

Executive Summary

i. In the latter half of the 1990s, budget deficits and debt levels in Turkey were allowed to reach such high levels that the country's macroeconomic stability was severely undermined. High inflation and volatility of the real exchange rate caused growth rates to oscillate excessively in a "boom and bust" cycle. In order to address this instability, the Government of Turkey (GOT) embarked on a path of disinflation in early 2000, requiring a reduction of government expenditures in all sectors. Given the bloated level of annual budgetary and other fiscal support which agriculture had come to absorb by this time, reforms of agricultural subsidies had a significant role to play in this fiscal stabilization program. For this reason, the GOT initiated a politically demanding but thorough realignment of agricultural support policies, aimed at improving the efficiency in their support to the sector at greatly reduced levels.

ii. Three years into the program, the agricultural subsidy reforms have contributed significantly to the fiscal stabilization agenda by reducing fiscal transfers to farmers by US \$4.3 billion, and avoiding a more prolonged and deeper recession. The agricultural subsidy reform program also succeeded in reducing significantly the redistribution of income from Turkish consumers to farmers by US \$3.6 billion (or from 22 percent to 8 percent of the value of agricultural consumption) to the benefit of the former. Direct payments to farmers are compensating almost half of the income loss imposed on Turkish farmers by the cuts in agricultural subsidies, proving to be an effective policy substitute for transferring income directly to them. The observed loss in agricultural income (16 percent between 1999 and 2002) primarily reflects the re-alignment in agricultural commodity and input prices that Turkey could no longer sustain fiscally; only 20 percent of the observed fall in agricultural income results from the 4 percent decline in agricultural output.

iii. In 1999, fiscal subsidies to the agriculture sector had reached over 3.0 percent of GDP (US \$6.1 billion), although the sector contributed only 14 percent of GDP. The reforms of agricultural subsidies focused mainly on reducing the fiscal support to state and quasi-state marketing enterprises and to credit subsidies and debt write-offs in the rural finance system. Inefficiency in past government support was particularly evident in expenditures covering the annual losses of parastatal marketing and processing enterprises, of quasi-state Agricultural Sales Cooperative Unions (ASCUs), of the Agricultural Bank (Ziraat Bank), and the system of Agricultural Credit Cooperatives (ACCs).

iv. In tandem with the reduced intervention capacity of parastatal marketing enterprises, the subsidy reduction program also eliminated fertilizer subsidies and significantly reduced deficiency payments (output price supports) for most of the supported agricultural products. In partial compensation for these subsidy reductions the Government introduced a Direct Income Support (DIS) Program. Starting in 2001, the DIS Program has made annual payments of roughly US \$90/hectare to all farmers on the basis of their cultivated area.

v. **The agricultural subsidy reform program contributed significantly to fiscal stabilization.** By 2002, the cuts in agricultural subsidies (US \$5.5 billion) coupled with the introduction of DIS reduced the cost of agricultural transfers (subsidies and DIS) by over 2.3 percent of GDP, contributing a third to the success in reaching the GOT target of a 6.5 percent primary budget surplus. By international standards, the magnitude of this fiscal adjustment from agriculture (agricultural transfers were cut by over two-thirds, or US \$4.3 billion) and its quality (since the adjustment squarely focused on subsidies rather than investments) are impressive.

vi. By the end of 2002, the reform program reduced the fiscal outlays on agricultural subsidies by about US \$5.5 billion to US \$0.6 billion. This represents a savings of over 2.7 percent of GDP. Over half of the subsidy cuts is accounted by the US \$3.1 billion reduction in the coverage of losses for state financed crop purchases. The elimination of the credit subsidies and debt write-offs generated another US \$1.4 billion in fiscal savings. Fiscal transfers to ASCUs, which had reached US \$1 billion per year, were also reduced by US \$800 million. The other area of subsidy reduction was fertilizer subsidies, which declined by US \$300 million. Put together, 70 percent of the subsidy cuts were directed at lowering agricultural commodity prices and was primarily achieved by imposing hard budget constraints on state marketing and processing enterprises as well as the quasi-state ASCUs. The remaining 30 percent cut was aimed at reducing agricultural input subsidies, notably credit and fertilizer.

vii. In 2001, the DIS Program was introduced by the GOT, aiming to compensate partially farmers for the negative impact on their income of subsidy reduction. As participation in the DIS Program reached about 75 percent of farmers in 2002, the cost of the DIS Program reached US \$1.25 billion. Thus, the net reduction in the annual fiscal cost of switching from heavy reliance on intervention in the output, input, and credit markets to the DIS Program has been on the order of US \$4.3 billion.

viii. Looking forward, the level of fiscal savings from agriculture will likely fall for a number of reasons. First, the accumulation of budget liabilities for the losses of parastatals has not been entirely stemmed. Progress in reducing the intervention purchases of the Turkish (State) Grain Board (TMO) has been significant, and the cost of intervention purchases by the hazelnut ASCU (Fiskobirlik) has fallen, but less progress has been made in the sugar, tea, and tobacco markets. Moreover, there will be costs to the budget when the Turkish (State) Alcohol and Tobacco Company (TEKEL) is privatized and when the debts of Fiskobirlik to private banks eventually need to be covered. Finally, the DIS Program will likely reach a steady annual cost of almost US \$2 billion, when the DIS payment is increased by the expected inflation rate and the participation rate rises close to 90 percent in 2004 as expected, and if the TL/\$US exchange rate maintains its current level.

ix. **Agricultural subsidy reforms benefit Turkish consumers.** The agricultural subsidy reform program reduced the burden imposed on Turkish consumers by an estimated US\$3.6 billion (per capita – roughly US \$50) between 1999 and 2001. Prior to the reforms, agricultural subsidies imposed a heavy burden on consumers by keeping agricultural prices about 25-30 percent above international levels. According to the OECD, transfers from consumers to farmers reached as much as US \$ 5.2 billion in 1999, the equivalent of 22 percent of agricultural consumption. Turkish consumers financed 55 percent of the overall support provided to farmers, in the form of higher food prices; about 45 percent of the remaining support to agriculture came

from the budget. By 2001, following the reforms, transfers from consumers to farmers had fallen to only US \$1.6 billion annually (equivalent to 8 percent of consumers food budget), indicating a much lower level of support to farmers paid by consumers as agricultural prices fell closer to international levels. By 2001, consumers contributed less than 30 percent of a much lower level of support to farmers, with the remaining 70 percent financed by taxpayers. Consumers have therefore been a significant beneficiary of the reform of agricultural subsidies, and the poor have undoubtedly benefited even more given the larger share of their income spent on food compared to wealthier consumers. The large benefits for consumers is consistent with the earlier observation that 70 percent of the agricultural subsidy reforms was aimed at lowering the support of agricultural commodity prices.

x. **DIS payments compensate almost half of the income loss imposed on Turkish farmers by the cuts in agricultural subsidies.** Between 1999 and 2002, agricultural income fell by 16 percent (US \$2.7 billion), while agricultural output declined by only 4 percent. The cuts in agricultural subsidies lowered agricultural commodity prices and raised input prices, bringing both closer to world price levels. By doing so, the cuts in agricultural subsidies realigned downward the profitability of agriculture that had been pushed artificially high by fiscally unsustainable subsidies. An estimated 80 percent of the 16 percent decline in agricultural income is explained by this realignment in agricultural profitability. The remaining 20 percent of the observed fall in agricultural income comes from lower agricultural output as farmers reacted to lower profitability, as well as to lower demand associated with the macroeconomic crisis of 2000 and 2001.

xi. DIS payments, however, reached US \$1.25 billion in 2002, and successfully compensated farmers by close to half of their income loss associated with the 16 percent decline in agricultural income. In aggregate terms, Turkish farmers suffered an estimated net income loss of US\$ 1.45 billion between 1999 and 2002. The large difference between the fiscal savings from the agricultural transfer (subsidy and DIS) reform program (US \$ 4.3 billion) and the net income loss to farmers (US \$1.45 billion) is a testimony to the gross inefficiencies of the pre-reform agricultural subsidies in supporting farmers' income. This indicates that, from a fiscal or taxpayers' perspective, the current DIS program is a much more cost effective and fiscally sustainable way at supporting farmers' income than the earlier regime of output and input subsidies. Adding to these fiscal efficiency gains in supporting farmers, the significant savings for Turkish consumers described above would suggest that DIS is an efficient and more equitable substitute for blunt agricultural policies.

xii. **Agricultural prices and profitability adjust to agricultural subsidy reforms.** In the latter half of the 1990s, output and input subsidies encouraged agriculture by artificially raising agricultural prices in real terms, and relative to either agricultural inputs or non-agricultural goods. This trend was reversed in 2000, and the reforms of agricultural input and output subsidies caused a significant re-alignment of agricultural prices. This re-alignment was, however, inevitable since the agricultural subsidies were not fiscally sustainable and had to be cut to help stabilize the economy.

xiii. Between 1999 and 2002, agricultural prices in real terms declined by 13 percent and by 22 percent when measured relative to non-agricultural prices. Within agriculture, crop prices fell by 23 percent relative to input prices, and by 33 percent in the livestock sector. Not all the

decline in agricultural prices results from lower agricultural subsidies. Lower demand for livestock products, brought about by the recession-led decline in per-capita incomes, have caused livestock prices to fall more than crop prices. Prices of the highly regulated crops, tobacco, sugar beet and hazelnut fell the most, between 25 and 50 percent in real terms as the level of government support was significantly reduced between 1999 and 2002. Grain (wheat, maize and barley) prices also declined by about 5 to 10 percent because of reduced interventions by the GOT. Prices of cotton and sunflower seed prices declined the least, either because government interventions were initially limited (cotton) or largely continued unreformed (sunflower). Fertilizer prices doubled when the 50 percent fertilizer price subsidy was reduced and finally phased out in November 2001. The price of agricultural credit witnessed a dramatic shift, as real interest rates increased from about -20 percent during the 90s to about +30 percent in 2001-2002.

xiv. The level of indirect support to Turkish agricultural producers financed by agricultural subsidies and tariffs measures, and measured by the percentage Producer Subsidy Equivalent (PSE), averaged about 25 percent of farm receipts in 1998-1999. By 2001, this measure had declined to 10 percent, with Market Price Support having declined by roughly US \$2.3 billion. At this level, Turkey's PSE is one of the lowest of all OECD countries. In terms of individual commodities, crops and in particular grains, sugar and tobacco, account for the bulk of the decline in support to farmers. Since the crop component of the PSE has decreased much more rapidly than that of livestock, the share of support to animal production has increased from 30 to 40 percent. With continued general (i.e., non commodity-specific, such as duty losses and debt write-offs) fiscal support to agriculture still occurring in 2001, Turkey's Total Support Estimate (TSE) remains high (3.8 percent of GDP), although much lower than the peak of 6.7 percent of GDP achieved in 1998.

xv. **Agricultural production adjusts to changing prices, and shows early signs of a shift away from previously highly supported crops.** Over the subsidy reform period, both fertilizer and agro-chemical usage have fallen back by 25 to 30 percent, to levels last seen in the early to mid-1990s. This is due to both the fall in agricultural income, as well as the higher fertilizer prices as the 50 percent subsidy was phased-out. Since flows of credit resources from the Treasury have been discontinued, the two main agricultural sector lenders, Ziraat Bank and the Agricultural Credit Cooperatives (ACCs), have reduced their loan portfolios by about three-fold from the peak level of US\$7.3 billion in 1997.

xvi. Despite the lower usage of agricultural inputs and reduced availability of agricultural credit, the volume of crop and livestock output declined by only 4 percent from 1999 to 2001. Crop output was down only 2 percent, but livestock output fell 10 percent. As indicated earlier, it is believed that lower incomes and therefore lower demand for livestock products explain, in part, the larger drop in livestock production, notably sheep meat and eggs where most of the drop was observed. Overall cultivated area decreased by about 450,000 hectares (1.7 percent). The shift across general crop types has been small, as area sown to field crops declined by 2 percent, and the areas under fruit and vegetables increased by only 1 percent. The production volume of cereals, pulses, nuts, and fodder crops increased (in ascending order) by 2 to 16 percent, while production of fruits and vegetables has been stable. Tubers (mainly potatoes), industrial crops (mainly tobacco, sugar beet), and oilseeds have seen their volumes fall by 15 to 30 percent. These shifts are often more a result of regional weather variations than of relative prices, but

generally they evidence a shift out of crops where support and prices have fallen the most (tobacco and sugar beet production fell by 40 and 24 percent, respectively) and an expansion of largely deregulated crops (e.g. cotton by 25 percent).

xvii. When one examines the gross crop value per hectare, similar trends are evident. By examining the magnitudes of the declines one can see that the DIS payment of 100 million TL per hectare was able to, on average, more than fully replace lost production value for field crops and for all crops taken together. However, within this wide category, this has likely not been the case for farmers more specialized in tobacco and sugar beet. Thus, the reforms appear to be moving production away from crops which were previously highly supported, but the DIS Program has not fully compensated those that formerly produced the most supported crops (nor was it designed to do so). Moreover, the overall reduction in value added in the sector has made it difficult for farms to find the resources needed to shift into relatively more attractive crops. Supply response in 2001 was particularly sluggish owing to the poor macro-economic environment and very high real interest rates.

xviii. **There are important regional differences in the net impact of the agricultural subsidy reform program.** In examining regional impacts, the total cultivated area has declined across the board, except in the Mediterranean region where it remained stable. These declines have ranged from 3.5 percent in the Central Anatolia region to 0.3 percent in the Aegean region. Indeed, two-thirds of this reduction occurred in the Central Anatolia region, where the sown areas (mainly grains) and fallow areas have decreased by over 300,000 hectares.

xix. The combined effect of area reduction and the fall in agricultural subsidization has been the most notable in the Central Anatolia region, where the PSE (in real 2001 TL) was both highest in absolute terms in 1999 and fell the most in both absolute and relative terms. The lower levels of support to wheat and sugar beet largely explain this large decline in agricultural support to Central Anatolia. The agriculturally most developed regions, Mediterranean, Aegean, and Marmara, experienced absolute declines in agricultural support levels (only 40-60 percent as large as that of Central Anatolia) that are largely explained by the lower support levels for wheat and livestock products. The agricultural weakest regions, Eastern and Southeast Anatolia, experienced small absolute declines in agricultural support, although large in relative terms because of their very low initial level of agricultural support.

xx. DIS payments fully compensated the income loss caused by subsidy cuts in Central Anatolia, even though that region experienced the greatest reduction in proportional terms. In contrast, the more commercially-oriented regions of Marmara and Aegean suffered the largest absolute declines in agricultural income, though relative to their pre-reform levels, the declines were proportionally less than in Central Anatolia. Thus, in these regions, DIS compensated less of the income loss since it is a fixed per hectare payment. Similarly income loss in Eastern and Southeastern Anatolia (with crop values per hectare below the national average) was fully compensated by DIS, while the Black Sea (with crop values per hectare above the national average) saw only partial replacement of the income loss by DIS.

xxi. **The fall in agricultural income largely reflects the re-alignment of agricultural prices and profitability.** Agricultural income fell by 16% (US \$ 2.7 billion) between 1999 and 2002, and the subsidy reform was responsible for about 80 percent of that fall. The adverse

movements in agricultural prices -- the 13 percent decline in real agricultural prices, combined with 13 percent increase in the real cost of agricultural inputs -- triggered by the phase-out of agricultural subsidies is the main factor behind the observed 16 percent decline in the agricultural value added. To a large extent, the fall in agricultural income reflects a downward adjustment in the profitability of agriculture profitability that had been pushed to artificially high levels by fiscally non-sustainable agricultural subsidies. The remaining 20 percent of the observed fall in agricultural value added comes from the (4 percent) decline in agricultural output, as farmers adjusted their production to lower profitability as well as to lower demand.

xxii. DIS compensates farmers for close to 50 percent of their loss in agricultural income .

The DIS Program has played a strong role in supplementing rural income in the aftermath of the substantial reductions in agricultural subsidization and the downturn in agricultural value added associated with the reforms and the 2001 recession. In a 2002 survey of village households conducted under the Agricultural Reform Implementation Project (ARIP), known as the Quantitative Household Survey (QHS) the DIS payments were shown to account for 7 to 8 percent of household income. Given the evolution of the ratio of net agricultural income to gross agricultural income over the reform period, it appears from the QHS results that the DIS Program is replacing about 40 percent of the net income loss which farmers have experienced. Clearly, the reform of agricultural subsidies and introduction of DIS could not have been expected to date to achieve the pre-reform level of agricultural income, especially for the more commercially oriented farmers who were the most responsive to agricultural policies and received the largest share of subsidies in the past. In 2003, DIS payments reached about US \$1.56 billion and replaced over 50 percent of farmers' income loss.

xxiii. Obviously, this affects only those who have actually been able to access the DIS Program, which in 2002 included over three-quarters of the farming population. Registration rates have been the highest in the Central Anatolia region. In addition, the national trend of continued higher shares of registered farmers than land areas was particularly marked in the South East Anatolia region, likely owing to the greater frequency of cadastral registration problems there. The most common reason cited by households for not participating in DIS is that they did not believe they were eligible to enter the program. Thus, improving dissemination of information on eligibility criteria, particularly in areas with high numbers of sharecroppers and farmers with land not registered in the cadastre, may help raise the participation rates.

xxiv. Analysis of the QHS data for 2002 indicate that relative to 2001, the area sown to grains (mainly wheat and barley) has fallen, while the areas sown to sunflower and fruits and vegetables have increased. This is in line with what would be expected as a result of the change in agricultural subsidy policies and represents an acceleration of the shifts observed in 1999-2001. Having constructed a model of gross agricultural income based on the QHS data set, the Review's analysis indicates that those households with greater relative wheat specialization, tobacco specialization, and barley specialization, all experience a significantly negative impact on agricultural income.

xxv. These findings are in accordance with the expected results since tobacco prices have fallen the most of all crops, and the PSEs for wheat and other grains (mainly barley) fell from over 40 percent in 1999 to near zero in 2001. Those households with greater relative specialization in sunflowers have experienced a positive impact on agricultural income, which

reflects the high support still accorded to this crop. The model results also indicate that the impact of the DIS Program on farmer's welfare has been significantly positive: one million TL paid in DIS generates approximately 2.5 million in gross agricultural value added. However, the model results reveal no significantly differential impact of DIS on the poor as opposed to non-poor farming families.

xxvi. **The adoption of the DIS Program should be viewed as only the first phase of an agricultural reform process that fosters agricultural incomes and growth in a manner that is fiscally and economically sound and sustainable.** A second phase is now needed that builds on the DIS Program by promoting agricultural productivity and boosting agricultural profitability through both investments in rural infrastructure, and in sustainable rural institutions that deliver critically needed services, including rural credit, marketing and processing, and technology transfers. Currently, DIS is, in effect, substituting for past distortive, inequitable, inefficient and non-sustainable agricultural policies. DIS transfers are as much a rural income support policy as a more efficient substitute for blunt agricultural policies. DIS needs to remain in place until Turkey formulates and initiates the implementation of an investment-based, regionally tailored rural development strategy focused on promoting greater productivity that restores agricultural profitability and income growth. One strand of such a strategy will have to address reversing the fall (two-thirds in 1999-2002) in formal agricultural credit which retards farmers' shift into more profitable crops.

xxvii. **Needed Improvements to the DIS Program and Other Policies.** Though the DIS Program has been able to replace a large share of the loss in agricultural income lost as a result of the reform of agricultural subsidization, it is unpopular with a number of groups in the agricultural sector for two main reasons. First, the planned timing of DIS payments has not been clearly communicated to farmers, nor has a rationale for targeting particular regions earlier in the payment cycle been set out (though it has been partially formulated). These deficiencies are to be addressed in a Agriculture Framework Law in mid-2004. In addition, DIS could be targeted to a greater degree on the poorest part of the farming community. This should be done by increasing the per hectare payments for the smaller half of farms (under five hectares) and substantially reducing the per hectare payments for cultivated farmland above the median farm size. However, the introduction of such adjustments to the DIS Program should take place only after the Program has reached a higher and steady level of beneficiaries and once a comprehensive rural development strategy has been formulated and initiated.

xxviii. This rural development strategy should recognize the second source of the DIS Program's unpopularity: it does not (as it cannot directly) address the needs of commercial farming. So rather than being a substitute for other efficiency promoting instruments of agricultural policy, the DIS Program should be recognized by the Government of Turkey as a piece in an overall agricultural development strategy, which itself fits into the rural development strategy. The other policy instruments that should be deployed in such a strategy would include the following, many of which can be funded from improved efficiency of investment spending and will not necessarily require substantial increase in budget expenditure:

- Promotion of a sustainable rural finance system to take the place of the past system which has collapsed;

- ❑ Increased expenditures in rural infrastructure, including irrigation and storage and marketing facilities in concert with the private sector for higher value (and especially perishable) crops in underserved areas;
- ❑ Expansion of agricultural extension activities in low productivity areas, again in concert with the private sector and farmers organizations; and,
- ❑ Restructuring government institutions which are not adequately adjusting and enforcing commodity grading and hygienic standards.

xxix. If such an agricultural development strategy could be devised and agreed on by the Government, it could then be built on to form a wider rural development strategy, under which the promotion of off-farm rural employment could be accorded its relevant role. These (and other) areas of agricultural and rural development policy will need to be laid out clearly if the Government is to make more efficient use of Government resources for rural development. They are also the fundamental elements needed to prepare Turkey's rural sector adequately for the challenges of the coming years as the process of accession to the European Union accelerates.