

Turkey: Urgent need for large-scale foreign funding and/or domestic issuance of dollar debt

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- The government will be faced with rapidly rising interest payments unless one of (or a combination of) the following scenarios materialises: (1) TRL yields fall sharply “on their own” before the “peak debt redemption period” between May and August; (2) the IMF and foreign governments provide the Turkish government with large amounts of new financing; or (3) the government accepts the idea of large-scale issuance of dollar-denominated T-bills.
 - The government is hoping that TRL yields will fall sharply in response to the newly announced fiscal and structural policies, and in response to a large inflow of new foreign funding. But the government is not ruling out the use of domestic dollar debt issuance to help bring down its interest burden.
 - We believe the government must, in order to cover its near-term funding needs, roll over 90-95% of its domestic debt redemptions between May and December while securing foreign financing in the order of US\$ 14-19bn for the remaining months of this year (including the previously committed foreign funds). We believe an amount at the lower end of this range is achievable. Any shortfall would have to be offset by higher amounts of domestic debt issuance.
 - The argument for domestic dollar debt issuance would be particularly strong if the international funding commitment for May-December were to fall short of US\$ 17bn, or if the IMF were to limit the usage of its funding package as a source of finance for government deficits. We do not believe it would be a realistic option for the government to cover the shortfall by increasing TRL-denominated debt issuance. We believe this strategy would keep TRL yields too high to prevent explosive growth in the government’s debt-to-GDP ratio. By contrast, the government would know that domestic dollar debt issuance would help contain the increase in the ratio of government debt to GDP, on the assumption of “reasonable” exchange rate stability in the years ahead (the main downside associated with dollar debt issuance is that it increases government exposure to exchange rate risk).
 - We have included a number of debt simulations in this paper. We demonstrate that long-run stability of the government’s debt/GDP ratio would, in a low-inflation environment, require: (1) consecutive governments committed to fiscal discipline; (2) strong economic growth and (3) real interest costs on government debt of less than 20%. If the government does manage to contain inflation (and exchange rate depreciation) in the short run, and to reduce it sharply in the longer term, the issuance of dollar debt would help ensure that real interest rate assumption would be satisfied.
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INTRODUCTION

The size of the foreign financing package remains uncertain

The economy minister, Kemal Dervis, has promised that he will shortly be in a position to detail the amounts of international funding that will be available to the government this year. We believe that it has become increasingly likely that the size of the funding package will not be known either to the government or the market before the time of the IMF's Interim Committee meetings in Washington at the end of April, although the government obviously hopes to be ready with an announcement at an earlier date. The size of the foreign funding commitment will affect not only the ability of the government to cover its immediate liquidity needs, but it will also affect the government's solvency.

Large-scale foreign financing will not just provide liquidity; it will also improve the government's solvency

Although the G7 governments appear sympathetic to Dervis's call for international support and are reportedly moving towards approving package of bilateral funding for Turkey, we believe the foreign financing package is likely to fall somewhat short of the US\$ 10-12bn that Dervis is seeking (on top of the funds that have already been committed under the existing IMF and World Bank programmes)¹. A smaller-than-targeted foreign financing package (we believe the bilateral funding package is likely to be in the order of US\$ 6bn) would force the government to rely more heavily than it would otherwise wish on the domestic debt market. One of the key concerns of the government would be that large reliance on TRL-denominated debt issuance in the domestic market would imply sustained buoyancy of real interest rates and would raise the risk of explosive growth in the government's debt-to-GDP ratio.

Domestic issuance of dollar debt might also improve the government's solvency

If the government draws the conclusion that TRL yields are falling insufficiently rapidly, then one solution might be the issuance of dollar-denominated debt in the domestic market. In fact, we believe the government would benefit from some degree of dollar debt issuance in the domestic market regardless of the level of foreign funding. Domestic dollar debt issuance would help reduce the debt-to-GDP-ratio on the assumption that the exchange rate would stay relatively stable in the years ahead – conversely, extra dollar debt would add to the debt-to-GDP ratio if the exchange rate were to depreciate sharply in the years ahead. Thus, from the perspective of the government, dollar debt issuance in the domestic market would represent a reinforced bet on the maintenance of “good policies” in the future.

Short-falls in the area of foreign financing would put domestic dollar debt issuance high on the agenda

The government has previously ruled out large-scale dollar-debt-issuance in the domestic market, probably primarily because of fear of a dramatic increase in the government's exposure to exchange rate risk. But in the current dire circumstances, all of the possible debt strategies carry a cost. If foreign governments fail to supply the amounts of finance that the Turkish government hopes for (either directly or through the IMF), then domestic issuance of dollar debt will be seen as the second-best option. Dollar debt issuance would be more attractive to the government than either a sharp increase in TRL money growth or a semi-coercive restructuring of the government's TRL-denominated liabilities. In fact, recent statements from the economy minister Kemal Dervis seem to confirm that the government is considering the option of at least some amount of domestic dollar debt issuance.

¹ The local press confirmed on 18 April that the government was seeking US\$ 10bn in bilateral funding from the G7 countries and that it was working on the assumption that the IMF package would not be increased from its currently undisbursed level of around US\$ 6bn. Representatives of the G7 ministries of finance indicated to us that they were moving towards a package for Turkey that would involve bilateral funding in the order of US\$ 6bn.

THE GOVERNMENT'S IMMEDIATE FINANCING NEED

The figures in the table below represent a rough financing scenario for the government for the period from May to December 2001.

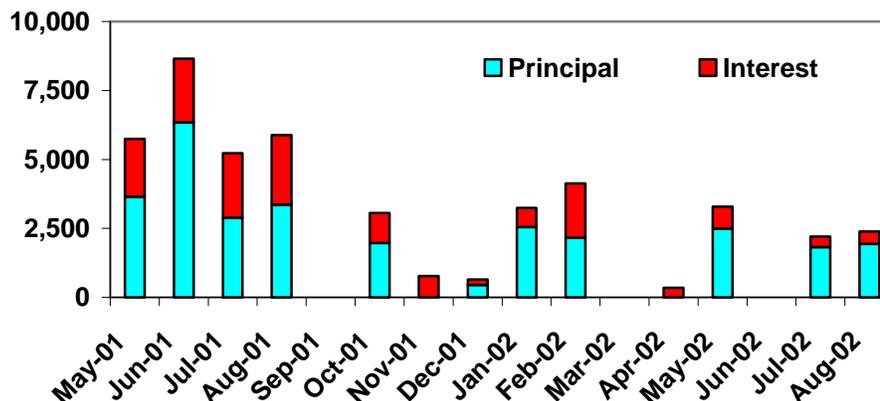
The Government's Financing Challenge	
May-December 2001	US\$ bn
Uses of Funds	64.5
TRL-denominated debt service	45.0
FX-denominated debt service	9.5
Servicing of the bank restructuring bonds	10.0
Sources of Funds (before international flows)	45.5-51.0
Primary surplus	5.0
Privatisation	0.0-3.0
Domestic debt rollover (90%-95%)	40.5-43.0
Gap to be financed by IMF, World Bank and int. cap. markets	13.5-19.0

Uses of funds

The top half of the table above specifies the government's need for funds. As indicated in the top line, we estimate that the total gross need for financing to cover debt service will be slightly below US\$ 65bn for the period May-December 2001. As the table illustrates, this amount consists of three components:

- (1) Due principal and interest payments on the government's currently outstanding stock of TRL-denominated debt (excluding bank recapitalisation bonds) during the period from May to December 2001 amount to about US\$ 30bn. We assume, for the purpose of the table above, that the government will be forced to roll over the debt service in May and June at maturities of 6 months (implying that the new debt will mature before end-2001) which raises the total domestic debt service in 2001 to about US\$ 45bn.

Turkey: Due payments on currently outstanding domestic government debt (TRL trn; apprx. US\$ mn)



- (2) We estimate that the government's FX-denominated debt service between May and December will be US\$ 9.5bn.
- (3) We believe that the government will, in addition, have to issue new bonds to recapitalise the banking sector and that the cost of servicing these bonds will be about US\$ 10bn during the last eight months of 2001.

We assume that the cost of servicing recapitalisation bonds will be in the order of US\$ 10bn

As we discuss in greater detail below, we believe (while recognizing that there is limited public information on this) that the total recapitalisation need of the banking sector is in the order of US\$ 35bn, including recapitalisation bonds that have already been issued by the government over the past year. For the purpose of the table above, we have assumed that the cost to the government of servicing these recapitalisation bonds will be in the order of US\$ 10bn during the remainder of 2001. But we recognise that this number is highly uncertain and that it depends on a number of crucial assumptions, including assumptions about the currency composition of the bonds and the interest rates they will carry.

Stock of duty losses stood at 14% of GNP at the end of 2000

Our rough guess for the size of the recapitalisation need of the banking sector (i.e. the US\$ 35bn that we quoted above) reflects a number of pieces of information. First, new information has become available regarding the size of the so-called "duty losses" of the state banks². Dervis presented to the public on 14 April a graph depicting the duty losses of the state banks. The graph indicated that the stock of duty losses stood at around 14% of GNP at the end of 2000. This corresponds to TRL 17,507tn, or approximately US\$ 14.8bn at the now-prevailing exchange rate. This does not tell us directly what the size of the state bank's recapitalisation needs was at the end of 2000; these needs were also affected by accumulated losses (or profits) from other sources than the "state duties". But in the absence of more comprehensive information, we have opted to use the duty loss estimate as a rough indication of the state banks' recapitalisation need as of end-2000.

The Treasury has issued some recapitalisation bonds already. By the end of 2000, the Treasury had issued bonds with a face value of at least TRL 2,200tn for the state banks (the announcement by Kemal Dervis on 14 April indicated that this amount was TRL 2,900tn). It had also issued recapitalisation bonds for the DIF-administered banks in the amount of TRL 3,900tn. By the end of the first quarter of 2001, the Treasury had issued additional recapitalisation bonds (on top of the stock outstanding as of end-2000) with a face value of TRL 7,800tn for the state banks and TRL 2,500tn for the DIF-administered banks (some of these recapitalisation bonds were dollar-denominated)³. Nevertheless, the cumulative issuance of recapitalisation bonds in Q4 2000 and Q1 2001 was not sufficient to turn the equity in the state banks and the DIF-administered banks into a positive figure (it was certainly not sufficient to raise the capital adequacy ratio to the 8% that would be required by standard banking regulation). We believe the state banks and the DIF-administered banks continued to accumulate losses in the first quarter of 2001 on account of the combination of negative equity and very high interest rates. On top of this, the state banks and the DIF-administered banks have undoubtedly suffered serious exchange rate related losses following the central bank's move to a currency float in February.

The recapitalisation need of the state banks and the DIF-administered banks at end-2000 was the equivalent of about US\$ 20bn (at the current exchange rate), on the assumption that the duty losses at that stage reflected the total recapitalisation needs in the state banks and that the issuance of recapitalisation bonds to the DIF-banks in Q4 2000 and Q1 2001 represented the total recapitalisation needs of those banks. We have assumed, additionally, that the interest and exchange rate related losses so far this year have

² These are the losses incurred by the state banks as a result of the "duty" imposed by the state on these banks to extend loans at below-market rates to the agricultural sector and to small and medium-sized enterprises.

³ The total amount of recapitalisation bonds (TRL-denominated and dollar-denominated) issued for the state banks and the DIF-administered banks until the end of the first quarter of 2001 was US\$ 8.5bn for the state banks and US\$ 5.4bn for the DIF-administered banks.

almost doubled the aggregate recapitalisation need to US\$ 35bn. We presume that the government will recapitalise the state banks and the DIF-administered banks by giving them state bonds, and we have assumed that some of these bonds will be dollar-denominated. In light of this, we believe our assumption of a debt service of US\$ 10bn on this stock of debt between now and the end of the year is quite conservative (in the sense that the debt service may well in practice end up being somewhat lower).

The central bank is currently providing liquidity to the state banks and the DIF-administered banks

It is possible that the government will need to provide some of the recapitalisation for the state banks in the form of cash rather than bonds, in order to reduce the need of these banks to fund themselves through the overnight repo market. The central bank governor, Sureyya Serdengecti, said on 13 April that the state-owned banks (Ziraat Bank, Halk Bank and Emlak Bank) and the DIF-administered banks were borrowing TRL 5,900tn from the interbank market as of 11 April. He said this figure corresponded to 29% of these banks' overnight liquidity needs. This statement indicates that the total liquidity need of these banks was around TRL 20,300tn as of 11 April. Serdengecti also indicated that the central bank would soon be the *only* supplier (within the domestic banking sector) of overnight funds for the state banks. We believe that the government could productively provide some of the required recapitalisation for the state banks simply by taking over from the state banks the responsibility for servicing the overnight liability (of these banks) to the central bank. This would sharply reduce the state banks' stock of overnight liabilities without requiring any immediate money printing (by the central bank) or foreign finance (for the government). This balance sheet maneuver would raise the government's debt to the central bank. I.e. the transaction would create a new long-term state liability, in the same way as the creation of a new recapitalisation bond would. The maneuver would add to the state banks' capital while helping to cut their need for overnight funding.

Sources of funds

The central government's primary surplus target is 5.1% of GNP

The second half of the table above sets out the government's sources of funds for the coverage of debt service. One source of finance is the primary budget surplus. The government's new economic programme (announced on 14 April) sets the primary surplus targets (excluding privatisation receipts) at 5.1% of GNP for the central government and 5.5% of GNP for the entire public sector. A big part of the full-year primary surplus of (roughly) 5% of GNP for the central government (about US\$ 9.7bn) has already been created. The primary surplus during the first quarter of 2001 (excluding privatisation receipts from the sale of a GSM license last year which accrued to the government in February 2001) was US\$ 4.4bn. The new target implies that the government should, during the last eight months of the year, create a primary surplus of around US\$ 5.0bn. We believe this is a realistic target, although the depressed economic environment generates obvious fiscal risks.

An optimistic privatisation target of US\$ 3bn

The government is reportedly planning to generate cash privatisation proceeds of US\$ 3bn in the remainder of 2001⁴. We believe that this target is highly optimistic, given the current depressed state of the equity market and the corporate sector. We have, therefore, entered a range of US\$ 0.0-3.0bn in the line for "privatisation" in the financing table on page 3.

⁴ While the government hasn't been entirely clear on this, we believe that its (still unofficial) US\$ 3.0bn target for privatisation receipts excludes the already cashed-in receipt of the GSM license fee. The government might hope to generate some privatisation cash from the transfer of operating rights in the energy sector. The electricity markets bill, which was enacted in February, states that the financial closure of these transfers should be completed by the end of June 2001.

Much uncertainty about the debt roll-over rate

For the purpose of the financing scenario in the table above, we assume that the government will be able to roll over between 90% and 95%⁵ of the maturing domestic debt service. This is a crucial assumption (for a fuller discussion of this assumption, see footnote 5 below). On this assumption, the government can issue domestic debt in the amount of US\$ 40.5-43.0bn in the domestic debt market during May-December 2001.

Total available financing, before the international package: US\$ 45.5-51.0bn

The financing inflows from privatization and domestic debt issuance add up to a total of US\$ 45.5-51.0bn (with the outcome depending on the amount of privatization proceeds that will be raised and the rollover rate in the domestic debt market).

The size of the financing gap

Need for international finance: US\$ 13.5-19.0bn

Using all of the assumptions that are listed above for the government's financing needs and financing sources, we arrive at a financing gap of US\$ 13.5-19.0bn for the last eight months of 2001. The government would need to raise US\$16.5-19bn to prevent dependence on the uncertain privatization revenue (which we have put at US\$0-3bn in the table above). Many of the assumptions in this table are subject to challenge – but the table serves to offer a broad estimate of the financing gap that the government will need to cover through borrowing from the IMF, the World Bank, bilateral official sources and international capital markets.

The “need for funding from abroad” that is identified in the table above (i.e. the US\$ 13.5-19.0bn) appears to be within the ballpark of the government's estimates. Dervis said the following on 26 March: “in external support we need US\$ 10-12bn; some people give figures like US\$ 30-40bn but these are fantasies”. Dervis confirmed a day later that the US\$ 10-12bn was additional to the already approved allocation of funds to Turkey under the existing IMF and World Bank programmes, which total about US\$ 6-8bn for 2001, as we outline below. This implies a total funding need, including already approved funding from the IMF and the World Bank, of about US\$ 16-20bn – which is very close to the amount we identify as the funding need in the table above.

HOW WILL THE FINANCING GAP BE CLOSED?

The existing IMF funding allocation to Turkey is already very large; a total of around US\$ 6bn remains undisbursed

The government has, in recent weeks, been actively lobbying for increases in the funding commitments of the IMF and the World Bank, and for separate bilateral funding from the G7 countries. At this stage, however, it remains unclear how much international funding will be available. An IMF spokesperson announced on 10 April that the IMF had not as yet negotiated the funding amounts with the government. A total of US\$ 6.25bn remains undisbursed under the previously approved IMF programmes. It seems improbable to us that the IMF will increase its previously approved funding for Turkey (as the previously approved IMF funding allocation already represented one of the largest-ever country-commitments of the IMF⁶).

⁵ We define the roll-over rate as the ratio of funding raised by the government (through new TRL debt issuance) to the funding need generated by TRL-denominated debt redemptions and interest payments. It is not impossible that a higher roll-over rate than 90-95% can be achieved during the remainder of 2001. This is because most of the TRL-denominated claims on the government that were generated last year were issued at yields that fall short of the past year's increase in the level of consumer prices in Turkey. For this reason, a roll-over rate of less than 100% would imply a decline in the domestic financial sector's real exposure to the government securities. However, we believe, nevertheless, that it would be sensible for the government to count on roll-over rates of less than 100%, as the local banks have foreign syndication liabilities that mature in the summer months. These syndication loans will probably not be rolled over 100%. This may force the banks to cut back on their exposure to government securities (although this is in no way obvious, as the banks' commercial activities are likely to be scaled back as well).

⁶ Measured by the ratio of the IMF funding commitment to the country's so-called “quota” in the IMF. Conceptually, the “quota” essentially represents the country's share of the IMF's capital.

The government is likely to receive US\$ 2bn from the World Bank this year

On 9 April, a senior World Bank official said there would be no increase in the amounts that would be provided from the World Bank, implying that the World Bank would stick to the US\$ 5bn framework package that was approved by that institution's board in late December 2000. This is a loose framework package that involves gradual board approval of more specific funding sub-programmes over a 3-year period. We find it unlikely that Turkey will receive more than US\$ 2bn under this framework umbrella before the end of 2001.

The IMF is unlikely to raise the size of its funding package; bilateral lenders may provide about US\$ 6bn

We heard on 18 April in conversations with representatives of the G7 governments that these governments are moving towards agreeing on a package for Turkey that involves bilateral funding in the order of US\$ 6bn, probably in the form of lending from the G7 central banks via the Bank for International Settlements, with a relatively short maturity (perhaps 12 months). We are also hearing that the IMF package will not be increased. Clearly the bilateral funding will be conditional on the existence of an IMF programme. We're hearing that the US is broadly on board for support but that the US government has developed a particularly strict set of conditions that need to be fulfilled before the bilateral support would be released. We don't know what exactly this conditionality amounts to, but IMF involvement will undoubtedly be a key requirement.

These pieces of information appear consistent with a report on 18 April in the local press by a columnist who is known to be close the prime minister. He reported that the government was indeed seeking US\$ 10bn in bilateral funding from G7, and that it was working on the assumption that the IMF package would not be increased. He added that the macro projections that the government announced on 14 April were based on the assumption that the government would obtain bilateral funding of US\$ 10bn. The columnist also reported that the IMF would not increase its own package and that the IMF would push the government for further tax increases/expenditure cuts if the size of the package from G7 would materialise around US\$ 6-7bn.

It may be possible for the government to scrape together some of the required residual amount through borrowing from international capital markets, but it looks equally probable that the supply of foreign finance will fall somewhat short of the government's target and/or that the IMF (or the G7) would not allow the government to use all of the lending for coverage of the fiscal financing need (in the past, the IMF has insisted that its funding should be used for the purpose of building up the country's foreign exchange reserves). The central bank's foreign exchange reserves are no longer at a sufficiently comfortable level to represent a seriously useable alternative financing source, but additional bilateral funding from the G7 countries might contribute to the foreign exchange reserves of the central bank.

One alternative to foreign finance is a much larger primary surplus

If the government proves unable to identify sources for the desired amounts of foreign financing, then it will have to reduce the need for foreign funds. It could in principle do this by adding further to its primary surplus target⁷. But we believe a substantial increase is clearly politically unrealistic at this stage and 5% of GNP as the primary surplus target of the central government is probably as good as it would get.

⁷ The government has already considered this option. It announced on 14 April that its primary surplus target in 2001 was 5.5% of GNP for the entire public sector and 5.1% of GNP for the central government. The framework agreement that the government reached with the IMF previously (announced on 19 March) had set the primary surplus target (as % of GNP) at 4% for the central government and 3.6% for the entire public sector.

Another alternative is to increase TRL-denominated debt issuance

An alternative (to securing vast amounts of foreign finance) would be to raise the roll-over rate in the domestic debt market⁸. As we discuss in some detail in footnote 5 (on a previous page), it may be possible for the government to raise the rollover rate to 100% or more. But we believe the domestic banks will be prepared to reinvest more than 100% of the maturing principal and interest payments in government securities at reasonable yields (i.e. at yields that don't put the government's debt-to-GDP ratio on an explosive path) only if they gain confidence in the government's solvency (we discuss the solvency issue in detail below).

A further option would be domestic issuance of dollar debt

Another option that is available to the government (and which we also discuss in detail below) is to swap at least some of the TRL-denominated debt into dollar-denominated instruments. A "soft" version of this "swap-possibility" would be a gradual issuance of dollar debt in the domestic market in the context of the debt redemptions in May-August.

Higher inflation could also contribute

Yet another option (but clearly an unattractive one from the point of view of the government and the IMF) would be to inflate the problem away by printing large amounts of lira that can be used by the government to cover its redemptions.

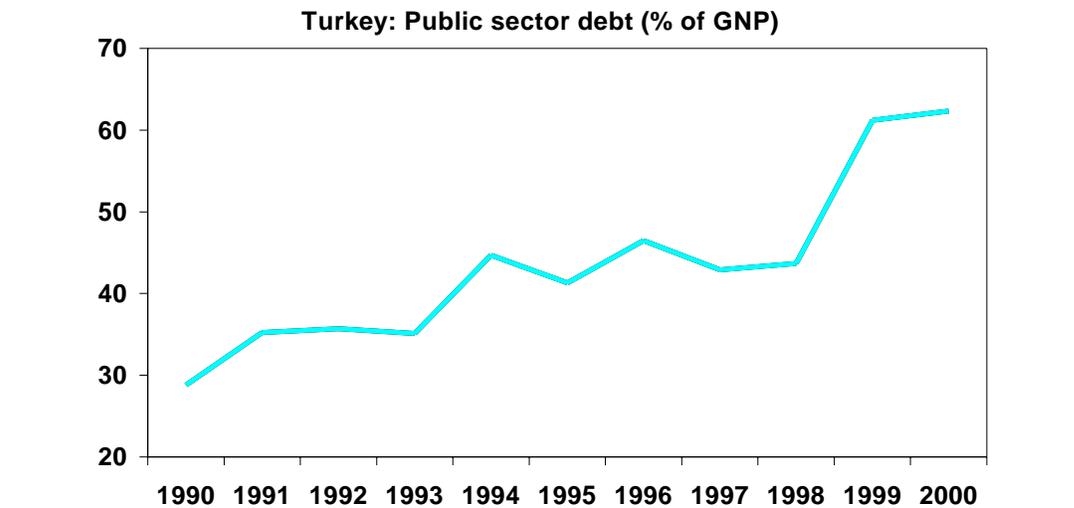
Opposition to coercive approaches

A more coercive restructuring of the lira-debt is also among the government's options but we believe there is very strong resistance within the government to go for this option.

Government indebtedness has risen sharply in recent years

A good proxy for the long-term solvency of the government is the ratio of public sector debt to GDP (or to GNP, which is the more commonly used measure in Turkey). This ratio has risen sharply in recent years, as a result of the combination of extremely large budget deficits, falling inflation and government efforts to recapitalize ailing banks (that have, in turn, continued to accumulate new losses).

The following chart shows the evolution in recent years of the government's debt-to-GNP ratio. The source of these data is IMF publications (data on all the components of the public sector debt are not available from other public sources). The underlying definition of the public sector includes not only the central government, but also the state-owned banks, state-owned enterprises, social security institutions, public funds and municipalities. The government publishes data on both the domestic and the foreign debt of the central government, but does not publish detailed data for some of the other components of the broader public sector.



⁸ On 14 April, the government announced in principle that retail investors would be exempt from the declaration for tax purposes of interest earned on government securities, as it was moving towards imposing a withholding tax on government securities instead. This might increase the retail investor appetite for government securities.

The increase in the ratio of government debt to GNP will cease only if some combination of the following events occurs:

- nominal GNP growth picks up
- the ratio of the fiscal deficit to GNP declines
- privatisation revenue picks up

In the peculiar Turkish case, the overwhelming near-term influence on the debt-to-GNP ratio comes from the interest that the government has to pay on its domestic debt.

We focus on the debt stock of the central government

We focus in our forward-looking exercise on the debt of the central government for which we have access to figures for both domestic and foreign debt. The debt stock of the central government at the end of 2000 stood at 55% of GDP (for comparison, IMF figures indicate that the debt of the broader public sector debt stood at 62% of GNP at the end of 2000).

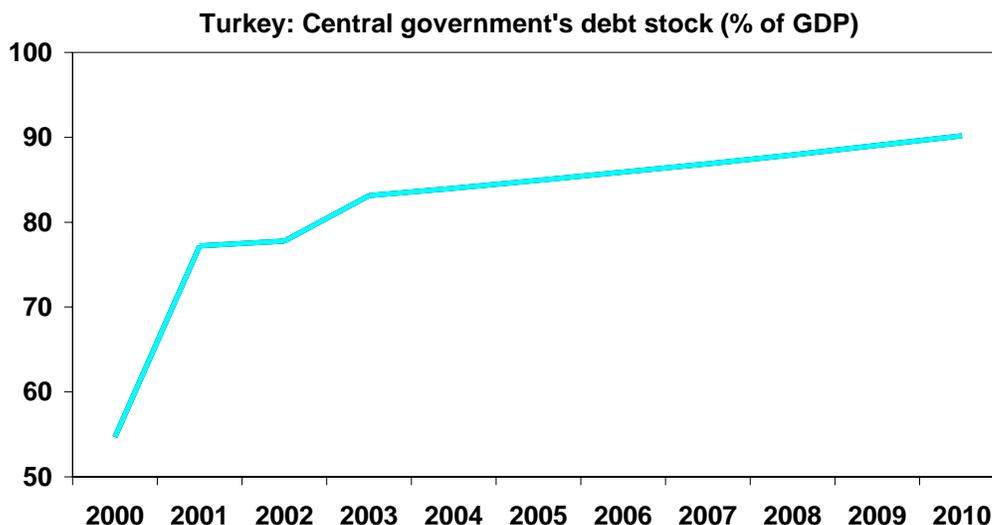
Base case assumptions

The following table shows our base macro-economic assumptions. (The assumptions on the primary surplus/GDP ratio include privatisation receipts.) Additionally, we assume that the government will obtain about US\$ 10bn in international finance this year and will issue new debt domestically to cover the residual financing need. We assume that the government will cover its financing needs in future years mainly through domestic debt issuance.

Base case macro assumptions			
	2001	2002	2003+
Growth	-3.0%	4.5%	5.0%
Inflation	55%	30%	15%
Real interest rate	20%	15%	10%
Primary surplus/GDP	5.0%	5.0%	2.0%
Real appreciation in the currency	-10%	0%	0%

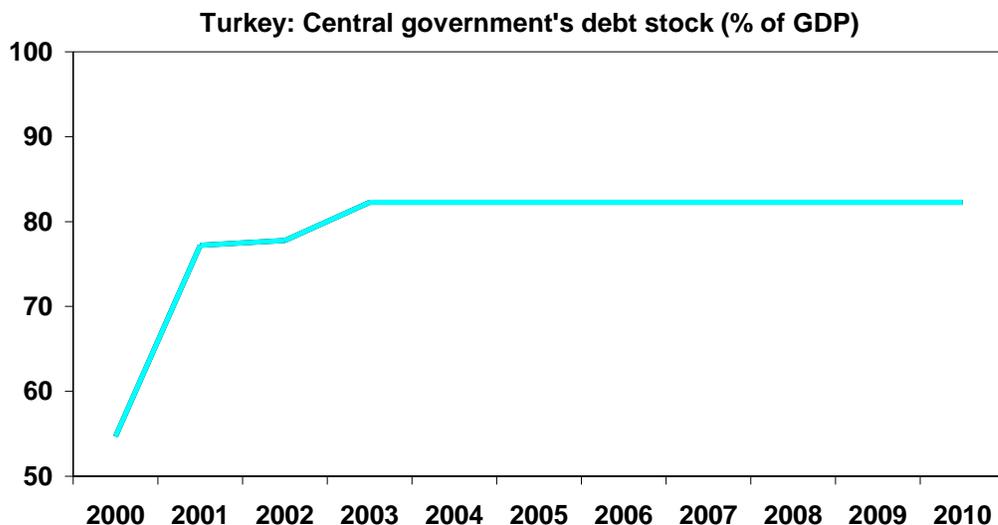
In the base case scenario, the central government's debt increases to 90% of GDP by the end of the decade

We estimate that on these assumptions the debt stock of the central government will increase from 55% of GDP at the end of 2000 to 77% of GDP at the end of 2001 (much of this increase reflects the bank recapitalisation operations). While the debt-to-GNP ratio of the central government would not, in this scenario, be on an explosive path, it would continue to rise and would reach 90% at the end of this decade. The picture below shows the long-term behaviour of government's indebtedness in our base case scenario.



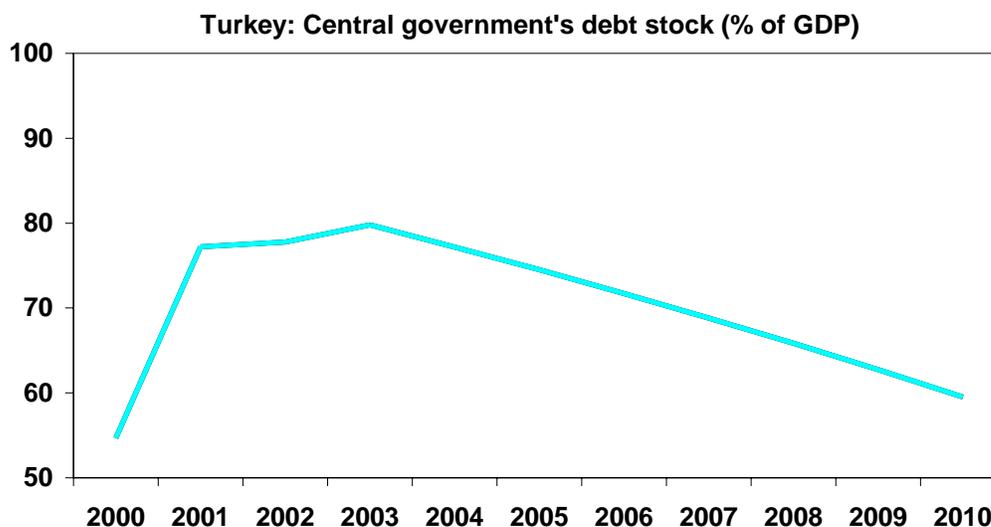
Growth of 6% p.a. could stabilise the solvency ratio

Higher real GDP growth would put the government's debt stock on a stable path "on its own" only if were to reach at least 6% every year after 2003 (assuming that everything else is kept constant at the levels assumed in the base case scenario). On this growth assumption, the debt stock of the central government would be stable at 82% of GDP starting in 2003. Although the desirable property of stability is reached under this case, the level of government's indebtedness will remain uncomfortably high and it would require an additional fiscal effort to reduce (rather than stabilise) the ratio of debt to GDP. The picture below shows the long-term behaviour of government's indebtedness in the scenario in which growth is 6% every year after 2003:



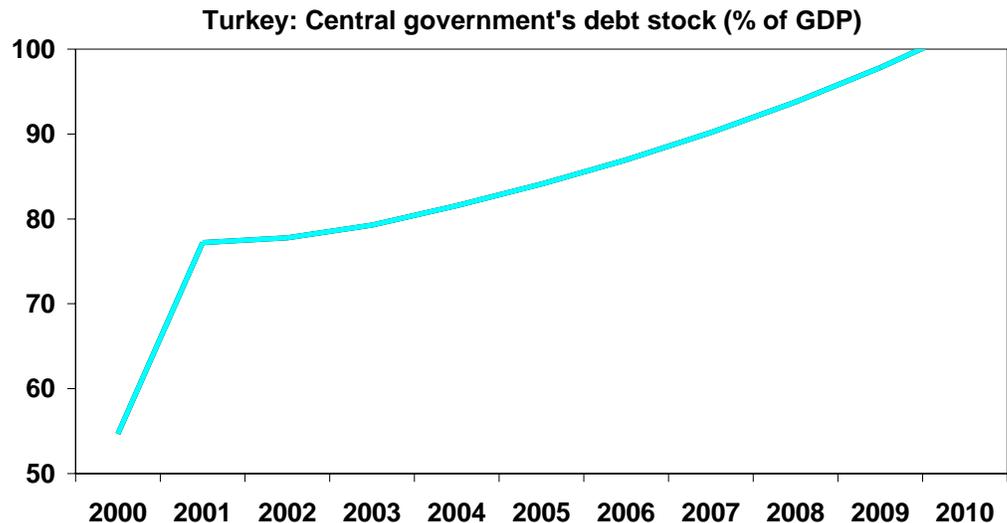
High growth and continued fiscal discipline would cut the debt level to 60% of GDP at the end of the decade

If economic growth is 6% starting in 2003 and the government creates a primary surplus of around 4.5% of GDP (instead of 2.0% as under the base case scenario) every year after 2003, then the public sector debt would come down to around 60% of GNP in 2010. The picture below shows the long-term behaviour of government's indebtedness in this favourable scenario:



Even in the “good” scenario, real interest rates must stay below 20% for the rest of the decade

However, as we noted above the situation in Turkey is clearly dependent on the real interest rate paid on domestic debt. Even if a very favourable scenario in terms of growth and fiscal discipline prevails (i.e. the economy grows by 6% after 2003 and the governments continue to create a primary surplus of 5% of GDP), but the governments continue to pay real interest rates of around 20% for the entire decade (possibly due to political instability) the government’s debt will rise sharply to 102% of GDP at the end of the decade, as the following figure suggests.



A favourable solvency outlook requires too many good things at the same time

This analysis of the long-term solvency shows that containment of the government’s indebtedness after the first jump in 2001 will not be a very challenging task. It will require consecutive governments committed to fiscal discipline in addition to uninterrupted economic growth and a relatively stable political environment that would help contain real interest rates at less than 20%. Given that many favourable conditions have to be satisfied simultaneously for a favourable solvency outlook, we would be very concerned about the long-term implications of the government’s indebtedness in case the government fails to obtain the amounts of foreign funding it is seeking (for 2001) while continuing to reject the notion of dollar debt issuance in the domestic market.

The government has to present a clear plan to deal with the solvency problem

Thus, we believe that if the forthcoming announcement of the economy minister, regarding the size of the international funding package, involves disappointing numbers, then the markets will find it very hard to react to the announcement with great enthusiasm because of the solvency concerns. We believe that in the absence of adequate foreign funding, the government will have to present to the markets a clear plan for the handling of its potentially explosive debt stock. One such plan could involve acceptance of the desirability of dollar debt issuance in the domestic market.

A CLOSER LOOK AT THE DOMESTIC COMPONENT OF THE DEBT STOCK IN 2001

Assumptions on international funding

In this section, we analyse in greater depth the near-term prospects for the government’s indebtedness. We assume that the government will have access to “only” US\$ 10bn during the remainder of 2001 from the IMF, the World Bank and international capital markets – this would be about US\$ 5-10bn short of the levels that the government is probably targeting. We analyse below how the government might deal with this shortfall. We assume that the available foreign funding would be composed of US\$ 6bn from the IMF, US\$ 2bn from the World Bank (approximately US\$ 350mn as the second tranche of

FSAL⁹-1, US\$ 750mn from FSAL-2, US\$ 600mn as the agricultural sector loan and US\$ 250mn from social support and health-related loans) and US\$ 2bn from international bond issuance (which would take the figure for total international bond issuance in 2001 to US\$ 2.8bn)¹⁰. We assume that the Treasury will roll over all of its outstanding domestic debt and in the meantime will issue domestic debt to cover the financing gap resulting from the shortfall regarding international financing.

Macro assumptions for 2001 are quite benign

Our macro assumptions are the ones indicated on page 6 for our base case scenario (for 2001): we assume that the economy will grow at -3%, that CPI-inflation at the end of the year will be 55%; that the primary surplus of the central government will be 5% of GDP; that real depreciation of the currency will be 10%; and that the ex-post real interest rate will be 20% on average (corresponding to a nominal interest rate of 86% on average for the remaining 8 months of 2001)¹¹.

Assumptions for the sources of funds

In calculating the monthly primary budget surplus for the remainder of the year, we start with the government's full-year target. Then we take away the surplus that was created in the first quarter of 2001 (TRL 4,853trn); and we distribute the remainder of the targeted full-year primary surplus evenly across the 9 months from April to December.

We also assume that the funds from the IMF, World Bank, international capital markets (a total of US\$ 10bn) accrue to the government evenly over the last eight months of 2001. We realise that the government is likely to push for an early and relatively large disbursement of these funds, ahead of the heavy redemption period, but we have opted to hold on to a slightly more conservative assumption for the purpose of our model calculations.

Assumptions for the uses of funds

Regarding the uses of funds, a key input into our calculations is our knowledge of the due monthly principal and interest payments on the existing stock of TRL-denominated Treasury debt. Regarding the external debt service of the public sector for the remainder of 2001, we have utilised the latest figures provided by the Treasury, which show a total external debt service of the public sector in 2001 of US\$ 12.8bn. Within this total, US\$ 3.4bn will have been paid by the end of April 2001. The government has to pay back a syndication loan of US\$ 1.0bn in June 2001. We have simplistically assumed that the government pays US\$ 1.052bn (in external debt service) each month between May and December, except in June, when it pays US\$ 2.052bn (including the US\$1bn repayment of the syndication loan).

As for the flow cost of bank recapitalisation, we assume that the cost for the full year (US\$ 10bn) will be distributed evenly over the last eight months of 2001.

In the scenarios below, we calculate the government's financing gap for each of the last eight months of 2001 (based on the assumptions we have already outlined) and assume that the financing gap will be bridged entirely by TRL-denominated debt issuance.

⁹ FSAL stands for the Financial Sector Adjustment Loan from the World Bank. The loan will be disbursed in two parts (FSAL-1 and FSAL-2). The first tranche of FSAL-1 was disbursed late last year. The second tranche of FSAL-1 and the full amount of FSAL-2 will be disbursed this year contingent on government's fulfilment of certain conditions.

¹⁰ Our assumptions regarding the components of around US\$ 10bn available to the government for budgetary purposes are not binding and are not in contradiction with the recent reports about the G7 governments moving towards agreeing on a package for Turkey in the order of US\$ 6bn. We do not know whether the IMF or the G7 money will be available to the government for budgetary purposes. We are assuming that US\$ 10bn out of a package that is likely to be extended to Turkey will be available to the government for meeting its financing needs.

¹¹ Some of these assumptions are very close to the government's projections announced on 14 April. The government's growth projection is -3%, the primary surplus target for the central government is 5.1% of GDP and the CPI-inflation for the end of the year is 52.5%. The assumptions of the government on the remaining macro variables are not known.

Central bank provides funding through open market operations

We assume further that the central bank doesn't directly finance the government and that it provides funding to the banks through open market operations. We have not explicitly modelled the linkage between money growth, inflation and real interest rates. Thus, in using the tables below, the reader will have to judge for himself which combinations of assumptions for inflation and the ex-post real interest rates are realistic.

For the narrow purposes of this section, we analyse the domestic debt stock, excluding the recapitalisation bonds (we refer to this shortly as the cash debt stock). This narrow measure of the government's domestic debt stock stood at 23.5% of GDP at the end of 2000 and 24% of GDP at the end of February 2001.

In our base case scenario (represented at the centre column of the table below), this subset of the government's debt stock increases grows to 32.6% of GNP at the end of 2001 (from the starting point of 24.5% at the beginning of the year), on the additional assumption that the government issues debt at 6 months tenors between May and December¹². On the alternative assumption that the government issues debt at 12-month maturity the cash debt stock of the government would stand at a more palatable 26% of GDP by the end of 2001. But we believe the 6-month rollover assumption is a more reasonable central scenario (partly because the government would not want to lock in the current high yields for a longer period).

Apart from the recapitalisation bonds, the domestic debt stock will increase by about 9% of GDP in 2001

We have opted to adopt the government's methodology for measuring the debt stock. This methodology captures the cash raised through the T-bill auctions, as opposed the nominal face value of the outstanding T-bill (and T-bond) stock. In our central scenario, the ratio of the cash debt stock to GDP will increase by about 9 percentage points in 2001, without taking into account the issuance of recapitalisation bonds. Based on the results of this exercise, we conclude that it will be very hard for the government to convince the markets in 2001 that it will finance itself through bond issuance without leading to an increasing/explosive debt stock, even in the absence of recapitalisation bonds.

In the table below, we present the results of the sensitivity of the ratio of cash domestic debt to GDP at the end of 2001. We show the effect of changing one variable while keeping all others constant at the values assumed under the base case scenario. The column at the centre of the table represents the base case.

Domestic debt stock (excluding bank recapitalisation) as % of GDP at the end of 2001						
Growth	-1%	-2%	-3%	-4%	-5%	-6%
	31.8%	32.2%	32.6%	33.0%	33.4%	33.8%
Year-end inflation	45%	50%	55%	60%	65%	70%
	33.0%	32.8%	32.6%	32.4%	32.2%	32.0%
Real depreciation	0%	5%	10%	15%	20%	25%
	32.2%	32.4%	32.6%	32.8%	33.0%	33.3%
Primary surplus	4.0%	4.5%	5.0%	5.5%	6.0%	6.5%
	33.7%	33.1%	32.6%	32.0%	31.4%	30.9%
Ex-post real interest rate	10%	15%	20%	25%	30%	35%
Nominal interest rate	71%	78%	86%	94%	102%	109%
	31.7%	32.1%	32.6%	33.0%	33.4%	33.8%

¹² This also assumes that the retail investors absorb that part of the domestic debt not bought by the banks due to liquidity reasons. The government's new economic programme, announced on 14 April, indicates that the government might take measures to exempt individuals from declaring for tax purposes their interest incomes from bond holdings.

Limited scope for solving the problem through money-printing

The line in which we raise (and lower) the rate of inflation, while keeping all other variables (including the real ex post interest rate) constant shows that there is little impact on the debt-to-GDP ratio of variations only in the inflation rate. But this is deceptive. This reflects the unrealistic assumption that the real ex post interest rate would be unaffected by the level of inflation. Large-scale money-printing could indeed substantially reduce government indebtedness if debt holders were left defence-less, but we do not see this as anything other than a last-resort option, and an option that would have highly detrimental consequences. If, for example, the central bank printed cash and gave it to the government for the purpose of covering all of the TRL-denominated debt redemptions between May and August, then clearly government indebtedness would be reduced substantially compared with our base case scenario. Real ex post interest rates would fall to sharply negative levels, helping to reduce the debt build-up. But the limitations of this strategy are pretty obvious. For example, financing all of the debt redemptions in May and June through money-printing would more than triple the supply of base money. This would lead to a massive depreciation of the lira and a very rapid acceleration of the inflation rate (probably to much higher levels than the country has ever seen). This would, no doubt, be associated with a high degree of political mess that would generate its own solvency fears among investors.

Against the background of these considerations, domestic issuance of dollar debt may no longer look so appetising to the government in comparison with the available alternative options. Although the economy minister Kemal Dervis told reporters on 16 April that the Treasury was not currently considering the option of swapping the TRL-debt with hard-currency debt, he left the door open by stating that the government could consider this option at some stage in the future. We argue below that the benefits to the Treasury of dollar debt issuance in terms of improving the solvency outlook and reducing the roll-over risk is significant regardless of the level of foreign funding.

DOMESTIC DOLLAR-DEBT ISSUANCE COULD HELP REDUCE ROLLOVER RISK

New focus on the possibility of domestic dollar debt issuance

A local TV channel reported last week that the government might consider a swap of its TRL-denominated debt into hard currency debt, in case it proved impossible for the government to raise the targeted amount of international financing support for the new economic programme. Local banks have for weeks been pushing for such a swap but the Treasury has, at least until now, been reluctant to consider it. The government's preferred option is clearly to try to reduce its need for TRL-denominated borrowing by obtaining large amounts of financing from the IMF, the World Bank and G7 governments. It follows from all of this that the expected imminent government announcement of the likely size of the international financing package will give the market a much improved basis for judging the likelihood of a domestic debt swap operation.

Government likely to opt for a "soft" version of dollar debt issuance

We believe that the government would be more likely to opt for a "soft" and limited version of the swap than for a comprehensive debt restructuring. This soft option involves simply opportunistic issuance of dollar debt in the domestic market for as long as the yields on TRL debt remain unacceptably high (from a government perspective). We also believe that the government could benefit from some degree of dollar debt issuance regardless of the level of foreign funding.

Dollar debt issuance to improve the solvency outlook and reduce the roll-over risk

In order to get a sense of the maximum possible significance of these options, we estimate below the impact on the Treasury's interest payments of a comprehensive voluntary swap of TRL liabilities into dollar liabilities. A debt swap would decrease the concerns about the solvency of the Turkish sovereign and would reduce the rollover risk substantially (assuming that the tenor on the government's dollar debt would be much longer than the tenor on TRL debt). In addition to its benefits to the Treasury, the swap of TRL-denominated debt with hard-currency debt would help the local banks close their short foreign exchange positions.

If the Treasury opts to swap its TRL-denominated debt into hard-currency debt, one approach would be to invite each of the banks to submit to the Treasury a price and the value of bonds it would sell at that price, in exchange for hard-currency bonds. The price will, of course, be a function of how willing the local bank is to receive hard-currency bonds. It is up to the Treasury to decide on the amount of hard-currency bonds to be issued.

We consider an extreme case: we assume that the Treasury swaps all outstanding government securities and issues a three-year and a five-year dollar instrument

In order to get an idea of the savings to the Treasury that would result from dollar debt issuance, we consider an extreme case in which the Treasury swaps all the outstanding zero coupon bonds and bills, fixed coupon bonds and the floating rate notes. We assume that half of the participating TRL debt is converted into a three-year dollar-denominated instrument and that the other half is converted into a five-year dollar-denominated instrument. We assume that the interest on both of the dollar-denominated bonds will be around LIBOR+1000bps, leading to about 14% annual yield for the three-year paper and about 14.5% annual yield for the five-year paper. For the sake of simplicity, we assume that both issues will have annual coupons.

We assume that the Treasury swaps all the outstanding T-bills, zero-coupon bonds, fixed-coupon bonds and the floating rate notes on 1 May 2001, paying back the interest accrued on all of these outstanding government securities (using straight line accrual for the T-bills/zero-coupon bonds and calculating the floating rate coupons using forward-forward rates observed in the market)¹³. From the perspective of the Treasury, this is a conservative assumption for the swap-terms. Swapping these bonds at the prevailing market prices would be more beneficial for the Treasury than assuming interest accumulation on a straight line from the time of issuance. We believe, however, that the government may have to accept straight-line methodology to obtain a voluntary agreement from the banks for a swap. Banks book the government bonds in their investment portfolios on an accrual basis and would incur new book losses if they were to swap the bonds at market rates.

On the listed assumptions, the government would have to swap domestic debt with a face value of TRL 37,600tn on 1 May 2001. Assuming that the swap takes place at an exchange rate of TRL 1.1mn/US\$ (we have also assumed this rate as the end-April rate in the previous section), the Treasury would have to issue US\$ 17.1 worth of three-year bonds and a US\$ 17.1bn worth of five-year bonds.

Results for 2001: Interest savings: almost 6% of GDP in 2001 and almost 12% of GDP in 2002 in the absence of further sharp depreciation in the currency

In the table below, we present the ratio of government's interest expenditure to GDP under two different scenarios.

The first scenario (the results of which are reported in the second column of the table below, with the title "without dollar-debt issuance") is built on the base case macro assumptions reported on page 9 (for 2001 and 2002). We also assume that the government issues securities with 6-month maturity both in 2001 and in 2002 to cover its financing shortfall. In the relevant column of the table below, we report the interest expenditures which materialise in 2001 and 2002 under these assumptions.

The second scenario (the results of which are reported in the third column of the table below, with the title "with dollar-debt issuance") assumes that the Treasury swaps on 1 May 2001 all outstanding government securities and issues a three-year and a five-year dollar instrument. We also assume that any financing gap which materialises after 1 May 2001 is covered by the issuance of 6-month TRL-denominated bills. In the third column of the table below, we report the interest expenditures which materialise in 2001 and 2002 under these assumptions. Please note that (i) the interest expenditures in 2001 under this scenario are interest expenditures on TRL-denominated bills, and (ii) the interest expenditures in 2002 under this scenario are interest expenditures on the dollar debt

¹³ We would like to thank Kerim Acanal for providing detailed data on the outstanding government debt and providing us with the calculations for the interests that will have accrued on 1 May 2001 on the Treasury bills, zero-coupon bonds, fixed-coupon bonds and the floating rate notes.

issued on 1 May 2001 (due to its annual coupon) and the TRL-denominated debt (which falls due in 2002) issued to cover the financing gap. In the relevant column of the table below, we report the interest expenditures which materialise in 2001 and 2002 under these assumptions.

Interest payments due on domestic debt (% of GDP)			
	Without dollar-debt issuance	With dollar-debt issuance	Interest savings from dollar-debt issuance
2001	14.5%	9.0%	5.5%
2002	17.3%	5.4%	11.9%
2003		2.4%	N/A
2004		10.2%	N/A
2005		1.1%	N/A
2006		8.2%	N/A

Figures for 2004 and 2006 under the scenario with dollar-debt issuance include both the interest and the principal payments on dollar-denominated debt.

The swap helps reduce the Treasury's interest payments...

The table above indicates that the ratio of interest expenditures to GDP would be reduced sharply by the swap. On the assumption that the tenor on dollar debt exceeds the tenor on TRL debt, the Treasury will unequivocally improve its liquidity situation through such a swap, while unequivocally reducing its interest expenditure. The savings on interest payments would be almost 6% of GDP in 2001 and almost 12% of GDP in 2002 if the exchange rate assumptions from our base case scenario materialise.

...but it could add substantially to the Treasury's exchange rate related losses

Nevertheless, the solvency impact of the swap would not be unambiguously positive. The swap would offer savings to the Treasury only on the crucial assumption that the exchange rate would remain relatively stable. If not, the savings on interest payments might be offset (possibly more than offset) by an exchange rate related loss on the stock of new dollar debt.

Exchange rate depreciation of 145% in 2001 and 48% in 2002 would eliminate the attraction of a swap

The first column in the table below shows the domestic debt stock (measured as a share of GDP) at the end of 2001 and the end of 2002, using our base case assumptions (listed on page 9). For the purpose of this table we use a measure of domestic debt that excludes the bank recapitalisation bonds. The second column shows what the debt-ratios would change to if the debt swap we have outlined above were to materialise (we keep all other assumptions unchanged).¹⁴ We convert US\$ 34.2bn worth of dollar-denominated debt into TRL using the year-end exchange rate forecasts under our base case macro assumptions, which are TRL 1,156,929/US\$ for end-2001 and TRL 1,504,007/US\$ for end-2002.

In the last column of the table below, we report the level of the exchange rate which would make the Treasury indifferent between the two scenarios, as far as the domestic debt component of the debt-to-GDP ratio is concerned. The nominal exchange rate depreciation would have to exceed 145% in 2001 and 48% in 2002 in order for the Treasury to be better off with TRL-denominated debt issuance than with domestic issuance of dollar-denominated debt.

¹⁴ Recall that in our scenario "with dollar-debt issuance", the government issues TRL-denominated debt throughout 2001 and 2002 to cover the residual financing gap (after taking into account the assumed primary surplus and our crude assumptions for the availability of international finance and privatisation proceeds). In the calculation of the debt stock, we also assume that if there is no financing gap, the Treasury pays back part of the principal using the surplus.

Domestic debt stock (excluding bank recapitalisation) as % of GDP			
	Without dollar-debt issuance	With dollar-debt issuance	Break-even exchange rate
2001	32.6%	23.2%	TRL 1,646,779/US\$
2002	36.3%	24.2%	TRL 2,443,594/US\$

Surely the government must, if it revives the IMF programme, have confidence that the exchange rate will not weaken to these break-even levels.

RISKS FACED BY HOLDERS OF EURO BONDS

As a last note to our study of the solvency issues in the Turkish context, we would like to mention that servicing domestic and external debt are inseparable issues. Especially if the government receives additional foreign funding in 2001 at very short maturity (such as one year), we believe that the absence of a credible solution to the solvency problem would be a risk to the external debt service as well. It is important to keep in mind that it is not only the bilateral funding but also some of the IMF funding that carries a relatively short maturity. Each tranche under the IMF's Supplementary Reserve Facility must be repaid to the IMF within 24-30 months of being disbursed (half within 24 months and half within 30 months).

We believe the solvency of the Treasury would improve, if the government embarked on some scale of domestic issuance of dollar debt. But the impact on the price of Eurobonds would, nevertheless, be ambiguous because the additional dollar debt issuance would add to the aggregate *supply* of hard currency bonds, and because the local banks might find it tempting to offload Eurobonds if the government were to embark on large-scale domestic issuance of dollar debt in the domestic market. We believe the net impact on Eurobond prices would be favourable only if the "domestic dollar debt issuance" would be perceived to be a temporary measure, aimed solely at taking the government through (for example) the May and June debt redemptions. We believe the (adverse) supply effect would dominate the (favourable) solvency effect, if the scale of the dollar debt issuance were to be (or if it were perceived by the market to be) of a much grander order of magnitude.

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