

Turkey: Toward EU Accession

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1. INTRODUCTION

TURKEY applied for associate membership in the EU – then the EEC – as early as 1959. The application resulted in an Association Agreement in 1963, whereby Turkey and the EU would conditionally and gradually create a customs union by 1995 at the latest. The customs union was seen as a step towards full membership at an unspecified future date. The EU unilaterally granted Turkey preferential tariffs and financial assistance, but the process of staged, mutual reductions in tariffs and non-tariff barriers was delayed in the 1970s because of economic and political conditions in Turkey. Turkey applied for full membership in 1987. The response in 1990 was that accession negotiations could not be undertaken at the time, since the EU was engaged in major internal changes as well as in the transition of Eastern Europe and the Soviet Union. However, the EU was prepared to extend economic relations without explicitly rejecting the possibility of full membership at a future date. Hence, the plans for a customs union were revived and a customs union for industrial goods was phased in between 1996 and 2001.

The process of bringing the Central and Eastern European Countries – the CEECs – into the EU made it difficult to keep the Turkish application for membership on hold any longer. A breakthrough came at the Helsinki meeting of the European Council in 1999, when Turkey attained status as a candidate for membership. It now has a so-called Accession Partnership with the EU, which means that the EU is working together with Turkey to enable it to adopt the *acquis communautaire*, the legal framework of the EU. However, in contrast to other candidate countries, Turkey has not received a timetable for accession. The revision of the number of votes and their distribution in the Council of Ministers that was agreed on during the Nice summit in 2000 did not take Turkish membership into account, which effectively meant that the EU-15 did not think that Turkey would become a member during the coming twelve years.

The author gratefully acknowledges the comments and contributions of Harry Flam. However, the views expressed in this paper are the author's sole responsibility.

The purpose of this paper is to study selected aspects of Turkish accession. While Section 2 discusses briefly the trade aspects of Turkey–EU relations, Section 3 considers the effects of Turkish accession on Turkey, and Section 4 the effects of Turkish accession on the EU. Finally, Section 5 spells out the conclusions.

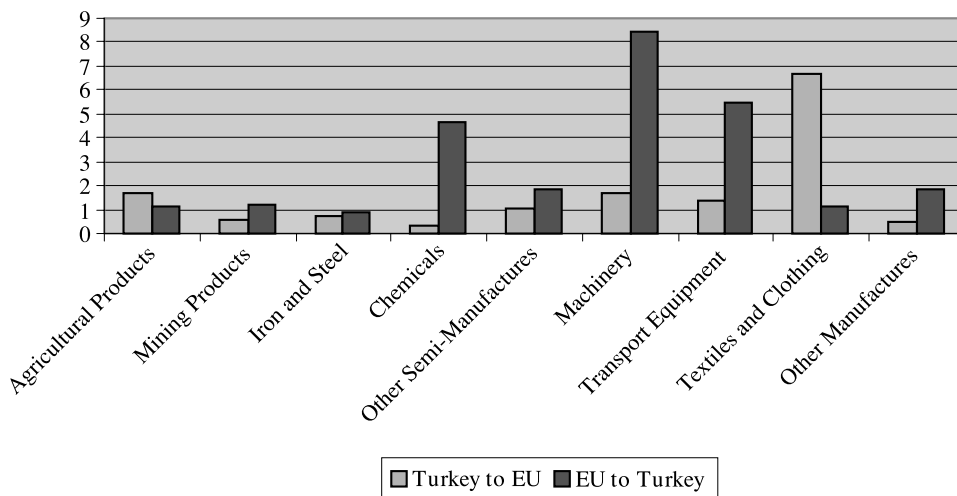
2. OPENING UP THE TURKISH ECONOMY

Until the early 1980s Turkey was a fairly closed economy. At that time – as part of more wide ranging economic reforms – the trade policy of protection and import substitution was replaced by a much more open trade regime. Measured as the average of exports and imports of goods and services over GDP, the openness ratio in 1980 was 9 per cent. Since then, trade has expanded rapidly and by 2000 the openness ratio was 27.9 per cent. Turkey joined the European customs union (CU) starting 1 January, 1996. According to the Customs Union Decision (CUD) all industrial goods except the ‘European Coal and Steel Community’ (ECSC) products circulate duty free between the parties as of 1 January, 1996. In the case of ECSC products, Turkey has signed a ‘Free Trade Agreement’ (FTA) with the EU in July 1996 as a result of which ECSC products received duty-free treatment between the parties since 1999. Currently, no quotas and tariffs are imposed on imports of industrial goods. Turkey is implementing the Community’s Common Customs Tariff on imports of industrial goods from third countries. On the commercial policy side Turkey has adopted the EC competition law, established the Competition Board, adopted the EC rules on protection of intellectual and industrial property rights, established the Patent Office, and started to harmonise technical legislation concerning industrial products and establishment of a sound conformity assessment and market surveillance structures internally.

Consideration of Turkish merchandise trade data for the year 2000 reveals that Turkish merchandise exports amounted to US\$27.3 billion and merchandise imports to US\$54 billion. Exports to the EU-15 formed 52.5 per cent of total exports, and imports from the EU 48.9 per cent of total imports. Among the EU-15, Germany is Turkey’s most important trade partner with export and import shares of 18.8 and 13.2 per cent respectively.

Turkey’s pattern of trade in goods is shown in Figure 1. For a country in the middle income range, the pattern is fairly sophisticated; almost 90 per cent of trade is in manufactures. However, when one scrutinises the trade pattern in manufactures, it becomes clear that manufacturing exports are concentrated in low skilled, low wage goods such as textiles and clothing, while manufacturing imports are concentrated in skill- and capital-intensive goods, such as machinery, telecommunications equipment and automotive products. However, during the last decade, exports of machinery and automotive products have grown much

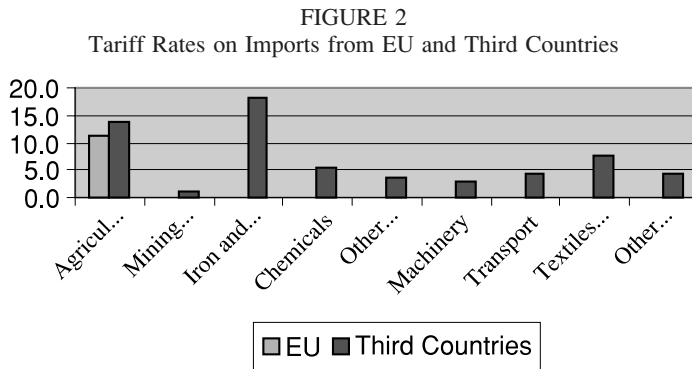
FIGURE 1
Turkey-EU Trade, 2000 (US\$ billion)



more rapidly than exports of textiles and clothing, while the reverse can be seen for imports. Much the same can be said for the trade pattern with the EU, although here trade in manufactures dominates even more. Thus, the comparative advantage of Turkey lies in agricultural goods, primarily fruits and vegetables, iron, steel, textiles and clothing, that is, in resource and labour-intensive goods, while Turkey's comparative disadvantage lies in physical and human capital-intensive goods, as revealed by large net imports of more sophisticated manufactures.

The deficit in goods trade is substantial, at US\$26.7 billion in total and about US\$12.1 billion with the EU. However, the statistics quoted above do not include the considerable transit and shuttle trade. Shuttle trade includes the trade carried out by people from parts of the former Soviet Union, who travel to Turkey to fill large suitcases with various goods to bring back to their home countries. The transit and shuttle trade provides 3–4 billion euros in net exports. The deficit in goods trade is also balanced by a surplus in tourism services. In fact, tourism is the single largest export item, with export revenues of about 7 billion euros.

The Turkish tariff rates applicable on imports of industrial commodities from the EU are all zero as shown in Figure 2. The average tariff rate on imports of agricultural commodities from the EU is 11.1 per cent. Since Turkey has signed free trade agreements (FTAs) with EFTA countries, Israel, and with most of the CEECs which have FTAs with the EU, the applied Turkish tariff rates applicable on imports of industrial goods from these countries are also zero. Furthermore, since Turkey has adopted the Community's common customs tariffs on imports of industrial goods from third countries, the Turkish applied tariff rates on industrial goods from third countries equal those of the EU. While the average tariff



rate on imports of iron and steel products from third countries equals 18.3 per cent, the average tariff rate on agricultural commodities on imports from third countries equals 13.9 per cent and on textile and clothing products 7.7 per cent.¹

Regarding market access for Turkish exports into the EU market, we note that the EU abolished the nominal tariff rates on imports of industrial goods from Turkey on 1 September, 1971. However, certain exceptions for textile products were made. Furthermore, trade of products within the province of the ECSC were protected by the Community through the application of non-tariff barriers and anti-dumping measures. These barriers to trade have been eliminated to a large extent with the formation of the customs union in 1995.²

3. EFFECTS OF ACCESSION ON TURKEY

Joining the EU will require Turkey to adopt and implement the entire body of EU legislation. This means that Turkey should attain macroeconomic stability, adopt the CAP, liberalise its services and network industries and bring among others its environmental protection system and standards up to Western European levels.

a. Macroeconomic Stability

Table 1 shows the EMU convergence criteria for Turkey and the CEEC. The table reveals that the CEEC are about to satisfy the criteria, but that Turkey is far away from satisfying the conditions. Indeed, Turkey is in the midst of a

¹ Sectoral tariff rates have been obtained by weighting the line tariff rates by Turkish imports of the commodity in the sector.

² For a discussion of issues related with contingent protectionism and technical barriers to trade see Togan et al. (2003a).

TABLE 1
EMU Convergence Criteria

	<i>Inflation Rate Per Cent</i>		<i>Budget Deficit Per Cent of GDP</i>		<i>Government Debt Per Cent of GDP</i>		<i>Interest Rates 10Y Bonds</i>	<i>Exchange Rate Stability Deviation from Parity</i>		<i>Currency Regime</i>
	2000	2001	2000	2001	2000	2001	Last	Last	Max (2Y)	
Bulgaria	10.1	7.9	-1.1	-1.0	83.8	72.5	5.2	0.0	-1.3	Currency Board (EUR)
Czech Republic	3.9	4.7	-4.0	-3.2	29.2	29.0	5.5	14.0	-6.0	Managed Float (EUR reference)
Estonia	4.0	5.8	-0.7	1.1	6.6	6.2	4.7	0.0	0.0	Currency Board (EUR)
Hungary	9.8	9.2	-3.5	-5.0	56.1	51.5	6.7	5.4	-4.5	Crawling Peg (EUR)
Latvia	2.7	2.5	-2.8	-1.9	10.0	12.2	10.7	2.6	2.6	Peg (SDR)
Lithuania	1.0	1.3	-2.8	-1.4	28.3	29.0	7.9	8.1	8.1	Currency Board (EUR)
Poland	10.1	5.5	-2.7	-6.3	43.8	38.0	8.3	8.4	-8.7	Float
Romania	45.7	34.5	-4.1	-3.7	29.2	31.2	34.9	-31.4	-31.5	Managed Float (USD reference)
Slovakia	12.0	7.3	-6.8	-7.2	32.9	42.7	7.8	4.0	-2.0	Managed Float (EUR reference)
Slovenia	8.9	8.5	-1.4	-1.3	25.1	25.4	na	-7.1	-7.1	Managed Float (EUR reference)
Turkey	54.9	54.4	-19.6	-17.6	57.4	93.3	75.0	56.9	93.3	Float
Reference Value	2.8	3.3	-3.0	-3.0	60.0	60.0	7.3		+/- 15%	

Notes:

Parity refers to last three-year average exchange rate against EUR. In the case of Turkey the interest rate is the annual compound interest rate on government bonds of eight months' duration obtained in the latest auction of treasury bills.

Source: Deutsche Bank Research, EU Enlargement Monitor (April 2002), Turkish State Planning Organisation, Central Bank of Turkey and Turkish Treasury (2002).

determined campaign to turn around decades of weak performance reflected by pervasive structural rigidities, and weak public finances. The past few years have witnessed three major attempts at addressing underlying weaknesses. The first was during 2000 under the three-year Standby Agreement initiated in December 1999. Despite some notable achievements, a worsening current account and a fragile banking system led in late 2000 to a liquidity crisis which turned into a full-blown crisis in February 2001. The government decided to abandon the crawling peg regime and floated the currency. In May 2001 the IMF increased its assistance under a new stand-by arrangement. Just as the revised programme was beginning to show results, the events of 11 September triggered the re-emergence of serious financing problems. In February 2002 the IMF approved a new three-year stand-by credit for Turkey to support the government's economic programme. With the implementation of the stabilisation programme Turkey envisages a gradual but steady improvement in its economic conditions.

Turkey realises that soon after accession it will be expected to join the Exchange Rate Mechanism (ERM-II) for at least two years and to achieve the Maastricht conditions for monetary and fiscal convergence before its EMU membership is examined.³ Once admitted Turkey would then replace its domestic currency with the euro at an irrevocably fixed exchange rate, confer the bulk of its reserves to the European Central Bank, and be bound by the so-called 'growth and stability pact'.

For Turkey the problem is not how to stay out of EMU but, on the contrary, how to reap the net benefits expected of monetary integration by fulfilling the Maastricht criteria as soon as possible. But these benefits can only be derived at some cost. The costs of fulfilling the Maastricht criteria when estimated by expected output losses turn out to be quite considerable.⁴

*b. Agriculture*⁵

Agriculture is an important part of the Turkish economy. Turkish agriculture contributes about 14 per cent to GDP and provides 33 per cent of total employment. The corresponding figures for the EU-15 are 1.7 and 4.3 per cent. In absolute

³ The conditions require that (i) member country's inflation may not exceed the average of the three lowest inflation rates in the EMS by more than 1.5 per cent, (ii) its long-term interest rate must not exceed the average of the interest rates in the three countries with the lowest inflation rates by more than 2 per cent, (iii) its exchange rate must have been in the 'normal' band of the Exchange Rate Mechanism (ERM) without devaluation for at least two years, (iv) its public debt cannot exceed 60 per cent of its GDP, and (v) budget deficit must not exceed 3 per cent of its GDP.

⁴ The expected output losses can be determined with the use of a 'sacrifice ratio' defined as the cumulative loss in output, measured as a per cent of GNP, associated with a one percentage point permanent reduction in inflation. On the sacrifice ratio see, for example, Ball (1993).

⁵ These results were obtained in collaboration with Harry Flam.

numbers, Turkey employs about the same number of people in agriculture as the EU-15, or more than 7 million. In terms of agricultural land, adding Turkey to the EU would increase the area under cultivation by 32 per cent. Adding both CEEC-10 and Turkey increases EU land under cultivation by about 78 per cent.

Trade in agricultural products between the EU and Turkey is a relatively small part of their total trade. Most of this consists of exports of fresh and processed fruits and vegetables. Agricultural trade is not part of the EU–Turkish customs union, is subject to duties, quotas and price regulations, and it is highly protected. Turkey has granted very few preferential tariffs on agricultural imports from the EU. High specific duties are applied to core products of the CAP: cereals and processed cereals, sugar and sugar products, dairy products and meat. Also, olive oil is highly protected. Turkish exports of vegetables and fruits receive export subsidies. The EU has, on the other hand, granted imports from Turkey highly preferential treatment. Many agricultural imports enter the EU without duties. Import barriers exist mostly in the form of tariff-quota schemes, where imports within the quota are free from tariffs and the entry price scheme, where specific duties are applied as long as the value of the consignment falls below the entry price. It is estimated that about 70 per cent of imports from Turkey enter the EU duty free and without any other import barriers.

In Turkey agricultural support has until now placed a large burden on taxpayers. Transfers to farmers have amounted to about five per cent of GDP and the total support to agriculture, including the higher prices paid by consumers, has been estimated at eight per cent of GDP. These numbers tell us that Turkish accession is likely to have important social, distributional and political effects in Turkey. The reason is that Turkey would have to switch policies to the CAP – something it is already in the process of doing – and would also be eligible for CAP financial support.

In the EU, prices of many agricultural products have been kept above world market prices by the buying up of excess supplies at administratively determined minimum prices and by protecting EU markets from low world market prices by duties on imports. Excess supplies were disposed of at a loss in the EU and on the world market. Starting in 1993, the CAP has gradually been shifting away from price to income support. Currently, prices in the EU are lowered towards world market prices and farmers are compensated by direct income payments based on their holdings of land and animals. The CAP favours the main agricultural products and farmers of the original EU-6, namely grains, sugar beets, dairy products and beef. Fruits, vegetables, poultry and pork, important products of the newer, southern members, receive less or no support. Recently, the EU has declared that farmers from CEECs will not be excluded from direct income support payments, but stated that direct payments would be introduced in CEECs equivalent to 25 per cent in 2004, 30 per cent in 2005 and 35 per cent in 2006 of the present system. After 2006 direct payments would be increased by percentage

steps in such a way as to ensure that the new member states reach in 2013 the support level then applicable. Since by 2013 support could absorb a high percentage of the EU budget it seems that the support system of the EU will change to a large extent between now and then.

In Turkey the most important part of agricultural policy has been price support. State economic enterprises and agricultural sales cooperatives have been commissioned to buy cereals, tobacco, tea and sugar beet from farmers at prices determined by the government. The higher than world market prices have been protected by import tariffs. The second most important component of the policy has consisted of various subsidies, grants and exemptions lowering the cost of inputs, including capital, fertiliser, seed, pesticides and water. The output of tobacco, hazelnuts, tea and sugar beet has been controlled in various ways. Services to farmers, such as research, training, extension and inspection services were provided free or at low cost.

The present agricultural reforms in Turkey are a result of the Uruguay Round agreement on agricultural trade, Turkey's own efforts to adjust to the CAP, and the conditions of the IMF programme. Under the reform programme output price supports and input subsidies and grants in various forms will be phased out and replaced by direct payments to farmers based on land holding, and tariffs will be gradually reduced. Income support is capped at 20 hectares and it is estimated that the total support will cost in excess of 2 billion euros. The reforms are being implemented at present and are planned to be completed in two years' time. Privatisation of state enterprises in the agricultural sector is also part of the programme. If the reforms are brought to completion, Turkey will have an agricultural policy similar to the CAP; high intervention prices and protection from the world market will have been replaced by direct income support, lower protection and prices approaching world market prices. Implementing the programme requires extensive administrative reforms. For example, substantial investments are needed in improving land registration, collecting agricultural data, and raising veterinary and phytosanitary standards.

The Turkish reforms can be seen as a consequence of accession as well as the need to reduce public expenditure. They will in the short run lead to considerable efficiency gains, but also to substantial reduction in farmers' income. Lower administered prices and elimination of input subsidies are far from being compensated by direct income support. It is estimated that total support – measured per hectare of land under cultivation – will decline from \$295 per hectare to \$68, including direct income supports (averages for 1997–99; OECD, 2000). Although this represents a large reduction, it is fairly small in relation to total farm income. In terms of the value of agricultural output, total support was estimated at 13 per cent in 2000, which should be compared to the EU average of 38 per cent in 2000 (OECD, 2001). The present price reductions in Turkey will not bring prices down to the new CAP levels. Disregarding any direct income compensations, adoption

of the CAP would therefore lead to further reductions in incomes. However, we also need to consider CAP subsidies to Turkish farmers. CAP subsidies are largely, but not entirely, independent of the recipient country's income level. If Turkey benefits in full from CAP subsidies, her farmers will be able to raise their income above the level existing before the present reforms, given that total support per hectare is much higher in the EU, or \$845 annually on average in 1997–99 (60 per cent of which consists of transfers from taxpayers; OECD, 2000). In other words, accession is likely to provide a gain for Turkish farmers, provided the present subsidy system is not changed and Turkey receives 100 per cent equivalent of the present system of subsidies in the EU.

For agricultural production and trade the consequences of adopting the CAP, including free trade with the EU, are less clear. The fact that prices in Turkey are generally higher than in the EU indicates that agricultural production will contract and the trade position with the EU deteriorate.⁶ Turkey had an agricultural trade surplus of about 1.3 billion euros with the EU in 1999. Most of this was in fruits, vegetables and tobacco, which can already enter the EU practically free. The customs union in agricultural products between the EU and Turkey will therefore have little effect on Turkey's main export items. Vegetables, fruits and tobacco have higher tariff protection in Turkey than in the EU when imported from third countries. Adopting the EU tariff rates may therefore induce some competition from imports. On the other hand, larger effects can be expected for the main crops, wheat, rye, barley, oats, maize and sugar beet, since they have administered prices that are scheduled for reduction both in the EU and Turkey.

A recent study by Togan et al. (2003b) has shown that the adoption of the CAP will lead, in the medium to long term, to a 1.9 per cent increase in real household incomes in Turkey, but will require substantial adjustments on the part of Turkish farmers, and that the effect on farmers' incomes will be mainly driven by the amount of CAP-like compensation payments granted to the farmers. Farmers' income will decrease considerably under Agenda 2000 policies without direct payments, and will increase under Agenda 2000 policies with direct payments when these payments will be equal to those currently applied in the EU. The annual budgetary cost to Turkey of adopting the CAP with direct payments, when these payments will be equal to those currently applied in the EU, is estimated to amount to 3 billion euros. On the other hand, when direct payments will be made at the level of 35 per cent of payments granted in the EU member countries, the annual budgetary cost will amount to 1.2 billion euros.

⁶ The administered prices in Turkey during 1999 were 58 per cent higher in the case of wheat, 13 per cent higher in the case of barley, 22 per cent higher in the case of maize and 32 per cent higher in the case of sugar beet.

c. Services and Network Industries

Joining the EU will require that Turkey liberalises its services and network industries, which account for about 65 per cent of its GDP. In the following we concentrate on the effects of liberalisation in the banking and electricity sectors as representative sectors of the services and network industries respectively.

(i) The banking sector

One of the primary causes of the recent currency crisis in Turkey was the unhealthy structure of the banking sector. First, there were problems with state banks. Governments have used these banks for a number of non-commercial objectives such as agricultural support, income redistribution, and industrial, urban and physical infrastructural development, and they faced unrecovered costs from duties carried out on behalf of the government, called 'duty losses'. The state banks covered their financing needs from markets borrowing at very high interest rates and at short maturities. Second, the banking sector faced problems created by high public sector deficits. As private banks found the financing of public deficits increasingly profitable, the share of government domestic securities in total assets of domestic banks increased considerably. The banks became vulnerable to changes in interest rates. Furthermore, during the 1990s the banks started to borrow funds from abroad and with these funds they bought government bonds.⁷ Banks, which became vulnerable not only to changes in interest rates but also to changes in the exchange rate, underestimated the risks inherent in overly extending investments in government paper and open foreign exchange positions. Third, the 1994 crisis had led the authorities to take drastic measures in order to save the economic system from collapse. The most controversial of these was the introduction of a full (100 per cent) state guarantee for deposits. This guarantee was effective in ending a bank rush as well as drastic shifts in deposits from private banks to state-owned banks in 1994. However, the fear of renewal of the banking crisis prevented the authorities abandoning this supposedly temporary measure in favour of a reasonable deposit insurance scheme. In addition, this decision led the banks to take higher risks and stimulated moral hazard. Fourth, there were problems related to the legislative, regulatory and institutional framework of the banking sector. Turkey lacked competent supervisory authorities, a regulatory framework and legal and institutional infrastructure. In addition, the then prevailing prudential regulations were poorly enforced.

Since 1999 Turkey has taken measures to reform the regulatory and institutional framework of the banking sector and restructure the state and private banks. In

⁷ The average excess return on Turkish government bonds over LIBOR both measured in US dollars has amounted to 4.05 per cent over the period 1990–93 and 22.9 per cent over the period 1995–November 2000.

1999 the Parliament passed a new banking law, which mandated the creation of a new independent Banking Regulatory and Supervisory Agency (BRSA). The BRSA took over the bank regulation and supervision responsibilities previously fulfilled by the Treasury and Central Bank. In the case of state banks the Treasury provided floating rate notes to those banks securitising the duty losses, and strengthened their capital base. A law was introduced requiring the state banks to run no more duty losses. Any support provided to the state banks will henceforth have to be budgeted. The state banks are required to comply fully with all banking regulations. On the other hand, the private banks, which had incurred significant losses in the aftermath of the currency crises, were either taken over by the Savings Deposit Insurance Fund (SDIF) or asked to strengthen their net worth and balance sheet structure. Furthermore, the capital base of banks under SDIF management has been strengthened by injection of government funds, and measures were taken to facilitate bank mergers and prepare the state banks for privatisation.

According to the Banks Act of December 1999 the establishment of a bank to be founded as a joint stock company is subject to authorisation to be issued by BRSA. Any candidate bank must be founded as a joint stock company, have founders who are of sufficiently good repute and have sufficient experience in the banking sector, and must have capital, paid in cash, which shall not be less than TL20 trillion (US\$14.3 million).⁸ According to the Banks Act, banks may exit from the system through acquisition, merger and liquidation. Mergers are to be realised with the permission of the BRSA Board. The Act also requires the Competition Agency's approval for mergers that exceed 20 per cent of the total assets of the banking system. According to Article 14(3) of the Banks Act the BRSA Board can revoke the licence of a bank to perform banking operations as long as the conditions stated in Article 14(2) materialise.⁹

Currently, banks are required to maintain and keep an eight per cent capital adequacy standard ratio, on a consolidated and unconsolidated basis, in order to ensure that banks maintain an adequate amount of capital against losses which may result from existing and potential risks. The consolidated financial reporting requirements allow quarterly verification of the bank's compliance with the consolidated capital adequacy requirement. When evaluating the capital adequacy

⁸ According to the 1977 First Banking Co-ordination Directive (77/780/EEC) and the 1989 Second Banking Co-ordination Directive (89/646/EEC) any bank to be founded in the EU must have initial capital of at least five million ECU, and have founders who are of sufficiently good repute and have sufficient experience in the banking sector. There must be prior consultation with the competent authorities. Thus Turkish regulations on the establishment of banks are in conformity with EU rules.

⁹ If BRSA determines that a bank, the assets of which are insufficient or that fails to meet the minimum level of capital, does not take the required measures to remedy the situation it may revoke the licence of the bank.

ratio banks are required to take capital charges for market risks such as foreign exchange risk, interest rate risk and securities price fluctuation risk. Lately, the maximum open foreign exchange position was reduced from 30 to 20 per cent. Furthermore, the government requires banks to establish internal control and risk management systems. The government has also taken steps to correct flaws concerning the weak loan loss provisioning rule and the lenient large exposure and connected lending limits. With the amendments to the Banks Act tighter limits were imposed on both on- and off-balance sheet commitments to related parties and especially to companies belonging to the same group. The bank shareholders and managers became personally liable for the mismanagement and abuse of bank resources. Since bank managers may attempt to under-report the size of their bad assets and overstate their capital, the BRSA requires that banks introduce internationally recognised accounting and auditing standards. The above considerations reveal that Turkish prudential requirements as of 2003 are, in general, in conformity with those in the EU regarding the capital adequacy standards, loan classification and provisioning requirements, limits on large exposures, limits on connected lending and requirements for liquidity and market risk management.¹⁰

The objective of the legislative and regulatory reform has been to bring the regulatory and supervisory regime for the Turkish financial sector up to the level of international practice in line with EU standards. This objective has been achieved to a large extent. A major issue that needs to be solved concerns the privatisation of state banks. Recently, Turkey has decided to privatise the two largest state banks within three years, to withdraw the banking licence of another state bank, and resume the privatisation process of another large state bank as soon as market conditions allow.¹¹ What is needed now is strict enforcement of the rules by the BRSA to cover all public and private banks in Turkey.¹²

Consideration of the data on the Turkish banking sector reveals that in the year 2001 private domestic banks accounted for about 53.6 per cent of total assets of the banking sector with the five largest banks accounting for 36.1 per cent of total

¹⁰ According to Pazarbaşıoğlu (2003) the fiscal cost of the 2001 financial crisis has amounted to 24.6 billion euros (around 17 per cent of 2001 GDP). If Turkey had adopted the legislative, regulatory and institutional framework of the EU banking system at the beginning of the 1990s and had enforced these rules, then the cost of the crisis would have been much smaller.

¹¹ The state banks to be privatised within three years are Ziraat Bank and Halk Bank. The government has withdrawn the banking licence of Emlakbank, and it will resume the privatisation process of Vakifbank as soon as market conditions allow.

¹² The ratio of non-performing loans to gross loans of the banking system in Turkey has reached about 22 per cent in 2001. The situation has improved during 2002 due to acceleration of out-of-court settlements and voluntary debt restructuring arrangements. However, non-performing loans still stood at a high level of 17.5 per cent of total loans at the end of 2002. It has been emphasised that strict enforcement of the rules would lead to further takeovers of private banks by SDIF. The budgetary burden would then make the country's debt dynamics more difficult.

assets. While the share of foreign banks in total banking assets amounted to 2.6 per cent, the share of state banks was 27.2 per cent and the share of banks managed by the SDIF was 11.7 per cent. Thus foreign banks in terms of their shares in total credits and deposits remain insignificant in Turkey.

With Turkish accession to the EU, competition in the financial sector will increase as Turkey recognises the Supervisory Authorities' competence of EU member states and introduces to its legislature the principle of home country control. According to Claessens, Demirgüç-Kunt and Huizinga (1998) the share of foreign bank assets in total bank assets over the 1988–95 period averaged 77 per cent in Greece, 31 per cent in Spain, 61 per cent in Hungary, 51 per cent in the Czech Republic and only 1 per cent in Turkey. Thus with liberalisation in financial markets the penetration rates of foreign banks in Turkey are expected to increase substantially, causing adjustment costs in the sector. Increased competition will improve the quality and availability of financial services in the domestic market, enable the application of modern banking skills and technology, enhance the country's access to international capital, lower prices for consumers and lead to a larger variety of financial instruments. Some of the Turkish banks will benefit from larger markets by concentrating on activities in which they have a comparative advantage. Other Turkish banks may be forced to merge with foreign banks or exit from the market.

(ii) Electricity

In 2001 Turkey had an installed power-generating capacity of about 28.8 GW. While electricity consumption has been growing at an annual average of 9 per cent over the last decade reaching 126.5 TWh in 2001, the demand for electricity is forecasted to grow at an annual rate of 8 to 10 per cent over the next ten years. This growth will require annual investment of about US\$3 billion in generation, transmission and distribution. The Turkish electricity sector is dominated by state-owned enterprises. The two largest firms are TEAS, the state-owned generation-and-transmission company, and TEDAS, the state-owned distribution company. Recently, TEAS was separated into three separate companies covering generation, trading and transmission activities. In the sector, privatisation has been widespread for some time. There are privately owned firms which have entered the industry through build-operate-transfer (BOT) or auto-generator schemes. They account for about 21 per cent of electricity generation. In addition there are four private distribution companies active on the Asian side of Istanbul, Kayseri, Adana and Antalya. Furthermore, five build-operate-own (BOO) contracts for electricity generation were competitively bid, and transfer of operating rights contracts (TOORs) have been awarded for 8 thermal plants and 14 distribution regions.

Although privatisation can be thought of as a legal transfer of assets from the government to a private operator many of the benefits of privatisation come with

the transfer of risk. When private companies bear risk, privatisation can be expected to lead to efficiency gains. Under the current regulations in Turkey the private owners in the electricity sector bear construction and operating cost risks. The private operator signs a long-term power purchase agreement with the state-owned generation enterprise in which the latter commits itself to buy the output of the plant for a period of, say, 20 years at a fixed price in foreign currency. While the price has ranged on average between eight and nine US cents per KWh for the first five to ten years of operation in BOT projects, the BOO projects tend to have lower prices. This contract, guaranteed by the Treasury, assures the investor that the project will be profitable irrespective of future demand for power. As a result the government retains the commercial risks. But there have been significant problems with these arrangements. The high cost electricity purchase agreements have exposed TEAS to significant losses and contingent liabilities. The financial position of the TEAS/TEDAS is poor partly due to high cost BOT contracts that involve purchase costs to TEAS in excess of subsequent sales prices to TEDAS set by the government.

Recently, the government in Turkey has passed a new Electricity Law. The law provides for the establishment of a new independent Energy Market Regulatory Authority, which takes over regulatory functions from the Ministry of Natural Resources. Standard regulatory functions include tariff setting, market monitoring and access dispute settlements. With the new law the government is introducing a market model as in the EU that will transfer most of the task of supplying and distributing electricity and the associated market risks to the private sector, eliminate the need for additional state-guaranteed power purchase agreements, and minimise costs through competitive pressures on producers and distributors along the EU model. The government will largely withdraw from the electricity generation and distribution businesses. Electricity generation companies will sign contracts for power directly with distribution companies without government guarantees. The government's future role will be largely confined to determining sector policy, owning the transmission system, and making sure that the rules are respected and that prices are competitively determined. Once the new Electricity Law is implemented the regulatory and supervisory regime for the electricity sector will be brought up to the level of international practice in line with EU standards. Currently Turkey faces major problems exiting from the old system, but once the system starts to operate Turkey expects to derive efficiency gains in the sector resulting in price reductions and improvements in the quality of the service.¹³

¹³ Because of the various BOT and BOO contracts signed in the past the establishment of a competitive environment may take quite a long time.

d. Trade and Growth Effects of Accession

When considering the effects of integration on the Turkish economy, it is important to keep in mind that the customs union in industrial goods was established in 1996 and that a period of perhaps ten years or more will precede full membership and Turkish participation in the internal market. Membership will add free trade in agricultural goods and services and free mobility for labour (eventually) and capital. Furthermore, Turkey within a few years of EU accession will need to satisfy the Maastricht criteria and join the Economic and Monetary Union (EMU).

The impact of the customs union in industrial goods on Turkish welfare has been estimated by Harrison et al. (1997). The authors consider the effects of tariff reductions, improved access to EU markets due to elimination of voluntary export restraints and harmonisation of product quality standards and improvements in testing laboratories in Turkey and reduced costs of trading due to the reduction in border costs estimate the gains to Turkey of 1.1 per cent of its GDP per year.

If liberalising trade in industrial goods can affect the GDP, then there should be comparable gains from liberalising agriculture and also services that are becoming increasingly tradable. It is emphasised that trade liberalisation in agriculture will lead to efficiency gains. On the other hand, an efficient and well regulated financial sector leads to an efficient transformation of savings to investment, and benefits also arise from increased financial product variety and better risk sharing in the economy. In the case of telecommunications, improved efficiency generates economy-wide benefits as telecommunications are a vital intermediate input and are also crucial to the dissemination and diffusion of knowledge. Similar considerations apply to the electricity sector as energy is an indispensable input into production and inefficient production of energy acts as a tax on production. Following Ritson and Harvey (1997) and Deardorff (2001) one could then argue that Turkey will derive considerable gains from eliminating barriers to trade in services.

The above considerations reveal that integration will remove the distortions in the price system, which in turn will boost the allocative efficiency in the economy. As a side effect, this heightened efficiency will make the country a better place in which to invest. Investment will increase and hence foreign direct investment. Thus the allocative efficiency gains from integration will be boosted by induced capital formation. While investment increases above its normal level the Turkish economy will experience a growth effect. All this means improved material wellbeing for Turkish people in the long term.¹⁴

Furthermore with accession Turkey will be eligible for EU structural funds. As a result infrastructural investments will increase, which in turn will contribute to

¹⁴ The process described above summarises briefly the impact of EU membership on Spain, Portugal and Ireland.

economic growth. Finally, within a few years of EU accession Turkey will abandon its national currency and adopt the euro. As stressed by Mundell (1961), currency union will reduce the costs of international transactions and promote trade and openness. Frankel and Rose (2002) note that belonging to a currency union triples trade with other currency union members, that there is no evidence of trade diversion, and that every per cent increase in the country's overall trade relative to GDP raises income per capita by at least one-third of one per cent.

Consideration of the effects of membership on the pattern of trade between the EU-15 and Turkey reveals that the trade pattern in industrial goods will not be affected significantly since the customs union was already established in 1996. Trade in agricultural goods will be affected, but the major effects will be in Turkey, not in the EU-15, since import barriers are relatively low for Turkish agricultural exports. Turkey's comparative advantage will for some decades to come be in low skilled, low wage activities in manufacturing. Compared to the CEEC-10, Turkey has less human capital and skills, because of a generally much lower level of secondary and higher education. The average level of schooling for an adult is 4.5 years. It was only recently that Turkey raised the mandatory minimum length of schooling from five to eight years.

Although the pattern of Turkish–EU trade is not expected to change substantially as a result of full membership, there is considerable potential for an increase in the volume of trade. The recent experience of the CEEC-10 shows that trade volumes have increased substantially as a result of large investments by firms from Western Europe and elsewhere, which combine their technical, managerial and marketing assets with a generally well educated and skilled labour force at low wages. Turkey has a long way to go before it can hope to attract foreign direct investment to the same extent as some of the more successful countries in Central and Eastern Europe. For example, Turkey attracted \$15 per capita in foreign direct investment in 2000 compared to \$256 in Poland, the most successful of the CEECs. Foreign direct investment in Turkey is hampered by economic and political uncertainty, government intervention, bureaucracy and detailed regulation. Turkey's investment climate has one of the lowest ratings in the UN's Direct Investment Index. Membership and adoption of the *acquis* will go some way towards establishing a better investment climate, which in turn will lead to higher volumes of trade in the same way as in the CEEC-10.

We have forecasted the volume of trade between Turkey and the EU-15 under the assumption that it will reach the same level of intensity as trade between the EU member states at present.¹⁵ The forecast is based on estimation of a gravity function for trade within the EU-15. The gravity function has been used to explain the volume of bilateral international trade since the 1960s and has proven

¹⁵ These results were obtained in collaboration with Harry Flam.

to be remarkably successful. It postulates that the volume of trade between a pair of countries is a function of the size of the trade partners, measured by GDP, population or geographic area, of their income level or capital abundance, measured by GDP per capita, and of trade costs, measured by a variety of factors, such as tariffs and other administratively imposed trade barriers, geographic distance, common borders, common language or common legal systems.¹⁶ We have estimated the following standard version of the gravity equation:

$$\begin{aligned} & \log[(\text{exports from country } i \text{ to country } j + \text{exports from country } j \text{ to country } i)/2] \\ & = \text{constant} + \beta_1 \log(\text{GDP of country } i \times \text{GDP of country } j) \\ & + \beta_2 \log(\text{GDP per capita in country } i \times \text{GDP per capita in country } j) \\ & + \beta_3 \log \text{geographical distance} + \text{dummy for common land border} + \text{error term.} \end{aligned}$$

The dependent variable in the gravity equation is the logarithmic average of bilateral exports. It is explained by the logarithmic product of GDP; the volume of trade is simply assumed to rise in proportion to the combined economic size of the trade partners. GDP per capita can be thought of as a measure of product differentiation and specialisation. The higher the per capita income is, the more differentiated is taste and production, and the larger is the volume of trade based on product differentiation and increasing returns to scale. A high per capita income is also an indication of abundance of physical and human capital relative to manual labour. Thus, the per capita variable should serve to capture both intra-industry trade caused by product differentiation and increasing returns to scale, and inter-industry trade caused by differences in factor endowments. Trade costs are controlled by the inclusion of geographical distance and a common land border. Geographical distance is an indicator of transportation costs, but also of the costs of cultural differences which tend to increase with geographic distance. Finally, a common land border is thought to have a level effect on the volume of trade.

The estimates of the gravity equation are presented in Table 2. Two estimation methods were used, OLS and random-effects GLS. The two methods yield similar estimates and the gravity equation explains more than 90 per cent of the variation in the data. All coefficients are estimated with a very high level of statistical

¹⁶ Note that standard versions of the gravity equation can be derived from all three basic trade models, the Ricardian, Heckscher-Ohlin and increasing returns to scale models, as well as from other models, as demonstrated by Anderson (1979), Bergstrand (1990), Deardorff (1998) and Helpman (1998). Recent research by Feenstra, Markusen and Rose (1999) and Evenett and Keller (2002) has sought to ascertain to what extent the various models contribute to the empirical success of the gravity equation and thereby to evaluate their empirical relevance. A tentative conclusion is that models based on increasing returns and product differentiation are more successful in explaining intra-industry trade, while trade in homogeneous goods is better explained by factor endowment differences or differentiation of goods by country of origin (the Armington assumption).

TABLE 2
Pooled Panel Gravity Estimates for Intra-EU-15 Trade

	<i>OLS (1)</i>	<i>OLS (2)</i>	<i>Random-effects GLS</i>
Log real product GDP	0.857686 (0.0098)	0.881789 (0.0120)	0.803127 (0.0266)
Log real product GDP per capita	-0.28017 (0.0362)	0.243911 (0.0384)	-0.37215 (0.0342)
Log distance	-0.8819 (0.0326)	- -	-0.93738 (0.0948)
Common border	0.399995 (0.0516)	1.255733 (0.0673)	0.417394 (0.1780)
R^2 : Within	-	-	0.3897
R^2 : Between	-	-	0.9275
R^2 : Overall	0.9249	0.8797	0.9227

Notes:

GDP and Population data from OECD Economic Outlook No. 70 (December 2001). Trade data from OECD Monthly Statistics of International Trade CD-ROM (June 2001) and great circle distances between capitals from the website (<http://www.wcrl.ars.usda.gov/cec/java/lat-long.htm>). 1,155 observations, annual data for 15 countries, 1990–2000. Intercept and year controls not recorded. Standard errors within parentheses. All estimates significant at less than one per cent.

significance (less than one per cent) and have the expected sign, with one exception. The product of real per capita GDP is found to have an unexpected, *negative* effect on the volume of trade, when distance is taken into consideration. However, the coefficient changes sign and becomes positive and highly significant when distance is left out of the regression, as in the second column. Clearly, the results indicate that income differentials between present EU members and distance are positively correlated.

The OLS estimates of the gravity equation in the first column were then used to make forecasts of bilateral trade for each of the CEEC-10 and Turkey with the EU-15. The results are presented in Table 3. As can be seen, the forecasted value of Turkish–EU-15 trade is \$26.1 billion in 2000, which is almost 41 per cent higher than the actual average value of \$18.5 billion for the period 1999–2001. Most of the CEEC-10 are also projected to increase their trade with the EU-15, some of them considerably more so than Turkey, while two countries – Estonia and Hungary – have higher actual than projected trade. Note, however, the point estimates obtained with our forecast method are highly uncertain as shown by the 95 per cent confidence intervals for the point estimates.¹⁷

Next, we assume that Turkey eventually will have a share of EU trade to total trade that is equal to that of the four large EU countries, namely 58 per cent. Then total trade of Turkey can be shown to increase to \$45 billion. When we

¹⁷ For an excellent discussion of methodological and modelling issues confronted when applying gravity modelling to the analysis of regionalism, see Greenaway and Milner (2002).

TABLE 3
Forecast of Trade with EU-15

<i>Country</i>	<i>Forecast (million US\$), 2000</i>	<i>95 Per Cent Confidence Interval</i>		<i>Forecast/Actual Trade, 2000</i>
		<i>Lower Bound</i>	<i>Upper Bound</i>	
Bulgaria	4.1	1.5	11.3	1.82
Czech Republic	22.5	8.3	60.2	1.29
Estonia	1.7	0.6	4.7	0.69
Hungary	13.8	5.1	37.2	0.80
Lithuania	3.2	1.2	8.7	1.82
Latvia	2.3	0.9	6.2	1.59
Poland	38.7	14.4	104.0	1.75
Romania	9.6	3.6	26.2	1.63
Slovak Republic	10.2	3.8	28.0	2.02
Slovenia	6.7	2.5	18.0	1.26
<i>Turkey</i>	<i>26.1</i>	<i>9.7</i>	<i>70.3</i>	<i>1.41</i>

Notes:

GDP and Population data from World Development Indicators On-line (World Bank). Trade data from OECD Monthly Statistics of International Trade CD-ROM (June 2001) and great circle distances between capitals from the website (<http://www.wcrl.ars.usda.gov/cec/java/lat-long.htm>).

divide this value by the average value of GDP for 1999–2001 we arrive at a ratio between the average of exports and imports to GDP of 25.2 per cent. The actual value of total trade to GDP over the 1999–2001 period, on the other hand, is 20.67 per cent. Noting from Frankel and Rose (2002) that every per cent increase in the country's overall trade relative to GDP raises income per capita by at least one-third of one per cent we can state that with EU accession income per capita in Turkey will increase by about 1.5 per cent.

4. EFFECTS OF ACCESSION ON THE EU¹⁸

The effects of Turkish accession on the EU are analysed in the following under the headings of migration and budgetary effects.

a. Migration

The PPP-adjusted income per capita in the EU is more than three times higher than in Turkey. It will probably take decades before Turkey attains an income

¹⁸ This section is based on the work of Harry Flam.

level comparable to that of the EU-15. The income differential will continue to be a strong incentive for migration from Turkey to the EU. Turkish migration to Western Europe was particularly high in the 1960s, but a steady flow has continued, particularly to Germany and, to a lesser extent, to the Netherlands. A period of active recruitment of foreign labour in many of the present EU countries in the 1950s and 1960s ended after the first oil crisis in 1973–74. Since then immigration policies have become successively more restrictive, and immigrants have mostly consisted of relatives of former immigrants, refugees and asylum seekers. Most migrants from Turkey have ended up in Germany, which has a population of 2.1 million with Turkish origins. The second largest recipient has been the Netherlands, with 250,000 immigrants and their descendants from Turkey.

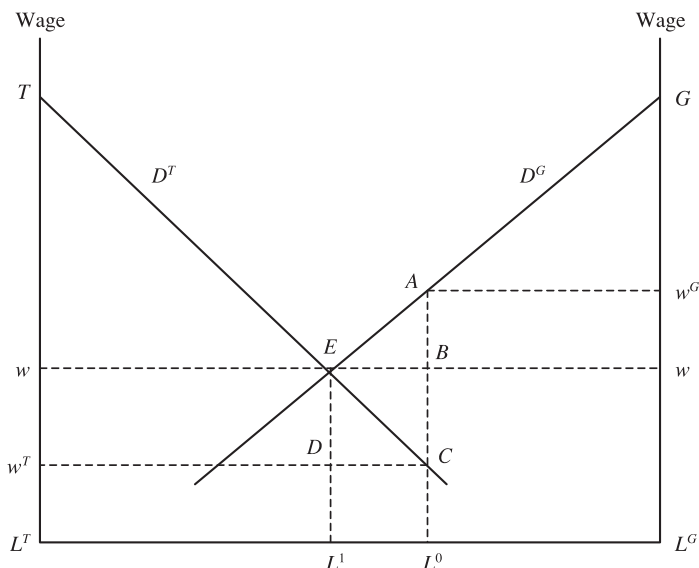
The prospect of large-scale immigration from Turkey and the other candidate countries is a source of considerable concern among the EU-15, where it is feared that the immigrants will depress wages, boost unemployment and cause social friction and political upheavals. Free migration will surely not be allowed immediately upon full membership, but only after some period of transition. In the case of the CEEC-10, the length of the transition period is still to be agreed upon. A transition period of seven years was applied for Greece, Portugal and Spain. Austria, Finland and Sweden were under no migration restrictions when they became members.

(i) *Theory*

The effects of migration from Turkey to any of the EU-15 member states can be illustrated with the help of Figure 3. The horizontal axis measures the total supply of labour in Turkey and – say – Germany. We will simplify at first and assume that labour is a homogeneous factor of production. Later we will take account of the fact that labour is differentiated by education, training and experience. Demand by employers for labour in Turkey is shown by the demand curve D^T . Likewise, demand for labour in Germany is shown by the demand curve D^G . The total supply of labour in Germany and Turkey is assumed to be fixed. Initially, it is divided up so that the supply of labour in Turkey is measured by the length of the line segment $L^T L^0$ and the supply of labour in Germany by the length of the line segment $L^G L^0$. The supply of labour in each country is assumed to be inelastic. Before migration is allowed, the equilibrium wage in Germany is w^G and it is much higher than the equilibrium wage in Turkey, w^T .

When free migration is allowed, labour will move from Turkey to Germany in order to earn the higher wage. Migration stops when the wage is equalised between the two countries, at the level w , and $L^1 L^0$ of labour has moved from Turkey to Germany. Thus, one effect of migration is that it raises the wage in the sending country and lowers the wage in the receiving country. Migrants as well as those remaining in Turkey gain, while German workers lose. The effects for capital owners are opposite. Turkish capital owners now earn the surplus TwE

FIGURE 3
Effects of Migration



instead of Tw^TC , while German capital owners earn GwE instead of Gw^GA . (We assume that capital does not migrate in response to eventual earnings differences.) The fact that part of the labour force has moved from Turkey to Germany also means that the Turkish GDP declines and the German GDP rises. All of these changes amount to an increase in aggregate social surplus or welfare. The increase is given by the area ACE and it is captured by German capital owners and Turkish migrants. The welfare increase is due to a more efficient allocation of labour; Turkish labourers become more efficient when they are moved to Germany and the optimal allocation is achieved when the marginal productivity of labour in Germany and Turkey is equalised.

Figure 3 provides a simplistic yet powerful analysis of the income, redistribution, output and welfare effects of migration. It is built on the assumption that migration is entirely driven by a wage differential and that no unemployment exists. Unemployment can easily be added to the model. Assume that before migration is allowed, L^1L^0 of the Turkish labour force is unemployed. Those employed now earn a higher wage, w instead of w^T . Assume also that employment is decided by a daily lottery. Thus, the expected wage (the actual wage w times the probability of winning employment) is lower than the actual wage and lies somewhere between w and w^T . The expected wage in Turkey is still below the certain wage w^G in Germany, so labour will migrate to Germany once migration is allowed. Assume that all the unemployed in Turkey migrate to Germany, but that employment will remain unchanged in Germany despite the inflow of

migrants. Employment in Germany is also decided by a daily lottery, in which German and Turkish workers have equal probabilities of winning. The expected wage therefore falls below w^G but not all the way to w . Thus, in the new equilibrium the actual and expected wage are higher in Germany than the actual wage in Turkey. In the new equilibrium, in which migration has stopped, the expected wage can be higher in Germany because workers attach a negative value to the risk of becoming unemployed. They demand a higher expected wage to compensate for the risk.

It is seen that Turkish migration can serve both to depress wages in the receiving country and to raise unemployment. Changes in the assumptions made, such as allowing unemployment to remain in Turkey, employment to increase in Germany or Turkish workers having a higher risk of becoming unemployed, would not change the basic conclusions. One assumption in the analysis is, however, questionable, namely that labour is homogeneous. In reality, labour is highly differentiated according to education, training, experience and many other characteristics. Thus, we do not have just two factors of production – labour and capital – but many types of labour and many types of capital as well. As soon as we allow for three or more factors, the effects of migration for income distribution and social welfare become less clear-cut.¹⁹ In general, the effects for native labour and capital become more favourable when immigrants are complements to rather than substitutes for the native factors. For example, if the German labour force is skilled and the Turkish immigrants are unskilled, then immigrants tend to increase the productivity and wages of German workers. Likewise, the increase in social surplus from migration tends to rise the more complementary migrants and native workers are. In terms of Figure 3, smaller substitutability between labour and capital means that the demand curves become steeper and that the size of the surplus triangles become, up to a point, greater.

The decision to migrate is of course not only dependent on relative wages and unemployment, but on many other factors as well. The early theoretical research focused on income differentials and individual decisions, as in Berry and Soligo (1969). Recent research stresses that migration is a household decision, and that social networks, culture, language, geographical distance and other factors are important as well.²⁰

(ii) Forecasts of migration from Turkey to Germany

We have made a forecast of Turkish migration to Germany under the assumption that such migration will be completely free from restrictions. Our forecast is based on an estimated model of immigration to Germany from the EU-15, Norway, Turkey, the USA and the former Yugoslavia by Boeri and Brücker

¹⁹ See Borjas (1995).

²⁰ For a survey, see Ghatak et al. (1996).

(2000). The choice of Germany is dictated first by the fact that Germany holds by far the largest population of Turkish immigrants among the EU-15 and therefore can be expected to attract the largest numbers of future immigrants, and second, the paucity of data on migration flows and stocks before the 1990s for most of the other EU-15 countries.

Boeri and Brücker (2000) estimated how the flow of migration depends on the wage differential, employment rates in the home and host countries, the stock of migrants from the home country, restrictions on migration, and country specifics such as language differences, distance and institutions. The migration decision is seen as dependent on expectations about the future wage differential. This is based on past and present values of the differential, which is conditioned by the individual probability of finding employment in the host country relative to the home country. This, in turn, is assumed to be based on past and present average employment rates, on the ease of adjustment, which is proxied to the size of the presence of earlier migrants, on the difference in development between the home and host countries and language differences, and on agreements regulating migration, such as guest-worker agreements. Migration flows are seen as short-run adjustments to a long-run equilibrium in which migration has ceased and the stock of migrants has attained an equilibrium level dependent on the wage differential, the employment rate differential, restrictions on migration and the country-specific factors. The long-run equilibrium is also estimated, giving long-run relations between the stock of migrants and the explanatory variables.²¹ The existence of a long-run equilibrium builds on the assumption that the propensity to migrate has a certain distribution in the home country; the equilibrium is reached when those with the highest propensity have emigrated for given long-run values of the explanatory variables, and those remaining do not find it worthwhile to emigrate.²²

²¹ The assumptions and the model are described in detail in Boeri and Brücker (2000).

²² Boeri and Brücker (2000) first estimate an (error-correction) model taking account of migration responses to short-run deviations from long-run equilibrium relations. The signs of the coefficients on the explanatory variables correspond to the signs found in the estimation. The equation was estimated with data on migration to Germany from 18 industrialised countries during the period 1967–1998. This equation is:

$$\begin{aligned} \text{Change in migrant population in receiving country/population of sending country} = & \beta_1(\text{country-specific factors}) + \beta_2(\text{change in GDP per capita in sending country relative to receiving country}) \\ & + \beta_3(\text{change in employment in receiving country}) - \beta_4(\text{change in employment in sending country}) \\ & + \beta_5(\text{GDP per capita in sending country relative to receiving country in the previous year}) \\ & + \beta_6(\text{employment in the receiving country in the previous year}) - \beta_7(\text{employment in the sending country in the previous year}) \\ & - \beta_8(\text{migrant population/population of sending country, in the previous year}) \\ & + \beta_9(\text{dummy variable for free migration}) + \beta_{10}(\text{dummy variable for guest worker agreement}). \end{aligned}$$

The long-run equilibrium relations between the ratio of the migrant population in the receiving country relative to the population of the sending country on the one hand and the explanatory

We have used the Boeri and Brücker (2000) estimation of the migration equation to forecast free migration from Turkey to Germany from 2000 to 2030. To make a forecast, we have to make assumptions for the whole period about population and GDP growth rates, and about employment rates. For population growth, we have used the forecasts given by the World Bank in its World Development Indicators database. For GDP, we simply assume a GDP growth rate for Germany equal to the average for 1990–2000. The GDP and population growth rates yield a GDP per capita growth rate of 1.7 per cent. For Turkey we assume a higher GDP growth rate. We make forecasts based on the assumption that 1, 2 or 3 per cent of the per capita income gap is closed per year. This means that GDP per capita in Turkey grows at about 9, 12 or 15 per cent in the beginning of the period and at about 3 per cent at the end. The average rate is about 5.5 per cent for the 2 per cent assumption. The Turkish GDP growth rate has been about 5 per cent over the last five decades. Our assumption implies that GDP growth has to increase by about 2 percentage points for GDP per capita to grow at 5.5 per cent. The forecast results are shown in Figure 4. As can be seen, the Turkish immigrant population starts out at about 2.2 million in 2000 and reaches about 3.5 million in 2030 under the assumption that no restrictions are placed on migration.²³

b. EU Budget Transfers to Turkey and Other Candidate Countries

The structure of the present system of EU revenue and expenditure is such that rich member states transfer resources to poor members, but the relation between income per capita and net transfer is far from straight. Some rich countries give proportionately more than others, while some poor countries receive a disproportionate share of the transfers. Turkey and the CEEC-10 are all poor relative to the EU-15. Much attention has therefore been given to the budgetary

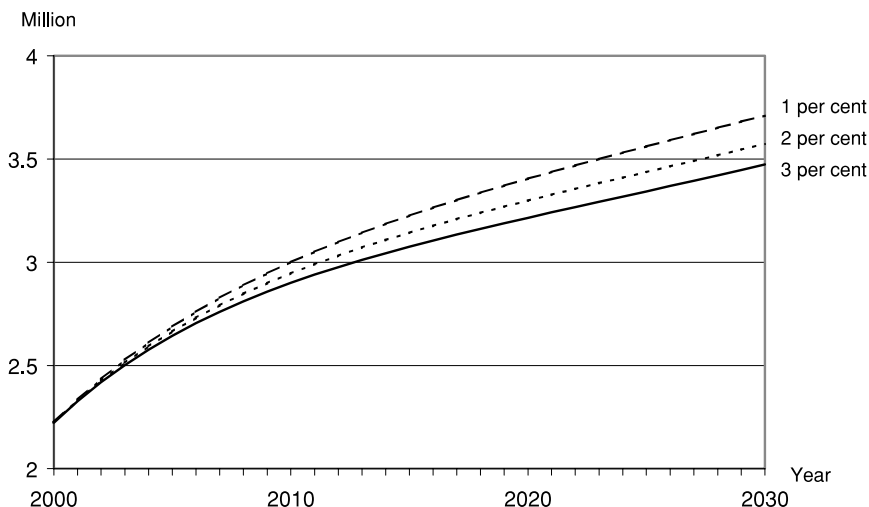
variables on the other can be found by setting the changes in equation (1) equal to zero and estimating the resulting equation which describes the long-run equilibrium relations as follows:

Migrant population in receiving country/population of sending country = (β_1/β_8) (country-specific factors) + (β_2/β_8) (GDP per capita in sending country relative to receiving country) + (β_6/β_8) (employment in receiving country) – (β_7/β_8) (employment in the sending country) + (β_9/β_8) (dummy variable for free migration) + (β_{10}/β_8) (dummy variable for guest worker agreement).

The signs of the coefficients within parentheses correspond to the estimated signs. As expected, in the long run the migrant population in the receiving country is positively related to the income differential between the sending and receiving country, the employment rate in the receiving country, free migration and guest worker agreements, and is negatively related to the employment rate in the sending country.

²³ It must be stressed that the forecast is highly uncertain. It depends on the specification of the migration model, the estimates of the model, which themselves are uncertain, and on heroic assumptions about GDP and population growth rates. Furthermore, we assume that estimates made for a group of countries during a certain time period in the past, can be applied for a different country pair and a different time period.

FIGURE 4
Forecast of the Turkish Immigrant Population in Germany



Note:

Forecasts for 1, 2 and 3 per cent convergence rate of per capita income between Germany and Turkey.

Source: Own calculation.

effects for the EU of enlargement on the presumption that enlargement will be very costly for the EU-15. The present net recipients from the EU budget seem to fear that transfer to them will be cut, and the net contributors fear that they will be required to raise their contributions.

The major items on the revenue and expenditure sides of the budget in 2002 are shown in Table 4. Revenues are collected from three sources: the member states' VAT revenues, customs duties collected by member states and a tax related to the member states' GNP. The total contribution to the EU budget is, by decision, capped at an amount equal to 1.27 per cent of GNP annually until 2006, when the present long-term budget ends.

Expenditures have two main destinations: the CAP and the so-called Structural Operations aimed at disadvantaged countries and regions. The CAP was until recently built on price supports. Starting in 1993, the CAP has gradually been shifting away from price to income support. On the other hand, Structural Operations are based on criteria of relative income level, under-development and the structural problems of particular regions and countries. Regional support is given by the so-called Structural Funds. For example, to be eligible for support under the classification of 'Objective 1' a region has to have a per capita income less than 75 per cent of the EU average. Nearly 70 per cent of Structural Operations expenditure fall under this classification. The Cohesion Fund is by construction exclusively directed at Greece, Ireland, Portugal and Spain. Cohesion Fund

TABLE 4
The EU Budget in 2002

	<i>Revenues</i>			<i>Expenditures</i>	
	<i>Million Euro</i>	<i>Share in Per Cent</i>		<i>Million Euro</i>	<i>Share in Per Cent</i>
Duties and levies	15,267	17	Agriculture	40,506	49
VAT	35,193	40	Structural Operations	27,591	33
GDP	37,580	43	Internal Operations	5,361	6
Correction*	-71		External expenditure	5,231	6
Total	87,969	100	Administrative exp.	4,643	6
Other revenue	4,755				
Total	92,724		Total	83,331	100

Notes:

* Due to exchange rate differences. ** Interest, surplus from previous years, fines, taxes on salaries of employees of European institutions, etc.

Source: European Commission, Allocation of 2000 EU operating expenditure by Member State, Table 5a and 5b.

expenditure is rather modest, or about 2 per cent of the total budget, but is important for the recipient countries. Relative to GDP, the largest recipients of Structural Funds are Greece and Portugal, which receive the equivalent of more than 2 per cent of their GDP, and Spain, which receives more than 1 per cent.

One way to calculate Turkey's contributions to and receipts from the EU budget would be to estimate the 'tax base', i.e. VAT and tariff revenue and GNP, and the extent to which Turkish agriculture and regions are eligible for support from the CAP, Structural Funds and the Cohesion Fund. The calculation is likely to come up with a large net transfer to Turkey, both because of the size of the agricultural sector and because Turkey is poor and under-developed relative to the EU-15. We find it unlikely that the EU-15 will accept Turkey as a member if it proves to be very costly. Turkish accession will come after the accession of most of the CEEC-10, Cyprus and Malta. These countries are also poor – with the exception of Cyprus – and have relatively large agricultural sectors. When the EU-15 determines new rules for contributions to and receipts from the budget it will consider the budgetary effects of accepting all of the present 13 candidate members. Since the EU-15 will be relatively large net contributors after enlargement under the present rules, they will, we argue, want to change the rules in order to reduce the amount of redistribution from rich to poor member states. Their ability to do so before enlargement is of course great. The question is what will happen once enlargement has taken place?

The history of past enlargements shows that rules are changed if an acceding country becomes a disproportionately large net contributor or is a disadvantaged recipient of CAP or Structural Funds support under existing rules. The United Kingdom has a relatively small agricultural sector and receives relatively little

CAP support. After a long struggle, it won a permanent rebate – a ‘correction of budgetary imbalances’ – on its contribution. Portugal and Spain receive relatively little CAP funding because their agriculture produces relatively little grain. After their accession, it was decided to limit aggregate CAP spending in favour of Structural Funds spending, something that benefited Portugal and Spain. The Cohesion Fund set up in 1993 – ostensibly to help the poor members cope with EMU – can also be seen as a compensation to Greece, Ireland, Portugal and Spain. Austria, Finland and Sweden do not have poor regions eligible for much support from Structural Funds. However, they managed to gain support for sparsely populated Alpine and Arctic regions when negotiating the terms of accession. Baldwin et al. (1997) provide a more detailed account of how eligibility criteria and the expenditure pattern have been adjusted in successive enlargements of the EU.

The rules for contributions to and receipts from the EU budget favour poor countries, since contributions are more or less proportional to income per capita while Structural Operations are targeted at poor countries and regions to raise their income relative to richer countries and regions. The CAP has a bias towards temperate climates and therefore the richer members, but not enough to overturn the redistributive effects of Structural Operations. What the budget rules will be after the CEEC-10, Cyprus, Malta and Turkey have joined depends in the final instance on the voting power of the new members and the voting rules.

Present rules give small countries more voting power per capita than large countries. Consider the extremes: Germany with a population of 83 million has ten votes in the Council while Luxembourg with a population of 400,000 has two, giving voters in Luxembourg 42 times the voting power of voters in Germany. Most of the candidate countries are relatively small. The largest are Turkey, with 65 million, Poland, 38 million, and Romania, with 23 million. Overall, poor countries will have more votes in EU-28 than in EU-15. There are at present 87 votes in the Council. Under existing rules, decisions have to be either unanimous or made with a qualified majority of 71 per cent (62 votes). Under the new rules agreed on at the European Council meeting in Nice, 74 per cent of the votes will be required for a qualified majority starting in 2005. The 13 candidate countries will add as many as 53 votes to the Council, based on the present allocation of votes according to population size.²⁴ Turkey should receive 10 votes, the same number as France, Germany, Italy and the United Kingdom have each. Thus, a coalition of poor, new member states can easily block decision-making in the EU-28.

Voting power should therefore be a good indicator of how much a country receives from the EU in the form of CAP and Structural Operations support. The history of enlargement has shown that if new members feel disadvantaged under

²⁴ The Nice Treaty has increased the number of votes in the Council to 348 when the EU has been enlarged to include the CEEC-10, Cyprus and Malta (but not Turkey). The new distribution of votes per member state is more differentiated with respect to population size than the present distribution, but the voting power distribution is still very regressive.

existing rules, they will change the rules and eligibility criteria to achieve an outcome that is more favourable. At the same time, GDP per capita is a good indicator of how much a country has to contribute to the EU budget. An alternative way of calculating the budgetary effects for new members is therefore to estimate the contribution per capita in the EU-15 based on income per capita, and to estimate the receipts per capita based on per capita Council votes and on the level of development in a broader sense, as indicated by eligibility for Cohesion Fund status. The results of such an estimation are shown in Table 5. As can be seen, GDP per capita alone can explain 82 per cent of the variation in contributions per capita among the EU-15. The estimated effect is highly significant. As for receipts per capita, the number of votes per capita and Cohesion Fund status can explain as much as 87 per cent of the variation in the data. The effect of voting power is borderline significant (it is significant at the 10 per cent but not at the 5 per cent confidence level), while the effect of Cohesion Status is highly significant.

The estimates of Table 5 were then used to estimate the contribution and receipts of each of the candidate countries shown in Table 6. It must be remembered that these estimates are based on the present distribution of votes among the EU-15 and present rules for contributions and receipts. The total net transfer to the 13 countries is quite large, or 49 billion euros. This is equivalent to more than half of the present budget of the EU-15. Turkey would receive the largest net transfer, about 14 billion euros.²⁵ The second largest net receiver is Poland, with about 9 billion. The smaller countries receive net transfers that are much larger per

TABLE 5
Estimates of Contributions and Receipts Functions

	<i>Contributions</i>	<i>Receipts</i>
Intercept	19.04018 (17.3033)	158.9615 (12.6017)
GDP per capita	0.010079 (0.0007)	
Votes per capita		22.91323 (8.9696)
Cohesion status × votes per capita		670.4564 (39.3141)
Adjusted R^2	0.82	0.87

Notes:

Data from OECD Economic Outlook No. 70 (December 2001) and Euro Conversion Rates from IMF/IFS (March 2002). OLS, 45 observations, annual data for 15 countries, 1998–2000. Standard errors within parentheses.

²⁵ The estimates are obtained under the assumption that there are no upper bounds on the receipts of the candidate countries. But according to EU rules transfers from the Structural Funds and Cohesion Fund cannot exceed 4 per cent of GDP, placing an upper bound on the amount that candidate countries can receive from the EU under Structural and Cohesion Funds. According to Togan et al. (2003b) Turkey, when these constraints are taken into account, would receive annual net transfers of about 8 billion euros under the present rules.

TABLE 6
Forecast of Contributions and Receipts in 2000

Country	Contributions (Millions €)	Receipts (Millions €)	Contributions Per Capita, €	Receipts Per Capita, €	Council Votes	95 Per Cent Confidence Interval	
						Contributions Per Cent	Receipts Per Cent
Bulgaria	285	4,072	35	499	4	233	26
Cyprus	109	166	144	220	2	54	61
Czech Rep.	746	5,100	73	496	5	110	27
Estonia	80	2,298	58	1,678	3	138	13
Hungary	685	5,060	68	505	5	117	26
Latvia	123	2,457	52	1,036	3	156	15
Lithuania	193	2,667	52	722	3	154	19
Malta	46	1,449	118	3,715	2	66	12
Poland	2,445	11,691	63	303	8	127	43
Romania	825	7,727	37	344	6	222	38
Slovak Rep.	310	2,939	57	544	3	140	24
Slovenia	234	2,396	118	1,205	3	66	14
Turkey	3,409	17,313	52	265	10	154	49

Notes:

Data from World Development Indicators On-line (World Bank) and Euro Conversion Rates from IMF/IFS (March 2002). Forecast based on estimates in Table XX. Assumed number of votes in Council of Ministers. All countries are assumed to have Cohesion Fund status, except Cyprus.

capita than the larger countries, due to their higher voting power. Although the net receipts to Turkey are the largest, the receipts per capita are the smallest. Turkey would receive 263 euros per capita, which is less than any country with Cohesion Status, while Malta, the smallest country, would receive 3,400 euros.

The distribution of votes that we have assumed is, of course, somewhat uncertain, as is the assumed eligibility for Cohesion Fund support. We have assumed that all countries except Cyprus qualify because their per capita income would be less than 75 per cent of the EU-28 average. A less generous assignment of Cohesion Fund status would generate substantially lower net transfers.

It is clear that accession of all the candidate countries requires substantial changes in the EU budget. The alternatives are numerous. One is, of course, to increase the gross contribution to allow much larger net transfers between member states. Another alternative is to drastically reduce the amount of redistribution. This must be achieved by a reduction of Structural Operations, since they are redistributive to a greater extent than CAP financing.²⁶

5. CONCLUSION

Joining the EU will require that Turkey attains macroeconomic stability, adopts the CAP, and liberalises its services and also its network industries. Integration will be beneficial for Turkey as it will remove the distortions in the price system, boosting the allocative efficiency in the economy, which in turn will make the country a better place to invest. Furthermore, with accession Turkey will be eligible for EU structural funds. The increase in infrastructural investments will contribute to economic growth in Turkey. In addition, Turkey will reap benefits from monetary integration, and finally, Turkey will benefit from migration of Turkish labour to the EU. However, the welfare gains that will be derived by Turkey from integration will have a price. The price will be the adjustment costs associated with the attainment of macroeconomic stability, adoption of CAP, liberalisation of services and network industries, and complying with EU environmental directives.²⁷

According to European Commission (2001), 59 per cent of the Turkish population supports EU membership and 68 per cent of the population declares that it would support the country's membership to the EU if a referendum were to be

²⁶ Here we should note that the above calculations are rather optimistic as, according to current EU rules, transfers from the structural funds and cohesion fund cannot exceed 4 per cent of the recipient country's GDP. Thus this requirement will place an upper bound on the amount that Turkey can receive from the EU under structural and cohesion funds, as long as the rules on structural funds and cohesion fund are not changed.

²⁷ For a discussion of environmental issues see Markandya (2003).

held on this issue. This high percentage of support for EU membership could partially be explained by the economic benefits that Turkey expects to derive from membership. Equally important is the recognition in Turkey that the system of governance of a rule-based society, as in the EU with its institutions, may provide a better system for meeting the demands of various groups in the society.²⁸ Furthermore, the support for EU membership stems also from the process of Westernisation and geo-strategic considerations.²⁹

The Turkish accession will also affect the welfare of current members of the EU. With Turkish accession current members will derive welfare gains from standard comparative advantage sources and also from growth effects of integration. Furthermore, migration of Turkish labour to the EU will affect the welfare level in member countries. The empirical research on the economic effects of immigration indicates fairly small and on the whole positive affects; employment opportunities are not affected much, the wage of low skilled labour is depressed somewhat but that of skilled labour is raised, and the net present value of public transfers is positive.³⁰ In addition to these effects, the EU will have to incur the net annual budgetary cost of Turkish membership to the EU. Estimates indicate that this cost will be quite high unless the rules on CAP and structural funds are changed over the next few years. There will also be political gains for the EU. Turkey is a large and fast expanding market. It is in fact the largest market in the Middle East, Balkans and Caucasus. According to the World Bank, Turkish

²⁸ This may explain the support provided to EU membership by followers of the Islamist political parties as well as by representatives of different minority groups.

²⁹ During the Tanzimat period (1839–1877) Westernising reforms were responsible for the adoption of a series of Western law codes, judicial organisation with secular law courts, introduction of French-style provincial administration (1864), and for the so-called *millet* system, which made it possible for the Christian minorities to have their own religious autonomous administration with representative councils. These liberal reforms culminated in the declaration of a constitution and the convocation of a parliament in 1876–1877. The process of reforms continued after the national War of Independence of 1919–1923. Under Atatürk's leadership, the newly founded Republic of Turkey carried through an extensive and comprehensive programme of modernisation and secularisation. Atatürk considered the total Westernisation of the country as an absolute precondition for Turkey's becoming a member of the Western family of nations. He succeeded in forging a modern nation out of a failing empire and a traditional community, based on the model of the Western countries. Turkey's aspiration to membership in the EU stems from the process of modernisation and Westernisation, the roots of which may be traced to Atatürk's reforms designed to establish a secular order in a country with a predominantly Muslim population. The Turkish elite considers membership in the EU a natural, desirable and inevitable step of this process. Furthermore, Turkey realises that it sits strategically at the edge of three regions of conflict – the Balkans, the Middle East and the Caucasus. Given the complexity of its security, Turkey seeks to cultivate stability in order to minimise the potential for conflict. For Turkey, EU membership can help to secure this stability and contain conflict, particularly in the Balkans. Furthermore, the EU and Turkey have a mutual interest in preventing and containing any instability that could arise in the CIS region.

³⁰ See the studies by Zimmerman (1995), Haiskens-De New and Zimmerman (1996), Winter-Ebmer and Zimmerman (1998), Storesletten (2000) and Bonin (2001).

GDP is as large as 80 per cent of Russian GDP. Turkey, located at the crossroads between Europe, Eurasia and the Middle East, has the potential to act as a major link between these markets. With harmonisation of commercial legislation, EU companies will be able to use Turkey as a joint investment and export base for the Middle East and Eurasia. Istanbul is emerging as transnational corporations' headquarters for operations in the Caucasus and Central Asia. The EU will derive potential gains from increased trade in the region. Finally, Turkish membership could help to secure stability and security in the Balkans and Caucasus. The EU could then increase its energy security and also decrease its defence expenditures.

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