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**TURKEY, 1980-2000:**

**FINANCIAL LIBERALIZATION,  
MACROECONOMIC (IN)-STABILITY, AND  
PATTERNS OF DISTRIBUTION**

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# **TURKEY, 1980-2000: FINANCIAL LIBERALIZATION, MACROECONOMIC (IN)-STABILITY, AND PATTERNS OF DISTRIBUTION**

## **I. Introduction**

Integration of the developing national economies into the evolving world financial system has been achieved by a series of policies aimed at liberalizing their financial sectors. The motive behind financial liberalization was to restore growth and stability by raising saving and improving economic efficiency. A major consequence, however, has been the exposure of these economies to speculative short term capital movements (hot money) which increased financial instability and resulted in a series of financial crises in the developing countries. Furthermore, contrary to expectations, the post-liberalization episodes were inflicted with divergence of domestic savings away from fixed capital investments towards speculative financial instruments with often erratic and volatile yields. As a result, national economies with weak financial structures and shallow markets suffered from increased volatility of output growth, short-sightedness of entrepreneurial decisions, and financial crises with severe economic and social consequences.

It is the purpose of this paper to identify and study the main stylized facts and processes characterizing the dynamic macroeconomic adjustments of Turkey since inception of its reforms towards global integration –viz. post-1980's. Turkey's post-1980 history of macroeconomic and political developments under the neo-liberal model is observed to suffer from persistent difficulties and wide fluctuations in national income, with conflicting policy adjustments. This observation pertains despite the overall thematic continuity with the ambitious program of economic liberalization and market-led adjustments put into full force during the early 1980s led by the military government and its civilian successors. At the turn of the 3<sup>rd</sup> millenium, the most striking aspects of the current Turkish political economy context are the persistence of price inflation under conditions of a crisis-prone economic structure; persistent and rapidly expanding fiscal deficits; marginalization of the labor force along with the dramatic deterioration of the economic conditions of the poor; and the severe erosion of moral values with increased public corruption.<sup>1</sup>

We plan this study as follows: The analytics of macro adjustments of the two distinct (*i.e.* 1980-88/89 and 1989-2000) phases of liberalization is the theme of section I. We address the modes of accumulation and resolution of macro equilibria under both periods separately, and highlight the ascendancy of finance over industrial development. In this section we further investigate the nature and evolution of the in- and out-flows of short term foreign capital. Here, in particular, we

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<sup>1</sup> See Yeldan (1995) and (1998) for a discussion on the characteristics of the post-1989 Turkish macro adjustments in terms of creation and absorption of the economic surplus, and a quantitative analysis on the strategic role played by the state apparatus. Önis and Aysan (2000), Cizre-Sakallioğlu and Yeldan (2000), Boratav, Türel and Yeldan (1996), Ekinci (1998), and Boratav, Yeldan, and Kose (2000) provide similar analyses based on the effects of international speculative financial capital flows on the Turkish economy.

report and document the detrimental consequences of hot money flows in inducing instability in the macro fundamentals of the domestic economy at the onset of the 2000/2001 financial crisis. Section II quantifies the economics of macro adjustments via a set of decomposition exercises on the evolution of real output and sources of aggregate demand. The deterioration of fiscal balances of the state constitute the thematic background of this section. Micro level adjustments and the related decomposition exercises, in turn, are investigated in section III within the confines of the manufacturing sector. Here we address two separate, yet related, issues: (i) the effect of external liberalization on oligopolistic concentration and the price-cost margins (mark-ups), and (ii) decomposition of productivity gains within the manufacturing sectors under external liberalization. We summarize over the distribution effects of liberalization of commodity trade and finance in section IV. Section V summarizes and concludes.

## **I. Phases of Macroeconomic Adjustment in Turkey**

The post-1980 Turkish adjustment path started with an orthodox stabilization policy which also incorporated the first structural steps toward a market-based mode of regulation. The shock treatment of 1980, facilitated by the military coup of September and generously supported by international donors was, to a large degree, successful in terms of its own policy goals. The rate of inflation which had almost reached three digit figures in 1980 was reduced to an average of 33.2% in the following two years. The recession was brief and a relatively mild one (-2.3% in 1980). Liberalization of domestic markets eliminated the painful shortages in basic commodities, and the major realignment in relative prices took place relatively smoothly. However, the whole operation was, to a large extent, dependent on a drastic regression in labor incomes which was realized by means of the suppressive control of relations of distribution by the military regime. The first phase of reforms was followed by a gradual move into trade liberalization in 1984 (which culminated in a Customs Union with the EU eleven years later) and liberalization of the capital account in 1989.

Particularly during the early phases of its inception, Turkish adjustment program was hailed as a “model” by the orthodox international community, and was supported by generous structural adjustment loans, debt relief, and technical aid. Currently the Turkish economy can be said to be operating under conditions of a truly “open economy” –a macroeconomic environment where both the current and capital accounts are completely liberalized. In this setting, many of the instruments of macro and fiscal control have been transformed, and the constraints of macro equilibrium have undergone a major structural change.

We provide a general overview of the recent macroeconomic history of Turkey in Table 1. We identify the 1972-1979 period as the deepening of the industrialization strategy based on import substitution (ISI). This period, often called the *second phase* of import substitution, extends the evolution of the inward-looking, domestic demand-led industrialization which dates as early as the 1950s. The late-1970s were characterized by the implementation of a vigorous public investment program which aimed at expanding the domestic production capacity in heavy manufacturing and capital goods, such as machinery, petrochemicals, and basic intermediates. The foreign trade regime was under heavy protection via quantitative restrictions along with a fixed exchange rate regime which, on the average, was overvalued in purchasing parity terms. The state was both an investing

and a producing agent with state economic enterprises (SEEs) serving as the major tools for fostering the industrialization targets.

<Table 1 here>

During 1927-79, the underlying political economy basis of the ISI strategy was one of grand, yet delicate, alliance between the bureaucratic elites, industrial capitalists, industrial workers, and the peasantry (Boratav, 1983; Boratav, Keyder and Pamuk, 1984). Accordingly, private industrial profits were fed from three sources: First, the protectionist trade regime, often implemented through strong non-tariff barriers, enabled industrialists to capture oligopolistic profits and rents originating from a readily available, protected domestic market. Second, the existence of a public enterprise system with the strategic role of producing cheap intermediates through artificially low, administered prices enabled the private industrial enterprises (and the rural economy) to minimize on material input costs. Third, a repressed financial system (supported by undervalued foreign currencies) enabled cheap finance to fixed capital investments in manufacturing. Industrialists, in turn, have “accepted” the conditions of a general rise in manufacturing wages, and an agricultural support program which induced the domestic terms of trade to favor agriculture.

The ISI reached its limits beginning 1976 when keeping up the investment drive and financing the consequent current deficits became increasingly difficult. The foreign exchange crisis of 1977-80 accompanied by civil unrest and political instability ended with an orthodox stabilization package (1980) and a right-wing military regime (1980-83).

### **I-1. Major Turning Points and the Early Phase, 1981-88/9**

Macroeconomic developments in the post-1980 period can be divided into two phases: 1981-88/89 and 1990-2000. The main characteristics of the first phase were export promotion with strong subsidy components and gradually phased import liberalization, together with the managed floating of the exchange rate and regulated capital movements. Gradual, but significant depreciation of the Turkish lira (TL) was one of the pillars of the policy orientation. Severe depression of wage incomes and declining agricultural support measures continued during the years following the military regime. There was also a decisive move towards supply-side orientations in fiscal policies.<sup>2</sup>

Domestic financial liberalization was an additional reform component of the 1980s. The early phase of financial liberalization turned out to be a painful process. The speedy lifting of controls on deposit interest rates and on the allocation of credits in mid-1980 had led to the financial scandal of 1982 when the numerous money brokers (called "bankers") which had flourished by offering very high real interest rates to savers via *Ponzi* financing methods collapsed together with a number of smaller banks. Thereafter, the policy pendulum moved between *re-regulation* and *de-regulation* up till the late 1980s; but the trend, although gradual, was definitely towards the establishment of a liberalized domestic financial system.

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<sup>2</sup> Yeldan (2001a), Boratav and Türel (1993), Aenses (1994), Celasun and Rodrik (1989), Uygur (1993), and Celasun (1994) provide a thorough overview of the post-1980 Turkish structural adjustment reforms. For a quantitative assessment of the export subsidization programme, see Milanovic (1986) and Togan (1993).

In retrospect, it can be stated that the mode and pace of financial reforms during the 1980s progressed in leaps and bounds, mostly following pragmatic solutions to emerging problems. The foreign exchange regime was liberalized early in 1984. Banks were allowed to accept foreign currency deposits from residents and to engage in specified external transactions. The Central Bank's control over commercial banks was simplified with a revision of the liquidity and reserve requirement system. An inter-bank money market for short term borrowing facilities became operational in 1986. In the following year the Central Bank diversified its monetary instruments by starting open market operations. A supervisory and regulatory agency over the capital market, *Capital Market Board*, was established which initiated the re-opening of the Istanbul Stock Exchange.

During 1983-87 export revenues increased at an annual rate of 10.8%, and gross domestic product rose at an annual rate of 6.5%. These years were also characterized by continued erosion of wage incomes –a process which had started early in the decade under the 1980 stabilization package and via hostile measures against organized labor by the military regime. Anti-labor legislation of the early 1980s was effectively utilized by Ozal governments up till the late 1980s. The suppression of wages was instrumental both in lowering production costs and also in squeezing domestic absorption. The share of wage-labor in manufacturing value added declined from an average of 35.6% in 1977-80, to 20.6% in 1988 (Table 1) and average mark up rates (gross profit margins as a ratio of current costs) in private manufacturing increased from 31% to 38%.

The severe deterioration of public sector balances of the late 1970s could have been relatively brought under control during the 1980s. Compared with the crisis years of 1977-1980, public sector borrowing requirement (PSBR) declined by more than two percentage points to 4.7% of the gross domestic product (GDP). Thanks to improved public and external accounts during the accelerated growth phase of 1983-87, the gap between domestic saving and investment rates, which were recorded at 19.5 and 20.7 per cents respectively, remained at a manageable magnitude (Table 1). There were, however, adverse changes with respect to the composition of total fixed investments against tradable sectors. In fact, as gross fixed investments of the private sector increased by 14.1% during 1983-87, only a small portion of this amount was directed to manufacturing. The rate of growth of private manufacturing investments has been on the order of half of this figure, at a rate of only 7.7% per annum, and could not reach its pre-1980 levels in real terms until the end of 1989. As data in Table 1 attest, much of the expansion in private investments originated from the pull from housing investments which expanded by an annual average of 24.5% during 1983-87. This resulted in a significant anomaly as far as the official stance towards industrialization was concerned: in a period where outward orientation was supposedly directed to increased manufacturing exports through significant price and subsidy incentives, distribution of investments revealed a declining trend for the sector. The implications of this non-conformity between the stated foreign trade objectives towards *manufacturing exports* and the realized patterns of accumulation *away from manufacturing* constituted one of the main structural deficiencies of the growth pattern of the period. The impressive export boom of the 1980s was, thereby, essentially based on the productive capacities established during the preceding decade. Thus, capacity constraints and limited technological upgrading contributed to the overall deceleration of export growth of manufactures (i.e. 4.4%) during 1989-2000.

The export-led growth path, which was dependent on wage suppression, depreciation of the domestic currency, and extremely generous export subsidies reached its economic and political limits by 1988. Regressive distributional policies were crucial with respect to the internal logic of the model; but it was becoming more and more difficult to sustain them within the political and social map prevailing at the end of 1988. Two consecutive years of negative *per capita* growth and a new wave of populist pressures leading to distributional shocks immediately before the 1989 elections were seen as evidence by most actors that the policy model of 1980-88 had exhausted itself and had to be changed. The way out of the impasse (by accident or design) turned out to be the liberalization of the capital account in August 1989. The full convertibility of the Turkish lira was realized at the beginning of 1990.

## **I-2. Capital Account Liberalization and its Consequences**

The 1989 benchmark was, indeed, the second turning point in economic policies of the post-1980 period in terms of both its distributional implications and macro-economic consequences. The fiscal and financial dimensions concerning the cause and effect linkages between the 1989 shift towards populism and capital account liberalization will be overviewed further below. The macro-economic consequences will be analyzed in what follows in four directions: Optimistic expectations on *financial deepening* within the domestic financial markets did not materialize. Capital account liberalization increasingly forged the economy to become dependent on the newly emerging *financial cycles*. Substantial *leakages from net inflows*, *i.e.* through capital outflows and reserve accumulation *transmuted* the conventional linkages between growth, current account balance and capital flows. And, finally, arbitrage-seeking (“*hot money*”) inflows and outflows started to constitute a rising share within capital movements, and contributed to rising external and domestic instability.<sup>3</sup>

### **I-2a. Increased fragility in the domestic financial markets**

Given the Turkish experience, one can easily trace out the drastic impacts of the unregulated opening of the domestic financial markets and consequent financial deepening. Contrary to expectations, however, the public sector's share in financial markets remained high. Financing behavior of corporations did not show significant change, and credit financing from the banking sector and inter-firm borrowing continued. Furthermore, the share of private sector securities in total financial assets fell. Thus, the observed upward trend of the proportion of securities to GNP originated from the direct new issues of public sector debt instruments, particularly, the Treasury Bills. The commercial banking system has been the major customer of such securities. The banks, in turn, were operational in marketing the T-bills to private households via the *repo* operations. The repo – reverse repo trading volume, which stood around US\$ 5 billions in 1997, accelerated rapidly to reach US\$ 221 billions in 2000, or to 110% of the GNP (see Table 2). Securitized deficit

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<sup>3</sup> See Yeldan (2001a), Ertugrul and Selcuk (2001), Özatay (1999) Balkan and Yeldan (2001, 1998) Selçuk (1997) Boratav, Türel and Yeldan (1996), Ekinci (1998), and Yentürk (1999) for an extensive discussion of the post-financial liberalization macroeconomic adjustments in Turkey. Metin, Voyvoda and Yeldan (2001) study the stylized facts of the macro adjustments using de-trending techniques of the *business-cycles* literature.



financing through T-bills and other debt instruments led to an overall increase of the real interest rates including the deposit rates, hence, time-deposits/GNP ratios tend to rise after 1996. In fact, with the implementation of positive interest rates, and the new possibility of foreign exchange accounts, the advance of financial deepening for the private households has meant increased foreign exchange deposits with substantial currency substitution. Thus, it can be stated that the "pioneers of financial deepening" in Turkey in the 1980's and 90's have been the public sector securities and the foreign exchange deposits.

< Insert Table 2 here >

As Akyuz (1990) and Balkan and Yeldan (2001) attest based on these observations, Turkish experience did not conform to the McKinnon-Shaw hypothesis of financial deepening with a shift of portfolio selection from "unproductive" assets to those favoring fixed capital formation. Indeed, throughout the course of these events Turkish banks became detached from their conventional functions, started to act as institutional rentiers, made huge arbitrage gains when conditions were appropriate (see Table 3), but became extremely vulnerable to exchange rate risks and to sudden changes in the inflation rate. In their new functions they gradually emerged as the dominant faction within business groups to influence and manipulate economic policies.

Some parameters of this process is reported in Table 3. The net return on the speculative arbitrage ("hot money") is given in column 1. This return is calculated as the rate of difference between the highest (nominal) interest offered in the domestic economy and the rate of (nominal) appreciation of the foreign currencies. It yields the net return to a foreign portfolio investment, which switches into TL, captures the interest income offered in the domestic economy and switches back to the foreign currency at the end-of-period exchange rate. The difference between interest earned and the loss due to currency depreciation is the net earnings appropriated by the investor.

<Table 3 here>

The gross in- and out-flows of external credit to/from the banking system are tabulated under columns 2 and 3 of Table 3, and the net flows of hot money injected into the domestic financial system is given under column 4. All of these flows display high sensitivity to whether or not the domestic rate of return is positive. Except for 1990 values, the net flows are observed to be of the expected sign. Net flows fluctuated widely, especially between 1993-1995, and 1998-2000. We witness that the gross inflows of banking sector's external credit grew rapidly from \$50 billions in 1991, to reach \$120 billions in 1995. After a brief deceleration during 1996 and 1998, they again reached to 108.6 billions in 1999. Under the disinflation program, gross in- and out-flows of banking sector external credit were US\$ 209 and US\$ 204 billions, respectively. This magnitude was in excess of the aggregate GNP in 2000!

A crucial factor behind all these developments was the collapse of the public disposable income (which declined by 39% during the 1990s in real terms) due to the emergence of negative public savings from 1992 onwards (see Table 7 below). This was, essentially, the outcome of borrowing from domestic banks at high interest rates (see Table 1) so that a rising portion of tax revenues was being allocated to interest payments: The ratio of interest payments to tax revenues rose almost without interruption from 28% in 1992 to 77% in 2000. The magnitudes involved, more

or less, made it inevitable that the financial system as a whole was directly shaped by the needs and methods of financing the public sector. Table 2 above documents this episode. The new issues of securities by the state increased from 6.9% of the GNP in 1988 to 38.7% in 1999. Per contra, issues by the private sector hovered around 1% of the GNP before jumping to 4.6% in 2000. Total banking credits as a percentage of GNP, on the other hand, actually declined over the initial phase of capital account deregulation, and could reach the pre-liberalization share only seven years later, in 1996.

High interest rates offered by the government bonds and treasury bills set the course for the dominance of finance over the real economy. As a result, the economy is observed to be trapped in a vicious circle: commitment to high interest rates and cheap foreign currency (overvalued TL) against the threat of capital flight generates a floor below which real interest rates cannot decline. When adverse impacts on the current account balance tend to become destabilizing, the only mechanism to prevent the specter of a major devaluation and to arrest currency substitution and/or capital flight is further upward adjustment in the domestic interest rates.

## **I-2b. The emergence of a new cycle and financial crises**

### *I-2b(i). The Financial Cycle Dominating the Growth Process*

This unstable environment is closely linked with the emergence of a new financial cycle which, ultimately, dominates the growth process. Findings presented in Table 4 depict one similarity and two differences between growth patterns of the 1980s and the 1990s<sup>4</sup>. The similarity is on the quantitative relationship between growth and the current deficits which remains stable and moderate during the two decades –a finding which suggests that the external gap, in terms of the relative magnitude of the foreign exchange requirements of given rates of economic growth, was practically unchanged between the two periods.<sup>5</sup>

<Table 4 here>

On the other hand, an important difference is observed between the two periods if our attention is directed toward linkages between capital flows by non-residents (i.e.  $NKF(nr)$ , following the notation of Table 4), current deficits and growth. During the 1980s, the linkages between these variables appear to be in the direction of  $growth \rightarrow current\ deficits \rightarrow capital\ inflows$ . In other words, a given growth rate generates current deficits which have to be covered by a somewhat larger margin of capital inflows from non-residents. The 1990s appear to have transformed the direction of the foregoing linkage into  $capital\ inflows \rightarrow growth \rightarrow current\ deficits$ . Inflows from non-residents gradually become autonomous (incorporating a rising component of “hot money” –see section I-2.d and Table 6b below) and, depending on the degree of sterilization, affect domestic

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<sup>4</sup> See Appendix on definitions, data and method related to the presentations in Tables 4-6.

<sup>5</sup> The contrast with the boom year of 2000 (when a 6.1% GNP growth generated current deficits equal to 4.9% of GNP) suggests that complacency on this issue may be premature. The delayed impact of the customs union with EU, combined with speedy currency appreciation, are explanatory factors behind the performance of 2000. (See note 8 below). It is too early to predict whether 2000 will be exceptional or typical for current deficit/GDP ratios during the boom phases in the near future.

demand items and uplift the growth rate which, ultimately, generates a higher level of current deficits. When inflows decline, the process is reversed, e.g. by generating reserve depletion, monetary contraction, declining domestic demand and an improved current balance. Hence, one of the crucial consequences of capital account liberalization turns out to be an increased degree of dependence of the growth path on autonomous capital movements.

There is, moreover, another striking difference between the growth paths of the two periods. During the 1990s, changes in the level and direction of capital movements generated a financial cycle of boom/bust/recovery which, in turn, resulted in rising volatility of the growth rate. Growth during the 1980s -being, to a large degree, independent of autonomous capital flows- was essentially an export-led process, supported, first by the post-crisis recovery of the early 1980s and, then, by Özal government's expansionary policy phase (1984-87). The end of this phase is characterized by declining domestic absorption in 1988 and the end of the export boom in 1989. Although the last stage of this episode is stagnation and exhaustion, it is radically different from the bust phase of the financial cycles of the following decade. Indeed, the post-1990 years exhibit four downturns (1991, 1994, 1998-99, 2001) the latter three of which also incorporate financial crises of different intensity; and four booms (1990, 1992-93, 1995-97 and 2000). It is also striking that as we move into the 21<sup>st</sup> century, the duration of the *mini* business cycles seems to have shortened even further. In fact, the growth rate is observed to be negative in ten of the last sixteen quarters from January 1998 up till the end of 2001.

#### *I-2b(ii). An Anatomy of Financial Crises, Turkish-style*

A brief overview on the bust phases of these cycles which incorporated serious banking and/or currency crises, *i.e.* 1994, 1998-99 and 2001, will be helpful in this context. Tables 4 and 5 show that it is impossible to diagnose the underlying cause of these financial disturbances without observing the volatility of capital flows. 1994 appears to exhibit the most violent impact in this respect: Net flows by non-residents had been reversed into outflows reaching 4.8% of GNP. The absolute magnitude of the reversal represented by the difference in inflows between the two years, *i.e.* 1994 minus 1993 figures for *NKF(nr)*, equaled -19.1 billion dollars. Somewhat surprisingly, resident agents (essentially banks) acted in counter-cyclical fashion by eliminating their assets abroad and allocating the funds to cover their losses in Turkey<sup>6</sup>. The net reversal of both non-resident and resident flows in 1994 compared with the 1993 figure was -12.8 billion dollars (*i.e.* 9.7% of GNP) the magnitude of which forced the government into two consecutive devaluations of the Turkish lira and pushed the economy into a severe (*i.e.* -6.1 and -5.5 % in terms of GNP and GDP respectively) recession.

<Table 5 here>

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<sup>6</sup> There was, also, a significant amount of financial investments by household on the so-called "super T-bills" offering 400% interest rates with a maturity of three months, financed by switching from unrecorded forex holdings. Although such currency switching from unrecorded into recorded assets may not incorporate cross-border capital movements, it is reflected as positive values in the "net errors and omissions" item which, in the methodology followed in this paper, are considered as *reverse capital flight* by residents.

The 1998 bust also incorporates comparable reversals in capital movements. Throughout 1998, non-residents' flows continued to be positive, but registering a substantial decline compared with the preceding year: The "1998 minus 1997" figure for  $NKF(nr)$  is -7.6 billion dollars. Residents' flows, on the other hand, continued to be increasingly in the outward direction and the "1998 minus 1997" figure for  $NKF(r)$  amounted to -417 million dollars. The net reversal on both items was -8 billion dollars, i.e. 3.9% of the GNP. Although a currency crisis was averted, the outcome was the *de facto* bankruptcy of eight banks taken over formally by the so-called *Savings Deposits Insurance Fund* (SDIS), in effect, by the treasury<sup>7</sup> – the first steps of a process of *de facto* socialization of banks which by July 2001 was to cover eighteen banks. The burden on the exchequer due to the liabilities of these banks as of July 2001 is estimated to be around US\$ 14 billions, or 9.3% of the GNP. The incidence of these operations on the productive sectors actually became visible starting from the last quarter of 1998, and the economy moved into a severe recession which continued during 1999 when the GNP declined by 6.1% in real terms.

2000 was characterized by an exchange rate-based disinflation and stabilization program designed, engineered, and monitored by the IMF. Starting from inflation rates of 68.8 and 62.9 percents in terms of CPI and WPI at the end of 1999 respectively, the program targeted 25% and 20% (December to December) inflation rates for the two indices at the end of 2000. Furthermore it programmed a 20% increase in the nominal TL price of a basket of  $1US\$+0.77 Euro$ . Upper limits for the net domestic assets of the Central Bank (CB) were set and the monetary base was to be totally dependent on the purchases of foreign exchange by the CB. Together with lower limits for the net international reserves and upper limits for PSBR as performance criteria and with the exclusion of sterilization as a policy option, the program can be interpreted as a mild Currency Board version (Yeldan, 2001b).

The program appeared to be successful in the first 10 months of its implementation: Monetary, fiscal and exchange rate targets were attained fully and the IMF teams praised the Turkish authorities on the successful implementation of the program. Although domestic price movements decelerated significantly from February onwards, the decline in inflation was behind the targeted rates of change of price indices and of nominal exchange rates. Between the last weeks of 1999 and 2000, the exchange rate basket rose by 20.3%; but rates of change in WPI and CPI indices were 32.7 and 39.0 per cents respectively. Disregarding price movements in trade partners, these figures correspond to real appreciation for the TL by 10.4% and 15.6% in terms of the two price indices respectively.

Appreciation of the domestic currency was further accompanied by an "explosion" of net capital flows by non-residents which reached 15.5 billion dollars during the first ten months of 2000. This was reflected in CB's balance sheet where the net external assets increased by 53%, and the monetary base by 46%, between February and mid-November. In contrast, the wholesale price index had risen (roughly) by 22% during the same period. Real interest rates on government's debt instruments (GDIs) collapsed from an average of 33% in 1999 to practically zero during 2000. A

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<sup>7</sup> Savings deposits are insured 100% since the 1994 crisis. Additionally, a scandalous provision imposed by the IMF during the negotiations for the additional stand-by agreement in December 2000 extended the guarantee to bankrupt banks' external debts. Hence, international banks' bad loans to Turkish banks are henceforth guaranteed and to be covered by the Turkish exchequer. The "moral hazard" dimension of this provision goes without saying and there is no estimate on the magnitude involved.

very strong upturn in domestic absorption accompanied by the appreciation of the TL and together with the impact of Customs Union with EU were the two major reasons leading to the rapid expansion of the current account deficit reaching 9.5 billion dollars by the end of 2000. (See Table 1 above). This outcome was solely due to the deterioration of the trade balance<sup>8</sup>. By November IMF officials started to express their concerns on the sustainability of the current deficit<sup>9</sup> and external investors appeared to share the same concern by liquidating their assets in TL and as international bankers started to call in their short-term loans to Turkish banks.<sup>10</sup>

Although real interest rates on government borrowing had declined practically to zero, short-term inflows continued throughout most of 2000 because strict commitment to the nominal exchange rate targets continued to generate positive arbitrage rate expectations for banks, which, ex post, averaged 13% for the whole year<sup>11</sup>. Although government bonds with maturities of 12-18 months purchased on lower rates were to generate serious problems to banks during 2001 after the collapse of the exchange rate and when inflation was, once again, rising, most of the banks continued to borrow short-term abroad during the year. In fact, if we denote *interest rates* on public borrowing, *inflation* and rate of change in the nominal (weighted) *exchange rate* by  $i$ ,  $p$  and  $e$ ; by the end of the year the respective ratios were 0.36; 0.327 and 0.203, i.e.  $i \bar{n} p \bar{n} e$ .

The ratio of short-term debt to international reserves of the Central Bank, which had stood at 101% at the inception of the program, jumped to 152% in December 2000. Figure 1 portrays the path of short term debt/CB Reserves ratio in Turkey, and contrasts with the data observed in various East Asian economies at the onset of their crises in July 1997. In retrospect, considering the East

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<sup>8</sup> During the first eleven months of 2000, exports remained practically unchanged, but imports rose by 37% more than doubling the trade deficit to 25 billion dollars. (See the following section). The adverse effects of the 1994 Treaty on the Customs Union with EU on the trade balance was delayed because of the substantial 1994 devaluation whose protective impacts had continued to prevail during the following five years of mild appreciation. These favorable conditions were reversed in 2000 not only due to the faster rate of appreciation of TL vis-a-vis the currency basket, but also because of the depreciation of the Euro vis-a-vis the dollar.

<sup>9</sup> Yet, the realized external disequilibria should have come as no surprise to the IMF. Past experience on all exchange-rate-based stabilization programs show that they initially generate a demand-based expansion accompanied by rising and usually unsustainable trade and current deficits followed by a contractionary phase – the magnitude of which depends on the size of the earlier external deficits. An overview of such *exchange rate-based* disinflation and stabilization is summarized in Calvo (2001), Calvo and Vegh (1999), Calvo, Reinhart and Vegh (1995), Amadeo (1996), Agenor (2000), Akyuz and Cornforth (1999), Calvo, Leiderman and Reinhart (1996), Diaz-Alejandro (1985), Kaminsky and Reinhart (1999), Frenkel (1995), and Agenor and Montiel (1999, chp. 8). For individual country experiences see also Corbo (1985), and Edwards and Edwards (1991) on Chile; Dornbusch and Werner (1994) on Mexico; Patinkin (1993), and Bruno (1993) on Israel; and Dornbusch (1995), and Frenkel and Fanelli (1998) on Argentina. The IMF itself has had access to a series of interim reports and staff papers documenting such possible discourse on the financial markets. See, e.g., Kaminsky, Lizondo and Reinhart (1998) “Leading Indicators of Currency Crises” *IMF Staff Papers*; and more recently, *Debt and Reserve Related Indicators of External Vulnerability*, A Report of the Policy Development and Review Department, which, in its own words, “has been prepared in consultation with the other Departments” (March, 2000).

<sup>10</sup> There were, without doubt, additional complications. The number of banks transferred to the *Savings Deposit Insurance Fund* kept on increasing throughout 2000. Most of their owners faced criminal charges and were arrested. The shock and apprehension of the financial community was aggravated when the newly established Board of Banking Supervision and Regulation called the banks to reduce their open positions between their foreign exchange liabilities and assets within the pre-set limits by the end of the year resulting in additional foreign exchange demand.

<sup>11</sup> Weighted average of interest rates on 2000 auctions, i.e. 36% deflated by 20%, i.e. change in nominal e-rate.

Asian experiences, Turkey was exhibiting serious deterioration in terms of this fragility indicator throughout 2000. Thus, the program succeeded in reducing inflation, but not enough to prevent significant currency appreciation, moreover at the cost of increased fragility of the banking system and of the external vulnerability of the Turkish economy as validated by the twin crises of November 2000 and February 2001.

<Figure 1 here>

A sudden outflow due to non-residents liquidating their treasury bill and equity assets started a run against the TL in November. Additional foreign exchange demand resulted in the erosion of the CB reserves by nearly 7 billion dollars whose net external assets declined by 52% in two weeks after mid-November. The macroeconomic impact was chaotic. We portray the paths of the monetary base, open market operations (OMOs), the net foreign assets (NFA), and the net domestic assets (NDA) of the central bank under the program implementation in Figure 2. As can be seen, the CB had played the role assigned to it under the program, i.e. the role of a *de facto currency board*, successfully until November when the first sign of the culminating crisis struck. The monetary base reflected the changes in the NFA, while the NDA was kept in its targeted limits. With the abrupt fall in its net external assets, the CB initially violated the IMF ban on open market operations, and managed to provide additional TL liquidity to banks. This maneuver, however, did not prevent the monetary base to contract by 17% during the rest of the month as most of the additional liquidity came back as foreign exchange demand to the CB. Ultimately CB reverted back to the non-sterilization rule, and the ongoing liquidity squeeze was aggravated as overnight interest rates climbed to exorbitant levels.

Short-term policies during the three months between the November and February crises were essentially aimed to preserve the exchange rate anchor at all costs. After making some allowance for the November turbulence, the previous rules of the game were reestablished with changes in the monetary base being dependent on changes in CB reserves. The low level of reserves continued up till the end of the year and contributed to a severe liquidity squeeze for the banking sector, high interest rates and contractionary pressures. An agreement with the IMF late in December included a financial package of \$10.5 billion. This kept funding the essential elements of the preceding program intact, and replenished reserves early in January 2001.<sup>12</sup> However, IMF funding through the SRF precluded its incidence on the monetary base. Hence the liquidity squeeze continued; yet, foreign exchange markets were temporarily stabilized, albeit at interest rates significantly above the pre-crisis levels. The last four Treasury auctions for government debt papers which took place in November had resulted in a (weighted) average annualized interest rate of 38.6% whereas the first four auctions in 2001 before the February crisis had raised the same interest rate to 66.6%. On the other hand, demand contraction and the ongoing impact of the exchange rate anchor were instrumental in pulling prices down to around 27 per cent per annum in January and February.

Suppressing the foreign exchange demand via exorbitant interest rates was, clearly, an unstable situation. A political skirmish between the President and the Prime Minister resulted in a second attack on the TL late in February 2001. As interest rates rose to three-digit figures, CB had

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<sup>12</sup> \$8.1 billions of IMF credits between November 2000 and June 2001 financed part of the reserve depletion of \$15.2 billions.

to sell \$5.2 billion within two days. This amount roughly equals non-residents' net liquidation of TL securities (\$-3.8 billions) and amortization of short-term bank loans (\$-1.3 billions). The 2000 program officially came to an end as free floating of the currency was announced on 22 February. And by mid-May, a more conventional standby agreement with the IMF was finalized. The new program was structured around a long list of so-called “structural reforms” which (with the exception of those related to the banking system) had no immediate or, even, medium-term relevance for stabilization; *plus* demand management via fiscal and monetary stringency, but with no targets for the exchange rate.

The impact of capital movements on the 2000-2001 cycle can be observed by the findings in Tables 5 and 6a which, using monthly data, compare the boom (i.e. January to October 2000) and the bust (November 2000 to September 2001) phases of the cycle. Table 5 (row 8) shows the magnitudes involved as capital flows are reversed during the eight months from November onward: The aggregated shock due to the reversal in non-residents' capital flows in 2000-2001 (i.e. \$-25.6 billions) is significantly higher than those observed during the earlier crises in 1994 and 1998-99. Thus, the breakdown of non-resident and resident flows into individual items in Table 6a shows that the drift into financial crisis is, predominantly, due to the capital outflows originating from non-residents. Outflows from portfolio investments play the most crucial role, followed by amortization of short-term bank loans. Residents, particularly in terms of their recorded capital movements, once again, act counter-cyclically and their net outflows, including the unrecorded (i.e. *EO*) items decline by \$800 millions. Even if this factor is included, the magnitude of the reversal between the first ten months of 2000 and the following eight months of all cumulative capital flows, i.e.  $NKF(nr)$ ,  $NKF(r)$  and *EO*, is an astounding \$27.6 billions.

<Table 6a here>

<Figure 2 here>

Dramatic macroeconomic implications follow. The high tempo of inflows by non-residents during the first ten months of 2000 generates a boom with unstable characteristics and as its unsustainability is perceived by external agents capital flows are reversed. The magnitude and suddenness of the reversal determines the depth of the financial crisis and its incidence on the growth rate. Hence, in 2001 the economy appears to be moving into a depression much more serious than those observed in the preceding crises. By the second half of 2001, the annual decline in industrial production had exceeded the 10% threshold accompanied by massive lay-offs, rising inflation, increased social unrest and generation of a current surplus which was, once again, essentially due to import compression. The “bust” phase of the present cycle appears to be longer-lasting, much more serious and destructive than the earlier ones. Thus, our findings in Tables 5 and 6a show that it is impossible to grasp the movement into a financial crisis and economic downturn unless the starting point is the analysis of capital flows in- and out of the country.

#### *I-2b(iii). Underlying causes of increased external fragility*

There is some confusion in Turkey and elsewhere in diagnosing the factors behind financial crises. As discussed above, the underlying cause in the Turkish case should be sought on the impact

and, at times, positive and negative shocks, generated by large, uncontrolled capital movements with a large “hot” component within a fragile financial system. Weak prudential regulation of banks or large public deficits may aggravate the situation, but never causes the collapse *per se*. And there is always an individual pretext which triggers the bust. A usual confusion is to see the pretext as the cause. The event which triggered the 1994 crisis by causing capital flight was the government’s effort to impose lower interest rates on the banks participating in treasury bill auctions. In November 2000, the case of *Demirbank* which was forced by rival banks to unload very substantial amounts of treasury bills on the market and the Central Bank’s simultaneous withdrawal from open market operations was regarded by some economists as *causing* the crisis. An attack on the TL immediately followed the skirmish between the President and the Prime Minister in February 2001. Rumors on arguments within the cabinet immediately resulted in substantial movements on the stock and foreign exchange markets leading to mini-crisis situations during the following months. Once again, each case is unique in the sense that there are different events triggering financial disturbances; but it is ultimately the structural fragility generated by the unregulated and chaotic capital movements and the financial cycle without which the same events could never have caused a similar havoc affecting the economy as a whole.

To be able to take better account of the disruptive mechanisms of this structural fragility, we have to note the well-known dilemmas faced by policy makers in a developing economy with an open capital account: As is the case with Turkey currently, fiscal stringency is imposed by the rules of the game and, using fiscal tools as a short-run macroeconomic policy option is out of the agenda. On the other hand, under conditions of open capital accounts, monetary authority can independently target either the nominal exchange rate or the interest rate, leaving the determination of the other to the interplay of the market forces.

The overwhelming evidence accumulated from the developing country experiences in the last two decades suggests that a liberalized capital account cannot be launched unless it is expected that a higher rate of return on domestic assets (deflated by the exchange rate) will be realized in comparison to the rate of return abroad. However, such a commitment favoring high domestic interest rates stimulates foreign inflows and leads to appreciation of the domestic currencies further inviting an even higher level of hot money inflows into the often shallow domestic financial markets. The initial bonanza of debt-financed public (*e.g.* Turkey) or private (*e.g.* Mexico, Korea) spending escalates. In order to accommodate to this process, the central bank is forced to hold significant foreign exchange –a phenomenon which will be discussed in what follows. In this setting, the only proper role that is remained for the monetary authority becomes that of monetary sterilization. Thus, the surge in the M2Y value of money supply is checked by restricting the *domestic* component, with a consequent rise in the domestic interest rates, and a re-commencement of the cycle. Eventually the bubble bursts as hot money rushes out of the country; and a series of severe and onerous macro adjustments take place through very high real interest rates, sizable devaluations, and a severe entrenchment of aggregate demand.<sup>13</sup>

## **I-2c. Rising Leakages from Non-Residents’ Inflows**

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<sup>13</sup> Elements of this vicious cycle are further studied in Kaminsky and Reinhart (1999), Adelman and Yeldan (2000), Dornbusch, Goldfajn and Valdés (1995), Velasco (1987), Diaz-Alejandro (1985), and more recently referred to as the *Neftci-Frenkel cycle* in Taylor (1998) (following Neftci (1998) and Frenkel (1998)).



Capital account liberalization resulted in a rising gap between non-resident inflows and the current account during the 1990s as has already been noted (see the first two rows of Table 4). Factors contributing to the growing gap between non-residents' inflows and current deficits is not merely of theoretical interest. The cumulative current account deficit during the 1990s equals \$14.1 billions, whereas Turkey's external debt during the same period had risen from \$42 billions to \$102 billions –a dramatic increase of \$60 billions, far in excess of the financing requirements of the current account.<sup>14</sup> As long as growth of the external debt is considered to be a policy issue, the analysis of factors that lead to the detachment of external borrowing and current account deficits becomes important in practical terms. Table 5 above provides the basic quantitative framework for depicting these factors.

The well-known BOP identity as depicted and defined in equation 1 in the appendix, i.e.  $NKF(nr)+NKF(r)+EO+DR+CA=0$ , constitutes the framework of Table 5. The terms represent, respectively, net capital flows emanating from non-residents, residents' net flows, net errors & omissions, changes in reserves, and the current account balance. Same data can also be presented with slight modifications in terminology. By reversing the signs of the last four terms of the BOP identity, one can *decompose* the non-resident *inflows* into current *deficits* and “*leakages*” (i.e. recorded and non-recorded *outflows* by residents, and reserve *accumulation*). The conceptual framework for both representations is further elaborated in the appendix (see appendix equations 1 and 2).

Table 5 shows the striking change which occurs as a result of the liberalization of capital accounts after 1989. Ratios of  $NKF(r)$ ,  $EO$ ,  $DR$  and  $CA$  within net non-resident flows, i.e.  $NKF(nr)$ , should be interpreted as the share of each type of utilization to which non-resident flows have been allocated. Findings on the values of each of the terms (and of the relevant ratios) during different phases of financial cycles as well as the cumulative sums for the 1980s and 1990s are summarized and analyzed in what follows.

*I-2c(i). Recorded capital flows by residents [ $NKF(r)/NKF(nr)$ ]:*

A negative value for  $NKF(r)$  signifies recorded capital outflows by residents. It will be observed that during the 1990s, with the exception of the crisis year of 1994 (when residents acted in counter-cyclical fashion and engaged in net inflows),  $NKF(r)$  was negative throughout. In relative terms, their drain on the capital account was particularly heavy during the financial bust in 1998 (when the current account was in surplus) as recorded resident *outflows* as a ratio of  $NKF(nr)$  rose to 94%. Comparing 1980s with the 1990s, it is observed that capital controls really make a

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<sup>14</sup> Cumulative non-resident inflows during the same period equal \$57.8 billions. However, part of this magnitude is covered in the BOP statistics, i.e. FDI and portfolio equity inflows which add up to \$10.7 of the total, consists of non-debt generating inflows. Hence, the debt stock, on the basis of BOP data, ought to have risen by \$47.1 billions instead of the \$60 billions based on external debt data. The discrepancy is either due to (i) inconsistency between data sets or (ii) the impact of currency movements between the US dollar and other convertible currencies on the total value of the external debt in dollars depending on the currency composition of the pre-1990 debt stock.

difference. The ratio of the residents' outflows to non-residents' inflows rose by 10 percentage points from 22 to 34% during the latter decade.

*I-2c(ii). Unrecorded capital flows by residents (capital flight) [EO/NKF(nr)]:*

Throughout this study, the "net errors & omissions" (*EO*) item of the BOP statistics is treated as *unrecorded capital movements by residents*. A negative *EO* value is, thus, considered as capital flight.<sup>15</sup> Liberalization of capital movements should, generally, be expected to transform unrecorded capital movements into recorded items by legalizing the former. This factor, together with improved statistical methods, should result in lower values, at least in relative terms for the *EO* item. This appears to be the case for a sample of 16 emerging economies during the 1990s compared with the preceding decade where the share of capital flight (as represented by negative *EO* values) within non-resident inflows has declined from 11.1 to 6% (See Table 5, column 8, last two rows).

The Turkish experience, however, is directly the opposite. During the 1980s, the net balance of the *EO* item was positive [i.e. 18.7% of *NKF(nr)*] probably due to the reversal of capital flight which took place during the severe crisis of the late 1970s. This positive contribution would, thereby, offset most of the recorded residents' flows, the cumulative sum of which was negative during the earlier decade [i.e. -22.4% of *NKF(nr)*]. The 1990s reversed the direction of capital flight by changing the cumulative *EO* item into negative values and residents' unrecorded capital movements as a ratio of total non-residents' flows were -6%. Thus, recorded and unrecorded capital movements by residents [*NKF(r)+EO*] together constituted a 40.4% drain on the non-residents' inflows –a radical deterioration which could only be understood within the context of liberalization of the capital account.

*I.2c3. Reserve changes [DR/NKF(nr)]*

Under a regime of controlled mobility of international capital, the adequate level of reserves was traditionally regarded as three or four months of imports for covering the time lags between payments for imports and export receipts, as well as offsetting temporary disequilibria in the current account. Capital account liberalization radically changed and broadened the criteria of reserve adequacy, and brought fore such indicators as "the ratio of reserves to short-term debt plus the stock of portfolio equity", "ratio of foreign-assets-to currency (usually M2Y)", and a minimum level in excess of scheduled amortization of external debt. For example, after observing that "foreign exchange reserves and reserve policy played an important role in the recent financial crises", Alan Greenspan suggested in 1999 that "countries could be expected to hold sufficient liquid reserves *to ensure that they could avoid new borrowing for one year*"<sup>16</sup>. (italics ours).

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<sup>15</sup> This interpretation is shared by many researchers. See, for example, B. Varman Schneider, *Capital Flight from Developing Countries*, Boulder, CO, Westview Press, 1991, 50:51. On the other hand, unrecorded current account operations, e.g. smuggling, as well as foreign exchange movements in and out of the formal sector, without any cross-border transactions taking place are also reflected in the *EO* item. The latter interpretation appears to be more valid for Africa. See N. Bhinda, S. Griffith-Jones, J. Leape and M. Martin, *Private Capital Flows to Africa*, The Hague, Fondad, 1999, 83)

<sup>16</sup> cf. UNCTAD, *Trade and Development Report 1999*, UN, New York and Geneva 1999, 110:111.

These new and drastic adequacy requirements for reserve levels have pushed most developing countries to move into an accelerated rate of reserve accumulation in "normal" periods. The outcome has been an additional and "expensive"<sup>17</sup> drain on non-resident inflows. However, the aforementioned drain of reserve accumulation on net inflows in Turkey does not show much change in the pre- versus post-liberalization years. (See column 8 in Table 5). Period averages, however, are affected by the severe drain on CB reserves taking place late in 2000 which pulled total reserve accumulation during that year practically to zero. Tables 6a and 6c depict the turbulence in capital movements which adversely affected the Turkish economy during the 2000-2001 crisis. It is observed that reserve accumulation amounting \$2.9 billions for the first three quarters in 2000 was reversed during the last quarter when \$2.5 billions of reserves were depleted. If data on 2000 are disregarded, between 1989 and 1999 the net increase in reserves in Turkey amounted to 19.9 billion dollars, constituting 84% of the total increase (e.g. 23.8 billion dollars) in the import bill; whereas the similar ratio for the developing countries as a whole was 60% -still considered excessive<sup>18</sup>.

These developments in capital movements during the past decade are not limited to Turkey. For comparative purposes, the last two rows of Table 5 present the data for 16 emerging economies (including Turkey)<sup>19</sup> for the two decades. Both for the 16 countries and Turkey, the share of current deficit financing out of non-resident inflows has declined, but the decline is much more substantial for Turkey (*i.e.* from 67 to 32%) than the others (from 54 to 43%). During the last decade, the shares of recorded and unrecorded resident outflows have been substantially higher in Turkey and those of reserve accumulation have been similar. These findings suggest that the impact of capital account liberalization in Turkey on the reallocation of capital inflows has been much more substantial than the comparable emerging economies.

#### **I-2.d. Arbitrage-Seeking, Short-Term Capital ("Hot Money") Flows**

Another disturbing feature of capital flows during the 1990s is the increasing magnitude, both in absolute and relative terms, of "hot money" flows. (See Appendix for the conceptual and empirical specification of "hot money".)

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<sup>17</sup> The differential between the rate at which reserves are borrowed and the return on the international assets at which they are invested represents the net loss on reserve accumulation. This resembles the case of a head of household in a developing country who borrows from the bank and then puts the borrowed money in a deposit account at the same bank. These two transactions which generates a net loss to the household may appear totally absurd and irrational; but in fact, it has a logic of its own if the deposit account is used to "gain respectability" from the consular office of, say, Australia, to which he has applied for a visa.

<sup>18</sup> UNCTAD, *Trade and Development Report 1999*, UN, New York and Geneva 1999, 108.

<sup>19</sup> The 16 countries covered are Argentina, Brazil, Chile, Columbia, Egypt, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, Philippines, South Africa, South Korea, Thailand and Turkey.

In a developing economy "hot money" flows emerge from arbitrage-seeking activities of rentiers and banks (both non-residents and residents) as well as of firms (essentially residents) in both directions. The arbitrage returns, defined as the speculative gain for rentiers between the highest (nominal) interest offered in the domestic economy and the rate of (nominal) change in the exchange rate (defined as TL per dollar) was calculated in Table 3 above. It should, however, be pointed out that the same variables similarly affect the behavior of banks borrowing abroad and moving into TL assets (e.g. government debt instruments) or firms borrowing in foreign exchange, but spending in TL. The rate of return minus the risk primea compared with rates of return abroad determines the direction of hot money flows. Tables 6b and 6c provide the empirical findings on hot money movements distinguished between residents and non-residents. Emphasis on the following observations is worth noting.

**<Tables 6b and 6c here >**

(i) The mere magnitude of *gross* short-term capital movements must be a source of concern. Columns 2 and 3 of Table 3 above report the gross flows of banks' foreign credit acquisitions and repayments for the post-1991 period. Even if we take into consideration that some of these figures includes double-counting due to the renewal of short-term bank liabilities more than once every year, the relevant magnitudes point at one of the most important sources of instability in the financial system.

(ii) It was, predominantly, short-term, arbitrage-seeking (i.e. "hot") capital movements which were affected by capital account liberalization in 1989<sup>20</sup>. The net balance of 1990-2000 is negligible, i.e. \$262 millions. But if we include the dramatic outflows during the recent crisis, the net balance for hot money for the 1990-2001 (January-September for the last year ) period, thus, turns out to be \$-13.1 billions<sup>21</sup>. This is significantly different from the earlier decade when "hot" non-resident inflows were of negligible magnitudes, but *reverse capital flight* had acted as a *positive* factor in financing current deficits. It is observed that the 1989 turning point affected arbitrage-seeking flows by raising non-resident inflows substantially, particularly during the boom phases of the cycle; but, more importantly, by reversing the direction of residents' flows into recorded and unrecorded outflows, exceeding the total of hot money inflows since 1990.

(iii) Since "arbitrage-seeking" is determined by the same variables regardless of the residence of the relevant agent, how can we explain the divergence between the actions of residents and non-residents? Indeed, as briefly discussed earlier, residents had acted in counter-cyclical fashion during the 1994 and the 2000-2001 crises (See Tables 6b and 6c). Two (not necessarily mutually exclusive) hypotheses are worth testing empirically: Contradictory expectations in response to the same variables, particularly on expected exchange rate movements and/or external agents more willing to take "moral-hazard-based risks" (which ultimately turn out to be justified) is one explanation. Alternatively, resident rentiers' behavior may be a transitional phenomenon of one-off

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<sup>20</sup> The only non-hot capital movement which was affected by the 1989 liberalization was, probably, FDI abroad of residents.

<sup>21</sup> Note that period coverage for recent hot money movements in Tables 6b and 6c are different: The former (row 9) covers the first three quarters of 2001 whereas the latter incorporates the last two months of 2000 additionally.

portfolio diversification, the impact of which will wear off after the first substantial movement abroad is exhausted.

(iv) The shares of "hot money" within capital flows of both residents and non-residents have risen substantially since the liberalization of capital accounts: For non-residents, "hot inflows"/total inflows ratio has risen by more than 5 percentage point to 26.1% during 1990-2000 as compared with the preceding decade with, however, a highly fluctuating pattern. For residents, "hot" outflows constitute 65% of total outflows during the same period. Hot money movements are much more volatile than other capital flow categories, particularly when crisis periods are included.

(v) Data on 1994 in Table 6b and the findings of Table 6c on the eight-month period from October 2000 to the end of September 2001 clearly show the contribution of hot money movements on the emergence of financial crises and on their deepening. Within eleven months in 2000-2001 net recorded and unrecorded hot money flows by non-residents and residents reached \$-13.3 billions and, to say the least, generated an extremely adverse and destabilizing impact on the economy.

To summarize, the liberalization of the capital account in Turkey in 1989 has pushed the economy into an unstable and risky path in four directions: (1) The fragility of the domestic financial system has increased substantially. (2) The growth path of the economy has become more volatile, subject to a newly emerging financial cycle, and the period between its boom and bust phases shortened considerably. (3) Drains or "leakages" out of inflows rose in relative terms, and the external debt has grown at a pace totally unrelated with the external financing needs of economic growth. (4) And, finally, arbitrage-seeking and short-term capital ("hot money") flows constituted a rising share of total capital movements from both residents and nonresidents and this phenomenon has started to transmit a serious factor of instability to the economy.

## **II. Economics of Macro Adjustment: Sources of Aggregate Demand**

In order to trace the patterns of adjustment to financial liberalization we will deploy a series of decomposition analyses over macro aggregates of final demand. Over the external-cum-financial liberalization era there have been substantial swings in the parameters governing the demand "injections" –such as investments, government expenditures, and exports- and "leakages" –savings, taxes, and imports.

Given our discussion above, much of the variability in aggregate demand in the Turkish economy is induced by the state's fiscal stance. The escalation of public deficits via ever rising costs of (internal) debt servicing became the dominant element in aggregate demand. The costs on domestic debt servicing were so explosive that by as early as 1992 public swings turned negative. By 2000 interest costs on domestic debt reached to 80% of overall tax income of the public sector, with an anticipation that the disposable income of the public sector, itself, is likely to be negative by the end of 2001.

## II-1. Decomposition of the Sources of Effective Demand

We will address these developments utilizing the analytics provided in Godley (1999) and Taylor (2000) where the following decomposition measure is applied over effective demand: At the one sector level, total supply,  $X$ , in any economy is given by the sum of GNP,  $Y$ , and imports,  $M$ . Total GNP, in turn, can be partitioned into private disposable income,  $Y_p$ , and public disposable income,  $Y_g$ , loosely referred to as aggregate tax income,  $T$ . Thus,  $Y = Y_p + T$ ; and we have

$$X = Y_p + T + M \quad (1)$$

Goods market equilibrium necessitates the balance on aggregate supply and demand (sum of private consumption,  $C_p$ , private investment,  $I_p$ , government expenditures,  $G$ , and exports,  $E$ ):

$$X = C_p + I_p + G + E \quad (2)$$

We define the following “leakage” parameters relative to aggregate GNP as:

$$s_p = \frac{Y^p - C^p}{Y}$$

$$t = \frac{T}{Y}$$

$$m = \frac{M}{Y}$$

Using this shorthand notation, one can obtain the following version of the (Keynesian) multiplier function:

$$Y = \frac{1}{(s_p + t + m)} (I^p + G + E)$$

or

$$Y = \frac{s_p}{s_p + t + m} \left( \frac{I^p}{s_p} \right) + \frac{t}{s_p + t + m} \left( \frac{G}{t} \right) + \frac{m}{s_p + t + m} \left( \frac{E}{m} \right)$$

Here,  $I_p/s_p$ ,  $G/t$ , and  $E/m$  can be interpreted as direct “own” multipliers of, respectively, investments, government expenditures, and exports. The overall impact of these injections are scaled by the corresponding leakages of savings, tax burden, and import propensities.

We portray the evolution of the values of key parameters in Figure 3. Here contrast can be made across the scaled injection sources and the GNP. The abrupt expansion of  $G/t$  is clearly visible against other demand components. The dismal performance of  $I_p/sp < Y$  discloses the channeling of investable funds away from the real fixed investments towards financial speculation targeted at government's deficit financing and securitization of domestic debt. Real exports as scaled by the import propensities,  $E/m$ , also fall short of GNP throughout the post-liberalization era. The only two exceptions occur in 1998 and then again 1994 –both being crisis years during when imports have contracted severely.

<Figure 3 here>

How dependable is the source of  $G/t$  in sustaining growth in GNP? Or, in other words, should we regard the massive injection provided by the  $G/t$  as a healthy source of growth?

In order to make a proper assessment of  $G/t$ , we further decompose  $G$  into its components. We deduct transfer expenditures from  $G$  wherein the most important item is interest costs on domestic debt. Then we carry out the same analysis by employing  $G'$  as real non-interest government expenditures (on goods and services).

This revision brings a totally new role over the state's stance as the source of demand. Real non-interest government expenditures, scaled by  $t$  ( $G'/t$ ) becomes much weaker as a source of injection in the first half of the 1990s. After 1994, the post-crisis management reduces the  $G'/t$  component severely. Even so, the public sector continues to provide relatively stronger demand pulls in comparison to exports. Thus, the foreign sector has continuously been a laggard throughout the whole post-financial liberalization era. Private investments behave comparably at par with public spending during 1994 through 1996. After then, however, investments lose all its impetus as limited domestic savings are channeled to securitization of the fiscal deficits, and the financial savings dominate the incentives against fixed investments in the real sector. These patterns are portrayed in Figure 4.

<Figure 4 here>

## **II-2. Deterioration of the Fiscal Balances**

The post-1988 period witnessed a drastic deterioration of the fiscal balances in Turkey. PSBR/GDP ratios averaged 4.5 percent during 1981-1988, but rose 10.2 percent in 1991, and averaged 9.4 percent over 1990-1999. The end of year PSBR reached to 15.1 percent of the GNP, and is anticipated to rise even further in 2001. Before investigating the serious consequences in resource use and income distribution, it will be useful to overview the factors which generated this deterioration.

We document this deterioration in Table 7 which is based on real values of the fiscal accounts, using 1987 prices.

< Insert Table 7 >

It can be directly noted that during 1988-1993, the major erosion has occurred in the *factor revenues* item, i.e. net factor income generated by the state economic enterprise system. Factor revenues of the state declined by 86 percent in five years in real terms. The real erosion up till 1992 corresponds approximately to 5% of the GNP of the period. The swift upward movement in transfer expenditures started in 1992. Between 1991 and 1996 the increase is more than 125 percent in real terms. The major item in this account is interest payments. The rise in the domestic debt gave way to a rapid build up of interest costs.

On the revenue side, tax collections had registered modest improvements in real terms by 50 percent up till 1993, but they start to decline thereafter essentially due to the erosion of direct taxes. The share of indirect taxes in the total rose to 64% in 1997 from 59% in 1990.

These developments led to a sharp collapse in the disposable income of the public sector, declining by 45 percent *in real terms*. As will be discussed presently, this decline had devastating effects and generated strong pressures on the provision of public services and/or raised public sector borrowing requirement (PSBR) to unprecedented levels.

In this context, it is important to note a fundamental change in financing of the PSBR, breaking away with the pre-liberalization period of the 1970's and 80's. Data on the financing patterns of the PSBR suggest that, under the financially repressed conditions of the 1970's and early 1980's, deficit financing through central bank advances (monetization) was the most direct method. However, after the embarkment of the structural adjustment reforms and especially with the removal of the interest ceilings in a series of reforms throughout the 1980s, the Turkish private sector faced a new element: positive real rates of interest. Financial institutions and rentiers adapted swiftly to changes in the rates of interest during the 1980's and the government found it much easier to finance its borrowing requirements from domestic borrowing through issues of the government debt instruments (GDIs). This also enabled successive governments to by-pass many of the formal constraints on their fiscal operations. Consequently, with the advent of full-fledged financial liberalization after 1988, the PSBR financing relied almost exclusively on issues of GDIs to the internal market –especially to the banking sector.

The underlying characteristic of the domestic debt management was its extreme short-termism. Net new domestic borrowings, as a ratio of the stock of the existing debt, rose to almost 50% over the 1990's. This ratio increased to 58% in 1992, indicating that each year the state had to resort to net new borrowing reaching to half of the stock of debt already accumulated. Thus, the public sector is trapped in a short term rolling of debt, a phenomenon characterized as *Ponzi-financing* in the fiscal economics literature. This clearly unsustainable process contributed to the so-called confidence crisis of the 1990's. For this scheme to work, however, domestic financial markets required the continued inflow of short term capital inflows. Thus, the episode of hot money inflows should be interpreted, in the Turkish context, as the long arm of fiscal policy, overcoming credit restraints and monetary constraints of the monetary authority.

Currently more than 90% of the newly securitized deficit is purchased by the banking sector. Thus, the so-called deepening of the financial system in the Turkish economy has turned into a



process of self-feeding cycles, ready to burst. High real rates of interest on the GDI's attract speculative short-term funds, and through the operations of the banking system, these are channeled to the vaults of the treasury, which in turn finds a way out of the regulations of the monetary authority, as well as the restricted long-term foreign borrowing opportunities directly from world markets. Capital account liberalization, thus, served the government by enabling banks to engage in extremely profitable short-term borrowing abroad so as to finance Treasury's bond auctions. The major brunt of the costs of this fragile environment, however, falls on the productive sphere of the economy, especially the traded sectors. High interest rates attract short term foreign capital, and the availability of abundant foreign exchange results in overvaluation of the domestic currency, generates disincentives to exporters and contributes to a widening trade deficit.

### II-3. Decomposition over the Fiscal-Real Linkages

Given that the evolution of the financial sector has mostly been related to debt servicing costs of a public sector which was working under conditions of *Ponzi*-finance, it would be illuminating to repeat the above decomposition exercise from the cycle of real-financial linkages.

The equation system introduced in section (II-1) above can be used to obtain the real-financial balance within the domestic economy:

$$DFp + DD + DA = (Ip - spY) + (G - tY) + (E - mY)$$

where  $DFp$ ,  $DD$ , and  $DA$  stand, respectively, for the net change in financial claims against the private sector, in government's domestic debt, and in foreign assets. Clearly, when any entity above (private sector, government or the rest of the world) has its balance on injections exceed the associated withdrawals, then financial claims against that entity must have been rising. So when  $G > tY$ , it means that government is accumulating debt. (Since in the Turkish context government's net foreign borrowing was virtually non-existent during 1990s –see Table 7- this meant build up of domestic debt). Similarly  $E < mY$  indicates that net foreign assets of the home country are declining. Since it must be true that at any point in time

$$dFp/dt + dD/dt + dA/dt = 0,$$

an expansionary stance of the government with  $G > tX$  must be matched by by some other entity increasing its asset holdings or reducing liabilities. In the Turkish case this mostly meant building up of domestic assets in the hands of the domestic banking sector, with injections of liquidity from the rest of the world via short term capital inflows. Under these conditions banks' assets mostly consisted of domestic debt instruments of the government, while their liabilities were mostly short term foreign borrowings. This operation by itself, deepened much of the fragility already existing in the system due to the mismatch between the maturity and currency compositions of the domestic assets and the foreign denominated liabilities.

This mis-match, often referred to as short-positions of the banking system reached to almost 15 billions \$, or about 7% of the GNP by the end of the decade, and increased the vulnerability of the banking system with a high devaluation risk. With the rise of the gap of the open positions of the

banking system, the ongoing risk premium of new borrowing increased secularly until when capital flows changed signs as in late 1998, and again November 2000. The necessary adjustments to bring the system back to the financial asset-liability stock-to-stock equilibrium were indeed onerous and painstaking.

We utilize the GNP identities once again,

$$Y = (C^G + C^P) + (I^G + I^P) + (X - M)$$

Since GNP is the sum of private and public disposable income,

$$Y^G + Y^P = (C^G + C^P) + (I^G + I^P) + (X - M)$$

We distinguish between private and public consumption as  $C^P$  and  $C^G$ ; and  $I^P$  and  $I^G$ ; respectively. Disposable income in the private sector is either private consumption,  $C^P$ , or private savings,  $S^P$ . Similarly for the public sector. We thus obtain,

$$I^P + I^G + E = (Y^P - C^P) + (Y^G - C^G) + M$$

The two terms in the parantheses on the right hand side reflect, respectively, the private savings and the public savings. Denoting  $sg = (Yg - Cg)/Yg$ , and using the remaining variables as defined above, we get a version of the decomposition equation above, th's time reflecting the investment-saving balances of the respective entities:

$$Y = \frac{1}{(s_p + s_G + m)} (I^P + I^G + E)$$

or

$$Y = \frac{s_p}{s_p + s_G + m} \left( \frac{I^P}{s_p} \right) + \frac{s_G}{s_p + s_G + m} \left( \frac{I^G}{s_G} \right) + \frac{m}{s_p + s_G + m} \left( \frac{E}{m} \right)$$

Table 8 documents the relevant parameters and the main indicators of the aggregate demand decomposition. The most striking observation is the negative saving performance of the public sector beginning 1992. This fact alone induces a severe volatility in the investment patterns as  $Ig/s_g$  ratios become negative after 1992 –with the exception of 1997. This observation pertains despite the secular rise of the tax burden,  $t$ . The import coefficient is also observed to rise by almost 2-folds from 0.12 in 1980, to 0.31 in 2000.

<Table 8 here>

Much of the expansion in  $I_p/s_p$  and  $E/m$  is absorbed by the negative saving performance of

the public sector, and the abrupt financing demands of the government increases uncertainty and risk in the financial markets. It also increases the volatility of the money multiplier as the government calls for large amounts of auctions for disposing its debt instruments. This volatility is portrayed in Figure 5.

<Figure 5 here>

### **III. Micro level Adjustments in the Manufacturing Sector**

In this section, we investigate the structural consequences of the post-1980 outward-orientation on the market concentration and productivity characteristics in the Turkish manufacturing industries. To this end, we will refer to recent Turkish literature and report on the continued concentration tendencies and oligopolistic mark-up pricing practices prevalent in the sector. Furthermore, we will employ a new set of decompositions on the productivity and employment patterns to reveal the leading/lagging subsectors within manufacturing.

The period under analysis is known to span the overall transformation of the Turkish economy from domestic demand-oriented import-substitutionist industrialization, to one with export-orientation and integration with the global commodity and financial markets. During this period the manufacturing industry has evolved as the main sector in both leading the export-orientation of the economy, and also as a focal sector wherein the distribution patterns between wage-labor and capital have been re-shaped.

Existing independent studies<sup>22</sup> and rudimentary data from official agencies suggest both formal and anecdotal evidence that one of the major structural deficiencies of the sector reveals itself in the rather loose association between the gains in export penetration and labor productivity on the one hand, and the dismal patterns of employment, accumulation, and of remunerations of wage labor, on the other. This deformation is, in fact, observed to be a perennial feature of the post-1980 structural adjustment era. In their analysis on the decomposition of labor productivity in manufacturing, for instance, Voyvoda and Yeldan (2001) report that, since the inception of the structural adjustment reforms and outward-orientation, the underlying sources of productivity gains were not significantly altered in the sector. They found that none of the leading export sectors of the 1980s could have generated sufficiently strong productivity contributions, nor admitted strong inter-industry linkages to serve as the leading sectors propelling the rest of the economy.

Given this background, there exists further considerable evidence on the extent of monopolization and high concentration in the Turkish manufacturing industries. The State Institute of Statistics data suggest, for instance, that the process of export orientation and overall trade liberalization since 1980 has not affected the structural characteristics of the manufacturing industry. Many of the monopolistically competitive sectors either kept their existing high rates of concentration,

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<sup>22</sup> See, e.g., Boratav, Yeldan and Köse (2000), Onaran (2000), Yeldan and Köse (1999), Filiztekin (1999), Ercan (1999), Pamukçu and de Boer (1999), Köse and Yeldan (1998a and 1998b), Yentürk (1997 and 1999), Uygur (1996), Kepenek (1996), Aenses (1996), Bulutay (1995), and Maraşlıođlu and Týktýk (1991).

or even suffered from increased monopolization as measured by their CR4 ratios or Hirfindahl indexes. Even among many competitive sectors of 1980, one observes increases in the CR4 ratios by 1996.<sup>23</sup>

These observations suggest that, contrary to expectations, the opening process was unable to introduce warranted increases in competition in the industrial commodity markets. Here we attempt to formalize on these observations and deduce econometric hypotheses on the patterns of trade liberalization, concentration and profitability. To this end, we will summarize the results obtained by Metin, Voyvoda and Yeldan (2001) who investigate these empirical questions using various panel data procedures. The relevant data cover 29-subsectors of Turkish manufacturing for the period, 1980-1996. We focus on three sets of issues: (i) effect of openness on the extent of market concentration as measured in CR4 rates; (ii) the behavior of gross profit margins (mark-ups) in relation to openness, concentration rates, and real wage costs; and (iii) the behavior of sectoral real investments (by destination) in relation to the mark-ups, real wage costs, and the openness indicator.

### III-1. Phases of Macroeconomic Adjustment in Turkish Manufacturing

Table 9 summarizes the main indicators of the manufacturing industry under the post-1980 adjustments. To document the extend of the oligopolistic structure of the sector, we tabulate the rate of market concentration in the manufacturing industry sub-sectors as calculated by the shares of the *four* largest enterprises in the total sales (revenues) of the sector (hence the acronym, CR4). Accordingly, we classify those sectors with CR4 ratios above 30% to be *imperfectly competitive*, and those having CR4 ratios below this threshold as *competitive*.<sup>24</sup> Data on other sectoral variables come from the State Institute of Statistics (SIS) Manufacturing Industry Annual Surveys. To arrive at “wage rates” and the “average labor product”, we have used data on “total wages paid” and “value added” divided, respectively, by “average number of workers engaged”. We have used the sectoral wholesale producer prices in deflating nominal magnitudes.

<Insert table 9 here>

The periodization of the table follows the adjustment path of the overall economy as characterized and discussed in Table 1 above. Given our criterion of distinguishing individual sectors as competitive *versus* imperfectly competitive based on their CR4 ratios, we observe that 18 of the 29 sectors fall under the “imperfectly competitive & oligopolistic” group in 1980. Eight of them have CR4 ratios higher than 50%. By 1996 there is very little change in these sub-groups. As of 1996

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<sup>23</sup> See, for instance, Metin-Voyvoda and Yeldan (2000), Güne° (1996), Kaytaz, Altýn and Güne° (1993) Katýrcýođlu (1990) and<sup>a</sup> ahinkaya (1993) for the evaluation of market concentration and patterns of oligopolistic mark-up pricing in the industrial commodity markets. Güne°, Köse and Yeldan (1997), in turn, document comprehensive panel data on the degree of concentration in Turkish manufacturing using the standard Input-Output classification for the period 1985-1993.

<sup>24</sup> This is the threshold used by Boratav, Yeldan and Köse (2000) and Yeldan and Köse (1999), where, on a further level of finesse, the sectors which had CR4 ratios between 30% and 49% are classified as “monopolistically competitive”, and those sectors with CR4 ratios exceeding 50% are regarded to be “oligopolistic”.

the share of value added of the imperfectly competitive sectors in manufacturing total reaches to 51%. Furthermore, these sectors employ 31% of total manufacturing employment in our data base. In contrast, the output share of the imperfectly competitive sectors was 55%, and their employment share was 42% in 1980.

Leaving sector 353 (Petroleum Refineries) aside due to its exclusive public ownership, as of the 1994-96 average, the highest degree of concentration is observed in:

Rubber and Plastics (355)	74.8%
Tobacco Manufactures (314)	64.5%
Miscellaneous Petroleum and Coal (354)	63.4%
Printing and Publishing (342)	60.0%

It is interesting to note that the size of the public sector is not necessarily the main actor in these sectors, with public share being 0.01 in 355; 0.04 in 354; and 0.07 in 342. Sectors 321 (textiles) and 322 (wearing apparel) display the most competitive environment with respect to their CR4 ratios.

Overall, one witnesses a mixed pattern of concentration over 1980-96. In general, there is very little structural shift across the two sub-groups. We record 341 (paper and paper products) to be the only sector to change its imperfectly competitive status from CR4 of 47.1% in 1980, to 22.6% in 1996. Per contra, it is interesting to note that one also witnesses a competitive sector such as manufacture of wood products (331) to increase its concentration level beyond the imperfectly competitive threshold of 30% by 1996.

At the expense of over-generalization, we can nevertheless confer a tendency for higher mark-up rates within the imperfectly competitive block. Petroleum Refineries (353), Soil Products (361), and Non-Metals (369) have the highest mark-up rates over 1994-96 with 1.07, 1.04, and 0.72, respectively. On the other hand, sectors 312, 323, and 324 yield the lowest mark-ups. We further observe that growth in real wages has been consistently negative over the 1981-88 and 1994-97 episodes, while real wage costs have been on an upward trend under the financial deregulation of 1989-93. As of 1994-97, the highest share of labor costs in value added is recorded in Manufacture of Footwear (324) with 0.27. This is followed by Glass Products (362) with 0.25, and Paper and Paper Products (341) with 0.24. The dis-association between the real wage movements and labor productivity is clearly visible over the classic export-led manufacturing era, 1981-88. Even though real wages seem to have caught up with real average labor products over 1989-93, this pattern is observed to fall short of its momentum, and by 1994-97, real wages start to follow a contractionary trend.

### **III-2. Econometric Investigation**

We now redirect our attention to the econometric investigation provided by Metin Voyvoda and Yeldan (2001). (Hereafter MVY). We focus on the 29 sub-sectors of manufacturing based on 3-

digit ISI-Classification. (The ISIC codes and their sectoral identification are laid in Appendix Table 1).

MVY continue to rely on the initial classification based on the CR4 ratios introduced above. Accordingly, those sectors which have a CR4 in excess of 0.30 are classified as “imperfectly competitive/oligopolistic”; and those with CR4 less than 0.30 are classified as “perfectly competitive”. On a different spectrum, sectors are to be regarded as “open” provided that their trade volume (measured as imports plus exports) as a ratio of sectoral value added exceed 0.50. Per contra, sectors with trade volume-to-value added ratios less than 0.50 are regarded as “inward-looking”. They carry this classification based on the characteristics of the 29 sectors in 1980. We thus obtain the following tabulation (see Appendix Table 1 for identification of the ISIC codes).

	Open sectors	Inward-Looking Sectors
<b>Competitive Sectors</b>	312, 322, 381, 383	311, 321, 323, 331, 352, 356, 369
<b>Imperfectly Competitive Sectors</b>	351, 353, 382, 384, 385, 390	313, 314, 324, 332, 341, 342, 354, 355, 361, 362, 371, 372

MVY utilize two specifications: they first study the distributional issues and analyze the behavior of gross profit margins (mark-up rates) in relation to trade liberalization, sectoral concentration, and swings in real wage costs. Secondly, they analyze the patterns of accumulation, and study the behavior of sectoral investment (by destination) against the behavior of mark-up rates, real wage costs, and openness.

Essential estimating equations are the following:

$$MR_{it}=f(\alpha_i, O_{it}, CR4_{it}, RW_{it})$$

$$RI_{it}=f(\alpha_i, MR_{it}, O_{it}, RW_{it})$$

The first implicit function represents the trade orientation and distributional aspects of the manufacturing industry where  $MR_{it}$  denotes mark-up rates;  $CR4_{it}$  denotes concentration ratios;  $O_{it}$  stands for “openness” of each sector, (ratio of imports plus exports to sectoral value added), and  $RW_{it}$  denotes real wage costs. The second relationship tries to explain the process of capital accumulation using three possible determinants namely mark-ups, real wage costs, and the openness, where  $RI_{it}$  is the real investment of each manufacturing industry sector. The index  $\{i=1,2,\dots,N\}$  refers to the individual unit, and  $\{t=1,2,\dots,T\}$  refers to a given time period. The coefficients  $\alpha_i$  (sector specific composite term) have two components:  $\alpha_{i1}$ , a sector specific intercept, and  $\alpha_{i2t}$ , a

sector-specific deterministic growth trend.

The general form of the econometric specifications are assumed to be linear:

*For trade orientation and distribution:*

$$MR_{it} = \alpha_i + \beta_1 O_{it} + \beta_2 CR4_{it} + \beta_3 RW_{it} \quad (1')$$

*For accumulation:*

$$RI_{it} = \alpha_i + \beta_1 MR_{it} + \beta_2 O_{it} + \beta_3 RW_{it} \quad (2')$$

MVY employ panel data estimation on specification (1') in six sets of equations. First, they estimate equation (1') for the whole sample, in other words for  $i = \{1, 2, \dots, 29\}$  and  $t = \{1980, 1981, \dots, 1996\}$ . Then, they take each of the identified cells as one individual group exclusively and re-do the estimation. Finally, they distinguish those sectors which were "inward-oriented" in 1980, but became "open" by 1996. That is, sectors  $i \in \{2 \text{ and } 4\}$  in 1980 and  $i \in \{1 \text{ and } 3\}$  in 1996. This leaves us with the following sectors:  $\{311, 314, 321, 323, 324, 331, 332, 341, 352, 355, 356, 362, 371, 372\}$ . This latter group is classified with the identifier "trade adjusters".

### ***III-2a. Distributional Indicators: Behavior of Gross Profit Margins***

We start summarizing MVY's econometric investigation with the analysis of the behavior of gross profit margins (mark-ups). Our bird's-eye-view observations on the mark-ups, as portrayed in Table 9 above, reflect a general rise of the average profit margins despite the increased openness and the secular rise of wage costs after 1989.

To test these hypotheses, MVY regress mark-up rates on openness, concentration (CR4 ratios), and (the logarithm of) real wage costs using the panel data. The econometric results reveal the following relationship for the mark-up equation when all sectors are considered:

$$MR_{it} = \alpha_i - 0.004 O_{it} + 0.181 CR4_{it} + 0.111 \text{Log } RW_{it}$$

(-5.107)      (6.361)      (13.108)

where  $\alpha_i$  is the of sector specific term and t-ratios are given in the parenthesis. Thus, for the whole sample, overall coefficient of openness is estimated to be a mere  $-0.004$ . The magnitude, which is found to be statistically significant at 1% level, is nevertheless very small, suggesting that the 16 years of adjustment to foreign integration has not brought a meaningful change in the market structure of the Turkish manufacturing industry. As such, the speed of adjustment of gross profit margins is revealed to be very slow in spite of the import discipline or export penetration, and the technological and institutional barriers to entry seem to persist over the post-1980 reform era.

Concentration rates, on the other hand, have a statistically significant and a higher (positive) coefficient with 0.181 at 1% level. Thus, a one percent increase in the level of concentration as measured through the CR4 ratio is likely to affect the average profit margin of the sector by +0.18 percent. The a priori theoretical expectation that higher concentration levels would be indicative of

higher profit margins is confirmed in the aggregate. What is more interesting, however, is that mark-ups do have a *positive* relationship with respect to real wage costs, with 0.111. These observations suggest that the sector has been characterized by Sraffian dynamics in the aggregate, with persistence of mark-ups against wage increases. (See also Boratav, Yeldan and Köse, 2000, and Yentürk and Onaran, 1999 for a further assessment of the behavior of mark-ups against the post 1989 wage cycle in Turkish private manufacturing).

Across the sub-groups, we observe that, in general, “open” sectors (as of 1980) have a negative relationship with “openness”. “Inward-looking” (as of 1980) sectors, on the other hand, display a positive relationship against the same variable. Most importantly, “trade adjusters” carry a coefficient of +0.026 vis-à-vis openness. Thus, for those sectors which were inward-looking by 1980, the process of opening could not have been associated with a competitive discipline squeezing the cost-margins (mark-ups). On the contrary, there seems evidence that the inward-looking sectors (as of 1980) have adjusted the new trade environment by way of *increasing* their profit margins (with an estimated coefficient of +0.026 vis-à-vis openness). Trade adjusters, as a group, displayed positive coefficients in relation with the concentration indicator (CR4) and the real wage costs. Except for the “inward-looking & imperfectly competitive” group, mark-ups have positive relationship with real wage costs under all groups. Thus, generally speaking, it seems that the manufacturing sectors could have responded to the shocks of trade policy and the real wage costs by increasing their profit margins over the post-1980 reform era.

### ***III-2b. Investment Behavior and Patterns of Accumulation***

Now we turn our attention to the analysis of the behavior of sectoral investment in response to openness, mark-up rates (profitability) and real wage costs by regressing logarithm of sectoral real investments against CR4, MR and logarithm of RW. The overall effect of profit margins on manufacturing real investment is quite strong with an elasticity of 0.548. This suggests the presence of strong accelerationist investment patterns in the sector. Openness, though positive, carries a smaller coefficient with 0.035. (Yet, it is not found to be statistically significant).

MVY’s estimated equation was reproted as:

$$\text{Log RI}_{it} = \alpha_i + 0.548 \text{ MR}_{it} + 0.035 \text{ O}_{it} + 0.841 \text{ Log RW}_{it}$$

(5.956)            (1.439)            (15.063)

The most interesting result is the estimated positive elasticity of real wages on real investment with a coefficient of +0.841 which is statistically significant at 1% level. In other words, real wages seem to act as an accelerationist variable, stimulating real fixed investments in the manufacturing sector, while the effect of openness –as measured in ratios of trade volume to value added– has been found to be in-significant. The un-orthodox behavior of real wages in stimulating both gross profit margins and real investments in a positive manner suggests the continued importance of domestic demand factors in the Turkish industrial commodity markets. These results concur with the findings



of Yentürk and Onaran (1999) in their classification of the post-1980 Turkish manufacturing as following a *wage-led* growth pattern.

### III-3. Decomposition of Labor Productivity and Employment Patterns in Turkish Manufacturing under External Liberalization

Formally, “labor productivity” is defined as the ratio of total value-added (X) to total employment (L). This ratio will tend to increase under two circumstances: (i) as labor employment stays constant, the level of production may increase, and (ii) the employment level may decline so that per capita value-added increases. Labor productivity technically originates out of these two effects, and decomposition of the overall productivity growth into changes of the sectoral growth of output and employment over time provide clues on the internal dynamics of the manufacturing industry.<sup>25</sup>

Let overall labor productivity be  $Q = \frac{X}{L}$ , where X is total output and L is total employment.

For each sector, we have the sectoral productivity identity  $q_i = \frac{x_i}{l_i}$  where  $i$  represents an index of the *sub*-sectors of manufacturing industry. Then Q is the sum of the sectoral labor productivity ratios:

$$(2) \quad Q = \frac{X}{L} = \frac{\sum_i x_i}{\sum_i l_i}, \quad \text{and} \quad q_i = \frac{x_i}{l_i}$$

Taking the first-differences with respect to time (t=0), we get:

$$(3) \quad \frac{\Delta Q}{Q} = \frac{Q_1 - Q_0}{Q_0} = \sum_i \left[ \left( \frac{x_{i1} - x_{i0}}{x_{i0}} \right) \left( \frac{x_{i0}}{X_0} \right) - \frac{Q_1}{Q_0} \left( \frac{l_{i1} - l_{i0}}{l_{i0}} \right) \left( \frac{l_{i0}}{L_0} \right) \right]$$

Defining :

$$\frac{x_{i1} - x_{i0}}{x_{i0}} = g_i \quad (\text{sectoral output growth rate})$$

$$\frac{l_{i1} - l_{i0}}{l_{i0}} = n_i \quad (\text{sectoral employment growth rate})$$

$$\frac{x_{i0}}{X_0} = \mathbf{q}_i \quad (\text{sectoral output share})$$

<sup>25</sup> For a similar application of the methodology used here, refer to Syrquin (1986) and Pieper (1998).

$$\frac{l_{i0}}{L_0} = \mathbf{I}_{i0} \quad (\text{sectoral labor share})$$

the following identity appears:

$$(4) \quad \frac{\Delta Q}{Q} = \sum_i \left[ g_i \mathbf{q}_i - \frac{Q_1}{Q_0} \mathbf{I}_{i0} n_i \right]$$

A re-statement of the above equation enables the decomposition of total productivity into dynamics of: (i) changes in net productivity, and (ii) changes in the structure of output and employment:

$$(5) \quad \frac{\Delta Q}{Q} = \sum_i \left[ \mathbf{q}_{i0} (g_i - n_i) + \left( \mathbf{q}_{i0} - \frac{Q_1}{Q_0} \mathbf{I}_{i0} \right) n_i \right]$$

The first term in the outside parenthesis is the difference between the growth rate of output and the growth rate of employment. We denote this term as the “net productivity”, indicating a net positive contribution to the overall labor industrial productivity when the rate of growth of output is greater than the rate of growth of employment in a particular sector. The second term of the right hand side of equation (4) represents the effect of sectoral employment reallocation on the overall productivity change. Here, the interaction term,  $Q_1/Q_0$  is weighted by sectoral labor share and is subtracted from the output share of that particular sector. By multiplying this magnitude with the sectoral employment growth rate, we obtain an indicator for the productivity effects of the reallocation of employment among the sub-sectors of the manufacturing industry. The “reallocation weight”  $\left[ \mathbf{q}_{i0} - (Q_1 / Q_0) \mathbf{I}_{i0} \right]$ , i.e. the difference between the output and the labor share of sector  $i$ , reflects differences in productivity levels across the sub-sectors of the domestic industrial economy, and allows us to detect the leading and the following sectors of the overall productivity change.

In terms of our accounting procedure, a *leading* sector is identified with a high value of its reallocation weight due to a relatively small labor share and a relatively high output share. As the second term of equation (4) represents the effect of sectoral employment reallocation on overall productivity change, the transfer of labor from a sector with a low output/labor ratio to a sector which admits high-productivity will have a positive contribution to total productivity. Thus, the leading sectors of the economy are expected to show a close relation with changes in the overall productivity due to their higher reallocation weight, irrespective of their relative size (just measured in terms of its labor or output share) in the economy.

In the following pages, we decompose the effects of the two terms of equation (4) on the total labor productivity of the Turkish manufacturing industry, covering 1981-96. Under the framework described above, we find that the overall productivity has increased by 111.2% during this period.<sup>26</sup> Table 10 illustrates the sectoral output/labor shares, their growth rates, and the productivities of 19 sub-sectors for the stated period.

< Insert Table 10 Here >

From Table 10 we identify the following sectors with the highest productivity gains:

1. Manufacture of wooden furniture and fixtures (546.0%)
2. Tobacco manufactures (300.7%)
3. Other manufacturing industries<sup>27</sup> (238.2%)
4. Manufacture of transport equipment (216.2%)
5. Printing, publishing and allied industries (207.4%)

The productivity values here reflect net direct changes in both employment and output levels at the sub-sectoral level. We find that the furniture industry which experienced a 546.0% increase in productivity, exhibits an output growth of 1763.9%, accompanied by an employment growth of 188.5%. However, the output share of the sector is virtually very small (0.2%) to provide any significant impetus to the rest of the industry. The tobacco industry achieves a cumulative 300.7% of productivity growth via direct labor shedding: while it experiences an output growth of 93.9%, it decreases its employment by 51.6%. Similar observations are valid for the remaining most productive sectors as they point to slightly positive or outright negative reallocation weights (second term in equation 4), indicating that these sub-sectors show almost no strength in productivity leadership. The output/labor shares, together with negative second terms in the productivity expression, prevent these sectors from being the “leading” sectors of the Turkish manufacturing industry for the 1981-96 period.

We observe that 15 out of 19 sub-sectors under consideration display negative productivity gains from labor reallocation. This reveals that productivity contributions originating from reallocation of labor from the sectors that have low output/labor ratios to those sectors which have higher rates of productivity have been limited. Furthermore, one-third of the sectors has negative employment growth rates. Here, it is also interesting to note that none of the fast exporters of the post-1980 export boom reveal themselves in the leading category. In particular, the most important export sector, textiles, is observed to generate a *negative* rate of productivity contribution from labor reallocation (with -10.9%), suggesting that the sector should more appropriately be characterized as *lagging*, rather than serving as a productivity leader.

In this vein, the only sub-sector that can be characterized as a “leader” in Turkish

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<sup>26</sup>The wholesale price index is used in converting the nominal magnitudes to real terms for both periods.

<sup>27</sup> Includes manufacture of plastic products, manufacture of professional and scientific and measuring and controlling equipment, and other manufacturing industries, not elsewhere classified.

manufacturing over the 1981-96 period is found to be the “petroleum refineries and petroleum derivatives” industry with a reallocation weight of 0.243. This sector displays an output share of 27.1% and an employment share of 1.3%. However, with an employment growth rate of –5.2%, *the productivity by reallocation of labor* term of this sector is found to be negative, causing the sector to display a cumulative productivity growth of 54.6%, which is quite below the average for the period at hand.

Concluding, we find that it is not possible to identify any viable “leading” or “strong” sub-sectors within the so-called “outward-oriented, competitive manufacturing” industry that would be able to generate effective leadership for the domestic economy over the 1981-96 period.

#### **IV. Distributive Impacts and The Cost Structure of Value added**

Turkey is known to suffer from one of the most skewed distribution of income across countries comparable with its level of development. Partly fueled by the legacy of prolonged import-substitutionist growth patterns with excessive quota rents and an oligopolistic industrial and banking structure, the economy is observed to suffer further from a relatively stagnant and over-populated agriculture with loose linkages to the domestic industry; high rates of immigration due to both economic and political pressures; and unequal opportunities to access education.

With the advent of reforms for openness aiming, first, at commodity trade liberalization in 1980, and finalizing it with financial liberalization of 1989, there were re-newed orthodox expectations towards more equitable forms of distribution of the national product as import-quota rents would be dissipated, and the domestic production structure would be transformed given the signals of efficiency (world) prices. It was further argued that, as the labor intensive domestic industries shift toward export markets, labor would be able to increase its factor remunerations in real terms.

These orthodox prescriptions failed to operate, however, as the economy witnessed sharp shifts in the underlying economic polity with the emergence and administration of new modes of surplus extraction mechanisms throughout the course of “liberalization”. First and foremost, the pro-liberal stance and the integration process of domestic economy with the world markets did not lead to a more competitive environment in the domestic industry; on the contrary, as discussed in section III-2 above, concentration rates in most of the outward-oriented sectors such as food processing, cement, glass production and ceramics did in fact rise sharply. Furthermore, the financing behavior of corporations did not show significant change, and the banking sector became increasingly dis-associated from credit financing and intermediation, and evolved into financiers of securitization of domestic debt.

The initiated outward-orientation also opened new venues for wealth accumulation based on a re-newed form rent-seeking, this time towards abduction of export-promotion subsidies and grants provided by the government. Commercial policies became the leading mechanism in squeezing the domestic absorption capacity to generate an exportable surplus for the export-oriented manufacturing capital. This exportable surplus was to be obtained through generation of excess supply by reducing the effective domestic demand. This, in turn, necessitated suppression of wage

incomes. This was in stark contrast with the dual role of wages under the import-substitutionist phase, both as a cost element and also a source of effective demand. Under the promoted export-orientation, however, as the sources of effective demand would be expected to propel not from the home market, but from the external economy, wages came to be regarded only as “cost” item, which needs to be “minimized”.

Thus, at a more general level, the post-1980 integration process has invigorated newed and intensified distributive tensions as the share of non-wage income in national product rose, marginalization of labor deepened, the existing wage inequalities between skilled and un-skilled labor intensified, and the access to social safety nets became increasingly difficult.

Another facet of this income concentration in the urban sectors has been the increased wage gap between the skilled/organized and the un-skilled/marginal segments of the labor force. Kose and Yeldan (1998), for instance, categorize the “informal/marginal” labor as that part of the employed labor force which is not officially registered under any social security coverage and also is not entitled under the “self employed or employer” status; and based on the State Institute of Statistics (SIS) *Household Labor Survey* data, report that the ratio of marginal labor to total employment in the industry increased to 49% in 1994, and stabilized around 44% following 1995, from 41% in 1980. This form of employment was found to be very extensive in the traditional sectors like food processing, textiles and clothing, wood and furniture, and metal products where small scale enterprises have greater importance. Wage data strongly suggest that the strong improvement in average wages during 1989-93 was almost totally due to what was happening at the organized/formal sectors. Wage gaps between the large/small and public/private enterprises widened significantly and exceeded the magnitude of the early 1980s. In particular, the highly organized mining and electricity/gas workers were observed to improve their relative economic positions significantly. Wages in the clothing industry compared with manufacturing averages, on the other hand, eroded by 20 percentage points over the same period, falling below its ration in 1981, at the start of the liberalization program (Köse and Yeldan, 1998; Boratav, Yeldan and Köse, 2000; Yentürk, 1998).

Given the extend of polarization indicated in these numbers, it is clear that the “traditional” explanations of income inequality, such as, unequal access to education, unequal distribution of assets and land concentration, and the urban-bias would not suffice to provide a coherent portrayal of the macroeconomic processes which give rise to such an outcome. Even though easy generalizations are not admissible and can be misleading, one can nevertheless associate the observed rising income inequality with the broad tendencies towards marginalization of labor given the informal industrial relations; advances of new technologies which favor skill-intensive production patterns; and an unequivocal trend towards dis-association of the financial sector from the productive sphere of the economy, coupled with the concomitant expansion of financial rents.

A careful pursuit along these lines will necessitate a shift of focus towards the functional categories of income and the underlying processes of macro adjustment. It is to these issues we turn in the next section.

#### **IV-1. Indicators of the Functional Distribution of Income: The Evidence**

We now turn to the functional categories of income. Given data constraints, it is a common practice to separate agricultural income from the non-agricultural income sources. (see *e.g.* Özmucur, 1986; Temel and associates, 1998; Yeldan, 2000). Among the non-agricultural activities we found it possible to distinguish the following entities: interest income, profits, rental income, and public and private wage income.

Figure 6 documents the distributional consequences of the post-1980 financial de-regulation episode given this breakdown. Share of interest income within aggregate domestic income is observed to stand around 15.2% by 1998, reaching almost the total value added of agriculture –a sector which houses 45% of the civilian labor force. The share of interest income was virtually nil in 1980.<sup>28</sup>

<insert Figure 6 here>

From a more extended time frame, the overall decline of agricultural and wage and salary factor income is phenomenal. The share of agricultural income is almost reduced by half in the course of the last three decades. The wage cycle, on the other hand, displays a rising trend in the 1970s; and follows a declining course throughout the outward orientation of the domestic economy in the 1980s. The share of non-agricultural wage-labor is observed to reach its lowest score in 1986 to 17.1%, from its peak of 36.8% realized in 1977. A fall of such an extend clearly reflects the faltering employment response of the domestic industry to the significant reductions in real wages. The implication is that the scope for capital-labor substitution has been highly limited in the productive sectors of the Turkish economy (Celasun, 1989: 20).

Given this background, it would be illuminating to trace out the dynamics of the real earnings of wage labor against (labor) productivity growth over an extended time horizon. In what follows, we employ the recent advances of the business-cycle literature, and decompose the variations in the average product of labor and the real wage rate in the Turkish industry to obtain their underlying long term trends. We make use of the so-called Hodrick-Prescott (1980) filtering methods to disintegrate the cyclical variations in productivity growth and wage rates from their respective historical trends. This exercise enables us to isolate the underlying trend paths of the two variables, and to make inferences about the evolution of the wage cycle against the long term productivity patterns in Turkish industry.

Data for our analysis come from the *Manufacturing Industry Annual Surveys* reported by the State Institute of Statistics. For the “wage rate” series we have used “total wage earnings” divided by “total workers engaged in production”. Average labor product is derived by dividing “total value added” by the same labor employment magnitude. Both series are deflated by the wholesale price index and are filtered in logarithmic form. The exercise covers the extended time frame, 1950-1996.

The results of the filter are portrayed in Figures 7a and 7b. The units on the y-axis are in real 1963 TL prices in log scale. In Figure 7a, we observe the historical long time trend of the real average labor product in Turkish manufacturing. The trend has a secular upward slope with an average rate of annual growth of 3.8% for the whole time horizon (1950-1996). This is to be

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<sup>28</sup> All income data are inclusive of taxes and are in gross terms.

contrasted with the trend of the real wage rate portrayed in Figure 7b. The trend in real wages fluctuates with an increasing path until mid-1970s, enter a deceleration between 1980 and 1988, and recover following 1989. The observed recovery in real wage is clearly the end result of the post-1989 populism which enabled sharp increases in real wages between 1989 and 1993 as narrated in Section II above. On this record of events, it seems plausible to argue that the post-1989 upswing in manufacturing real wages was in fact in line with the real average product of labor as far as the long trends of the two series are concerned.<sup>29</sup>

<insert Figures 7a and 7b here>

The fluctuations of the real wage trend consequently document the periodization of the overall political cycle in the Turkish labor markets. The fundamental characteristic of this cycle is that it discloses a relatively weak connection between wage remunerations and labor productivity in manufacturing industries. The trend path of real wages clearly signals a break following 1979/80. This is the era when the domestic economy is subjected to a new transformation towards foreign competition and integration with the global commodity and asset markets. The ongoing wage suppression as manifested by the downswing in the wage cycle indicates that the adjustments in the labor markets had served as one of the main mechanisms in bringing forth this transformation. Implemented under a military rule with severe restrictions in the Labor Code against collective bargaining and unionization, the cost savings on wage labor were instrumental in the extraction of an economic surplus which, in turn, was oriented to export markets via a generous export subsidization program.

Reading from a different perspective, the sharp contrast of the trend of labor productivity against real wage earnings following the 1980-transformation clearly displays the extend of dis-association of the productive sphere of the domestic economy from its indigenous processes of accumulation and distribution. As internationalization of the commodity and the financial markets is intensified, the links between the processes of savings generation and the productive use of such funds into enhancement of capital accumulation –the so-called process of intermediation– are severed. With the complete de-regulation of the financial transactions and the consequent ascendancy of finance over industry, the international finance capital was able to assume a dominant role so as to act as the sole arbiter aiming at immediate financial gain, rather than long term economic development and sustainable growth.

#### IV-2. Decomposition of the Structure of Costs

Given aggregate GNP, we can deduce its components in the following manner: Let PY be the nominal GNP, then:

$$PY = iD + rN + \mathbf{P} + WpLp + WgLg + A$$

Where  $iD$  is interest income generated in the economy;  $rN$  is rental costs;  $\mathbf{P}$  is aggregate profits;  $WpLp$  and  $WgLg$  are wage costs in the private and public sectors, respectively; and  $A$  is agricultural

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<sup>29</sup> See Boratav (1991) for a narrative support of this claim.

income. If we add import costs (in domestic currency),  $eP^*M$ , we reach a breakdown of the costs of producing aggregate (nominal) supply:

$$PX = iD + rN + \mathbf{p}PX + WpLp + WgLg + A + eP^*M$$

Where we regard  $\mathbf{p}$  as the share of profits in total output. Let debt to output ratio to be  $d = D/PX$ , real import-output ratio be  $m = M/X$ ; the real exchange rate be  $z = eP^*/P$ ; and denoting  $n=N/PX$ ;  $lp=Lp/X$ ;  $lg=Lg/X$ ;  $wp=Wp/P$ ;  $wg=Wg/P$ ; and  $a=A/PX$ , we obtain the structural breakdown of the unit costs:

$$l = id + \mathbf{p} + rn + wplp + wglg + a + zm$$

We provide the relevant data the associated calculations in Table 11. The breakdown of unit costs is portrayed in Figure 8.

< Table 11 here >

<Figure 8 here >

Aggregate real GNP is observed to rise at an annual average rate of 4.4% over 1990-1998. The expansion of the share of interest is phenomenal. The share of  $iD$  increased from 0.049 in 1990, to 0.119 in 1998. This translates into an annual increase of 17.7% over the same period. Import costs likewise take about one-fifth of the aggregate cost of production. The rise of import costs comes to an average rate of increase of 10.4% per annum. The share of wage costs in the public sector fluctuate across the 1990s. Being as low as 0.077 in 1998, public sector wage-labor succeed in rising its share up to 0.166 in 1992, but start experience a fast decline to reach 0.096 in 1996. Private sector wage cost is observed to be more stable. Hovering around 0.10 – 0.12. Profits, also is another fairly stable entity in the costs structure mostly capturing about a third of unit costs. A decline in the making is visible after 1995, however, as interest servicing costs expand their share at the expense of non-agricultural, non-wage factorial incomes.

## V. Concluding Comments

<Sketch of notes. To be complemented >

In this paper we have sought to identify and study the main stylized facts and processes characterizing the dynamic macroeconomic adjustments of Turkey since inception of its reforms towards global integration –viz. post-1980's. The Turkish adjustment experience throughout the post-1980 period reveals a process in which a developing market economy trapped within the needs of integration with the world markets and the distributional requirements warranted by such re-orientation, the state apparatus became the bastion of privilege, regulating the mode of income re-distribution within the society. The elements of this re-distribution involved both direct mechanisms toward attaining favorable production and export subsidies, currency depreciation, wage suppression; as well as indirect mechanisms such as tax evasion on capital incomes, and conduct of a financial market development strategy which enabled massive income transfers to the rentier class.



Our decompositions of the components of aggregate demand revealed that the increased financial demands of the public sector dominate much of the process. Yet, government expenditures being mostly swamped by interest servicing costs on domestic demand do not provide a sustained impetus to the rest of the economy. Furthermore, operating under a structure of open capital markets, the economy is trapped in a vicious circle of high real interest rates, overvalued domestic currency, and increased volatility of the flows of speculative short term foreign capital.

Existing data reveal very little structural change in the sectoral composition and nature of market concentration and behavior of profit margins under the post-1980 Turkish structural adjustment reforms and outward-orientation. It is also notable that the sectors which are characterized by high concentration coefficients do not necessarily reflect high shares of public ownership, and that reductions in the share of the public companies do not lead directly to an increase in the degree of competitiveness. As such, the speed of adjustment of concentration is revealed to be very slow in spite of the import discipline or export penetration and the technological and institutional barriers to entry seem to persist over the post-1980 reform era.

We reported that “openness” had very little impact, if any, on the levels of profit margins (mark-ups) and also on the behavior of sectoral investments. Econometric results reflect a pattern of sluggishness of the existing levels of mark-ups in Turkish manufacturing against a 16-year long period of trade liberalization adjustments. With a relatively small effect of “openness” on gross profit margins (averaging  $-0.004$  for the whole period), the sector seems to display a resistance to increased competition despite the import discipline the post-1980 adjustments have brought. In fact, those “trade adjusting” sectors which were classified as “inward-looking” in 1980, and became “open” by 1996 display a positive response ( $+0.026$ ) of profit margins vis-à-vis openness. Thus, these results suggest that, contrary to the prognostications of the orthodox theory, the post-1980 export orientation of Turkish manufacturing could not lend itself into gains in competitiveness, and could not be sustained as a viable strategy of “export-led industrialization” via increased investments.

Profit margins (mark-ups) are further found to be positively and significantly affected from concentration power and real wage cost increases. Thus, there seems to be evidence that the manufacturing sectors have responded to shocks of trade policy and real wage costs by increasing their indigenous profit margins. Real investments, in turn, have been found to have a statistically *insignificant* relationship with “openness”; yet, significant and positive responses to profit margins and real wages. This finding suggests the continued importance of the domestic demand factors in the Turkish industrial commodity markets, and an overall wage-led growth pattern with both profit margins and real wages acting as accelerationist variables to stimulate fixed investments.

Our further analysis on the decomposition of labor productivity in manufacturing revealed that, since the inception of the structural adjustment reforms and outward-orientation, the underlying sources of productivity gains were not significantly altered; and that none of the leading export sectors of the 1980s could have generated sufficiently strong productivity contributions, nor admitted strong inter-industry linkages to serve as the leading sectors propelling the rest of the economy. With a meager investment performance in manufacturing, the so-called export-led growth episode seems to have generated sizable cost savings and surplus transfer to the recipient sectors, and could not

generate sufficient contributions in productivity and employment. As such, the post-1980 export orientation could not support itself into productivity gains in the leading exporting sectors and could not be sustained as a viable strategy of “export-led industrialization”. Lacking the necessary productivity investments in export manufacturing, the export gains based only on price incentives and subsidies have exhausted their impetus by the end of the decade.

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## APPENDIX ON CAPITAL MOVEMENTS: DEFINITIONS, DATA AND METHOD

IMF in its *Balance of Payments Manual, 1993* (5<sup>th</sup> Edition) made a number of changes in the conceptual framework of the capital and financial account of balance of payments statistics as a result of which capital movements emanating from residents or non-residents; from non-official (i.e. banks & “other sectors”) and official (i.e. general government and monetary authorities) agents can be distinguished together with the types of assets and liabilities which constitute the content of capital movements. The quantitative analysis on capital flows in general and, particularly, “hot money” (i.e. arbitrage-seeking, short-term private capital) movements as presented in Tables 1-3 are based on this improved conceptual framework adopted by Turkish b.o.p statistics as well.

### A decomposition based on the balance of payments identity

Let us denote net capital flows emanating from non-residents as **NKF(nr)**, from residents as **NKF(r)**, net errors and omissions as **EO**, reserve movements as **DR** and current account balance as **CA**. The well-known balance of payments identity is expressed as follows:

$$\mathbf{NKF(nr)+NKF(r)+EO+DR+CA=0} \quad (1)$$

For a typical developing economy the usual signs as observed during “normal periods” are (+) for **NKF(nr)** and (-) for the other terms. This means that residents engage in net recorded capital outflows; errors and omissions are interpreted as reflecting residents’ unrecorded capital movements and the net outcome is capital flight; reserves tend to increase and the current account chronically generates a deficit. These are not rigid generalizations: In individual years, there may occur net repatriation of non-residents’ assets [i.e.  $\mathbf{NKF(nr)<0}$ ]; residents may engage in net repatriation of their external assets or reverse capital flight may occur [i.e.  $\mathbf{NKF(r)>0}$  and  $\mathbf{EO>0}$ ]; reserves may decline or the current account may generate a surplus (i.e.  $\mathbf{DR>0}$  and  $\mathbf{CA>0}$ ). However, empirical findings for developing countries as a whole or for the sub-group of “emerging markets” have shown that cumulative sums of each of the foregoing items for a few years or for the full financial cycle have generated the “usual” signs as depicted above<sup>30</sup>.

This observation on the “usual signs” of the terms in the b.o.p identity, enables us to reformulate it as the decomposition of nonresidents' inflows. Let us, first, reformulate equation (1) as follows:

$\mathbf{NKF(nr) = -[NKF(r)+EO+DR+CA]}$  (1a). Since each of the terms in the right hand side (RHS) of the equation have usually negative signs, let us *reverse* the signs and *rename* the terms: -NKF(r) becomes net capital *outflows* by residents, denoted as **NKO(r)**; -EO becomes *capital flight* by residents denoted as **KFL**; -DR becomes *reserve accumulation*, denoted as **RAC** and -CA becomes current account *deficit*, denoted as **CD**. It would be conceptually helpful if we also rename NKF(nr) without any change of sign as net capital *inflows* by non-residents, denoted as **NKI(nr)**. Hence, with the signs reversed in the RHS and the terms renamed, equation (1a) is transformed into the following decomposition:

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<sup>30</sup> See UNCTAD, *Trade and Development Report 1999*, Geneva and New York 1999, Table 5.2. On the other hand consolidated African data for 1980-1998 generate the same signs except for the EO item which tends to be positive. (UNCTAD, *Capital Flows and Growth in Africa*, Geneva 2000, Table 3).



$$\mathbf{NKI(nr)=NKO(r)+KFL+RAC+CD} \quad (2)$$

The interpretation of the decomposition (2) is as follows: A typical capital-scarce developing country chronically generates current deficits in her external accounts and these deficits as well as her additional foreign exchange demands due to residents' (recorded and unrecorded) capital outflows, and reserve accumulation can, in the medium run, only be "financed" through net inflows from non-residents. Hence, net inflows from external agents, i.e. **NKI(nr)**, are allocated to finance both the "leakages", or "drains", i.e. **[NKO(r)+KFL+RAC]** and **CD**. Transitionally, some of the terms in the RHS of equation (2) may take negative signs and appropriate interpretations follow: Residents may repatriate their (recorded and unrecorded) external assets in net terms, reserve depletion and current surpluses may occur whereby the relevant terms are expressed as negative terms on the RHS. However, the decomposition logic loses its significance when the sum total of the RHS terms, and consequently, **NKI(nr)** is negative- a phenomenon which can be expected to occur only exceptionally (under serious financial crisis) in a developing country, e.g. Turkey in 1994, Mexico in 1995 or East Asia in 1997-98.

It will be noticed that Table 2 has used the conventional signs of the b.o.p. accounts as expressed in Equation 1, rather than the decomposition terminology of Equation 2. However, in reading and interpreting Table 2, it will be helpful to keep the decomposition logic in mind. Hence, the *negative* values of the ratios in the last four columns of Table 2, can (after mentally reversing the signs) be read as the shares of the current deficit and the relevant "leakage" items out of non-residents' net capital inflows.

### **Arbitrage-seeking, short-term, private capital ("hot money") movements**

Short-term private capital flows with the exception of trade credits can be considered to constitute a broad definition of hot money movements engaged by banks, institutional and private rentiers and firms. Within the new framework of b.o.p statistics this broad category can be disaggregated into the following items:

Table A1: "Hot money" items within the framework of standard balance of payments statistics

Heading	IMF code for non-resident flows	IMF code for resident flows	Note
<b><i>Portfolio Investment</i></b>			
Equity securities	4660 (8) (-518)	4610 (-50) (171)	Investment in equities
Money market instruments	4680 (0) (0)	4630 (0) (0)	Investment in gov't paper
<b><i>Other Investment</i></b>			
Short term loans to banks	4774* (724) (63)	4724 (-134) (-75)	Bank to bank loans
Short term loans to other sectors	4777 (586) (419)	4727 (0) (0)	Other sectors=firms and households
Deposit and currency: banks	4783 (-152) (2303)	4733 (-678) (-752)	
Deposit and currency: other sectors	4784 (0) (0)	4734 (0) (0)	Other sectors=firms and households
Other liabilities and assets: banks	4795 (0) (0)	4745 (0) (0)	

Other liabilities and assets: other sectors	4798 (0) (0)	4748 (-676) (-427)	Other sectors=firms and households
<i>Net errors and omissions</i>	---	4998 (-2594) (-2203)	Residents' non-recorded flows

**Note:** Figures in parantheses are Turkey's 1997 and 1998 values in million dollars for the relevant item..

Zero values for some of the items do not necessarily imply the absence of the relevant transborder transaction. Improved recording also results in changing zero values into positive or negative figures. For example, it is known that nonresidents have been purchasing and selling Turkish treasury bills, but they have not, as yet, been recorded within the correct item, i.e. 4680. The relevant figures are registered elsewhere in the capital account, e.g. within 4783 and/or as another unrecorded quantity within the EO item. On the other hand, Mexican b.o.p. data show zero values for the 4680 item up till the end of 1993, but thereafter register negative values for two years (-1.9 and -13.8 billion dollars in 1994 and 1995 respectively) and positive values thereafter. Negative values for the 4680 item in 1993-94 signify sale of Mexican government debt papers by nonresidents the earlier purchase of which should have been recorded as positive (instead of zero) values for the same item in the preceding years. Once again, earlier inflows have, evidently, been recorded elsewhere.

These observations suggest that it is too early to treat *individual items* of the capital and financial accounts of the b.o.p. statistics in Turkey (and elsewhere) as reliable and undertake a quantitative analysis based on these specific variables. However, the sum total of "hot money" flows emanating from nonresidents as well as residents' "hot" capital movements are, essentially, reliable magnitudes<sup>31</sup>. In other words, the distinction between residents and nonresidents in transborder transactions is much more reliable than the specific item in which the specific quantity is recorded. This is the reason for distinguishing "hot money" figures only between residents and nonresidents in Table 3 without going into the individual items behind the two totals.

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<sup>31</sup> Meetings with the CB staff have persuaded the authors on the reliability of resident/nonresident distinction in the Turkish data. The only qualification is related to the characterization of the EO item as "residents' unrecorded capital movements". The underlying assumption that unrecorded flows are, predominantly, due to residents' capital account transactions is open to criticism as long as unrecorded current account items as well as currency switching of residents into and out of unrecorded assets reach high figures and if nonresidents also engage in illicit (and substantial) cross-border capital movements.

**Table 1. Phases of Macroeconomic Adjustment in Turkey, 1972-2001**

	Import-Substitutionist Industrialization 1972-76	Economic Crisis 1977-80	Post-Crisis Adjustment 1981-82	Export-Led Growth 1983-87	Exhaustion 1988	Unregulated Financial Liberalization 1989-93	Financial Crisis 1994	Reinvigoration of Short-term Foreign Capital-Led Growth 1995-97	Contagion of the World Financial Crisis 1998 1999	Exchange Rate Based Disinflation and Financial Meltdown 2000 2001.II*		
<b>I. Production and Accumulation (Real Rate of Growth, %)</b>												
GDP	6.8	0.5	4.2	6.5	2.1	4.8	-5.5	7.2	3.1	-5.0	7.2	-9.3
Agriculture	1.8	0.5	0.6	0.8	7.8	0.1	-0.7	1.3	8.4	-4.6	4.1	-4.9
Manufacturing	9.7	-0.2	7.9	8.6	1.6	6.0	-7.6	10.2	1.2	-5.7	5.9	-8.5
<i>Fixed Investment:</i>												
Private Sector	11.5	-7.3	-1.0	14.1	29.2	11.9	-9.6	9.5	-4.2	-17.8	14.0	-32.2
Private Energy and Transport.	19.5	-10.6	27.3	7.5	4.2	16.2	-26.2	25.8	-14.3	-31.7	15.6	
Private Manufacturing	10.9	-13.6	4.8	7.7	9.7	14.3	-0.5	4.7	-6.3	-17.5	15.0	
Private Housing	9.0	2.2	-19.6	24.5	50.7	11.2	-24.6	2.9	-1.6	18.6	14.0	
Public Sector	15.4	-1.7	4.8	12.0	-2.3	5.2	-39.5	15.8	4.6	-3.9	15.7	-32.1
Public Energy and Transport.	16.3	0.3	9.5	16.8	-2.6	4.4	-44.6	13.6	14.6	-15.4	26.2	
Public Manufacturing	16.0	1.3	-11.2	-9.6	-11.3	-6.9	-41.4	7.8	17.1	-4.1	61.2	
Manufacturing Sector (Total)	12.0	-9.4	-0.8	3.7	6.6	12.4	-2.5	4.8	-5.6	-17.6	17.0	
<i>As % Share of GNP:</i>												
Savings	20.9	17.3	17.7	19.5	27.2	21.9	23.0	21.1	23.1	19.6	19.9	
Investment	21.3	22.3	18.3	20.9	26.1	23.7	24.4	24.8	24.3	22.3	24.1	
PSBR	5.7 <sup>a</sup>	6.9	3.7	4.7	4.8	9.1	7.9	7.2	9.2	15.3	12.0	
<b>II. Distribution and Prices</b>												
Inflation Rate (CPI)	18.4	59.5	35.1	40.7	68.8	65.1	106.3	85.0	90.7	70.5	39.1	66.5
Annual Rate of Change in Exchange Rate (TL/\$)	3.9	48.0	45.0	39.7	66.0	50.4	170.0	72.0	71.7	58.2	28.6	77.5
Real Interest Rate on Government Bonds <sup>b</sup>	--	--	--	--	-5.8	10.5	20.5	23.6	29.5	36.8	4.5	31.8
Manufacturing Real Wages <sup>c</sup>	3.1	-1.1	-1.1	-3.9	-7.1	10.2	-36.3	-2.8	3.3 <sup>d</sup>	4.6 <sup>d</sup>	-8.8 <sup>d</sup>	
Share of Wages in Manufac. Value Added (%)	27.7	35.6	24.5	20.6	15.4	21.8	16.1	16.7				
<b>III. Internationalization</b>												
Man. Exports Growth	39.4	14.3	19.7	12.5	14.0	5.1	18.0	14.2	3.2	-5.5	4.9	12.4
<i>As % Share of GNP:</i>												
Imports <sup>e</sup>	11.7	11.2	14.0	15.9	15.8	14.6	17.8	23.2	22.5	21.7	27.2	
Exports <sup>e</sup>	5.3	4.2	8.5	10.8	12.8	9.1	13.8	15.8	13.2	14.2	13.7	
Current Account Balance <sup>e</sup>	-1.4	-3.4	-2.7	-1.9	-1.7	-1.3	-2.0	-1.4	1.0	-0.7	4.8	
Stock of Foreign Debt	1.4	14.5	27.1	37.8	44.8	35.1	49.6	45.6	50.9	55.7	58.3	

Sources: SPO Main Economic Indicators; Undersecretariat of Foreign Trade and Treasury Main Economic Indicators; SIS Manufacturing Industry Surveys.

\* Annual % rate of change from the same period of the previous year.

a. 1975-76 only.

b. Annual average of Compounded Interest Rate on Government Debt Instruments deflated by the whole sale price index.

c. Wage earnings of workers engaged in production. Private manufacturing labor data cover enterprises employing 10+ workers.

d. Refer to unit wage costs in (\$) obtained from production workers in private manufacturing..

e. Including luggage trade after 1996

**Table 2. Financial Deepening in Turkey: Financial Assets & Monetary Indicators (% of GNP)**

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<i>I. Securities by Issuing Sectors</i>													
Public Sector	6.9	7.7	5.5	7.4	15.9	16.8	22.7	19.8	35.3	22.9	29.4	38.7	37.5
Government Bonds	3.0	3.9	3.2	1.8	6.8	7.5	4.8	4.4	8.3	8.0	2.5	27.3	32.3
Treasury Bills	4.0	3.3	2.1	5.4	8.7	9.0	16.7	15.4	24.8	14.9	26.9	11.3	5.2
Private Sector	0.9	1.0	1.0	1.0	1.7	3.8	2.1	2.1	1.0	1.0	1.0	1.1	4.6
Shares	0.3	0.4	0.5	0.7	0.5	0.5	1.0	0.5	0.6	0.7	0.8	0.9	2.4
TOTAL	7.8	8.7	6.5	8.5	17.6	20.6	24.8	21.9	36.3	23.9	30.4	39.8	42.1
<i>II. Monetary Indicators</i>													
Currency in Circulation	2.7	3.0	2.9	2.7	2.7	2.6	2.6	2.4	2.1	2.2	2.1	2.6	2.6
M1	8.8	8.5	7.9	7.4	7.1	6.5	5.9	5.0	5.6	4.7	4.3	6.3	6.5
M2	21.1	20.5	18.0	18.5	17.3	14.1	16.2	16.0	18.7	17.9	20.3	28.9	26.0
M2Y	28.4	26.6	23.5	26.5	26.6	23.7	30.7	30.7	36.8	34.5	36.3	51.3	45.4
Total Deposits	15.7	16.6	15.7	15.9	18.3	19.0	24.6	26.0	29.3	27.0	27.7	39.5	33.6
Demand Deposits	3.4	3.4	3.3	2.8	2.5	1.0	0.9	0.7	0.7	0.7	0.5	0.8	0.7
Time Deposits	7.2	8.8	8.3	8.1	8.1	5.3	7.6	8.1	10.5	9.8	11.2	16.3	13.6
FX Deposits	4.2	3.8	3.6	4.7	7.3	12.7	16.2	17.3	18.0	16.5	16.0	22.4	19.3
Banking Sector Credits	17.6	16.1	16.5	12.4	12.7	14.0	13.3	16.5	18.5	21.7	19.4	20.1	20.4
<i>III. Securities Markets:</i>													
Stock Exchange Trading Volume <sup>a</sup>					115	773	5,854	8,502	8,567	21,771	23,202	52,311	36,696
Government Securities Direct Transactions Trading Volume <sup>a</sup>								312	2,403	10,717	8,828	16,509	32,736
REPO - Reverse REPO Trading Volume <sup>a</sup>										4,794	23,704	123,254	221,405

Sources: Central Bank, Quarterly Bulletins; SPO, Main Economic Indicators.

a. Millions US\$

**Table 3. Arbitrage Returns, Gross External Credits to Banks and Hot Money Inflows (Mn.\$)**

	<b>Banking Sector Foreign Credits</b>			<b>Net Hot Money Inflows</b>
	<b>Return on Hot Money<sup>a</sup></b>	<b>Gross inflows</b>	<b>Gross Outflows</b>	
1988	-0.073			-126
1989	0.236			233
1990	0.293			3139
1991	-0.038	43,186	42,523	-392
1992	0.154	64,767	62,363	2439
1993	0.045	122,053	118,271	4478
1994	-0.315	75,439	82,040	-5913
1995	0.197	76,427	75,626	2341
1996	0.329	8,824	8,055	2198
1997	0.278	19,110	18,386	1166
1998	0.254	19,288	19,225	2267
1999	0.298	122,673	120,603	2907
2000	0.133	209,432	204,691	4863

*Sources:* Central Bank Balance of Payments Statistics; SPO Main Economic Indicators.

a.  $[(1+R)/(1+E)-1]$ ; R: The highest rate of return offered in the domestic market;  
E: TL Rate of change of the exchange rate

**Table 4: Net Capital Flows by Non-Residents(NKF(nr)),  
Current Deficits(CD) and Growth (g)**

	NKF(nr) / GNP(%)	CD / GNP(%)	g(%)*
Cumulative 1981-89	1.9	1.0	5.2
Cumulative 1990-99	3.4	0.8	4.2
1990	3.0	1.7	9.4
1991	0.2	(-0.2)	0.4
1992	4.3	0.6	6.4
1993	7.1	3.5	8.1
Cumulative 1990-93	3.8	1.5	5.5
<b>Bust:1994</b>	(-4.8)	(-2.0)	- 6.1
1995	3.5	1.4	8.0
1996	5.4	1.3	7.1
1997	5.8	1.4	8.3
Cumulative 1995-97	4.9	1.3	7.7
<b>Bust:1998</b>	1.8	(-0.9)	3.9
1999	4.6	0.7	- 6.1
2000	6.5	4.9	6.1

**Source for Tables 3,4,6 :** IMF, Balance of Payments Statistics and official Turkish data.

(\*): Period averages are logarithmic growth rates

**Table 5: Net Capital Flows by Non-Residents(NKF(nr)), Recorded Net Capital Flows by Residents (NKF(r) ), Errors & Omissions (EO), Current Account Balance (CA) and Reserve Movements (DR)**

	NKF(nr)	NKF ( r )	CA	EO	DR	NKF(r ) / NKF(nr)	EO/NKF(nr)	DR/NKF(nr)	CA/NKF(nr)
<b>Expansion 1990-93</b>	24536	-10333	-9782	-2932	-1489	-0.421	-0.12	-0.061	-0.399
<b>Bust 1994</b>	-6259	2409	2631	1766	-547	* ,,,,	* ,,,,	* ,,,,	* ,,,,
<b>1994 minus 1993</b>	-19090	6277	9064	3988	-239	,,,,	,,,,	,,,,	,,,,
<b>Expansion 1995-97</b>	27173	-4832	-7454	-2021	-12866	-0.178	-0.074	-0.473	-0.274
<b>Bust 1998</b>	3677	-3453	1984	-1991	-217	-0.939	-0.541	-0.059	0.54
<b>1998 minus 1997</b>	-7623	-742	4663	603	3099	,,,,	,,,,	,,,,	,,,,
<b>Boom 2000 (I- X)</b>	15179	-2707	-7598	-2550	-2324	-0.178	-0.168	-0.153	-0.501
<b>Bust minus boom in 2000- 2001**</b>	-25621	1357	5834	867	17563	,,,,	,,,,	,,,,	,,,,
<b>1980-1989</b>	15529	-3471	-10408	2910	-4560	-0.224	0.187	-0.294	-0.670
<b>1990-2000</b>	74654	-23785	-23746	-5898	-21226	-0.319	-0.079	-0.284	-0.318
<b>16 countries 1980-89</b>						-0.228	-0.111	-0.118	-0.543
<b>16 countries 1990+</b>						-0.241	-0.060	-0.268	-0.431

Note : NKF(nr) +NKF(r) +EO+DR+CA = 0. (\*) Ratios are meaningless when NKF(nr) is negative.

(\*\*) The cumulative values for November 2000 to June 2001 minus the cumulative values for January to October in 2000

**Table 6a: Capital Movements Before and During the 2000/2001 Crisis (Mn.\$)**

	<b>2000(I) to 200</b>	<b>2000(XI) to 2001(IX)</b>
<b>A. NKF, non-residents</b>	<b>15179</b>	<b>-12416</b>
* <i>FDI</i>	589	2881
* <i>Portfolio</i>	6789	-9063
* <i>Long-term flows</i>	3201	190
* <i>Short-term flows</i>	4600	-6424
<b>B. NKF, residents</b>	<b>-5257</b>	<b>-4462</b>
* <i>FDI</i>	-751	-497
* <i>Portfolio</i>	-730	76
* <i>Short-term, recorded</i>	-1226	-826
* <i>Short-term, unrecorded (EC</i>	-2550	-3215
<b>C. Reserve changes(a)</b>	<b>-2324</b>	<b>16585</b>
<b>D. Current balance</b>	<b>-7598</b>	<b>293</b>

Note: A+B+C+D=0

(a): "-" signifies increase and vice versa.



**Table 6b : Direction and Magnitude of "Hot Money" Movements from Non-Residents and Residents**

	<b>Hot Money: Non- Residents (1)</b>	<b>Total Non- Resident Flows (2)</b>	<b>(3) = (1) / (2)</b>	<b>Hot Money: Residents (4)</b>	<b>Total Resident Flows (5)</b>	<b>(6) = (4) / (5)</b>	<b>Net Hot Money (7) = (1) + (4)</b>
<b>1990 - 93</b>	9664	24536	0.394	-12278	-13265	0.926	-2614
<b>1994</b>	-5913	-6259	0.945	4212	4175	1.009	-1701
<b>1995 - 97</b>	5705	27173	0.21	-3233	-6853	0.472	2472
<b>1998</b>	2267	3677	0.617	-3286	-5331	0.616	-1019
<b>1999</b>	2907	8646	0.336	-1333	-2076	0.642	1574
<b>2000</b>	4863	16362	0.297	-4572	-6215	0.736	291
<b>1980-89</b>	2454	15529	0.158	213	-561	***	2667
<b>1990-2000</b>	19493	74654	0.261	-19231	-29683	0.648	262
<b>2001(I-IX)</b>	-9222	-10283	0.897	-4100	-3495	1,173	-13322
<b>90-01(I-IX)</b>	10271	64371	0.16	-23331	-33178	0.703	-13060

(\*) Ratios are meaningless when signs of hot money and total flows are different

**Table 6c: Hot Money Flows Before and During the 2000/2001 Crisis (Mn. \$)**

	<b>2000(I) to 2000 (X)</b>	<b>2000(XI) to 2001(IX)</b>
<b>Non-residents</b>	<b>4204</b>	<b>-13745</b>
*Portfolio securities	835	-9189
*Short-term credit to banks	3639	-3846
* Short-term credit to other sectors/agents(a)	84	504
* Deposits and other liabilities	-354	-1214
<b>Residents</b>	<b>-3498</b>	<b>-4042</b>
* Portfolio securities	-730	76
* Short-term credit from banks	59	-581
* Other short-term assets	-277	-322
* Unrecorded (EO)	-2550	-3215

(a) Trade credits are excluded(b).

(b) Residents' "other assets" are inflated due to probable inclusion of trade credits.

**Table 7. Public Sector Balances (Real 1987 Prices, Billions TL) (1)**

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999 <sup>2</sup>
<i>Tax Revenues</i>	10313.8	11818.9	13855.2	13965.6	15145.1	17452.2	15597.0	15830.0	17065.0	20099.2	22235.4	22458.0
<i>Direct</i>	3983.1	5120.1	5879.7	6013.8	6359.6	7115.8	6820.7	6061.9	6195.1	7380.5	9668.1	9346.9
<i>Indirect</i>	6330.7	6698.8	7975.5	7951.8	8785.5	10336.4	8776.4	9768.1	10869.9	12718.7	12567.3	13111.1
<i>Factor Revenues</i>	4612.5	3987.4	2805.2	531.3	-70.4	729.2	1732.1	3122.4	4493.9	4662.1	5172.9	5698.9
<i>Current Transfers</i>	-6077.6	-6230.8	-5892.8	-5272.4	-5947.8	-9201.7	-9504.5	-10167.4	-13897.9	-12894.7	-16163.6	-18953.6
<i>Public Disposable Income</i>	9866.1	10587.0	12095.6	10196.4	9966.8	9498.1	8083.3	8779.7	7755.4	11912.6	9919.9	7351.5
<i>Public Savings</i>	4970.8	3801.4	3084.7	613.1	-718.0	-2660.6	-925.0	-69.0	-1634.7	854.4	-2110.2	-7132.0
<i>Public Investment</i>	-6147.9	-5938.0	-7762.3	-6516.7	-5926.4	-7224.9	-3071.7	-3553.3	-5101.9	-6570.7	-7115.6	-6889.0
<i>Public Sav-Inv Balance</i>	-1177.2	-2136.6	-4677.6	-5903.6	-6644.4	-9885.5	-3996.7	-3622.3	-6736.6	-5716.3	-9225.8	-14020.9
<b>Ratios to GNP (%)</b>												
<i>PSBR</i>	4.8	5.3	7.4	10.2	10.6	12.1	7.9	5.2	8.8	7.6	9.2	15.1
<i>Budget Balance</i>	-3.1	-3.3	-3.1	-5.3	-4.3	-6.7	-3.9	-4.0	-8.3	-7.6	-7.0	-11.6
<i>Non-interest Primary Budget</i>	0.8	0.3	0.5	-1.5	-0.6	-0.9	3.8	3.4	1.7	0.1	4.7	2.1
<i>Gov. Net Foreign Borrowing</i>	2.1	0.8	0.9	0.4	1.6	1.4	-1.7	-1.1	-0.9	-1.5	-2.0	0.6
<i>Stock of GDI's</i> <sup>3</sup>	5.7	6.3	6.1	6.8	11.7	12.8	14.0	14.6	18.5	20.2	21.9	29.3
<i>Interest Payments on:</i>	3.8	3.6	3.5	3.8	3.7	5.8	7.7	7.5	10.2	7.7	11.7	13.7
<i>Domestic Debt</i>	2.4	2.2	2.4	2.7	2.8	4.6	6.0	6.2	9.0	6.7	10.6	12.6
<i>Foreign Debt</i>	1.4	1.4	1.1	1.1	0.9	1.2	1.7	1.3	1.2	1.0	1.0	1.1
<i>Net New Domestic Borrowing / Domestic Debt Stock (%)</i>	41.7	48.5	40.7	41.7	58.6	48.9	53.1	52.4	57.8	52.4	49.5	49.3

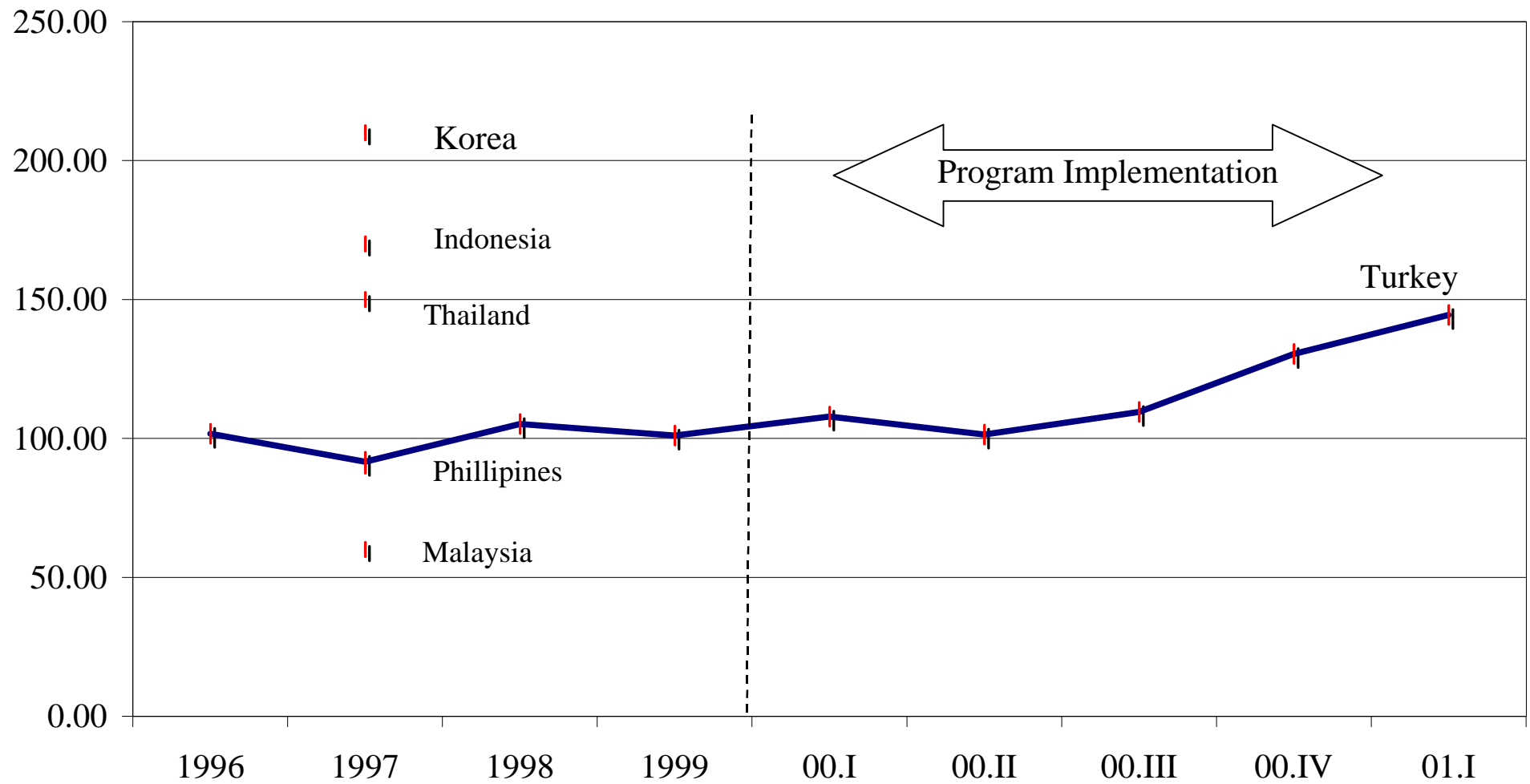
**Sources:** SPO Main Economic Indicators ; Undersecretariat of Treasury, *Treasury Statistics, 1980-1999*.

(1) Deflated by the Wholesale Price Index.

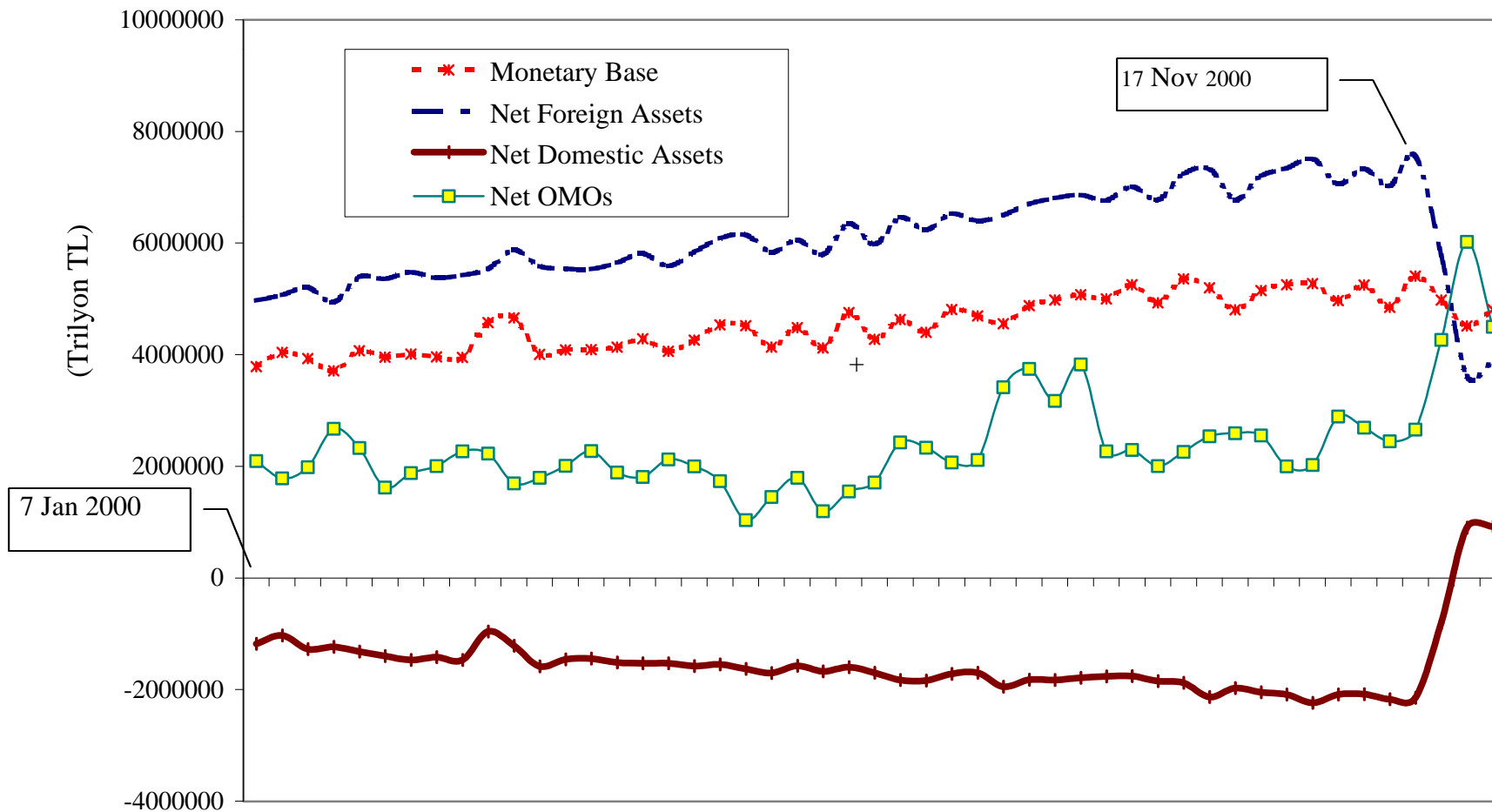
(2) Provisional

(3) Government Debt Instruments. (Gov. Bonds + Treasury Bills). Exclusive of Central Bank Advances and Consolidated Debts.

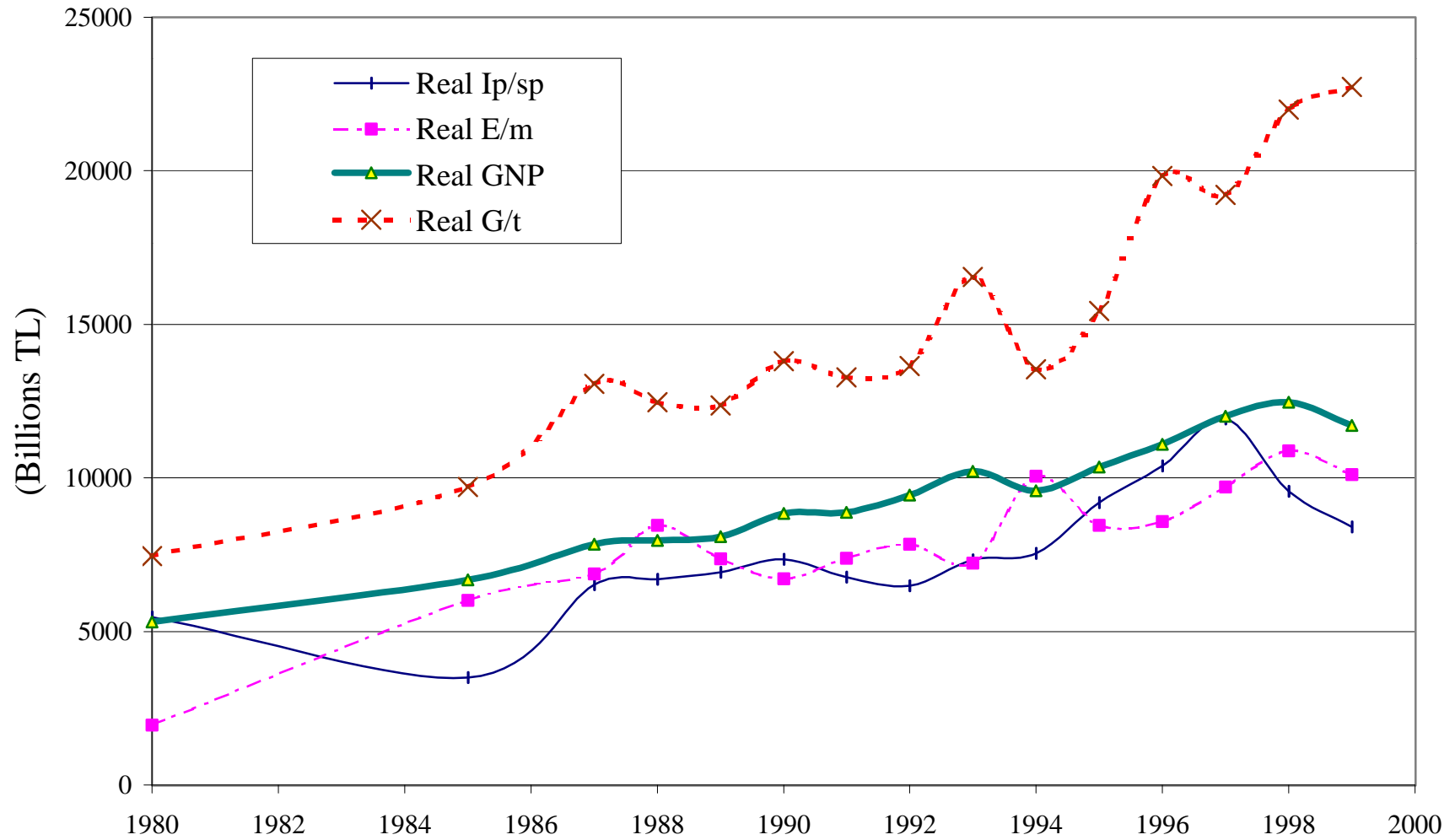
**Figure 1. Short Term Foreign Debt / CB Reserves (%)**



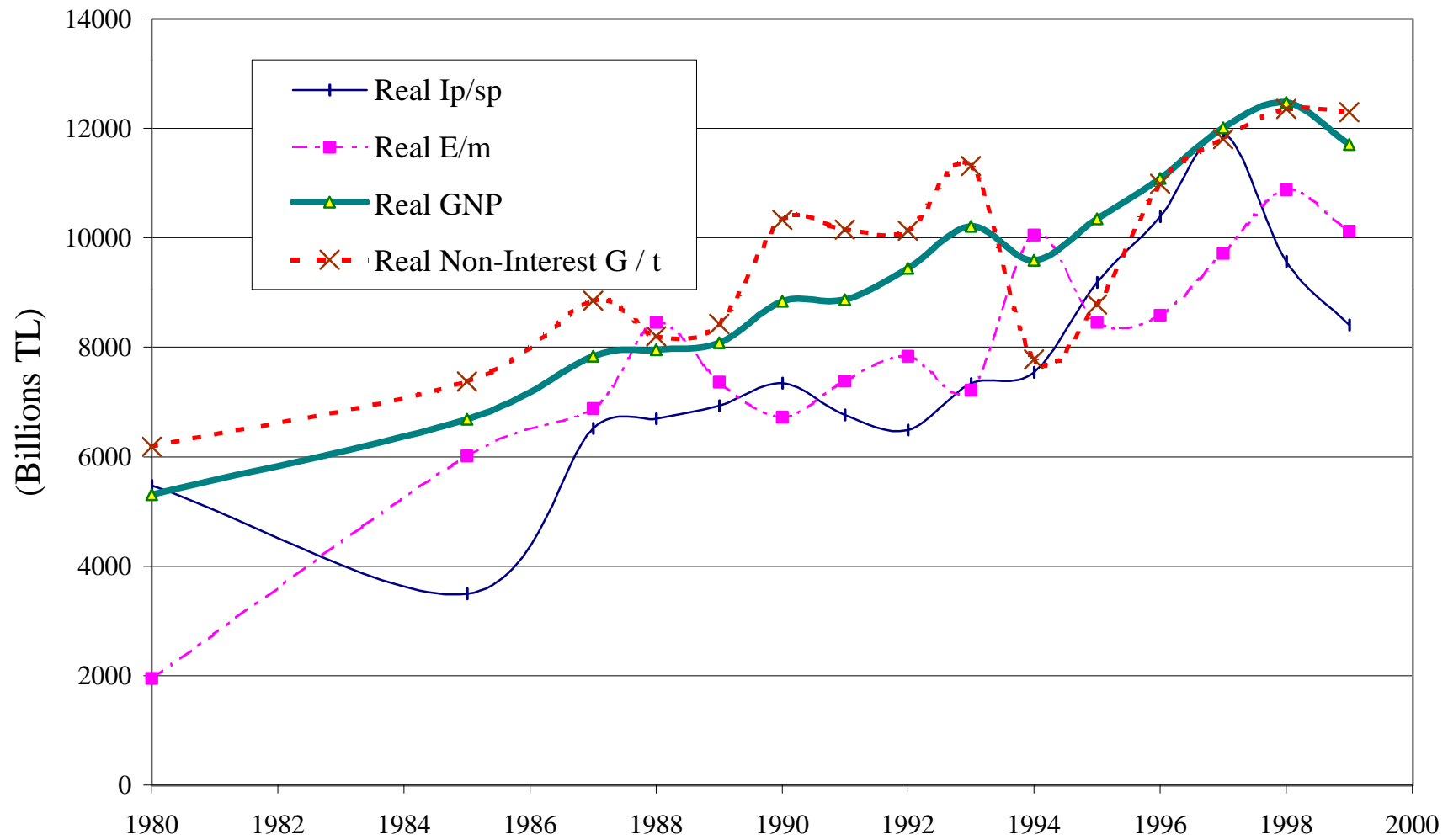
**Figure 2. Monetary Base, Net Domestic Assets, Net Foreign Assets and Net Open Market Operations**  
**(7 Jan 2000 - 1 Dec 2000, End-of-week Observations)**



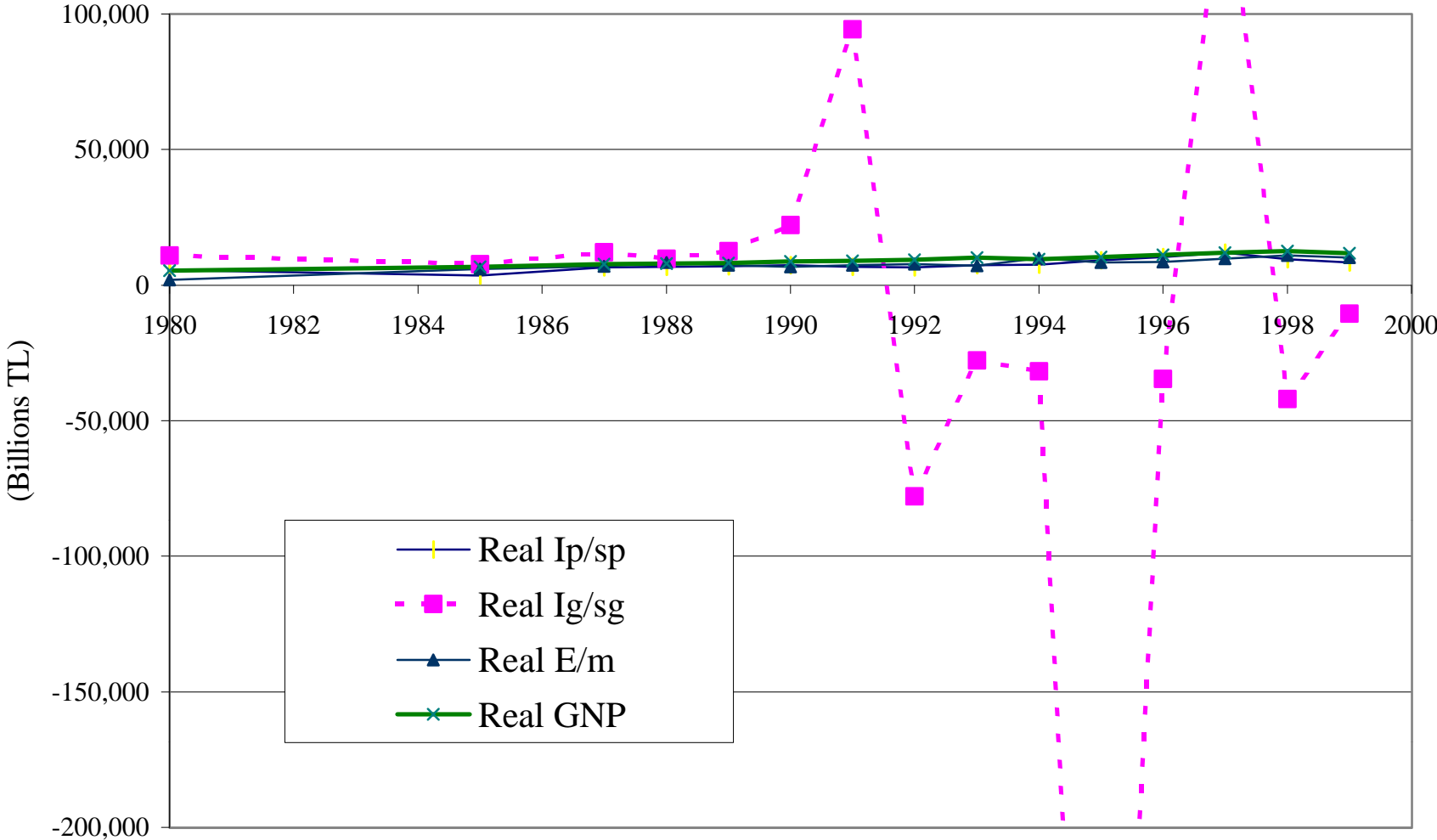
**Figure 3. Decomposition of the Sources of Macroeconomic Demand  
(Real 1980 Prices)**



**Figure 4. Decomposition of the Sources of Macroeconomic Demand  
(Real 1980 Prices)**

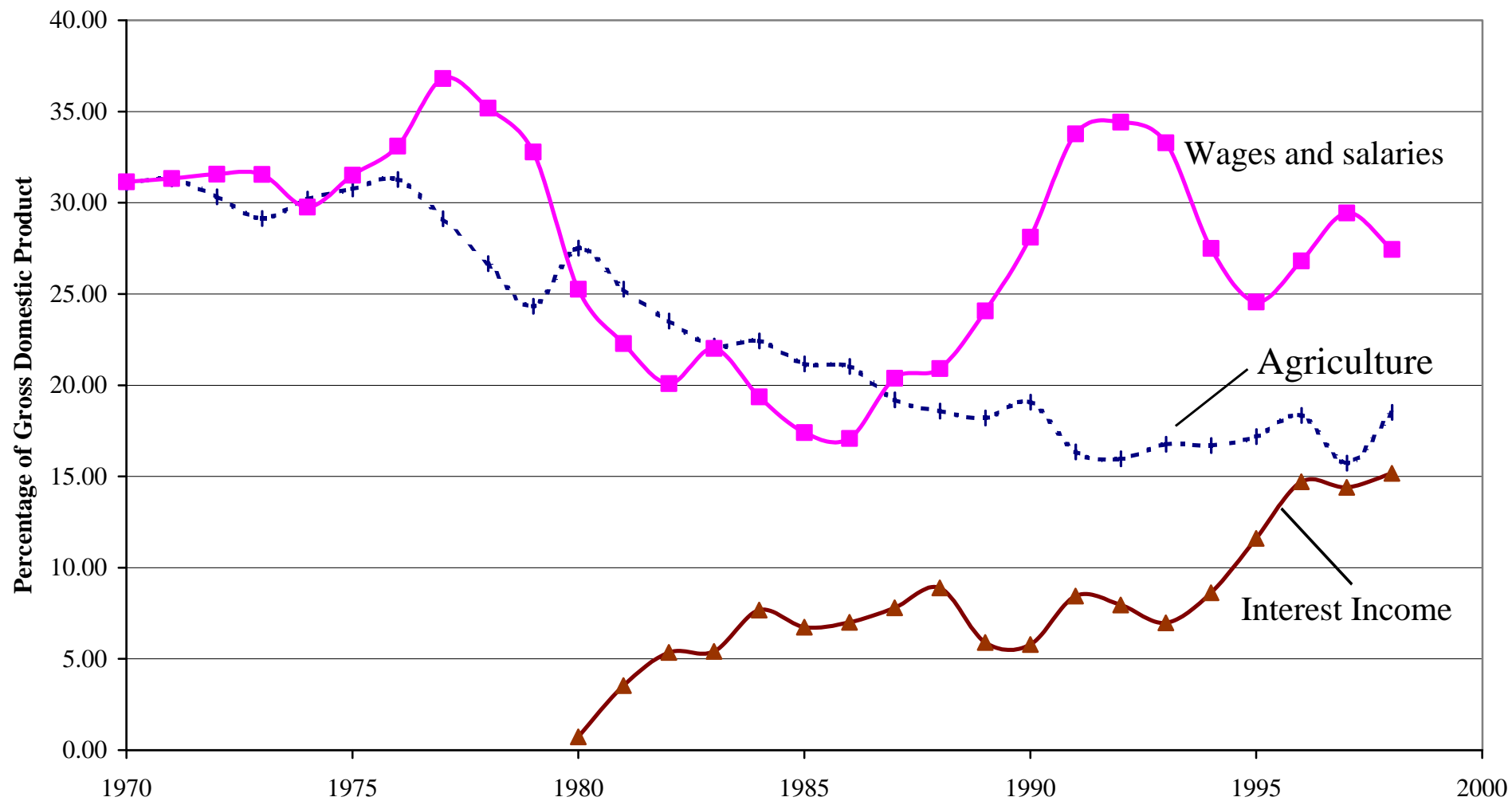


**Figure 5. Sources of Macroeconomic Demand and The Financial Linkages (Real 1980 Prices)**





**Figure 6. Functional Distribution of Income, Turkey: 1970-1998**



**Table 8. Sources of Aggregate Demand: Main Indicators and Parameters**

	<i>sg</i>	<i>sp</i>	<i>m</i>	<i>t</i>	Real GNP	Real Ip/sp	Real Ig/sg	Real E/m	Real G/t	Real Non-Interest G / t
1980	0.045	0.127	0.120	0.167	5,303.0	5,470.6	10,913.5	1,945.3	7,449.1	3,096.0
1985	0.077	0.210	0.189	0.141	6,688.2	3,494.7	7,778.1	6,017.1	9,701.3	2,981.1
1987	0.066	0.173	0.177	0.160	7,840.5	6,519.8	12,226.4	6,879.4	13,058.5	3,815.4
1988	0.068	0.204	0.176	0.156	7,955.4	6,692.9	9,839.4	8,454.4	12,467.8	3,884.7
1989	0.047	0.174	0.175	0.159	8,084.1	6,931.4	12,626.7	7,366.7	12,354.5	4,687.2
1990	0.034	0.186	0.174	0.167	8,843.7	7,349.5	22,254.8	6,724.2	13,801.9	5,753.1
1991	0.007	0.206	0.165	0.174	8,872.9	6,766.0	94,314.6	7,382.7	13,280.3	6,277.3
1992	-0.008	0.224	0.172	0.182	9,442.7	6,486.8	-77,942.3	7,835.2	13,642.3	6,628.0
1993	-0.027	0.254	0.192	0.181	10,212.7	7,338.3	-27,732.3	7,219.4	16,544.6	7,209.3
1994	-0.011	0.242	0.203	0.188	9,589.8	7,537.5	-31,843.7	10,050.1	13,530.4	5,924.1
1995	-0.001	0.222	0.241	0.171	10,349.7	9,187.0	-465,263.4	8,454.4	15,430.6	6,467.8
1996	-0.017	0.215	0.274	0.169	11,087.3	10,385.2	-34,602.9	8,583.5	19,837.7	7,492.3
1997	0.005	0.205	0.298	0.183	12,007.6	11,912.2	158,963.3	9,713.1	19,215.5	7,883.9
1998	-0.019	0.235	0.272	0.191	12,471.8	9,571.7	-42,055.3	10,880.1	21,992.9	8,108.3
1999	-0.069	0.222	0.266	0.202	11,709.2	8,407.2	-10,582.5	10,116.7	22,725.3	8,697.8
2000	-0.052	0.221	0.309	0.244	13,048.6	9,488.4	-16,655.0	9,977.4	21,740.6	7,439.7

Note: For symbols, see text. Real quantities are in Billions TL, deflated by the GNP deflator (1980=100).

**Table 9. Evolution of the Turkish Manufacturing Sector under External Liberalization**

	Structural Adjustment Reforms	Outward- Orientation	Unregulated Financial Liberalization	Financial Crisis and Reinvigoration of Short Term Capital- Led Growth
	<i>1980-81</i>	<i>1981-88</i>	<i>1989-93</i>	<i>1994-97</i>
<b><i>Competitive Sectors</i></b>				
Value Added / Total Manuf.	0.45	0.42	0.51	0.48
Employment / Total Manuf.	0.58	0.59	0.62	0.65
Ratio of Trade Volume to Value Added	0.39	1.04	0.91	1.46
Share of Public Firms in Value Added	0.15	0.13	0.11	0.04
Share of Wages in Value Added	0.33	0.22	0.23	0.19
Annual Rate of Growth of Real Wages (%)	2.77	-1.88	11.62	-7.92
Annual Rate of Growth of Labor Productivity (%)	26.54	8.83	11.69	-2.01
Gross Profit Margins (Mark-up)	0.28	0.33	0.39	0.38
<b><i>Non-competitive Sectors</i></b>				
Value Added / Total Manuf.	0.55	0.58	0.49	0.52
Employment / Total Manuf.	0.42	0.41	0.38	0.35
Ratio of Trade Volume to Value Added	0.67	1.04	0.89	1.59
Share of Public Firms in Value Added	0.62	0.53	0.43	0.42
Share of Wages in Value Added	0.28	0.14	0.21	0.14
Annual Rate of Growth of Real Wages (%)	3.39	-3.15	15.41	-8.28
Annual Rate of Growth of Labor Productivity (%)	83.25	12.71	8.53	3.24
Gross Profit Margins (Mark-up)	0.34	0.46	0.49	0.53

Source :SIS Manufacturing Industry Annual Surveys; and Manufacturing Industry Concentration Ratios.

**Table 10: Manufacturing Industry Labor Productivity Decomposition, 1981-1996**

	Sectoral Labor Productivity Growth Rate	Sectoral Output Share	Sectoral Employment Share	Real Output Growth Rate ( $g_i$ )	Employment Growth Rate ( $n_i$ )	Net Productivity	Productivity by Reallocation of Labor	Reallocation Weight
Food Manufacturing	1.314	0.104	0.147	1.704	0.168	0.160	-0.035	-0.206
Beverage Industries	0.794	0.029	0.014	0.712	-0.046	0.022	0.000	-0.002
Tobacco Manufactures	3.007	0.042	0.058	0.939	-0.516	0.061	0.042	-0.081
Manufacture of Textiles	1.142	0.112	0.209	1.851	0.331	0.170	-0.109	-0.330
Manufacture of Wearing Apparel	1.690	0.013	0.031	13.026	4.214	0.117	-0.217	-0.052
Manufacture of Wood and Cork Products	1.607	0.007	0.016	1.529	-0.030	0.010	0.001	-0.027
Manufacture of Furniture and Fixtures	5.460	0.002	0.005	17.639	1.885	0.038	-0.014	-0.007
Manufacture of Paper Products	1.904	0.014	0.023	1.997	0.032	0.027	-0.001	-0.035
Printing, Publishing and Allied Ind.	2.074	0.011	0.013	3.743	0.543	0.035	-0.009	-0.017
Manufacture of Basic Industrial Chemicals	1.964	0.078	0.055	2.545	0.196	0.183	-0.008	-0.039
Petroleum Refineries and Petroleum Derivatives	0.546	0.271	0.013	0.466	-0.052	0.140	-0.013	0.243
Manufacture of Rubber Products	1.612	0.015	0.013	2.025	0.158	0.028	-0.002	-0.014
Manufacture of Non-metallic Mineral Products	1.370	0.066	0.074	1.705	0.141	0.103	-0.013	-0.091
Basic Metal Industries	1.182	0.075	0.093	0.687	-0.227	0.069	0.028	-0.122
Manufacture of Fabricated Metal Products	1.524	0.029	0.049	2.070	0.216	0.054	-0.016	-0.074
Manufacture of Machinery	1.810	0.042	0.062	1.784	-0.009	0.076	0.001	-0.088
Manufacture of Electrical Machinery Apparatus	1.804	0.034	0.039	3.043	0.442	0.089	-0.021	-0.048
Manufacture of Transportation Equipment	2.162	0.044	0.062	3.456	0.409	0.133	-0.036	-0.087
Other Manufacturing Industries	2.382	0.012	0.023	5.436	0.903	0.053	-0.033	-0.037

**Table 11. Decomposition of the Structure of Costs**

<b>(Real Billions TL, 1980 Prices)</b>									<b>As Ratio of Unit Cost of Total Supply</b>						
<b>Years</b>	<b>GNP</b>	<b>Import Costs</b>	<b>Interest Costs</b>	<b>Profits</b>	<b>Rental Costs</b>	<b>Private Sector Wages</b>	<b>Public Sector Wages</b>	<b>Agricultural Income</b>	<b>Import Costs</b>	<b>Interest Costs</b>	<b>Profits</b>	<b>Rental Costs</b>	<b>Private Sector Wages</b>	<b>Public Sector Wages</b>	<b>Agricultural Income</b>
1980	5303.0	638.0	38.7	1989.7	475.7	565.8	774.2	1458.9	0.107	0.007	0.335	0.080	0.095	0.130	0.246
1985	6688.2	1266.7	450.8	3137.4	520.3	595.9	567.8	1415.9	0.159	0.057	0.394	0.065	0.075	0.071	0.178
1987	7840.5	1386.7	611.6	3634.8	490.8	859.3	739.4	1504.6	0.150	0.066	0.394	0.053	0.093	0.080	0.163
1988	7955.4	1396.9	707.2	3724.7	381.9	939.5	723.9	1478.1	0.149	0.076	0.398	0.041	0.100	0.077	0.158
1989	8084.1	1418.4	477.0	3873.1	316.9	945.8	1000.0	1471.3	0.149	0.050	0.408	0.033	0.100	0.105	0.155
1990	8843.7	1538.4	512.1	3859.4	299.8	1157.6	1328.3	1686.5	0.148	0.049	0.372	0.029	0.112	0.128	0.162
1991	8872.9	1466.0	748.9	3342.4	333.6	1376.2	1621.1	1450.7	0.142	0.072	0.323	0.032	0.133	0.157	0.140
1992	9442.7	1622.3	750.7	3571.2	362.6	1415.5	1834.7	1508.0	0.147	0.068	0.323	0.033	0.128	0.166	0.136
1993	10212.7	1960.2	711.8	4043.2	345.2	1449.2	1950.6	1712.7	0.161	0.058	0.332	0.028	0.119	0.160	0.141
1994	9589.8	1945.0	826.6	4214.7	309.8	1153.7	1483.5	1601.5	0.169	0.072	0.365	0.027	0.100	0.129	0.139
1995	10349.7	2490.6	1201.6	4492.8	335.3	1229.5	1312.3	1778.1	0.194	0.094	0.350	0.026	0.096	0.102	0.138
1996	11087.3	3042.8	1630.9	4108.9	341.5	1611.0	1361.5	2033.4	0.215	0.115	0.291	0.024	0.114	0.096	0.144
1997	12007.6	3579.8	1729.1	4481.3	372.2	1915.2	1621.0	1888.8	0.230	0.111	0.287	0.024	0.123	0.104	0.121
1998	12471.8	3396.1	1892.0	4427.5	421.5	1697.4	1724.9	2308.5	0.214	0.119	0.279	0.027	0.107	0.109	0.145

Real Quantities are deflated by the GNP Deflator (1980 =100). Cost items are inclusive of taxes.

Figure 7a. Real Average Labor Productivity in Large Private Manufacturing: H-P Filtered Trend

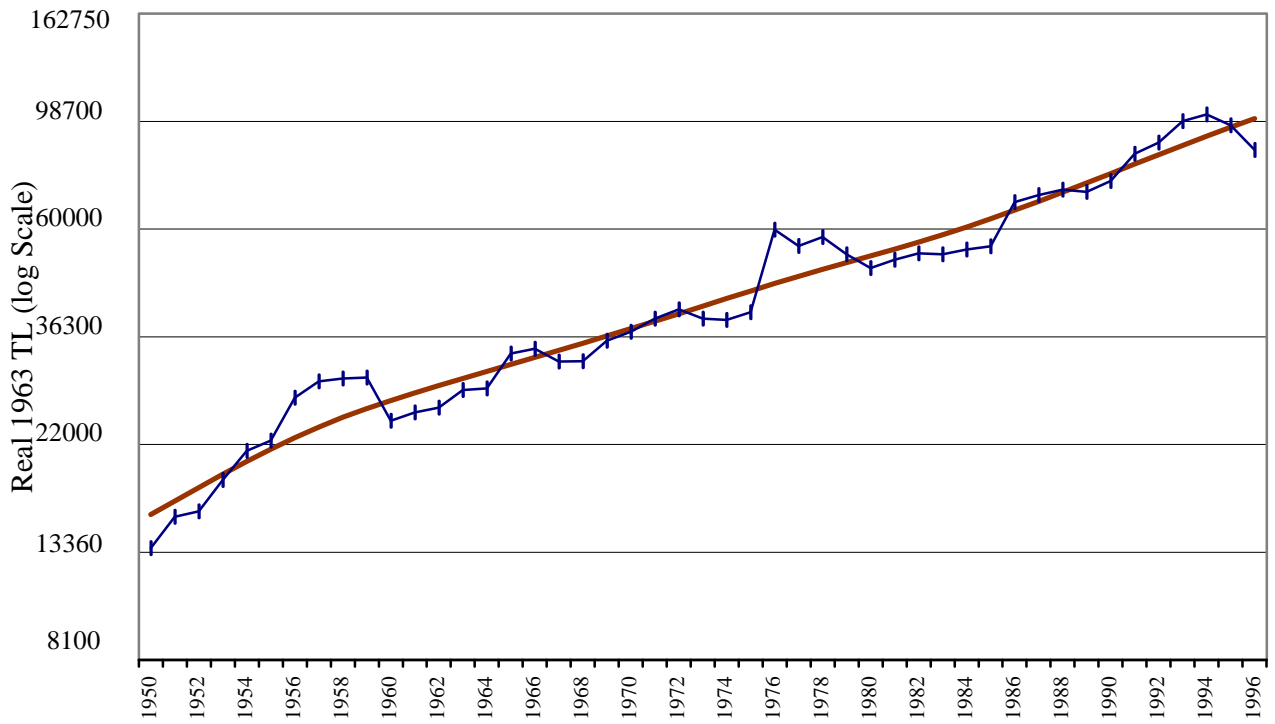
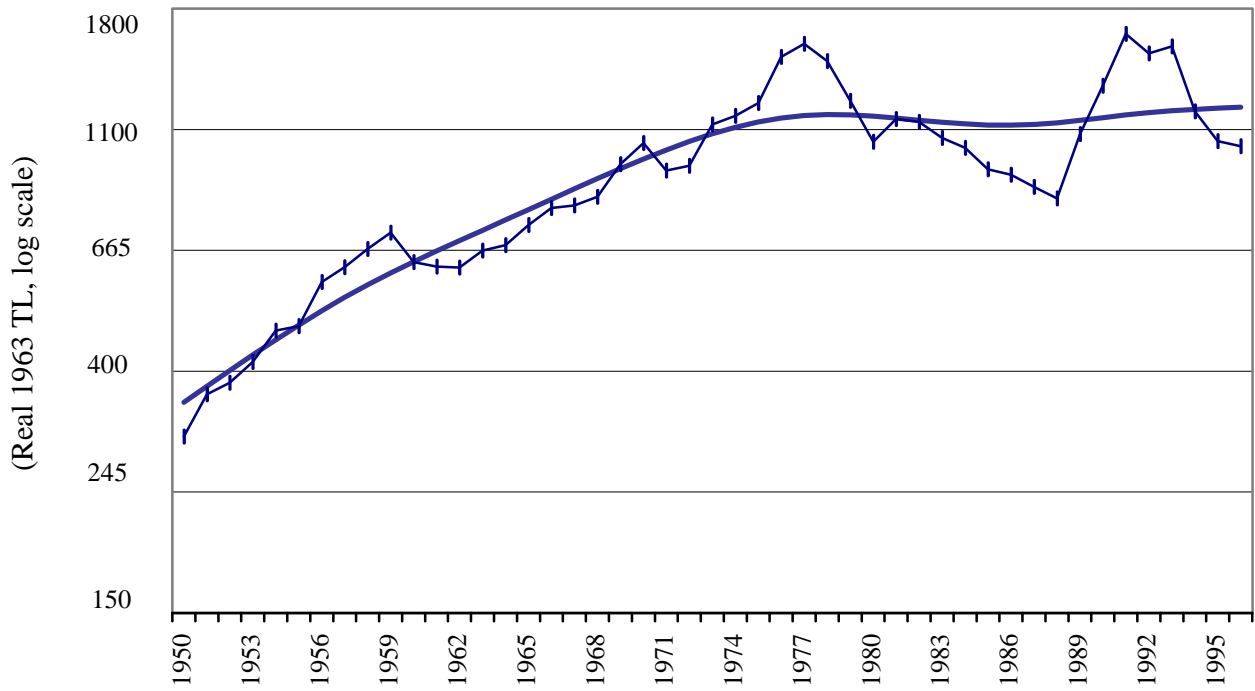
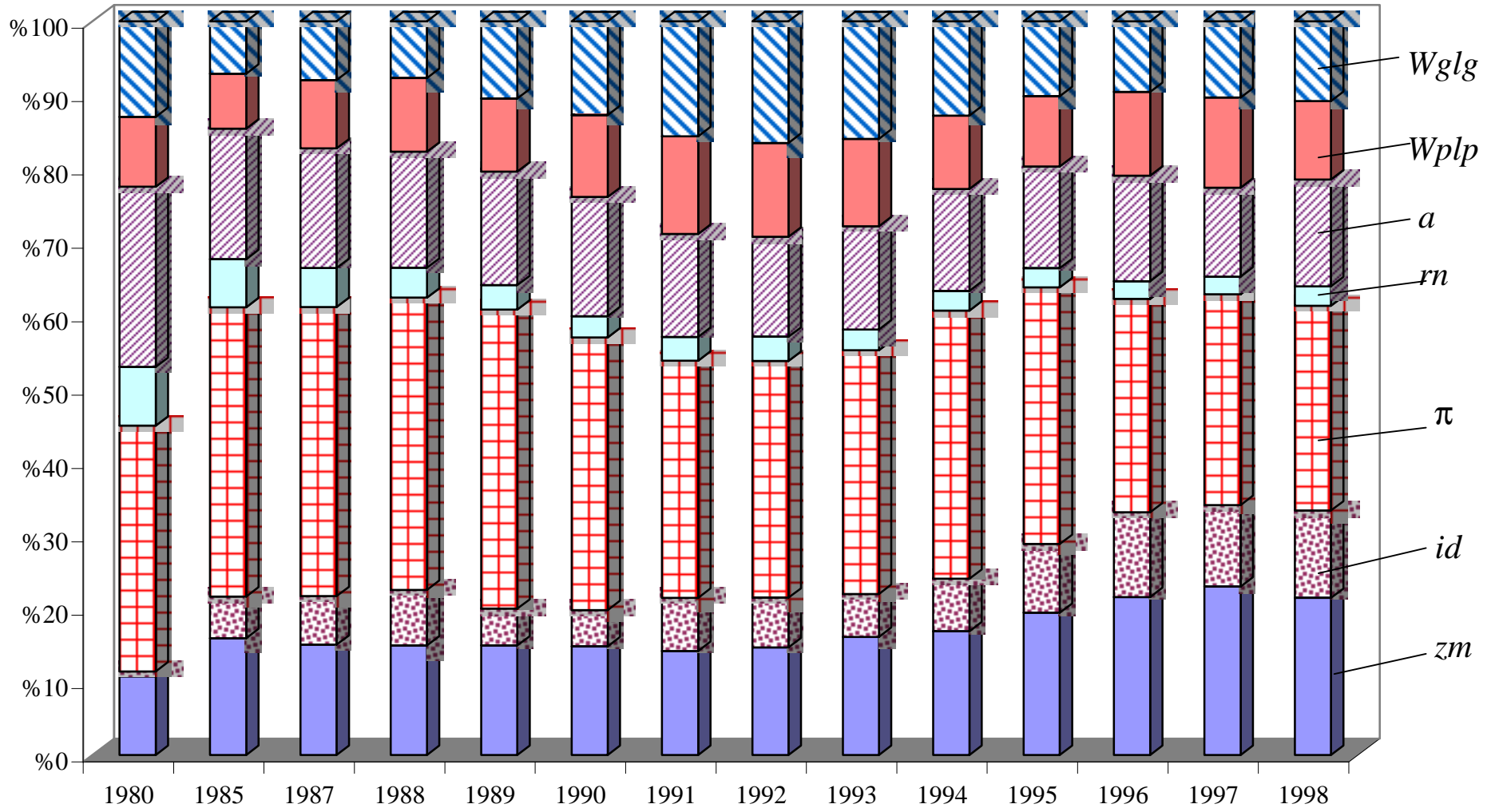


Figure 7b. Real Wages in Large Private Manufacturing:  
H-P Filtered Trend



**Figure 8. Decomposition of the Structure of Costs**





**Appendix Table 1: International Standard Industrial Classification of  
All Economic Activities  
Manufacturing Industry Classification**

311	Food manufacturing
312	Manufacture of food products not elsewhere classified
313	Beverage industries
314	Tobacco manufactures
321	Manufacture of textiles
322	Manufacture of wearing apparel, except footwear
323	Manufacture of leather and products of leather, leather substitutes and fur, except footwear and wearing apparel
324	Manufacture of footwear, except vulcanize or moulded rubber of plastic footwear
331	Manufacture of wood and wood cork products, except furniture
332	Manufacture of furniture and fixtures, except primarily of metal
341	Manufacture of paper and paper products
342	Printing, publishing and allied industries
351	Manufacture of basic industrial chemicals
352	Manufacture of other chemical products
353	Petroleum refineries
354	Manufacture of miscellaneous products of petroleum and coal
355	Manufacture of rubber products
356	Manufacture of plastic products not elsewhere classified
361	Manufacture of pottery, china and earthenware
362	Manufacture of manufacture of glass and glass products
369	Manufacture of other non-metallic mineral products
371	Iron and steel basic industries
372	Non-ferrous metal basic industries
381	Manufacture of fabricated metal products except machinery and equipment
382	Manufacture of machinery (except electrical)
383	Manufacture of electrical machinery, apparatus, repairing, appliances and supplies
384	Manufacture of transport equipment
385	Manufacture of professional, scientific measuring and photographic and optical goods
390	Other manufacturing industries