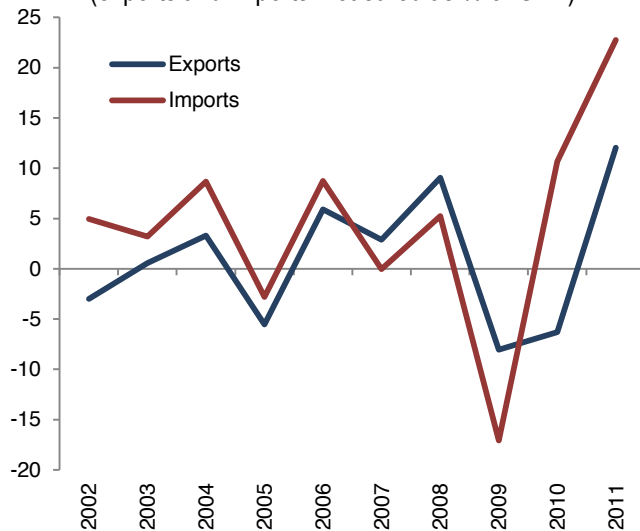
The focus of this report is on increasing household savings, assuming that the majority of Turkey's dissaving is from the household sector. However, if corporate dissaving is high then strategies to address this would also help increase the aggregate savings rate. Private firm dissaving is likely an important reason for why the private savings rate is so low in Turkey. But data that disaggregate private savings into household and corporate savings are not publicly available. Improving data around Turkish savings should be a priority in order to better understand why private savings has become so low in recent years and what can be done to reverse this trend. For example, the 2008 Survey of Consumer Finances administered by the Ministry of Finance could be made public. In addition, efforts should be made to make more data about corporate savings publicly available (such as retained earnings), including for SMEs.

Finally, it is important to emphasize the importance of development policy in general as a means of improving the Turkish savings rate. Research suggests that income and education are related to the savings rate (Ministry of Development, 2012). Therefore, goals such as increasing productivity and improving labor skills, which are laudable in their own right, will help to increase Turkish savings.

3.2 TRADE IMBALANCE: EXPORTS AND IMPORTS

Viewed through the lens of the trade balance, a current account deficit can be improved by increasing exports and/or reducing imports. In recent years, Turkey has transitioned into an export-driven economy, significantly expanding its external trade relationships, particularly with Europe and MENA countries. However, import growth has outpaced export growth resulting in a widening of the current account deficit (Graph 17). While exports, aided by export promotion programs and increased competitiveness, must continue to increase, Turkey also needs to address its dependence on imported energy and intermediate goods to manage import growth.

Graph 17. Annual Growth of Exports and Imports
(exports and imports measured as % of GDP)



Source: Turkstat and WDI

3.2.1 EXPORT PROMOTION

Since implementing its set of broad-based economic reforms, Turkey has enjoyed success in diversifying its export base, in terms of both products and markets. Turkey’s large increase in exporting activity over the past decade has been accompanied by a sizable increase in the number of products it exports, from 233 in 1995 to 258 in 2011 (Graph 6). The country has likewise managed to expand its export sales into new countries over the same time period from 180 in 1996 to 236 in 2011, demonstrating sizable increases in exports to the Asia and the MENA regions (Graph 7). Efforts to diversify geographically have allowed Turkey to weather the demand shocks resulting from the economic crises of the past years in the EU and the US.

Looking to build on these successes, in 2009 the Turkish Ministry of Economy and the Turkish Exporters Assembly announced the “Exports Strategy of Turkey for 2023.”⁴⁹ The ambitious initiative aims to increase exports by 12% annually to reach \$500 billion dollars of exports annually and 1.5% of the global share of the world’s trade by 2023. These are worthy goals for increasing exports and improving the country’s external position. Economic theory supports government involvement in export promotion to solve problems of asymmetric information and other market failures, including hesitancy by private firms to incur costs of researching foreign markets because externalities can also benefit competitors.⁵⁰ Pioneer exporters are similarly worried about free-rider problems when attempting to open new foreign markets, cultivate new contacts, establish international distribution chains, and making other investments that are crucial to penetrate foreign markets.⁵¹ The Ministry of Economy’s plan can aide Turkish businesses in exporting to new markets by helping them overcome problems of imperfect information about foreign markets, foster new cross-border commercial networks, coordinate marketing and sales programs abroad, and establish a physical presence in markets such as the United States and China.

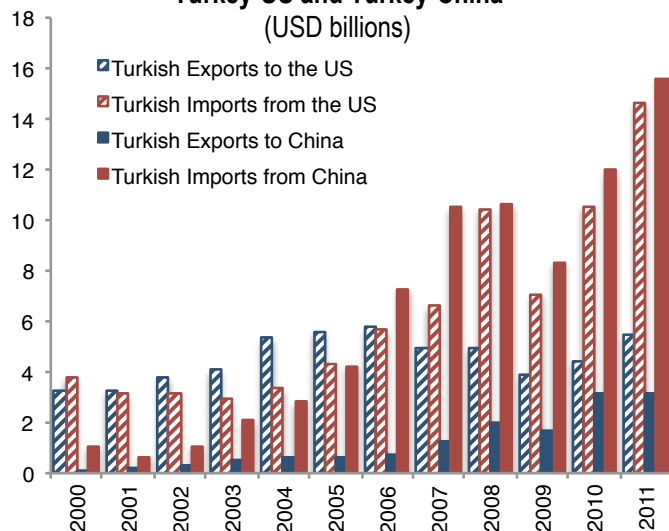
3.2.1.1 OPPORTUNITIES FOR TURKEY TO DIVERSIFY EXPORT DESTINATIONS

Trade theory and empirical evidence suggests that a country’s dependence on a narrow range of exports to a narrow set of destinations increases an economy’s vulnerability to economic shocks.⁵² Export diversification, both in the composition of products exported and the destination of products, lowers volatility in earnings from exports, expands national revenues, fosters industrial innovation to create more value-added products, and enhances growth.⁵³

Especially since entering into a customs union with the European Union, Turkey’s trade relationship with the EU has become crucial to its economy. Prior to the global financial crisis, the European Union consumed around 56% of all of Turkey’s exports.⁵⁴ Over the last decade, however, Turkey has also astutely moved to expand and diversify its trade relationships outside of Europe, particularly in the MENA countries. This strategy has paid crucial dividends, especially after the global financial crisis, which has had a prolonged effect on Europe. As European Union’s demand for Turkish exports dropped between 2007 and 2009, falling from 56% to 46%, the MENA countries share of Turkish exports rose, rising from 17% to 26%.⁵⁵ Over four years later, Europe’s economy still remains shaky. As European demand for Turkish exports continued to drop in the first eight months of 2012 – falling to 39% from 48% in 2011 – MENA partners continued to pick up the slack.⁵⁶ However, ongoing civil strife following the “Arab Spring” could have an impact in the near-term on aggregate demand in affected countries.

Turkey currently runs large trade deficits with these key countries, especially China and the United States (Graph 18). In 2012 (through October), Turkey imported \$17.5 billion from China while only exporting about \$2.5 billion in return.⁵⁷ In 2012 (through October), Turkey imported \$12 billion from the US while only exporting about \$4.6 billion.⁵⁸ The Ministry of Economy’s Annual “Action Plans” rightly focus on increasing exports to these countries and should be pursued in earnest.

**Graph 18. Bilateral Annual Trade Flows
Turkey-US and Turkey-China
(USD billions)**



Source: Direction of Trade Statistics (IMF)

3.2.1.2 BEST PRACTICE IN EXPORT PROMOTION PROGRAMS

When designing firm-targeted export promotion programs, policymakers must decide between many approaches. In making funding allocation decisions, or in establishing a set of criteria for the approval of export promotion program applications, Ministry leaders may want to evaluate their options along several dimensions:

- 1) Are programs more effective focusing on SMEs or MNCs?
- 2) Are programs more effective in targeting firms already exporting or non-exporting firms?
- 3) Are programs more effective in helping firms export *new products* or in helping firms export to *new markets*?

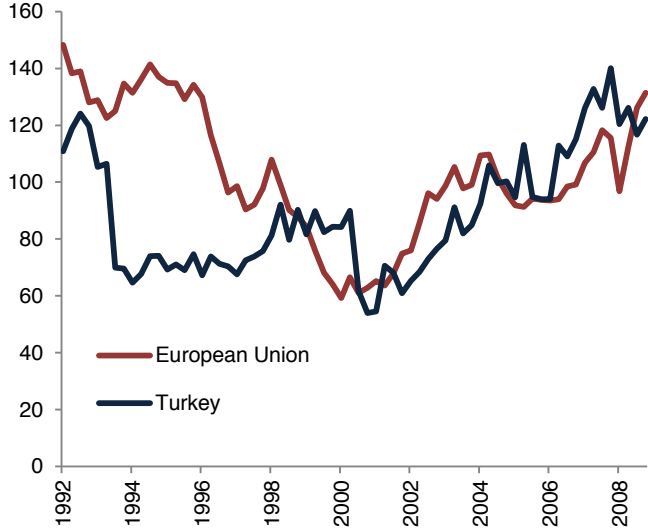
In efforts to increase Turkish global market share, The Export Strategy aims to give priority to “branded products.” Such products are more likely to come from large Multinational Corporations, such as Vestel, which already boasts more than 20% of Europe’s color TV market share. While the large brands generate reputation benefits to the Turkish exporting industry at large, in focusing on large industries, the Export Strategy risks neglecting another crucial export revenue generator—Small Medium Enterprises (SMEs). In contrast to many large firms, SMEs collectively contribute a net surplus to the country’s current account, generating nearly 60% of the country’s exports, while accounting for only 40% of the country’s total imports (Ministry of Economy, 2012). Given this, Turkey’s Export Promotion programs at small firms could work to a great effect in generating broad-based net export growth. An analysis of six different Latin American Export Promotion programs, focusing primarily on the Chilean PROCHILE program has also found that small firms benefitted from Export Promotion programs most (Martincus, 2008a).

Under Area of Action 1, the Export Strategy plan emphasizes the importance of directing exporters to alternative markets and increasing the number of exporting firms. In doing so its places priority on increasing exports through the *extensive* margin. It places less emphasis on simply helping existing exporters ramp up their production of existing exports, or through the *intensive* margin. Field evidence suggests this emphasis is well placed. In examining the PROMPEX Export Promotion scheme in Peru, Martincus (2008b) finds evidence that confirms Export Promotion programs achieve their effect primarily through the extensive margin. This suggests, as indicated in the table below that EP programs in can be most effective in assisting current or potential exporters export new products or expand exporting activity to new export markets, rather than helping firms ramp up exportation of existing export products.

	Current Exporters	Potential Exporters
New Products	Current exporters export <i>new</i> products to <i>existing</i> markets	Helping potential exporters develop new products for export.
New Markets	Current exporters export <i>existing</i> products to <i>new</i> markets.	Helping potential exporters export existing products for the first time.

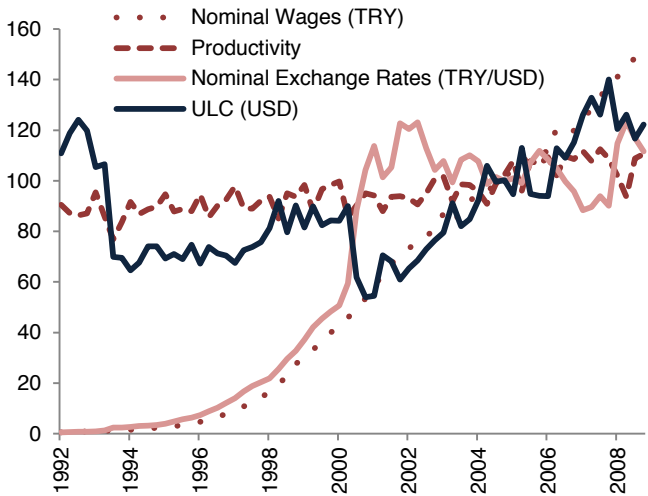
But where, specifically, on the matrix above does the project-level evidence suggest Export Promotion programs can be most effective? A recent study by Martincus (2011) suggests that programs are particularly effective in helping *current exporters* increase along the *new markets* dimension of the extensive margin. The result makes intuitive sense: It is much less costly for firms already exporting to expand into new markets than to add production lines. The result likewise provides a microeconomic explanation for Turkey's recent market diversification successes in the MENA region and lends additional support for the Export Strategy's emphasis on market penetration activities.

Graph 19. Unit Labors Costs of Turkey and EU
(Index, 2005=100; quarterly)



Source: OECD, *International Financial Statistics (IMF)* and Eurostat

Graph 20. Nominal Wages, Productivity, Nominal Exchange Rates, and Unit Labor Costs
(Index, 2005=100; quarterly)



Source: OECD and *International Financial Statistics (IMF)*

3.2.2 EXTERNAL COMPETITIVENESS

One way to reduce Turkey's trade imbalance is to increase exports by enhancing the relative competitiveness of its firms. According to the Global Competitiveness Report 2012-2013, Turkey ranks only 57th out of 142 in terms of external competitiveness.⁵⁹ Moreover, according to McKinsey Global Institute (2003), Turkish productivity is at only 40% of the current US level and is only slightly more than half of its own potential. This clearly leaves room for improvements in both Turkey's basic infrastructure (e.g. physical, institutions, education and health system) and market efficiency (labor, capital, and goods) to further productivity and thus competitiveness.

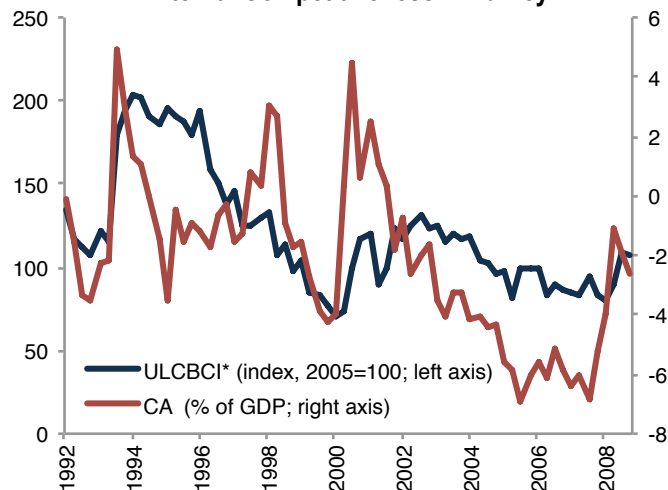
Competitiveness is often framed in terms of unit labor costs, which incorporates both productivity and nominal wages adjusted by the nominal exchange rate, compared to those of trading partners.⁶⁰ Increased productivity will diminish unit labor costs while lower nominal wages increase competitiveness as long as they are not only a reflection of lower productivity. Regarding the nominal exchange rate, a more depreciated currency translates into lower relative unit labor costs. Comparing unit labor costs (ULC) between Turkey and the EU (its major trading partner) we see that since 2000 the two series have broadly moved together, implying that over that period no major gains in external competitiveness have been achieved (Graph 19).

Following the large depreciation during the 2001 crisis, nominal exchange rates stabilized yet nominal wages kept increasing, reducing the competitiveness of Turkish exports (Graph 20). Throughout the period productivity level variation is relatively small yet there seems to be a positive trend.

Keyder et al. (2004) compares Turkish ULC to those of its fifteen major trading partners and argues that, despite an overvalued lira, Turkey's exports can still compete as long as there is a cost advantage. For

instance, they claim that during the period 1999-2003 exports continued to increase simply because lira overvaluation was more than offset by relatively lower ULC.

Graph 21. Current account and External Competitiveness in Turkey



* The Unit Labor Cost-Based Index is built by taking the inverse of the Turkish ULC relative to those of EU.

Source: OECD, *International Financial Statistics (IMF)* and Eurostat

Improvements in Turkey's external competitiveness are empirically related to a reduction in the current account deficit (Graph 21). Statistical analysis indicates that a 1 percentage point increase in the competitiveness index growth rate is associated with an improvement of the current account balance by 0.16 percentage points (see Appendix A for details of the model). This suggests an important correlation between external competitiveness and the current account, and calls our attention for policy measures aimed at reducing relative ULC in Turkey such as increasing productivity and/or managing nominal wage growth.

Long-lasting efforts towards improving productivity in key tradable sectors could have positive effects in the current account balance. It is worth noting, however, that higher productivity in tradable sectors will tend to

increase prices in non-tradable sectors leading to an appreciation of the TLY (i.e., Harrod-Balassa-Samuelson effect), which may offset the positive effect of higher productivity in exports. Further productivity growth will also increase local demand (i.e., absorption capacity), incentivizing more imports. Despite these offsetting effects, higher productivity will improve Turkey's ability to rebalance its current account and service its debt in a sustainable way.

BOX 2. IMPROVING PRODUCTIVITY IN TURKEY

Based on a thorough analysis of eleven sectors in Turkey, McKinsey Global Institute (2003) put forward the following broad recommendations to further productivity:

1. Reduce dramatically the level of informality in the economy.
2. Ensure that liberalization of the utilities sectors takes place only within a robust regulatory and judicial framework.
3. Achieve macroeconomic stability.

Englander and Gurney (1994) highlights that education probably provides around 5-10% increase in productivity levels per additional average year of education, but there are very small long-term effects on growth rates from an additional year of education. Contrastingly, McKinsey Global Institute (2003) argues that technical (on-the-job) training may be more important in creating human capital (and therefore enhancing productivity) than is more years of schooling.

Blanchard (2007) argues that reducing informality of labor markets, improving zoning and licensing requirements, and adapting employment protection laws to allow seasonal industries to use labor more efficiently would be effective measures to raise productivity. Jajri (2007) conducted an empirical analysis to pin down the determinants of total factor productivity (TFP) growth in Malaysia during 1971 - 2004. In particular, he found that openness to foreign companies and the world economy are significant in explaining TFP changes.

Increasing flexibility in the labor market is another alternative to increase external competitiveness. A clear indicator of wage rigidities and other inefficiencies in the Turkish labor market is the significant number of people working outside the formal sector. These underground firms continue to operate outside of the formal economy in order to avoid taxes and social security contributions and adherence to other laws. This feature of the Turkish economy is a main reason why tax rates are high, creating unfair competition conditions for different firms and possibly generating net welfare losses. Although reducing nominal wage growth is a much less appealing strategy than increasing productivity it certainly can operate more rapidly and yield short-term results. Nevertheless, pursuing such a policy may be socially and politically costly.

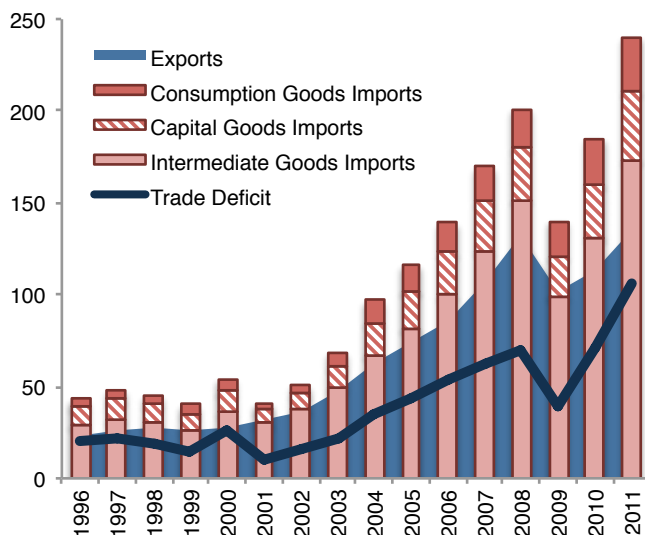
Blanchard (2006) points out that to avoid a period of “competitive disinflation”⁶¹ decreasing the nominal wage growth rate and price of non-tradables may be instrumental. For instance, in 2011 productivity and wage annual growth in the EU were 1.2 and 3.4% respectively, which is an increase in labor costs of 2.2%. Likewise, Turkey’s productivity and wages grew at 2.5 and 9.6%, implying an increase in labor costs of 7.1%. Therefore, Turkey’s relative labor costs in 2011 increased by 4.9%. If nominal wages in Turkey, at the extreme, had been frozen (disregarding movements in the exchange rate of the EU and Turkey) relative labor costs would have decreased by 4.7%. In other words, the currently high wage growth rate in Turkey in Turkey, beyond productivity growth, may be one factor limiting export growth as it undermines Turkey’s relative competitiveness.

3.2.3 RELIANCE ON IMPORTED ENERGY AND INTERMEDIATE INPUTS

Turkey’s heavy reliance on imported energy and intermediate goods is a key challenge for reducing the current account deficit. Without action on this front, efforts to boost exports may not be effective at closing the trade deficit as producing these exports requires an increase in imported intermediate goods. The sustained appreciation of the lira during the past decade – which made imports cheaper – coupled with the shift of the economy towards a more capital-intensive production increased the demand for intermediate inputs and exacerbated the trade imbalance.

Given that Turkish exporters have increasingly used imported inputs in the production process that are not easily substituted by domestic goods, a higher demand for Turkish exports triggers an increase in the derived demand for imports. Turkish exports have grown rapidly in the last decade, contributing significantly to the economy (Graph 22). In 2001, Turkey’s total annual exports totaled \$3.1 USD billion and by 2011 reached \$134.9 USD billion. However imports growth has outpaced the rise in exports worsening the trade deficit. In 2011, real annual export growth was 9.1% while real annual imports growth was 19.5%.⁶²

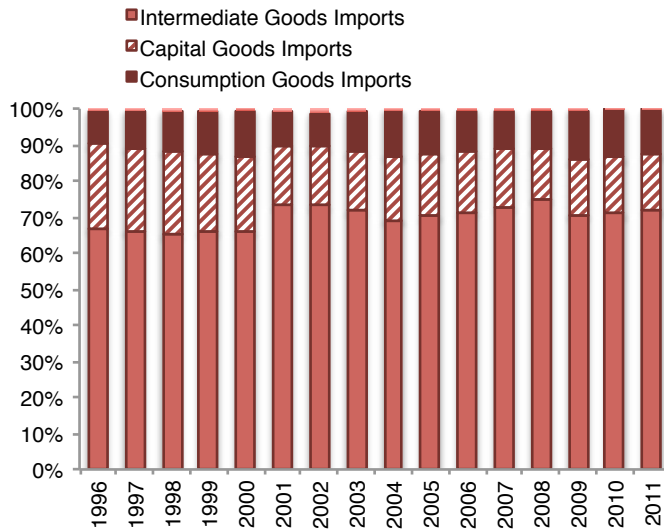
Graph 22. Evolution of Trade Deficit
(USD billions)



Source: Turkstat

By analyzing the Broad Economic Categories (BEC) classification of imports, we observe that the share of consumer goods imports compared to total imports did not greatly increase between 1996 and 2011 (Graph 23). The high import growth rate observed in the past decade can be attributed in large part to the growth of intermediate goods, which represented 72% of total imports in 2011. For OECD countries, intermediate inputs represent on average only 56% of goods trade.

Graph 23. Imports by BEC Classification
(% of total imports)



Source: Turkstat

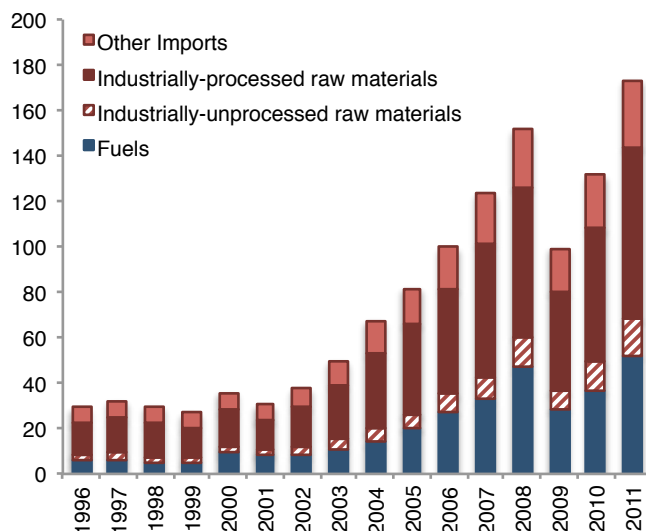
According to the CBRT Business Survey (2009), which covers large industrial firms, imported intermediate goods as share of total imports increased by 10 percentage points during 2000-08 due to: (i) inadequate quantity and/or quality of domestic alternatives; (ii) input sourcing decisions taken at headquarters by multinational companies; (iii) a shift from labor- to capital-intensive products but without a corresponding increase in capacity to produce capital-intensive intermediates; and (iv) an increased tendency, particularly in labor-intensive sectors, to resort to cheaper imported intermediate and investment goods.

Given that a large portion of the trade deficit comes from the reliance on intermediate imports goods, it is relevant to understand which industries and products are the cause of this imbalance. Imports of fuels and industrially processed raw materials are a significant driver

of Turkey's imbalance.

The bulk of energy imports consists of crude oil and natural gas (34.4 USD billion in 2011), and coking coal, petroleum and nuclear fuel (18.3 USD billion in 2011). Energy imports account for 22 percent of Turkey's import and about 47% of the trade deficit. Research and development efforts on alternative energy could help reduce the dependence on foreign-sourced energy. Turkey has the second biggest onshore wind and solar potential in Europe, and third biggest geothermal potential, but development has been slow. The rapidly growing energy industry requires high amounts of new investments in addition to financial resources to ensure their implementation, as well as a sound and consistent legislative infrastructure. Additionally, measures to reduce energy imports may include modernization of the energy infrastructure, improvement of energy efficiency, and encouraging companies to save energy.

Graph 24. Intermediate Goods Imports
(USD billions)



Source: Turkstat

An examination of imports by International Standard Industrial Classification of All Economic Activities (ISIC) shows that the dependence on imported energy is not the whole story (Graph 24).

The other sectors that can largely explain the foreign trade imbalance are the chemical and the metal industry.⁶³ The chemical industry posted the second largest foreign trade deficit in 2011 (33.2 USD billion imports compared to 6.7 USD billion exports).⁶⁴

The Turkish metal industry is the largest scrap importer in the world, with \$10.5 USD billion worth of imports in 2011. According to industry representatives, the main reasons for the high ratio of intermediate goods imports in the iron and steel sector are: (i) inadequate local

production of flat-rolled and qualified steel products; (ii) the inability of local producers to establish trust in terms of quality and delivery; (iii) and issues related to business ethics, trust, continuity, and flexibility in local production.⁶⁵ Therefore improving the quality of the institutions, rules and regulations and policies that affect the business climate could enable the local production of manufacturing inputs.

BOX 3. TURKEY'S INVESTMENT INCENTIVE SCHEME

Introduced in the first half of 2012, the Ministry of Economy's 'New Investment Incentives Program' has as one of its objectives to reduce the current account deficit of Turkey by encouraging domestic production of intermediate inputs. While the program has four major categories of investment assistance- General, Regional, Large-scale and Strategic, the latter two are relevant for the purposes of exploring the production of intermediate and final products with high import dependence in order to gauge the impact on the current account deficit.

In an assessment of the incentive scheme, Acar and Caglar (2012) pose the question of whether a micro policy tool such as incentives can solve a macroeconomics problem like the current account deficit. From the fundamental current account identity it is easy to see that simply reducing import of intermediate goods will not address the deficit. Underlying the deficit is a problem of weak domestic savings, which are unable to meet domestic investments. Should domestic investments increase without a concomitant increase in savings; this is likely to exacerbate the current account deficit.

Not only is it difficult to conceptualize a direct link between the current account and the incentive scheme, it is difficult to quantify the impact of the scheme given that the project was implemented a few months ago. A preliminary analysis could involve exploration of the certificates being issued for investments. If the scheme is aimed at decreasing the dependence of the sectors with growth potential on the imported intermediary goods, the certificates can be explored to see whether investments are being made in those goods. Data from the Ministry of Economy's website shows that of the certificates issued in the month of October, investments in manufacturing consist of the largest share (61%). Certificates issued for investments in energy consisted of only 3% of the total number of certificates issued in October.

It may be worth visiting some of the broader criticisms about the scheme which have been talked about by Turkish economists. These are listed below:

- Despite assertions from government officials, there are concerns that the scheme is akin to the import substitution strategy pursued by Latin American countries.
- Implementation and monitoring capacity of the bureaucracy is not sufficient for a project of this scale.
- CAD is a holistic problem; critics argue that instead a multi-pronged approach is necessary.
- Some contend that the incentive scheme is what it seems--compensation to investors for bad investment climates.⁶⁶
- Exporters have expressed a concern that domestic production of intermediate inputs may not lead to purchase of domestically produced intermediate outputs if their quality is inferior to that of their foreign counterparts.
- Lack of publicly available data, especially that of how the regions were selected, raises concerns that the incentive is a means of political patronage.

Overall, our assertion is that the scheme should be promoted as one part of a larger comprehensive package to address the current account deficit.

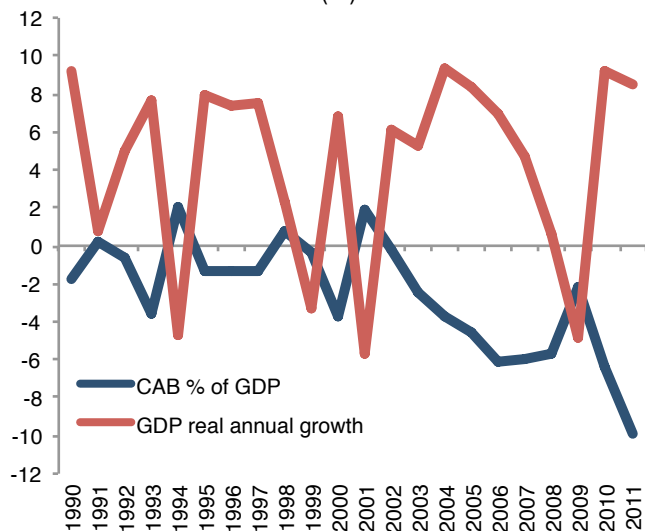
4. CYCLICAL DRIVERS OF THE CURRENT ACCOUNT DEFICIT

While in the long run addressing structural determinants of the current account deficit is crucial, there is also an important role for shorter-term policies in managing the cyclical fluctuations of the current account deficit. This section establishes the robust link between the current account deficit and Turkey's position in the business cycle, suggesting that effective counter-cyclical monetary and fiscal policies have a role to play. It also presents evidence that suggests caution should be used if considering the exchange rate as a policy tool for addressing the deficit.

4.1 THE CURRENT ACCOUNT IN THE BUSINESS CYCLE

There is strong evidence linking the current account deficit and GDP growth through the business cycle in Turkey. Observation of the data show that these two series have moved closely together over the past twenty years (Graph 25).

Graph 25. GDP Growth and Current Account Balance (%)



Source: World Development Indicators

highlights that countries with higher levels of output are more likely to attract capital flows from abroad, which creates a positive association between the domestic output and the capital account, but a negative relationship with the current account.

This relationship can be compounded if, as in the case of Turkey, industrial production heavily depends on imported intermediate goods (see Section 3.2.3). As output expands, more of these intermediate goods are required leading to a rise in imports. Akal (2010) calculate the income elasticity of imports and estimate that a 1% rise in income leads to a 2.24% rise in imports.

Several empirical studies have been carried out to find the short-run relationship between output growth (both domestic and foreign) and current account balances. Calderon et al. (1999) use data from 44 developing countries for the period 1966-95, finding that an one percentage point rise in the GDP growth rate leads to an increase of about 0.21 percentage points in the current account deficit.⁶⁸ Yang's (2010) findings in emerging Asian economies suggest that domestic income also has a negative impact on the current account for the Philippines and Thailand.

This is consistent with economic theory. Using a basic inter-temporal approach, current account behavior is mainly determined by an update in expectations of future income by forward-looking private agents.⁶⁷ Higher expected income growth in the future – such as during a boom – leads to greater borrowing and spending today, and the converse is true when lower income growth is expected (a downturn). If import demand is a function of a country's income, whereas export supply is a function of foreign countries' income, a rise in domestic income increases imports with little effect on exports.

Khan and Knight (1983) point out that excess domestic demand generally manifests itself in a worsening of the balance of payments and a rise in the domestic inflation rate, with the relative sizes of these effects depending in large part on the openness of the economy. Yang (2010)

Using data from the World Bank's World Development Indicators we estimated the correlation between GDP growth and the current account balances for Turkey from 1974 to 2011 is -0.44. This simple calculation implies that a policy aimed at cooling the economy would be an effective way to reduce the current account deficit in Turkey.

More robust statistical analysis controlling for other factors such as the real exchange rate, foreign output, the terms of trade and fiscal balance produces a similar result (see Appendix A for details of the model). This model shows that a fall of approximately one percentage point in the domestic industrial production growth rate (used as a proxy of aggregate demand) is associated with a 0.28 percentage point reduction in the current account deficit. In other words, an annual reduction of one percentage point in the current account deficit will require a fall of three and a half percentage points in the annual growth rate. Like all statistical estimation, caution should be used in applying these findings, as this does not necessarily identify causation, and relationships can change over time.

The natural policy implication of this finding is that restraining economic growth to sustainable levels may ameliorate the current account deficit. While it might be argued that such a measure will increase unemployment, the adjustment would occur at the peak of the cycle when unemployment is not a significant concern. Moreover, as the economy overheats, price instability (i.e., inflation) may challenge the structural level of unemployment in the long term.⁶⁹

4.2 COUNTER-CYCLICAL FISCAL POLICY

Turkish government officials recognize that a key tool of demand management is fiscal policy, and are implementing policy with this goal of bringing GDP growth to sustainable levels and reducing the current account deficit. Turkey's finance minister Mehmet Simsek recently said, "Reducing the current account deficit is our number one challenge and priority. All you can do in the short run is cool the economy and we're doing what we should be doing."⁷⁰

Countercyclical fiscal policies have the flexibility and effectiveness necessary to control internal demand and thereby improve the country's current account balance. Turkey's fiscal deficits have been modest in recent years and are part of the strong macroeconomic fundamentals built over the past decade. Given the current stage of Turkey's business cycle, relatively tight fiscal policy should remain in place so long as domestic demand pressures remain.

4.3 THE ROLE FOR THE CENTRAL BANK AND MULTIPURPOSE MONETARY POLICY

Any policy response aimed at managing the domestic macroeconomy necessarily has a key role for the Central Bank of the Republic of Turkey. However, as noted in Röhn, et al. (2012):

"Turkey faces the complex task of taming inflationary pressures without attracting surges in short-term capital inflows. On the one hand, these inflows fuel domestic credit growth, thereby counteracting the intended monetary tightening. On the other hand, they push up the exchange rate, hampering competitiveness."

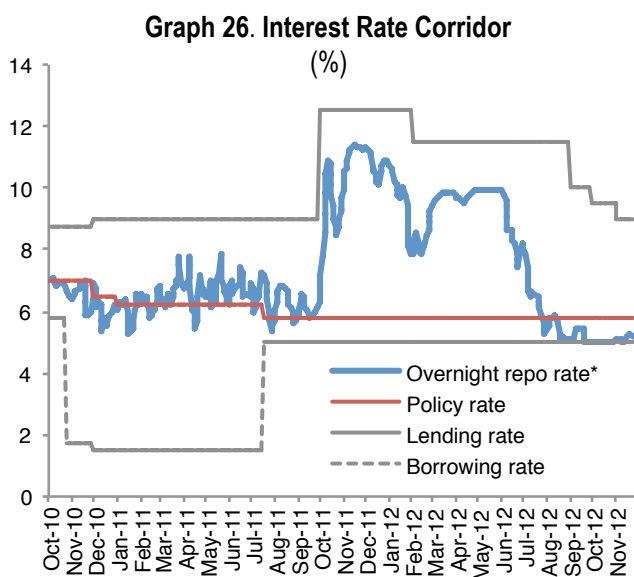
In response to the difficult situation, the CBRT has employed a range of both traditional and new tools. Thus far, they have been relatively successful in preventing the short-term negative impacts on the economy; however, the benefits of these tools may hurt the medium- and longer-term effectiveness of monetary policy towards the current account adjustment process. This section focuses on how the CBRT can play an effective role in curbing the current account deficit through its impact on output growth, in the context of the environment of competing goals. The potential destabilizing effect of short-term capital flows is also an important concern of the CBRT, which is addressed in Section 5.

4.3.1 THE CENTRAL BANK'S TOOLKIT

The CBRT has instituted a number of innovative policy tools and instruments to address the need to “prevent excessive deviation of the exchange rate from economic fundamentals, while the necessary measures are taken in collaboration with other regulatory institutions, to avoid excess credit growth.”⁷¹ The argument for a non-traditional monetary policy response stemmed from concerns that raising policy rates will attract short-term capital and that lowering growth is a viable way to rein in the current account. Governor Başçı cited the CBRT’s need for policy tools that, in addition to maintaining price stability: channel foreign capital inflows into long-term investments; prevent an over-appreciation of the lira; control domestic growth; and contain domestic loans and domestic demand.

The CBRT toolkit now includes an interest rate corridor, reserve requirements, FX intervention, use of a “reserve option mechanism,” and various liquidity-manipulating measures such as engaging in one-month repo auctions.⁷²

A key CBRT innovation is the use of an interest rate corridor policy. The policy aims to segment the interest rates faced by domestic borrowers and savers from the returns that foreign investors can achieve in Turkey. The goal of the corridor is to allow the CBRT to set monetary policy in order to manage domestic demand and inflation pressures (with higher interest rates) without attracting excessive capital inflows. It achieves this by increasing the volatility associated with very short-term returns in Turkey (lowering the Sharpe ratio⁷³), which disincentivizes short-term foreign capital that is attempting to take advantage of real interest rate differentials between Turkey and the rest of the world. The CBRT policy rate is set within a band with the central bank’s overnight borrowing and lending rates setting the floor and ceiling respectively (Graph 26).



* 7-business day moving average

Source: Central Bank of Turkey and Istanbul Stock Exchange

that maintaining a corridor sends an important signal to the market that the emerging economy has functioning wholesale money markets.⁷⁴

The primary contribution of monetary policy with regards to achieving the goal of a lower current account deficit is making sure that output growth is kept at a sustainable pace. The CBRT’s policy corridor seeks to achieve this goal while at the same time discouraging very short term capital inflows. One concern is that the corridor may not be a perfect way to allow the CBRT to meet both these goals and that this could lead to the demand management objective not being fulfilled, aggravating the current account deficit. Given the strong

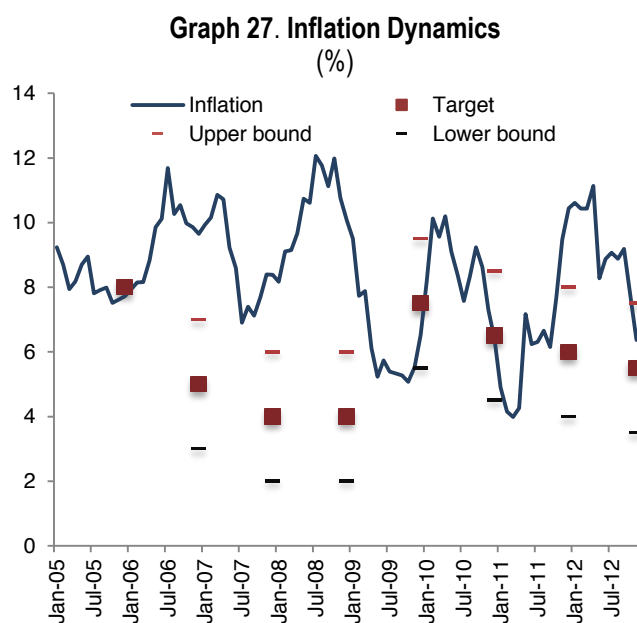
Other *ad hoc* monetary interventions accompanied interest rate decisions, including lowering reserve requirements, changing reserve requirements on FX deposits and engaging in FX sales in the wake of sharply depreciated nominal exchange rate in August 2011. The CBRT has also introduced a Reserve Option Mechanism (ROM) meant to be an automatic stabilizer, the effects of which are described in Section 5.3.3.

4.3.2 EFFECTIVENESS OF CENTRAL BANK POLICIES

Kahn (2010) and others have found interest rate corridor policies to be effective in providing adequate liquidity during financial crises. Benefits of a corridor include the flexibility it provides policymakers to change the cost of liquidity on a daily basis outside of Monetary Policy Committee meetings. Some also argue

positive link between output and the current account deficit identified in Section 4.1, excessively easy domestic monetary conditions could worsen the current account deficit.

The Turkish economy has had a mixed response to the new monetary intervention. In 2012 the current account deficit was smaller than the previous year in the face of more subdued domestic growth, the increased stability of the lira, and the accompanying moderation in inflation. However, the CBRT's headline CPI target has been breached every year since 2006 – except in 2009 and 2010 when the end-year target was 7.5% and 6.5%, respectively (Graph 27). The cumulative increase in the price level since 2005 has been 87.3%; had the CBRT met its inflation target over that period price levels would have risen only 55.6%.



Source: Central Bank of Turkey and Turkstat

Monetary policy can play a significant role in managing the cyclical component of the current account by achieving a sustainable path for output growth. It is worth noting that the higher-than-desired inflation might suggest that in order to manage short-term capital flows for financial stability purposes, demand has been allowed to grow too quickly in some instances. To the extent that less reliance on monetary policy to affect capital flows leaves the capital flow management objective unfulfilled, other tools should be brought to bear as discussed in Section 5.3.

4.3.3 TOO MANY POLICY GOALS RAISE CONCERNS ABOUT LONG-TERM EFFECTIVENESS

The current monetary policy regime is confusing in many respects. The interest rate corridor policy, in particular, has been criticized as creating too much volatility in interest rate markets as well as in money multipliers.⁷⁵ Such volatility may complicate the formation of long-run interest rate expectations, which could possibly distort inflation expectations. There is the potential for the monetary policy transmission mechanism to also be hurt due to opaqueness about policy objectives, which may make it more difficult for private actors to properly infer monetary policy intentions from rate decisions or movements in the real economy. However, inflation expectations appear to remain relatively well anchored and there is some evidence that the sensitivity of inflation expectations in Turkey to actual inflation has decreased over time.⁷⁶ This may indicate greater credibility of the CBRT's inflation target and weighs against the above concerns.

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There may also be some confusion around how monetary policy is being used to meet its objectives within its inflation targeting framework. While the CBRT's overarching goal is to achieve price stability and financial stability, currently monetary policy is being explicitly used to address exchange rate, inflation, credit growth, GDP growth, and capital flow dynamics. Significant liquidity tightening following exchange rate depreciation may suggest some exchange rate targeting in certain episodes. This was confirmed by CBRT deputy governor Turalay Kenc's statement: "We don't target a level of the lira but when we see a rapid depreciation we stop providing liquidity."⁷⁷ This plethora of goals, and interactions between competing objectives, may make it more difficult for savers and borrowers to form long-term expectations about the course of Turkish monetary policy.

The IMF voiced concerns about unclear policy objectives in stating that the "scope for arbitrariness may raise concerns about CBRT objectivity."⁷⁸ Providing transparency about the priority given to each policy objectives

(and the circumstances that could cause this to change) could help with managing expectations and thereby increasing the efficiency of the monetary policy transmission mechanism.

The sum of this policy uncertainty may shorten the time horizon at which savers and investors make their decisions. This has the potential to negatively affect savings and result in fewer long-term productive investments than is optimal, hurting the Turkish economy in the long run. Therefore, without being assured of an effective policy transmission mechanism, the CBRT's role in the current account turnaround may be diminished.

4.3.4 THE ARGUMENT FOR IMPROVED TRANSPARENCY

Improved monetary policy communication and transparency are necessary to addressing uncertainty and ensuring that market actors' expectations are appropriately calibrated during central bank intervention.

According to work by Geraats (2009), the CBRT already ranks within the upper echelons of central banks regarding communication. Monetary Policy Committee meetings are set for the middle of every month and policy statements are released at 2:00 PM on the day of the meeting. Starting in 2006, the bank began publishing its medium-term inflation outlook and enhanced the forward-looking content of the MPC policy statements. The bank also communicates the uncertainty around its inflation forecasts through tools such as fan charts.

Because much of the policy uncertainty stems from the competing factors influencing monetary policy, an explicit statement of the CBRT's considerations when setting interest rates is a key undertaking. The CBRT could supplement their communication strategies to better align policy intent and market understanding. Transparency of expectations and policy goals is important for all agencies whose policies influence the Turkish economy (Box 4).

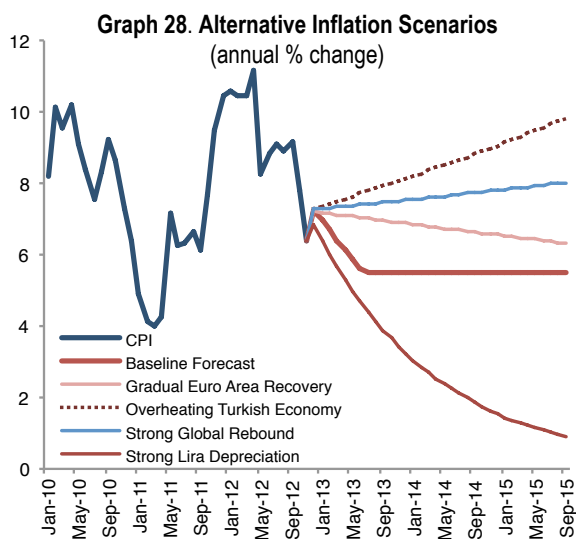
BOX 4. SUPPLEMENTING COMMUNICATION POLICY ACROSS AGENCIES

Forecasting Turkish economic variables is of utmost importance to those who make decisions based on the future state of the economy. Understanding these variables is important to government entities that make policy decisions based on the economy's movement. Many others have a vested interest in having an accurate projection of the economy, including Turkish businesses, its citizens, and those participating in the international financial and trade markets. The latter group's views on the economy are heavily influenced by the projections disseminated by Turkish government officials.

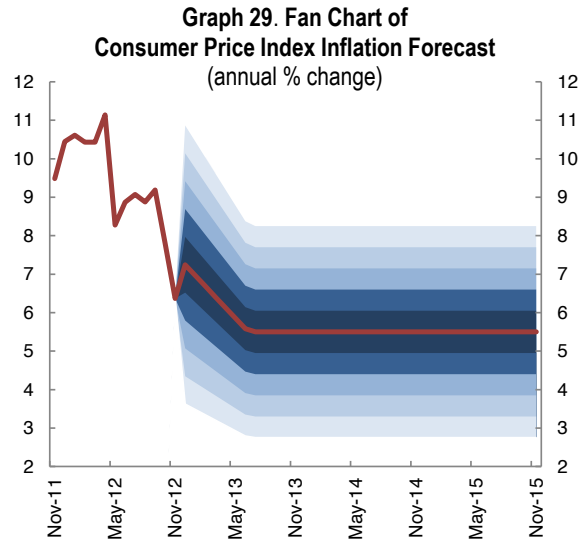
Policymakers need to ensure that the public understands both their forecast and the risks around this forecast. For each indicator it is useful to communicate its expected path under both baseline and alternative scenarios to help explain uncertainty around point forecasts.

The baseline forecast for each variable can be created using judgmental forecasting techniques or by using more advanced econometric techniques such as dynamic factor models. Alternatively, the central scenario can also be derived from the distribution around the modal forecasts for each variable.

Several "alternative scenarios", which represent what is expected to happen in circumstances other than the baseline scenario, also need to be generated (see Graph 28 for a mock example). Examples of alternative scenarios for inflation are if global demand increases at a faster-than-expected pace or if there is a strong lira depreciation. The alternative scenarios can be thought of not as specific paths for a given indicator but instead as a distribution of those forecasts around the central scenario. Assigning a probability to each scenario gives a forecast with a "probabilistic density" that can naturally be displayed as a fan chart (see Graph 29 for a mock example). The benefits are two-fold. First, the alternative scenarios capture some sense of the likelihood of different kinds of shocks. Second, they capture the uncertainty around the direction and magnitude of the effect of a given shock.

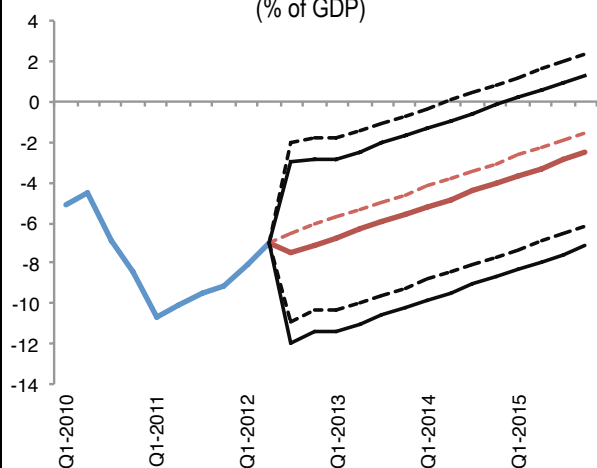


Source: Turkstat and Author's Calculations



Source: OECD Stat. Extract and Author's Calculations

Graph 30. Changes in Expected Current Account Balance Projections (% of GDP)



Source: OECD Stat. Extract and Author's Calculations

Policymakers may also find it useful to explain how new information has changed their perceptions of the baseline forecast and the uncertainty around that forecast. Charts like the one outlined in Graph 30 are useful tools in explaining both changes in the risks, uncertainty and expected path of any given variable since the previous meeting or report.

Currently, the Ministry of Economy releases its Monthly Economic Outlook both graphically and in written form, which uses backward-looking graphs to demonstrate the path of specific economic indicators. However, by adding density forecasts to these graphs, and using them to demonstrate how new information has affected forecasts, the MoE and other government agencies could more effectively manage expectations about the Turkish economy.

4.4 USE OF THE EXCHANGE RATE AS A POLICY TOOL

The widening of the trade deficit over the past decade has been attributed, among other things, to an overvalued real exchange rate.⁷⁹ While this suggests that a nominal depreciation could improve the trade balance by making exports more competitive, the evidence on the efficacy of such a policy is not clear. Turkey's large reliance on imported energy and intermediate goods complicates the relationship between the exchange rate and the demand for imports and exports.

The theory that a change in the exchange rate should affect the trade balance is straightforward.⁸⁰ Changes in the exchange rate will affect the trade balance through prices and quantities. As the exchange rate depreciates, imports become relatively more expensive for domestic purchase while exports become relatively cheaper for foreign buyers. The result is an increase in the quantity of exports and a decrease in the quantity of imports, with the extent to which they are affected dependent on the export (import) elasticity with respect to the exchange rate. A depreciation is more likely to improve the trade balance if: 1) exports and imports are more

sensitive to changes in the exchange rate (high elasticities) and, 2) the ratio of exports to imports is bigger (i.e. an initial large trade deficit will make it harder to improve the trade balance since it will require larger price elasticities).

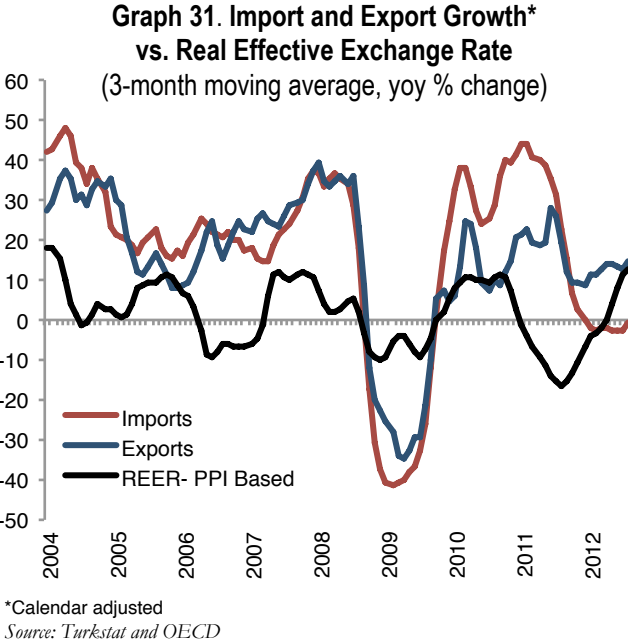
The extent to which exchange rate movements affect import and export prices is affected by the degree of exchange rate pass-through (ERPT) to consumer prices. A zero ERPT implies that prices in the consuming country do not change in response to depreciation and full pass-through assumes that the depreciation is passed in full to local prices. In general, depreciation will worsen the terms of trade if a small ERPT is observed. However, changes in the exchange rate typically affect the general price level, not just relative prices. In that sense, higher domestic production costs can offset part of the competitiveness gain from the depreciation such that it may not be possible to keep consumer prices unchanged.

Furthermore, to assess the true impact of the exchange rate on trade volumes, we also need to consider the substitutability of the goods in consumption and domestic production in the case of imports, and domestic supply conditions in the case of exports. Quantity responses may not be linear to price changes if, for instance, there is no availability of close substitutes. Therefore, if on one hand, the import content of exports is very high and on the other, no alternative to imported raw materials is produced locally, trade volumes will not be very sensitive to changes in the exchange rate.

4.4.1 RELATIONSHIP BETWEEN THE EXCHANGE RATE AND TURKEY’S TRADE BALANCE

Before considering changes in the exchange rate as a policy for reducing the trade deficit in the short term, it is important to establish how much of an effect exchange rate movements have. The picture is mixed with no clear empirical effect of the exchange rate on the current account deficit.

The high reliance on intermediate imports means that the effect of an depreciation could be negligible – increased demand for exports necessarily means more demand for inputs to produce those exports, increasing imports. Similarly, the Turkish economy relies heavily on imported energy and does not have the capacity to produce such goods domestically. Because demand for energy can be very price inelastic, this will make imports less sensitive to exchange rate changes.



The data also do not conform well to expectations about the effect of exchange rates on the trade balance (Graph 31). Turkish exports experienced high growth in 2005, 2007 and 2012 during periods when the Turkish lira appreciated. Additionally, both imports and exports seemed to have slowed down when the currency depreciated in 2006 and 2011. In 2009, as a result of the global crisis, exports and imports decreased dramatically.

A number of empirical studies have examined the relationship between the real exchange rate and the foreign trade balance in Turkey. Several studies show mixed interaction between the real exchange rate and imports, but no real effect from the real exchange rate on exports.¹ The main conclusions of those studies is that (i) income elasticities play a stronger role in

¹ For a detailed literature review see Appendix B.

determining import growth than exchange rate elasticities; (ii) capital goods and consumption goods imports are sensitive to exchange rate movements; (iii) intermediate goods imports do not seem to respond to the exchange rate; and (iv) depreciation of the lira doesn't appear to be a powerful tool for combating the current account deficit.

4.4.2 IS THE EXCHANGE RATE A USEFUL POLICY INSTRUMENT

Given that domestic alternatives to imported energy and many intermediate goods are not readily available in the short term, such imports tend to be relatively insensitive to price changes. Moreover, because imported intermediate goods are extensively used in the production of exports, the competitive gains from depreciation are limited by the increase of production costs. The higher domestic costs not only offset the competitiveness gain but also can affect the general price level and inflation. Additionally, energy and intermediate goods imports are generally priced in US dollars, while the main destination of exports is Europe and priced in euros. Hence, the dynamic of the Euro/USD exchange rate, an exogenous variable that is not under control of the Turkey economy, has a more relevant role in determining activity in trade sectors. In sum, given Turkey's large initial trade deficit, high exchange rate pass-through to import prices and inelastic trade volumes, depreciation of the Turkish lira is not likely to have a material effect on the current account deficit in the short term.

5. MANAGING SHORT-TERM VULNERABILITIES

It is expected that Turkey’s current account deficit will remain substantial for some time. Addressing the structural component of the deficit is a lengthy process and expectations of strong growth are likely to keep Turkish demand for foreign goods and services high. The result will be continued large demand for external capital, much of which is likely to be in the form of debt. Further growth in external debt, which is already large, makes Turkey increasingly vulnerable to a sudden (or partial) stop of capital flows (Graph 13 in Section 1.3). Without a means to finance a current account deficit, there would need to be a sharp move towards current account balance with damaging effects for the macroeconomy.

Overall, there appears to be a non-trivial chance that a current account reversal could occur in the short- to medium-term, and the costs of such a reversal are high. It is therefore important to take policy actions to mitigate the risk from this vulnerability.

5.1 CURRENT ACCOUNT REVERSALS

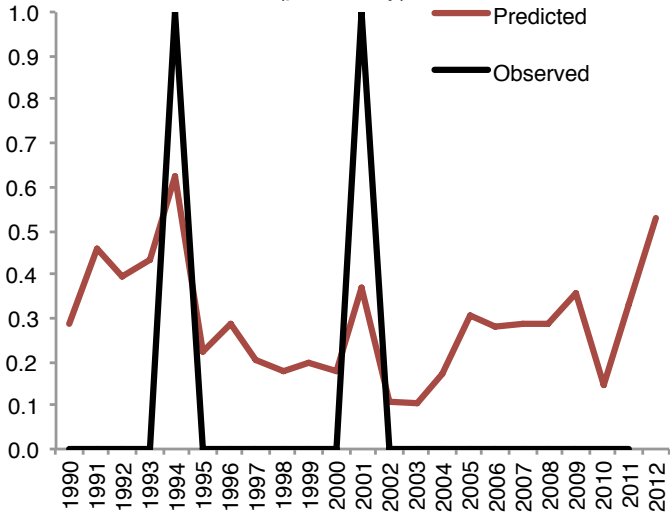
The possibility of a current account reversal is important to policy makers because it can lead to a severe economic contraction, just as Turkey experienced in 1994, 2001 and 2008. Given the current conditions, our estimate (using a standard econometric model) of the probability of a current account reversal is the highest observed since the 1994 crisis. Were a reversal to occur, the predicted effect on output would be a reduction in output growth of close to 3%. However, the model does not account for current global liquidity conditions, nor does it consider Turkey’s macroeconomic stabilization and fiscal consolidation since 2001. Consequently, the model presented in this section should be taken with caution, but acknowledging there are important similarities with previous reversal (or “sudden stop”) episodes that should raise concerns and call for carefully designed policy responses.

5.1.1 DANGEROUS IMBALANCES – THE PROBABILITY OF A CURRENT ACCOUNT REVERSAL

To estimate the effect of a current account reversal on the Turkish macroeconomy, we rely primarily on the model developed by Edwards (2004). This two stage econometric model allows for the estimation of the expected probability of a current account reversal (defined as a reduction in the current account deficit of at least 4% of GDP in a single year) and its subsequent impact on growth due to the adjustment process. We replicate the data for Turkey including the latest available information and estimate the year-by-year probability of a current account reversal and the impact a reversal had on growth for the years where a current account reversal was observed.

Edwards (2004) reports two findings for the last three decades of current account reversals, which are key to understanding the scenarios faced by Turkey. First, “sudden stops” in capital flows have been associated with current account reversals, but the two are not perfectly correlated.⁸¹ Turkey may face a “sudden stop” in capital flows but be able to avert a current account reversal by means of managing international reserves; while, on the flip side, it is possible to experience a current account reversal without

Graph 32. Point Estimates of the Model and Observed Current Account Reversals (probability)



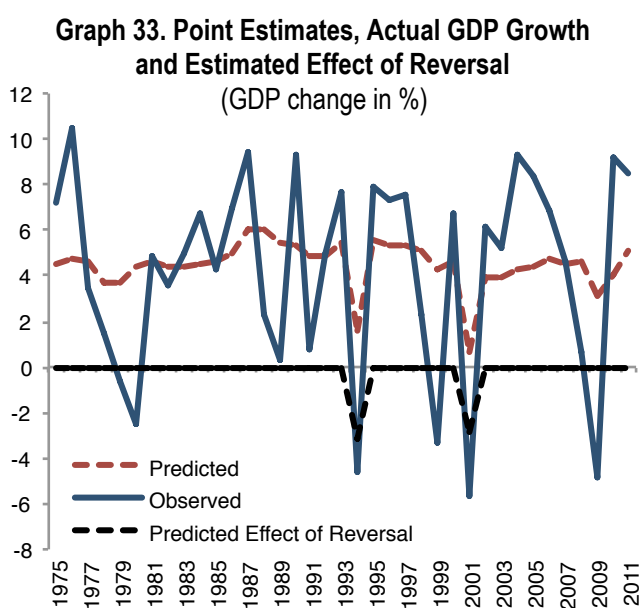
Source: WDI and Author's estimates

a “sudden stop” of capital. Around 46.1% of countries that experienced “sudden stops” in capital simultaneously faced a current account reversal episode, while only 22.9% of current account reversals also included a “sudden stops” in capital.

The model finds that countries with higher fiscal deficits, large external debt, rapid increases in domestic credit growth and low levels of international reserves are more likely to experience a current account reversal episode (see Appendix C for details of the model). The estimates of Turkey’s reversal likelihood generated by the model are powerful in explaining the country’s 1994 and 2001 current account reversals – the two local maximums coincide exactly with the two reversal episodes (Graph 32). Of concern, the estimated current account reversal probability for 2012 is also very high. This indicates that, based on past empirical relationships, Turkey faces a non-trivial probability that it could suffer a current account reversal in the coming years.

5.1.2 THE MACROECONOMIC CONSEQUENCES OF A CURRENT ACCOUNT REVERSAL

Despite opposing views on the effects of current account reversals on the real economy, recent research (Edwards, 2004) provides strong evidence that such episodes are associated with poor GDP growth performance. However, evidence suggests that relatively more open economies, such as Turkey, will suffer less in terms of aggregate demand contraction.



Source: WDI and Author's estimates

The growth equation of the Edwards model allows us to forecast the cost of a current account reversal for the Turkish economy.⁸² Full details of this part of the model are in Appendix C.

The model’s in-sample predictions for Turkey fit the data reasonably well. Although the predictions are much smoother than is actually observed, they do capture the negative effect of current account reversal episodes on economic performance (Graph 33) and the offsetting effect due to increased openness in the Turkish economy. In 1994 the model predicted a net growth effect of reversal of -3.2%, while the observed GDP growth rate was -4.7%. For the 2001 episode the estimated effect of reversal on growth was -2.9% while the actual aggregate growth was -5.7%.

Should the Turkish economy experience a current account reversal in the near term, the effect on growth is expected to be of a similar magnitude to the estimated effect in 2001 (-2.9%). This is because key determinants in the model such as the one-year lagged values of trade to GDP ratio, investment as a share of GDP and international reserves have remained at similar levels.⁸³

5.2 GLOBAL LIQUIDITY CONDITIONS

A common counterargument asserts that the risk of a sudden stop of capital flows is negligible so long as global liquidity remains abundant and real interest rate differentials persist.⁸⁴ This would limit the likelihood of a sharp reversal of the current account.

Major developed country central banks have significantly increased the liquidity available in their economies. This has led to very low domestic interest rates and driven down world interest rates. The result has been a large investor appetite for relatively higher yielding assets in other parts of the world, particularly in countries with a sound macroeconomic environment and demonstrating strong economic performance such as Turkey. These factors have driven down the real interest rates that borrowers in these economies need to pay and have allowed Turkey to borrow abroad for investment and consumption relatively cheaply. It is generally expected that liquidity conditions will remain loose for a number of years to come. The Federal Reserve has explicitly stated that it will keep US policy rates low until at least mid-2015⁸⁵, while Olivier Blanchard of the IMF has been reported as saying that the global economy may not recover until 2018.

The heart of this more sanguine argument is twofold: first, that low real interest rates mean that a much higher level of debt is sustainable than was previously the case; second, so long as there is so much money sloshing around the global financial system seeking a return, Turkey will have no problem attracting a share of those flows. To the extent that this holds it is good news for the Turkish authorities, as it means that there is more time for policies aimed at reducing the current account deficit to take effect and/or rebalance the maturity of liabilities away from short-term capital.

A sudden stop or reversal of capital flows to Turkey is still possible in an environment of high global liquidity. While Turkey is an attractive option for investors looking to move their funds into better-yielding assets, it is by no means the only option and investors can easily substituted away from Turkey. As such, continued rapid expansion in external debt, or deterioration in macroeconomic fundamentals, should still be expected to raise the risk premium demanded by foreign investors for Turkish assets. Short-term external debt as a proportion of total external debt escalated from 18.7% in 2008 to 27.3% in 2011 (World Development Indicators, 2012). Should foreign investors demand a higher risk premium, this high rate would therefore need to be paid both on new borrowing and also the rollover of the existing debt stock. The greater the run-up in short term debt the more vulnerable Turkey is to this kind of situation.

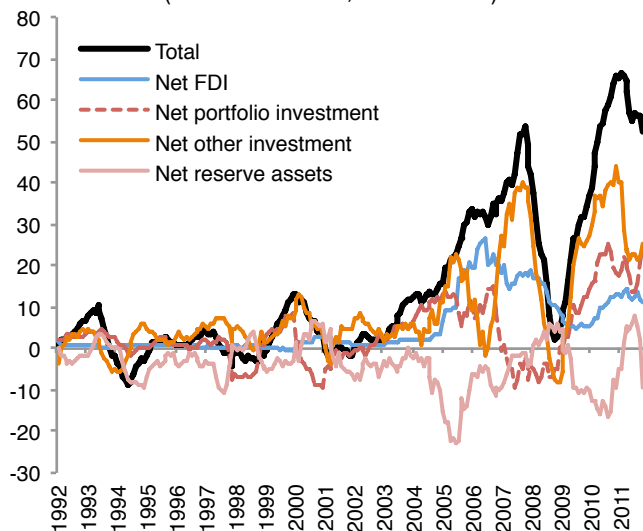
A large enough shock could lead investors to believe that Turkey's external debt level is unsustainable and to refuse to lend to Turkish borrowers, causing a current account crisis. Such a shock could come from a range of sources. Examples include a domestic Turkish shock, a global confidence shock (such as a shock to China, the EU or the US), or increased tensions in Turkey's region. Any of these could significantly reduce investor risk appetite and result in capital flight away from Turkey to perceived safe-havens

On the whole, abundant global liquidity probably does act to somewhat limit the risk of a capital flow reversal as it lowers the real interest rate paid by Turkey and results in a higher sustainable debt level. However, authorities should not fall into the trap of believing that this immunizes Turkey from capital flow problems. In addition, world real interest rates cannot be expected to remain this low indefinitely, and Turkey's external account needs to be in sufficiently good shape by that time to be able to adjust to this without a loss of investor confidence.

5.3 MANAGING CAPITAL FLOWS

After 2004, the profile of net capital flows to Turkey changed dramatically. While in the mid-2000s flows were driven by large increases in FDI and other investment (largely loans to the non-banking sector), following the 2008/09 financial crisis flows shifted predominantly towards portfolio investment and FDI was more subdued. In the post crisis period there was a return to high "other investment" inflows (which are short-term in nature), driven by loans to the banking sector. There were also large accumulations of reserve assets in both of these periods, with some small run-down of reserves during the crisis. Concerns about sudden stops or reversals in foreign capital are well founded: during the crisis, portfolio and other investment collapsed and went negative, while FDI flows slowed considerably (Graph 34). This quickly reversed once global conditions calmed down, but it highlights that sudden swings in access to foreign capital can and do occur.

Graph 34. Net Capital Flows to Turkey
(12-month ended, USD billions)



Source: Central Bank of Turkey

The result of these flows has been a large increase in Turkey's external indebtedness. Gross external debt almost tripled over the past decade. Of particular note, since the financial crisis there has been a change in the maturity structure of Turkey's external debt stock, with the proportion of short term debt in total gross external debt increasing from 12.7% at the end of 2002 (after the adjustment that occurred following the 2001 financial crisis in Turkey) to 30.6% in June 2012. To the extent that the private sector is more likely to borrow short term than the government, this may reflect that a much larger portion of Turkey's external debt is now owed by the private sector than has historically been the case. The government's share of outstanding external debt fell from around 45.4 per cent December 2002 to just 26.1 per cent in June 2012.

5.3.1 CAPITAL CONTROLS

One cause of high output growth volatility in Turkey was the sudden financial account liberalization carried out by Ozal in 1989. Rodrik (1992) called it a "premature liberalization with incomplete stabilization". This reform included substantial import liberalization and a relaxation of controls on the financial account of the balance of payments. Rapid financial liberalization, Rodrik argues, proved disastrous for inflation and macroeconomic stability.

If greater financial liberalization is associated with increased macroeconomic instability and capital reversal episodes that ultimately lead to prolonged economic downturns, one possible solution is to impose some level of capital controls. However, capital inflows are also positively correlated with economic growth. Therefore, the challenge to economic policy-makers in Turkey is to not discourage capital inflows indiscriminately, but to implement mechanisms to attract more stable FDI and/or portfolio investments rather than potentially volatile short-term debt. One reason for the Turkish officials' reluctance to address this challenge using capital controls is the fear that capital market intervention will jeopardize the government's publicly stated plans to make Istanbul an increasingly important regional financial hub.

Although there is a lack of evidence that capital controls can affect the long term level of total capital inflows, the OECD (2012) has found strong empirical evidence of the ability of differentiated controls to alter the composition of external liabilities. In fact, the OECD finds that imposing restrictions on capital inflows from credit operations and removing controls from FDI and equity investments can translate into a reduction of external bank debt by up to 20% as a share of GDP. In turn, this effect would translate into a sustained improvement in the currency mismatch of a country's liabilities as (particularly shorter term) debt liabilities in emerging economies are usually denominated in foreign currency, while FDI and equity investments are denominated in local currency.

On the downside, capital controls are usually associated with welfare decreasing distortions; hence some have favored macro-prudential policies as an alternative. However, in the case of Turkey, macro-prudential policies have been followed, yet short-term capital inflows risk persists. Consequently, temporary capital controls as outlined earlier may prove useful as long as shorter maturity capital inflows threaten financial stability.

5.3.2 THE CENTRAL BANK'S UNCERTAINTY CORRIDOR

The CBRT's corridor policy for conducting monetary policy is outlined in Section 4.3.1. While one goal of this policy is to achieve domestic price stability, the use of a corridor rather than conventional monetary policy is designed to allow the authorities to alter the incentives for short-term capital inflows. As discussed, the policy works by changing the volatility of short-term interest rates, increasing uncertainty for investments at very short time horizons.

This policy may be somewhat useful in discouraging very short-term capital flows, or "hot money". However, banking association chairman Huseyin Aydin stated that the interest rate corridor policy is creating notable costs for banks.⁸⁶ Although it is still premature to evaluate the results of this policy, the CBRT has already started to narrow the interest corridor and pursue other alternatives.

BOX 5. CAPITAL CONTROLS IN CHILE AND MALAYSIA

Chile's imposition of capital controls in 1991 took the form of unremunerated reserve requirements (URR). The policy was considered highly successful as it stabilized inflation and countered an appreciation of the peso (improving export competitiveness), while achieving sound economic growth (even during financial crises) and a reduced current account deficit. However, Edwards (1999) argues that controls did not decrease the inflows, asserting instead that capital inflows increased from 7.3% of GDP between 1990 and 1995, and then to 11.3% in the period between 1996 and 1997. Nevertheless, the composition of capital inflows significantly changed from portfolio investment to FDI.

The URR effectively acts like a tax (the expected returns foregone by keeping those assets in reserve accounts) on foreign denominated short-term debt, increasing foreign exchange borrowing costs and further discouraging capital inflows. The economic rationale behind this mechanism is based on the idea that private agents (e.g., banks) holding foreign denominated debt are not properly considering the social costs of a likely capital flight from the country (i.e., negative externality), and therefore implicitly imposing a tax on capital inflows would drive the foreign exchange market to a socially optimal equilibrium.

Malaysian capital outflows controls

In September of 1998 the Malaysian government decided to impose capital controls to prevent capital flight during the Asian financial crisis. Controls were primarily imposed on capital that was already in the country (mainly portfolio investment) and not capital flowing to the country. However, the effectiveness of this measure seems to have been limited, given that a major proportion of foreign capital was already gone when controls were implemented. Moreover, investors' confidence was heavily eroded and international rating agencies downgraded Malaysia.

This is not to say that capital controls had no benefits. As the economy was insulated from further shocks it provided time and autonomy to Malaysian authorities to make the necessary structural reforms to financial markets. These changes, along with strong macroeconomic fundamentals and the belief of an undervalued ringgit eventually restored confidence to markets, with no significant capital outflows after controls were eliminated. In sum, while controls of capital outflows should be carefully considered only as an instrument of last resort (as opposed as a preventive measure), they may be helpful tools in managing a crisis should one occur.

5.3.3 THE RESERVE OPTION MECHANISM

The Reserve Option Mechanism (ROM) is a market-based mechanism used by the CBRT with the objective of reducing the adverse impact of volatile capital inflows by reducing the banking sectors' foreign exchange risk. It does this by incentivizing banks to hold a larger portion of their assets in non-lira denominations. One interpretation of this policy is that it builds up private foreign exchange reserves, which may function as a replacement for official foreign exchange reserves.

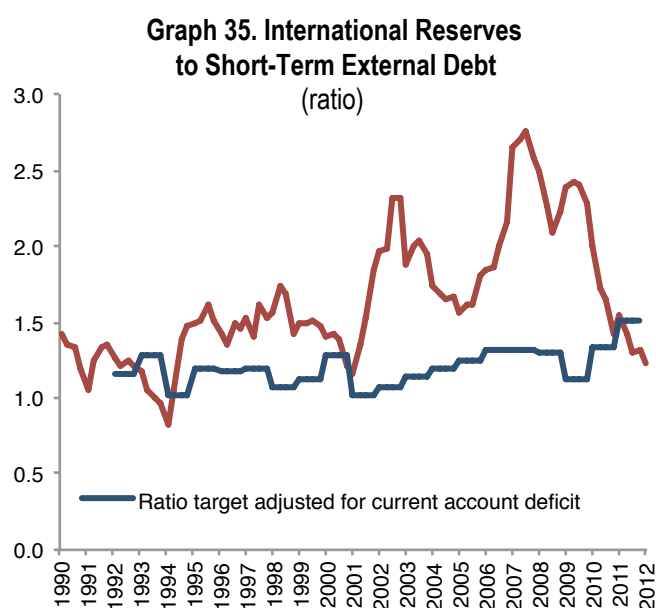
The ROM allows banks to hold some of their required reserves in assets that are not lira denominated and provides a strong incentive for them to do so. This increases the banking sector's foreign-denominated assets, helping to reduce any currency mismatch between assets and liabilities. The effect is to provide a greater level

of insurance for banks against foreign exchange risk associated with a depreciation of the lira, since less assets and liability currency mismatch means a smaller net effect of the depreciation on banks' balance sheets.

5.4 REDUCING VULNERABILITES

Given the potential for a current account reversal in the short- to medium-term, combined with the serious consequences for GDP, we recommend that Turkish take appropriate action to mitigate this vulnerability.

5.4.1 HIGHER INTERNATIONAL RESERVES COULD INCREASE INVESTOR CONFIDENCE



Source: Central Bank of Turkey and Author's Calculations

One way to reduce the likelihood of a stop in capital flows is to strengthen foreign investor confidence in Turkey's ability to meet its external obligations. Increasing official foreign exchange reserves may be useful in this regard. While the ratio of official reserves to short-term debt remains above 1, this ratio is at its lowest level since 2001 (Graph 35). If we augment the minimum ratio target of '1' with a weight on the current account deficit, as suggested by Busseire and Mulder (1999), we can see that current reserve levels are below the "minimum" threshold.

It is important to acknowledge that Turkey has made significant efforts to increase the level of foreign exchange reserves held by the banking sector, in part through the CBRT's ROM policy. If investors are aware of these "private reserves" it may limit the need for official reserves. However, investors may continue to regard

official reserves as more reliable insurance against Turkey facing a shortage of foreign exchange, and so consider private reserves only a partial substitute.

5.4.2 MANAGING SHORT-TERM CAPITAL FLOWS

As discussed in Section 4.3.2, the CBRT's policy corridor may be a useful tool in limiting the build-up of short-term debt. However, it is not clear that this should be the primary policy instrument with which to manage short-term capital flows. Indeed, there may be times when the stance of monetary policy that is conducive to price stability are in conflict with what would be useful to discourage capital flows, and under the CBRT's inflation targeting framework the former considerations take primacy. The Reserve Option Mechanism seems to be a very helpful tool for mitigating the risks associated with capital flows, and we encourage its continued prudent use.

Two further policy tools should be considered in the case of Turkey. The first is to directly alter the incentive to put short-term capital in Turkey through the use of capital controls as outlined by the OECD (2012). The second is to incent the banking sector to fund itself with longer-maturity borrowing through, for example, increasing capital adequacy requirements on short term foreign denominated liabilities or capping the ratio of those liabilities to total assets.

Prudential policies that alter banking sector incentives can be used either to complement a tax on short-term capital flows or as an alternative. Since a large proportion of total private capital inflows are intermediated by the banking sector, this could be effective in changing the overall maturity composition of external debt. Higher capital requirements for short-term non-lira denominated debt in effect act as a small tax, by

increasing the cost of this kind of borrowing. In that sense it is little different than a direct tax on short term capital inflows, except that it is arguably less transparent. Limiting the proportion of banks' balance sheets that can constitute short-term foreign denominated liabilities could also be effective if the maximum ratio is less than what banks currently choose. This would force banks to either cut back on such borrowing or to proportionately match it with more stable long-term funding, decreasing overall risk.

6. POLICY RECOMMENDATIONS

Drawing upon the analysis presented in this paper, we suggest that Turkish policy makers consider the following recommendations:

Increase private savings

1. Develop domestic bond and stock market; create strong institutions and transparency to attract increased domestic savings into the financial system.
 - a. Open the stock and bond markets to small and medium size enterprises, helping to grow the economy and create legitimacy in these markets.
2. Promote the 2003 private pension schemes as a vehicle for savings, and continue reforms to make the program appeal to a wide range of Turkish citizens, including those employed in the informal sector. Emphasize increasing financial literacy as a part of this marketing campaign.
3. Improve data collection around private savings in Turkey, focusing on household and corporate savings rates

Promote Turkish exports abroad

4. Continue to increase the geographical diversity of Turkey's export partners, including large, relatively underdeveloped export markets such as the U.S. and China.

Boost Turkey's external competitiveness

5. Improve labor productivity
 - b. Increased foreign direct investment (FDI) and trade openness can ease technological transfer processes.
 - c. A more flexible legal and regulatory framework is needed to improve the functioning of labor markets.
6. Manage nominal wage growth
 - d. Nominal wage growth in export industries above productivity significantly undermines Turkey's international competitiveness
 - e. Restricting rises in the minimum wage and keeping inflation at the CBRT's target may help address wage pressures.

Reduce reliance on imported intermediate goods and energy

7. Facilitate domestic sourcing of manufactured inputs to reduce the dependence on imported raw materials.
 - f. The Investment Scheme implemented by the Ministry of Economy could help diminish the reliance on intermediate raw materials.
 - g. Identify industries with large trade deficits and assess whether it is efficient to produce those goods locally

- h. Improve business environment to attract investments.
8. Promote renewable energy use and increase energy efficiency is vital to help contain energy imports.
- i. A diversification of the energy supply, particularly towards renewable resources, could help reduce the import dependency over time.
 - j. Channel investment for the research and development of renewable energy.
 - k. Implement energy efficiency legislation.
 - l. Modernization of the energy infrastructure.

Enhance the effectiveness of monetary policy

15. Within its inflation targeting framework, the primary goals of Central Bank of the Republic of Turkey (CBRT) are price stability and financial stability. Use of monetary policy to deliberately affect capital flows may generate uncertainty around the CBRT's actions, so greater reliance on other policy tools to manage capital flows may be desirable.
16. Clearer communication regarding how the CBRT views the current account balance and how this affects the stance of monetary policy may be helpful for promoting greater transparency.

Exchange rate policy

17. Using the exchange rate might not be a desirable strategy to reduce the current account deficit.
- a. Boosting exports through a nominal depreciation alone will not be sufficient. Turkey's structural dependency on intermediate import goods needs to be addressed.
 - b. A nominal depreciation could translate into higher inflation. Attempting to depress the nominal value of the lira might fail to durably improve competitiveness given high pass-through to wages and prices.

Manage vulnerabilities arising from short-term capital flows

18. While the interest rate corridor may be a useful part of the policy mix to manage very short-term capital inflows, greater reliance on other tools may enable monetary policy to better target domestic conditions and respond less to external pressures.
19. Increase official reserves to provide a greater buffer against external shocks and foster more confidence by foreign investors.
20. Consider introducing measures such as taxes on short-term capital inflows or higher reserve requirements for short-term foreign-denominated liabilities.

APPENDIX A: SHORT-RUN DETERMINANTS OF THE CURRENT ACCOUNT IN TURKEY

In order to conduct a more rigorous examination of the main short-run determinants of the current account in Turkey we pooled time-series quarterly data from 1992Q4 to 2009Q3 and specified the following autoregressive distributed lag model:

$$\frac{CA}{Y}_t = \beta_0 + \beta_1 \frac{CA}{Y}_{t-1} + \beta_2 \Delta \text{Log} Y_t^D + \beta_3 \Delta \text{Log} Y_t^W + \beta_4 \frac{FB}{Y}_t + \beta_5 \Delta \text{REER}_t + \beta_6 \Delta \text{Log} \text{TOT}_t + \beta_7 \Delta \text{Log} \text{ULCBCI}_t + \varepsilon_t$$

Table Z below describes the variables used in the specification above, and lists the sources for the data.

Table A.1: Data description and sources

Variable	Descriptor	Units	Source
<i>CA/Y</i>	Current Account Balance	Percentage of GDP	OECD
<i>Y^D</i>	Domestic Industrial Production	Index (2005)	IFS
<i>Y^W</i>	European Union Industrial Production	Index (2005)	IFS
<i>ULCBCI</i>	Unit Labor Costs in the Euro in USD divided by Unit Labor Costs in Turkey (USD)	Index (2005)	IFS, Eurostat, and OECD
<i>TOT</i>	Terms of Trade	Index (2005)	IFS
<i>REER</i>	Real Effective Exchange Rate	Index (2005)	IFS
<i>FB/Y</i>	Fiscal Balance	Percentage of GDP	IFS

Time series data management:

- The Dicky-Fuller unit root test was applied to all variables in the model. We reject non-stationarity only for current account and fiscal balance. Subsequently we first-differenced all other variables to gain stationarity so that interpretation of results can be done according to standard OLS principles.
- According to the Bayes information criterion (BIC) only one lag of the current account was chosen as a regressor.
- Newey-West standard errors were used to account for serial autocorrelation. The truncation parameter of the HAC estimator was 3 (i.e., 2 autocorrelations were included in the calculation of the standard errors).

Table A.2: Short-run determinants of the Current Account in Turkey (1992 – 2009)

Dependent variable: Current Account Balance as a percentage of GDP								
Regressors								
<i>CA/Y</i> (<i>t-1</i>)	$\Delta \text{Log} \text{ULCBCI}$	$\Delta \text{Log} \text{REER}$	$\Delta \text{Log} \text{TOT}$	$\Delta \text{Log} Y^W$	$\Delta \text{Log} Y^D$	<i>FB/Y</i>	<i>Intercept</i>	<i>adjusted R</i> ²
0.811***	16.03*	2.17	-2.89	22.36	-28.14*	0.003	-0.349	0.74
(0.757)	(4.929)	(8.881)	(10.910)	(28.363)	(7.394)	(0.041)	(0.466)	

*Significant at the 0.01 level.

APPENDIX B: THE EFFECT OF THE EXCHANGE RATE ON THE TRADE DEFICIT

<p>Aydin, M. F., 2004 U. Ciplak and M. E. Yücel</p>	<p>They estimate the short run and long run elasticities of quantity of imports with respect to real income (GDP) and real exchange rate using a single equation Engle-Granger cointegration framework and an unrestricted vector auto regression for the period 1987-2003.</p>	<ul style="list-style-type: none"> • Import demand is influenced by the real exchange rate and national income. • Exports are determined by the unit labor costs, export prices and the national income. • Income elasticity is much higher than exchange rate elasticity both in the short run and long run.
<p>Togan, S. and 2007 H. Berument</p>	<p>Using annual data between 1970 and 2005 they apply Johansen's cointegration method to obtain long run price and income elasticities of the main components of imports (consumption goods, capital goods and non-energy intermediate goods imports).</p>	<ul style="list-style-type: none"> • Responsiveness of consumption goods imports to domestic demand and real exchange rate is higher compared to capital and non-energy intermediate goods • Domestic demand elasticity is higher compared to exchange rate in the long run in all categories.
<p>Ogus, A. and 2009 N. Sohrabji</p>	<p>They estimate income and price elasticities of Turkish imports and exports based on the Johansen cointegration method using quarterly data between 1998 and 2008.</p>	<ul style="list-style-type: none"> • Negative exchange rate elasticity for both imports and exports indicating that an appreciating lira will increase imports and exports, the latter result is due to cheaper imported inputs that help the export of consumer goods
<p>Aldan, A., I. 2012 Bozok & M. Gunay</p>	<p>They study the short-dynamics of Turkish imports (focusing on non-energy imports) between 2003 and 2011 by applying Kalman filter to obtain time-varying parameters for income and exchange rate.</p>	<ul style="list-style-type: none"> • Income is more important than the exchange rate in determining import growth in most of the sectors. • Intermediate goods imports seem to be nonresponsive to exchange rates whereas consumption and capital goods imports do respond to exchange rate changes.

APPENDIX C: A MODEL OF CURRENT ACCOUNT REVERSALS

Despite opposing views on the effects of current account reversals on the real economy, recent research (Edwards, 2004) provides strong evidence that such kind of episodes are in fact associated with poor performance in terms of growth. Additionally, several economic models conclude that more open economies will suffer less in terms of aggregate demand contraction and exchange rate depreciations as compared to countries that are less exposed to international trade. Two additional factors that determine the extent to which economic performance will be affected by a reversal episode (that are not further analyzed in this appendix) are the degree of dollarization in a given country and the prevailing exchange regime at the time of the reversal. The former suggests that to the extent that (private and public liabilities) are denominated in foreign currency, when a devaluation is observed, corporate liabilities are less likely to be serviced due to increased indebtedness, while in the case of governments with a high proportion of foreign currency denominated debt, a depreciation will induce countries to run higher primary surpluses consequently further depressing aggregate demand. In terms of the latter, based on theoretical models, we would expect that since economies with more flexible exchange rates are better able to cope with external shocks, current account reversals would have a smaller impact on real economic activity in such countries.

Although we expect a decrease in investment¹ to be the main channel through which current account adjustment negatively impacts real economic performance, reversals may also affect growth through other channels. To address this question Edwards (2004) jointly estimates growth and current account reversal equations. The latter is probit (or treatment) equation on the probability that an economy j in time t experiences a reversal episode as defined before. The former is a regular outcome equation based on traditional determinants of real GDP growth. By doing this the author is able “to estimate a conditional effect of a current account reversal on real macroeconomic performance”. The model as proposed by Edwards (2004) is:

$$y_{tj} = x_{tj}\beta + \gamma\delta_{tj} + \theta(\delta_{tj} \times Openness_{tj}) + \mu_{tj}$$

$$\delta_{tj} = \begin{cases} 1, & \text{if } \delta_{tj}^* > 0 \\ 0, & \text{otherwise} \end{cases}$$

$$\delta_{tj}^* = w_{tj}\alpha + \epsilon_{tj}$$

Where y_{tj} is the real GDP growth, x_{tj} is a vector of covariates from the standard empirical growth literature from Barro and Sal-i-Martin (1995) that include investment, labor force growth rate, openness and government consumption. δ_{tj} is a dummy variable taking a value of 1 for all observations experiencing a current account reversal as previously defined; γ is the parameter of interest which may be interpreted as the effect of the reversal on real economic growth, while θ measures the effect on growth of the interaction between openness (defined as exports plus imports over total GDP) and the reversal dummy.

When estimating the probit treatment equation, Edwards (2004) includes the following as covariates (lagged one period): current account as percentage of GDP which we would expect to monotonically increase the probability of reversal; the ratio of external debt to GDP which we would expect to be positive; the proportion of international reserves to GDP which would reasonably be expected to be negative, as higher

¹ Investment is likely to fall during a current account reversal as per the basic identity where current account deficit is equal to investment minus savings plus government expenditure minus taxes (e.g private and public investment minus savings).

levels allows for managing central bank assets to avoid abrupt reversals; the ratio of short term external debt to exports which should be positive as this ratio expresses the short term leverage on the ability to service it (exports); the year on year rate of growth of domestic credit, the coefficient is expected to be positive as credit expansion is generally presumed to be positively associated with dissaving; the ratio of external debt service to exports which again is expected to be positive as increased obligations put pressure on the external position of a country.

Edwards reports that all the coefficients have the expected sign and are statistically significant except for the case short term debt and external debt service as percentage of exports which are not significant at conventional levels. This in turn implies that countries with higher deficits, large external debt, rapid increases in domestic credit and low levels of international reserves are more likely to experience a current account reversal episode.

NOTES

- ¹ In nominal US dollar terms; Data from the World Bank accessed 12/8/12:
<http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?page=2>
- ² Onis (2009)
- ³ See for example Rodrik (2009) and Boratav & Yeldan (2001)
- ⁴ Yenturk (2009)
- ⁵ Ertugrul and Selcuk (2001)
- ⁶ Akat and Yazgan (2012)
- ⁷ Rodrik (2009)
- ⁸ For example, Yenturk (2009) and Görmez and Yiğit (2009)
- ⁹ Rodrik (2009)
- ¹⁰ Treasury (2012) and Iwulski (2012)
- ¹¹ Görmez and Yiğit (2009)
- ¹² Akat and Yazgan (2012)
- ¹³ Ministry of Development & World Bank (2012) Chapter 2
- ¹⁴ Ministry of Development & World Bank (2012) Chapter 1
- ¹⁵ Ministry of Development & World Bank (2012) Chapter 2
- ¹⁶ Brissimis and Hondroyannis (2012)
- ¹⁷ Rogg (2000)
- ¹⁸ Van Rijckeghem (2010)
- ¹⁹ Matur, Sabuncu & Bahceci (2012)
- ²⁰ Dalgin & Gupta (2012)
- ²¹ Akçay & Üçer (2008)
- ²² Akat and Yazgan (2012)
- ²³ Senerdem (2012)
- ²⁴ Krugman and Obstfeld (2011)
- ²⁵ OECD (2012)
- ²⁶ See for example Dalgin & Gupta (2012) and Binatli & Sohrabji (2008)
- ²⁷ Milesi-Ferretti & Razin (1996)
- ²⁸ Edwards (2005)
- ²⁹ Dalgin and Gupta (2012)
- ³⁰ Kiran (2012)
- ³¹ International Monetary Fund (2011)
- ³² Organisation of Islamic Cooperation (2012)
- ³³ Ucal & Oksay (2011)
- ³⁴ Van Rijckeghem & Ucer (2009)
- ³⁵ Schmidt-Hebbel & Serven (1997)
- ³⁶ Seker & Correa (2010)
- ³⁷ Ministry of Development & World Bank (2012)
- ³⁸ Van Rijckeghem & Ucer (2009)
- ³⁹ Ministry of Development & World Bank (2012)
- ⁴⁰ In spite of a decrease in the aforementioned ratio (from over 60% in 1990 to 38.8% in 2011), Turkey still has a youth-dependency ratio of 60% larger than the average of its seven major trading partners (US 30%, France 29%, UK 26%, China 23%, Russia 22%, Italy 21%, Germany 20% and the EU as a whole at 23%)
- ⁴¹ Chinn and Prasad (2002).
- ⁴² Ministry of Development & World Bank (2012) , p.31.
- ⁴³ Macovei (2009)
- ⁴⁴ *Ibid.*
- ⁴⁵ Gonenc *et al* (2005)
- ⁴⁶ World Bank (2012c)
- ⁴⁷ Pension Supervision Center (2012)
- ⁴⁸ Braunstein & Welch (2002)
- ⁴⁹ <http://www.economy.gov.tr/upload/strategy/strategy2023.pdf>
- ⁵⁰ Lederman *et al* (2006)
- ⁵¹ Hausmann & Rodrick (2003) and Lederman, *et al* (2006).
- ⁵² "Export Dependence and Export Concentration," *Towards Human Resilience: Sustaining MDG Progress In An Age Of Economic Uncertainty*, UNDP, 10/13/11.
- ⁵³ Samen (2010)
- ⁵⁴ TurkStat data and Turkey Ministry of Economy (2012)
- ⁵⁵ TurkStat data and Turkey Ministry of Economy (2012)
- ⁵⁶
- ⁵⁷ TurkStat data
- ⁵⁸ TurkStat data
- ⁵⁹ In a report by Schwab (2012) competitiveness is defined as the set of institutions, policies, and factors that determine the level of productivity of a country.
- ⁶⁰ External competitiveness can also be built in terms of unit labor costs relative to those of trade competitors (i.e., countries that have no bilateral trade relationships with Turkey but do have with countries trading with Turkey), instead of only trading partners.
- ⁶¹ Competitive disinflation is a period of sustained high unemployment, leading to a lower nominal wage growth until relative unit labor costs have decreased, competitiveness has improved, the current account deficit has decreased, and demand and output have recovered.

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- ⁶² Deflated using the GDP deflator.
- ⁶³ Chemicals and chemical products include: consumer goods (cleaning products, paints, cosmetics, and pharmaceuticals), agricultural products (fertilizers and pesticides), and intermediate goods such as organic and inorganic chemicals, coloring substances, laboratory chemicals, and thermoplastics required by the manufacturing industry.
- ⁶⁴ Among this range of products, 70% of raw materials are imported while only 30% are supplied locally (Ministry of Science, Industry and Technology, 2011)
- ⁶⁵ YASED (2011)
- ⁶⁶ <http://www.hurriyetdailynews.com/lord-of-the-incentives.aspx?pageID=449&nID=18497&NewsCatID=430> accessed 12/20/12.
- ⁶⁷ See Obstfeld and Rogoff (1996)
- ⁶⁸ Calderón et al (1999) also show that a one-percentage point rise in the growth rate of industrial countries reduces a developing economy current account deficit by 0.46 percentage points. Similarly, Khan and Knight (1983) found that for non-oil developing countries, a fall of one percentage point in the growth rate of industrial countries would reduce the current account ratio by a little less than 1.5 percentage points.
- ⁶⁹ Capie et al. (1994) point out that there is negative association between inflation and economic growth in the long term.
- ⁷⁰ The Economist (2012)
- ⁷¹ Başçı (2012)
- ⁷² However, the introduction of the reserve option mechanism has reduced the need for FX auctions – indeed, the CBRT announced that it does not plan to undertake any such auctions in 2013 (Central Bank of the Republic of Turkey, 2012).
- ⁷³ This ratio is defined as the expected return of an investment divided by the variance of returns. It provides a measure of how well compensated investors are for the risk they take.
- ⁷⁴ Egginton (2012)
- ⁷⁵ Citi Research (2012)
- ⁷⁶ Başkaya, Gülşen and Kara (2012)
- ⁷⁷ The Economist (2012)
- ⁷⁸ International Monetary Fund (2011)
- ⁷⁹ International Monetary Fund (2010)
- ⁸⁰ *Ibid.*
- ⁸¹ Edwards (2004) defines sudden stops as meeting at least one of two criteria: 1) The country in question must have received an inflow of capital larger than its region's third quartile during the previous two years prior to the sudden stop; and 2) net capital inflows must have declined by at least 5% of GDP in one year.
- ⁸² In the model growth is primarily driven by initial GDP, investment, labor force growth rate, trade openness, government consumption, and of particular interest, the cost of reversal conditional on the degree of trade openness.
- ⁸³ As noted earlier, Turkey is in a much sounder macroeconomic position now compared to 2001. However, many of the aspects that have been improved, including fiscal balance, cost of external debt financing, and inflation are either not included or not do not have a significant effect in the Edwards (2004) model.
- ⁸⁴ This argument was made to the authors in several interviews. Interviews included current and former Turkish government officials, academics and individuals working in the private financial sector.
- ⁸⁵ Federal Reserve (2012)
- ⁸⁶ Reuters <http://uk.reuters.com/article/2011/12/01/turkey-banks-idUKL5E7N11C620111201> accessed 12/20/2012.

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