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# Republic of Tunisia

## Changing the Structure of Incentives

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REPUBLIC OF TUNISIACHANGING THE STRUCTURE OF INCENTIVES

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## REPUBLIC OF TUNISIA

### CHANGING THE STRUCTURE OF INCENTIVES

#### EXECUTIVE SUMMARY

1. In the context of the preparation of the Eighth Development Plan (1992-96), the Tunisian authorities are taking stock of the results of the reform program launched in 1986 and discussing the economic strategy to be adopted in the future. This program, aimed at transforming the country into an efficient and diversified outward-oriented economy, included: a reform of the trade incentives through the rationalization of tariff rates, the liberalization of domestic prices, and the reform of direct and indirect taxation; the promotion of domestic competition, through the elimination of direct regulatory impediments to entry and a reform of investment incentives; and the encouragement of import competition through the gradual elimination of quantitative restrictions. Measures to improve competition among banks and to reform the public enterprise system were also undertaken.

2. Few would deny the importance of the changes in the structure of the economic incentives generated by the program and the resulting strong recovery during 1989-1990. GDP increased by 7.1% in 1990 compared to 3.7% in 1989, and 1.1% in 1988 when it was influenced by a severe drought. Real investment increased by 35% in 1989 and by 28.1% in 1990 after much stagnation. Manufactured exports have grown, on average, by 17.3% in real terms since 1986. In 1990, however, the upsurge in imports, mainly of capital goods reflecting the boom in investments, resulted in a current account deficit of 5.3% of GDP. The political instability in the region, following the Gulf crisis, has created uncertainty in the economic prospects for the near future. The sharp drop in tourism revenues, already manifested in early 1991, is expected to be above 34% by the end of the year (or 13% of total export earnings). This comes at a time of low international reserves, estimated at 1.7 months of imports at the end of 1990. The authorities have already taken stringent fiscal measures to reduce domestic absorption and to prevent a further deterioration of the current account. Balance of payments support has also been sought from the IMF and the World Bank.

3. This report reviews the results of the reforms initiated in 1986. It focusses on those aspects of the reforms where more policy actions will be needed to produce a structure of economic incentives that better fits the outward looking strategy of the Government and its objective to increase the efficiency

of resource allocation. Building on previous Bank reports,<sup>1</sup> it assesses the results of the trade reform (Chapter I); the effect on investment decisions of fiscal incentives (Chapter II); and the financial incentives (Chapter III). The underlying conclusion is that, although the structure of incentives has changed significantly in the last few years, the need to persevere with structural reforms remains strong, given the country's continued vulnerability to exogenous shocks. As discussed in other Bank reports, sustained economic growth needs to be supported by more efficient investment as well as by a steady increase in exports. A major constraint to achieving these objectives is the deep-rooted dualism within the industrial sector between wholly exporting firms and firms producing for the domestic market. On the one hand, firms producing for the domestic market are sheltered from international competition and enjoy substantial tax exemptions and access to preferential credit. On the other hand, exporters are insulated from the negative effects of the policies aimed at protecting domestic markets through free access to imported inputs, generous fiscal and financial incentives, and the active management of the exchange rate conducted by the authorities. The continuation of reforms in the trade, fiscal and financial sectors is crucial for unifying the industrial sector, thus allowing the spill-over of efficiency gains from export industries to the whole economy. Such a continuation represents a major challenge for the Tunisian Government soon. More generally, a time-bound, non-discretionary incentive framework capable of correcting market failures without creating distortions and rents is needed.

#### The Reforms of the Eighties: Remaining Issues

4. Trade liberalization: More efficient resource allocation and providing equal incentives to domestic sales and exports were at the heart of the 1986 reform program. The program included the decontrol of domestic prices and distribution margins, the rationalization of the trade taxes, reductions in the tariff rates, the devaluation of the dinar, and the gradual elimination of most quantitative restrictions (QRs). The initial emphasis of trade liberalization was on the rationalization of the tariff structure: the range of customs duties was compressed from 5%-235% in 1986 to 15%-43% in 1990. Capital goods were most affected, with the average rate of nominal protection decreasing from 26.1% in 1987 to 21.2% in 1990. However, for the economy as a whole, the import-weighted tariff only fell to 22.3% in 1990 from 24.9% in 1987.

5. The early reduction in tariff rates in 1987-88 made the elimination of QRs more difficult later. Thus, the revision of non-tariff barriers proceeded cautiously. From its inception, the liberalization program involved mainly intermediate and capital goods, i.e., commodities that were not domestically produced and that represented essential inputs for the exporting industries.

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1/ See in particular: "Tunisia: Country Economic Memorandum: The Road to an Outward-Oriented Economy", World Bank (1990), Report No. 8044-TUN; and "Tunisia: Industrial Sector Note", World Bank (1990), Report No. 8277-TUN.

Indeed, since 1987, as an incentive for exports, firms exporting a minimum of 15% of their turnover are allowed to freely import all inputs needed, irrespective of their general policy regime. The importation of products subject to non-tariff barriers is permitted by means of an import authorization or a licence, which is liberally granted. However, the share of freely importable goods, measured in terms of domestic output, was only 28% at the end of 1990. Thus, overall, the liberalization program did not go far enough to expose domestic producers to import competition. Moreover, the earlier liberalization of intermediate inputs, without the liberalization of the related finished products increased the rate of effective protection in many activities in recent years. For example, the rate of effective protection of the manufacturing industries producing for the domestic market increased from 78% in 1988 to 87% in 1989. Protection, by raising the profitability of domestic sales and by failing to expose firms to international competition, is also responsible for the lack of integration between exporting and non-exporting firms. An example of this weak integration is that, in spite of the numerous incentives granted to indirect exporters, more than 90% of the inputs purchased by exporting firms are from sources outside Tunisia.

6. Trade liberalization and current account performance: Evidence from both developing and developed countries suggests that trade reforms are likely to produce current account imbalances in the short run because import flows respond more rapidly than exports to liberalization measures.<sup>2</sup> Thus, the prediction of the response to reform measures of imports and exports is of paramount importance in the implementation of the liberalization program. The view taken by the Tunisian authorities in the adjustment program was that export growth, as opposed to import compression, would have to be responsible for achieving external balance. In this respect, exchange rate policies played a major role in raising the competitiveness of Tunisian goods in recent years. The response of manufactured exports to the significant real depreciation of the exchange rate in the mid and late eighties was substantial.<sup>3</sup> Remarkably, the improvement in competitiveness of Tunisian goods was noticed not only for industrial countries but also for competing countries such as Morocco, Turkey, and Greece. As to import demand, the econometric estimates presented in this report indicate that imports of consumer goods are very responsive to changes in trade policy, especially in quantitative restrictions. However, imports of both consumer and capital goods, as well as export flows, also respond strongly to changes in the exchange rate. This would suggest that policies to increase

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2/ See for example Khan and Zahler, "Trade and Financial Liberalization given External Shocks and Inconsistent Domestic Policies", IMF staff papers, 1985.

3/ The real exchange rate (based on the wholesale price index) depreciated about 11% from 1984 to 1986 and a further 1.5% in 1988. After registering a growth rate of just above 6% during 1980-85, the manufactured exports recorded (see paragraph 2) an average annual rate of 17.3% since 1986.

export growth, particularly careful management of the exchange rate, may be sufficient to avoid a large deterioration in the external balance as quantitative restrictions are eliminated.

7. Overhauling the tax system: the 1988-1990 reform: The stated objectives of the comprehensive tax reform enacted in 1988-90 were to increase fiscal neutrality and equity and to reduce distortions in the incentives to save and invest. The reform package, expected to be revenue neutral, included the introduction of a Value Added Tax (VAT) on production in 1988, its extension to wholesale trading in 1989, and the adoption of new personal and corporate income tax laws in 1990. The implementation of the VAT has proceeded smoothly, and the revenue performance has been better than expected. International comparisons of marginal tax rates indicate that the new direct tax laws respond better than those in most OECD countries to the objective of neutrality (e.g., towards debt/equity choices, pay-out ratios, the incorporation decision, among others). For example, (a) the alignment of the maximum corporate tax rate with the top rate of the personal income tax reduces the incentive to convert labor income into the (formerly) less taxed corporate income; (b) the simplification of the tax rate structure reduces opportunities for tax avoidance while the reduction in the top rates may weaken the incentive for tax evasion; and (c) the double taxation of companies' income, at the corporate and personal level, has been eliminated. Dividends are exempt from personal tax. However, as in most OECD countries, the corporate tax laws present a bias toward debt financing as interest payments are tax deductible.

8. The Investment Codes: a legacy from the past. Undermining the simplicity, neutrality and revenue potential of the new tax law is a system of incentives contained in several Investment Codes. They are primarily aimed at encouraging investments in the industrial, tourism, agricultural, fishing and trading sectors although they also promote "horizontal", non-sectoral objectives such as export growth and regionally balanced development. The extensive sectoral targeting is difficult to justify. It may have been necessary in the past to offset the side effects of distortive trade and fiscal policies, administered prices and underdeveloped capital markets. As these distortions are being addressed, however, there is less need for industry-specific State intervention.

9. The incentives contained in the Codes include partial or permanent exemption from payment of registration, income and trade taxes; tax deductions on reinvested profits; interest rate rebates; and capital subsidies. There is no apparent rationale for the use of so many different instruments. They contribute to an increased rate of dispersion of the cost of capital among different investment projects and sources of finance and may result in arbitrary and unintended distortions. For example, interest rate subsidies reduce the cost of capital only to debt financed projects, which already benefit from the incentive of deductible interest payment. On the other hand, some instruments, in particular tax holidays, are poor and expensive means of attracting investments. This is so because firms must write off depreciation allowances during the tax holiday. This implies that when the tax holiday is over, firms may still pay taxes on income generated by investments undertaken during the holiday which, in most cases, have already been depreciated. Clearly, for a tax

holiday to be truly effective, firms should be allowed to defer depreciation until after the holiday. This provision cannot be recommended, however, as the foregone tax revenue of this incentive is relatively high.

10. Financing the corporate sector: the bias toward debt financing: The financing patterns of corporate investment in Tunisia reveal a very low degree of self-financing. During 1979-1987, internal sources of funds only accounted for 20% of investment financing and new share issues for an additional 19%. A great part of the financing was provided by debt in the form of short-term loans (22%), medium- and long-term loans (26%), and by government subsidies (13%). The heavy reliance on debt has largely depended on the easy credit and on its low real cost. Both elements have been the result of Government intervention aimed at influencing the allocation of financial resources. This has included: selective policies to channel credit to priority sectors of the economy; preferential rediscount at the Central Bank; interest rate subsidies; repayable advances; investment grants; regulatory controls to influence the lending and pricing decisions of commercial and development banks; and recourse to external funds at a cost lower than that of domestic funds since the former excluded the exchange risk.

11. During the eighties, the percentage of selective credit, relative to total credit to the economy, was around 25% (declining to 20% in 1990). Financial incentives have created a strong bias toward debt financing by encouraging an artificial demand for loans from firms unable to obtain credit at market rates. The minimum proportion of self-financing being required on the projects that benefit from selective credit is extremely low, ranging between 10% to 40% of the project cost. Repayment of government loans granted through public funds is generally rare, and loan collection is poor. According to a recent study, 40% of the enterprises financed by a government fund, the FOPRODI, went bankrupt or faced serious difficulties. Moreover, the absence of a centralized monitoring system makes the overall assessment of the cost of the selective credit schemes particularly difficult. Estimates provided in this report indicate that in 1990 the budget cost was equivalent to 24% of the budget deficit, or 0.8% of GDP.

12. Regulatory controls. During 1987-88, many reforms were implemented by the Central Bank, including the elimination of the Central Bank's prior approval system applied to most lending; the freeing of most interest rates; and the development of a money market. Despite these reforms, regulatory controls on the banking system, resulting in the segmentation and fragmentation of credit markets, are still important in Tunisia. Remaining regulatory controls on commercial banks include a cap of 300 basis points above the money market rate (TMM) imposed on lending rates, and a ceiling of 200 basis points below the TMM for the rate on special savings accounts. The lending rate cap was established in 1988 to prevent a general rise in interest rates that could have been engineered by banks inexperienced with competitive loan pricing. As price competition, within the cap, has indeed developed, continuing the ceiling may hamper the ability of banks to further differentiate their rates according to the quality and creditworthiness of borrowers. On the other hand, the ceiling on the rate of special savings accounts appears to be excessively high relative to the yield of longer term instruments. Special savings accounts compete

unfairly with other types of financial instruments; being an expensive resource, they also reduce the banks' operating margins.

13. A further constraint on the activities of commercial banks is the prohibition to offer long-term loans. However, even if this constraint were relaxed, commercial banks would probably be prevented from granting long-term loans by their weak capital structure, relative to that of the development banks. The discrepancy in the capital structure of commercial and development banks, if not addressed, is likely to perpetuate the segmentation of the credit market and to inhibit the emergence of market-based pricing policies. Finally, commercial banks are required to comply with a detailed system of credit guidelines defining the purpose, maturity and amounts of the loans they can grant. Because of a lack of audited accounts and difficulties in screening viable projects, the credit guideline system is used as a poor substitute for a more comprehensive system of supervisory and prudential regulations. For example, it does not preclude a bank portfolio from being excessively exposed to certain economic sectors or poorly matched to resources in terms of maturities. It induces banks to provide, and borrowers to request, loans simply because they are included in the guidelines, irrespective of real needs. It dilutes and discourages the responsibility of banks to screen and monitor their loans.

14. External financing. During the eighties, the complete coverage by the state of the foreign exchange risk on external loans raised by financial institutions encouraged the financial institutions to borrow abroad in currencies carrying a low interest rate. At the end of 1989, funds originating from foreign credit lines represented, respectively, 8% and 30% of commercial and development banks borrowing. Until 1988, the foreign exchange losses arising from external loans were covered by a guaranteed fund, the "Fonds de Péréquation des Changes et Taux d'Intérêt", which was greatly underfunded. As it became clear that the fund could not break even unless the dinar appreciated substantially, the authorities have looked for new solutions since 1989. Hedging instruments, such as a forward cover and options have been introduced to cover the foreign exchange risk but only on short-term loans. "Ad hoc" mechanisms were agreed to between the Central Bank and financial institutions for the few concessional credit lines undertaken in 1989 and 1990.

15. Financial markets development. Historically, the predominance of debt as a source of finance for investments has been mirrored in the underdevelopment of financial and capital markets. The development of these markets has been a central objective of the authorities since 1987. Among the measures taken is the establishment of a new comprehensive set of market regulations by the Stock Exchange authorities. The tax treatment of financial instruments, of equity and bonds in particular, has been streamlined and simplified under the recent direct tax reform. However, both the stock and the bond markets are still in their infancy. The Treasury's issuing policies have not contributed to creating a strong bond market, as they have emphasized compulsory placements of low yielding "equipment bonds" by the banks (currently amounting to 20% of their deposits) and insurance companies (50% of their technical reserves). A major reform of the money market was implemented in 1988-89. Competition has been encouraged by the introduction of new financial

instruments, such as certificates of deposit, commercial paper and short-term Treasury bills. Commercial and development banks, as well as non-financial enterprises have been allowed to participate in this market, thereby reducing the segmentation in the market for resource funds. More recently, to encourage investment in securities, two types of investment funds, namely closed-end (SICAFs) and open-end funds (SICAVs), have been introduced.

16. Although the tax treatment of financial instruments appears to be satisfactory, some tax incentives granted to purchases of securities in the primary market are detrimental to the development of the secondary market. Under the Law 62-75 of December 1962, purchases of shares and bonds, previously approved by the Minister of Finance, are deductible up to 35% of taxable income. However, to enjoy this tax advantage, the securities must be held for two years (for stocks) and five years (for bonds), thus discouraging secondary trading. Contradictions in the existing tax treatment for SICAVs are also delaying their creation. For example, on the one hand, the interest income, which is normally taxed if securities are held directly, is not if distributed as a dividend by a SICAV. On the other hand, the 1991 Finance Law has excluded SICAVs (but not SICAFs) from the benefit of the tax deductibility provided by the Law 62-75 to holders of securities.

#### POLICY RECOMMENDATIONS

17. The challenge faced by the Government of Tunisia in the coming years is to consolidate the economic recovery initiated in the late eighties and to achieve a sustained growth in the nineties. In line with the objectives of making the economy more outward-oriented and increasing the role of the private sector, policy intervention should be focussed on improving market efficiency. To this end, the Government should continue the structural reform program initiated in the mid-eighties to improve the system of economic incentives in three main areas: trade liberalization, rationalization of fiscal incentives, and financial sector reform.<sup>4</sup>

#### Trade Liberalization

18. In view of the delays incurred in the last two years, largely due to unfavorable exogenous factors, the acceleration of the import liberalization program is a priority. This would stimulate productivity and improve the quality of domestically produced goods. It would enhance consumers' welfare, as domestic prices approach international prices. It would eliminate the indirect costs

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4/ Complementary issues relating to industrial restructuring, administrative reforms, labor markets and human capital development have already been discussed in recent Bank documents (for example, in the recent "Employment and Training Fund Project", Report No. 8630-TUN and in the "Industrial Sector Note", Report No. 8277-TUN) and are the subject of ongoing discussions between the Bank and the Tunisian authorities.

associated with the management of import controls and special exemption schemes allowed to exporters. The program for the elimination of quantitative restrictions should, therefore, be continued. It should be accompanied by transitional measures designed to ease the adjustment costs of previously protected enterprises. These measures could take the form of temporary tariff surcharges which would maintain existing protection levels in the short run. Gradually, these surcharges would then be lowered to allow imports to be expanded. The introduction of tariff surcharges would increase the credibility of the liberalization program and reduce existing political pressures against it. At the same time, an active exchange rate policy, aimed at increasing the competitiveness of exports, would be required to encourage export growth and to prevent a large deterioration in the current account. In particular, the authorities should aim at maintaining the competitiveness of Tunisian goods with respect to their competitors in the developing countries. Finally, decontrol of producer prices and of distribution margins should be continued in combination with the removal of import restrictions to promote competition within the industrial sector.

19. The decision to continue import liberalization would enhance the process of structural integration within the industrial sector between fully exporting firms and firms producing for the domestic market. The Government could take a step in this direction by encouraging exporting firms to sell part of their output in the domestic market. This measure would introduce some competition between goods produced for the domestic market and those for export, which are typically of greater quality. Some immediate measures could also be taken to improve administrative and customs procedures for exports. In particular, partly exporting firms should be exempted from the obligation to post a bond as a guarantee for unpaid customs duties on imported inputs for their export activities. This required bond, now equal to 5% of the value of imported goods, represents a significant financial burden for these firms. In addition, the simplified temporary admission procedure should be extended to all indirect exporters. At present, exporting firms acquiring inputs from domestic firms rely on a duty drawback procedure, where a refund is claimed for the customs duties paid by indirect exports. This procedure is cumbersome and discourages exporting firms from buying intermediate inputs from domestic firms.

#### Fiscal Incentives

20. In line with the greater transparency and economic efficiency introduced by the tax reform of 1989-90, the incentive structure contained in the Investment Codes should be rationalized. Government objectives should shift from being industry and sector specific to being "functionally" oriented (e.g., to promote infant industries, technology transfer, the development of disadvantaged areas, among others). Promoting exports, although outside the domain of market failures should still be pursued until trade restrictions and price controls have been eliminated. The existing Investment Codes, which target sectoral activities, should be replaced by a single Code. This Code would harmonize the principal incentives and eliminate those which address sectoral issues only. Fewer instruments would be less expensive to administer and their effects would be more easily understood by both Government and industry. They

would also reduce the risk of complex interactions that could produce unintended distortions. The incentives should be chosen according to the criteria of cost-effectiveness and efficiency. Thus, they should be offered for a limited time to minimize their budgetary cost and avoid the creation of enterprises surviving only because of the concessions. Moreover, only those instruments which could affect the targeted activities in a direct and unique way should be preferred. Examples of such incentives are: (a) Accelerated depreciation allowances, which allow firms to increase the rate at which capital can be written off against tax. They reduce the cost of capital and, by benefitting only companies with sufficient investment, imply lower foregone revenues to the budget, relative to tax exemptions and holidays; (b) Investment allowances benefit firms not in proportion to their profits but to the size of their investments. They are simple to monitor and their cost can be easily calculated; and (c) Direct investment grants from budget resources. They constitute an effective way of reducing the cost of capital and, if properly accounted for in the government's budget, they constitute a transparent instrument of subsidization.

### Financial Sector Reform

21. To consolidate the liberalization process begun in 1987, financial sector reforms would need to aim at three objectives: (a) increasing competition in the banking system and eliminating segmentation in the credit market; (b) eliminating selective credit policies; and (c) developing active securities markets.

22. Competition between financial institutions could be increased by eventually eliminating the controls on the lending and deposit rates of commercial banks. Some transitory measures could be taken immediately. The cap on the lending rates could be applied on the average of the total portfolio of each bank, as opposed to a loan by loan basis. This measure would increase the flexibility of the banks' pricing policy while still ensuring the control of lending rates on an administered basis. The current ceiling on special savings accounts should also be relaxed from the current level of money market rate minus 2% to money market rate minus 3% or 4%. This measure would still grant small savings a positive interest rate, while it would address larger deposits towards more remunerative and less liquid instruments. A further measure to increase competition among financial institutions would be to gradually allow both commercial and development banks to lend short and long term. The quality of bank portfolios and capital bases are not sufficiently known at this stage. However, the issues relating to provisioning for bad loans and capital adequacy are being addressed by the Central Bank in the proposed reform of the prudential and supervisory framework.

23. A further reform would concern loans derived from funds in foreign currencies. Clearly, a market solution to the foreign exchange risk will be feasible only with the elimination of capital controls and the convertibility of the currency. However, in the meantime, the distortions involved in the administrative management of the foreign exchange risk should be minimized. Thus, financial intermediaries should fully transfer the foreign exchange risk to the final borrowers willing to carry it. This implies the further development

of hedging instruments and of "natural hedging" practices. To this end, it might be desirable to increase the proportion of foreign exchange receipts that exporters are allowed to retain above its current 70% limit. As to the medium- and long-term loans, a centralized scheme should be adopted. To ensure the efficiency of such a scheme, the rate charged by banks to the final borrowers should be linked to, and vary with, a reference rate that reflects the foreign interest rate and the expected evolution of the currency. In Tunisia, the best approximation to such a rate is the TMM. It can be influenced by the authorities through their operations in the money market; it is highly visible and outside the control of any single financial institution. Hence a mechanism that could be considered, for the time being, would be for the borrowing banks to pay to the Central Bank the difference between the interest rate on the borrowing abroad and the money market rate, possibly adjusted periodically (for example, every six months) on the basis of the weighted average prevailing during the previous semester.

24. Selective credit policies and financial incentives have been shown to lack focus and monitoring, to provide a bias in favor of debt financing, and to entail a high budgetary cost. They should be reviewed in the context of the reform of fiscal incentives as they respond to the same preoccupation by the Government of encouraging priority sectors. Both the channels and the instruments through which financial incentives are delivered need to be re-examined. To increase the transparency of the budgetary cost of the incentive mechanism, all subsidies should be paid directly through budget resources. Thus, the preferential rediscounting system at the Central Bank should be phased out completely. The criteria for granting and monitoring direct loans and repayable advances should be reconsidered in view of the past unsatisfactory loan recovery. Finally, to avoid the excessive bias toward debt financing, the self-financing requirements imposed on projects that receive subsidized credit should be significantly increased.

25. The development of an active securities market depends on a stable political and economic environment, and on the existence of an adequate fiscal, regulatory and supervisory framework.<sup>5</sup> Efforts in this direction should include:

- (a) Removing the distortions in the tax treatment of financial instruments in order to encourage the emergence of a market yield curve. Thus, the Law 62-75 should be modified to make the yearly net increase in a securities portfolio deductible from taxable income (up to a specified percentage) irrespective of the origin of the purchase (primary or secondary market), or of the nature of the transaction itself (sale or purchase), or of the identity of the investor. Decreases in portfolio would give rise to pro-rated repayments of tax benefits. This scheme would simplify and remove

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5/ The promulgation of accounting standards and the development of the auditing profession would also greatly encourage the development of a viable equity market. These important elements have been discussed in the World Bank's "Country Economic Memorandum", op. cit. Volume III, Annex 2.

tax distortions in both the primary and secondary markets and in the treatment of SICAVs.

- (b) Deepening the bond market. As far as the Treasury is concerned this would entail: (i) harmonizing the characteristics of the instruments issued; (ii) ensuring adequate market timing of issues; (iii) diversifying the maturities of bonds; (iv) allowing banks to underwrite Treasury and other bond issues; and (v) placing medium- and long-term bonds through public offerings as opposed to bilateral placements with institutional investors. In addition, the compulsory holdings of "equipment bonds" by financial intermediaries should be phased out, and the investment guidelines of institutional investors (e.g., insurance companies) should be loosened so as to include all instruments issued by the Treasury.

### CONCLUSIONS

26. The major challenge faced by Tunisia in the medium term is to achieve a rate of economic growth sufficiently high to reduce unemployment while maintaining macroeconomic stability. The strength of the economy in 1990 is the result of a marked recovery in investment and exports. Part of this recovery can be ascribed to the changes in the economic incentives brought about by the policy reforms implemented in the late eighties. As the economy becomes more sophisticated and distortions are addressed, the rationale for public intervention changes. Government intervention in the economy should cease to be industry and sector specific. Instead, it should encourage the private sector to be flexible and adjust to shocks; to attack remaining market rigidities; and to support the institutions aimed at improving the functioning of these markets. Some recommendations along these lines on how to improve the structure of incentives notably in the trade, fiscal and financial sectors have been provided in this Report. The implementation of the suggested measures would bring about a better allocation of resources. It would also contribute to the achievement of a sustained private sector-based growth, in line with the economic strategy adopted by the authorities in the Eighth Development Plan.

## I. TRADE POLICIES AND INCENTIVES

### A. INTRODUCTION

1.01. The trade and industrial policies in Tunisia have been shaped by a variety of considerations. The desire to provide infant-industry type of protection to the nascent industrial sector, and the need to devise reliable sources of finance for the Treasury motivated the introduction of a system of high and variable customs duties during the seventies. Tariff protection, in turn, was supplemented by non-tariff barriers which insulated domestic producers from fluctuations in international prices. The high level of protection accorded to domestic industry increased the profitability of import-substituting industrialization, inducing a resource shift toward production for the domestic market. At the same time, a system of investment licensing was introduced to limit the inefficiencies associated with excess entry into the relatively small domestic market of Tunisia. In turn, the recognition that attempting to control entry would breed oligopolistic practices prompted Tunisian policy-makers to impose a pervasive system of price controls. Overall, the combination of trade protection, investment licensing and price controls produced a structure of industry that was inefficient and contained a bias against exports.

1.02. Falling revenues from oil exports in the early eighties brought to the forefront the need for a radical revision of trade, industrial and pricing policies. This need was recognized in the Sixth Development Plan which called for a major overhaul in the structure of economic incentives, with the objective of opening the economy to foreign competition and fostering efficiency. The implementation of the necessary reforms was fairly slow; indeed, it was only in 1986, when a deteriorating current account brought Tunisia close to a balance of payments crisis, that a major reform aimed at providing a more neutral set of incentives to exports and domestic sales was initiated. The liberalization program consisted of a combination of freeing of prices, simplification of import procedures, reduction in tariffs, and elimination of quantitative restrictions. The impact of this policy reform on the structure of trade incentives is analyzed in Section B. The response of exports and imports of both consumption and capital goods to variations in trade policy, the exchange rate and exogenous external factors is analyzed in Section C. Finally, Section D reviews the main issues involved in the continuation of the trade liberalization program and draws some recommendations.

### B. TRADE LIBERALIZATION AND THE STRUCTURE OF INCENTIVES

1.03. Prior to the 1986 liberalization program, customs duties were generally high and subject to wide variations, with rates ranging from 5% to 236%. Typically, consumption goods enjoyed much higher levels of nominal protection than other commodities. The cascading structure of customs duties translated into very high levels of effective protection for final goods.

According to a study prepared by the Institut d'Economie Quantitative (IEQ)<sup>1</sup>, in 1985 the rate of effective protection (REP) for activities producing for the domestic market was 84%, as compared to a REP of -7% for export activities. The REP of the textiles and the food processing sectors was 203% and 553%, respectively. Agriculture, mining and transport activities were discriminated against, with a REP equal to 49%, 20% and -7% respectively.

1.04. Overall, the trade protection system generated a strong anti-export bias. However, already in 1972, the recognition of such anti-export bias and the need to redress it prompted Tunisian authorities to grant significant concessions to exporters. With the Law 1972-56, fully exporting firms, i.e., firms which catered only to foreign markets, were granted full exemption from corporate taxation and unrestricted access to imported inputs. Further attempts to promote and diversify exports were made at the beginning of the eighties, with the establishment in 1982 of the Tunisian Export Insurance Agency (COTUNAGE), the introduction of simpler customs procedures for exports and the adoption of a law governing the establishment of export companies. The benefits previously granted only to fully exporting firms were then extended (Law 1981-56), in proportion to their export sales, to firms exporting part of their production. Significant changes were introduced in 1985 in the temporary admission procedures, i.e., in the import regime for intermediate inputs for exports. Until then, the importer was still forced to seek an import license and foreign exchange authorization from the Central Bank. The need for an import license was eliminated by the new regulation. In 1986 a deteriorating current account brought Tunisia close to a payment crisis. The short-run response was an intensification of import controls, but, at the same time, a set of far reaching reforms was also prepared.

1.05. The reforms introduced in 1986 brought major changes into the structure of tariff protection. Import tariffs and duties were compressed to a range of 15%-50% in 1987 and 15%-43% in 1990, compared to 5%-236% in the early eighties. Table 1.1. shows that the mean unweighted tariff fell from 32.5% in 1987<sup>2</sup> to 28.5% in 1990 and that the simplification in the tariff structure led to a reduction in the variation of the customs duties.

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1/ See Institut d'Economie Quantitative (1988) and Table 6 in Annex I. The rate of effective protection measures the protection to net value added in an activity and thus the artificial pull of that activity for non-traded resources in production. It is calculated as  $REP = (P_D - I_D) / (P_W - I_W)$ , where P, I = output and inputs; D, W = domestic and world price.

2/ The 1987 tariff rates shown in the tables include the customs duty rate and a customs clearance fee (equal to 5% for all tariff positions). This custom fee, together with other minor taxes, was integrated in 1988 into the custom duties. The finance law of 1988 also introduced a new tax, "la redevance des prestations douanières", equal to 1.5% of the custom duty rate. This tax has been included in the tariff rates.

**Table 1.1: RATES OF CUSTOMS DUTIES  
(percentages)**

	1987			1988			1990		
	Whole Economy	Products with QRs	Without QRs	Whole Economy	Products with QRs	Without QRs	Whole Economy	Products with QRs	Without QRs
Mean	32.5	35.0	22.0	30.2	34.9	24.1	28.5	34.5	23.4
Coeff. of variation	44.3	40.9	38.9	37.1	30.4	36.1	41.6	32.2	42.5

Source: IEQ tariff files and mission estimates.

1.06. Table 1.2 shows that consumer goods and capital goods were most affected by the reduction in the tariffs, with the average rate of nominal protection falling from 41.4% in 1987 to 36.6% in 1990 for the former and from 26.1% in 1987 to 21.2% in 1990 for the latter. However, the increase in the minimum tariff rate raised the rate of nominal protection for some intermediate goods, offsetting the effect of the reduction in the top rates. As a result, intermediate goods showed a virtually unchanged average level of nominal protection since 1986. The import-weighted tariff of the manufactured sector as a whole<sup>3</sup> declined from 26.5% in 1987 to 23.2% in 1990.

3/ These values are in line with those prevailing in most developing countries. According to Erzah et al ("The Profile of Protection in Developing Countries" - Unctad, discussion paper no. 21, 1987), at the end of 1985 the weighted average tariff rate for 50 developing countries was 26%. However, similar estimates for OECD countries (Finger and Laird, "Protection in Developed and Developing Countries - An Overview", Journal of World Trade Law 2, 6, December 1987) revealed instead that average tariffs on industrial goods were about 5%.

**Table 1.2: THE STRUCTURE OF PROTECTION, RATES OF CUSTOMS DUTIES  
(percentages)**

	1987			1988			1990		
	Weighted Average	Unweighted Average	As % of total imports	Weighted Average	Unweighted Average	As % of total imports	Weighted Average	Unweighted Average	As % of total imports
Agriculture	17.6	31.7	7.10	18.8	28.8	9.60	18.5	28.9	6.4
Mining	13.9	18.3	6.86	17.6	19.6	5.70	11.7	18.4	4.5
Manufacturing	26.5	32.9	86.04	26.2	30.5	84.70	23.2	28.6	89.1
- Consumer goods	39.8	41.4	(32.10)	34.4	36.8	(36.01)	32.4	36.6	(32.4)
- Intermed. goods	19.5	25.3	(43.70)	21.1	25.6	(42.30)	18.8	24.3	(37.2)
- Capital goods	24.1	26.1	(24.20)	24.0	24.5	(21.60)	19.7	21.2	(30.4)
All commodities	24.9	32.5	100.00	25.0	30.2	100.00	22.3	28.5	100.00

Source: IEQ Tariff files.  
Weighting factors are based on 1987-1989 values of imports.

1.07. The reduction in non-tariff barriers, by contrast, proceeded more cautiously. This may be attributed, partly, to the fact that products subject to QRs are not prohibited, but restricted. Imports of these products require an import licence, an annual import authorization or an import card generally liberally granted.<sup>4</sup> The percentage of tariff lines corresponding to restricted

4/ Tunisia operates a fairly complex system of import regulations (published in the "Notice to Importers and Exporters, Official Gazette No. 75, November 27, 1981, amended subsequently). Two broad import categories can be distinguished. The first category consists of products not subject to administrative controls or those whose imports are available to authorized operators, such as exporting firms. Imports of these products are permitted by an import certificate, obtained after presenting a commercial contract, domiciled with a commercial bank and copied to the Central Bank. A simplified procedure (admission temporaire) may be used by industries that export 15% or more of their output for imports of prohibited products (raw materials and semi-finished products used in their production). This procedure can also be used by enterprises exporting less than 15% of their output for imports not exceeding the value of their exports. All other imports, constituting the second category, require the authorization of the Ministry of Economy. Restricted imports, in turn, fall into three different categories: (i) annual import authorization, where import licenses for raw materials and semi-finished goods are issued to industrial enterprises at the beginning of the year for a global limit, expressed in dinars. Since 1984, firms can carry-over to the following year any unused portion of their import authorization. Swapping between items is also permitted. (ii) import cards, mostly for small operators to cover urgent

goods fell quite rapidly from 80% in 1987 to 48.3% in 1990. However, the inadequacy of this indicator as a monitoring tool of the liberalization process is well-known. First, a rise in the import coverage of non-tariff barriers may reflect a tightening rather than a relaxing of the import regime to the extent that import licenses are less generously granted. Second, and more crucially, the liberalization program involved mostly intermediate and capital goods, i.e., commodities with little or no domestically produced substitutes. Imports competing with domestic production were virtually excluded from the liberalization process. Quantitative restrictions, therefore, continued to offer substantial protection to domestic production.

**Table 1.3: QUANTITATIVE RESTRICTIONS ON IMPORTS**  
(Whole economy)

Year	Number of tariff positions			% Controlled
	Total	Free	Controlled	
1987	8376	1678	6698.0	80.0
1988	8376	2328	6048.0	72.2
1989	8376	3629	4747.0	56.7
1990	8376	4331	4045.0	48.3

1.08. As can be seen in Table 1.4, non-tariff barriers in 1987 covered 97.0% of total domestic output. In 1988, a large group of capital goods and some consumer goods were liberalized, reducing the percentage of production protected by QRs to 87.5%. A second phase of the adjustment program was initiated, which emphasized the elimination of QRs on import substitutes. Under this program, the percentage of freely importable goods, measured in production terms, was expected to be 75% by the end of 1991 (subsequently revised to end of 1992). The program, however, proceeded much more cautiously: at end-1990 the share of freely importable goods was only 28.1%, as compared to a target of 48.5% at that date.<sup>5</sup>

1.09. Several reasons explain the delay in the trade reform program. First, the reduction in the tariff rates implemented in 1987-88 in advance of

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needs amount to a limited sum each year; and (iii) general import licenses which are valid for six months.

5/ Comparisons with other developing countries reveal the importance of protection in Tunisia. For example, in Morocco the percentage of domestic production covered by quantitative restrictions fell from 21.5% in 1989 to 16.7% in 1990; in Indonesia, from 43% in 1986 to 29% in 1989; in Mexico, from 100% in 1984 to about 15% in 1990. Practically all QRs have been eliminated in Turkey and Poland.

the removal of quantitative restrictions made this removal more difficult. Second, there was strong opposition from enterprises in the highly protected import substituting industries. Third, a severe drought in 1988 and 1989, combined with a fall in private investment and rising unemployment led the authorities to slow down the process of liberalization for fear of aggravating these trends. This had a perverse effect on protection. The earlier liberalization of intermediate inputs, without the liberalization of the related finished products increased effective protection in many sectors of the economy. For example, the rate of effective protection of the manufacturing industries producing for the domestic market increased from 78% in 1988 to 87% in 1989.<sup>6</sup> Despite the Government's commitment to the continuation of the trade reform, industrialists have not yet been presented with a revised medium-term program of import liberalization. Without a credible program, which should include transitional measures to help viable firms to compete internationally, it is doubtful that significant trade liberalization would be achieved in the foreseeable future.

**Table 1.4: PERCENTAGE OF DOMESTIC PRODUCTION COVERED BY QRS  
By Sector**

	1987	1988	1989	1990
<b>Total Manufacturing</b>	96.6	94.0	85.6	68.4
- Food processing & Agro-industries	99.8	99.6	95.6	83.9
- Chemicals	94.4	93.7	90.2	50.9
- Textiles	98.5	97.8	93.6	90.5
- Electrical & Machin.	90.3	88.0	61.3	53.8
<b>Agriculture</b>	97.1	95.5	87.3	77.8
<b>Mining</b>	99.3	98.4	98.3	85.5
<b>Total Economy</b>	97.0	94.7	87.5	71.9

**Source:** Tariff positions included in the free lists are published in the Journal Officiel de la République Tunisienne. Weighting factors are based on 1984 domestic output data provided by the Institut National de la Statistique.

6/ See: IEQ: "La protection effective en 1989" and Annex I, Table 6.

### C. LIBERALIZATION AND EXTERNAL TRADE

1.10. Because of the limited size of its domestic market, it is imperative for Tunisia to rely on foreign trade. By most standards, Tunisia is indeed a fairly open economy. In 1989, the ratio of the sum of imports and exports to GDP, a basic indicator of openness, stood at 93.3, compared with 48.9 for Morocco, and 46.0 for Turkey. In 1970, the same indicator for Tunisia was equal to 48.5. However, the shift toward greater openness of the Tunisian economy has shown considerable fluctuations, with the openness indicator displaying a steady upward trend until 1980<sup>7</sup>, then declining until 1985 and exhibiting a strong recovery afterward.

1.11. The composition of Tunisia's trade, in particular of export flows, has undergone a radical change in the last few years and has mirrored, to some extent, the shift in the orientation of trade policies. Two main trends are noteworthy on the export side. First, because of falling oil prices and dwindling reserves, the share of oil in merchandise exports dropped to 20% in 1989, compared to almost 50% in the early eighties.<sup>8</sup> Second, within the non-oil exports subsector, the share of manufactured exports in non-oil merchandise exports increased from 73.4% in 1973 to 90.8% in 1989. By contrast, the share of agricultural exports fell from 17.1% to 8.1% over the same period.

1.12. On the import side, the structural changes were more modest. The dependence of Tunisia on both capital and intermediate goods imports remains high.<sup>9</sup> In fact, the share of imported inputs in total merchandise imports exhibited a weak upward trend during 1973-89. Capital goods imports fluctuated in a more pronounced way, mostly in response to domestic investment trends and the availability of foreign exchange. Finally, the share of non-food consumer imports showed a remarkable increase during the last few years. After oscillating around 17% until 1984, imports of other consumer goods appear to take an increasing share, almost 26% of total merchandise imports.

#### Trade Reform and Import Behavior

1.13. The experience of other countries demonstrates that import liberalization brings substantial microeconomic benefits to the economy by allowing a more efficient allocation of productive resources and a fuller

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7/ See Table 8 in Annex I.

8/ See Table 9 in Annex I.

9/ See Table 10 in Annex I.

exploitation of economies of scale.<sup>10</sup> The increased pressure of foreign competition helps limiting monopolistic practices and increasing productive efficiency of domestic producers. At the same time, the process of import liberalization may generate some short-term macroeconomic costs insofar as it may free pent-up demand for foreign goods and may lead to a deterioration in the current account. To assess the likelihood of such an outcome, it is essential to predict the evolution of import demand in the wake of the liberalization process, which, in turn, requires an estimate of the price and income elasticities of imports. However, to derive these estimates is a fairly complex task as the observed price and income elasticities are likely to have been distorted by the presence of QRs. In order to circumvent this obstacle, it is necessary to derive empirical estimates of price and income elasticities of imports using a model for which the impact of QRs is explicitly allowed.<sup>11</sup>

1.14. Import of consumer goods. Drawing on recent applications of rationing theory to import behavior<sup>12</sup>, a model of the import demand for consumer goods, described in Annex II, was estimated for Tunisia. It was found that expenditure levels, relative prices and quantitative restrictions were significant in explaining the evolution of import demand for consumer goods. In particular, the size of the import response to price and total expenditure appeared to be significantly affected by the existence of non-tariff barriers. In fact, it was estimated that a 1% increase in expenditure brings about a 2.7% increase in imports without QRs but only a 1.8% increase when QRs are present.<sup>13</sup> Similarly, a 1% decline in domestic prices (or, equivalently, a 1% depreciation

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10/ See, for example, Vittorio Corbo, Jaime de Melo and Jim Tybout, "The Effects of Trade Policy on Scale and Technical Efficiency: New Evidence from Chile", PRE Working Paper; and Ann Harrison, "Productivity, Imperfect Competition and Trade Liberalization in Côte d'Ivoire", PRE Working Papers n. 451.

11/ Note that an estimate of the underlying price elasticity of imports is also required, together with an estimate of the price elasticity of exports to evaluate the extent to which real exchange rate devaluation may offset the effect on the current account deficit of a removal of QRs.

12/ See Giuseppe Bertola and Riccardo Faini, "Import Demand and Non-Tariff Barriers: The Impact of Trade Liberalization. An application to Morocco", *Journal of Development Economics*, November 1990.

13/ These figures refer to 1989 and therefore reflect the degree of tightness of QRs in that year.

of the dinar) determines a decrease in imports of 0.52% and 0.62% respectively with or without QRs.<sup>14</sup>

1.15. These estimates can be used to simulate the impact of past trade policies, for example, the tightening of quantitative import restrictions in 1986 in response to the incipient balance of payments crisis. Had quantitative restrictions been left unchanged at their 1984 levels, imports of consumer goods would have increased by TD 50 million in 1985 and TD 61 million in 1986 with respect to their historical levels. The current account would have consequently deteriorated by .08% and 1% of GDP in 1985 and 1986 respectively. The impact of future policy options can also be simulated. It can be shown that, following the repeal of all quantitative controls on imported consumer goods, imports would increase on impact by TD 178.2 million, and in the long run, when all dynamic adjustments are completed, by TD 525.4 million. These figures represent respectively 16.7% and 49.3% of actual imports of consumer goods in 1989 or 2.1% and 6.2% of GDP in the short and long run respectively in that year. Thus, the macroeconomic repercussions of import liberalization would not be negligible. However, as discussed later, this could be dealt with by the appropriate management of exchange rate and tariff policies.

1.16. Imports of capital goods. While QRs are crucial in explaining the demand for consumer goods, their impact on the demand for capital goods is likely to be minor because a share of these is produced domestically (e.g., construction and some electrical machinery). In addition, a much lower percentage of capital goods, relative to the consumer goods, is subject to quantitative restrictions. Therefore, as detailed in Annex II, the demand for imports of capital goods was analyzed without taking into explicit consideration the effect of QRs. The empirical estimates suggest that capital goods are very sensitive to the behavior of relative prices and to investment demand. In the short run, an increase in domestic investment has a more than proportional impact on the demand for imported capital goods (the so-called accelerator effect), presumably because of short-run supply constraints by domestic producers which are not reflected into higher prices. However, in the long run the elasticity of capital goods with respect to domestic investment is equal to one. The above estimates can be used to interpret the evolution of capital goods imports between 1979 and 1989 (Table 1.5).

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14/ It is worth recalling that in a linear expenditure system, the size of the elasticities depends on the levels of income and prices at which they are being measured.

**Table 1.5: DETERMINANTS OF INVESTMENT GOODS IMPORTS**

Years	Import growth	Investment growth	Accelerator effects	Relative price	Regression residual
1978-82	46.7	25.0	1.0	4.1	16.5
1982-85	-45.9	-8.8	-17.5	-5.2	-14.3
1985-88	-37.4	-36.4	3.6	-12.4	7.7
1988-89	32.2	8.1	14.2	-0.8	10.8

Notes: The sum of the various determinants contribution plus the regression residual may not add up to actual import growth because of rounding errors.

Source: Mission estimates.

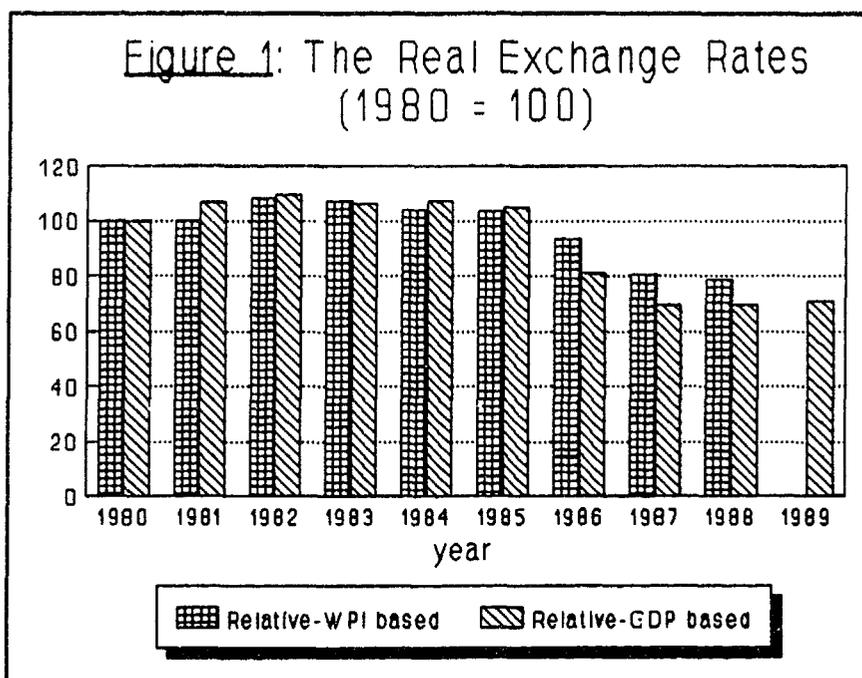
1.17. Throughout the period, the main factor affecting the demand for capital goods was the evolution of total investment demand, both in its permanent component and in its transitory component. Indeed, the swings in total investment demand explain from 55% to almost 90% (according to the sub-period considered) of the changes in imports of capital goods. The contribution of relative prices was more limited but not irrelevant, with the exception of the years 1985-87 when the fall in the domestic price of capital goods, relative to that of foreign goods, was responsible for one-third of the overall decline in imports of capital goods.

#### Export Growth and Exchange Rate Policies

1.18. Adjustment to external shocks can occur either through import compression or export expansion or a combination of both. Faced with declining oil revenues and stagnant export growth (less than 1.4% on an average annual basis from 1980 to 1986), Tunisia was forced to severely curtail import growth at the beginning of the eighties. In fact, real imports in 1986 were virtually at the level reached six years earlier. Over the same period, GDP growth declined to a mere 2.8%, barely sufficient to compensate for population growth. The period after 1986 witnessed a remarkable turnaround, as indicated by the performance of exports, which in the following three years achieved an average annual growth of 13.7%. The behavior of exports was mirrored in the evolution of both imports and GDP, which grew from 1986 to 1989 at average annual rates of 8.9% and 3.5% respectively.<sup>15</sup>

<sup>15/</sup> During 1987-89, the GDP growth was negatively affected by a severe drought that curtailed agricultural output.

1.19. Reforms in the trade regime contributed significantly to the promotion of export growth. It was not until the mid-eighties, however, that exchange rate policies played an important role in raising the competitiveness of Tunisian goods. The real effective exchange rate showed a weak appreciating trend until 1984 (Figure 1 and Table 12 in Annex I). Specifically, from 1980 to 1984, the real exchange rate appreciated by 4.3%, as measured by relative wholesale prices (or by 7.5%, as measured by relative GDP deflators).



1.20. Starting in 1986, the Government adopted a more flexible exchange rate policy. The nominal exchange rate was devalued by 10% in August 1986, which, together with the devaluation in 1985, translated into a real depreciation of almost 11% from 1984 to 1986 (with the GDP deflator-based index showing instead a 24.4% real depreciation). The real exchange rate registered a further real depreciation in 1987 and remained virtually unchanged until 1989.

1.21. The impact of real exchange rate variations on exports depends on many factors. In particular, manufactured exports appear to be much more responsive than primary goods to shifts in relative competitiveness levels. In Tunisia, with its structure of exports increasingly dominated by manufactured goods, export performance since 1985 has been remarkable. Manufactured exports, after recording a meager 6.4% growth rate during 1980-85, grew at an average annual rate of 17.3% from 1985 until 1989. However, the task of identifying the effect of real exchange rate variations is rendered difficult because other

factors, in particular the evolution of international demand for Tunisian exports, also contributed to determining the behavior of exports.

1.22. To disentangle the effects of the real exchange rate from the impact of fluctuations in world demand, it is useful to examine the changes in Tunisia's market share abroad (Table 1.6). In view of the geographical and commodity composition of Tunisia's exports, the analysis focusses on Tunisia's share in the EEC, the OECD, and in the French and German markets for agriculture, manufacturing and clothing products. It is difficult to discern a clear pattern for agricultural exports, whose performance is strongly affected by weather and other exogenous factors. By contrast, the pattern of manufactured exports, particularly of clothing, reveals a close correlation to the behavior of the real exchange rate. In most cases, Tunisia's market share shows a declining trend until 1985, followed by a sustained recovery in 1986, after the exchange rate policy made exporting more profitable.

**Table 1.6: SHARES OF TUNISIAN EXPORTS IN IMPORTS OF MAJOR TRADING PARTNERS**

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
EEC 10	0.43	0.45	0.37	0.40	0.36	0.35	0.37	0.41	0.38	0.42
Agriculture	0.27	0.35	0.25	0.32	0.34	0.33	0.35	0.43	0.46	0.44
Manufactur.	0.39	0.41	0.45	0.44	0.35	0.34	0.36	0.37	0.37	0.41
Clothing (84)	3.31	3.24	3.63	3.74	3.13	2.99	3.11	2.85	3.34	3.81
FRANCE	0.26	0.37	0.33	0.43	0.36	0.40	0.32	0.30	0.35	0.38
Agriculture	0.38	0.52	0.46	0.50	0.45	0.40	0.38	0.32	0.30	0.27
Manufactur.	0.27	0.30	0.33	0.34	0.29	0.30	0.32	0.31	0.32	0.38
Clothing	3.50	3.72	3.85	4.01	3.58	3.37	3.55	3.28	3.61	4.34
GERMANY	0.15	0.13	0.13	0.14	0.11	0.11	0.14	0.19	0.14	0.14
Agriculture	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.03	0.02	0.02
Manufactur.	0.18	0.18	0.19	0.21	0.18	0.14	0.16	0.17	0.18	0.17
Clothing	1.57	1.58	1.76	1.95	1.65	1.38	1.33	1.31	1.52	1.67
OECD	0.14	0.16	0.14	0.13	0.11	0.10	0.09	0.10	0.09	0.10
Agriculture	0.09	0.11	0.08	0.09	0.09	0.09	0.09	0.12	0.12	0.11
Manufactur.	0.09	0.08	0.09	0.09	0.07	0.06	0.07	0.08	0.08	0.09
Clothing	0.96	0.92	0.97	0.95	0.72	0.66	0.75	0.75	0.85	0.91

Source: Comtrade data.

1.23. The pattern of Tunisia's penetration in foreign markets can be compared to that of other developing countries. It is often argued that the competitiveness of Tunisian goods with respect to other developing countries represents an important factor in the country's export performance. This effect, however, is not well captured in traditional measures of the real exchange rate which tend to give a disproportionate weight to industrial countries. Turkey

and Morocco (and, presumably to a lesser extent, Greece) are traditional competitors for Tunisia.

**Table 1.7: BILATERAL REAL EXCHANGE RATES (a)**  
(relative wholesale prices)

Year	Turkey	Morocco	Greece	Average
1979	68.53	85.00	101.53	83.77
1980	88.81	88.21	101.29	92.54
1981	87.71	90.97	96.34	91.56
1982	100.13	92.36	97.95	96.79
1983	99.72	94.27	99.99	97.97
1984	100.91	96.18	98.70	98.60
1985	100.00	100.00	100.00	100.00
1986	110.83	92.87	95.55	99.56
1987	104.89	83.01	83.26	89.97
1988	106.29	80.39	82.04	88.99
1989	90.76	77.66	80.37	82.82

(a) An increase indicates an appreciation of the TD.

Source: Mission calculations.

1.24. As indicated in Table 1.7, the competitiveness of Tunisian goods relative to Turkey and Morocco fell quite markedly from 1980 to 1985. Both these countries undertook significant adjustment measures, including a pronounced real depreciation, much earlier than Tunisia. The falling competitiveness with respect to Turkey and Morocco provides a plausible explanation for the loss in market shares that Tunisia suffered during 1980-85. The latter could hardly be attributed exclusively to the behavior of competitiveness relative to industrial countries which, as indicated by the traditional measure of the real exchange rate (Figure 1), registered only modest changes during those years. Finally, since at least 1986, Tunisia has maintained and somewhat improved its competitiveness with respect also to its competitors in the developing countries, particularly Morocco and Greece. This is reflected in the recovery of its market shares abroad. The paramount role of real exchange considerations is confirmed by examining the evolution of market shares of Turkey and Morocco. Both countries registered significant gains in their market penetration abroad, with Turkey showing both a larger depreciation and significant gains.<sup>16</sup>

#### Export Behavior

1.25. Econometric analysis was used to disentangle the effects on export performance of world demand and real exchange rate variations (with respect to competitors in both developing and developed countries). The empirical analysis

<sup>16/</sup> See "Morocco 2000. An open and competitive economy", Trade Expansion Program, UNDP - World Bank, 1990.

focussed on manufactured exports. It was noted that the evolution of international demand has exerted an important effect on the behavior of Tunisia's manufactured exports; on average a 1% increase in international demand brought about, *ceteris paribus*, a 6.1% increase in exports. Relative prices have also played an important role in affecting export performances. Exports appear to have been very sensitive to the level of competitiveness with respect to other developing countries (the corresponding price elasticity was estimated to be equal to 1.71). More limited, and indeed statistically insignificant was the effect of price competitiveness with respect to industrial countries. Overall, these estimates support the idea that the real exchange rate had a significant influence on manufactured exports. They also infer that exports compete quite fiercely with products from other developing countries. Therefore, in monitoring the evolution of the real exchange rate, particular attention should be devoted to the behavior of competitiveness in developing countries.

1.26. The contribution of the different demand factors to the growth of manufactured exports is shown in Table 1.8.

Years	Export growth	World demand	Relative price	Regression residual
1980-82	13.2	15.4	-7.7	5.5
1982-84	5.4	11.0	-3.2	-2.4
1984-86	23.1	25.7	-1.6	0.9
1986-89	63.1	49.5	31.5	-18.0

Notes: The sum of the various determinants contribution plus the regression residual may not add up to actual export growth because of rounding errors.

Source: Mission calculations.

The first column reports the actual rate of growth of manufactured exports over the relevant period. The next two columns indicate by how much foreign demand growth and changes in competitiveness with respect to other developing countries contributed to export growth. The last column shows the regression residual. The results underscore the prominent role of competitiveness effects. From 1980 to 1984, declining competitiveness had a stifling effect on export growth. If competitiveness with other developing countries had remained unchanged, the growth rate of exports would have been 7.7% higher between 1980 and 1982 and 3.2% higher in the following two years. The loss of competitiveness also explains why, after 1984, Tunisian exports were only partly able to benefit from the strong recovery in world demand. Conversely, since 1986, more than 50% of export growth is explained by the behavior of the real exchange rate, highlighting the crucial role that more flexible exchange rate policies played in promoting export growth.

### Implications of Accelerating the Trade Reform

1.27. To evaluate the macroeconomic repercussions of import liberalization, a small econometric model of Tunisia's external trade sector was constructed. The model consisted of three behavioral equations which described the determinants of exports of manufactures and imports of capital and consumer goods, and one trade balance identity. As a first approximation, it is assumed that all other items in the current account do not respond to price variations. This assumption, albeit unrealistic, allows one to put an upper limit on the need for a compensatory depreciation in the wake of a further liberalization of imports. Clearly, if other items, such as tourist receipts or intermediate imports, also respond to changes in relative prices, the required real depreciation will be smaller. In all the simulations, exogenous variables in the import equations, such as domestic investment and private consumption, were assumed to grow at an average annual rate of 5% until 1992. International demand was posited to grow at an annual rate of 1%.

1.28. The impact of the liberalization of consumer goods imports was examined earlier. Under the assumption of a quasi complete repeal of quantitative restrictions in 1990, with only 5% of tariff lines still subject to QRs, the model predicts that imports would have increased by TD 221.3 million.<sup>17</sup> After two years, and with unchanged trade policies, imports would grow by TD 497.3 million with respect to the base scenario. Compensatory exchange rate policies could be relied upon to achieve the objective of an unchanged resource balance.<sup>18</sup> Indicatively, if QRs had been repealed, the real exchange rate would have needed to be depreciated by 7.2% in 1990 and by a further 4% in the following year to keep the current account from deteriorating. Import tariffs could also be increased to offset the current account impact of import liberalization. If the tariff rate on imports of both consumer and investment goods were increased by 10%, the required real depreciation (for current account purposes) would have declined to 3.2% in 1990 and to 3.8% in 1991. Overall, whereas the current account impact of trade liberalization is likely to be substantial, strong responses of both import and export flows to changes in relative prices imply that only relatively modest adjustments in the exchange rate would be required to avoid a deterioration in the current account.

### D. CONCLUSIONS

1.29. Trade policies have undergone a significant shift during the eighties. The process has accelerated since 1986. The objectives of the new

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17/ See Annex I, Table 13.

18/ In a more complete model the real exchange rate should be an endogenous variable. The following results, therefore, should be considered as mostly indicative. They, nonetheless, suggest some order of magnitude for compensatory policies.

policy reforms have been to reduce the export bias and enhance the efficiency of firms catering to the domestic market. A crucial role in this context has been the progressive opening up of domestic markets to foreign imports. The recent performance of the Tunisian economy, in particular the substantial export response to changing incentives, underscores its long-run growth potential and indicates the need to persevere on the road to structural reforms.

1.30. A snapshot of Tunisia's trade policy today reveals two main features: on the one hand, domestic producers still enjoy a significant level of protection. The rate of nominal protection remains high and its dispersion across sectors is considerable. Similarly, despite the import liberalization measures adopted by the authorities since 1986, more than 70% of domestic production continues to enjoy quantitative protection from foreign competition.

1.31. On the other hand, exporters have been insulated from the negative impact of policies aimed at protecting domestic markets by receiving generous fiscal and financial incentives and free access to imported inputs. These policies have generated a deep-rooted dualism within Tunisia's industrial sector between firms competing in foreign markets, forced to achieve adequate levels of efficiency, and firms catering to the domestic market which are still substantially shielded from the pressure of international competition. The lack of integration between exporting and other firms is particularly revealing. According to a recent study<sup>19</sup>, more than 90% of the inputs purchased by exporting firms are from sources outside Tunisia, despite the existence of several provisions giving incentives to indirect exporters (i.e., domestic firms supplying exporting firms). For example, indirect exporters benefit, on a pro-rata basis, both from a corporate tax exemption and a duty drawback procedure on inputs purchased abroad. Under these circumstances, the lack of integration between exporting and other firms must be predicated on the sizeable level of protection which is still granted to firms producing for the domestic market. By increasing the profitability of domestic sales, trade policy limits the incentive for domestic producers to supply exporting firms. Furthermore, lasting protection is bound to have an adverse impact on the quality of domestic inputs, therefore encouraging exporting firms to locate their input sources abroad.

1.32. In light of the delays experienced during the last two years, it is crucial that the Government accelerate the import liberalization program. This would improve the allocation of resources in production; enhance the welfare of consumers, as domestic prices on consumer goods become closer to international prices; eliminate the indirect costs associated with the management of import controls and the special exemption schemes allowed to exporters; and accelerate the process of structural integration within the industrial sector. It would also allow, in a medium-term perspective when the anti-export bias is eliminated, a reduction in the size of the fiscal incentives granted to exporters. This change would have a beneficial effect on the Treasury accounts and, consequently, also on macroeconomic stability. The experience of other countries, like Turkey

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<sup>19/</sup> See World Bank (1990) "Tunisia - Industrial sector note", February 1990.

and Morocco, suggests indeed that the range and size of fiscal exemptions can be restricted after the new trade regime has been consolidated.

1.33. The elimination of quantitative restrictions would entail some costs. First, as suggested by our econometric estimates, a deterioration of the current account should be expected. However, the high sensitivity of both imports and exports to changes in relative prices also indicates that a careful management of the exchange rate should be sufficient to avoid large negative effects on trade flows. If, in addition, import tariffs on the liberalized goods were raised, the total effect of the elimination of the QRs on the current account could be virtually offset. Second, adjustment costs, especially in terms of unemployment are likely to be felt by domestic firms. Whereas export growth would eventually provide a substantial contribution to employment absorption, the need remains, in the short-run, to devise accompanying measures to cushion domestic agents from the costs of adjusting to the new trade regime. These measures should be of a temporary nature, to allow the elimination of quantitative restrictions, and be designed with a view to enhancing the long-run credibility of the reform process. A popular method of liberalizing quantitative restrictions<sup>20</sup> consists in converting the licensing system to a tariff system that initially is equally restrictive and then gradually lowering the tariff rate to allow an expansion of imports. Practically this would entail calculating the difference between domestic and world prices before the removal of quantitative restrictions. Temporary tariff surcharges could then be imposed on products for which domestic prices exceed international prices by more than the amount of the existing tariff. The surcharges could subsequently be eliminated according to a well-prepared and publicized time schedule. Following the elimination of quantitative restrictions, the Government should continue the tariff reform, by making tariff rates lower and less dispersed. By reducing distortions in relative prices, a lower and more uniform nominal protection will allow the whole economy to fully benefit from the effects of a more open and competitive environment.

1.34. In the near future, trade policy in Tunisia should focus on import liberalization. This would be in contrast to the past tendency of increasing the range and the size of incentives to exporters to counterbalance the protection granted to producers for the domestic market. However, some measures could be taken to improve administrative and customs procedures for exports. In particular, it would be advisable:

- (a) To eliminate the obligation by partly exporting firms to post a bond as a guarantee for unpaid customs duties on imported inputs for their export activities. The required bond is now equal to 5% of the value of imported inputs. It represents a non-negligible burden on the financial operations of exporting firms.

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20/ See Takacs W. (1990) "Options for Dismantling Trade Restrictions in Developing Countries", The World Bank Research Observer, Vol. 5, No. 1.

the value of imported inputs. It represents a non-negligible burden on the financial operations of exporting firms.

- (b) To extend temporary admission procedures to indirect exporters. Present regulations allow exporting firms to rely on a duty drawback procedure, where a refund is claimed for the customs duties paid by indirect exporters. Complex documentation is required to support this claim. This cumbersome procedure discourages exporting firms from relying on domestic firms as a source of intermediate inputs.
- (c) To encourage fully exporting firms, established under Law 72-56, to sell part of their output on the domestic market. This measure would introduce some competition between goods produced for the domestic market and those for exports, typically of higher quality. Thus, it would promote the integration within the industrial sector.

## II. FISCAL INCENTIVES FOR INVESTMENTS AND EXPORTS

### A. INTRODUCTION

2.01. The guiding principle of Tunisian industrial policy since Independence has been the promotion of economic growth and private initiative. The first legislative Act granting tax incentives to emerging industries dates back to the "Lettre d'Etablissement" of 1946. The introduction of the Industrial Investment Code in 1969, was followed by the promulgation of several other codes and promotional laws. Government support of economic activities was justified on both economic and political grounds to: promote export firms; compete better in international markets; achieve self-sufficiency in certain sectors, notably agriculture; achieve regional balance and assist employment growth; and attract foreign investors by offering at least the same incentives as those of competing countries. Fiscal and financial benefits were progressively extended to most activities of the economy, including agriculture, industry, tourism and services.

2.02. The recent reform of the personal and corporate income tax systems, which aimed at introducing greater administrative simplicity, economic neutrality and equity, did not include a revision of the existing incentive legislation. Moreover, by creating a more neutral incentive structure, the reform questions whether the selective and sectoral interventions provided in the Investment Codes should be maintained. The analysis of this incentive structure is the focus of this chapter. Section B discusses aspects of the recent tax reform, in particular the new corporate tax law, and provides quantitative estimates of the net impact of taxation on marginal decisions to undertake investment. Section C compares the Tunisian basic tax structure (excluding the incentives contained in the Investment Codes) with that of the OECD countries. Section D discusses the provisions of the Investment Codes and assesses if they can improve the incentive to invest in the targeted activities and regions. Finally, Section E summarizes the main findings and gives recommendations.

### B. RECENT TAX REFORM

2.03. The tax reform program, initiated recently by the Tunisian Government, included the introduction of a value added tax (VAT) in 1988 and the reform of both the personal and the corporate tax systems in 1990.<sup>21</sup> The VAT, which replaced three turnover taxes and various excise taxes, introduced an average rate of 17%, a reduced rate on basic consumption goods of 6%, and a higher rate of 29% on luxuries. The unified personal income tax has replaced

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21/ The Tunisian tax system is described in Annex III.

various existing taxes. It is based on a broader definition of income, most indemnities and exemptions being eliminated, and it has reduced the previous 68% maximum rate and its 18 tax brackets to a top rate of 35% and 6 tax brackets. The new corporate income tax has streamlined the previous 6 rates and a top rate of 44% into two rates: 10% for agricultural, fishing and handicraft sectors, and 35% for all other sectors.

2.04. Interest in tax reform has stemmed not only from a desire for fiscal neutrality and administrative simplicity but also from a growing concern over the distortions in the allocation of resources produced by the previous tax system. Thus, the reform has paid considerable attention to the tax-induced incentives to save and invest. It has aimed at achieving a greater neutrality among different sources of corporate finance, and it has eliminated the double taxation of dividends that previously existed. Corporate income is now taxed once at source, while dividends are tax-free for shareholders.

#### Calculating Tax Wedges

2.05. Several questions arise in considering the system of corporate taxation and fiscal incentives in Tunisia. Does the tax system encourage or discourage investments? How does it compare with the tax and incentive framework of other countries? Are investment incentives successful in allocating aggregate investment among the priority activities and sectors of the economy? The answers to these questions require an analysis of the effects of taxation on the decision to undertake new investment projects. Easily computable and frequently used measures of tax pressure, such as the average tax rate (the ratio of tax paid to profit) are unsatisfactory for this purpose. In fact, average tax rates crucially depend on the history of the company and on the age of the capital stock and, therefore, give a misleading indication of the effects of taxation on new investment decisions.

2.06. Standard investment theory predicts that a company would undertake all investment projects which break even; that is, all projects offering a rate of return which, after payment of taxes, is at least equal to the market real interest rate (the rate that can be earned by potential suppliers of finance on alternative assets, for example Treasury bills). The difference between that rate of return and the after-tax real market rate, namely the "tax wedge", is therefore a measure of the incentive to undertake an additional investment at the margin. The framework adopted here for measuring the tax wedge is based on the commonly used King-Fullerton model, adapted to include the particular features of the Tunisian tax system.<sup>22</sup>

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22/ A formal treatment of the King-Fullerton model is given in Annex IV which also describes the manner in which the various provisions of the investment codes were modelled. The King-Fullerton methodology has the advantage of summarizing and quantifying the essential features of the tax system in a relatively simple manner. Internationally, it is also the most familiar framework for comparing tax systems. It has, however, very important limitations. For example, it considers only a limited number of assets

2.07. For purposes of practical calculations, the King-Fullerton model assumes a particular value of the real market interest rate.<sup>23</sup> We chose 5%; then, we calculated the pre-tax rate of return which a firm must earn on an investment project for savers to be paid at least a 5% real market rate. This pre-tax rate is conventionally called the cost of capital. The market interest rate will also represent the post-personal tax return for those domestic savers who are exempt from personal tax, and for foreign savers. These two rates will generally differ for those savers liable to pay personal taxes. Thus, estimates of a total tax wedge have been provided, calculated as the difference between the cost of capital and the post personal tax rate received by savers.

2.08. Estimates of the cost of capital required to earn a 5% return are shown in Table 2.1. Only the basic features of the tax system (a 35% corporate tax rate, and no investment incentives<sup>24</sup>) and the 7.4% inflation rate prevailing in 1989 have been taken into account. Investment projects in buildings, machinery and inventories were considered as financed by retained earnings, equity and debt. Averages were calculated by applying weights which reflected

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and finance types. More fundamentally, current investment decisions are assumed to be made on the basis of the current tax system and the current inflation rate, while they depend on future returns, inflation rates and tax parameters. Thus, the King-Fullerton methodology correctly represents business investment decisions only if the current values of inflation and tax parameters are an unbiased indicator of the future values.

23/ The methodology is a partial equilibrium analysis so one rate of return must be taken as fixed. In a general equilibrium framework, adjustments to tax rate differentials would determine all rates of return endogenously.

24/ The basic provisions modelled in Table 2.1 are a corporate tax rate of 35%, and no personal taxation. Stocks are valued under the "First-In/First-Out" (FIFO) system. Depreciation is based on the straight line method. The rates of depreciation are those allowed by the law, 15% on machinery, 5% on buildings, as compared to "real" economic depreciation rates conventionally thought to be 12.25% for machinery and 3.6% for industrial buildings (See Hulten, C.R. and Wykoff, F.C. 1981 "The Measurement of Economic Depreciation" in C.R. Hulten (eds), Depreciation, Inflation and the Taxation of Income from Capital, Washington, D.C., Urban Institute). It is assumed that all inputs are locally produced and no investment incentives are given.

current investment and financing patterns.<sup>25</sup> The overall marginal tax rate represents an equi-proportional increase in all investments and savings. The standard deviation (in parenthesis) indicates the degree of dispersion among the returns on different assets and types of finance.

**Table 2.1: PRE-TAX RATES OF RETURN WITH 7.4% INFLATION AND ZERO PERSONAL TAX**

	Buildings	Machinery	Stocks	Average*
Retained earnings/ new equity	7.92	7.97	11.68	8.69
Debt	1.82	2.23	5.00	2.57
Average	3.89	4.18	7.26	5.67 (3.35)

\* Overall unweighted standard deviation of the cost of capital in parenthesis.

2.09. A neutral tax system would require the rates in Table 2.1 to be equal to 5%, the real interest rate, for all assets and finance types. Neutrality implies that the tax system does not distort the choice and the ranking of investment projects and does not discriminate between sources of finance. The overall average (5.67%) suggests that the Tunisian tax system is fairly neutral and does not discourage investment. The tax wedge, indicating whether taxation creates a disincentive to invest, is only 0.67 percentage points. The tax wedge can be expressed as a percentage of the before-tax rate-of-return, giving a "marginal effective tax rate" which, in this case, is about 12%. Thus, the combination of tax parameters, inflation rate, and depreciation rules existing at the end of the 80s has resulted in an effective rate of taxation on the

25/ The weights used for the different assets are: stocks 20%, building 52% and equipment 28%; and for the different finance types, debt 66.1%, new equity 5.6% and retentions 28.3%. The weights for the sources of finance have been derived from flow of funds data (World Bank, Country Economic Memorandum, Report No. 8044-TUN, Volume IV, Annex 3, 1990, pp. 66-67). As far as the weights for the different assets are concerned the Annexe Statistique au Rapport sur le Budget Economique 1990 reports that the ratio of construction investment to investment in equipment is nearly 2:1 and the National Accounts (1988) shows that fixed capital formation accounts for around 80% of total investment. The proportions imply that 20% of investment are in stocks, 52% in buildings, and the remainder in equipment.

marginal investment of 12%, as compared to a statutory rate of corporate taxation of 35%.

2.10. Overall, however, the high standard deviation indicates that there is a wide divergence between required rates of return on projects in different assets and finance types. For example, investment in buildings is favored over investment in stocks or in machinery<sup>26</sup>, and investment in stocks financed by retained earnings and equity is discouraged. Debt is favored over other forms of finance because interest is deductible from the corporate tax base. This tax benefit is of particular importance during inflation periods<sup>27</sup> when it may drastically reduce the cost of capital financed with debt. Inflation, however, results in the creation of inventory profits and, therefore, increases the tax burden of firms. This is because in the calculation of the taxable income, raw materials, work in progress, and stocks are evaluated at the original purchase cost. Thus, when prices rise, recorded profits will be higher since the acquisition inventory cost is charged against the current value of sales.<sup>28</sup> Finally, inflation has the effect of reducing the real value of depreciation allowances. A neutral depreciation system would allow assets to be depreciated, for tax purposes, at rates as close as possible to the true rates of economic depreciation. However, economic depreciation is very difficult to measure accurately. Thus, most countries, including Tunisia, rely on a fictitious "tax life" of the asset and on mechanical rules of depreciation. The so-called "straight line" method used in Tunisia, whereby equal depreciation allowances are given over a number of years,<sup>29</sup> is vulnerable to inflation. An alternative "declining balance" method, where the allowance is larger in the initial year

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26/ The estimates of the assets are subject to caution as they depend on the true economic depreciation rates which cannot be known for any particular investment.

27/ As nominal interest rates rise with inflation, the tax burden to the firms is decreased. The effect of inflation on the cost of capital can be seen by comparing Table 2.1 with Table 14 in Annex I, calculated assuming a zero inflation rate.

28/ Alternatively, some countries allow firms to evaluate stocks at replacement cost, thus eliminating the creation of inventory profits during inflation. However, in order to make up for past inflation, the Tunisian tax law allows enterprises to periodically reevaluate certain qualifying assets. After revaluation, depreciation is computed based on the revalued amount. The revaluation gain is treated as a special component of capital reserve.

29/ Exceptions are allowed. The new income tax law permits accelerated depreciation for some equipment goods, computers and agricultural assets. Depreciation rates higher than normal are allowed to firms operating on a 16 or 24 hours per day cycle.

and gradually diminishes in subsequent years, may be preferable. It offsets the effects of inflation (when the asset starts its economic life), and it is generally preferred by risk-averse companies in cases where the economic life of the asset may be difficult to ascertain.

### C. INTERNATIONAL COMPARISONS

2.11. Tables 2.2 and 2.3 provide estimates of the tax wedge, relative to a 5% real interest rate, in Tunisia, Morocco, and selected OECD countries. The figures in Table 2.2 are calculated using the average weights throughout the OECD<sup>30</sup>, the average inflation rate of 5.2% prevailing in 1989, and zero personal taxation. In this table, therefore, it is possible to compare the structure of the corporate tax system among the different countries eliminating all non corporate tax effects on the required returns, such as personal taxes and differences in the inflation rate.

**Table 2.2: TAX WEDGES**  
**ZERO PERSONAL TAX RATES, 5.2% INFLATION, AVERAGE WEIGHTS**

Country	Buildings	Machinery	Stocks	Retain. Earn.	Equity	Debt	Average
France	-0.5	-1.2	2.6	3.4	-1.4	-2.2	0.1
Germany	-0.8	-1.3	6.5	9.3	-2.7	-3.8	1.0
Greece	-0.6	-0.7	-0.1	2.4	2.4	-3.3	-0.5
Italy	0.2	-0.4	-1.1	4.4	-3.4	-3.4	-0.4
Morocco	0.05	-1.3	3.8	3.9	3.9	-2.6	0.5
Portugal	0.0	-0.6	-0.2	2.7	2.7	-3.2	-0.3
Spain	0.4	0.6	2.8	3.9	3.9	-1.5	1.2
Tunisia	0.05	0.1	2.6	3.4	3.4	-1.6	0.8
Turkey	0.1	-0.3	4.8	5.4	5.4	-2.7	1.3
UK	-0.1	-0.6	2.3	3.2	-0.3	-1.7	0.4
USA	0.54	-0.9	-0.1	2.5	2.5	-2.9	-0.2

Table 2.3 introduces the effects of personal taxation. The top rate of personal tax in each country is applied. Moreover, the weights given to each asset and finance type and the inflation rate are those of each country. This Table, therefore, gives the total tax wedge for projects financed by investors that pay

<sup>30/</sup> Average OECD weights are as follows: machinery, 0.41; buildings, 0.31; stocks, 0.28; debt, 0.52; new equity, 0.10; retained earnings, 0.38.

the highest rate of personal tax and in circumstances which reflect local investment conditions.

**Table 2.3: TAX WEDGES**  
**TOP RATE OF PERSONAL TAXES, COUNTRY SPECIFIC INFLATION, COUNTRY SPECIFIC WEIGHTS**

Country	Buildings	Machinery	Stocks	Retain. Earn.	Equity	Debt	Average
France	1.8	1.0	4.1	3.3	7.2	0.8	2.4
Germany	1.1	1.0	5.3	2.7	2.7	1.8	2.2
Greece	1.9	2.8	-0.2	-0.5	8.9	2.0	1.7
Italy	1.2	1.3	-0.5	2.3	3.3	-0.8	0.8
Morocco	1.7	1.0	3.9	1.1	6.9	1.9	1.7
Portugal	0.2	0.3	-1.3	2.1	6.9	-3.3	-0.2
Spain	4.0	4.6	7.0	4.3	9.2	4.9	5.1
Tunisia	1.1	1.6	4.3	1.9	1.9	1.9	1.9
Turkey	-19.5	-11.7	45.2	35.9	35.0	-30.7	1.7
UK	2.8	2.7	6.0	3.7	4.1	2.5	3.4
USA	2.5	1.4	1.8	3.7	5.9	1.0	1.8

2.12. Taken individually and jointly, the figures in the two tables suggest that tax parameters in Tunisia are in line with those of most OECD countries. Indeed, the total tax wedge in Table 2.3 is closer to zero, which indicates that in Tunisia the tax system is more neutral than that in Germany, the UK or France. Table 2.2 shows that in all countries, the deductibility of nominal interest payments from corporate tax reduces the marginal tax rate on investments financed with debt. Thus, in the absence of personal taxes, debt is the most tax efficient source of finance. This is especially so in countries with high inflation rates, such as Turkey (73.3%) and Portugal (12.7%). As nominal interest rates rise with inflation, interest payment deductibility increases. In these circumstances, the tax wedge on investments financed by debt may even become negative indicating that these investments are not taxed but subsidized. Inflation, however, as suggested by the values of the total tax wedge in Turkey, exacerbates the distortions in asset and finance types. Stocks are discriminated against in Tunisia and Germany because they are evaluated, for tax purposes, at acquisition cost. For example, in Germany the tax wedge is 5.3 (see Table 2.3) in spite of an inflation rate of 3.3%. In comparison, the relatively high inflation rate in Greece (13.8%) does not affect the tax wedge because inventories are evaluated at replacement cost (which reduces current taxes by eliminating inventory profits).

2.13. Most countries discriminate among different sources of finance. The tendency for debt to be preferred (see Table 2.2) is reversed in those countries

(see Table 2.3) where the taxation of dividends and capital gains is lower than the taxation on interest income. Table 2.3 also suggests that when the marginal finance for an investment project is provided by a top rate taxpayer, the tax system in Tunisia is neutral regarding the source of finance. This occurs because interest payments are assumed to be taxed at the personal level with a 35% rate: the same rate at which dividends are taxed at the corporate level. Thus, all returns to the suppliers of capital, whether in the form of dividends, capital gains or interest, are taxed in the same way.

#### D. INVESTMENT INCENTIVES

2.14. The present Tunisian incentive framework includes several Investment Codes.<sup>31</sup> They are primarily aimed at encouraging investments in the industrial, tourism, agricultural, fishing, and trading sectors although they also promote "horizontal", non-sectoral objectives, such as export growth and regional balance. The revision in 1987 of the most important Code, the Industrial Investment Code, represented an initial step towards the gradual disengagement of the State in the economy. The Code has abolished the requirement of prior approval from the Investment Promotion Agency (API), previously needed for all investments. Prior approval has been maintained only for those investments seeking incentives, and the procedures for obtaining these incentives have been simplified. During 1988-90, some of the Codes (for example, agriculture and tourism) were revised along the lines of the Industrial Code. In addition, the Code for Service Activities was introduced and the Artisan Code was prepared. The Codes contain numerous provisions which can be broadly classified into two categories: (a) fiscal incentives: partial or permanent exemption from payment of registration duties and income tax; preferential tax treatment of income from exports; partial or total exemption from tax of reinvested profits; suspension or repayment of VAT and customs duties; and (b) financial incentives: interest rate subsidies, direct capital grants, assumption by the State of expenditure on preliminary studies, infrastructure costs and, in some disadvantaged areas, of up to 100% of the investment costs.

2.15. As in the previous sections, we are concerned with the relationship between tax provisions and firms' investment decisions.<sup>32</sup> Specifically, the

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31/ In this Chapter the five major Investment Codes are considered: the Industrial Code (Law No. 37-51), the Agriculture and Fishery Code (Law No. 88-18), the Tourism Code (Law No. 90-21), and the Code for Service Activities (Law No. 89-100) and for investments made by International Trading Companies (Law No. 88-110).

32/ A further question, not investigated in this report, concerns the effect of incentives on the demand and supply of labor. Labor taxation includes the income tax, employers and employees social security contributions and payroll taxes (see Annex III). Preliminary research indicates that for the economy as a whole the marginal effective tax wedge, i.e., the difference between the gross labor costs to the employer and the after tax

King-Fullerton methodology was applied to investigate whether the incentives of the Codes resulted in a lower cost of capital for the targeted investments. Given the number and complexity of these incentives, only the most important were analyzed: exemptions from payment of income tax and import duties; tax exemption on reinvested profits; and interest rate subsidies. Empirical results are reported in Table 2.4 and in Tables 14-17 of Annex I. Table 2.4 shows the rate of return (or cost of capital) required for a firm to provide a potential saver with a return of 5%. A cost of capital of 5% would indicate perfect neutrality of the tax system. A value below 5% would indicate that the investment is being subsidized, rather than taxed, through the incentive system.

2.16. The following implications can be drawn from the estimates in Table 2.4. The tax system, by definition, is neutral for wholly export-oriented industries under both the Industrial and the Services Codes, because investors are exempt from paying taxes. The most generous Code is the Agriculture and Fishery Code. The combination of a reduced corporate tax rate (10%), tax holidays, interest rate rebates, and grants can lower the cost of capital for all combinations of finance and asset types. Indeed, the "redundancy" of incentives produces a negative cost of capital for marginal investments financed with debt (the same happens for investments in decentralized areas under the Tourism Code). The incentives given in the Services Investment Code are the same as those given under the Industrial Code.

2.17. Debt is highly favored over all other sources of finance. In addition to the tax deductibility of interest payments, debt financed investments enjoy financial incentives (in the form of interest rate subsidies) under both the Agriculture and the Tourism Codes. Financial incentives significantly reduce the cost of using debt finance and increase the variation in the rates of return

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wage available for consumption to the employee is 50%; this implies that 50% of the cost to the employer of taking on a worker is represented by payments to the Government in the form of taxes. The Investment Codes may reduce this wedge. Exemption from the payroll taxes (granted to wholly-exporting firms) reduces the tax wedge to 0.46. If the investment were located in the decentralized zone, the employer would need to pay no social security contributions and the resultant wedge would be 0.37. The marginal tax wedge is clearly important as a determinant of labor supply. A high wedge will discourage work effort and employment, *ceteris paribus*. Compared to the results reported by McKee, Visser and Saunders ("Marginal tax rates on the use of labor and capital in OECD countries", 1987), Tunisia does not impose a particularly heavy tax burden on labor. For example, the marginal wedge in Sweden and the Netherlands in 1983 exceeded 70%; and figures in excess of those for Tunisia were recorded in two thirds of the countries covered in the study.

between different assets.<sup>33</sup> A further incentive given to debt finance consists of personal taxes being exempt from the interest income received from investments in wholly exporting industries (in the Industrial and Services Codes). This benefit, which is clearly relevant to suppliers of capital facing a positive rate of personal tax, contributes to increasing the bias towards debt financing.

2.18. Exemption from payment of corporate tax and import duties is granted in all codes to exporting firms, pro-rated to the output exported. In some cases (i.e., investments in decentralized areas in the Industrial Code, in agriculture and fishing activities, hotel construction and investments in the Sahara in the Tourism Code), these exemptions are given in the form of a tax holiday for 5 to 10-year periods. Tax holidays are controversial incentives and, as shown in Table 2.4, they may even raise the cost of capital. This is because Tunisian firms are required to depreciate their assets for tax purposes during the same period as the tax holiday. When the holiday is over, firms have few undepreciated assets left, and they must pay taxes on income generated by investments undertaken during that period. For example, investments made by firms in decentralized areas (benefitting from the Industrial Code) enjoy a reduced corporate tax rate of 10% for seven years. Thus, depreciation allowances must be made against the 10% corporate tax rate, instead of the 35% rate the firm would normally face. However, if the assets continue to generate a return after seven years, that return would be taxed at the full rate of 35%. Thus, tax holidays worsen the relative position of assets which can be depreciated, for tax purposes, over a short time.

#### Incentives to Foreign Investors

2.19. Government intervention through tax and financial benefits has often been justified in Tunisia by the need to compensate for and compete with the incentives offered to foreign investors by other countries. In fact, incentives to foreign investors are among the most attractive in the world. According to a recent study<sup>34</sup> comparing the policies adopted by 53 developing and developed countries to attract foreign capital, Tunisia emerged as one of the countries which had the most fiscal and financial incentives and assistance programs to encourage direct foreign investment.

2.20. In the manufacturing sector, 100% foreign ownership is allowed and government permission is not required by a foreign company for starting a

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33/ Table 2.3 shows that the tax wedges for projects financed with debt are closer to zero (except for Turkey) than those financed with equity or retained earnings.

34/ See "International Investment Incentives" in Site Selection, October 1989.

business.<sup>35</sup> According to the sector involved, foreign investors have access to all the benefits provided for by the Investment Codes. In addition to the fiscal and financial incentives discussed in the previous sections, incentives in the Codes include the Government's assumption of social security contributions, government supplied infrastructure for new projects in priority areas, investment grants to cover the start-up cost of a project, and subsidies for feasibility studies. Foreign investors can repatriate 100% of the invested capital in foreign exchange and the proceeds from its liquidation even if the initial foreign exchange investments are exceeded. The transfer of profits and dividends is subject to authorization, which is granted automatically by the Central Bank when the enterprise is at least 65% foreign owned. Moreover, non-resident manufacturing and international trading companies have no obligation to repatriate export profits to Tunisia providing that resident suppliers have been paid in foreign currency or convertible dinars.

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35/ Some limitations on foreign ownership exist in the agriculture and fishing sectors.

**Table 2.4: PRE-TAX RATES OF RETURN WITH  
ZERO PERSONAL TAX AND 7.4% INFLATION**

	Buildings	Machinery	Stocks	Retain. Earn./ New equity	Debt	Average*
<b>1. INDUSTRIAL INVESTMENT CODE</b>						
1a. Totally export.	5.0	5.0	5.0	5.0	5.0	5.0 (0.00)
1b. Partly export.	4.38	5.56	6.07	7.08	4.01	5.05 (1.63)
1c. Decentr. zones	3.64	6.77	6.37	7.84	3.65	5.06 (2.34)
<b>2. AGRICULTURE CODE</b>						
2a. Basic	0.49	0.10	1.82	3.54	-0.84	0.84 (2.17)
2b. Priority areas	0.63	-0.98	1.84	3.10	-1.01	0.38 (2.22)
<b>3. TRADING COMPANIES INVESTMENT CODE</b>						
3a. Non-resident trading companies	4.47	4.54	5.89	6.45	3.92	4.78 (1.37)
<b>4. TOURISM INVESTMENT CODE</b>						
4a. Hotel Constr.	2.01	4.87	4.94	8.12	0.98	3.40 (3.59)
4b. Invest. in Sahara	0.78	3.46	4.02	7.13	-0.38	2.18 (3.61)
<b>5. SERVICES INVESTMENT CODE</b>						
5a. Exporters	5.0	5.0	5.0	5.0	5.0	5.0 (0)
5b. Partly export.	4.38	5.56	6.07	7.08	4.01	5.05 (1.63)

\* Overall unweighted standard deviation of cost of capital in parenthesis.

**Note:** Incentives considered in the calculation of the required pre-corporate tax rates of return (inflation = 0.074 in all cases)

- 1a. Exemption from corporate tax, no import duties.
- 1b. Corporate tax reduced on the basis of 35% of the firm's output being exported; tax exemption on profits from domestic sales up to 20% of profits on exports; exemption from 35% of import duties.
- 1c. Tax holiday at 10% of the corporate tax rate for 7 years.
- 2a. Corporate tax at 10%, reduced to 0% for 10 years and then 5% for five additional years; exemption from import duties; a 5% soft loan rebate; a grant equal to 20% of the investment cost.
- 2b. On the assumption that 50% of turnover is exported, the corporate tax rate is 0.05; tax holiday at 0% for 10 years; exemption from import duties; a 5% soft loan rebate; and a 20% grant.
- 3a. On the assumption that 50% of output is exported, the tax rate is 17.5%; exemption from import duties.
- 4a. Tax holiday at 10% for five years, and a 3% soft loan rebate.
- 4b. Tax holiday at 0% for 10 years plus a 5% soft loan rebate.
- 5a. Exemption from corporate tax, no import duties.
- 5b. Corporate tax reduced on the basis of 35% of the firm's output being exported; tax exemption on profits from domestic sales up to 20% of profits on exports; exemption from 35% of import duties.

## E. CONCLUSIONS

2.21. The recent reform of direct and indirect taxation has put the Tunisian tax system very much in line with those of the OECD countries. Indeed, in some respect, the new system for taxing income from capital is better than in most of these countries. In particular, profits are taxed only at the corporate level, and there is no attempt to tax dividends at the personal level.

2.22. Undermining the simplicity, neutrality and revenue potential of the new direct tax law is a system of exemptions and incentives contained in several Investment Codes. These are designed to promote investments in particular activities e.g., exports; areas of the country (especially the Sahara); and sectors (industry, agriculture and fisheries, tourism and services). Two main questions arise in considering the Codes. First, why should such activities and sectors be favored by the tax system? Second, does the present system of incentives actually succeed in reducing the cost of capital for investment in these activities and sectors?

2.23. The first question is at the heart of the current discussion on the objectives of industrial policy. As indicated in this chapter, the current targeting of many of the activities in agriculture, fishing, industry, services, tourism and trading is difficult to justify. If these activities are inherently more useful to the Tunisian economy than others, this would probably be reflected in their relative profitability. If so, there is no need for them to receive special tax concessions. If they are not profitable, the argument for giving tax incentives must rest on the grounds that investment in these activities produces external benefits to the economy which cannot be captured by the company undertaking the projects. But it is difficult to see why investment in so many activities should contribute such external benefits to the economy. Moreover, sectoral targeting may have been necessary in the past to offset the side effects of distortive trade and fiscal policies, administered prices and underdeveloped capital markets. As these distortions are being addressed, there is less need for continuing industry-specific Government intervention.

2.24. To answer the second question, the effect of incentives on firms' decisions to undertake investment have been investigated. Several observations can be made about the effectiveness of the incentives contained in the Investment Codes.

- (a) The proliferation of incentives in any single Code is difficult to justify. For example, investment in agriculture can currently benefit from a reduction in corporation tax, a tax holiday, exemption from import duties, and interest rate rebates. The simultaneous use of different instruments results in arbitrary and unintended distortions that could easily be avoided if the authorities used fewer but more focussed incentives. For example, interest rate rebates are very effective in reducing the cost of investment capital. However, they benefit only debt-financed projects, which already benefit from the tax deductibility of interest payments. As will be discussed in Chapter III, the preference of debt over all

other sources of finance aggravates the incentives for maintaining an "overdraft economy".

- (b) Some incentives, notably tax holidays, are a poor and expensive means of attracting investments. Firms must write off tax depreciation during the holiday, when the tax rate is low. Such tax depreciation is therefore worth less than normal, which increases the cost of undertaking investments to the company. Clearly, for tax holidays to be truly effective, firms should be allowed to defer depreciation until after the holiday. However, given that the cost of tax holidays in terms of foregone tax revenue is relatively high, this kind of incentive cannot be recommended.

2.25. The shortcomings in the Investment Codes raise the question of which incentive structure would better fit the newly reformed corporate tax structure. Designing a new system entails a choice of objectives and instruments. Government objectives should shift from being industry and sector specific to being "functionally" oriented: for example, incentives to promote technology-intensive investments may be justified in terms of their spill-over effects and in support of industrial transformation. The promotion of infant industries, an important policy goal during the last three decades, may still be a valuable objective although it should be reviewed in the context of the results achieved and of the overall development strategy. Promoting exports should continue to be a priority, at least in the short run. Although this is outside the strict domain of market failures, it is still needed to compensate the existing anti-export bias in the economy until trade restrictions and price controls have been eliminated. Thus, the existing Investment Codes should be replaced by a single code which would harmonize the principal incentives and eliminate those which are addressing only sectoral issues.

2.26. The incentives currently included in the Investment Codes should be re-examined in the light of the objectives chosen, and possibly reduced. Exemption from payment of import duties on equipment and capital goods is currently granted on a permanent basis to exporting. By reducing their fixed costs, this incentive contributes to making enterprises competitive in international markets. It is possible that enterprises relying heavily on imported inputs would not survive if the exemption was terminated. Tariff exemptions should continue to be granted, but only on a temporary basis. In any case, the exemption should be terminated as soon as such inputs can be produced at competitive prices and with adequate quality standards, by the domestic industries. Deduction from taxable income<sup>36</sup> of earnings reinvested, currently available under most Codes, is a difficult instrument to administer: in fact, not only has it to be verified that earnings (as distinguished from depreciation allowances or external loans) have been retained, but also that they have been invested in certain sectors or activities. In addition, there is currently no

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36/ The advantage of tax deduction of earnings invested in shares and bonds, up to 35% of taxable income, is included in law 62-75. In the various Codes the percentage is increased up to 100%.

limitation on the number of activities in which earnings can be invested and deducted for tax purposes (and by way of successive deductions, taxable income in certain cases can be reduced to zero). If this instrument is designed to encourage the expansion of an ongoing business or the establishment of a new one, these objectives can be easily achieved by investment allowances or other tax benefits. As already discussed, tax holidays are not an efficient incentive instrument. Because the subsidy conveyed by a tax holiday is proportional to profits, this instrument is also subject to the risk of providing greater and unnecessary benefits to profitable and already established industries.

2.27. The following are some of the criteria for choosing among different instruments. First, incentives should be offered for a limited number of years. This would minimize the fiscal cost of these benefits, and it would become more difficult to create firms that could survive only because of the concessions. Second, incentives should be easy to award, administer and monitor. The elimination of discretion in the approval process and in the size of benefits would reduce the administrative costs of running the scheme, which potential investors may find more attractive. Third, only the most efficient instruments should be chosen, that is those which can affect in a direct and unique way the activities to be encouraged. For example, if the Government wishes to encourage employment, it should provide a subsidy to labor (for example, a temporary exemption on payroll taxes) rather than a tax holiday to labor-intensive industries.

2.28. Three incentive instruments most closely respond to the criteria of cost effectiveness and efficiency as outlined above: Accelerated depreciation allowances allow firms to write off the value of their capital over a shorter time than normally permitted. They reduce the cost of capital and are clearly attractive to firms that have a high capital stock and/or renew and upgrade their capital investments. They would reduce corporate taxes, however, only for companies with sufficient investment. Unlike tax holidays and reductions in corporate taxes, they would raise revenue from profitable projects.<sup>37</sup> Rates could vary across different regions or between exporting and domestic companies. Investment allowances, like accelerated depreciation, benefit firms not in proportion to their profits but to the size of their investments. Investment allowances, usually calculated as a percentage of the value of the eligible assets, are attractive to firms that produce enough income to take advantage of the allowance. The simplicity of the investment allowance makes the calculation of the benefits to the investors and the revenue loss to the State relatively easy and reliable. Finally, direct grants represent an effective instrument to reduce the cost of capital. They can be focussed on any policy objective desired by the authorities and, if properly accounted for in the budget, they represent a transparent and easily monitored instrument of subsidization.

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<sup>37/</sup> The major disadvantage of accelerated depreciation allowances is that they encourage capital intensive investments (i.e., they distort the choice between capital and labor whenever such a choice is available).

### III. FINANCIAL INCENTIVES TO INVESTMENT AND EXPORTS

#### A. INTRODUCTION

3.01. Aside from the incentives created by trade policies and those embodied in the Investment Codes, the Tunisian authorities have traditionally used financial incentives and controls as a means to influence the allocation of capital among economic sectors. Until recently, the Tunisian financial system was characterized by heavy regulation in the deposit and credit markets and an inadequate development of the bond and equity market. The reforms of 1987-88 have introduced many changes. Some interest rates have been liberalized; the responsibility for credit allocation has been returned, at least partly, to the financial institutions; and a money market and new financial instruments (commercial paper, certificates of deposit, etc.) have been created, which have increased competition and flexibility in the financial system as a whole. Moreover, the tax reform of 1989-90 has eliminated the most flagrant disincentives provided by the previous tax system in holding securities.

3.02. Yet, a multitude of past controls and practices still contributes to the perpetuation of what has been defined as the "overdraft economy".<sup>38</sup> This is an economy where investment is financed mainly with debt provided by financial institutions, as opposed to internal funds and shares. Banks are virtually the sole link between lenders and borrowers; external funds are made available at a cost that does not reflect the foreign exchange risk; and selective credit policies are extensively used to channel credit to priority sectors of the economy, or regions, at subsidized rates of interest.

3.03. The analysis of the characteristics of this "overdraft economy" is shown in this chapter. It starts with an analysis of the sources and uses of funds (Section B) in the economy and for the corporate sector in particular. It then discusses the reasons for the choice of debt as the main source of investment financing: the segmentation of credit markets (Section C), the availability of external funds (Section D), the existence of selective credit policies (Section E), and the inadequacy of the securities markets in channelling funds directly from the savers to the enterprises (Section F). Finally, Section G gives recommendations on how to continue the transition towards an open and market-determined financial system.

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<sup>38/</sup> See "Epargne et Développement dans les pays du Maghreb", Institut de Financement du Développement du Maghreb Arabe, 1990; in particular the article by Messrs. Ben Othman and R. Bouvariz "La libéralisation financière: cas de la Tunisie".

## B. THE FINANCING OF CORPORATE INVESTMENT

3.04. Flow of funds data on the borrowing and lending of the various sectors of the economy in Tunisia and in some developed and developing countries are reported in Annex I, Tables 4 and 5. Relative to these countries, Tunisia has shown a peculiar pattern in the sectoral distribution of surpluses. First, it was one of the few countries where the Government registered a net surplus during the early eighties. Second, the business sector's deficit, averaging 13% of GNP, was one of the largest among the countries of the sample; moreover, the household sector recorded a small surplus of only 2.5% of GNP (as compared for example with 14% in Portugal, 7.7% in Turkey, and 11% in Italy). Thus, the burden of closing the gap between savings and investments of the business sector was borne by foreign financing which, on average, represented 9% of GNP (as compared to 7% in Portugal, 3% in Turkey, and 2% in Italy).

3.05. A breakdown of investment financing sources for the business sector (private as well as public enterprises) is reported in Table 3.1. A striking feature of corporate finance in Tunisia is the low degree of self financing.<sup>39</sup> Between 1979 and 1987, internal sources of funds (retained earnings and depreciation allowances) accounted for only 20% of the total sources of finance; new share issues have amounted to 19% of companies' needs for funds. Thus, a great part of financing came from government subsidies (13%), and debt in the form of short-term loans (22%), and medium- and long-term loans (26%).<sup>40</sup>

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39/ This is very much in contrast with financing patterns of both developed and developing countries where gross internal funds represent more than 50% of corporate financing.

40/ Both domestic and foreign loans are included.

**Table 3.1: PUBLIC AND PRIVATE ENTERPRISES - FINANCING SOURCES**  
(in percent of total funds)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1979-87
Gross internal funds	21.5	9.2	15.7	1.5	16.2	30.9	18.4	32.3	27.7	20.0
Medium-Long term loans	41.2	24.9	27.0	32.5	33.5	24.5	25.2	16.0	14.0	26.0
Short-term loans	14.0	33.3	19.6	27.6	10.3	18.6	29.1	23.2	22.4	22.0
Subsidies	14.7	16.1	17.2	14.3	9.9	8.4	14.4	11.7	15.2	13.0
Equity	8.7	16.6	20.6	24.1	30.2	17.7	12.8	16.8	20.8	19.0

Source: IEQ (1990) - La rétrospective de l'économie tunisienne, 1960-1985.

3.06. What has caused private and public companies to rely so much on debt to finance their investments and so little on internally generated funds? Unfortunately, statistics on the operating profits of the corporate sector, are not available. However, indications are that even when profits were high, Tunisian entrepreneurs preferred purchasing real assets (e.g., houses, land) or even investing in short-term financial assets rather than financing their own investments. This behavior appears to be in contrast with the well-established view<sup>41</sup> that companies prefer internal sources of funds even when faced with the economic advantages of debt.

3.07. The preference of debt over all other forms of finance has depended on the easy availability of credit from the banking system and on its low real cost. In turn, these characteristics have been the result, to a great extent, of heavy Government intervention in credit markets. Such an intervention has taken the form of:

<sup>41/</sup> See for example S. Myers and Mayluf (1984) and G. Donaldson (1961). Donaldson, G. (1961) "Corporate Debt Capacity", Graduate School of Business Administration, Harvard University Press. Myers, S.C. and Mayluf (1984), "Corporate Financing and Investment Decisions when Firms have Information that Investors do not have", Journal of Financial Economics, 13, pp. 187-221.

- (a) Regulatory controls over the banking system. For example, commercial and development bank operations have been strictly directed towards short-, medium- and long-term maturities respectively, which has resulted in a high segmentation of the credit market.<sup>42</sup> Such segmentation has been enhanced by administrative controls on both deposit and lending rates.<sup>43</sup>
- (b) The complete coverage, by the State, of the foreign exchange risk on all external loans raised by financial institutions. This has resulted in easily available external funds at a cost sometimes lower than that for domestic resources. Thus, during the eighties, financial intermediaries were encouraged not only to borrow abroad but also to borrow in currencies carrying a low interest rate (usually associated with expectations of depreciation).
- (c) The extensive use of selective credit policies to direct banks' resources to priority investment projects that the authorities believed would not be otherwise undertaken. Priority investments were considered those in the agricultural, export, and tourism sectors, in underdeveloped areas of the country and those made by small and medium enterprises. Selective credit instruments have included differential rediscount rates, subsidized loan rates and direct grants from budget resources.

3.08. Finally, the predominance of the monetary sector in financing investments has contributed to the underdevelopment of the securities market, together with other factors. For example in Tunisia, the private corporate sector is dominated by family-owned companies. These companies, as in most developing countries, are often reluctant to broaden their shareholdings to prevent loss of control and to avoid disclosure of financial information, possibly for tax evasion purposes. This situation combined with the tax advantages associated with debt instruments, as compared to equity financing and the lack of investor protection regulation, has inhibited the development of a strong securities market in support of corporate investments.

### C. REGULATORY CONTROLS ON THE BANKING SYSTEM

3.09. For selective credit policies to work, and financial institutions to be unable to circumvent them, credit markets need to be kept segmented and controls over the banking system kept tight. Segmentation and fragmentation are in fact still the principal characteristics of the financial system in Tunisia,

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42/ Deposit banks lend up to seven years.

43/ Administrative controls, coupled with high inflation rates, have resulted in negative real interest rates during the late seventies and early eighties (around 7%-8% for demand deposits and 0%-1% for lending rates).

although less now than in the past. The financial system comprises a Central Bank (BCT), twelve commercial banks, eight development banks, one specialized savings institution, eight offshore banks, several insurance companies, and a postal checking system.<sup>44</sup> Half of the commercial banks are owned by the Government which also has a 50% stake in most development banks. Legally, development banks have not been allowed to take deposits or to benefit from Central Bank rediscounting. They have funded their operations through their equity base, domestic bond issues and special government resources including the proceeds of loans raised by the Government in international markets and from official agencies. Development banks have represented, and largely still represent, the main channel through which medium- and long-term credit has been allocated to the economy, according to Government priorities. Starting in 1988, they were allowed to take deposits over one year maturity from clients and to provide short-term lending. Long-term lending, however, still accounts for most of their portfolio (about 85%)<sup>45</sup> and represents a significant portion of total credit to the economy (15% at the end of 1989). Development banks can freely set their lending rates, although strong moral suasion is exercised by the Authorities in order to keep the rates of both commercial and development banks in line.

3.10. Commercial banks, on the other hand, have been traditionally confined to their deposit taking and short-term lending function, although they have enjoyed Central Bank refinancing facilities and have had access, like the development banks, to special government and foreign resources. Until the reforms of 1987-88, they were required to place 20% of their deposits into Treasury bonds (Bons d'Équipement), 5% into bonds issued by housing savings institutions, and 18% into medium- and long-term loans. In 1988<sup>46</sup>, the 18% requirement was replaced by the RAP (Ratio des activités prioritaires): since then, 10% of their sight and time deposits have to be held in medium- and long-term loans to the priority sectors. Except for the fulfillment of this

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44/ The most important commercial banks are: the Banque Nationale de l'Agriculture (BNA), the Arab Tunisian Bank, the Banque Franco-Tunisienne, the Banque Internationale Arabe de Tunisie, the Banque de Tunisie, the Crédit Foncier et Commercial de Tunisie, the Société Tunisienne de Banque, the Union Internationale des Banques, and the Banque de l'Habitat. The development banks are: the Banque de Coopération du Maghreb Arabe (BCMA), the Banque de Développement Economique de Tunisie (BDET), the Banque Nationale de Développement Touristique (BNDT), the Banque de Tunisie et des Emirats d'Investissement (BTEI), the Banque Tuniso-Koweïtienne de Développement (BTKD) and the Société Tuniso-Saoudienne d'Investissement et de Développement (STUSID). The specialized savings institution is the Caisse d'Épargne Nationale Tunisienne (CENT).

45/ The remaining 15% is represented by equity participation.

46/ Circulaire no. 89-16, May 17, 1988.

requirement, commercial banks are not allowed, yet, to offer long-term credit. Thus, short-term credit represents about 65% of their asset portfolio (and 57% of total credit to the economy). Moreover, unlike development banks, commercial banks' lending rates are subject to a ceiling of 300 basis points over the money market rate (TMM). The original aim of the ceiling, established in 1988, was to prevent a general rise in interest rates that could have been engineered by the banks' inexperience with competitive loan pricing. The ceiling was therefore meant to allow banks a learning period for developing price competition. Price competition has, indeed, developed. In fact, it is estimated that 20% of loans are currently granted at the TMM plus 1.5%, another 50% at 2-2.5 percentage points above TMM, and only 30% of total loans are priced at TMM plus 3%. Thus, it appears that the ceiling is less justified; on the contrary, it may hamper the banks' ability to further differentiate their lending rates according to the quality and credit worthiness of borrowers.

3.11. Should commercial banks be allowed to grant long-term loans, they would probably be precluded from entering this market segment by their weak capital structure. Aggregate information<sup>47</sup> on the balance sheet structure of commercial and development banks indicates that in 1989 the ratio of assets to equity was 11.4 for commercial banks and 1.8 for development banks. Such discrepancy is likely to perpetuate the segmentation of the credit market, to inhibit competition and to distort the emergence of market determined lending rates. Contrary to commercial banks, whose supply and cost of funds is market determined, development banks rely almost completely on their strong equity position to develop long-term loans.<sup>48</sup> Because their cost of funds largely depends on the return on equity expected or agreed upon by their shareholders, their pricing policies may not completely reflect market forces and may therefore result in unfair competition with the commercial banks.<sup>49</sup>

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47/ Data on the capital structure of financial institutions should be treated with caution. The lack of uniformity in audit standards is a clear impediment to the transparency of the financial statements of banks and development banks.

48/ At the end of 1989, long-term loans (from own resources) and equity participation of development banks were 100% funded out of their share capital.

49/ For example, it is striking to observe that, following the recent increase in the money market rates (to 11.8% in the second half of 1990 from 10.3% p.a. at the end of 1989 and 8.6% p.a. at the end of 1988) commercial banks increased their lending rates to a much larger extent than development banks. As a result, maximum commercial banks' short- and medium-term rates now stand at about 15%, while development banks lend long term at lower rates.

**Table 3.2: SIMPLIFIED BALANCE SHEETS OF COMMERCIAL & DEVELOPMENT BANKS  
December 1989**

	Commercial Banks	Development Banks
	(TD million)	
<b>EQUITY</b>	529	686
<b>LIABILITIES</b>	5,489	530
Deposits	4,194	39
Bonds	0	82
Special Resources	570	386
- govern. funds	369	12
- external funds	201	374
Rediscount	725	23
<b>ASSETS</b>	6,018	1,216
Loans	5,382	847
Securities	141	173
Current Assets (net)	495	196
<b>ASSETS/EQUITY</b>	11.4	1.8

Source: Central Bank, Statistiques Financières, June 1990.

3.12. Fostering competition in the banking system and promoting market pricing policies crucially depends on the capital structure issue being addressed. Such issue is currently being discussed by the Central Bank in the context of a major reform aimed at strengthening prudential regulations, accounting practices and the supervisory framework.<sup>50</sup> A radical measure would be to merge selected commercial and development banks, along the same lines as that for the Banque Nationale Agricole (BNA).<sup>51</sup> However, this is obviously a complex matter, both from a political and a technical standpoint, which should be carefully investigated. In the short run, the authorities should ensure that the credit and pricing policies of development banks are consistent with those of other lending institutions and of the market as a whole through their representatives on the banks' boards of directors.

3.13. Credit guidelines. A further source of segmentation in the lending market derives from the current system of credit guidelines applied to commercial banks. This system, however, represents a marked progress over the one in

50/ The design of the reform is still at a preliminary stage.

51/ In October 1989 the Banque Nationale de Développement Agricole (BNDA) was merged with the Banque Nationale de la Tunisie (BNT) to create the Banque Nationale Agricole (BNA).

existence until the end of 1986 whereby all banks needed prior approval from the Central Bank for all their lending operations. The prior approval system was replaced in 1987 by a comprehensive set of guidelines which defined the purpose, the maturity and the amount of the loans banks could grant.<sup>52</sup> Compliance with these guidelines is checked by the Central Bank on the basis of detailed loan reporting from commercial banks.

3.14. The actual effect of the guidelines on credit allocation is difficult to assess. The Central Bank has indicated that they were mainly motivated by prudential considerations at the time that the prior approval system was suppressed and that they basically spelt out existing banking practices. Potential distortions, however, may obviously take place if the type of loans defined administratively do not correspond to the borrowers' needs. The guideline system may induce banks to provide, and borrowers to request, loans because they are available in a certain form, irrespective of real needs. Also, lenders may be induced not to perform a genuine risk appraisal as long as they feel that the loan features comply with the Central Bank guidelines. In that sense, the current system may perpetuate, though to a lesser degree, the main shortcoming of the previous one, that is to dilute the banks' responsibility in deciding, screening and monitoring loan projects. Moreover, it appears to be ill-adapted to its stated objective of setting prudential regulations. For example, it does not preclude a bank portfolio from being excessively exposed to certain economic sectors, or poorly matched to resources in terms of maturities. The revision of the credit guidelines system is expected to be a major component of the proposed reform of the prudential and supervisory framework.

#### D. EXTERNAL FINANCING:

3.15. As shown in Table 3.2, a important proportion of the total liabilities of the banking system is represented by special resources which include budget resources (from the Government funds) and the counterpart of long-term loans raised abroad. At end-1989, the sum of the funds originated from foreign credit lines by deposit and development banks amounted to TD 575 million (about 8% of total liabilities and 30% of development banks' liabilities) and included funds from multilateral creditors (IBRD, African Development Bank), bilateral creditors (e.g., France, Italy and the Arab countries, usually at

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<sup>52/</sup> The guidelines (as specified in the circulaire 87/47) single out as many as 11 categories of short-term loans and 13 categories of medium-to long-term loans. Loans are defined with respect to: (i) their purpose (e.g., medium-term credit to repair agricultural machinery, or to finance the purchase of equipment for retailers); (ii) their maximum maturity, which ranges between two and seven years for medium-term loans, according to the type of loan considered; and (iii) their maximum volume, which depends on criteria such as equipment cost, working capital requirements, projected or past turnover, and the proportion of self-financing.

concessional rates), and some direct borrowings from financial institutions in foreign capital markets.

3.16. The value, in local currency, of external loans is greatly affected by the changes in exchange rates. In Tunisia, like in most developing countries where the foreign exchange market is not liberalized, the Government has traditionally assumed the foreign exchange risk: that is, it has kept the foreign currency, lent the proceeds in domestic currency to public enterprises and financial intermediaries, and it has agreed to cover the foreign exchange risk completely.<sup>53</sup> The foreign exchange losses arising from external loans were expected to be covered, until 1988, by a guarantee scheme, the "Fonds de Péréquation des Changes et Taux d'Intérêt" (FPC) which was intended to be self-sustaining and was funded by the following resources: (i) a 1% flat commission levied on term loans of development banks; (ii) an annual commission of 0.5% on overdrafts granted by deposit banks; and (iii) a variable commission deducted from the interest income received by the Central Bank on the rediscount.

3.17. According to data provided by the Tunisian authorities<sup>54</sup>, cumulative foreign exchange losses on credit lines undertaken before 1988 totalled TD 156 million during 1981-90. The FPC's reimbursements to financial institutions amounted to TD 114 million; about TD 42 million represented payment arrears of the FPC, which are still expected to be covered directly by the Treasury. Assuming that this debt will eventually be settled, the Government's contribution stands at TD 65 million (i.e., the FPC's arrears plus the amount levied on the Central Bank rediscounting receipts, estimated at TD 23 million during 1981-90), or 42% of total losses. The remaining 58% has been covered by the banks through their payments to the FPC (and ultimately by the borrowers).

3.18. In 1988, it became clear that unless the Tunisian dinar appreciated, the FPC could not break even in the long run. Thus, the Government decided to eliminate it although it would still be maintained for the credit lines already committed. Since then no other coverage system has been introduced. For the few concessional credit lines undertaken in 1989 and 1990, an "ad hoc" mechanism was designed to pass at least part of the subsidy element included in these loans to the end-users. Under this mechanism, the Central Bank is covering the foreign exchange risk and is funding the potential losses by charging banks with a fixed annual commission of 3% on the foreign loans.

3.19. Hedging instruments, aimed at covering the foreign exchange risk in the short run, have also been introduced. They include forward contracts for commercial transactions, soon to be extended to capital transactions, and

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53/ For a discussion of the coverage system of the foreign exchange risk in the Maghreb countries see Pigato, M. (1990), "The Economics of the Foreign Exchange Risk. Theory and Practical Solutions in the Maghreb Countries". World Bank, EMENA Discussion Paper Report No. IDP0076.

54/ See Table 22 in Annex I.

currency options.<sup>55</sup> Moreover, exporters have been allowed to retain foreign currency receipts up to 20% of their exports, and banks to make loans to cover cash problems due to foreign exchange losses of viable firms. The pricing of the above hedging instruments is being calculated with reference to the money market rate. The Central Bank has suggested that such a rate could be taken as the reference rate for pricing the long-term loans originated from external resources. The difference between the money market rate and the actual interest rate of the foreign loans would be paid by the banks to the Central Bank, to cover future foreign exchange losses.<sup>56</sup>

#### E. THE INSTRUMENTS OF SELECTIVE CREDIT

3.20. The distribution and the cost of credit to the economy are strongly influenced by a wide range of selective policies. As for the fiscal incentives discussed in Chapter II, these policies aim at achieving several, sometimes inter-related objectives: the encouragement of exports, of investments in sectors defined as a priority (agriculture, tourism, small and medium enterprises), and the development of the poorest areas of the country. Two main categories of incentives were adopted:

- (i) Interest rate subsidies, with the subsidy being borne either by the Central Bank through preferential rediscount or directly by the State budget.
- (ii) Special purpose Government funds using a wide range of instruments, including soft loans<sup>57</sup>, investment grants, and repayable advances.

3.21. During the 1980s, the percentage of selective credit, relative to total credit to the economy, was around 25% (declining to 20% in 1990). Based on end-1990 data, selective credit is allocated to four main priority sectors: 37% to export activities, 15% to the agricultural sector, 17% to the tourism sector, and 12% to small and medium enterprises; the remaining 18% is granted to various other activities in the economy.

#### Interest Rate Subsidies

3.22. Central Bank preferential rediscount. The Central Bank preferential rediscount system is the main channel through which below-market loans are made

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55/ A few option contracts were written for the first time in October-November 1990, following the revision of pricing methods by BCT.

56/ According to the Central Bank, this system should be applied only to a few loans, decided annually by the authorities.

57/ That is, loans at subsidized interest rates.

available to the economy. As shown in Table 3.3, at the end of 1990, rediscounted loans amounted to TD 772 million and represented 12.5% of total credit to the economy or 63% of preferential credits. Most of these loans were made to the exporting sector, followed by the small and medium enterprises<sup>58</sup> and the agricultural sector. In 1990, outstanding loans showed a significant decrease from their value at end-1989, when they stood at TD 949 million, representing 17% of total credit to the economy or 68% of total preferential credit. The reduction was due to measures taken by the Central Bank in July 1990, when rediscounts of credit to public sector entities, such as the Compagnie de Phosphates de Gafse (CPG), and the agencies specialized in agriculture commodities were phased out.

**Table 3.3: CENTRAL BANK REDISCOUNTING<sup>1</sup>**  
(outstanding credit at year end in millions of TD)

	1988	1989	1990
Short-term credit	589	566	355
- Agriculture	138	158	32
- Exports	449	405	298
- Other	2	3	25
Medium-term credit	212	383	417
- Agriculture	57	48	23
- Export (Investment financing)	27	115	155
- Fonapra	39	40	39
- Small-medium enterprises	20	60	61
- Other	69	120	139
TOTAL	801	949	772
In percent of total credit to the economy <sup>2</sup>	15.5	17.13	12.5

<sup>1/</sup> To commercial and development banks.

<sup>2/</sup> Credit granted by the Central Bank, the commercial banks, the development banks

3.23. The main features of Central Bank rediscount are summarized in Table 3.4. Rediscountable loans entail three levels of end-user interest rates ranging between 8% and 9%; thus, they stand at six to seven percentage points below commercial banks' lending rates (14.8% at end-1990). Rediscount rates vary between 4% and 7.5%, as compared to an intervention rate of the Central Bank in the money market at 11.8%.

58/ Other loans benefitting from preferential rediscount are less significant and involve the housing sector or the financial restructuring of public enterprises.

**Table 3.4: PREFERENTIAL RATES  
(in percent)**

Eligible Credits	End-user Rate		Rediscount Rate		Spread	
	9/88	7/90	9/88	7/90	9/88	7/90
<b>SHORT TERM</b>						
Agricultural loans guaranteed by Mutual Guarantee Company	7.00	8.00	3.00	4.00	4.00	4.00
Other seasonal credits	7.00	8.00	4.75	5.75	2.25	2.25
Export financing	6.00	8.25	4.00	6.25	2.00	2.00
<b>MEDIUM TERM</b>						
Agriculture, SMEs, Energy conservation	7.00	8.00	5.50	6.50	1.50	1.50
Export financing, Investments of exporting sector	8.00	9.00	6.50	7.50	1.50	1.50
<hr/>						
Memo	1988		1990 (end)			
<hr/>						
Money market rate	8.6		11.8			
Lending rates:						
- commercial banks	11.6 (max)		14.8 (max)			
- development banks	11-12.75		13-14			

3.24. The number of different preferential rates to end-users was reduced from six in 1986 to three in 1990; five different rediscount rates, however, still remain. Preferential interest rates were increased in September 1988 (by 0.5 to 1 percentage point) and again in July 1990 (by 1 to 2.25 percentage points) in order to narrow the gap with the market rates.

3.25. Despite these recent improvements, the rediscount system still presents many imperfections. First, there is no clear rationale for the existence of different end-user interest rates. Second, the structure of end-user rates does not match that of rediscount rates, resulting in the banks' spread varying from 1.5 to 4 percentage points depending on the category of the loan. Paradoxically, the highest spreads apply to short-term loans, which is questionable in view of the lower risks and appraisal costs involved in these loans. Third end-user interest rates are set administratively and are not adjusted to market rates. More fundamentally, preferential loans are not subject to the normal risk assessment evaluation of the banks. They tend to inflate the demand for credit, thus crowding out projects economically sound but not eligible for preferential rediscount. The fixed and relatively low spreads result in a significant constraint on the banks' ability to manage their operating margins;

and because the subsidy is paid by the Central Bank, as opposed to the budget, transparency of the whole incentive system is impaired.

3.26. Direct interest subsidies. In the tourism sector, as indicated in the Tourism Investment Code, interest subsidies are paid by the State on bank loans financing tourist investments.<sup>59</sup> Loans can provide up to 60% of a project cost and the maximum interest subsidy is 3%. However, the end-user rates cannot, as a result of the subsidy, be lower than the money market rate. Finally, interest rate subsidies are granted to loans in priority sectors and activities through the Government Funds, examined below.

#### Special Purpose Government Funds

3.27. The second channel for selective credit is represented by special Government Funds, funded directly through State budget resources. The Funds were established to direct financial resources in priority sectors and activities: (i) the agricultural sector, with the Fonds Special pour le Développement de l'Agriculture (FOSDA), established in 1963; (ii) the fishing industry, with the Fonds Spécial d'Encouragement à la Pêche (FOSEP), established in 1969; (iii) small and medium industries, with the Fonds de Promotion et de Décentralisation Industrielle (FOPRODI), established in 1976; and (iv) artisanal activities with the Fonds National de Promotion de l'Artisanat et des Petits Métiers (FONAPRAM), established in 1981.<sup>60</sup> As shown in Table 3.5, the loans allocated through the funds<sup>61</sup> amounted to TD 238 million in 1990, or 4% of total credit to the economy. Access to the Funds is provided by both deposit and development banks which, in consideration of a commission, manage and disburse the Funds' resources. In order to be eligible, projects must obtain authorization from the relevant agencies (API for FOPRODI, APIA for FOSDA-FOSEP) or from the Central Bank (FONAPRAM). A wide range of financial instruments is delivered through the Funds<sup>62</sup>: subsidized loans, investment grants, covering up to 30% of the investment cost of a project, the coverage of the interest on medium- and long-term loans from the banking system (for a limited time), and repayable advances, which are long-term loans designed to enable the promoters to increase the equity component in the enterprises to be formed.

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59/ The decision to grant the subsidies is vested in an administrative commission, the Sous-Commission des Aménagements Touristiques.

60/ These are clearly the most important. Other Funds are the Fonds Social pour la Promotion du Logement des Salariés (FOPROLOS) and the Fonds National d'Amélioration de l'Habitat (FNAM) which finance low income housing.

61/ That is, FOPRODI, FOSDA/FOSEP, and FONAPRAM.

62/ See Tables 23 and 24 in Annex I.

**Table 3.5: SPECIAL PURPOSE GOVERNMENT FUNDS**  
(Outstanding Loans/Advances at year end in millions of TD)

	1988	1989	1990
<b>FOPRODI</b>	84.8	76.1	58.0
Loans on Budget Resources	9.7	11.0	14.0
Repayable Advances	19.1	21.1	24.0
Subsidized bank Loans	56.0	44.0	20.0
<b>FOSDA/FOSEP</b>	111.3	100.7	132.5
Loans on Budget Resources	93.0	76.0	72.0
Repayable Advances	5.3	7.7	10.5
Subsidized Bank Loans	13.0	17.0	50.0
<b>FONAPRAM</b>			
Repayable Advances	35.2	42.3	48.0
<b>OTHER BANK LOANS SUBSIDIZED BY BUDGET</b>			
Tourism	237.0	232.0	220.0
Other		30.6	--
(1) TOTAL	468.4	481.7	458.5
<b>Memo:</b>			
(2) Central Bank Rediscount	801.0	949.0	772.0
(3) 1 + 2 Total Subsidized Credit	1269.4	1430.7	1230.5
Government Funds as % of total credit	9.4	8.7	7.4
Subsidized Credit as % of total credit	25.58	25.81	19.95

3.28. Although most funds have recourse to the same set of instruments and respond to comparable rationales, their respective guidelines exhibit some degree of complexity and dissimilarity. Some facilities are available under certain funds while they may not be with others; from this standpoint, the FOSDA appears to be by far the most comprehensive scheme since it involves virtually every kind of instrument. Also, the initial capital required for projects to be eligible vary significantly among the funds and according to the quality of the promoter. Finally, the debt component of the project financing may be provided, depending on the situation, by budget or bank loans, with the latter normally subsidized either from budget resources or through BCT rediscount.<sup>63</sup>

**63/** Facilities available under Government funds are summarized below:

- (a) The FOPRODI provides the promoters of small and medium industrial projects with repayable advances to increase the equity component of their project financing. Depending on the project size, repayable advances constitute between 40% and 70% of the equity component, which itself represents at least 30% of the project cost. For smaller projects, the FOPRODI also grants soft loans. Repayable advances have a 12-year maturity with a 5-

Shortcomings of the Current Selective Credit System

3.29. Complexity. Selective credit policies in Tunisia fail to meet the basic features of any efficient incentive system, namely transparency and simplicity. Instead, they are complex, in terms of the priorities emphasized, the instruments used, and the channeling procedures. The priorities are numerous and, as for the fiscal incentives, include sectoral as well as functional objectives (exports, small and medium enterprises, the country's poorest areas, the young entrepreneurs). Depending on the area or the priority concerned, one or several instruments (the most important being soft loans, subsidized bank loans, capital subsidies, and repayable advances) may be available. A particular instrument usually entails different conditions (interest rate, maturity, grace period, eligible portion of project cost) depending on the beneficiaries, resulting in the number of distinct schemes being exaggeratedly high. Finally, the decision power to grant the preferential schemes is attributed to a variety of public entities, including the Central Bank, the Ministry of Finance, the

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year grace period and carry an interest rate of 3%. FOPRODI loans entail a 7-year to 10-year maturity with a grace period of up to 3 years and carry an interest rate of 4% or 6.25% (depending on the project's geographical location). At end-1990, outstanding repayable advances and loans stood at TD 24 million and TD 14 million, respectively.

- (b) The FOSDA (which is associated with the FOSEP for statistical purposes) is the largest Government fund. At end-1990, outstanding repayable advances and loans channeled through the FOSDA/FOSEP stood at TD 10.5 million and TD 72.0 million, respectively. In addition, bank loans subsidized by the FOSDA amounted to TD 50.0 million at the same date. The FOSDA offers a wide range of instruments, repayable advances, soft loans, investment subsidies, and interest subsidies. According to criteria set by decrees, the FOSDA finances small investments in specific projects, classified as "A", and small integrated projects, classified as "B". A third category "C", consists of large integrated projects, financed by the budget (from the "Compte Central") through the BNA. For simplicity, in this Chapter all 3 categories have been included in the FOSDA. In the "A" projects, 10% of the cost must be self-financed while another 10% is usually provided by the State as a capital subsidy. The equity component required to projects "B" and "C" is 10% and 30% respectively; however the State may provide additional equity in the form of repayable advances or capital subsidies; in addition, bank loans associated with these projects benefit from interest subsidies charged to the budget. The maturity of the repayable advances ranges between 10 and 12 years and the interest rate charged is between 4% and 6% p.a.
- (c) The FONAPRAM essentially provides repayable advances to small and medium artisanal entrepreneurs. These advances represent 32% or 36% of the project cost, depending on its size, and thus provide the bulk of the self-financing required from the promoter (40% of the project cost). The repayable advances, which stood at TD 48 million at end-1990, do not bear an interest rate.

Ministry of Tourism, the Agence pour la Promotion de l'Industrie (API), the Agence pour la Promotion des Investissements Agricoles (APIA), while the management of the loans/advances is usually performed by the banks which also bear a variable degree of responsibility for final repayment.

3.30. Bias towards debt financing. A most important effect of the credit incentive system in Tunisia is that it biases the enterprises' financing patterns in favor of debt. This results from the combination of the following factors.

- (a) The subsidization of interest rates creates an artificial demand for credit, especially for low-yielding investments that would not take place if the promoters had to pay a market interest rate.<sup>64</sup> Moreover, the promoters of high yielding investments, that in fact could pay such a rate, are encouraged to crowd the market for subsidized loans. The end result may be a combination of both rationing and low investment efficiency.
- (b) The magnitude of interest rate subsidies is significant (six to eight percentage points in most cases), resulting in real interest rates being close to zero or even slightly negative for about 75% of outstanding preferential credits. Thus, some borrowers may be encouraged to take up loans for the purpose of investing in the highly remunerated savings deposits. This has the effect of raising the cost of financial intermediation without reaching any of the objectives of selective credit policies.
- (c) The minimum proportion of self-financing being imposed on the projects of the promoters is very low; self-financing requirements range between 20% to 40% of the project cost, resulting in debt-to-equity ratios of 2.5:1 to 5:1. Moreover, repayable advances are regarded as, and included in, equity financing since they are granted to the project promoter, not to the enterprise; if they are considered as debt, the effective proportion of equity financing is reduced to less than 20% of the project cost and can be as low as 4% for some projects. Furthermore, the lowest debt to equity ratio appears to be accepted for the potentially weakest enterprises (small and medium enterprises, projects of young entrepreneurs).
- (d) Subsidized interest rates, by lowering the cost of capital, distort factor prices and encourage highly capital intensive investment. This result is in conflict with one of the Government's several objectives: to create employment.

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64/ From a welfare point of view, the selective credit policies would still have reached their objective if the social returns on these investments had been very high. However, there is no evidence that Tunisian authorities have identified investments with low private and high social return.

3.31. Absence of monitoring. A further characteristic of selective credit policies is the absence of a centralized or at least homogeneous monitoring system. As a result, no global assessment of the magnitude and cost of the preferential credit schemes is readily available in Tunisia, which undoubtedly hampers the authorities' ability to conduct an economic evaluation of the system.<sup>65</sup>

3.32. Loan recovery. Although complete information on loan recovery is not available, the repayments of budget loans and repayable advances seems to be particularly poor. At the end of 1987, 1988, and 1989, arrears on FOSDA loans as a percentage of outstanding amounts stood at 30%, 32% and 35%, respectively. As regards to FONAPRAM, arrears represented 42% of outstanding repayable advances at the end of September 1990. With respect to FOPRODI, a 1987 study from API<sup>66</sup> indicated that 57% of the advances granted were not being repaid on a regular basis; at the end of 1987, 53% of scheduled repayment on loans and advances were still overdue.

3.33. It is difficult to assess to what extent distressed loans are due to genuine difficulties of the enterprises or to poor collection policy. The API study indicated that 40% of the enterprises financed by the FOPRODI went bankrupt or were facing serious difficulties. However, indications are that, for the same enterprises, collection from banks on their own loans is significantly higher than on the sums due to the Government. Thus, there seems to be room for an improvement in the mechanisms of loan monitoring and management. Currently, this task is delegated to the bank which carried out the project screening and cofinanced the project. The banks theoretically bear 25% of losses on loans and advances but this rarely happens since they can decide whether a loan is collectible.

3.34. Budgetary costs. As shown in Table 3.6, the total budgetary cost of the financial incentive system was TD 94.4 million in 1990, corresponding to

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<sup>65/</sup> The main deficiencies of the present system relate to: (i) the non-estimation of the budget costs involved in below-market loans; (ii) the lack of consistent time series; (iii) discrepancies in the format of the data; depending on the public entity managing the facility, information may be available in terms of stocks or flows, in terms of commitments or disbursements; (iv) the volume of banks loans associated with the intervention of Government funds is not readily available and must often be estimated on the basis of budget subsidies actually paid or appropriated; and (v) the breakdown between repayable advances and loans out of budget resources is not available in all cases.

<sup>66/</sup> API, Etude sur le Fonds de Promotion et de Décentralisation Industrielle (76-86).

24% of the budget deficit and 0.8% of GDP.<sup>67</sup> It increased by 22% relative to 1989, reflecting the upsurge in the average volume of rediscounted loans and the larger differential rates between preferential and market during the first part of the year.<sup>68</sup>

3.35. In 1990, the relative weights of the various financial incentives in the total cost were as follows: 69% represented the cost of preferential rediscount by BCT; about 20% was accounted for by interest rate subsidies and by the cost of repayable advances; and, 11% was imputable to direct investment grants.

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67/ For investment grants and interest rate subsidies paid on bank loans, the cost of incentives appears in the budget. Loans rediscounted at the Central Bank involve an opportunity cost which is calculated with reference to the normal intervention rate of BCT (currently 11.8%). Below market loans from the budget and repayable advances also involve an opportunity cost under the assumption that they have to be funded by the Government at its marginal cost of financing. This cost has been assumed to be that of "B" bond issues, i.e., 11%.

68/ In July 1990, the volume of rediscounting was cut by about one third and preferential rates were increased.

**Table 3.6: BUDGETARY COST OF PREFERRED CREDITS SCHEMES**  
(in millions of TD)

	1988	1989	1990
Central Bank Rediscounting	27.0	46.0	65.0
Below-market Budget Loans	3.0	2.8	3.0
Foprodi	0.6	0.7	0.8
Fosda/Fosep	2.8	2.5	2.2
Repayable Advances	5.7	6.3	7.4
Foprodi	1.5	1.6	1.8
Fosda/Fosep	0.3	0.5	0.6
Fonapram	3.9	4.2	5.0
Interest Rate Subsidies (Bank Loans)	10.3	9.7	8.2
Tourism	7.1	7.0	6.5
Foprodi	2.8	2.2	1.1
Fosda	0.4	0.5	0.6
Investment Grants	11.0	7.2	10.8
Foprodi	1.0	0.9	0.6
Fosda	8.6	9.7	9.9
Tourism	1.4	1.3	0.3
<b>TOTAL</b>	<b>57.4</b>	<b>77.0</b>	<b>94.4</b>
<b>Memo:</b>			
In percent of budget deficit	16.6	21.5	24.5
In percent of GDP	0.7	0.9	0.8

Source: Mission estimates.

## F. FINANCIAL MARKETS

3.36. In Tunisia, the predominance of the monetary sector, reflecting the dominance of investment financing with debt granted by financial institutions, is mirrored in the under-development of the financial market. In fact, despite the establishment of a Stock Exchange in 1969 and a steady increase in securities capitalization in recent years, the financial market is still in its infancy. In 1990, the capitalization of the permanent equity market was TD 445 million (about 4% of GDP), while the outstanding stock of marketable bonds<sup>69</sup> was TD 238 million (2.1% of GDP) (see Table 25 of Annex I), figures much lower than

<sup>69/</sup> Excluding Government equipment bonds which represent a compulsory way of financing the budget deficit.

those in most emerging markets of developing countries.<sup>70</sup> Share trading represented only 5% of capitalization, and 85% of trading was concentrated in five individual shares; trading of bonds was virtually non-existent (about 1% of the volume of shares were traded). In terms of annual flows, the financial market's direct contribution to investment financing appears to be quite limited: new equity financing represented about 15% of annual investment flows between 1980 and 1989 and these volumes were raised primarily, if not entirely, through equities privately placed. As to the bond market, the Government and the development banks are the main issuers; in early 1991 the first two corporate issues were recorded. Finally, another indicator of the scant market depth is the few securities held by private investors, as estimated by the Stock Exchange authorities. For bonds, purchases from individuals in a significant sample of issues averaged only 16%; this figure would have been 10% if a particular issue (BDET in 1988) heavily subscribed by individuals had been omitted.

#### Institutional and Regulatory Framework

3.37. Since 1987, the authorities have undertaken a significant effort aimed at developing financial markets. A comprehensive set of market regulations was established by the Stock Exchange authorities in the "Règlement Général de la Bourse des Valeurs Mobilières".<sup>71</sup> The tax treatment of financial instruments was streamlined and simplified under the major tax reform carried out in 1989. A new institutional framework, including the Stock Exchange and an advisory committee, the "Conseil Supérieur du Marché Financier" (CSMF), was defined in March 1989.<sup>72</sup> The CSMF's role, composition and responsibilities is to be defined by a Government decree which has yet to be issued. The Stock Exchange, instead, has been vested with both regulatory and market responsibilities over the

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70/ For most emerging markets tracked in the International Finance Market's (IFC) data base, the ratio of stocks capitalization to GDP ranged in 1989 between 15% and 75% (see IFC, Emerging Stock Markets Fact Book, 1990).

71/ These rules compare reasonably well with developed market standards. For instance: (i) public offerings are conditional upon prior approval being given by the Stock Exchange to a prospectus providing relevant financial information concerning the company; (ii) specific operations such as takeovers or the purchase of controlling interest in a company are subject to precise disclosure requirements; and (iii) in order to be listed on the Stock Exchange, a company must meet specific conditions in terms of its past payment of minimum dividends and the public's holding of its shares.

72/ Law no. 89-49 of March 1989 (published in the Journal Officiel no. 20 of March 21, 1989).

securities market.<sup>73</sup> The Board of Directors has been broadened to representatives of participants to the securities market (banks, stockbrokers and insurance companies), the accounting profession, and qualified individuals.

3.38. The new institutional framework shows considerable progress over the past as it clearly defines the key functions to be performed on a financial market by each agent and the authority in charge. However, contrary to most developed markets, there is no separation between regulatory and market authorities, and the Government exerts a tight control over the Stock Exchange, as it appoints all Board members and can veto Board resolutions. While this institutional structure reflects the current narrowness of the Tunisian market place and the absence of spontaneous market development, it may ultimately result in a conflict of interest and in confused responsibilities. As the market matures, the authorities may wish to consider conferring regulatory and supervisory functions on an entity separate from the Stock Exchange, possibly to the CSMF.

#### Features and Tax Treatment of Financial Instruments

3.39. The satisfactory development of a financial market depends largely on the availability of appropriate instruments. Financial instruments should be simple, particularly in emerging markets, and liquid and diversified enough to meet the investors' different and changing motivations. These features are only partially met in the Tunisian market, which offers common stocks, debt securities, and mutual funds.

3.40. Stocks. Until recently, stocks represented a most unattractive instrument because of their tax treatment. This is no longer the case. The 1990 direct tax reform has removed the triple taxation of dividends previously in effect (corporate tax, schedular tax and income tax) and exonerated dividend payments from the income tax. In addition, under the Law 62-75 of December 1962, up to 35% of taxable income is deductible for purchases of shares in the primary market.<sup>74</sup> However, the shares must then be held for two years. Investors may still enjoy this tax benefit when they sell the shares before the end of the holding period, if the proceeds are reinvested in comparable instruments. The costs involved in these operations clearly constitute an impediment to the development of the secondary market. To increase the supply of securities, the

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73/ Regulatory functions comprise the regulation of, and control over, all market operations, including public offerings, takeovers, purchase of controlling interest in a company; and the definition of ethical standards applicable to issuers, intermediaries and portfolio managers. Market functions include: (i) the establishment of listing requirements; (ii) the licensing of, and control over, intermediaries; and (iii) the material organization of secondary market transactions in the Stock Exchange.

74/ As discussed in Chapter II, the 35% percentage of deductibility is increased above 35% if the equity is issued by firms that qualify for incentives under the Investment Codes.

Tunisian authorities have recently granted tax incentives to companies that go public.<sup>75</sup> However, given the pervasiveness of tax exemption, the impact of these measures is likely to be minor. Additional, and possibly more effective, means would include encouraging public enterprises to raise funds in the bonds market and speeding up the privatization policy, initiated in recent years.

3.41. Bonds. Three categories of bonds are issued in the Tunisian market: Bonds of the development banks, and two types of Government bonds, the equipment bonds (to institutional investors) and the so-called "emprunts nationaux" (to the general public).

3.42. Bonds of development banks represent the quasi totality of non-Government bonds issued in the market. In fact, due to the extent of administrative controls, such as the prior approval that until recently had to be sought from the Ministry of Finance for any bond issue, bonds issues by corporations have been insignificant. Indications are that the need for placing equipment bonds and the development banks' issues has led the authorities to follow restrictive policies vis-à-vis corporate issuers. Probably because the prior authorization system was abolished only recently, corporate issuers might still be unaware of the new opportunities offered to them. Specific authorization from the Ministry of Finance is still required with respect to: (i) the issuance of bearer bonds; (ii) the classification of bond issues as "first category" (which implies that they can be bought by the insurance companies); and (iii) the announcement of bond issues in the "Journal Officiel", which is needed before proceeding with a public offering. Even though representatives of the Ministry of Finance have indicated that these authorizations have been granted on a quasi-systematic basis, they have the undesirable effect of complicating and lengthening issuing procedures, and the Government should consider removing or modifying them.

3.43. Tables 26A and 26B in Annex I show the main features of development banks' bond issues since 1985. Every issue entailed at least two tranches "A" and "B", with the former enjoying the tax advantages provided by the Law 62-75: tax deductibility<sup>76</sup>, up to 35% for purchases in the primary market. Contrary to shares, the holding requirement for bonds is five years.<sup>77</sup>

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75/ A 50% reduction of corporate tax is provided to listed companies that have a minimum 20% of share capital publicly held. This advantage is granted only for 5 years.

76/ Tax deductibility is granted only up to a certain proportion, decided by the Minister of Finance, of any bond issue. As a result, bond issues in Tunisia systematically include two tranches, A and B, with and without tax advantages.

77/ Since 1980, interest coupons have been set at 8% p.a. for A bonds and 11% p.a. for B bonds (fixed rate in both cases), resulting in after-tax returns of up to 14.96% p.a. and 7.15% p.a., respectively (assuming an average tax rate of 35 percent). In most issues, four different instruments were in

3.44. Equipment bonds are 10-year maturity, fixed-rate, government instruments repayable in equal installments.<sup>78</sup> Though their share in total net bond issues has been decreasing in recent years, they still constitute the bulk of total bond market capitalization (about 85%). Banks and insurance companies are required to hold a minimum of 20% of their deposits and 50% of their technical reserves, respectively in these bonds. The outstanding stock of equipment bonds was TD 1276 million at the end of 1990 (corresponding to 11% of GDP).

3.45. The "emprunts nationaux" were bonds issued by the Treasury in 1986 and 1988. Both issues were at fixed interest rates and included dinar-denominated, A and B bonds, and bonds denominated in foreign exchange currencies.<sup>79</sup> They were heavily over-subscribed and largely placed with individuals (an estimated 50 percent) due to the active promotion by the banks and the Treasury and their high yields.

3.46. Several characteristics of existing bond issues may further hamper the development of the primary and secondary market. In the primary market, investors face a lack of transparency due to the great variation in the repayment features of similar financial instruments. The experience of other countries suggests that the two most desirable features of a bond issue are the annual payment of interest, as capitalization of interest fits the needs of institutional rather than individual investors, and the so-called "bullet repayment" where the principal is repaid entirely at maturity rather than by installments, which facilitates computation and comparison of yields. Such characteristics could be adopted in Tunisia. Moreover, investors could be offered a wider choice regarding the range of maturities, currently limited to

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fact offered as tranches A and B were issued with two different repayment schedules: (i) five-year bonds with bullet repayment and capitalization of interest; and (ii) ten-year bonds with repayment in ten equal installments and annual payment of interest. While some issues involve slightly different features (e.g., in 1990, the five-year, category B, tranche of Tunisia-leasing's issue gives investors an option between bullet repayment and equal installments), the above four-tranche pattern appears to have been the most commonly used.

78/ Until 1989, equipment bonds carried a tax-exempt, below-market interest rate of 6.5% p.a. Since the beginning of 1989, the conditions of the new issues have been brought roughly in line with those of A bonds, with a fixed interest rate of 8.125% p.a. and tax deductibility of the invested amount. This tax advantage is granted only to the bonds voluntarily held and not to those compulsorily held by banks and insurance companies.

79/ That is French francs (9% p.a.), Deutsche Marks (6.25% p.a. in 1986, 7% p.a. in 1988) and US dollars (7.75% p.a. in 1986, 10% p.a. in 1988).

5 and 10 years, and new instruments, e.g., variable rate bonds, indexed to the money market rate. In the secondary market, investors do not benefit from the tax deductibility granted by Law 62-75 to purchases in the primary market. As with shares, this feature of the tax system greatly discourages the development of the secondary bond market.

3.47. Money market instruments. A major reform of the money market was implemented by the Tunisian authorities in 1988-89. Certificates of deposit, introduced in January 1988, can now be issued by banks in denomination of multiples of TD 500.000 with maturities ranging from 10 days to 5 years. Non financial enterprises are allowed to participate in the money market as lenders of funds and, with a minimum capital of TD 1 million, can issue commercial paper (billets de Trésorerie). In October 1989, the Central Bank introduced short-term Treasury bills which are now issued through an auction mechanism with maturities ranging from 13 to 52 weeks. Outstanding volumes of Treasury Bills have grown from TD 171 million in December 1989 to TD 448 million in December 1990. A significant volume of T-bills has been placed with individuals (about 50% of outstanding volumes), due to the small denominations of TD 1,000 and active selling policies from banks. The minimum denomination for commercial paper (TD 100,000) and CDs (TD 500,000) makes them accessible only to enterprises, institutional investors, or mutual funds. This characteristic may have constrained the growth of CDs. While commercial paper increased from TD 54 million in 1989 to TD 233 million in 1990, CDs increased only from TD 192 million in 1989 to TD 196 million in 1990. Yields on both commercial paper and CDs are very close to the money market rates while they are about two percentage points below for T-bills.

3.48. Mutual funds. Two types of mutual funds were recently introduced in Tunisia, namely closed-end investment funds (SIFAFs) and open-end investment funds (SICAVs).<sup>80</sup> Their creation is subject to the prior authorization of the

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80/ They were introduced by Law 88-92 of August 1988. Both open-ended and close-ended investment funds are legal constructions designed to pool many small amounts of money from different individuals in a common fund to be invested. Close-ended are investment companies with the share capital fixed in amount; open-ended are companies that issue new units or shares every time new money is received from subscribers. Normally, close-ended funds use the funds provided by the shareholders to invest in the shares of other companies and in fixed-term debt instruments. The shares of close-ended funds are not redeemable but can be traded in the market; thus, their value can clear above or below the market value of the underlying portfolio. This cannot happen with open-ended funds because the number of units or shares is not fixed. Being open-ended, the capital can be increased or decreased according to demand. This capital is then invested mainly in short-term prime paper. The net income from the fund is distributed, at intervals, to unit holders by dividing this net income by the number of units. If unit holders wish to dispose of all or some of their units, the company can simply cancel the units and sell off the corresponding assets. Accordingly, the market value or price of the units will vary directly with the market value of the securities represented by

Ministry of Finance (MoF). Though both categories of funds are intended to encourage investment in securities, SICAVs are likely to better serve this purpose, at least at an early stage of market development, because they provide the public at large with a greater degree of portfolio liquidity, while SICAFs are better adapted to the needs of large or sophisticated investors. Regrettably, the only funds authorized by the Minister of Finance (MoF) so far are SICAFs (though many applications have been filed for SICAVs). The MoF's reluctance to authorize SICAVs seems to result from its increasing awareness of the contradictions in the tax treatment: for example, on the one hand, the interest income, which is normally taxed if securities are held directly, is not if distributed through a SICAV (i.e., in the form of a dividend). On the other hand, the 1991 Finance Law has excluded SICAVs (and not SICAFs) from the tax deductibility benefits provided by the Law 62-75 to holders of securities.

3.49. Some restrictive features in the investment guidelines of SICAVs may also hamper their development. For example, just two years after their creation, SICAVs are expected to have invested 70% of their portfolios in bonds and stocks while investment in money market instruments other than T-bills is prohibited. Because of the market thinness, the two years period appears to be too short for complying with the 70% requirement. Moreover, limiting the choice of instruments of cash management only to bank deposits and T-bills, both yielding below-market returns, could lead SICAVs to hold a dangerously low level of liquid assets.

#### Term Structure of Interest Rates

3.50. A major impediment to the development of the financial market is the existence of administrative controls in the determination of interest rates. As already discussed, deposit and lending rates were partially liberalized in 1987-88. Commercial banks' deposit rates are now freely determined with the exception of the rates on sight deposits, which cannot exceed 2%, and the rate on special savings accounts which is set at 200 basis points below the money market rate. Current regulations limit the holding of special savings accounts to physical persons and to TD 5,000 per person and per bank. The outstanding stock of savings deposits was around TD 1.5 billion at end 1990 (or 35% of total banks' deposits). The Central Bank estimates that about half of this is accounted for by large and possibly multiple accounts that are not allowed by current regulations. Because of their high remuneration and liquidity, special savings accounts represent a most attractive instrument. However, they compete unfairly with other types of financial instruments; being an expensive resource, they also reduce the banks' operating margins. Rates on loans to priority sectors are set by the Central Bank while those on non priority lending may not be higher than the money market rate augmented by 300 basis points. Development banks rates are not subject to controls. Since the reform of the money market and the introduction of short-term financial instruments (CDs, Treasury bills, etc..) in 1988, the money market rate has been primarily determined by demand and supply forces. Instead, a considerable influence is still exercised by the

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those units. See Lewis, M.K. and Davis, K.T. (1987), "Domestic International Banking", Philip Allen (eds), page 32.

Ministry of Finance on the pricing of bond issues. Thus, bond market interest rates have remained remarkably uniform since the early eighties, even though the money market rate has increased by about two percentage points during the same period. Table 3.7 shows the term structure of interest rates as of November 1990.

3.51. Non market determination of interest rates result in anomalies in the term structure which, in turn, are likely to distort the allocation of resources. Assuming neutral inflationary expectations, a free market would produce a rising term structure of interest rates, to reflect time and liquidity preferences and the risk aversion of investors. Instead, the term structure of the interest rates of financial assets shown in Table 3.7 presents several anomalies which depend on structural distortions.<sup>81</sup> In particular, savings deposits are currently the highest yielding financial instrument on an after-tax basis, with the exception of A bonds; and the interest rate on ordinary bonds (category B) stands below that of money market instruments, while it could be expected to be higher in order to provide investors with a premium for the additional interest rate risk.

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81/ Similar anomalies can be found in the term structure of loan rates with long-term subsidized rates below short-term freely determined loan rates.

**Table 3.7: TAXATION AND YIELD OF FINANCIAL INSTRUMENTS**  
(Interest rates and tax regime as of November, 1990 - percent)

INSTRUMENT	NOMINAL RATE	WITHHOLD. TAX 1/	TAXATION 2/	TAX BENEFIT 3/	AFTER-TAX YIELD 4/
<b>Time Deposits</b>					
3-6 months	7.00	15	YES	NO	4.55
6-12 months	8.00	15	YES	NO	5.20
12-60 months	9.00	15	YES	NO	5.85
<b>Savings Deposits</b>					
with banks	9.81 5/	10	YES	TD 1,000	9.81
with CENT	9.81 5/	0	NO	TD 1,000	9.81
<b>Treasury Bills</b>					
13 weeks	8.75 6/	15	YES	NO	5.69
26 weeks	9.00 6/	15	YES	NO	5.85
52 weeks	9.50 6/	15	YES	NO	6.18
Commercial Paper	11.81 7/	15	YES	NO	7.68
CDs	11.81 7/	15	YES	NO	7.68
"A" Bonds	8.00	15	YES	35	14.9 8/
"B" Bonds	11.00	15	YES	NO	7.15 9/
Equipment Bonds 10/	8.125	15	YES	NO	5.28
"Emprunts Nationaux"			NO	NO	
Shares		0	NO	35	

- 1/ The withholding tax gives right to an equivalent tax credit; it is increased to 35% for bearers instruments.
- 2/ "Yes" means that interest income is taxable under general conditions (flat corporate tax of 35%, marginal tax rates ranging from 15% to 35% for individuals).
- 3/ Absolute amounts apply to the amount of interest deductible from taxable income; in the case of percentages, interest or dividend is fully deductible up to the specified portion of taxable income.
- 4/ Assuming an average tax rate of 35%, i.e., the corporate rate or the highest marginal rate applicable to individuals.
- 5/ Administratively set at TMM - 2% p.a.
- 6/ As it results from the bill auctions.
- 7/ Approximately equal to the current money market rate.
- 8/ Assuming repayment of capital and interests at end-period.
- 9/ Assuming repayment in equal installments and annual payment of interest.
- 10/ Repayment in equal installments over 10 years.

## G. CONCLUSIONS

3.52. Several features of the Tunisian financial system still hamper the transition from the previous "overdraft economy" to a full market economy. To consolidate the liberalization process initiated in 1987, the Government should adopt measures aimed at promoting competition in the banking system, and at reducing the segmentation of credit markets. Some recommendations along these lines have been provided in Section C. Specific suggestions on how to improve the coverage system of the foreign exchange risk, selective credit policies, and financial markets are examined below.

### Foreign Exchange Risk

3.53. A first best solution to the problem of "who bears the foreign exchange risk" cannot be implemented until capital controls are eliminated and the currency is made convertible. In fact, these are the objectives of monetary authorities for the 1990s. In the meantime, however, the distortions involved in the administrative management of the foreign exchange risk should be minimized. Thus, financial intermediaries should be encouraged to fully pass the foreign exchange risk to individual end-users willing to carry it. This would imply the further development of hedging instruments and of "natural hedging" practices: to facilitate the latter, it might be desirable to increase the current 20% limit above the proportion of foreign exchange receipts that exporters are allowed to retain.

3.54. There are at present no market-based long-term instruments for covering foreign exchange risk. The only long-term mechanism available applies to loans incurred by banks at the behest of the authorities, essentially loans from official sources with enough concessionality to be attractive to the Government but which the banks are unwilling to take unless they can transfer the foreign exchange risk. Under this mechanism the Central Bank assumes the risk and the borrowing bank pays 2-3 percentage points to the Central Bank. As a general rule, it would be better for a centralized system to be adopted that links the costs of loans to banks more closely with the market. A centralized solution would be justified in terms of economic efficiency by transferring the foreign exchange risk from risk-averse borrowers to the risk-neutral authorities, thus improving the welfare of the former while leaving the latter as well off as before.<sup>82</sup> One such mechanism might be to link the rate charged by the bank to the final borrower to a reference rate that is market determined and, ideally, one that reflects the foreign interest rate and the expected evolution of exchange rates. Such a rate should also be conspicuous and unambiguous. At present the only interest rate that is like this is the money market rate. Hence a temporary mechanism that could be considered would be for the borrowing banks

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82/ Authorities are less risk averse than final borrowers because the behavior of the domestic currency depends directly on their policy decisions. A welfare loss occurs when risk-averse borrowers cannot transfer the foreign exchange risk to other agents or deal with it in the market place.

to pay the difference between the interest rate on the borrowing abroad and the money market rate, adjusted periodically (for example, every six months) on the basis of the weighted average prevailing during the previous period.<sup>83</sup> At the same time the Central Bank could study the possibility of introducing market based instruments to cover in the international market the foreign exchange risk on long-term loans.

### Selective Credit Policies

3.55. Selective credit policies have been extensively pursued to allocate credit to priority sectors of the economy, including tourism and agriculture, export industries and small and medium enterprises. Selective credit policies have been shown to lack focus and monitoring, to provide a bias in favor of debt financing, and to entail a high budgetary cost. Thus, an overall reassessment of the entire system appears to be desirable. Such a reassessment should be undertaken in parallel with the reform of the Investment Codes. As discussed in Chapter II, the Government should first review the objectives of the incentives structure, both fiscal and financial, in the light of the newly reformed tax system and of the recently liberalized financial sector. Both channels through which selective credit is delivered and the instruments used should then be revised. As for the fiscal incentives, financial incentives should be chosen according to the criteria of cost effectiveness and efficiency.

3.56. Based on the analysis in this chapter, some suggestions can be made. For example, the preferential rediscounting at the Central Bank should be phased out entirely. If the authorities intend to keep subsidized loans for some activities, the subsidy element should be paid to the financial institutions directly out of budget resources. This measure would increase the transparency of the budgetary cost of the incentive mechanism. In addition, the instruments of selective credit should be limited to subsidized loans and direct investment grants. The criteria for granting and monitoring direct loans and repayable advances from budget resources should be reviewed in light of the unsatisfactory loan recovery experienced in the past. Finally, to avoid excess bias towards debt financing, the self financing requirements imposed on projects that are the target of subsidized credit should be significantly increased.

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<sup>83/</sup> This solution, however, presents an important drawback. For deposit banks, the money market rate also represents the marginal cost of funds. For development banks instead, the marginal cost of funds is better represented by the weighted cost of bond issues (A and B bonds) which is currently well below the money market rate and, in addition, varies from bank to bank and issue by issue. As a result, development banks, which, besides their own equity, are largely funded by external resources, would be deterred from continuing to borrow externally if the money market rate is chosen as the reference rate.

## Financial Markets

3.57. The development of an active securities market primarily depends on a stable political and macroeconomic environment, and on the existence of an adequate regulatory, fiscal and supervisory framework. Efforts in this direction would include:

- (a) Removing the remaining tax distortions. First, the benefits of Law 62-75 might be extended to all securities under identical and modified conditions. Under the new scheme, the yearly net increase in a securities portfolio could be made deductible from taxable income (up to a specified percentage), irrespective of the origin of the purchase (primary or secondary market) of the nature of the transaction itself (sale or purchase) and of the identity of the investor (personal, corporate or mutual fund). Decreases in portfolio would give rise to pro-rated repayment of tax benefits. This scheme would simplify the tax provisions of securities traded in the primary market, remove the tax distortions affecting the secondary market, and allow the application of Law 62-75 to SICAVs.
- (b) Deepening the bond market. As the Treasury is likely to remain the major issuer of bonds, it should use its prominent position to establish a standard of conduct. This would entail: (i) harmonizing the characteristics of the instruments issued; (ii) ensuring adequate market timing of issues; (iii) diversifying the maturities of bonds; (iv) allowing banks to underwrite Treasury and other bond issues; and (v) placing medium- and long-term bonds through public offerings as opposed to bilateral placements with institutional investors. At the same time the compulsory holdings of equipment bonds by financial intermediaries should be phased out; moreover, the investment guidelines of insurance companies and other institutional investors should be loosened so as to include any type of Treasury bond.
- (c) Adjusting the term structure of interest rates. Existing regulation on both deposit and lending rates should eventually be eliminated. During the transition, several measures could be taken. The rate on savings deposits could be set equal to the money market rate minus three or four percentage points, instead of the current two percentage points. This measure would still grant small savings a positive interest rate, while directing larger deposits toward more remunerative and less liquid instruments. As to the lending rates, the ceiling of 300 points over the money market rate could be applied on the average of the total portfolio of each bank rather than on a loan by loan basis. This measure would allow banks a most needed flexibility in their pricing policies and would still ensure the control of lending rates on an administered basis. An increase in bond yields would also be desirable, to ensure that the after tax return on these instruments is more attractive than that for savings deposits.

A N N E X I

S T A T I S T I C S

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**Table 1: NATIONAL ACCOUNTS IN CURRENT VALUES AND GROWTH RATES**

	in millions of Dinars		(Growth rates in percent rate in constant 1980 prices)						
	1980	1975	1980	1985	1986	1987	1988	1989	1990
Gross Domestic Product m.p.	10990.00	7.1%	7.4%	5.6%	-1.4%	5.5%	1.1%	3.7%	7.1%
Agriculture	1587.00	5.8%	9.8%	17.4%	-12.2%	17.5%	-23.7%	5.7%	26.9%
Industry	3094.30	6.5%	9.0%	1.8%	-0.8%	0.1%	2.3%	5.5%	5.4%
of which: Manufacturing	1641.20	1.5%	15.2%	5.0%	4.8%	4.1%	6.9%	6.0%	9.2%
Services	5052.70	9.6%	7.7%	4.8%	1.6%	6.2%	8.2%	2.6%	3.3%
Total Consumption	8864.00	15.8%	12.7%	2.9%	1.0%	0.8%	1.1%	4.0%	6.0%
Gross Domestic Investment	2919.30	-1.1%	0.9%	-12.6%	-18.6%	-7.7%	-17.1%	34.6%	28.6%
Resource Balance (X-M)	-793.30	..	..	..	..	..	..	..	..
Exports of GNFS	4591.90	0.7%	0.0%	3.3%	5.2%	14.5%	23.6%	3.3%	1.3%
Imports of GNFS	5385.20	9.8%	4.5%	-13.0%	-2.1%	-3.2%	15.8%	15.1%	8.1%
Gross Domestic Saving	2126.00	-18.5%	-0.6%	8.7%	-30.0%	33.4%	-10.5%	5.1%	13.9%
Gross National Saving	2339.10	-17.0%	1.3%	-1.0%	-30.0%	40.4%	-6.8%	6.9%	20.8%
<b>Prices</b>									
Real Effective Exchange Rate	65.25	..	100.00	96.74	82.90	71.23	68.75	67.19	65.25
Consumer Price Index	219.71	71.2	100.00	158.00	167.10	179.20	190.60	204.70	219.71
Growth Rate		9.5%	10.0%	8.0%	5.8%	7.2%	6.4%	7.4%	7.4%

**Source:** Ministry of Planning & Finance.

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**Table 2: BUDGET AND CURRENT ACCOUNT AS PERCENT OF GDP**

	1980	1985	1986	1987	1988	1989	1990
Government Revenues/GDP	28.8%	31.9%	32.0%	30.3%	30.3%	29.3%	27.3%
Government Net Expenditures/GDP	32.2%	36.9%	37.5%	33.0%	33.9%	33.1%	31.1%
Net External Borr/GDP	0.9%	2.4%	3.0%	0.3%	1.7%	1.2%	1.5%
Net Domestic Borr/GDP	2.5%	2.6%	2.6%	2.4%	1.9%	2.6%	2.3%
Net Deficit/GDP	-3.4%	-4.9%	-5.5%	-2.7%	-3.6%	-3.8%	-3.8%
Current Account/GDP	-4.7%	-7.1%	-8.0%	-1.0%	1.0%	-3.2%	-5.3%
Net Direct F. Investment/GDP	2.7%	1.7%	1.8%	1.0%	1.1%	1.3%	1.5%
<u>Memo item:</u>							
Debt Services(PPG)/EXPGS	11.8%	22.3%	25.5%	25.5%	20.4%	22.1%	22.1%
Total DOD(PPG,NPG,IMF,ST)/GDP	40.3%	58.9%	66.9%	70.2%	66.4%	67.4%	61.0%

Source: Ministry of Planning & Finance and World Bank Debt Reporting System (DRS).

**Table 3: INVESTMENTS AND SAVINGS AS PERCENT OF GDP**

	1975	1980	1985	1986	1987	1988	1989	1990
Gross Investment/GDP	28.0%	29.4%	26.6%	23.2%	20.4%	19.2%	22.8%	26.6%
Corporate Invest./GDP	17.8%	18.1%	16.2%	14.0%	11.5%	11.2%	12.3%	13.8%
Government/GDP	3.7%	5.4%	5.5%	4.9%	4.1%	4.1%	4.5%	5.4%
Households/GDP	4.2%	4.8%	5.1%	5.2%	4.7%	4.2%	3.9%	4.0%
Change in Stocks/GDP	2.3%	1.1%	-0.2%	-0.9%	0.0%	-0.3%	2.0%	3.4%
Domestic Saving/GDP	23.2%	24.0%	20.4%	15.9%	19.4%	19.6%	18.7%	19.3%

Source: Ministry of Planning & Finance.

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**Table 4: SECTORAL SURPLUSUS AND DEFICITS, 1980-1986**  
(in millions of TD)

	1980	1981	1982	1983	1984	1985	1986
Business sector	-386.1	-499.7	-743.8	-539.4	-742.0	-527.8	-616.2
Financial inst.	34.1	25.2	42.3	47.2	-63.1	21.0	24.4
Government	91.1	40.3	40.9	42.8	71.7	6.1	-48.1
Households	96.1	160.6	217.4	124.6	53.6	41.8	33.8
Extern. financing	-164.8	-273.6	-674.6	-374.8	-679.8	-458.9	-506.1
% gross domestic investment	15.8	20.3	44.2	23.1	34.1	25.0	31.1
% GNP	4.8	6.8	14.5	5.4	9.6	6.3	6.8

Source: Les comptes de la Nation, octobre 1989.

**Table 5: SECTORAL SURPLUSES AS % SHARE IN GNP**  
SELECTED COUNTRIES

		Households	Business	Government	Foreign
France	80-82	4.11	-4.74	-1.43	2.01
Japan	83-85	9.16	-4.73	-2.20	-2.73
UK	82-84	3.84	0.89	-3.38	-0.55
Italy	81-83	13.92	-2.82	-12.15	1.23
Turkey	71-81	7.73	-10.99	-0.86	3.16
Portugal	77/9 - 81	14.31	-16.06	-7.28	7.58
Indonesia	82-86	3.01	-4.06	-2.97	5.02
Philippines	83-85	9.07	-6.96	-3.64	2.93
Thailand	81-83	6.78	-6.52	-4.28	5.72
Korea	80-85	6.97	-13.35	1.12	5.15
Malaysia	85-86	16.79	-7.15	-12.24	1.71
Chile	83-85	3.65	-6.92	-4.32	7.59
Yugoslavia	70-85	7.02	-8.24	0.69	1.19
Tunisia	80-84	2.05	-13.65	2.45	9.10

Source: Honohan and Atiyas (1989), "Intersectoral Financial Flows in Developing Countries, World Bank, WPS 164.

**Table 6: EFFECTIVE PROTECTION RATES (in percentage)  
(activities producing for the domestic market)**

	1980	1983	1984	1985	1986	1987	1988	1989
Total Manufacturing	242	178	153	207	124	81	78	87
- Food processing & Agro-industries	258	191	1404	553	421	120	134	110
- Chemicals	111	161	92	100	88	62	62	70
- Textiles	272	175	98	203	194	107	82	76
- Electrical & mech.	96	67	92	104	88	73	63	98
Agriculture	27	33	46	48	46	43	25	22
Mining	10	24	23	20	9	14	16	17
Total Economy	70	67	74	84	70	52	42	43

**Source:** Institut d'Economie Quantitative.  
Atelier de Travail sur la protection, les incitations et la compétitivité dans les activités économiques du Maghreb, décembre 1988, page 49.

**Table 7: TARIFF DISTRIBUTION OF IMPORTS**

Tariff Bracket	1987			1988			1989		
	Whole Economy	Without QRs	With QRs	Whole Economy	Without QRs	With QRs	Whole Economy	Without QRs	With QRs
0- 5	1.21	1.25	1.14	1.46	1.21	1.50	1.46	1.58	1.32
5.1-10	.79	.36	.90	.01	.00	.02	.01	.00	.02
10.1-15	19.02	33.27	15.50	.47	.43	.49	.61	.41	.76
15.1-20	2.43	6.39	1.45	23.41	44.95	15.31	23.41	40.55	10.64
20.1-25	25.64	46.59	20.47	3.43	6.09	2.44	3.43	5.44	1.94
25.1-30	2.93	1.31	3.33	29.73	37.18	26.95	29.59	36.73	24.28
30.1-35	4.30	2.09	4.85	2.58	2.50	2.62	2.58	2.65	2.54
35.1-40	5.51	1.73	6.45	5.11	3.37	5.77	5.11	3.68	6.18
40.1-45	4.32	3.76	4.47	33.78	4.27	44.91	33.78	8.96	52.32
45.1-50	33.85	3.23	41.45	0.00	0.00	0.00	0.00	0.00	0.00
>50		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Source:** IEQ Tariff Files.

**Table 8: THE OPENNESS OF TUNISIA'S ECONOMY**

	1970	1975	1980	1985	1988	1989
Export/GDP	22.0	31.0	40.2	32.6	42.2	44.6
Import/GDP	26.5	35.8	45.6	38.7	41.8	48.7
Openness ind.	48.5	66.8	85.8	71.3	84.0	93.3

Source: Comtrade Data Base.

**Table 9: THE STRUCTURE OF EXPORTS  
(in percent)**

	1970	1973	1976	1979	1982	1985	1988	1989
Fuel	26.4	30.0	42.3	48.6	46.0	41.8	16.1	20.0
Agriculture	14.0	17.1	7.7	7.1	5.9	9.6	9.0	8.1
Manufact.	70.0	73.4	78.9	88.0	90.3	87.2	89.7	90.8

Note: Agricultural and manufacturing exports in percent of non-oil exports.

Source: Comtrade Data Base.

**Table 10: THE STRUCTURE OF IMPORTS  
(in percent)**

	1970	1973	1976	1979	1982	1985	1988	1989
Food	20.7	16.8	12.3	13.0	10.5	12.1	15.0	13.2
Cons.	18.9	19.6	15.8	17.8	16.9	19.8	25.3	25.7
Intermed.	35.4	29.3	28.8	27.8	31.0	32.5	36.4	33.3
Capital	23.2	28.0	31.9	24.1	30.5	22.0	16.7	19.1

Source: Comtrade Data Base.

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**Table 11: DISTRIBUTION OF IMPORTS BY IMPORT REGIME, 1982-1989**  
(Values in millions of dinars)

	1982	1983	1984	1985	1986	1987	1988	1989
<b>RESTRICTED</b>	1571	1561	1641	1342	1465	1254	1316	1255
imp. lic.	981	1068	1070	837	955	789	989	1052
annu. imp. auth.	580	493	571	505	510	465	327	203
<b>UNRESTRICTED</b>	430	409	454	542	452	730	1331	1805
import certif.	430	283	331	237	199	508	994	1407
equipment goods	---	126	123	151	31	21	77	100
temp. admission	---	---	---	154	222	201	260	298
<b>TOTAL</b>	2001	1970	2095	1884	1917	1984	2647	3060

Source: Central Bank of Tunisia.

**Table 12: THE REAL EXCHANGE RATE**  
(1980 = 100)

Year	Based on relative WPI	Based on relative GDP deflators
1980	100.0	100.0
1981	100.0	106.7
1982	108.3	109.7
1983	107.3	106.4
1984	104.3	107.5
1985	103.6	104.8
1986	93.6	81.3
1987	80.4	69.7
1988	78.8	69.7
1989	N.A	71.0

Source: IMF Financial Statistics and mission calculations.

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**Table 13: THE CURRENT ACCOUNT IMPACT OF TRADE LIBERALIZATION**

	1989	1990	1991	1992
<b>A. BASE SCENARIO</b>				
ER	1.000	1.000	1.000	1.000
TB	-20.369	-112.899	-188.501	-238.137
MCON	1065.730	1261.848	1418.643	1553.908
MCAP	793.389	805.251	845.513	887.591
XMANUF	1838.750	1954.200	2075.655	2203.363
<b>B. TRADE LIBERALIZATION</b>				
ER	1.000	1.000	1.000	1.000
TB	-20.369	-334.224	-566.508	-735.423
MCON	1065.730	1483.173	1796.650	2051.195
MCAP	793.389	805.251	845.513	887.591
XMANUF	1838.750	1954.200	2075.655	2203.363
<b>C. TRADE LIBERALIZATION AND COMPENSATORY DEVALUATION</b>				
ER	1.000	1.072	1.112	1.137
TB	-20.404	-112.899	-188.501	-238.137
MCON	1065.742	1392.033	1632.141	1828.205
MCAP	793.395	773.959	795.564	824.657
XMANUF	1838.709	2200.044	2490.111	2745.210
<b>D. TRADE LIBERALIZATION AND TARIFF INCREASE</b>				
ER	1.000	1.032	1.070	1.093
TB	-20.404	-112.899	-188.501	-238.137
MCON	1065.742	1320.686	1552.918	1741.758
MCAP	793.395	790.847	813.492	843.635
XMANUF	1838.709	2062.556	2329.618	2564.685

**Legenda:** ER: real exchange rate  
 TB: (partial) trade balance  
 MCON: imports of consumption goods  
 MCAP: imports of capital goods  
 XMANUF: exports of manufacturing goods

**Source:** Mission calculations

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**Table 14: PRE-TAX RATES OF RETURN WITH ZERO INFLATION AND ZERO PERSONAL TAX**

	Buildings	Machinery	Stocks	Average*
Retained earnings/ new equity	6.71	6.39	7.69	6.81
Debt	4.23	4.09	5.00	4.34
Average	5.07	4.87	5.91	5.18 (1.28)

\* Overall unweighted standard deviation of the cost of capital in parenthesis.

**Table 15: PRE-TAX RATES OF RETURN AND TAX WEDGES WITH TOP PERSONAL TAX, ZERO AND 7.4% INFLATION**

	Buildings	Machinery	Stocks	Retain. Earn./ New equity	Debt	Average*
Zero inflation/35% Personal Tax	4.23	4.09	5.00	4.34	4.34	4.34 (0.40)
Tax wedge	0.98	0.84	1.75	1.09	1.09	1.09
7.4% inflation 35% pers. tax rate	1.82	2.23	5.00	2.57	2.57	2.57 (1.41)
Tax wedge	1.16	1.57	4.34	1.91	1.91	1.91

\* Overall unweighted standard deviation of the cost of capital in parenthesis.

**Table 16: PRE-TAX RATES OF RETURN WITH  
TOP PERSONAL TAX AND 7.4% INFLATION**  
Average over assets and finance types

	Buildings	Machinery	Stocks	Retain. Earn. /New equity	Debt	Average*
<b>1. INDUSTRIAL INVESTMENT CODE</b>						
1a. Totally export.	0.66	0.66	0.66	0.66	0.66	0.66 (0)
1b. Partly export.	2.63	3.76	4.22	1.81	4.01	3.26 (1.23)
1c. Decentr. zones	1.96	5.15	4.83	3.02	3.64	3.44 (1.43)
<b>2. AGRICULTURE CODE</b>						
2a. Basic	-0.01	0.27	0.62	0.96	-0.20	0.19 (0.61)
2b. Priority areas	-0.55	-2.15	0.47	-0.37	-1.01	-0.80 (1.14)
<b>3. TRADING COMPANIES INVESTMENT CODE</b>						
3a. Non resident trading companies	2.77	2.89	4.11	1.41	3.92	3.07 (1.32)
<b>4. TOURISM INVESTMENT CODE</b>						
4a. Hotel Constr.	0.26	3.18	3.23	3.03	3.03	1.67 (1.66)
4bc. Invest. in Sahara	-0.737	1.93	2.75	2.73	-0.36	0.69 (1.95)
<b>5. SERVICES INVESTMENT CODE</b>						
5a. Exporters	0.66	0.66	0.66	0.66	0.66	0.66 (0)
5b. Partly export.	2.63	3.76	4.22	1.81	4.01	3.26 (1.23)

\* Overall unweighted standard deviation of cost of capital in parenthesis.

**Note:** Incentives considered in the calculation of the required pre-corporate tax rates of return (inflation = 0.074 in all cases).

- 1a. Exemption from corporate tax, no import duties, no taxes on interest income.
- 1b. Corporate tax reduced on the basis of 35% of the firm's output being exported; tax exemption on profits from domestic sales up to 20% of profits on exports; exemption from 35% of import duties.
- 1c. Tax holiday at 10% of the corporate tax rate for 7 years.
- 2a. Corporate tax at 10%, reduced to 0% for 10 years and then 5% for five additional years; exemption from import duties; a 5% soft loan rebate; a grant equal to 20% of the investment cost.
- 2b. On the assumption that 50% of turnover is exported, the corporate tax rate is 0.05; tax holiday at 0% for 10 years; exemption from import duties; a 5% soft loan rebate; and a 20% grant.
- 3a. On the assumption that 50% of output is exported, the tax rate is 17.5%; exemption from import duties.
- 4a. Tax holiday at 10% for five years, and a 3% soft loan rebate.
- 4b. Tax holiday at 0% for 10 years plus a 5% soft loan rebate.
- 5a. Exemption from corporate tax, no import duties.
- 5b. Corporate tax reduced on the basis of 35% of the firm's output being exported; tax exemption on profits from domestic sales up to 20% of profits on exports; exemption from 35% of import duties.

**Table 17: TAX WEDGES WITH TOP PERSONAL TAX  
AND 7.4% INFLATION**  
Average over assets and finance types

	Buildings	Machinery	Stocks	Retain. Earn. /New equity	Debt	Average
<b>1. INDUSTRIAL INVESTMENT CODE</b>						
1a. Totally export.	0	0	0	0	0	0
1b. Partly export.	1.97	3.10	3.56	1.15	3.35	2.60
1c. Decentr. zones	1.30	4.49	4.17	2.36	2.98	2.78
<b>2. AGRICULTURE CODE</b>						
2a. Basic	-1.35	-1.84	-0.05	0.63	-1.50	-1.21
2b. Priority areas	-1.21	-2.81	-0.19	1.03	-1.67	-1.46
<b>3. TRADING COMPANIES INVESTMENT CODE</b>						
3a. Non resident Trading companies	2.11	2.23	3.45	0.75	3.26	2.41
<b>4. TOURISM INVESTMENT CODE</b>						
4a. Hotel Constr.	-0.4	2.52	2.57	2.37	0.32	1.01
4b. Invest. in Sahara	-1.43	1.27	2.09	2.07	-1.02	-0.03
<b>5. SERVICES INVESTMENT CODE</b>						
5a. Exporters	0	0	0	0	0	0
5b. Partly export.	1.97	3.10	3.56	1.15	3.35	2.60

**Note:** Incentives considered in the calculation of the required pre-corporate tax rates of return (inflation = 0.074 in all cases).

- 1a. Exemption from corporate tax, no import duties, no taxes on interest income.
- 1b. Corporate tax reduced on the basis of 35% of the firm's output being exported; tax exemption on profits from domestic sales up to 20% of profits on exports; exemption from 35% of import duties.
- 1c. Tax holiday at 10% of the corporate tax rate for 7 years.
- 2a. Corporate tax at 10%, reduced to 0% for 10 years and then 5% for five additional years; exemption from import duties; a 5% soft loan rebate; a grant equal to 20% of the investment cost.
- 2b. On the assumption that 50% of turnover is exported, the corporate tax rate is 0.05; tax holiday at 0% for 10 years; exemption from import duties; a 5% soft loan rebate; and a 20% grant.
- 3a. On the assumption that 50% of output is exported, the tax rate is 17.5%; exemption from import duties.
- 4a. Tax holiday at 10% for five years, and a 3% soft loan rebate.
- 4b. Tax holiday at 0% for 10 years plus a 5% soft loan rebate.
- 5a. Exemption from corporate tax, no import duties.
- 5b. Corporate tax reduced on the basis of 35% of the firm's output being exported; tax exemption on profits from domestic sales up to 20% of profits on exports; exemption from 35% of import duties.

**Table 18.A: CONSOLIDATED BALANCE SHEET OF CENTRAL BANK AND DEPOSIT BANKS - LIABILITIES**  
(End of period - Millions of TD)

	1975	1980	1983	1984	1985	1986	1987	1988	1989	1990
<b>Money + quasi money</b>	663	1441	2429	2712	3087	3262	3711	4416	4909	
<b>Money</b>	475	950	1653	1765	1987	2057	2025	2456	2526	2649
- Currency outside banks	162	299	533	573	632	651	704	800	874	1005
- Demand deposits	313	651	1120	1191	1355	1406	1321	1565	1652	1644
of which: households		160	322	367	407	425	438	559	496	
enterprises		406	635	664	773	801	785	982	1008	
<b>Quasi money</b>	188	491	776	947	1100	1205	1686	1960	2383	2571
of which : Comptes Spéciaux d'Epargne	49	178	407	487	576	688	863	1079	1300	1511
<b>M3 (1)</b>	667	1445	2431	2715	3090	3265	3713	4420	5163	5480
<b>Special resources (2)</b>	108	186	292	351	405	460	501	542	664	743
of which: Long-term Foreign Borrowing	49	94	130	163	179	189	191	187	201	
<b>Capital</b>	83	159	324	413	487	570	612	448	574	640
<b>Total resources of Central Bank &amp; Development banks</b>	892	1781	3301	3647	4136	4316	4777	5217	6230	6840

(1) M3 - (Money + quasi money) = Housing savings.

(2) Government funds make up the difference between Special resources and Long-term foreign borrowing.

Source: Central Bank, Statistiques Financières.

**Table 18.B: CONSOLIDATED BALANCE SHEET OF CENTRAL BANK AND DEPOSIT BANKS - ASSETS**  
(End of period - Millions of TD)

	1975	1980	1983	1984	1985	1986	1987	1988	1989	1990
Net foreign assets	148	191	389	289	201	53	176	532	668	596
Credit to the Government	69	218	354	451	554	628	721	677	722	807
Credit to the economy	674	1372	2558	2907	3381	3635	3878	4008	4840	5335
- Short term	473	953	1708	1940	2305	2492	2574	2796	3201	3365
of which: Rediscount	74	117	255	338	433	453	386	381	401	146
Special resources	8	28	57	72	93	106	102	112	112	
- Medium term	110	236	512	562	609	631	694	725	901	881
of which: Rediscount	11	21	188	204	209	221	220	212	337	332
Special resources	36	39	58	70	80	94	117	103	148	
- Long term	58	124	204	224	257	257	298	333	597	329
of which: Rediscount	0	0	21	21	13	10	3	0	2	9
Special resources	50	108	157	177	210	211	217	256	286	
- Bonds	33	59	134	182	210	255	312	154	141	154
Total assets	891	1781	3301	3647	4136	4136	4775	5217	6230	6840

Source: Central Bank, Statistiques Financières.

**Table 19: NON-MARKET RESOURCES OF DEPOSIT BANKS**  
(End of Period; Millions of TD)

	1983	1984	1985	1986	1987	1988	1989	1990
1) Total	834	1000	1137	1256	1273	1334	1608	1440
2) Central Bank Rediscount	542	649	732	796	772	792	944	772
3) Special Resources	292	351	405	460	501	542	664	668
- Government Funds *	136	159	193	214	224	259	366	
- Foreign Resources	130	164	179	190	191	187	201	
- Counterpart Funds	26	28	33	56	86	96	97	
Memorandum								
4) Credit to the Economy	2148	2396	2752	2953	3217	3527	4668	5194
5) = 1/4	38.8	41.7	41.3	42.5	39.5	37.8	34.4	27.7

\* FOSDA, FOSEP, FOFRODI, FONAPRA, FNAH

Source: Central Bank, Statistiques Financières.

**Table 20: BALANCE SHEET OF DEVELOPMENT BANKS**  
(End of period, Millions of TD)

	1986	1987	1988	1989	1990
- Foreign assets	89	45	45	59	70
- Claims on Government	--	0.6	0.7	9	--
- Claims on Economy	1026	1184	1292	847	983
Credit from ordinary resources	655	743	738	510	597
Credit from special resources	371	441	554	337	387
- Securities portfolio	168	159	182	173	208
- Others	190	390.4	464.3	342	382
<u>Total assets = Total liabilities</u>	1473	1779	1984	1430	1643
- Foreign liabilities	83	73	28	51	57
- Monetary deposits	11	17	13	6	8
- Time and saving deposits	247	256	329	115	186
- Special resources	457	566	699	386	417
- Capital accounts	461	662	710	686	739
- Others	214	205	205	184	236

Source: Central Bank, Statistiques Financières.

**Table 21: CREDIT RECORDED BY THE CENTRALE DES RISQUES BY BRANCH OF ECONOMIC ACTIVITY**  
(End of Period; Millions of TD)

	1980	1983	1984	1985	1986	1987	1988	1989
<b>Short-Term Credit (1)</b>	901	1568	1918	2174	2458	2666	2936	3411
- Agriculture and Fish	44	80	94	113	122	135	154	182
- Industry	455	867	1040	1230	1447	1577	1757	2043
of which manufact.	287	670	824	972	1147	1299	1463	1725
- Services	602	621	784	831	889	954	1025	1186
of which Tourism	51	56	79	85	102	104	104	121
<b>Medium- &amp; Long-Term Credit (2)</b>	568	1150	1373	1585	1718	1882	2024	2139
- Agriculture and Fish	84	149	161	186	208	232	317	320
- Industries	267	549	672	758	787	812	816	817
of which Manufact.	214	447	561	633	661	634	716	745
- Services	217	452	540	641	723	838	891	1002
of which Tourism	56	122	167	210	242	257	275	318
<b>Total Credit (3=1+2)</b>	1469	2718	3291	3759	4176	4548	4960	5550
- Agriculture and Fish	128	229	255	299	330	367	471	502
- Industries	723	1418	1712	1988	2234	2389	2573	2860
of which Manufact.	572	1117	1385	1605	1808	1993	2179	2470
- Services	619	1073	1324	1472	1612	1792	1916	2188
of which Tourism	107	178	246	295	344	361	379	439
Percentage of Short-Term Credit	61.3	57.7	58.2	57.8	58.8	58.6	59.2	61.4
Percentage of Medium- & Long-Term Credit	38.7	42.3	41.8	42.2	41.2	41.4	40.8	38.6

Source: Central Bank, Statistiques Financières.

**Table 22: FONDS DE PEREQUATION DES CHANGES (FPC)**  
(millions of TD)

	FOREIGN EXCHANGE LOSSES 1	PAYMENTS MADE BY THE FPC 2	LIABILITIES FLOWS 3 = 1-2	LIABILITIES: STOCKS AT END-YEAR
1983				13.59
1984	13.72		13.72	27.31
1985	16.07		16.07	43.38
1986	14.36	19.50	-5.14	38.24
1987	21.49	17.50	3.99	42.23
1988	32.78	30.41	2.37	44.60
1989	27.27	23.90	3.37	47.97
1990	30.45	22.81	7.64	55.61
	156.14	114.12	42.02	

Source: Ministry of Finance and Mission estimates.

**Table 23: LENDING CONDITIONS OF GOVERNMENT FUNDS**

	REPAYABLE ADVANCES			LOANS FROM BUDGET			INTEREST RATE SUBSIDIES
	Maturity (years)	Grace Period (years)	Interest rate (in %)	Maturity (years)	Grace Period (years)	Interest Rate (in %)	
<b>FONAPRA</b>							
< TD 10,000	11	1/	0				
10,000 TO 25,000	11	1/	0				
<b>FOPRODI</b>							
< TD 45,000 (extensions)	12	5	3	7	0	4-6.25	2/
< TD 150,000 (new projects)	12	5	3	10	3	4-6.25	2/
150 to 500,000	12	5	3				
<b>FOSDA 3/</b>							
"A" projects				up to 25		8-8.5	
"B" projects							
General							end-user pays the equivalent of 8%-8.5%
Young/Technic.	12	5	4				
Technicians in priority areas	12	5	4				
"C" projects							
General	10	3	6				up to 3 percent- age points
Young farmers	12	5	4				
Technicians	12	5	4				
<b>TOURISM PROJECTS</b>							
							3% to 4% end-user pays at least money market rate

1/ Grace period of up to the maturity of loans granted by banks for the project.

2/ Depending on the geographical location of the project.

3/ "A" projects = isolated investments; "B" projects = integrated investments below TD 120,000;

"C" projects = integrated investments below TD 150,000.

**Source:** Information provided by the relevant agencies.

**Table 24: ACCESS CONDITIONS TO GOVERNMENT FUNDS**

	Project Promoter	Others	Repayable Advances	Capital Subsidies	Total Equity	Debt	Broad Debt 2/
<b>FONAPRA</b>							
< TD 10,000	4%		36%	N.A.	40%	60%	96%
10,000 to 25,000	8%		32%	N.A.	40%	60%	92%
<b>FOPRODI</b>							
< TD 150,000	3%	6%	21%	N.A.	30%	70% 3/	91%
150 to 500,000	3%	6%	21%	N.A.	30%	70%	91%
500,000-1 Million	6%	10.5%	13.5%	N.A.	30%	70%	83.5%
<b>FOSDA 1/</b>							
"A" projects	10%		N.A.	10%	20%	80% 3/	
"B" projects							
General	10%		N.A.	16%	26%	74% 4/	
Young/Technic. Technicians in priority areas	2%		8%	23%	33%	67% 4/	75%
"C" projects							
General	15%		15%	1%	31%	69% 4/	84%
Young farmers	6%		24%	8%	38%	62% 4/	86%
Technicians	6%		9%	23%	38%	62% 4/	71%
<b>TOURISM PROJECTS</b>						4/	

1/ "A" projects = isolated investments; "B" projects = integrated investments below TD 120,000;  
"C" projects = integrated investments below TD 500,000.

2/ Including repayable advances in debt.

3/ Preferential loans from budget are available.

4/ Bank loans may benefit interest rate subsidies.

**Source:** Information provided by the relevant agencies.

**Table 25: FINANCIAL MARKETS - SELECTED TABLES**  
(in Millions of TD)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Corporate Invest.	641	895	1148	1135	1248	1120	981	913	962	1176	1543
<b>STOCK MARKET</b>											
Share issues	53	314	156	259	300	137	200	121	134	195	
New Companies	31	259	118	146	200	42	15	31	42	123	
o/w cash	30	259	116	144	193	41	14	28	39	107	
Cap. increases	23	55	38	113	99	96	185	91	92	72	
o/w cash	16	35	34	108	65	81	169	84	78	59	
Total cash	46	294	150	252	258	122	183	112	117	166	
% of Investment	7.2%	32.8%	13.1%	22.2%	20.7%	10.9%	18.7%	12.3%	12.2%	14.1%	
Market Capitalization (main market)						366	450	455	546	577 (278)	(445)*
Volume Traded	20.4	18.8	23.9	23.7	33.9	24.3	18.2	29.2	54.8	98.2	
Main market	2.9	5.6	6.2	6.2	20.6	8.1	5	4.9	11.1	29.6	
Occasional market	17.5	13.2	17.7	17.5	13.3	16.2	13.2	24.3	43.7	68.6	
Turnover (main market)						2.2%	1.1%	1.1%	2.0%	5.1%	
<b>BOND MARKET</b>											
Gross Bond Issues	113	154	153	180	217	258	286	246	324	308	332
Equipment Bonds	111	154	151	178	207	253	246	237	207	252	260
Other Govt Iss.	0	0	0	0	0	0	32	0	80	0	0
Other Issuers	2	0	2	2	10	5	8	9	37	56	72
Govt in %	98.2%	100.0%	98.7%	98.9%	95.4%	98.1%	97.2%	96.3%	88.6%	81.8%	78.3%
Net Bond Issues	72.0	101.8	86.8	98.6	120.3	145.7	147.3	80.6	141.8	96.3	101.3
Equipment Bonds	70	102	85	97	111	142	109	80	34	69	60
Other Govt Iss.	0	0	0	0	0	0	32	-6	74	-22	-22
Other Issuers	2.0	-0.2	1.8	1.6	9.3	3.7	6.3	6.6	33.8	49.3	63.3
Govt in %	97.2%	100.2%	98.0%	98.4%	92.2%	97.4%	95.7%	91.8%	76.2%	48.8%	37.5%
Market Capitalizat.	389	491	578	676	796	942	1090	1170	1312	1410	1514
Equipment Bonds	387	489	574	671	782	924	1033	1113	1147	1216	1276
Other Govt Iss.	0	0	0	0	0	0	32	26	100	80	60
Other Issuers	2	2	4	5	14	18	25	31	65	114	178
Marketable Bds in % of capitaliz	2 0.5%	2 0.4%	4 0.6%	5 0.8%	14 1.8%	18 1.9%	57 5.2%	57 4.9%	165 12.6%	194 13.8%	238 15.7%

\* Revised data based on new admission criteria for the permanent market.

Source: Stock Exchange and Central Bank.

**Table 26.A: MAIN FEATURES OF THE BONDS ISSUED BY  
DEVELOPMENT BANKS 1985-1988**

YEAR	*ISSUER * 1/ *	* * * * * * * *	VOLUME ISSUED (Tmillion)*	*INTEREST RATE	*TAX *BENEFIT * 2/	*Maturity	*REPAYMENT	*INTEREST *PAYMENT
1985	*STUSID	* A *	0.62 *	7.40%	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* B *	0.51 *	9.60%	NO	*10 YEARS	*BULLET	*CAPITALIZED
		*TOT*	1.13 *					
1985	*BDET	* A *	2.72 *	7.75%	YES	*10 YEARS	*EQUAI INST.	*ANNUAL
		* B *	1.44 *	10.25%	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	4.16 *					
1985	*TOTAL	* * *	5.29 *					
1986	*BDET	* A *	5.18 *	8.00%	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	2.44 *	11.00%	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	7.62 *					
1987	*BDET	* A *	5.83 *	8.00%	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	3.03 *	11.00%	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	8.86 *					
1988	*BNDT	* A *	0.38 *	8.00%	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* A *	6.66 *	8.00%	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	0.89 *	11.00%	NO	* 5 YEARS	*BULLET	*CAPITALIZED
		* B *	6.48 *	11.00%	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	14.41 *					
1988	*BDET	* A *	1.04 *	8.00%	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* A *	4.67 *	8.00%	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	5.59 *	11.00%	NO	* 5 YEARS	*BULLET	*CAPITALIZED
		* B *	1.08 *	11.00%	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	12.38 *					
1988	*STB	* A *	3.50 *	10.00%	YES	*10 YEARS	*BULLET	*ANNUAL
		* B *	6.50 *	10.00%	NO	*10 YEARS	*BULLET	*ANNUAL
		*TOT*	10.00 *					
1988	*TOTAL	* * *	36.79 *					

- 1/ STUSID, BDET, BNDT and BTKD are development banks; BNA and BS are commercial banks; TL is a leasing company.
- 2/ For "A" bonds, the investment amount is deductible from taxable income (up to 35% of taxable income).
- 3/ Bondholders can choose repayment in equal installments.

**Table 26.B: MAIN FEATURES OF THE BONDS ISSUED BY DEVELOPMENT BANKS 1989-1990**

YEAR	*ISSUER	* VOLUME	*INTEREST	*TAX	*MATURITY	*REPAYMENT	*INTEREST	
	1/	* ISSUED	* RATE	* BENEFIT*			* PAYMENT	
		*(Tdmillion)*		* 2/				
1989	*BDET	* A *	N.A.	* 8.00%*	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* A *	N.A.	* 8.00%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	N.A.	* 11.00%*	NO	* 5 YEARS	*BULLET	*CAPITALIZED
		* B *	N.A.	* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	12.37	*	*	*	*	*
1989	*BNDT	* A *	1.42	* 8.00%*	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* A *	1.81	* 8.00%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	4.35	* 11.00%*	NO	* 5 YEARS	*BULLET	*CAPITALIZED
		* B *	4.91	* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	12.49	*	*	*	*	*
1989	*TL	* A *	1.09	* 8.00%*	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* A *	0.35	* 8.00%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	1.19	* 11.00%*	NO	* 5 YEARS	*BULLET	*CAPITALIZED
		* B *	0.36	* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	2.99	*	*	*	*	*
1989	*BS	* A *	2.00	* 8.25%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	1.00	* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	3.00	*	*	*	*	*
1989	*BNA	* A *	17.50	* 8.00%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	7.50	* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	25.00	*	*	*	*	*
1989	*TOTAL	* *	55.85	*	*	*	*	*
1990	*BNA	* A *	5.00	* 8.00%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	20.00	* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	25.00	*	*	*	*	*
1990	*BNDT	* A *	3.74	* 8.00%*	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* A *		* 8.00%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	9.77	* 11.00%*	NO	* 5 YEARS	*BULLET	*CAPITALIZED
		* B *		* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	13.51	*	*	*	*	*
1990	*BDET	* A *	8.95	* 8.00%*	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* A *		* 8.00%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	4.93	* 11.00%*	NO	* 5 YEARS	*BULLET	*CAPITALIZED
		* B *		* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	13.88	*	*	*	*	*
1990	*BTKD	* A *	5.04	* 8.00%*	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* A *		* 8.00%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	2.78	* 11.00%*	NO	* 5 YEARS	*BULLET	*CAPITALIZED
		* B *		* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	7.83	*	*	*	*	*
1990	*BS	* A *	2.00	* 8.5-10%*	YES	* 8 YEARS	*EQUAL INST.	*ANNUAL
		* B *	6.00	* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	8.00	*	*	*	*	*
1990	*TL	* A *	1.50	* 8.25%*	YES	* 5 YEARS	*BULLET	*CAPITALIZED
		* A *		* 8.25%*	YES	*10 YEARS	*EQUAL INST.	*ANNUAL
		* B *	1.50	* 11.00%*	NO	* 5 YEARS	*BULLET 3/	*CAPITALIZED
		* B *		* 11.00%*	NO	*10 YEARS	*EQUAL INST.	*ANNUAL
		*TOT*	3.00	*	*	*	*	*
1990	*TOTAL	* *	71.22	*	*	*	*	*

- 1/ STUSID, BDET, BNDT and BTKD are development banks; BNA and BS are commercial banks; TL is a leasing company.  
 2/ For "A" bonds, the investment amount is deductible from taxable income (up to 35% of taxable income).  
 3/ Bondholders can choose repayment in equal installments.

**Table 27: PLACEMENT OF SELECTED BOND ISSUES WITH INDIVIDUALS AND CORPORATIONS**

	ISSUE VOLUME (millions of TD)	INDIVIDUALS (in percent)	CORPORATIONS (in percent)
<b>DEVELOPMENT BANKS</b>			
BDET 1983	2.1	33.7	66.3
BDET 1984	3.9	5.1	94.9
BDET 1985	4.1	19.8	80.2
BDET 1986	7.6	8.4	91.6
BDET 1987	8.8	13.0	87.0
BDET 1988	12.5	73.9	26.1
BNDT 1988	14.4	3.0	97.0
BNA 1989	25.0	26.0	74.0
BNDT 1989	12.5	3.0	97.0
BNA 1990	25.0	4.0	96.0
BNDT 1990	13.5	5.0	95.0
BTKD 1990	7.8	14.0	86.0
<b>TOTAL</b>	<b>137.2</b>	<b>16.6</b>	<b>83.4</b>
<b>TREASURY BONDS</b>			
1986	32.0	57.0	43.0
1988	80.5	60.0	40.0

**Source:** Stock Exchange.

ANNEX II

THE MODEL OF THE TRADE SECTOR

Econometric analysis has focussed on imports of consumer and investment goods and on exports. The empirical results indicate that the evolution of tariff and non tariff barriers to trade plays a crucial role in affecting import behavior, particularly of consumer goods. Remarkably, however, also imports of capital goods are found to be significantly affected by movements in relative prices. Finally, the competitiveness of exports is found to be a major contributing factor to the performance of manufacturing exports.

1. Imports of Consumer Goods

The demand for imports of consumer goods modelled in this section draws on recent applications of rationing theory to import behavior.<sup>1</sup> It is assumed that consumer preferences for domestic and foreign goods can be described by a linear demand system. In the specification of the model a crucial distinction is introduced between restricted and free imports. The model permits to recover structural parameters of consumers behavior, allowing therefore to isolate the impact of import liberalization.

The representative household, after having solved the first stage of its optimization problem, allocates total consumption among domestic and foreign goods. Two import categories are distinguished, depending on whether they are subject to quantitative restrictions. Relative prices between restricted and unrestricted imports are assumed to be constant. Consumers' preferences are described by a Linear Expenditure System. As shown by Neary and Roberts (1980),<sup>2</sup> the demand function for an unconstrained good in the presence of binding constraints on other goods is:

$$m_j P_j = Y_j P_j + \frac{\beta_j}{1 - \sum \beta_c} - [E - \sum P_f \gamma_f - \sum P_c m_c]$$

where  $Y$ 's are the subsistence levels of the different commodities;  $\beta$ 's are marginal propensities to spend,  $m$ 's are levels of consumption. Indices  $f$  (and  $j$ ) refer to unconstrained goods, index  $c$  to constrained goods. Aggregating over imported goods, we find that total real imports  $M$  can be written as:

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1/ See Bertola G. and Faini R., "Import demand and non tariff barriers: the impact of trade liberalization. An application to Morocco", *Journal of Development Economics* 34, 1990.

2/ See Neary, J.P. and Roberts, K.W.S., "The Theory of Household Behaviour under Rationing", *European Economic Review* 13, 1980, pp. 25-42.

$$P_M M = P_M (\sum \gamma_f + \sum m_c) + \frac{\sum \beta_f}{1 - \sum \beta_c} [E - P_D \sum \gamma_D - P_M (\sum \gamma_f + \sum m_c)]$$

where  $p_M$  and  $p_D$  denote the price of imports and domestic goods respectively. The above equation is not suitable for estimation to the extent that data on quota levels for individual goods are unavailable. For the purpose of estimation, it is assumed that: a)  $\sum \beta_c / \beta = \sum \beta_c / (\sum \beta_f + \sum \beta_c)$  can be approximated by the share of tariff lines subject to QR's (henceforth,  $q$ ); b) that  $\alpha = (\sum \gamma_f + \sum m_c)$  is approximately constant. With these assumptions, the estimating equation becomes:

$$P_M M = P_M \alpha + \frac{\beta(1-q)}{1-\beta_q} [E - P_D \gamma - P_M \alpha]$$

Results of the estimation by non-linear least squares, after allowing for partial adjustment are presented in Table A1.

Table A1: IMPORTS OF CONSUMPTION GOODS

<u>Coefficient</u>	<u>Estimate</u>	<u>Standard Error</u>
$\alpha$	211.98	29.5
$\gamma$	1471.6	240.1
$\beta$	.50	.098
$d$	.59	.154

DW: 2.31  $R^2 = .99$  LM = 1.45

The (constrained) average propensity to import in 1989 was equal to .173. The estimate of the (unconstrained) marginal propensity to import is significantly higher, .50. Estimated super-numerary income is positive over the

whole sample. The Lagrange multiplier (LM) test is used as a diagnostic tool. It does not indicate any clear sign of misspecification.

## 2. Imports of Investment Goods

Investment goods imports are modelled very simply. Investment decisions are assumed to be separable, i.e., investors first decide the aggregate amount of investment and then determine its allocation across foreign and domestic sources of supply. Only the second-stage decision is analyzed here. Following Nabli (1980)<sup>3</sup>, it was assumed that quantitative import restrictions did not have a substantial effect on capital goods imports. Preliminary investigations confirmed this supposition. Imports of investment goods (MI) are assumed to depend on aggregate domestic investment (I) and the relative price of foreign capital goods (RP, defined as the ratio of imported to domestic capital goods prices). Starting from a general dynamic specification, with one lag for all explanatory variables and no zero price homogeneity condition imposed, the following parsimonious representation of the data generating process was retained (Table A2).

Table A2: IMPORTS OF INVESTMENT GOODS

<u>Explanatory Variable</u>	<u>Coefficient Estimate</u>	<u>Standard Error</u>
Ln I	2.07	*
Ln I <sub>t-1</sub>	-1.07	.295
Ln RP	-.57	.23
DW: 2.14    R <sup>2</sup> = .74    LM = .39		

\*: Constrained coefficient

The hypothesis of a unitary long-run elasticity of MI with respect to I was tested and imposed on the data. It was not possible to reject the hypothesis of both short-run and long-run zero-price homogeneity.

<sup>2/</sup> See M. Nabli, La protection effective en 1977, IEQ.

### 3. Exports of Manufacturing Goods

The demand for manufacturing exports is modelled in a fairly standard fashion. It is assumed to depend on foreign income level and relative prices. Following Faini et al (1991),<sup>4</sup> the standard model is however amended to allow for a more general pattern of competition where a distinction is made between developing and developed countries' competitors. As a result, international demand for Tunisia's exports of manufacturing goods is assumed to be a function of the level of world income (YW, proxied by a weighted share of the GDP of Tunisia's main trade partners), the relative price of Tunisia's exports with respect to industrial countries (PN, proxied by a weighted average of the GDP deflators of Tunisia's main trade partners) and the relative price of Tunisia's exports with respect to other developing countries (PS, proxied by a weighted average of the wholesale price index of Tunisia's main developing countries competitors, i.e. Turkey, Morocco and Greece). The equation was estimated by a two-stage least-squares procedure, starting again from a general specification with one lag for all explanatory variables and no zero price homogeneity condition imposed. The instruments included all the relevant appropriately lagged explanatory variables, real value added in domestic manufacturing and the GDP deflator. The last two variables would presumably belong to the exogenous determinants of export supply. A Sargan test was used to determine the adequacy of the set of instruments. The results are presented in Table A3.

Table A3: EXPORTS OF MANUFACTURING GOODS

<u>Explanatory Variable</u>	<u>Coefficient Estimate</u>	<u>Standard Error</u>
Ln (YW)	6.12	.28
Ln (PS)	-1.71	.43

DW: 2.44    R<sup>2</sup> = .99    Sargan = 4.77

Note: The Sargan test is distributed as a X<sup>2</sup> with 7 degrees of freedom.

<sup>4/</sup> Faini, R. et al., "The Fallacy of Composition Argument", European Economic Review, forthcoming.

#### 4. Simulation of the Trade Sector Model

The model comprises the three equations described so far. It also includes a (partial) trade balance equation. The model was simulated starting in 1989. All variables are defined at 1989 prices. The activity variables in the import equations, i.e. investment and private consumption, are assumed to grow at a constant 5% rate each year. World demand is assumed to grow at approximately one percent each year. In the first simulation, quantitative restrictions on imports of consumption goods are assumed to affect only 5% of import commodities. The exchange rate is kept at its base level and the trade balance is allowed to deteriorate. In the second simulation, the trade balance is fixed at its base case level and the real exchange rate is the adjusting variable. In the last simulation, a 10% across-the-board import tariff is introduced. The real exchange rate is still determined endogenously. The GAMS program was used for all the simulations.

ANNEX III

THE TUNISIAN TAX SYSTEM

1. In recent years the Tunisian tax system has been largely reformed. The process started with the reform of external trade taxes in 1986, followed in 1988 by the replacement of the existing system of indirect taxation with a Value Added Tax (VAT). A new personal income tax was introduced in 1990, and the corporate income tax is expected to be effective in 1991. Only the Investment Codes, designed to encourage export volumes and investments by residents as well as foreigners in particular sectors and areas of the country remain largely unreformed. The aim of this Annex is to describe the most important characteristics of the tax system in Tunisia. The features which are not relevant to the empirical analysis developed in Chapter II have not been included.

A. PERSONAL INCOME TAXES

Personal Income Tax

2. In December 1989 a unified income tax was introduced in Tunisia (Law number 89-114). It replaced the old system based on a schedular system, with different tax rates according to the source of income. Based on a broader definition of income, since most previously existing indemnities and exemptions were eliminated, the new unified tax is levied on the incomes realized on an individual basis or in the context of a partnership by all Tunisians, residents or not. Eleven different tax rates are applied up to a maximum rate of 35%.

<u>Income (Tunisian Dinars)</u>	<u>Rate (%)</u>
0- 1500	0
1500- 2000	18
2000- 2600	20
2600- 3200	22
3200- 4000	24
4000- 6000	26
6000-10000	28
10000-20000	30
20000-40000	32
40000-80000	34
more than 80000	35

Dividends distributed are exempt from personal tax.

Taxation of Labor

3. Payroll taxes. Two taxes are levied on the payrolls of companies: (a) The Business Training Tax is levied on the wage bills of all companies (whether subject to the personal or corporate income tax) at a rate of 1% for industrial companies, 2% for other companies, but 0% for agricultural activity; and (b) The Contribution to Funds for Workers Lodgings is set at 1% on the wages bill.

4. Social security contributions. As in most countries, the social security system in Tunisia is funded by compulsory levies on both employers and employees. In the non-agricultural sector, employers pay 17.5% of total salaries to the national social security fund, while employees pay 6.25%. In the agricultural sector, employers pay 4.4% and employees pay 2.05%.

B. TAXATION OF GOODS AND SERVICES

Value Added Tax

5. The value added tax, introduced by Law 88-61 of June 2, 1988, has replaced the existing production tax, the consumption tax and the tax on services. The VAT applies to most economic transactions which are carried out in Tunisia. The standard rate is 17%, with a reduced rate of 6% applying to professional services and to the import, production and sale of fertilizers, electricity, gas, television and other minor products. An increased rate of 29% is levied on luxury goods.

Custom Duties

6. (i) Custom duties on imports; a three-column tariff system is used - minimum, preferential, and general rates of duty are levied according to the origin of imports. Preferential treatment is given to 15 North African and Middle Eastern countries. General treatment is given to most other countries. Some exemptions and deductions apply to certain categories of importers. The range of tariff rates is 15%-43%. The minimum tariff rate on equipment goods is 10%. All duties are assessed ad valorem at c.i.f. value.

7. (ii) Custom duties on exports; most exported goods are exempted from custom duties. They apply only to a very small number of goods (fish waste, animal products unfit for human consumption, waste and scrap metal of iron and steel) with a rate of 25% of the export value.

C. TAXATION OF CAPITAL

Corporation Tax

8. The comprehensive reform of direct taxation enacted by Law 89-114 of December 1990 included a new corporate tax system, which is expected to become effective in 1991. Instead of six rates and a top rate of 44% as in the old system, the new corporation tax has a general tax rate of 35%. This is reduced to 10% for agricultural, fishing and handicraft activities. The tax base excludes interest payments. Assets are depreciated for tax purposes using the straight line method. Commercial buildings can be depreciated at 2-5%, industrial buildings at 5%, and equipment at 15%. Inventories are valued on the first-in-first-out (FIFO) basis. A system of accelerated depreciation is allowed for a limited number of equipment goods.

9. The Law no. 89-114 of December 1990 also attempted to reduce some of the fiscal advantages included in the Codes. In particular, Article no. 12 states that, regardless of the provisions of the Codes, all companies will be subject to a minimum corporate tax at a rate of 10% with the exception of wholly exporting enterprises, of financial intermediaries and of firms under the Agriculture and Fishery Code. Articles 9 and 10 concern the incentives accorded by Law no. 62-75 (and increased in the various Codes) in the form of tax exemption on the part of income or profits reinvested in shares and bonds. Previously, the exemptions varied from 35% to 100% according to the sectors of the enterprises issuing these assets. With the new reform, the percentage of reinvested income that can be deducted from the tax base has been reduced, by a minimum of 30%, except in the case of reinvestments in firms in decentralized areas, in agriculture and in particular deposit accounts (the "comptes d'épargne projets").

Taxation on Gains from Immovable Property

10. This tax is levied on profits from sales or gifts of buildings and land. If the asset is held for one year or less the tax rate is 30% on the gain, 20% if it is sold after being held for 2-3 years, and 10% if it is held for between 4 and 10 years.

Tax on Immovable Property

11. The taxation of immovable property differs from the regime of immovable property gains tax. There is a municipal tax on buildings, whose base is the gross rental value and with rates varying from 10% to 15%, depending on the rent control legislation. A supplementary tax applies to buildings subject to the rent control legislation and is payable by any occupant of a building. There is also a land tax on underdeveloped land, at a rate up to 5% of the rental value.

D. OTHER TAXES

12. There are a range of other less important taxes. A wide range of registration and stamp duties are levied on financial transactions. There is a tax on currency transactions - 0.5% of all sales of foreign currency is taken in tax. A hotel tax (1% of turnover) is levied on tourist establishments, and there is a similar tax on non-tourist activities, at a rate of 0.2%.

E. THE INVESTMENT CODES

13. Most economic activities in Tunisia are covered by separate investment incentive schemes, managed by the sector Ministries and administered by the Promotion Agencies: the Industrial Investment Code, the Agricultural and Fishing Investment Code, the Incentives for Resident and Non-Resident International Trading Companies, the Investment Code for Tourism, and the Services Investment Code. In addition, there are other promotional laws (not analyzed in this Annex), providing fiscal incentives to banking and financial institutions, encouraging investment in Government securities, and establishing provisions for the production of Hydrocarbons.

The Industrial Investment Code (Law no. 87-51, August 1987)

14. The Industrial Investment Code was completely reformed in 1987. It replaced the provisions in Law no. 81-56 (establishing incentives for manufacturing industries and industrial decentralization) and in Decree-Law no. 85-14 of October 1985 (establishing incentives for investments in exporting industries). In the new Code, the procedures for granting incentives have been highly simplified. Incentives to wholly exporting firms are granted only upon presentation of a statement of investment intention. For all other firms, a request is needed, followed by a decision by the Ministry as recommended by the Industrial Promotion Agency.

15. (i) Manufacturing industries producing fully for export. On deposit of a corporate plan outlining an investment project which is intended to produce mainly (i.e., more than 80%) for export, the firm is entitled to be exempt from corporate taxes, registration duties, customs duties and VAT. Nor is the firm liable to the payroll taxes - the business training contribution, and workers housing contribution. The only compulsory levy is the employers social security contributions. However, if the firm operates in a decentralized area, a 5 year tax holiday is granted. If the project is financed by debt, then the interest received by debt holders is exempt from personal tax. Profits or income reinvested in the equity of a wholly exporting firm are 100% tax deductible (if the firm operates in decentralized areas) or 70% (in non decentralized areas). Wholly exporting firms are also entitled to a refund of customs duties and VAT on equipment goods, spare parts and semi-finished goods imported and/or acquired in the local market. There are also a range of other administrative benefits, such as unconstrained repatriation of profits, no control over recruitment policy, etc. If in addition the company is in an underdeveloped region of the

country, further advantages result, including State payment for any infrastructure costs, and the payment of the employers contribution to the social security fund for five years, extensible to ten.

16. (ii) Manufacturing partially for exports. A company exporting only part of its production is entitled to fixed registration fees for 10 years and it is exempt from corporate tax in proportion to the ratio of exports to total sales. In addition, the company is granted a tax exemption on profits from domestic sales up to a ceiling of 20% of profits on exports. The company also enjoys: a) a 40% tax exemption on annual taxable income or profits reinvested in the company, if it operates in non decentralized areas (70% in non decentralized areas); b) suspension of VAT on capital goods imported or purchased locally and needed for the firm productions activities; c) suspension of turnover taxes on local purchases needed for the exports; refund of custom duties and charges on import of inputs needed for the exports; d) refund of custom duties and charges on import of equipment goods not manufactured locally, in proportion to exports; e) exemption of 40% of the income received from export activities from individual income tax. It also benefits from the temporary admission procedures for imported goods and products intended to be processed for re-exportation.

17. (iii) Manufacturing in decentralized areas. Manufacturing firms in decentralized areas are entitled to a reduced corporate tax rate of 10% for seven years. In addition, if companies can show that they export 20% or more of their annual turnover, this incentive can be extended for another 3 years. The state pays for any infrastructure costs, and the employers social security contributions for five years. The employer is exempt from contributing to the employers housing fund.

The Agriculture and Fishing Investment Code (Law no. 88-18, April 1988)

18. All businesses in this sector, regardless of whether they qualify for the investment code, are entitled to the reduced corporate tax rate of 10%. Investments qualifying for this Code (those intended to increase, develop and modernize agriculture and fishing production, and to promote the interests of farmers and fishermen) must be approved by the Minister of Agriculture on the advice of the Agency for the Promotion of Agricultural Investments. Investments in the agriculture and fishing sectors are classified as : "A", investments made by small and medium-sized farms and fishing concerns in the form of "specific actions"; "B", investments undertaken by small and medium-sized farms or fishing concerns in the form of small and medium-sized integrated projects; "C", investments undertaken by large companies as specific actions or integrated projects or within the framework of the realization of highly productive projects. General advantages include: (a) the exemption from corporate tax during the first 10 years followed by a reduced rate of 5% for a further five years; (b) reduction of custom duties to the legal minimum leviable on imported capital goods and suspension of VAT payable on the acquisition of capital goods locally manufactured; (c) tax exemption, up to 70% of taxable income of earnings reinvested in the subscription or increase of the company's capital; (d) fixed

registration duties on acts setting up a corporation and on those relating to an increase in capital during 10 years from the date of incorporation of the company; (e) financial advantages. Investments in category "A" can benefit from the financial advantages provided in Law no. 63-17 and Law 69-11 in the form of direct subsidies (up to 15% of the projects), loans (up to 75% of the projects) and interest rate subsidies (preferential rediscounting, see Chapt. III). For priority projects, these rates are higher. The minimum self-financing ratio required is 10%, while an additional 10% is provided by the State as a capital subsidy. Investments in category "B" benefit from a subsidy (up to 15% of the investment). The minimum required self-financing ratio is 10% and up to 25% is usually provided by the State as repayable advances. Some particular investments in "B" enjoy the same benefits as those in "A". Category "C" investments are entitled to preferential rediscounting, interest rate subsidies and repayable advances. Investments in priority activities (that is in the fields of food self-sufficiency and exporting activities) benefit from exemption from corporate tax within the limit of the ratio of priority activity turnover to total turnover. Similarly, firms that export agricultural or fishing products are exempt from corporate tax within the limit of the ratio of export turnover to total turnover. Investments made in priority activities benefit, beside the general financial advantages, from an added rebate of the interest rate as investment credit.

The Trading Companies Investment Code (Law no. 88-110, August 1988)

19. International trade companies are companies whose main activity is the import and export of goods as well as any other international trade or brokerage operation.

20. (i) Non-resident international trade companies. To be eligible for this code, at least 66% of the capital of the company must have been provided in foreign currency. If this condition is satisfied, the company becomes entitled to the following: exemption from corporation tax; exemption from paying VAT and from import duties on capital goods and inputs; 100% reimbursement of import duties on goods purchased locally; fixed registration duties; reduction in the income tax on the salaries of foreign members of staff. The company is also allowed to the free transfer of profits to non residents abroad and to keep the net proceeds from export in foreign currency.

21. (ii) Resident international trade companies. These companies are entitled to: (a) exemption from corporation tax in proportion to the ratio of exports to overall sales; (b) exemption from VAT on inputs purchased locally for export; and (c) refund of customs duties, and various other administrative benefits. Reinvested earnings are deductible up to 70% of taxable income (in the case of the initial capital) and 35% (for increases in the capital).

The Tourism Investment Code (Law no. 90-21, March 1990)

22. Tourism investments are those in the "tourist zones" in the following activities: (a) providing accommodation; (b) recreation; (c) tourist transport.

To be entitled to the advantages of this Code, tourism investments must be approved by the Minister in charge of the tourist sector on the advice of the Office National du Tourisme Tunisien. The basic advantages include: (a) fixed rate of registration duty for acts relating to the setting up of an enterprise and to increase in the capital; (b) exemption of earnings reinvested in authorized capital of an enterprise up to 35% of taxable income; (c) suspension of payment of VAT and other taxes and payment of the minimum tariff rate on the imported new capital goods; (d) suspension of payment of VAT for new capital goods produced in Tunisia.

23. (i) Hotel construction for tourist accommodation and recreation. Companies involved in hotel construction get the same benefits as those investing under the basic code. In addition, they pay corporation tax at a rate of 10% for five years (in the case of tourist accommodation) or three years (in the case of recreation). The state also takes charge of some of the necessary infrastructure costs. In addition, up to 60% of the investment costs may be funded by a soft loan. The maximum interest rebate is 3% (4% if the company is in a decentralized area).

24. (ii) Investment in the Sahara. Companies which invest in the Sahara get the same benefits as those investing under the provisions of hotel construction. They are also exempted from payment of corporation tax for 10 years. In addition, up to 70% of the investment cost of the project can be financed by a loan with a 5% interest rebate.

The Services Investment Code (Law no. 89-100, November 1989)

25. Service investments are defined as investments made in computer services, engineering, building and public works, research, counseling and assistance. As in the Industrial Code, wholly export-oriented firms are exempt from corporate taxes, from payment of customs duties and of VAT. Interest payments received from companies are exempt from personal tax.

26. Partially exporting firms are entitled to paying fixed registration duties. Corporate taxes are reduced in line with the proportion of turnover which is exported. In addition, domestically generated profits of up to 20% of the profits made by exporting services are exempted from tax. Individuals contributing to new equity of a service industry may reclaim up to 70% of the personal tax paid on the contribution. The company is exempt from customs duties and VAT on capital goods imported or purchased locally.

ANNEX IV

METHODOLOGY OF CONSTRUCTING TAX WEDGES AND EFFECTIVE TAX RATES

A. THE KING-FULLERTON METHODOLOGY

1. The marginal effective tax rate is a measure of the tax due on an additional hypothetical investment. The most popular method of measuring the marginal tax rate is that derived by King and Fullerton (1984).<sup>1</sup> They consider a small increase in the level of real investment by the domestic non-financial sector financed by an increase in the savings of domestic households. The technique consists in calculating the minimum rate of return (which we call  $p$ ) that an investment, net of depreciation, must yield before taxes in order to provide savers with the same gross tax return (which we call  $s$ ) they would receive from lending at the market interest rate. In the absence of taxes, these rates will be equal. With distortionary taxes, however, they can differ, giving a tax wedge of  $p-s$ . The size of the wedge depends on the way projects are financed (e.g., in the form of shares, retained earnings, bonds and bank loans), on the types of assets in which companies invest (e.g., buildings, stocks, equipment, etc..) and on all the parameters of the tax system. Thus, at the margin, a company would undertake a project if the rate of return, after payment of all taxes, is sufficient to persuade potential savers to finance that project. The tax wedge can be used to define an "effective" tax-inclusive marginal tax rate,  $h=(p-s)/p$ . The link between the saver and the company is the rate of return the company pays on the savers financial claims (denoted by  $r$ ). In the case of debt finance, for example,  $r$  is simply the real rate of interest paid by the company to the lender.

2. The investment project considered is a single asset such as a machine. It is expected to generate a flow of revenues which declines exponentially over time in real terms, at rate  $\delta$  as the asset depreciates. These revenues include the financial rate of return,  $p$ , plus the cost of depreciation,  $\delta$ . At the same time, revenue increases in nominal terms at the general rate of inflation,  $\pi$ , which is expected to remain constant. The flow of net revenues is taxed at rate  $t$ . These flows are discounted back to the current period, period 0, at the company's nominal discount rate,  $\rho$ . The present value,  $V$ , of this stream of returns is therefore:

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<sup>1/</sup> King, M.A. and Fullerton, D. (eds) (1984), "The taxation of income from capital: a comparative study of the United States, the United Kingdom, Sweden and West Germany". University of Chicago Press.

$$V = \int_0^{\infty} (1 - t) (\rho + \delta) e^{-(\rho + \delta - \pi)u} du$$

$$= \frac{(1 - t) (\rho + \delta)}{\rho + \delta - \pi}$$

3. The cost of the project is unity, the initial payment for the asset, less the present discounted value of any grants or tax allowances given for the asset, A. Hence the total cost, C, is

$$C = 1 - A$$

4. For a marginal investment,  $V=C$ ; the project is just worth undertaking. This allows us to solve for the value of the pre-tax rate of return,  $p$  given the tax parameters and the company's discount rate:

$$p = \frac{(1 - A)}{(1 - t)} (\rho + \delta - \pi) - \delta$$

The next step is to relate the company's discount rate,  $\rho$ , to the interest rate,  $r$ . In the absence of taxation,  $\rho=r+\pi=1$ , i.e., the discount rate equals the nominal interest rate. In the presence of taxation, it depends on the source of finance used for the investment. For debt finance, since nominal interest is tax deductible, the rate at which companies will discount post-tax cash flows is the net of tax interest rate. Hence

$$\rho = i (1 - t)$$

However, if the tax treatment of interest payments from companies is different from the tax treatment of interest payments from other sources, then the discount rate will be that rate which equalizes the after tax return on the two forms of interest income.

If  $m^l$  is the personal tax rate on normal interest income, and  $m^c$  is the personal tax rate on interest income from companies, then we can write

$$(1 - m^l)i = \frac{(1 - m^c)}{(1 - t)} \rho$$

This leads to a discount rate of

$$\rho = i(1 - t) = \left[ \frac{1 - m^l}{1 - m^c} \right]$$

For retained earnings and new equity finance, the discount rate also depends on the interaction of the corporate and personal tax systems. If retained earnings are used, then the value of shares held in the firm will increase, so the return to the financier is in the form of a capital gain. The investor will require an after capital gains tax return sufficient to match the return on an alternative use of the funds.

Thus, if the yield of a project is  $\rho$ , the investor would require a yield such that  $(1 - m^l)i = \rho^{(1-z)}$ . The discount rate for the retained earnings is therefore:

$$\rho = i \frac{(1 - m^l)}{(1 - z)}$$

In Tunisia, however, there is no tax on capital gains, so  $z=0$  and  $\rho = (1 - m^l)i$

For investments financed through new share issues, the required rate of return needed by financiers is affected by the tax treatment of distributed profits. Again the return to shareholders after tax must be sufficiently large to match the return they could get from another use of their funds, which is  $(1 - m^l)i$ . The personal tax rate on dividends is denoted by  $m^d$ . However, in many tax systems, an imputation tax credit is given, so the return to shareholders needs to be grossed up by the imputation rate,  $c$ . Hence overall,

$$(1 - m^l)i = \frac{(1 - m^d)}{(1 - c)} \rho$$

In Tunisia, neither is an imputation tax credit nor personal tax on dividends, so the discount rate is

$$\rho = (1 - m^l)i$$

This is exactly the same as the one for retained earnings. Hence the basic Tunisian tax system is neutral between retained earnings and new equity. The discount rates on projects financed by the three different types of finance for zero rate taxpayers and for higher rate tax payers are summarized in the table below.

DISCOUNT RATES ON PROJECTS WITH DIFFERENT TYPES OF FINANCE

Type of finance	Discount rate for zero rate taxpayers	Discount rate for higher rate taxpayers
Debt (normally)	$(1 - t)i$	$(1 - t)(1 - m')i$
Debt (no tax on interest income from companies)	$(1 - t)i$	$(1 - t)i$
Retained earnings	$i$	$(1 - m')i$
New equity	$i$	$(1 - m')i$

The basic case is completed by introducing the personal taxation of the investor. The real post-tax return earned by the saver,  $s$ , is equal to  $r$  less personal taxation. If income tax is charged on the nominal return,

$$s = (1 - m) (r + \pi) - \pi$$

5. Finally, for the case of investment in inventories (stocks), there may be an additional tax charge if for tax purposes inventories are valued by the FIFO (first in, first out) method. Essentially, the additional tax is equal to  $t\pi$  in each period. This leads to a modification of the definition of  $p$  to

$$p = \frac{(1 - A)}{(1 - t)} (\rho + \delta - \pi + t\pi) - \delta$$

6. This completes the description of the basic methodology. The approach used in this paper is to choose a value of  $r$  - 5% is chosen - which applies to all investments. Given  $r$ , it is possible to calculate  $p$  and  $s$ , and hence the tax wedge,  $p-s$ , and the effective marginal tax rate,  $(p-s)/p$ .

B. TUNISIAN INVESTMENT INCENTIVES

7. There are five main relevant forms of investment incentive in Tunisia: exemption from import duties, tax holidays, soft loans, the permanent reduction in corporate tax rates and the exemption of interest payments from companies from personal tax. The circumstances in which these can be claimed vary, as described in Annex III. The intention here is simply to show how each has been modelled within the context of the King-Fullerton approach. Each of the five is taken in turn.

Exemption from Import Duties

8. It is not so much the exemption from import duties as the import duties themselves which must be added to the King Fullerton framework. They are easily included. The basic principle is that if the asset purchased as part of the investment is imported, its effective price rises from unity to 1+X, where X is the rate of import duty. If the whole of the effective price can be depreciated for tax purposes, then the overall effective price of the asset is (1+X)(1-A), where A is, again, the present value of tax allowances and grants. This yields an expression for p as

$$p = (1 + X) \frac{(1 - A)}{(1 - t)} (\rho + \delta - \pi) - \delta$$

If the asset is exempt from import duties, then X is set to zero.

Tax Holidays

9. Tax holidays are more complex to model. This is because the King-Fullerton framework was set up only to consider a tax system which was not expected to change at any time in the future. Under the Tunisian system, however, companies may face a different statutory tax rate for five, seven or ten years, to that faced thereafter. To consider a general case, suppose that the proportion of the statutory tax rate faced in the first period of n years was a; thus a=0 and n=5 shows that the company faces a zero tax rate for five years. In addition, the proportion of the statutory tax rate faced in the second period of m years (immediately following the first period) is b; thus, for example, if b=1 the tax holiday is not continued after n years. The simplest way to capture this in the King-Fullerton framework is to construct two new variables t' and A'. These directly replace t and A in the earlier definition of p, so that, in the basic case

$$p = \frac{(1 - A')}{(1 - t')} (\rho + \delta - \pi) - \delta$$

To construct the variables  $t^*$  and  $A^*$  it is necessary to return to the definitions of  $V$  and  $C$ , the marginal benefit and marginal cost of the project. Consider first the definition of  $V$ . Allowing for tax holidays as described above, this can be written:

$$\begin{aligned}
 V = & \int_0^n (p + \delta) (1 - at) e^{-(\rho+\delta-\pi)u} du \\
 & + \int_n^{n+m} (p + \delta) (1 - bt) e^{-(\rho+\delta-\pi)u} du \\
 & + \int_{n+m}^{\infty} (p + \delta) (1 - t) e^{-(\rho+\delta-\pi)u} du
 \end{aligned}$$

Using this definition,  $V$  can be written as

$$V = \frac{(1 - t^*) (p + \delta)}{(\rho + \delta - \pi)}$$

where

$$t^* = t \left\{ a + (b-a)e^{-(\rho+\delta-\pi)n} + (1-b)e^{-(\rho+\delta-\pi)(n+m)} \right\}$$

Clearly, if  $a=b=1$ ,  $t^*=t$ .

Turning to the definition of  $C$ , the present value of allowances,  $A$ , depends on the tax depreciation rate and the length of the tax holiday. Since tax depreciation is on the straight line method, the number of years for which an allowance can be claimed is  $T=1/d$ , where  $d$  is the depreciation rate. Taking first the case in which  $T > n+m$ , the present value of allowances can be constructed from

$$\begin{aligned}
 A^* = & \int_0^n dt a e^{-(\rho-\pi)u} du \\
 & + \int_n^{n+m} dt b e^{-(\rho-\pi)u} du \\
 & + \int_{n+m}^T dt e^{-(\rho-\pi)u} du
 \end{aligned}$$

which simplifies to

$$A^* = \frac{dt}{\rho - \pi} \left\{ a + (b-a)e^{-(\rho-\pi)n} + (1-b)e^{-(\rho-\pi)(n+m)} + e^{-(\rho-\pi)T} \right\}$$

The approach is similar if  $T < n+m$ . If this is true, then two other definitions of  $A^*$  can be defined. If  $n < T < n+m$ , then

$$A^* = \frac{dt}{\rho - \pi} \left\{ a + (b-a)e^{-(\rho-\pi)n} - be^{-(\rho-\pi)T} \right\}$$

If  $T < n$ , then

$$A^* = \frac{dt}{\rho - \pi} \left\{ a (1 - e^{-(\rho-\pi)T}) \right\}$$

The problem with tax holidays is obvious from this analysis. Consider the case in which there is a tax holiday for five years, so that  $a=0$  and  $n=5$ . Suppose that the tax depreciation rate were 25% so that  $T=4$ . Then  $A^*=0$ : the company does not receive any allowance on the cost of its investment.

### Soft Loans

10. Soft loans can be incorporated into the framework since they essentially reduce the interest rate payable on debt. Recalling the value of the company discount rate in the case of debt finance,  $\rho = (r + \pi)(1 - t)$ , this would simply be modified by the extent of the reduction in the interest rate. Thus, for example, if the subsidy were 2%, the new value would be  $\rho = (r + \pi - 0.02)(1 - t)$ .

### Reduction in the Corporate Tax Rate

11. This incentive can be included in the model very easily. The tax rate,  $t$ , simply needs to be reduced to the allowed level. Note that if  $t=0$  (i.e., the company is permanently exempt from corporation tax), this does not imply that the tax system has no impact on investment. The personal taxation of investment income may lead to a required pre-tax rate of return differing from

the required pre-tax rate of return were there no personal taxes on any investment income.

Exemption from Personal Tax on Interest from Companies

12. As described in the outlining of the basic features of the King-Fullerton framework, the discount rate on debt financed investment is

$$= i(1 - t) = \left[ \frac{1 - m^l}{1 - m^c} \right]$$

Exemption from personal tax on interest from companies means that  $m^c$  is zero. This means that whereas normally the personal tax rates cancel out, and the discount rate for projects financed by debt is determined purely by the corporate tax rate, the personal tax rate on interest from investments other than in companies now becomes relevant. The discount rate will fall where the financier faces a positive rate of personal tax. This means that were there no corporate tax, and in addition the financier benefited from exemption from the personal tax on interest income from companies (i.e., there is absolutely no tax at all on an investment project), the situation would not be the same as if there were no tax system. Because income from other sources *would* be subject to personal tax, the company need earn and pay out a lower return to the shareholder than in the no tax case, because it only need match the *after-tax* return the financier could get elsewhere.

13. While these issues have been discussed separately, it is clear that any of them can be combined in order to calculate the tax wedge and marginal tax wedge on investments which can claim the benefit of more than one of the allowances.