FISCAL POLICY IN THE CZECH REPUBLIC IN 1989–1994

MAIN BUDGET DEVELOPMENTS AND AN ESTIMATION OF THE FISCAL STANCE

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1. Introduction

Recent, current, and future macroeconomic performance of transition economies has a high ranking on the political agenda in those countries. This is understandable, because it constitutes not only a brief and condensed record of major reform successes and failures in the past, but also, if the achievements are credible and sustainable, it can attract the sufficiently broad public support necessary for the completion of transformation in years to come. This support will be crucial, both from domestic citizens for the sake of maintaining social cohesion and from the international community as an indispensable condition for the ultimate integration of these countries into the European Union.

There is an abundance of literature dealing with macroeconomic aspects of the transformation of former centrally planned economies into market-based ones. Typically, considerable attention has focused on the precipitous decline in economic activities and the multifaceted difficulties which have accompanied this decline. These are being attributed to numerous reasons and ascribed different labels like "exogenous", "endogenous", "self-inflicted", "transformation-induced", "external", "domestic", "institutional", "demand-side", "supply-side", etc. It is generally accepted that temporary output decline in economies in transition is an extremely

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complex phenomenon covering a wide set of causes, effects and fuzzy transmission mechanisms within a broader framework of under-developed institutions, unsettled market conditions, inherited social archetypes, distorted behavioural patterns, etc. The role of each individual factor is highly disputed among economists. Each observer puts different weights on different components of this set and arrives, understandably, on the basis of underlying models or assumptions, at a different conclusion.

Macroeconomic restriction, implemented in some way in all Central and Eastern European countries (at least for a certain period of time), seems, among other reasons, to play one of the most significant roles in explaining the protracted recessions. However, a careful analytical assessment of the real stance of macroeconomic policies is not an easy task in any economy. Due to a highly non-standard economic and institutional environment this is, alas, even more the case in economies in transition. The task is exacerbated by the limited availability of reliable statistical data which suffer, in addition, from methodological discontinuity in their collection. For this reason all conclusions are to be treated with appropriate caution.

The purpose of this study is to provide a comprehensive macroeconomic analysis of fiscal policy in the Czech republic during the transformation period 1989-1994. In contrast to those studies which are based on "decline accounting", disentangling different factors from each other and ascribing to them specific roles in the overall decline, this study focuses exclusively on fiscal policy and tries to identify its impact on the economy. The crucial methodological feature of the analysis consists in a proper recognition of exogenous economic developments which enter the fiscal area "from outside", as distinct from those endogenous factors which are the result of the typically discretionary decisions of policy-makers. The choice of the Czech republic for this fiscal policy analysis is straightforward. While the experience of the vast majority of the countries in transition seems to suggest that swiftly emerging budget deficits are the general pattern of fiscal development in the second and especially the third year of transition, the Czech budget experience is clearly an exceptional case in the region. Indeed, the exceptionally low rate of unemployment (which *ex post* always turned out to be lower than that expected by the government) helped to ease the strain on the expenditure side; but considering the huge restructuring and the decline of the overall level of income redistribution via the budget in recent years, one should tend to conclude that the fiscal policy strategy implemented by the Czech government(s) has outweighed (so far) the developments which, in other transition countries, led to sizeable budget deficits, which most likely contributed to inflationary pressures.

More specifically, the study tries to answer the following questions: Why the Czech republic, unlike other countries in transition, was not caught in a "fiscal trap" in the period of 1989-1994? What was the real stance of the fiscal policy during this period? An implicit question is to what extent is this non-deficit fiscal development sustainable. Although the Czech republic seems to be an almost ideal case to study there is one circumstance (not seen elsewhere and in addition to those mentioned above) which makes the analysis difficult. This is related to the split of the former CSFR and the ensuing requirement to consolidate the budgets into a consistent time series. Because the budget outcomes of the former federal budget were sometimes (especially in 1991) quite the opposite of those of both republics, the analysis using the consolidated budgets adjusted according

to the IMF methodology (referred to as Government Finance Statistics - GFS) may lead to results inconsistent with the results of studies treating all three budgets (federal and two republican) separately. The distortions stemming from the *ex post* split of federal revenue and expenditures are the inevitable price which must be paid in order to obtain a comprehensive picture of fiscal developments in a longer time frame. Whenever useful, the shorter time series of non-consolidated budgetary data are preferred.

The structure of the study is as follows. *Section 2* reviews the background, recalling the aims of fiscal policy under the centrally planned economy and its role within the broader policy and institutional framework in the specific conditions of the former CSFR and Czechoslovakia.

Section 3 describes the main macroeconomic, structural and conceptual changes in the fiscal policy of the Czech republic in the period under consideration. It marks out three sub-periods which are defined as: 1) the period of preparation of the economic reform (1989-1990); 2) the period from the introduction of the main reform measures until the split-up of the country (1991-1992); and 3) the period after the split-up of CSFR and after the introduction of tax reform (1993-1994). It tries to disentangle, on a qualitative basis, the economy-driven fiscal developments from budget-driven economic developments.

The core of the study lies in *Section 4* which, using the knowledge accumulated in the previous sections, attempts to quantify the fiscal stance of the budgetary policy. Generally, current budget receipts and expenditures are discarded as reliable measures of the fiscal stance and the concept of high-employment budget (surplus) is introduced and applied instead. At the beginning, the advantages and limitations of this concept are discussed and necessary modifications derived both from non-standard transformational conditions and from the availability of data are suggested. Then, an analysis is presented of exogenous (economy-driven) *versus* endogenous (policy-driven) causalities on the one hand and structural *versus* cyclical budget components on the other. *Section 5* summarizes and concludes.

Based on the maximum available data and focusing on a relatively narrow topic, the study is intended to contribute to a discussion on the extent to which the fiscal policy in the Czech republic during transition period was really restrictive, implying a contractionary impact on the aggregate demand and the aggregate supply respectively, or the extent to which it was "neutral-like", implying a more significant role of external factors in registered overall economic decline in a given period.

The main finding of the study confirms the importance of studying the fiscal stance with tools which are different from those relying on current budget revenue and expenditures. The wider the GDP gap, the more restrictive the fiscal policy, despite the existence of the budget balance or even an emergence of a small deficit, other things being equal. When the GDP gap is substantial the fiscal stance as assessed by current budget balance might become totally misleading. The danger of inappropriate evaluation seems to apply to a Czech fiscal policy fully. While the current budget balance (as measured by a Ministry of Finance methodology) would suggest a fiscal permission in 1992 and, to a lesser extent, also in 1992, converting its stance into restriction thereafter, full employment budget concepts indicate a small fiscal permission in 1990 followed by a huge restriction thereafter amounting to 2.5 per cent of the potential GDP in 1991 and even an

unprecedented 4.5 - 5.25 per cent during 1992-1994 (see *Chart 45* in the *Appendix*). Even if we do accept certain qualifications against the real values (though smoothed) of income elasticity of revenue obtained from the budgetary data (based mostly on current prices) a relatively low elasticity equalling 0.5 produces a fiscal restriction amounting to nearly 4.5 per cent of the potential GDP in 1994 (see *Table 7* and *Chart 49*). On the other hand, it is likely that fiscal restriction was not higher than 8 per cent as might be suggested when applying the unitary elasticity. The restrictive stance of the fiscal policy as assessed by the full employment budget will apply for the above years even in the case when the GDP gap narrows to (for example) a half, thus diminishing proportionately the level of the fiscal restriction. As the GDP gap estimated in *Section 4.1* is, intuitively, far from being excessive (considering the scope of economic restructuring) we do not see any reasons for adjusting the afore mentioned conclusions related either to the GDP gap or to the income elasticity of revenue.

2. The Role of Fiscal Policy under a Centrally Planned Economy

This section aims to review the general role of fiscal policy under a centrally planned economy and its links to other components of economic policies in the broader framework of a socialist policy and institutional establishment. Then, the specific historical experience of running a fiscal policy in former Czechoslovakia is described and the implicit macroeconomic consequences are discussed.

2. 1 Institutional and economic policy integrity of a centrally planned economy

Central planning constituted a broad and rather consistent set of interdependent policies which mostly directly, but also partly indirectly, controlled and influenced virtually every aspect of the economic system. The backbone of this system was a production plan which, in physical terms, directly and explicitly determined allocation of resources by assigning the inputs and ordering specific outputs, leaving prices largely with an accounting role only. Further supplementary component parts of this policy set were the monetary plan, state budget, credit plan, cash plan, foreign trade plan, foreign exchange plan, and many others. Highly centralized decision-making was not only practised in the investment sector but the state also predetermined, to a considerable extent, the level and patterns of consumption of its citizens. Incomes were distributed by direct control of prices and wages via subsidies and taxes. A large part of the individual's income was provided implicitly by subsidized housing, free education, free health care, subsidized transportation, subsidized food, subsidized energy, subsidized necessities, family benefits, and even subsidized vacations (Tanzi, 1992). Labour mobility was low because labour allocation was made via allocation of housing and jobs. Prices in the production sector generally did not reflect relative scarcity and opportunity costs. Banking and credit operations were fully monopolized by a central bank which fulfilled also the role of commercial banks. Allocation of credit was derived from the production plan on a more or less automatic basis which left no role either for interest rate or for risk considerations. Cheap and easily accessible credit encouraged extensive capital investment and hoarding of inventories. Money lending to the state enterprises meant in fact a purely technical transfer of money "between two pockets of the same trousers". The losses of some enterprises were compensated by the gains of the others. Asset holding by individuals was limited mostly to savings and many private activities were either discouraged by prohibitive taxes or administratively forbidden.

The system, which left hardly anything uncontrolled, possessed a certain beauty which consisted precisely in its integrated character. Although this distinctive integrity might have been relatively efficient in the short run and on the lower level of economic development (leaving aside any social considerations), and it might have displayed partial admirable achievements (for example with regard to tax collection), its long run sustainability proved to be exceptionally costly both in economic and in social terms. Although the main allocative decisions were seemingly made by government ministries, they were, if fact, heavily dependent on acquiring information (mostly about production possibilities) from enterprises which they were supposed to "control". As the system,

consequently, was based on a complex process of bargaining about plan targets, input allotments, relative and absolute prices, credits, subsidies, taxes, export and import tariffs, foreign exchange funding, etc. (as exhaustively described by many authors) it generated a non-parametric economic environment implying a heavily distorted incentive structure, low institutional flexibility, low allocative efficiency, lack of innovation, and secular stagnation.

2. 2 General features and roles of fiscal policy in a centrally planned economy

There are several features of fiscal policy in a CPE which are relevant for our macroeconomic analysis. As already indicated above, a key feature of the fiscal policy consisted in its subordination to a more or less coherent system of institutions and policies produced by highly centralized decision-making. Fiscal policy was closely intertwined with monetary policy, foreign trade policy, the enterprise sector, and the household sector as well. Especially, the linkages between fiscal and monetary policies were typified by manifold overlapping and interdependencies. Consequently, a number of functions which in a market-based economy are a domain of monetary policy were fulfilled by fiscal operations in a CPE and *vice versa.* Thus, for example, money lending to loss-making enterprises (with a zero chance of being repaid) was not only a banking function but essentially a fiscal function. Being technically fiscal subsidies, this money creation did not enter and "distort the fiscal accounts giving an inaccurate view of the fiscal tightness of the country's fiscal policy" (Tanzi, 1992). Similarly, due to the existence of an integrated system of producer prices and consumer prices linked via highly individualized turnover "taxes", tax collection was not performed only by budget bodies but also by the universal banking system. And, last but not least, many typically fiscal functions were substituted by activities of public enterprises, such as the provision of some social benefits, subsidized housing, subsidized energy and many others. The general lesson is that the more fiscal objectives are pursued by non-fiscal tools, the more misleading any commonly accepted measures of fiscal stance, understood in a strictly narrow sense, become. The faster the disintegration of the formerly integrated system and the faster the reduction in the former overlapping between its individual parts, the better we may attempt to evaluate its macroeconomic impact on the economy.

A related issue stems from the fact that many former subsidies and taxes were implicit rather than explicit. They were provided through interest rates, exchange rates, banking regulation and through countless other channels. These implicit (though more accounting than real) flows by definition never appeared in fiscal accounts, thus implying further distortions of the true role of this particular segment of a centrally planned economy. Again, the transformation of these implicit flows into explicit ones accompanied by the emergence of a corresponding institutional background increases the reliability of a more profound fiscal policy analysis.

Both above suggestions are supported by the fact that many former centrally planned economies displayed either none or quite small budget deficits and low foreign debts although the indebtedness of the public sector in a broad sense was far-reaching if not ubiquitous. Here we have in mind, for example, substantial under-capitalization of the economy, ruthless exploitation of

natural resources, deterioration of the environment and public health, a whole economy simply living beyond its means[2].

The bulk of complex functions which were attributed to fiscal policy under CPE consisted mainly of resource allocation within the public sector and income redistribution within this sector and between public and household sectors, always in accord with other components of the system (Chand/Lorie, 1992). These functions had both a real and an accounting nature and were based on both direct and indirect tools. The undeniable arbitrariness of the system was reinforced by a deep-rooted institution of bargaining in the phase of *ex ante* preparations of the plans complemented by exceptionally high level of discretion in *ex post* adjustments of the results.

Was there, under such circumstances, still any room for a stabilizing role for fiscal policy in a CPE? Yes, indeed. But the scope for that function was, again, defined by its overall role in the system and could not have been applied independently of it. One could conceivably argue that the stabilization potential and a certain sort of flexibility of the whole system was surprisingly high though achieved in a rather passive way. Despite some critical periods in the history of every centrally planned economy, caused either by unexpected and severe external (supply side or terms of trade) shocks or by incompetence on the part of the central planners, these economies displayed tendencies for achieving global equilibrium. Although the partial equilibria used to be substantially more prevalent on consumer markets than on investment markets, the ability of CPEs to deal with many external and internal shocks was quite obvious, especially in the medium run. The medium run was defined by the length of a basic planning period, which was 5 years. Thus, the system, as a whole, needed up to 5 years to absorb the shock unless a new one hit the economy in the meantime.

The indirect measure of the ability of the system to absorb shocks (at least in accounting terms) might be seen in the insignificance of the officially reported budget deficits. Deficits "appeared only when shocks were so large or unexpected that the budget could not cushion them. In this sense, an explicit budget deficit was a measure of the *net* extent to which administered prices were irreconcilable with true economic costs" (Cheasty, 1992).

We are far from suggesting that the allocation and production efficiency of the CPE was satisfactory[3], but it is probably acceptable to say that within the given limits of the system, its stabilization capabilities, in terms of achieving an equilibrium in the medium term, were substantially better than, for example, its ability to generate and implement innovations. In other words, the inefficiency in production and the scale of allocation distortions outweighed the inefficiency in maintaining macroeconomic (quasi)equilibrium. It might even be argued that these surprisingly vigorous stabilization features contributed significantly to the rather long historical persistence of the system as such.

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[2] Considerations regarding the extent to which these tendencies were determined by the intrinsic logic of the system or to what extent these were politically imposed remain beyond the scope of this paper.

[3] The only possible historical exception was at the early stage of the existence of CPE when large amounts of resources seemed to be efficiently mobilized.

2. 3 The Czechoslovak experience of a centrally planned economy

Although the system of CPE displayed a lack of sustainable efficiency, the way it was practised in the former Czechoslovakia was comparatively efficient and surprisingly successful[4]. There are probably three reasons for this.

1) Monetary and fiscal prudence seemed always to be a tradition in that country during the 20th century. It goes back to the very first years of the existence of the independent Czechoslovakia which us early as 1919 took effective measures to cut itself off from its hyperinflationary neighbours (encompassing the former Astro-Hungarian Empire), thus creating a small island of financial stability in the heart of Europe (Dyba/Svejnar, 1994). Also, during the whole inter-war period, the Czechoslovak crown belonged to the most stable currencies throughout the whole of Europe.

2) The external imposition of the centrally planned system after 1948 led to a secular deterioration of the relative position of Czechoslovakia among the advanced countries. In spite of that, Czechoslovakia succeeded in certain "creeping" improvements of this system during the whole period of CPE as analysed by Klaus (1990). His findings can be summarized as follows:

   a) Textbook-type versions of the CPE (if such existed at all) were implemented only in the 1950s and 1960s. In those decades the economy experienced severe investment cycles.

   b) Although the shake-up of this kind of system at the end of 1960s was reversed by a subsequent re-centralization at the beginning of the 1970s, the system really did not return to its original position. Instead, it acquired new elements (as a result of the reform attempt) which consisted of prominence of monetary policy and the central bank. Although monetary planning was formally subordinated to the standard state plan, monetary or "efficiency" criteria were gaining a certain respect in the decision-making process. Thus, the standard pattern of bargaining process between the "economic centre" and "production units" was partially and steadily transformed into bargaining between the "planning centre" and the "monetary centre".

   c) It seems that central planners learned their lesson during the 1970s and 1980s and began to understand that certain macroeconomic rules must be followed in order to eliminate (or minimize) short- and medium-term economic fluctuations. Hence, very cautious macroeconomic policy resulted in a relatively lower degree of internal disequilibrium and in the non-existence of serious foreign indebtedness. It follows from this that if even highly

[4] It can be argued that Hungary, for example, was also relatively successful in maintaining market equilibrium. This is certainly true but it happened over a long period of experimentation with gradual decentralization and partial liberalization of the system within affordable political limits, while the Czechoslovak system remained until the very end of the socialist era as rigid and highly centralized as those in Romania or Bulgaria.

centralized decision-making is implemented under slightly different institutional circumstances it can have important implications for the macroeconomic outcomes.

3) It can be argued that the shadow (black, grey, underground, illegal, untaxed, etc.) economy constituted an important supplement to the official one. Although some observers suggest that it was the shadow economy which eroded the official one and contributed to its ultimate end, we strongly believe that it was precisely the shadow economy activities which largely "helped" to correct the short-term misallocations of central planning and to supply the goods in shortage fully in accordance with free market principles. A sort of generosity towards the phenomenon of the shadow economy rather than its restriction might have allowed a healthier equilibrium to be attained on the official markets. Thus, even though the shadow economy may have been a source of frustration and a challenge for stalwart central planners, by the same token, it may also have been a source of relief, because the invisible hand kindly completed their unfinished job, thus masking the allocation imperfections they created. Understanding the scope of shadow activities might in fact be the very tool which would "illuminate" the overall level of disequilibrium in the economy. Unfortunately, due to the unwillingness of the Czechoslovak socialist politicians to admit (officially) the existence of this phenomenon, the empirical evidence is meagre and inconclusive.

More specifically, the important features of fiscal development during the period 1970-1988 were as follows[5]:

- The ratio of total public expenditures in the GDP fluctuated, but since 1982 it grew steadily[6]. There was an observable tendency that when this ratio tended to decline the price indices tended to increase, and *vice versa;* when this ratio tended to increase the price level stagnated.

- Total budget expenditures in 1970-88 increased by approximately 213% while GDP rose by 193%. A high dynamic growth was recorded for "public consumption" (285%), likewise for medical services (293%), culture (286%), etc. The single most dynamic item was a "negative turnover tax" (in fact subsidies to retail prices) with the index of growth standing at 931% in 1988 and 1555% in 1989 (compared to 1970). The absolute volume of retail trade subsidies amounted to 11% of total expenditures in 1989.

- The volume of subsidies to enterprises amounted to 14% of total expenditures in 1988 with a declining tendency over the long run.

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[5] See Kočárník (1990a) for more details.

[6] The ratio of total public expenditures in the GDP in former Czechoslovakia was comparable with those in other advanced countries, but while the scope of redistribution in the former was connected with high level of different subsidies (distortions of the price system, protectionism towards inefficient producers) it was derived predominantly from the developed social security systems in the latter.

- The structure of receipts remained relatively unchanged. The bulk of revenue was coming from enterprises (38-40% of total receipts), turnover tax (27-30%), and households (11-13%).

- Fiscal federalism resulted in vast redistributions: The share of the Federal budget in total public sector *receipts* ranged between 52-54%, while the budget of the Czech Republic (including local budgets) amounted to 32% and that of the Slovak Republic 14%. On the other hand, the share of the Federal budget in total public *expenditures* was between 17-20%, while that of the Czech Republic (including local budgets) was 52-57% and of the Slovak Republic 27-29%.

- The accumulation of internal disequilibrium pressures combined with an effort to implement at least a partially restrictive monetary policy resulted in the emergence of "open" (admitted), though small, deficits within the system of state (Federal, Czech and Slovak) budgets: 3 bn CSK (Czechoslovak crowns) in 1986, 0.6 bn CSK in 1987, 0.7 bn CSK in 1988, and 3.5 bn CSK in 1989.

To summarize, former Czechoslovakia maintained a relatively stable macroeconomic environment and a reasonably high level of macroeconomic balance (especially on the consumer markets) with a small monetary overhang compared to other CPEs (see Dyba/Svejnar, 1994; Dlouhý, 1989; Cheasty, 1992, and many others) for the most of the pre-reform period. Despite the fact that the economic development at the very end of 1980s led to a sharpening of external conditions which, combined with attempts to initiate only a partial economic reform, resulted in further worsening of the trade-off between macroeconomic stability and general growth performance, the above conclusion does not require any significant revision. This can be indirectly supported by the "guesstimates" that the relative scope of the shadow economy was steadily increasing towards the end of the decade although it remained low compared to other former socialist countries. In metaphorical terms, the Czechoslovakian version of a CPE was similar to the situation of an old-fashioned and over-loaded aeroplane which was quickly running out of fuel (without having an airport in sight) but with an relatively experienced pilot on board who skilfully maintained both wings at approximately the same height, thus averting the worst disaster at the moment of a (not very soft) emergency landing.

3. Main Fiscal Policy Developments during Transformation Period in the Czech Republic: An Overview

It was argued in the previous section that fiscal policy could contribute to the stabilization of the economy only as a part of a broader set of policies and institutions. As the transition to the market dramatically alters the whole institutional scene of the economy it imposes totally new roles existing (but mostly underdeveloped) policy tools and urgently calls for a number of completely new institutions which have to be established from scratch. This section outlines what general changes had to be made in the fiscal area in all transition countries and the likely macroeconomic consequences of these changes. The main body of this section is devoted to the description of the timing and scope of fiscal measures taken in the Czech Republic in the period 1989-1994 which is presented in the context of available data. The section is then concluded by a qualitative analysis of fiscal development.

3. 1 Fiscal policy in transition: main conceptual (re)considerations

Transition from centrally planned economy to market-based one encompasses numerous general changes and developments. Among the most important are the following: a) the collapse of the integrated system of numerous, mostly direct mechanisms of control and its substitution by a few, indirect (and often incomplete or underdeveloped) ones; b) the emergence of real money (and all its functions) in the place of "accounting money"[7] ; c) abrupt decentralization of decision-making and the ensuing precipitous increase in the number of economic agents; d) the emergence of private property and a multitude of different forms of enterprises; e) increasing risk of failures of state enterprises; f) diminishing job security; g) the necessity to establish a social safety net; h) liberalization of all markets; i) emergence of virtually new markets (capital market, labour market); j) liberalization of foreign trade; k) introduction of convertible currency; l) massive adjustments of relative and absolute prices; m) vast redistribution of incomes and wealth which may not coincide with widely held equity "norms"; n) creation of institutions servicing the market economy; o) change of labour attitudes; p) re-shaping of incentive structures.

Consequently, the list of short- and especially long-term tasks which have appeared (or are still present) on the fiscal policy agenda at the beginning of transition is long[8] and rather complex. The most general tasks are the following: i) complete overhaul of both revenue and expenditure

[7] The emergence of real money can be illustrated using the example of taxes. It was usual under CPE that if, the enterprise fell into tax arrears, the central bank accommodated this money demand enabling a fulfilment of obligations towards the state budget and enjoying the privileges of those who (over)fulfilled the plan in terms of guaranteed profit of *ex ante* given prices. On the other hand, tax arrears in a market economy bite inescapably either into the firm's real profits or assets. The accommodation of money demand was an *ex post* vindication of implicit information contained in the tax claim under CPE. The real enforcement of a real tax payment not accommodated by monetary policy was the task for a credible economic policy which had to alter the content of this implicit information.

[8] See, e.g. Chand/Lorie (1992), Tanzi (1992), Gordon (1994), and Heady/Rajah/Smith (1994).

side; ii) redefinition of the role of fiscal policy within the whole economic policy system; iii) separation of the fiscal policy from other policy tools, especially from monetary policy, thus preventing an automatic monetary accommodation; iv) insulation of the budget from the private enterprise sector (cutting all unnecessary subsidies); v) replacement of administrative fiscal discretion and its substitution by fixed fiscal rules; vi) introduction of complete transparency into budgeting along with public control; vii) achieving the highest possible consistency and uniformity in the tax treatment of different sectors, commodities and forms of ownership (i. e. simplification of taxation, abolition of exemptions and special privileges, replacement of implicit contracts related mostly to inherited but unnecessary commitments and interventions); viii) introduction of transitory budgetary measures preventing the still prevailing and very powerful state enterprises from misusing their dominant monopoly power and exploiting the liberalization process in the period when neither the old system of control nor the new regulatory framework are non-existent; ix) establishing the market-consistent tax administration capable of taxing a newly emerging profit-oriented private sector and of limiting tax avoidance and evasion (comprehensive reorganization and retraining and recruitment of appropriate staff); x) introduction of such features into the tax code which would minimize the distortions or "over-taxation" resulting from inflation which is likely to threaten for a certain period of time; xi) promotion of such expenditure management as would encourage "spending agencies to formulate their budgets flexibly within the given totals so as to get value for money and avoid waste" (Chand/Lorie, 1992); this refers to the introduction of cost-benefit evaluation of expenditure programmes and a change in the operational procedures to cope with an "intra-budgetary" hard budget constraint; xii) re-shaping of the existing social security and welfare system, resulting in a targeting of benefits to those whose needs are greatest but whose means are smallest; xiii) introduction of a redistribution system which would not hamper attainment of the equity standards shared by most of society (such a system would include effective taxation of undesired distribution of incomes, windfalls, and various forms of capital gains; xiv) proper qualitative and quantitative definition of the long-term role of government - in terms of expenditures - allowing it to fulfil its substantial roles in the economy (timing and sequencing of its downsizing with respect to a transitory or short-run goals); xv) running deficit and debt management so as to minimize the short-run cost of transition and optimize the long-run burden.

The transition process, even if properly managed, is likely to generate massive macroeconomic instability. Generally, this instability arises from the interference between the inherited (but disappearing) economic system, the distorted system of relative and absolute prices, the behavioural inertia of economic agents (producers), liberalized markets, powerful monopolies, weakened policy tools, undervaluation of currency, terms of trade shocks, restructured incentives, and the suddenly emerging institutional void. Thus, the **crucial dilemma for fiscal policy during the transition period** is: **how to contribute to the stabilization of the economy (in terms of slowing down output decline and containing inflationary pressures) while simultaneously promoting the necessary structural change (both in the whole economy and in the budget itself) and achieving equity goals in the new socio-economic environment, together with significant redefinition of the role of the state, and re-shaping of policy instruments**. The next sub-section will examine how this challenging dilemma was tackled by the Czech policy-makers.

3. 2 Main changes in fiscal policy measures against the background of economic development: A brief description

The following sub-section will describe the main fiscal events in the Czech republic in the period 1989-1994. For the sake of clarity, we will divide the whole period into three shorter periods which could be labelled as: 1) the period of "preparation of the economic reform" (1989-1990); 2) the period "between the introduction of the economic reform and the implementation of the tax reform" (1991-1992); and 3) the period after the split of the former CSFR (or of the existence of an independent Czech Republic), after the tax reform (1993-1994).

One crucial qualification must be made at the very beginning. Any assessment of fiscal policy during the period of 1989-1992 must take into account the existence of the following unfavourable circumstances:

1. The available statistical data are not robust and they suffer from numerous well-known deficiencies stemming from the general reform of statistical methods of data collection. This imposes severe limits on the inter-temporal comparability of the data and undermines understanding of past developments in general.

2. Even if we find some measures or indicators whose methodology seems to remain unchanged throughout the period under consideration from a technical viewpoint (like price indices or budget revenue) the same measure gives quite different messages about the given phenomenon in economically and institutionally different periods.

3. The analysis of fiscal policy in the former CSFR is complicated by the existence of three state budgets (Federal, Czech and Slovak) which underwent a rather dramatic development consisting of the rapid phasing-out of the role of the Federal budget and a concomitant increase of the role and share of the two Republican budgets. Another difficulty is presented by the relatively strong (though weakening) interdependency between all state budgets, consisting of a bilaterally accepted scheme of fiscal (or income) redistribution between both republics within the federal state (see below). In other words, a sufficiently precise "budget consolidation" is required to obtain a reliable data series illuminating the real fiscal performance.

We have basically three sets of data at our disposal. The first set consists of official information published by the Ministry of Finance as the *State Final Accounts of the Federation*, or as the *State Final Accounts of the Czech Republic* respectively. The data are yearly and constitute the core of the budgetary process as understood both by the government and by the Parliament. The second set of data is obtained by means of adjusting the first set according to the *Government Finance Statistics* (GFS) methodology used by the International Monetary Fund[9]. Similarly, the data are yearly and provide a view of how the budgetary process would

[9] A detailed description of the GFS methodology, including the accounting bridge tables, are contained in the report written by Skarzynski and Kim (1994).

look if an internationally comparable IMF accounting methodology were applied. The third set is based on monthly data series of major budget revenue and expenditure items in a structure which is identical to the yearly budgetary data (first set) as reported by the Ministry of Finance.

The application of three sets of data has both advantages and disadvantages. Understandably, while the yearly data provide a more general picture of the whole period, monthly data are clearly more revealing in shorter periods of discontinuity of economic and fiscal developments. More interesting seems to be the distinction between standard official data (first set) and the GFS methodology (second set). As the former reflect the budgetary process practised by the Ministry of Finance they yield a key to the understanding of fiscal policy-making. On the other hand, as the latter are based on a more refined and internationally acknowledged methodology, they may generate a less distorted picture of the real fiscal stance. In other words, while the first set can probably better explain the motives behind the nearly omnipresent struggle for a balanced budget by fiscal policy-makers, as they understand it, the second set might be more appealing for economic "purists" attempting to discover the "deepest possible economic truth" or to deliver more reliable international comparisons[10].

4. The continuity and reliability of the fiscal policy indicators is heavily impeded by the introduction of the tax reform on January 1, 1993, and the ensuing restructuring of the majority of individual tax receipts and expenditures.

The simultaneous existence of all these circumstances makes the analysis of fiscal policy inevitably vulnerable, and uncomfortably dependent on *a priori* assumptions based on mostly subjective judgements. Despite that bias, we strongly believe that even subjective assessment may bring interesting insights into the problem.

3.2.1 Preparation of the economic reform: 1989-1990

In *Section 2.3* we saw that although the long-term logic of the functioning of the centrally planned economy allowed for certain adjustments to external and internal shocks, the manner of effecting those adjustments was rather passive. Instead of a creating *stimuli* for producers to economize their production and to adjust to all shocks efficiently (most importantly through productivity gains) it distributed (in a highly accommodative way) the burdens of macroeconomic disturbances throughout the economy, accumulating inflationary potential in the long run. Continuing insistence on social commitments embedded in the long-term social contract consistent with socialist ideology limited the manoeuvring space for this adjustment and speeded up the moment when hidden inflationary pressures started to spill over into open ones and when the adjustment processes visibly started imposing a barrier to growth performance even in the short run.

[10] The existence of the above two sets of data is another proof that ambiguity is a governing rule in economics and, indeed, the most dynamizing factor of its development.

Although this secular process had been recognized in the former Czechoslovakia already during the 1970s and 1980s, it accelerated dramatically during 1989[11]. Positive factors such as improvement of terms of trade and favourable weather (mild winter and good crop) were outweighed by the disturbances stemming from implementation of some partial reforms similar to those reform attempts introduced in other neighbouring countries.[12]

Annual growth of the so-called "created" real GDP dropped from 2.3% in 1988 to 1.3 in 1989 as did productivity per production employee (from 2.4% in 1988 to 1.3% in 1989)[13]. Growth in industrial production was only 1% per year, the poorest growth rate since the middle of the 1960s. Export growth slowed and inventories increased by 45%. The state budgets ended up with a deficit (Federal budget: 0.83 bn CSK; Czech budget: 1.25 bn CSK; and Slovak budget: 1.42 bn CSK) while local budgets recorded a surplus of 4 bn CSK, implying a small surplus in the whole public sector of 0.5 bn CSK. The reason was an unequal rate of deceleration of both sides of the total government budget. While the rate of growth of revenue slowed down from 5.3% in 1988 to 2.8% in 1989 (mostly due to diminishing dynamics of profit tax receipts) the rate of growth of expenditures slowed from 5% in 1988 to 3.4% in 1989[14].

Long-term economic trends in general, and the short-term sharpening of fiscal disequilibria during 1989 in particular, later led the first post-communist government (the "Government of national understanding") to interpret the whole development in 1989 as conclusively inflationary. Despite a small surplus in the total public budget, the government believed that the overall impact of the budgets was inflationary, adding some 11.9 bn CSK to the aggregate demand. This judgement derived mainly from the manner of financing both central and local governments budgets, which consisted of using the so-called state financial assets accumulated in previous years. In addition, an increase in the disposable income of the population of 12.4 bn CSK (or 3%) compared to 1988 (with households' money deposits remaining unchanged) was considered as another strong impetus to the aggregate demand, which was magnified further by an increase in enterprise demand (see Kočárník, 1990b).

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[11] The 1989 was the last year of the communist regime in the former Czechoslovakia. The first non-communist government (so called "Government of national understanding") was appointed on 10th December 1989.

[12] The common feature of these reform attempts was an ambition to revive withering economic growth while maintaining all the basic attributes of CPE. The impact of these marginal reforms was largely adverse because they increased inflationary expectations, fostered uncertainty throughout the economic environment, brought ambiguity into incentive structures, etc., while leaving state property untouched and major questions of achieving real micro- and macroeconomic rationality unanswered.

[13] Quoted from Kočárník, 1990b. These figures are not consistent with the later data showing a deceleration of the nominal GDP growth from 3.7 % in 1988 to 2.2 % in 1989 and, due to an increase of the GDP deflator, even an acceleration of real GDP from 2.1 % in 1988 to 4.5 % in 1989 (Czech Statistical Office, 1995).

[14] The most rapidly growing expenditures were those of local budgets (from 4.3% in 1988 to 6.3% in 1989) and public consumption transferred to households. In addition, partial (socialist) reforms announced in 1988 and implemented in 1989) resulted in an increase of purchasing and wholesale prices, which, combined with unchanged retail prices, implied a dramatic increase in consumer subsidies (or the so called negative turnover tax) from 30 bn CSK in 1988 to 48 bn CSK in 1989 (by 60%! on a year-to-year basis).

In the very last days of its rule (November 30, 1989) the old communist government approved a budget for the fiscal year 1990. This budget more or less passively extrapolated economic and budgetary trends from the past period, allowing for a further emergence of an open (or explicit) budget deficit amounting to 5.1 bn CSK (with an implicit deficit even amounting to 10 bn CSK) and initiating no change which could reverse an increasing disequilibrium. It assumed a rate of growth of budgetary expenditures which was twice as high as the rate of economic growth and provided no new incentives for the effective hardening of the soft budget constraints for enterprises.

Shortly after the new government came to the power (December 10, 1989) this budget was discarded and a provisional budget announced. The provisional budget allowed for the implementation of the former budget during the first quarter of 1990 only, and immediate steps were taken to elaborate a new budget. The new budget for 1990 was announced in March and reflected a substantial change in the whole budget strategy. Although it did not yet prescribe any drastic cuts, it constituted a clear budgetary discontinuity with the past. It also represented one of the very first congruous economic policy documents of the new government[15], thus paving the way for the formation of a new long-term pro-market economic strategy[16]. The budget for 1990 had two major goals:

1. To take a decisively anti-inflationary stance[17]. It was assumed that this could be achieved in two ways. First, by substantial restriction of the growth rate of expenditures which should by no means outpace the rate of growth of the whole economy; and second, by running budget surpluses which would have both an anti-inflationary impact and would start repaying the debt accumulated in the past.

2. To initiate the transformation process towards the market economy. It was assumed that this could be achieved by: a) limiting the scope of income redistribution via budgets; b) by cutting expenditures such as defence, administration, and subsidies to enterprises; c) by generating effective pressure on the behaviour of economic agents and their economic rationality, and d) by imposing the principle of equivalence.

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[15] One of the very first measures taken by the new government was a devaluation of the Czechoslovak crown (CSK) *vis-à-vis* convertible currencies and its revaluation *vis-à-vis* the Soviet rouble during December 1989.

[16] In March 1990, the macroeconomic tenets of this strategy were as follows: a) keeping economic growth on the levels reached in recent years (economic growth of 1.7% per year was envisaged for 1990); b) taming inflationary pressures (co-ordinated effort of monetary and fiscal policies to restrict aggregate demand); c) maintaining the external balance (no increase of convertible currency indebtedness); d) shaping employment policy (re-training programmes, etc.) (see Kočárník, 1990a).

[17] The decisive anti-inflationary stance stemmed not only from the long-term worsening of the economic performance of Czechoslovakia but also from the rapid deterioration of macroeconomic equilibrium during 1989 and also probably strongly (though indirectly) from the newly emerging experience of the reforms in Poland which brought hyperinflation in the very first months after price liberalization. The Polish experience seemed to have an educational effect on Czech policy-makers.

The main changes of the new state budget (including the Federal budget and the two republican state budgets) for 1990 can be summarized as follows (growth rates are compared to 1989):

	original 1990 budget	*new 1990 budget*
rate of growth of receipts	3.4%	2.9%
rate of growth of expenditures	4.7%	1.6%
total budget expenditures	427 bn CSK	415 bn CSK
explicit budget deficit (-) or surplus (+)	- 5.1 bn CSK	+ 5.4 bn CSK
total estimated deficit (incl. implicit)	- 10.0 bn CSK	0 bn CSK
net budgetary impact (compared to the original 1990 budget)		+ 15 bn CSK[18]

One of the crucial budget transformation measures implemented during the fiscal year 1990 was the elimination of the "negative turnover tax" on foodstuffs on 9th July. Compensation for the elimination of subsidies on foodstuffs (accompanied by an increase in retail prices) was provided to each citizen by the introduction of the General Income Support amounting to 140 CSK per month[19]. This down-streaming of the budget which eliminated one of the most obvious distortions in relative prices was presented as having a neutral impact both for the budget and for households. While this might be true in a purely accounting sense for the former, due to the non-zero propensity to save, it cannot be the case for the latter. Among other measures were the increase in oil prices, prices of public transport, prices of public catering and three devaluations of the currency, all having implications for the state budgets.

The original intentions to achieve a balanced budget were more than fulfilled: while the Federal budget finished with a surplus of 0.7 bn CSK, the Czech budget recorded a surplus of 0.2 bn CSK. *Table 1* in the *Appendix* shows the main contours of budget development during the period 1989-1994[20].

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[18] See Kočárník, 1990a.

[19] The elimination of the subsidies for foodstuffs created the conditions for the enormous simplification of the turnover tax rates from thousands to only four at the beginning of 1991.

[20] There are basically three sets of data for four levels of government. While the three sets reflect the budgetary figures for the "original budget" (as approved by the Parliament before the beginning of a given fiscal year), "modified budget" (as modified at a certain moment during the fiscal year due to an unexpected economic development) and "final budget" (the actual outcome of the fiscal year), the four levels include the Federal budget, State budget of the Czech republic (Czech budget), Local budgets and total Public budget (consisting of three state budgets and local budgets). In addition, the consolidated Czech budget (based on the author's computation) is obtained by adding the figures for the Czech budget to two-thirds of the figures for the Federal budget. The rule of applying the ratio 2 : 1 was accepted for splitting the assets of the former CSFR unless otherwise specified. Although this method of consolidation is not ideal, it creates a much better and more appropriate basis for inter-temporal comparisons of both particular taxes and the general fiscal development, since it is not dependent on the complicated and rapidly changing patterns of transfers between different levels of budgets.

3.2.2 Economic reform: 1991-1992

The bulk of the economic reform measures were implemented in January 1991[21]. In addition, many other changes and adjustments were implemented in the course of the year. These were both of a long-term strategic nature (connected with the further progress of the economic transformation as such) and of a shorter-term nature, as pragmatic policy reactions reflecting the current state of the economy. In terms of economic development, economy-related legislative processes and institutional reorganization, the year 1991 constituted the most significant discontinuity in the whole post-1948 period. The profound domestic changes coincided with dramatic external developments (collapse of CMEA markets, Gulf crisis, recession in developed countries) resulting in a slow shift from a supply-constrained economy to a (basically) demand-constrained one[22].

The goals of fiscal policy for 1991 were the following:

1. Implementation of restrictive fiscal policy with the aim of curbing the inflationary spiral in the economy.

2. Contribution to the transformation of the economy by lowering the share of public budgets in GDP, by diminishing the enterprise tax burden, by shrinking subsidies, by narrowing the redistribution flows both among all budgetary levels[23] and between the public sector and the re-emerging enterprise sector.

3. Increase of the share of transfers to households in total budget expenditures with the aim of establishing a social safety net which would react flexibly to the evolution of living costs and unemployment.

The underlying macroeconomic assumptions for 1991 were the following: a decline in real GDP of 5%; rate of inflation 30% *per annum*; rate of unemployment 5 - 7%; growth in nominal wages of

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[21] The far-reaching market transformation included the following main measures: price liberalization (approx. 85% of all prices), foreign trade liberalization, introduction of current account convertibility (preceded by three rounds of currency devaluations at the end of 1990), initiation of large-scale privatization, initiation of deep reforms of the legislative and institutional framework, etc.

[22] Although, by definition, such a statement may, due to the sweeping market liberalization, probably be correct, the empirical (and especially anecdotal) evidence accumulated on many markets by casual observations could forcefully challenge the robustness of such a statement. The sluggish supply response caused either by privatization "agony" or by general under-capitalization did not seem to put the consumer into the role of a "sovereign".

[23] The system of subsidies and transfers from the Federal budget to Czech and Slovak budgets was abolished for 1991. Common revenue from the turnover tax and from corporate profit tax had been distributed among the budgets according to the formula 35 : 40 : 25 (Federal budget : Czech republic : Slovak republic). In general, the overall role of the Federal budget within all public budgets was further weakened, thus reflecting the trend of passing on the legislative and executive competencies to both republics. Roughly 60% of all expenditures of the Federal budget were directed to defence, security service, administration, etc., while only 30% were related to social functions of the budget. The ongoing trend towards decentralization of the CSFR strongly restricted the genuine economic functions of the Federal budget, implying a lessening possibility to carry out the common economic policy of the country.

20 - 24%; and the increase of the gross convertible currency indebtedness to 11.3 bn USD. However, already during the preparation of the budget, the government stressed that, due to enormous expected uncertainties emerging both from rapidly liberalized markets and from external shocks, fiscal policy had to be very flexible to allow for adjustments to actual economic developments.

The total of the state budgets of the former CSFR (Federal budget plus two republican budgets) was expected to finish with a surplus amounting to 8 bn CSK (Federation - 6.2 bn CSK, Czech republic - 1.1 bn CSK, Slovak Republic - 0.7 bn CSK). The major shifts in the shares of particular tax receipts in total receipts consisted of the envisaged increase in the share of turnover tax (from 21.3% in 1990 to 32.7% in 1991) and the envisaged decrease in the share of corporate profit tax (from 20.9% in 1990 to 15.7% in 1991)[24].

Real GDP declined by 14.2%, total industrial production by 21% and total construction output by 31%. The price level (CPI) increased by 57.9% on a year-to-year basis, mainly as a result of price liberalization; however, the monthly rate of inflation declined rapidly from 25.8% in January to 7.1% in February and to 4.8% in March, and it did not exceed 2% per month from April until end of the year. With the economic decline, unemployment started to increase but very unequally between both republics. As the shedding of labour did not correspond proportionately to the output decline, productivity declined (by 14 % in manufacturing and by 24% in construction industry). Growth of employment in the newly-emerging private sector was vigorous. The balance of payments reached a surplus (898 mn USD), as did as the current account. Despite the decline of foreign trade turnover the growth of exports (stimulated by devaluations) outpaced the growth of imports, reaching black numbers in the second half of the year. Gross indebtedness in convertible currency increased by 1.3 bn USD, amounting to 9.4 bn at the end of the year. Debt service was 1.5 bn USD, this being the equivalent of 18.4% of total annual convertible currency exports. The exchange rate remained unchanged. Total money (nominal) incomes of households increased by 15%, but real incomes decline by 28% compared to 1990.

The ensuing budgetary evolution was heavily shaped both by these underlying developments and by vigorous discretionary fiscal policies. While at the beginning of the year, economy-driven factors dominated the budget scene, in the second half and especially towards the end of the year, policy-driven factors started to prevail. The foremost feature after initiation of reforms was an exuberant increase in revenues stemming partly from windfall- and partly from "paper" profits of enterprises. Swelling budget surpluses combined with steep (steeper than expected) output decline led the government to make certain adjustments to the level of envisaged budgetary restrictions. On the one hand, it decreased the rates of turnover tax[25], while on the other it provided an indexation

[24] The decline of receipts was expected to result from the decrease of maximum corporate profit tax rates to 55% from 65% in case of enterprises and from 75% in case of banks and savings and loan institutions.

[25] The simplification of the system of turnover tax rates led to abolition of the non-transparent system (practices under CPE) of about 1500 (very arbitrarily stipulated) rates at the end of 1990 and to the introduction of four rates: 0%, 12%, 22%, and 32%, at the beginning of 1991. In May these rates were decreased by approx. 10%, i.e. to 0%, 11%, 20%, and 29%. In addition, some taxed items were shifted from higher brackets to a lower level of taxation in the course of the year.

of some budget expenditures and took some budgetary measures whose aim was to contribute to the recovery of slack aggregate demand. These steps were incorporated into the budget review (adjustment) in July. Both receipts and expenditures of the three state budgets (Federal plus two republican) were adjusted upwards by 35.9 bn CSK (by 7.6% respectively) with the planned budget surplus left unchanged. On the side of public *revenue,* the receipts from corporate profit tax were increased by approx. 45 bn CSK and the receipts from turnover tax were decreased by 12.4 bn CSK. On the side of public *expenditures*, the increases were channelled into health, education, and social care (increased by 15 bn CSK), to the wage increase of the budgetary institutions (5 bn CSK), and to an increase in investment expenditures (3.7 bn CSK). These changes were supplemented also by the adjustment of depreciation allowances, by regulation of conditions related to providing jobs for school leavers, by changes to the import surcharge (as an additional source of revenue) and by many other measures.

However, growing erosion of the tax base during the year, combined with a lack of budgetary discipline at the very end of the year (reflected by an increase in expenditures in the budgets of both republics) resulted in a high deficit of the CSFR public sector. The total public sector deficit, amounting to 10.3 bn CSK, was a combined result of federal budget surplus (6.4 bn CSK), two republican deficits (13.6 bn CSK of the Czech republic and 10.2 bn CSK of the Slovak republic) and the surplus of Czech and Slovak local budgets (7.1 bn CSK)[26]. Thus, the original intention of fiscal policy to attain a surplus of 8 bn CSK failed and the outcome was worse - by 18.3 bn CSK - than expected. Indeed, it turned out to be worse also in comparison to previous years. However, it must be noted that the results were strongly influenced by a change in accounting methodology recommended to the Ministry of Finance by the IMF. In contrast to preceding years they did not include certain transactions with enterprises. Had the data been compiled according to the same methodology as in previous years, the resulting deficit for all public budgets would be only 1.4 bn CSK, i.e. 8.9 bn CSK lower than that recorded.

The resulting budget deficits of both republics were financed mostly by government bond issues. While the deficit of the Czech republic (13.62 bn CSK) was covered by a 9.89 bn CSK debt issuance, the Slovak deficit (10.23 bn CSK) was covered by bonds amounting to 6 bn CSK. The outstanding balances were covered temporarily (for a period of about five months) by direct credit provided by the central bank.

If we look at the overall public budgets, we see that all main sources of tax revenue were weaker than originally anticipated; the strongest fall was recorded for revenue from turnover tax (18.5 bn CSK) and from the wage tax (12.7 bn CSK); the fall in revenue from corporate profit tax was relatively smaller. These gaps were largely compensated for by additional receipts from local budgets and from other non-tax sources, implying a heavy restructuring within the whole revenue side of the budgets.

Expenditures over-shot the plan by 17.2 bn CSK. Subsidies to enterprises were lower by 19.5 bn CSK (by 23%) compared to 1990; on the other hand, expenditures to the budgetary sphere

[26] See State Final Accounts of 1992, Federal Ministry of Finance, for more details.

were much higher (by 76.8 bn CSK i.e. by 21%) against 1990. The shares of main expenditures in total expenditures were as follows:

	share in %	
	1990	1991
Expenditures to households	48.8	52.6
Transfers	24.8	29.8
Subsidies to enterprises	13.9	12.5
Public government expenditures (non-investment)	29.3	26.1
Investment expenditures to budgetary sector	8.0	8.8
	100.0	100.0

These shares imply a rather forceful restructuring of the expenditures consisting of a deepening of the "consumption" profile of the budgets. This move stemmed from the need to react to inflationary development and to the necessity to compensate for its impact on households and on sectors providing public services. On the other hand, the share of subsidies to enterprises and the share of public government expenditures declined. This illustrates a distinct transformation trend consisting of cutting off the enterprise sector step-by-step from the budgets. In other words, the budgets were becoming less and less sensitive to fluctuations in the enterprise sector and more and more sensitive to developments in the household sector. The general transformation impact of the budget might also be demonstrated by the declining share of public sector expenditures in GDP. For the Czech republic this share (measured on the basis of GFS consolidated methodology) decreased by 9.3 percentage points from 55.7% in 1990 to 46.4% in 1991 (see *Chart 10* in the *Appendix*).

To summarize, 1991 was a highly turbulent year in many respects. A number of potential difficulties were envisaged before its beginning, only their scope and timing were rather uncertain. The Czechoslovak economy was hit by several external shocks which put some additional constraints on domestic transformation. The output and inflation records turned out to be worse than expected, but the current account balance and stability of currency proved to be sustainable. The budget lesson showed that the economy need not necessarily fall into a deficit trap, even when the liberalization of many markets is implemented in a semi-reformed environment with underdeveloped institutions and rudimentary financial markets. Within the given limits, represented predominantly by a strongly devalued currency, supplementary balance of payments measures (import surcharge), and a pragmatic mix of available indirect and direct economic policy measures (e. g. money supply squeeze or wage control), the fiscal policy proved to be potent enough to achieve several goals. While it is the very subject of this paper to find out to what extent the fiscal policy was really restrictive, it undoubtedly contributed to providing an initial push towards the restructuring of the economy. Its major strength consisted of its ability to make flexible and fast

adjustments (both in absolute terms and also from the point of view of the structural composition of receipts and expenditures) to a rapidly changing economic environment. This flexibility seemed to be neither in contradiction to its stabilization commitments nor in contradiction to the transformation targets. Although the failure to prevent the emergence of deficits, at the end of the year, was largely a demonstration of insufficient budgetary discipline, its occurrence can be partly attributed to a weakening of the central power which had only limited (and rapidly shrinking) room for economic policy manoeuvring. Nevertheless, the resulting deficits were by no means critical (especially since they emerged at the very end of the year) and the fact that they were not automatically monetized by the central bank was very positive.

From the point of view of this study, 1991 seems to present a great puzzle. It brought the steepest decline in economic activity of the whole period under consideration and at the same time it marked a decisive withdrawal of the state from the economy, accompanied by the weakening of the role of Federal government (budget) and the strengthening of the roles of republican governments (budgets), and all this at a time when both domestic and external events were highly unpredictable. More than in any other year, 1991 mixed economy-driven developments with budget-driven ones in a very "sophisticated" manner, thus making the exercise of disentangling them a very tedious task.

The government forecast of economic development for 1992 was as follows: a decline in real GDP in the range of 3 - 6%; a rate of unemployment 1/3 higher than that recorded at the end of 1991; an inflation rate of approximately 1% per month; a current account deficit of not higher than 1 bn USD. It was expected that the economy would reach the "transformation trough" and start growing thereafter (possibly in 1993).

These underlying expectations, combined with the analysis of fiscal developments in 1991, became a benchmark for the budget strategy for 1992. The main goals of the strategy were the following (see Klaus, 1992):

1. Minimization of economic decline;
2. Limitation of inflationary tendencies;
3. Maintenance of the existing nominal exchange rate[27].

The term "restriction" was explicitly abandoned as being an attribute of fiscal policy in 1992. Restriction, as practised in 1991, was found to be no longer necessary for 1992[28]. Accordingly, the budget was expected to reach a balance. Any attempts to rely (even marginally) on deficit stimulation were strictly rejected. Instead, the balanced budget was assumed to send a signal of financial credibility and healthiness both to domestic economic agents and to foreigners. Balance in

[27] In the State Final Account of the Czech republic for 1992, the goals of fiscal policy were stated as follows: support for economic recovery; the maintenance of economic equilibrium and of social peace.

[28] The most important ways of stimulating the economy consisted, according to the government, of privatization, supporting exports and structural change, increasing public expenditures on infrastructure, support for newly emerging enterprises, etc., rather than any sort of budgetary stimulation.

public finance was intended to serve as an example to be followed by the former and as a stimulus to the inflow of capital in the case of the latter[29].

While the year 1991 could be labelled as the year of liberalization and stabilization, 1992 can be described as the year of privatization[30]. The officially reported decline in GDP amounted to 6.4%, but due to the emergence of a second (shadow) economy, the real decline was probably somewhat lower. The inflation rate was 11.1%, which was comparable to that of many countries in the world. In the Czech Republic the average rate of unemployment was only 3%. The trade balance was negative by a total of 22.6 bn CSK (against a positive balance of 24.8 bn CSK in 1991) but, due to surpluses in services, the current account balance was slightly positive. Foreign exchange reserves increased by 1.1 bn USD to 4.4 bn USD at the end of 1992. The level of foreign indebtedness remained unchanged, at 9.5 bn USD, as did the nominal exchange rate. Further deregulation of prices occurred (public transport, services related to housing, postal services, etc.), as well as a step-by-step deregulation of many other areas (internal convertibility, foreign exchange regulation, interest rate policies, etc.). New institutions for the promotion of entrepreneurship were established.

The evolution of the budget balance in the Czech republic in 1992 was marked by an augmented control of expenditures in relation to revenue. As the revenue side of the budget exhibited a lower rate of growth than originally expected (especially the revenue from turnover tax) some expenditures were cut correspondingly in the course of year, although less than proportionately[31]. The Federal budget, instead of finishing in balance recorded a significantly worse result than in 1991 (with a deficit amounting to 7 bn CSK). Revenues were 10.7 bn CSK (7.9%) lower than expected, and this was only partially off-set by a decrease in expenditure (of 3.7 bn CSK or by 2.7% respectively). The budget of the Czech republic was doing better: on October 20, both sides of the budget were modified downwards by 6 bn CSK and the final deficit was 1.7 bn CSK (or 0.7% of total expenditure)[32].

An important new phenomenon in fiscal policy was the manner in which the budget deficits were financed. From February, all three Ministries of Finance started issuing state treasury bonds on a periodic basis in order to finance their deficits. The restriction of direct credit to the budgets

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[29] The insistence on a balanced budget stemmed both from short-term and from long-term considerations. Short-term concerns (related to standard demand management) were based on the assumption that due to a very low short-term elasticity of aggregate supply the fiscal deficits would lead to an increase in prices and imports rather than to an increase in output and employment. On the other hand, the long-term concerns focused on preventing the burdening of future generations by accumulation of debt in the present simply in the interest of satisfying short-term goals.

[30] This is not because the share of private sector output in GDP increased from 10.6% in 1991 to 19.5% in 1992, but mainly because the large-scale privatization gained significant momentum.

[31] The negative deviations in budgetary revenue were influenced also by an increase in the savings ratio of households, by a shift in households' demand toward goods with lower rates of turnover tax, by a probably increasing level of tax evasion, and by the emergence of tax arrears. To combat tax evasion more effectively, rules for reporting exports became more strict from April.

[32] While the budget adjustment measures resulted in a relatively modest deficit in the Czech republic, the Slovakian budget plunged heavily into red numbers.

and its substitution by standard sources of finance on the regular financial market increased significantly the transparency of the system of public finance and provided the required constraints stimulating greater efficiency of budget management[33].

Fiscal policy in 1992 retained its transformational attributes, as the share of non-investment subsidies to enterprises in total public budget expenditures decreased from 10.9 % in 1991 to 5.7 % in 1992.

Structural changes within public budgets were less significant compared to 1991; nevertheless, three of them deserve mentioning:

a) There was an increase in the number of expenditure programmes financed from the federal budget in favour of republican budgets, carried out under the jurisdiction of republican governments. They were related to:
   - expenditures on "social cohesion" (solidarity) containing not only the general income support (140 CSK per month per head) but also expenditures related to the financing of employment policy;
   - expenditures on maintenance of "homogeneity of market conditions", comprising subsidies to the Fund for Market Regulation, subsidies for heating, etc.;
   - expenditures on selected programmes of country-wide importance (conversion of armaments industry, export promotion, etc.)

   From the total amount of 134.7 bn CSK of federal expenditures (originally approved budget) these expenditures represented 54.4 bn CSK, i.e. 40.4%.

b) A one-off subsidy to the republican budgets amounting to 5 bn CSK (3.3 bn for CR and 1.7 bn for SR), i.e. 3.8% of all federal expenditures. (No transfers from the Federal budget were provided to republican budgets in 1991.)

c) The level of redistribution between state budget and local budgets dropped from 64.9 bn CSK in 1991 to 33.7 bn CSK in 1992, i. e. to 51.9% of the 1991 level.

In addition, the formula of distribution of the common revenue within the CSFR public budget was modified from 35 : 40 : 25 to 35 : 41.5 : 23.5 (Federal budget : CR : SR) in order to better reflect the real revenue performance of both republics and to lessen the income redistribution from the Czech republic to Slovakia. Thus, after many years, budget expenditure per capita in the Czech republic exceeded that of Slovakia.

Due to high surpluses of local budgets in the Czech republic, the total of Czech public budgets recorded a surplus 6.1 bn CSK (i.e. 2.1 % of total public budget expenditures).

[33] The introduction of state bonds on the financial market contributed to the development of the latter by widening the choice of instruments for long-term investment.

To summarize, in the budgetary sphere the year 1992 represented, basically, an overall consolidation and further progress on the way to transformation. Due to the taming of inflationary pressures, no substantial shocks or unexpected events emerged during the fiscal year. The over-estimation of revenues embodied in the original budget proposal (especially with regard to revenue from turnover tax) was not so significant as to distort the overall budget result, though some cuts had to be implemented two months before end of the year. This illustrates that lessons from the end of 1991 had been learned by the policy-makers and that the government started becoming more familiar with the "secrets" of fiscal policy management in times of uncertainty and continuing massive institutional restructuring. However, it must be stressed here that the patience and endurance of the population was astounding. To an extent, the attitude of the population a part of the social heritage of socialism, and helped to ease the role of government. Indeed, the government very much attempted to maintain social peace and used every available tool to prevent being voted out by disappointed citizens. Fiscal policy, again, proved to be a crucial tool within an overall economic policy set, although the efficiency of the Federal budget management was more and more restrained by the ongoing dissolution of the Federal state and ensuing weakening of the Federal government administration.

3.2.3 The development of fiscal policy after the split-up of the CSFR and after the implementation of tax reform: 1993-1994

The year 1993 was the first year of the independent Czech republic[34]. The main determinants of economic development were related to the consequences of the split-up of the CSFR and the subsequent split of the currency (the former common currency - the Czechoslovak crown - survived only 5 weeks), the steep decline in mutual trade, tax reform, privatization and the development of capital markets, the ongoing transformation of the economy, and the unfavourable external business situation (world recession).

The major macroeconomic records were the following: GDP declined slightly - by 0.3%[35]; price levels increased by 20.8% (to which tax reform contributed approximately 8%); for the first time since the beginning of transformation, labour productivity started rising (2.4% against 1992);

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[34] As this study concentrates predominantly on the Czech republic we shall deal, in the next sections, solely with fiscal developments in this country, leaving Slovakia only for some occasional comparisons.

[35] In a sense, the year 1993 began already in autumn 1992, when expectations concerning the split of the country generated higher household consumption, faster capital formation, faster growth of imports, than would otherwise have been the case. Thus, the expectations of the split "improved" not only the relative results of the year 1992, and "worsened" the results of 1993, but paradoxically and optically "improved" also the results of 1994, which are being compared on a year-to-year basis with the "poor" performance of 1993. In other words, the expectations related to the split of the country (which occurred at the beginning of 1993) already produced in autumn 1992 developments whose "statistical" repercussions could still be felt in 1994. This arithmetic might be even better illustrated by the economic performance of Slovakia. As the relative importance of the mutual trade between both republics was higher for Slovakia, it was hit more by trade disturbances than the Czech republic. On the other hand, the economic growth of Slovakia in 1994 has been estimated at about 1% higher than in the Czech republic, although many different economic indicators prove that its general performance is poorer.

the rate of unemployment was 3.5% (at the end of 1993); exports grew faster than imports; foreign currency reserves increased to 6.2 bn USD (equivalent of 4 months imports); the nominal exchange rate remained stable but, due to an inflation differential, the real exchange rate appreciated; the finishing of the first "wave" of coupon privatization (along with further progress in "small" privatization and restitution) increased the share of the non-state sector in GDP to an average of 45.7% (against a 20% share in 1992) and to more than 50% from the 3rd quarter of the year.

At the time of its compilation, the budget for 1993 was intended to fulfil all "traditional" goals from the past (i.e. stabilization and transformation of the economy). In addition, two more burdens were imposed on it: those connected with the split-up of the country and those stemming from the introduction of the tax reform. Both factors substantially increased the budget-related uncertainties compared to the year 1992. While the first factor contributed to a robust absolute increase in the planned volume of the Czech budget (by 86 bn CZK which was by about 1/3 more than in 1992)[36] and to the ensuing structural changes between state and local budgets, the second factor profoundly altered the structure of receipts in the whole system of public budgets. Additional modifications were connected with the introduction of a fully-fledged social security system and with the introduction of methods of financing health care *via* health insurance companies[37]. All these factors make comparisons between the 1992 and 1993 budgets a highly intriguing and problematic task.

The public budget had been approved as balanced and after several upward adjustments during the year it finished with a surplus of 12.2 bn CZK (with the surplus of the central budget being 1.1 bn CZK and the surplus of local budgets amounting to 11.1 bn CZK). These adjustments consisted of increasing the planned expenditures (by nearly 12 bn CZK) as a response to a higher than expected increase in revenue. The final amount of expenditures was a further 4 bn CZK (or 3.5%) higher than the original budget proposal (see *Table 1* in the *Appendix*).

Understandably, within the whole structure of public budgets, the relative role of the state budget increased. Despite this, the major increase in revenue in the whole public sector occurred in local budgets. However, if the local budgets had not used as a means of financing some (extra-budgetary) assets accumulated in the past, their surpluses would have been much lower - even close to zero[38]. The changes in the tax structure and a decrease in subsidization from the state budget helped to put the local budgets on a more independent footing. While their own revenue still accounted for only 20.3% of their total expenditures in 1992, this ratio increased to 55.5% in 1993.

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[36] The Czech budget "inherited" from the former federal budget such items like general income support, expenditures related to unemployment, financing of government credits, debt service, etc.

[37] These expenditures were expected to decrease total expenditures by about 30 bn CZK against 1992.

[38] These extra-budgetary sources included transfers from "reserve and development funds" and from "targeted funds" amounting to 8.1 bn CZK, and from credits and community bonds amounting to 2.1 bn CZK. These operations typically violate the rules which define the distinction between current revenues ("above the line" items) and the means of financing current expenditures ("below the line" items). After exclusion of these "revenue sources", the local budget surplus would be only 0.9 bn CZK.

The final total revenue of the state budget was 15.8 bn CZK higher than originally planned (by 4 bn CZK after all adjustments). The major "culprits" were social security contributions[39] (11.9 bn CZK of additional revenue), revenue from custom duties (7.7 bn CZK), and also additional tax revenue transferred ("inherited") from 1992. On the other hand, revenue from corporate income tax was lower by 15 bn CSK, and revenue from VAT 11.3 bn CZK less than originally planned[40]. The factor not originally envisaged was the financing of the active balance of clearing payments with Slovakia. If this payment had not been provided, the budget surplus would have been 4.6 bn CZK higher.

The final state expenditures were 14.7 bn CZK higher than originally planned (2.9 bn CZK after all adjustments) with the increments used mostly for non-investment purposes. As was already mentioned, the structure of expenditures altered substantially as a consequence of the dissolution of the federal structure of the budgets. The final level of expenditures was 104 bn CZK higher (partly due to the upward adjustments) than in 1992. The major impact of this was on transfers to households (increased by 28 bn CZK), public consumption expenditures (increased by 45 bn CZK[41]), financing of government credits, and expenditures on debt service (increased by 19 bn CZK).

The public budgets entered 1993 with a burden accumulated in the previous year. The proportionate part of the deficit of the former federal government (4.7 bn CZK) plus the deficit of the Czech government (1.7 bn CSK) were financed by the issuance of state treasury bonds with a nominal value of 6.7 bn CZK. The introduction of the State Bank Act, in February 1992, prohibited direct credit financing of the budget deficit, with the exception of technical credit provided temporarily to cover the discrepancy between expenditure payments and revenue accruals unless the gap exceeded 5% of the current budgetary revenue.

The importance of the tax reform is comparable to that of the very first major reform measures taken in 1991. With the benefit of hindsight we may suggest that the whole process of transformation benefited very much from the fact that only two years elapsed between price liberalization and the introduction of the new tax system. In this context, the government must be lauded for its thoroughness in preparing the whole concept of the tax reform and for making it viable even during the critical period of the second half of the year, when the split-up of the country started to be implemented[42]. The "timely" introduction of the tax reform seems to have been one of the crucial steps in "crossing the transformation Rubicon".

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[39] The reason for this increase was a higher than expected number of employees and, therefore, a higher volume of payroll and consequently a wider tax base.

[40] Lower revenue from VAT partly reflected changes in the pattern of the household consumption.

[41] This huge increase reflected the inclusion of expenditures on defence and security.

[42] This does not mean that everything went smoothly from an administrative point of view. There is evidence to suggest that the tax administration offices were organizationally ill-prepared and that the tax administration employees lacked the appropriate qualifications (for the task). There were many real-life stories about discussions between entrepreneurs and tax administrators during which the former provided free lessons to the uninformed latter. It is reasonable to assume that much tax evasion occurred during the introduction of charge the system.

The new tax system is fully compatible with and comparable to the tax systems applied in developed market economies. One of the main features of the tax reform consisted of increasing the share of indirect taxes (including customs duties) in all revenues from 29.5% in 1992 to 36.9% in 1993. However, due to many imperfections (caused partly by its hurried preparation in 1992) the tax code had to be modified several times during 1993. These modifications reflected both the elimination of many flaws allowing for tax evasion, and the need to react to the current situation and to promote entrepreneurial activities to a greater extent.

To summarize, fiscal policy in 1993 was rather cautious. This stance stemmed from broad uncertainties related to the unpredictable consequences of the split-up of the country, and also related to the ability of the new system to generate revenue. While the split-up of the country produced substantial, though largely quantitative, changes in the budget (mainly in terms of restructuring the relative shares of the main groups of expenditures), the tax reform fundamentally altered qualitative features of the revenue, with greater reliance on indirect taxes. After the first five months, it turned out that total revenues might be higher than originally planned, although revenue from the taxes forming the backbone of the system lagged behind expectations. As a consequence, the total budget was adjusted upwards while maintaining its balance. Many alterations were made to the tax code during the year. These led both to the replacement of many existing deficiencies and to easing the tax burden for enterprises to a certain extent. The expenditure policies modestly boosted aggregate demand (which showed some signs of recovery in the second half of the year) without running any deficit. The process of disentanglement between fiscal and monetary policies progressed by relying less on central bank credits and more on issuance of state treasury bonds to finance budget deficits. In sum, the realistic assessment of potential tax revenue sourcing in a new market-consistent tax system, combined with a good level of budget flexibility during the second half of the year, were the major features of the fiscal policy in 1993, a somewhat critical year. The split-up of the country simplified some former budgetary complexities and helped to make fiscal policy management more transparent and compact.

Forecasting economic conditions for 1994 was much easier than for the previous year. With no further institutional shake-ups on the horizon and after absorbing most of shocks derived from the split-up of the CSFR, real economic growth was expected to range between 2 - 3 %, inflation between 8 - 10 % per year, and the unemployment rate around 5%.

Slower dynamics of nominal revenues (in terms of extrapolated trends from the past) had been followed by equally slower dynamics of expenditures with the aim of securing a balanced budget, thus confirming the "unshakeable" continuity of stabilization and anti-inflationary intentions. In addition to these short-term goals, a longer-term fiscal policy course emerged. This trend toward longer-term continuity encompassed a step-by-step decrease in income taxation (both personal and corporate) on the revenue side and further cuts in enterprise subsidies on the expenditure side. All this was supposed to facilitate an increase in the share of transfers to households, an increase in the share of public expenditures to households and encourage the development of entrepreneurship and export activities. More specifically, the following adjustments were made to the tax system:

* the marginal corporate tax rate was decreased from 45% to 42%;
* the highest marginal individual tax rate was decreased from 47% to 44%[43];
* tax deductions on individual income tax were increased slightly;
* the threshold for obligatory registration for payment of VAT was decreased from 6 mn CZK yearly turnover to 3 mn CZK;
* excise tax rates were increased;
* the rate of contributions to the employment policy fund was reduced from 4% to 3% to reflect the general (low) level of unemployment; and there were many other smaller changes.

However, two exceptions were made to this general direction:

- debt service (amounting to 13.7 bn CZK in 1994) did not become an expenditure item; instead it was covered by the National Property Fund[44];
- the balance of the clearing trade relations between the Czech republic and Slovakia was no longer expected to influence the public budget (4.6 bn CZK in 1993).

The aims of expenditure policies were as follows:

1) to guarantee the legal claims of the population relating to social security;
2) to maintain government expenditures on public consumption at the level of 1993 but to set some priorities like security and education;
3) to decrease enterprise subsidies by 6% in nominal terms; these should be related especially to a limitation of price subsides on private transport and full abolition of subsidies on drinking water;
4) to promote housing policies, pro-export policies, and the development of a highway network.
5) to encourage development of the private sector by providing credit subsidies (interest rates) and state guarantees for credits via special institutions and banks (Havel, 1994).

Considering the ongoing relative decline of the share of expenditures in GDP, the attention which was paid to the selected areas mentioned above implied a further alteration of the content of the whole fiscal policy. Fiscal policy, which, in the previous years, was one of the most important tools used vigorously to contain the inflationary dangers threatening the very transition from CPE to a market economy, now started to operate in a standard manner, focusing on "normal", everyday problems and thus slowly entered a truly post-transformation period. Although we are far from suggesting that the transformation is over or that the expenditure side of the budget does not contain

[43] It was planned that these tax burden-decreasing measures would shrink total revenue by 3 bn CZK and that the share of corporate income tax and individual income tax in total revenue would both drop by 1.3% while the share of taxation of consumption would increase by 1.6% (Havel, 1994).

[44] More frequent utilization of privatization revenues for financing current budget expenditures is a sign of fiscal policy permissiveness. Unlike the situation at the beginning of transformation, when government strongly opposed the utilization of these revenues for fear of their inflationary impact on aggregate demand, the attitude to their utilization from 1993 onwards was more relaxed.

any CPE "residua", the "historical mission" imposed on the fiscal policy at the beginning of transformation is slowly disappearing and is being replaced by a sort of "fine tuning" both on the side of revenues and on that of expenditures. Such a metamorphosis from short-term goals to longer-term ones, however, calls for the formulation of a strategy which will provide a stable and continuous framework for the year-to-year budgeting process.

The final state budget revenue was 32.5 bn CZK (or 9.1 %) higher compared to 1993 and 8.7 bn CZK (or 2.2 %) more than originally planned. As the expenditures increased only by 23.1 bn CZK (or 6.5%) and even decreased by 1.7 bn CZK (or 0.4 %) compared to the figure planned, the budget recorded a massive surplus amounting to 10.4 bn CZK (2.7 % of total revenue and 1 % of nominal GDP), 9.4 bn CZK higher than in the previous year. The revenue from social security contributions was better than expected (by nearly 10 bn CZK), as was non-tax revenue, revenue from excise tax and personal income tax; worse than expected was the revenue from VAT (by 8.6 bn CZK) and the revenue from corporate income tax (by 8.5 CZK). The pattern of expenditure development was similar to that of previous years but despite the traditional increase at the end of the year, the final level remained 5.2 bn CZK behind the modified budget[45]. As in 1993, in 1994 too the expenditures on servicing the state debt were financed by transfers from the National Property Fund.

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The development of fiscal policy in the former CSFR and then in the Czech Republic during 1989-1994 was rather stormy and multi-faceted. Its major features may be summarized as follows:

1. Fiscal policy proved to be a powerful instrument in the implementation of several crucial reform measures. These were: overall decrease of the share of public budget expenditures in GDP; restructuring of expenditures in terms of limiting subsidies to enterprises and of expanding transfers to households; implementation of market-consistent tax reform;

2. The carefully managed and soundly footed fiscal policy most probably contributed to the taming of inflationary pressures, though the general macroeconomic assessment of the scope of this impact, which is the main subject of this study, is a difficult and complex task. By the same token, the fiscal policy significantly assisted in the transformation of the economy, in a step-by-step elimination of the soft budget constraint, in increasing the transparency of the budgetary process, and in achieving independence in monetary policy.

[45] The emergence of the surplus during the first three quarters of the year was significantly co-determined by involving the budget in balance of payment settlements of the trade between the Czech republic and Slovakia. The fact that the balance of this settlement was not originally embodied in the budget (which became the case later on), and that the debtor position of the Czech republic converted into that of a creditor in the course of the year, led to a decrease in its expenditure resulting in the emergence of the state budget surplus. In October, however, on the basis of an agreement between the Czech Ministry of Finance and the Czech National Bank, the settlement of trade transactions was excluded from the budget and secured through state financial assets without leaving any impact on the final budget result.

3. During the whole period, the government(s) intervened boldly on a continual basis on both sides of the budgets, trying to mitigate significant disruptions and preventing the process from getting out of control. In the preparatory phase of the budget, the potentially collectable revenues were usually neither grossly underestimated nor overestimated (even during rather discontinuous periods of transformation), which in most cases resulted in relatively comfortable fulfilment of budgetary intentions. Emerging structural discrepancies both on the side of revenues and on the side of expenditures tended to have a largely off-setting impact on the totals. Quite cautious distribution of transformation costs over time and throughout all levels of society meant that a broad social consensus and wide support for the reforms were successfully maintained.

4. The interactions between an initially unreformed economic system, anti-inflationary fiscal policy, sweeping transformation of the economy, negative external influences, and changing institutional framework led to an extremely complex mix of causes and effects. These encompassed a combination of exogenous impacts on the budgetary sphere (economy-driven factors) with the endogenous effects of fiscal tools (budget-driven) on economic development, but also a combination of qualitative and structural fiscal adjustments, a combination of short-term (cyclical) and long-term (transformational) developments, a mixture of fiscal autonomy with fiscal discretion, interdependence of macroeconomic aims and microeconomic goals, and last but not least an intermingling of purely economic considerations with politically based economic interests.

5. Unlike other Central European countries, fiscal policy management was complicated by the split-up of the former CSFR and the resulting dissolution of the former three-tier budget system. Despite the uncertainties stemming from the creeping disintegration of the federal state, especially during the last year of its existence, and the ensuing weakening of integrated economic policy, fiscal policy did not become a source of unmanageable economic disturbances.

6. Due to the maintenance of an approximately balanced budget during the whole period under consideration, fiscal policy seems to be a shining exception rather than the rule not only in comparison with the budgetary results of other post-socialist countries but also compared to many developed market economies. Apart from the universal explanation that both government(s) and Parliament(s) largely resisted the temptation of budget prodigality, one of the main reasons was that a comparatively short time elapsed between price liberalization (January 1991) and implementation of a market-consistent tax system (January 1993)[46]. An additional reason for the favourable budget development of the Czech republic after the split-up of the former CSFR stemmed from the special bonus ("split revenue") which was granted to the country as a result of stopping the previous quite generous income redistribution in favour of Slovakia.

[46] I am indebted for this point to Pavel Štěpánek. In Poland, the span was 3 1/2 years (from January 1990 to July 1993).

A comprehensive view of fiscal development based on yearly data is provided by *Tables 1* and *2* and *Charts 4* to *17* in the *Appendix*. While *Table 1* (and related *Charts 1* to *3*) reflects the data based on the Ministry of Finance (MF) methodology, *Table 2* (and *Charts 4* to *17*) and *Table 4* (with *Charts 19* to *22*) are compiled on the basis of GFS methodology. It is obvious that the results of both methodologies converge in the course of time. Quarterly figures are presented in *Table 5* and *Charts 23* to *25*. Finally, the monthly fiscal story is told in *Table 6* and *Charts 26* to *37*.

4. Estimation of the Fiscal Stance during Transformation Period

4. 1 Some methodological considerations

We saw in previous sections that fiscal policy developments during the transformation period embrace an extremely complicated mix of inter-relations between many different macroeconomic, microeconomic, structural and policy factors and processes. As a result, there is a whole cohort of methodological assumptions, analytical considerations and computational simplifications (due both to sober lack of necessary statistical data and to significant discontinuities in existing data series) which seems to be indispensable in order to obtain a better understanding of the real fiscal stance in a certain period. In the following, we are going to discuss a dozen of the most important ones.

Emergence of "real" money and hard budget constraints. A general difficulty in the analysis of any issue relating to a country in transition consists of the fact that these economies have been transforming from a system where money played a rather peculiar, and often a secondary or merely an accounting role, in the allocation of resources (soft budget constraint) to a system in which money fulfils all its classical and fully-fledged roles. This implies a significant methodological impediment to reliable comparisons of budgetary data from the time of CPE with the data during the transformation, even if all those had be collected according to the very same statistical standards and using the same techniques. In dealing with this difficulty, two important qualifications are to be made. First, due to the specific asymmetry between the household sector (which was facing a generally hard budget constraint) and the enterprise sector (which was facing a generally soft budget constraint) under CPE, we shall interpret the budgetary changes concerning the enterprise sector with great care, while those concerning households will be taken much more seriously in any inter-temporal comparisons going before the beginning of 1990. Secondly, although the planning system directives were formally abolished during 1990, the imposition of a hard budget constraint on the enterprises can be pinpointed (by definition) to the freeing of markets at the beginning of 1991. In spite of the continuing supply of soft credit from the banks, the emergence of inter-enterprise arrears, and the still significant level of enterprise subsidization, we shall deal with the budget constraint of enterprises as a "hard" one from January 1991 on. In other words, liberalization of prices (and markets) is the major turning point in transformation from a system which is basically supply-constrained to a system which is basically demand-constrained.

Year-to-year changes and longer term comparisons. Dealing with a complex fiscal policy development against the background of a continually transforming institutional framework and turbulent economic fluctuations necessitates a flexible or even a creative approach to the evaluation. Therefore we shall combine short-term comparisons, mainly on a year-to-year basis, with longer-term comparisons focusing on the comparisons between 1989 (or 1990) and 1994. While the former are hoped to provide more revealing insights into complex short-term inter-plays between economy-driven and budget-driven developments, the latter may be expected to provide a

better overall (truly macroeconomic) picture of fiscal policy impact undistorted by particular economic and policy events or random statistical discrepancies.

Balanced budget multiplier. Czech fiscal policy development seems to provide an almost ideal case for the examination of the impact of the balanced budget multiplier on aggregate demand and national income. Considering the exceptionally high level of the ratio of government expenditures to the GDP at the beginning of transition and its subsequent precipitous decline to levels comparable with other market economies within a short period of time, the cutting down of the government sector should imply, other things being equal, a strong budget-driven restriction. If there is a rationale in the very concept of the balanced budget multiplier, the rule of thumb would indicate a restriction of the aggregate demand roughly equalling the amount of reduction of budget expenditures in real terms. Thus, the bulk of the fiscal policy restriction would stem not only from some occasionally achieved (and indeed small) surpluses of current revenues over current expenditures but, most importantly, from the robust withdrawal of public sector finance from overall economic activities.

Endogenous (economy-driven) versus exogenous (policy-driven) fiscal developments[47]. One of the most crucial and challenging analytical tasks consists of a sufficiently reliable and feasible separation of the impact which economic factors (like movements in real income, prices, or demographic factors) had on nominal receipts and expenditures from those which converted the budget policy decisions and actions (changes of tax rates, or changes of public consumption outlays) into changes of macroeconomic variables. Thus, in terms of IS-LM model, while the endogenous changes capture the movements of the LM curve along a given IS curve or movements of this curve caused by non-fiscal reasons, the exogenous changes convey information about the policy-driven shifts of the curve. While the former changes are generally supposed to have no inside lag, the latter do contain such a lag. Although this distinction is very useful in the ultimate assessment of the relevant factors, it must be treated with care. There are at least two reasons for considering the border-line between the automatic and discretionary changes as somewhat obscure. First, automatic changes themselves typically contain an element of discretion as they are allowed to behave according to some pattern which might be modified by legislative or policy action[48]. Second, automatic and discretionary changes are not isolated sets of changes with mutually independent evolutionary paths; rather they constitute inter related areas which influence each other on the basis of an underlying state of the economy both actual and expected.

Full employment budget. The logical extension of the discussion of exogenous versus endogenous changes leads us to the rejection of **current** revenues and expenditures as true

[47] There are multiple notions describing basically the same dichotomy: automatic versus discretionary changes, cyclical versus structural budgetary components, autonomous versus policy responses, etc.

[48] As suggested by P. Samuelson, the automatic mechanism "is set up by discretion, is abandoned by discretion, and is interfered with by discretion". Cited from Cohen (1985).

indicators of the fiscal stance and the introduction of measures along the lines of the concept of the full employment budget (surplus) and all its derivatives like structural budget, high employment budget (surplus), etc.[49]. We must be aware of the fact that, the more we disregard the indicative or explanatory role of current revenues and expenditures as measures of the real fiscal stance, the more model-specific our basis for assessment becomes. As such a basis encompasses different behavioural, informational, and institutional assumptions, different lag structures and functional forms, or different sets of endogenous and exogenous variables (Cohen, 1985), the results obtained are very much of subjective value. However, they should by no means be considered inferior (see below for a more detailed discussion of the full employment budget concept whose application is the very purpose of this study).

Active versus passive (hands-off) policies. These terms should by no means be mixed up with permissive and restrictive policies. By active policy we mean, basically, policies which vary the level of endogeneity or responsiveness of any automatic mechanism to the level of exogenously determined economic activity in the reaction to actual economic developments. Usually, the standard assumption of many macroeconomic models is that tax revenues are endogenous to income while government expenditures are not. This can be illustrated by *Figure 1* (on *Page 34 a*) which, on the horizontal axis, shows the national income and on the vertical axis the level of budget expenditure and receipts. There are two functions; while the horizontal function of government expenditures (g) is exogenous, i. e. independent on the level of income, the revenue function (t) is an upward - sloping one with the slope reflecting the "aggregated" marginal tax rate. It is easy to see that above the income level y_1, the total budget is in surplus, while under this income level, the budget runs a deficit. This situation, however, corresponds to a fully passive policy, disregarding actual developments in the economy. If the government is, on the other hand, committed to the target of a balanced budget or not running a budget deficit, it will intervene either on the tax rate side or the expenditure side to achieve the budgetary targets it has set. If, for example, the revenues do not seem to reach the targeted level during the first half of the year, the government, by running an active policy, will endogenize the policy by cutting expenditures to correspond to revenues[50].

We saw in *Section 3* that Czech fiscal policy, by pursuing anti-inflationary goals, was quite active not only in the phase of the preparation of budgets for each year, but also during implementation of the fiscal measures during the year, both on the side of revenues (tax rate changes) and on the side of expenditures. We shall see that very active fiscal policies (both in terms of quantitative adjustments and in terms of frequency of the adjustments) undertake a rather tricky

[49] There is a long history of the attempts to develop more accurate measures of the fiscal stance going back to the classic article by C. Brown (1956) or works by A. Okun (1983). Among the more recent authors we could mention Eisner (1984), Kotlikoff (1988), Holloway and Wakefield (1985), Cohen (1987), Leeuw and Holloway (1985), OECD (1994).

[50] A sort of middle way might consist of adhering to "formula flexibility" which allows rules to be partly flexible and, at the same time, restricts the applicability of discretionary changes. More specifically, the aim is to "vary the size of the multiplier inversely with the movement of national income so as to reinforce the effectiveness of discretionary measures in periods of recession and to weaken autonomous destabilizing movements in periods of prosperity" (Shaw, 1977).

exercise in detecting a distinction between exogenous (discretionary) components and endogenous (automatic) components.

Interdependence of budget revenues and expenditures. It follows directly from the above point that the more active the policies which the government pursues, the lesser is the independence between both sides of the budget, which is sometimes considered as a distinctive feature of many fiscal models. In addition, active policies endogenizing budget changes act not only between the receipts on one side and expenditures on the other but also within both sides of the budget. If, for example, the expenditures on unemployment benefits happened to be lower than originally anticipated (which repeatedly used to be the case), then a chance emerged to use this "reserve" elsewhere according to other budgetary needs. Similarly, when the tax receipts appeared to be "excessive" compared to the planned expenditure (like during the first half of 1991), the turnover tax rates were cut as a result, implying a further endogenization of budgetary procedures.

Troublesome budget consolidation. Throughout the whole period under consideration, analysis is constantly confounded by lack of sufficiently reliable budget data. These relate both to consolidated budget balances, and to the role of non-standard operations with budget assets accumulated in previous years, to the role of extra-budgetary funds, and also partly to the methods of financing the budget deficits. Specific difficulties stem from the split-up of the country and the ensuing switch from the three-tier system to the two-tier system of budgets and particularly from the introduction of fundamental tax reform in 1993. That year became virtually the first year which can (and does) serve, for many reasons, as a real budgetary benchmark for future longer-term fiscal studies, but it came "too late" to capture the most fundamental stabilization efforts pursued in the post-liberalization period.

Local budgets are excluded. There are traditional difficulties connected with a proper analysis of the position of local budgets in the whole system of public budgets. Although they seemed repeatedly to play an important role in maintaining the whole public sector in approximate financial balance, the measurement of their contribution to macroeconomic stabilization is heavily distorted and blurred by many factors such as frequent financial operations with financial assets accumulated in the past. We do not, therefore, take the local budgets into account in this study.

Sensitivity criterion. Fiscal policy involves an incredible number of developments, operations and actions which contribute in one way or another to a final result. To avoid getting lost in details, true macroeconomic analysis should confine itself to a reasonable aggregation of data and to some threshold sensitivity to the level of changes which deserve the attention of a macroeconomic analyst. For the purpose of this study, we shall tend to disregard any changes in receipts and expenditures (both exogenous and endogenous) amounting to less than 2 bn CSK (CZK) per year in nominal terms.

Conceptual definition of the fiscal stance. Any macroeconomic assessment of fiscal policy must explicitly state what is to be understood under fiscal restriction and fiscal permissiveness respectively. There are basically two approaches regarding how to define the fiscal stance: while the first approach (and the most common one) consists of an evaluation of the budgetary variables (or changes) themselves, the second one judges on the basis of the impact of fiscal measures on aggregate demand (or less frequently on aggregate supply) and on the national income. In addition, it is useful to make a distinction between the impact of individual measures or changes on one side and the influence of the whole fiscal policy over the fiscal year, even in the absence of any change, on the other. Thus, according to the first approach, those particular policy (exogenous) measures are restrictive which increase the current budget surplus or decrease the current budget deficit, other things being equal, and *vice versa;* those policy measures are permissive which increase the current budget deficit or decrease the current budget surplus, other things being equal, all in the short run, i.e. within the framework of comparative statics. If, however, the general fiscal stance is to be assessed (especially in the absence of any exogenous policy change), the full employment budget seems to be the only reliable analytical instrument. Then, the fiscal policy as such would be considered permissive if the budget showed a deficit with all productive resources being "fully" employed, and *vice versa;* the budget would be restrictive if there were a surplus, again with "fully" employed production factors. According to the second approach, any fiscal policy measure is restrictive which, via contraction of aggregate demand, leads to the decline of national income, other things being equal, and *vice versa;* those measures are permissive which lead, via expansion of the aggregate demand, to the increase of national income, other things being equal. This second approach usually refers to the fiscal impetus which, by weighting different spending programmes and tax rate changes by their income shares and corresponding multipliers, measures the fiscal policy effects on national income.[51]

4. 2 Full employment budget: several qualitative issues

The full employment budget concept[52] was developed to capture the difference between exogenous and endogenous changes in the budget receipts and expenditures. In order to be able to distinguish the particular contributions of endogenous (cyclical, autonomous) and exogenous (structural, discretionary) components of the budget, it models the expenditures and receipts irrespective of the momentary phase of the business cycle. Instead, they are estimated according to how they would look if the economy were employing all its production resources "fully" without generating any

[51] In a more sophisticated approach, such as that based on the life cycle model, the examination of intergenerational budget constitutes a relevant criterion for the assessement of the fiscal stance. According to this methodology, a "tight intergenerational fiscal policy corresponds to policy that places a larger share of the burden of paying for the government's consumption ... on current as opposed to future generations. Stated differently, tight intergenerational policy is policy that redistributes toward earlier generations" (Kotlikoff, 1988).

[52] A multitude of terms is used to describe the same concept: full employment surplus, high employment budget, structural budget (deficit), cyclically adjusted deficit, standardized employment surplus, etc.

additional inflationary pressures. By doing that, the cyclical component acquires a zero value, thus allowing the structural component to display fully a real discretionary fiscal stance. In other words, current receipts and expenditures can be properly used for the evaluation of fiscal policy only when the actual output equals the potential output; as a definition, the more the economy works with unemployed resources, the more misleading is the **current** budget balance for a proper interpretation of the fiscal stance. This idea can be illustrated by *Figure 2* (on *Page 38 a*). The vertical axis measures the budget surplus or deficit and the horizontal axis measures the GNP. There are two parallel budget functions with a positive slope in a two different years. The positive slope reflects the changes in receipts and expenditures due to automatic (endogenous) responses to business cycle fluctuations implying a tendency to budget surpluses (or smaller deficits) in periods of boom and a tendency to deficits (or smaller surpluses) when the economy is slack. The slope is derived from the combined income elasticity of budget revenues and expenditures. As the elasticity of revenues is much higher than that of expenditures, the slope is determined mainly by marginal tax rates and, of these, especially by personal income taxes[53]. Within this conceptual framework, the only relevant indicator of the fiscal stance is the level of high employment surplus (or deficit) measured at the full employment level of GNP. Despite the emergence of an actual deficit in year 1, we can see that the fiscal policy in that year is highly restrictive due to the high level of the full employment surplus. Suppose that the government introduces some fiscal permission and the economy enjoys (along with some other factors) some recovery. Two different simultaneous movements might be observed: 1) the new fiscal programme will shift the budget function downward; and 2) the recovery will move us along the new budget function to the right, resulting in a current (actual) budget surplus. Thus, while the emergence of the actual budget surplus in year 2 might lead us to conclude that the policy change brought a restriction, the appropriate interpretation of the discretionary (exogenous) measures unambiguously suggests permission compared to the fiscal stance in year 1. The beauty of this simple instrument resides in the fact that while the actual budget balance blurs the combined effect of the autonomous economic change (a movement along the given budget function) with the discretionary policy change (shift of the whole budget function), the full employment budget disregards the actual budget outcome.

It follows from the above that the concept of full employment surplus could be used for comparisons of two alternative fiscal packages whose introduction might be contemplated in a given forthcoming period or for comparison of the degree of fiscal stimulus (or restraint) in two different periods. If the fiscal stance over a more extended time period is to be considered, it is advisable to portray the actual GNP as a fraction of the potential GNP in order to take account of the growing size of the economy and eliminate the implicit distortions.

Unfortunately, this methodology, though analytically highly appealing, is not free of flaws and complications. The most crucial of these is the fact that it is based on unobservable (or very occasionally observable) magnitudes of variables like full employment values of output, prices,

[53] Indeed, the slope and specific shape of any given budget function is determined by a huge number of parameters including all rates of all taxes, by amount and allocation of government expenditures, by multipliers of different transfer programmes, etc.

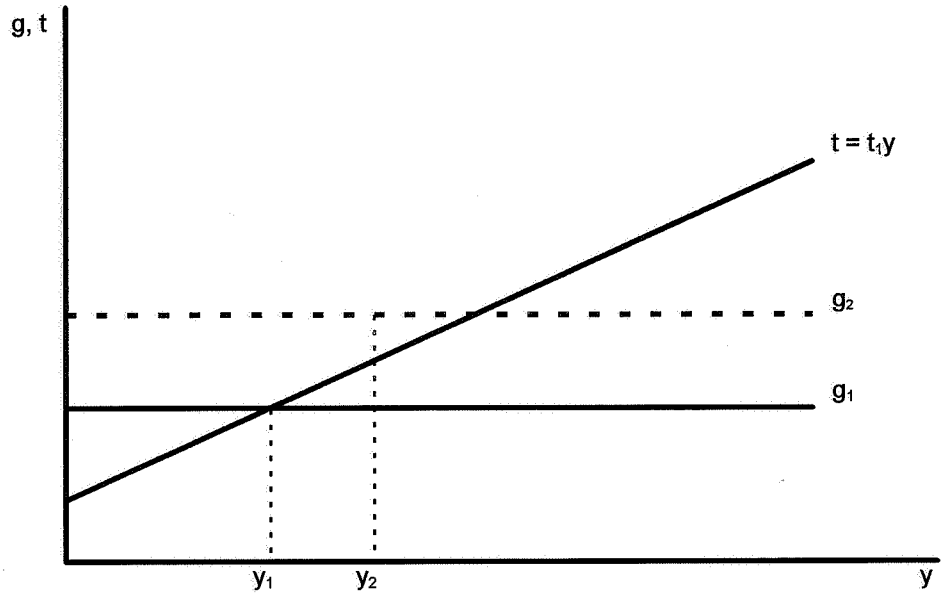

Figure 1 **Fiscal stance with endogenous taxes**
(*Source*: Shaw/1977)

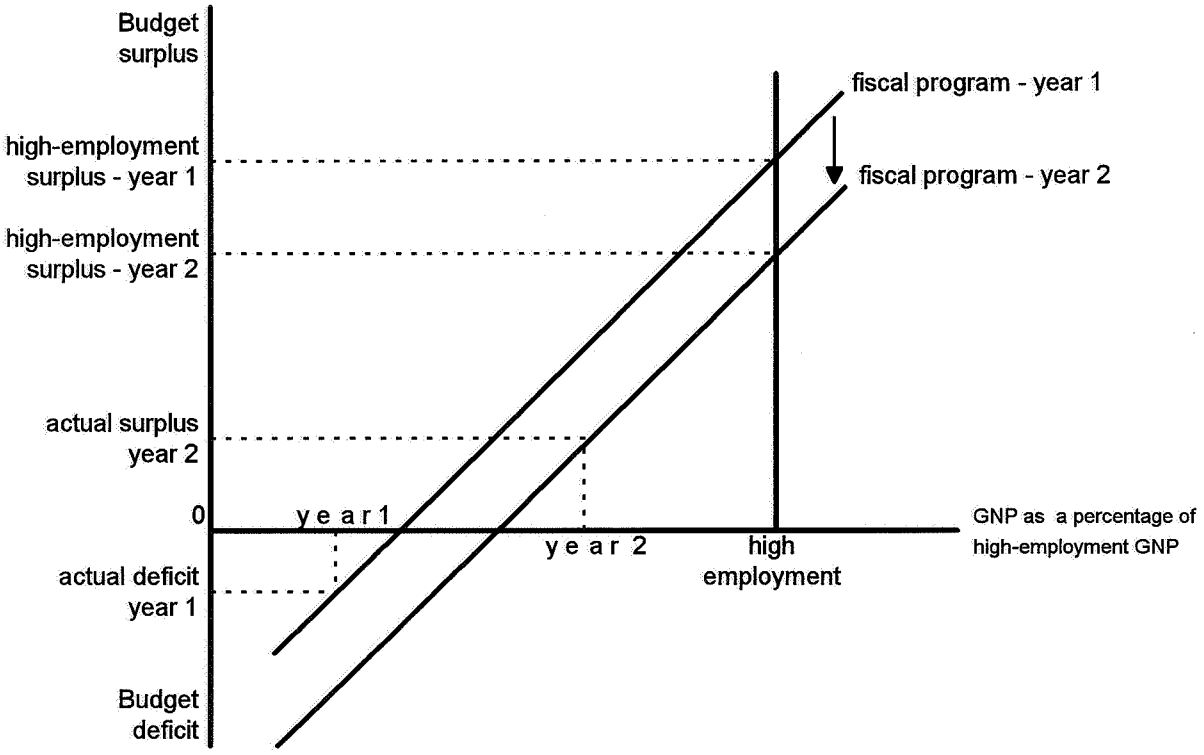

Figure 2 **Relation between actual and high-employment surplus or deficit**
(*Source*: Leeuw, Holloway, Johnson, McClain, Waite/1980)

interest rates, profits, and so on (Cohen, 1987). The specific magnitudes of the variables are typically derived from past statistical records, implying a highly model-sensitive selection of relevant variables and outcomes of computations. Thus, obtaining a reliable picture of an economy in a transformation period calls not only for the justification which would be needed in more or less standardized market economies but also for sensitive adjustments allowing for the temporary existence of unique peculiarities generated by the features of a transition economy.

A serious difficulty arises from price level increases. In a simple form, high employment budget estimates are made on the assumption that the price level associated with potential GDP is the same as the actual price level. However, the wider the "price gap" which emerges without being adequately captured by necessary adjustments, the more misleading the full employment figures might become. Rising price levels push up both receipts and expenditures, but due to a progressive tax structure denominated in nominal terms, the impact on receipts is larger and faster than the impact on expenditures. This is even reinforced by lags in adjustment of expenditures which are generally longer and of smaller magnitude than those of receipts. As a net result, the rising price level drives the full employment toward surplus, which might be misinterpreted as a discretionary move toward budgetary restriction. This unpleasant feature which causes the fiscal policy to look more restrictive ex post than ex ante can be mitigated by expressing the full employment budget as a percentage of potential GDP. This adjustment however, does not replace the fundamental asymmetry between the exogenous impact on receipts and exogenous impact on expenditures. The tendency of the budget to have a surplus is observable not only during inflation but also as a consequence of real economic growth. This phenomenon is usually referred to as a "fiscal drag"[54] (Leeuw, Holloway, Johnson, McLain, Waite/1980). Therefore it is instrumental to make a distinction between (automatic) responses of receipts and expenditures to the business cycle (referred to as automatic cyclical effects) and (automatic) responses of receipts and expenditures to inflation (referred to as automatic inflation effects) (Holloway, Wakefield/1985). From these two, the former seems to be more pronounced than the latter, because while receipts are equally responsive to automatic cyclical effects and to automatic inflation effects, expenditures are less responsive to automatic cyclical effects. It worth noting that the distortion of the full employment budget estimates stemming from the automatic cyclical effects (fiscal drag) can be eliminated by expressing the high employment budget as a percentage of potential GDP. As we shall see below, significant modification of the above analysis under the circumstances of an economy in transition will have to take into account the simultaneous occurrence of price increases and output decline i.e. mutually inverse automatic cyclical effects and automatic inflation effects.

The concept of the full employment surplus is a more or less static one. Although it shows how much fiscal policy is pushing the economy in a given period, it does not capture its impact over an extended period of time, i.e. the timing of the dynamic multiplier process. It could be reasonably assumed that the time shape varies for different types of fiscal measures. For example, multipliers for grants to local budgets are likely to have comparable values in absolute terms as

[54] The tendency of growth to "produce" a fiscal drag is more pronounced, the more the changes in expenditure lag behind the changes in receipts.

those of transfer payments to persons, but the former are likely to be slower than the latter (see Okun, 1983). Thus, unless appropriate adjustments for the dynamic multipliers are made, the somewhat static concept might produce slight distortions in the assessment of the fiscal stance.

Another issue related to timing may arise from expectations. As most major tax proposals are prepared ahead of time, many decisions of private agents (in their effort to anticipate future outcomes) can affect today's economy. Tax proposals may have an influence even if their enactment as law is ultimately rejected. Similarly, government intentions to increase certain expenditures could stimulate economic activity before they actually affect federal purchases. An example could be the accumulation of inventories of purchased materials or semi-finished products before delivery to the government (Okun, 1983).

4. 3 Full employment budget: a quantitative analysis

4.3.1 Estimation of the potential output

A crucial element of fiscal policy analysis consists in the estimation of the potential output of the economy. As already mentioned, this is a tricky task also in the case of the established market economies but even more so for the economies in transition. The approach used here develops that introduced by the author elsewhere (Bárta, 1994). Current estimation takes the actual GDP as the pivotal point which is subject to adjustments on the basis of several *a priori* assumptions and underlying developments. These assumptions (though inevitably arbitrary) seem to be a both necessary and instrumental substitution for the usual measures of production factor idleness or capacity under-utilization which, alas, are hardly applicable or even misleading in the circumstances of the Czech economy during the transformation period.[55]

There are two variables used for the adjustment of actual output in order to arrive at a potential one in our estimation. The first adjustment concerns **employment**.[56] It is assumed that the level of employment "inherited" from the centrally planned economy contained a certain amount of over-employment which was vanishing step-wise with the progress of marketization and privatization of the economy. We assume a fairly modest level of 5 per cent over-employment in total employment in 1989, modified to 1 per cent in 1994. Although both levels may be underestimated in absolute terms, the dynamics of the process may be realistic.[57] The second assumption related to employment adjustment deals with labour hoarding. Its emergence is

[55] The most difficult task consists not in the estimation of the production factor utilization but in defining what could be considered as the production capacity as such in an economy which is undergoing rapid change through liberalization, opening, restructuring and fast adjustment of relative prices in virtually every area.

[56] The employment rather than the unemployment rate seems to have much higher significance in explaining the situation where total employment dropped by 10-12 per cent during 2 years (1992-1993), but there were only insignificant fluctuations in the unemployment rate.

[57] Here, we disregard the shift of a good deal of the employment from the official economy to the underground, and therefore unrecorded, economy.

estimated against the background of output decline and general worsening of economic conditions during transformation. Many firms (especially those located in the areas of abundant employment possibilities) are expected to retain labour during a period of decline in order to prevent the problem of finding appropriate/qualified workers when the business situation improves. As both "inherited" over-employment and labour hoarding inflate the total labour force, these two components of the labour force should be deducted from the actual (recorded) labour force in order to determine the level of labour force actually needed for production purposes.

The second adjustment focuses on **labour productivity**. We impose on the economy a sort of restriction that the level of labour productivity reached at the end of the centrally planned economy should be basically sustained during the whole transformation period. The only exception allowed is for productivity disturbances or gaps stemming from economic restructuring (i. e. the shift from primary and secondary sectors to a heavily undersized tertiary sector), and from external trade shocks. All other reasons for productivity decline are assumed to lead to a deviation of the actual output from potential output. Thus, we allow for a modest 1 per cent productivity decline in 1990 when transformation started and 4 per cent for all consecutive years, with a trade shock component taken into account mainly in 1991-1992 and a restructuring component in 1993-1994 when privatization gained a reasonable momentum. By applying this procedure we receive a productivity benchmark for every year in the period under consideration.

Potential output is then obtained by multiplying the productivity benchmarks by the adjusted employment figures in individual years (see *Table 3* in the *Appendix*). The resulting GDP gap (as a percentage of actual GDP) is portrayed in *Figure 18.* We see that under the assumptions defined above GDP gap averages 8 per cent during 1992-1994 (the 5 per cent band of potential output is indicated by high-low marks). This estimation (based on rather arbitrary and intuitive assumptions) is likely to be undervalued considering the fundamental re-shaping of virtually every aspect of economic life.

4.3.2 Income elasticities of revenue: broad macroeconomic estimates

As noted earlier, the main task in fiscal analysis rests on disentangling the autonomous changes in budgets receipts (and to some extent also in budget expenditures) caused by economic developments from discretionary changes generated by policy measures. These discretionary measures encompass, for example, changes in the tax bases (number and coverage of tax payers; number and spread of tax brackets; number of tax exemptions; number of preferential tax treatments; etc.); changes in marginal tax rates; introduction of new taxes or abolition of the existing ones; and changes in expenditure programmes.

Section 3.2 partly illustrated the complexity of fiscal restructuring during the transformation period. The fiscal process comprised thousands of discretionary changes and interventions in the budget a detailed description of which is beyond the scope and intentions of this study. As we saw, the discretionary fiscal changes (measures) coincided with autonomous changes in an extremely complex and inter twined manner. In order not to become submerged in a multitude number of

details about which we have, alas, only incomplete evidence, we must inevitably simplify, our analysis. Thus, in estimating the income elasticities of the budget revenue we focus on those years which witnessed comparatively fewer discretionary changes, disregarding the magnitude of these changes completely. The elasticity estimates obtained for years of substantial fiscal discontinuities will be evaluated with great care and the necessary scepticism. In any case it can be suggested that high absolute levels of revenue elasticities strongly indicates the prevalence of discretionary changes over autonomous changes.

The first approximation to the analysis of the revenue elasticities is provided by *Table 1* (*Page 2*). Here, the data for the consolidated state budget[58] based on the MF methodology are presented. It is obvious that income elasticities of total revenue based on current prices generally give much more stable values than elasticities based on constant prices showing rather wild fluctuations on a year-to-year basis. A wide spread of positive and negative values could be explained by a simple arithmetic property of the very calculation of the elasticity: whenever either nominator (percentage change of the revenue) or denominator (percentage change of the income) is small, any significant change of the other variable drives the value of elasticity onto an unrealistically extreme level. This is observable in 1990 and 1993 when GDP growth was -1.2 per cent or -0.9 per cent respectively, implying high absolute values of elasticities. On the other hand, in 1991 the GDP decline was substantial and changes of revenue (in real terms) unimportant, which resulted in very low absolute values of elasticities. It is remarkable that elasticities for 1992 are consistently negative due to the opposite development of GDP (a decline of 6.4 per cent) and the positive increase in revenue in real terms. All elasticities turn into high positive values in 1994 as both GDP and revenue increased, though the former at a slower pace than the latter. Although absolute values of elasticities in 1994 are out of any reasonable range, their consistently positive signs seem to indicate the termination of the process of fiscal adjustment and the beginning of a "normal" period of positive correlation between GDP and revenue.

A similar message is transmitted by *Table 4,* based on the GFS methodology. Again, the income elasticities of central government revenue derived from current prices fluctuate much less than those derived from stable prices. However, the years 1990 and 1993 display some irregularities. Surprisingly low value of the elasticity of central government revenue in 1990 (0.12 compared to 1.12 based on the MF methodology) is attributable to an exceptional circumstance of the pre-reform situation where only certain prices started to rise (mainly after the abolition of subsidies on food) in an overall regulated economy excluding virtually all means of transforming such an increase into higher revenue. Even negative elasticity in 1993 (-0.09 compared to 0.54 based on the MF methodology) might be associated with the circumstances connected with the split up of the country and the introduction of the new tax system.

A parallel insight is provided by a look at *Chart 6,* which show the ratios of budget revenue to GDP (based on current prices). The unchanged ratio of the central government revenue to GDP (current prices) in 1991 is another way of expressing the value of the elasticity in *Table 4* which is

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[58] Consolidation of data is produced by adding of two thirds of the federal budget revenue to the state budget revenue of the Czech republic for 1989 - 1993, excluding subsidies.

close to 1. This almost text-book case indicating that the percentage of GDP decline was transformed into a one percent decline in central government revenue is distorted by the steep decline of the share of local government revenue occurring especially in 1991. Thus, for a better understanding of the overall impact of the public budgets an inspection of the elasticities of public budget revenue would be more revealing. Again, an obvious tendency towards a much smaller oscillation of elasticities based on current prices is confirmed, implying a more difficult interpretation of elasticities based on constant prices. Among these, the elasticities based on the government expenditure deflator seem to be the least reliable, showing wild fluctuations and the most extreme values throughout the whole period.

The findings related to the elasticities of central government revenue are illustrated on *Charts 19* to *22*. *Chart 19* and *Chart 20* juxtapose the changes of central government revenue and changes of GDP in current prices and in constant prices (deflated by CPI) respectively. The elasticities are positive when both variables either increase or decrease simultaneously, and negative when both variables have an opposite sign. With the small exception of 1993, all elasticities (including those derived from a longer period of observation) are positive when based on current prices *(Charts 19* and *21)*. However, the picture is modified substantially when constant prices are used *(Charts 20* and *21)*: the year 1992 rather than 1993 is an outlier with a negative sign of elasticity and the periods 1990-94, 1990-1993, and 1990-92. On the other side, the years 1990, 1991, 1993 and 1994 belong to "well-behaved" ones, as is likewise the case in the period 1992-94. Surprisingly, the year 1991 displays a "miraculous" accord between all elasticities (based both on current and on constant prices). Although the values of all elasticities oscillate in an extremely narrow band (ranging from 0.37 derived from the central government deflator to 0.98 derived from current prices), implying a unique similarity throughout the whole period, the information contained in *Section 3* should serve as a warning because of the massive fiscal adjustment which occurred in that year.

To conclude, the overall analysis of income elasticities of revenue derived from yearly data suggests a puzzle. The values of the elasticities of central government revenue based on current prices look very good, but they certainly conceal rather massive fiscal adjustments, which definitely occurred during the period of observation. On the other hand, the values of elasticities based on constant prices are likely to contain the information about the adjustments in a more discernible way, but it is difficult to find out whether the fluctuations of elasticities are the consequence of those fiscal adjustments or whether they reflect rather the impact of inflation, or the inability of the tax administration to collect taxes properly (tax evasion), or some disturbances stemming from the output decline or other developments.

A supplementary view of fiscal development is provided by quarterly data (see *Table 5* and *Charts 23* to *25*). We can see from *Table 5* that elasticities based on quarter-to-quarter changes are too sensitive in cases when GDP figures display minor fluctuations and therefore reach unreliable values (e.g. 1991/Q3 and 1991/Q4). Moreover, the development of revenue and expenditure is typically subject to cyclical fluctuations with deficits occurring in the last quarters of fiscal years followed by surpluses in the first quarters of the consecutive years (see *Chart 23*). In order to mitigate this cyclical pattern, the income elasticities of revenue are computed from quarterly data comparing a given quarter with the same quarter of the previous year. In spite of the fact that this

seasonal adjustment leads to more stable elasticities, their fluctuations are still excessive. Another source of instability consists of the varying shares of the main budget receipts. *Chart 24* shows a highly volatile share of corporate profit tax especially during 1991: while the receipts from profits ballooned in the first half of the year following the price liberalization, they plummeted in the second half of the year (see *Chart 24*). On the other side, stable growth of the single most important revenue item (social security contributions in the aftermath of the introduction of the new social security system) is typical for the period 1993-94 (see *Chart 25*).

Thus, quarterly data, even after cyclical adjustment, do not seem to provide an adequate basis for the estimation of reliable revenue elasticities. Consolidated time series are too short, too cyclical and too "noisy" due to systemic transformation changes. All these circumstances push the revenue shares (and consequently the sum of all receipt items) to unwelcome volatility and drive the elasticities onto unrealistic levels.

The last attempt to derive income elasticities of revenue rests on monthly data. *Table 6* contains monthly values of total revenue (and main revenue items) and total expenditures (and main expenditure items) for the period of 1989-1994. This table is accompanied by *Charts 26* to *38*. They show the following tendencies and justify the following preliminary conclusions:

1. A strong cyclical pattern of December peaks both in revenue and in expenditure is discernible throughout the whole period of 1989-94. The volatility of monthly deficits and surpluses (in nominal terms) increased after the implementation of the reform package at the beginning of 1991 (see *Chart 26*). This tendency would be partly offset by using constant prices. Considering the absolute values of receipts and expenditures, the volatility diminishes during 1993 and 1994. This indicates a relative stabilization of fiscal adjustments and better predictability of economic development in general.

2. The receipts from the turnover tax were fairly stable on monthly basis during 1989-92. The volatility of revenue from VAT (combined with excise taxes) increased after their implementation in the tax reform. The trough in receipts in January 1993 illustrates the difficult launch of this indirect tax.

3. Monthly development of receipts from corporate profit tax demonstrates the fiscal response to the price liberalization of January 1991 (*Chart 29*).

4. Another example of the take-off of the new tax is provided by *Chart 30,* which show a steady but robust increase in the monthly receipts from social security contributions after 1993. After reaching a "target" level in 1994, strong cyclical fluctuations with December peaks remains the most obvious pattern for these receipts.

5. Monthly data seem to be the least reliable indicator for computations of the revenue elasticities. Their volatility reflects the complexity of everyday business life and the mechanism of tax

collection. Moreover, in the periods following the implementation of the tax reform the receipts from the new taxes might be even misleading in judging the values of revenue elasticities.

Some shortcomings of monthly data could be alleviated by smoothing for longer periods. The smoothing is made using a least square linear trend line for all relevant variables. *Chart 31* juxtaposes total revenue and nominal GDP for the period 1990-1994, arriving at an income elasticity of revenue 0.5. Although this value looks nice, it contains an "average of averages" covering both the pre-reform period and the post-tax-reform period. A more detailed view of the period 1991-1992 (*Chart 32*) leads to an elasticity which is close to one, and the period 1993-1994 (*Chart 33*) following the tax reform produces an elasticity of 0.75. We could suggest that this rather simple method leads to elasticities which have reasonable values. The elasticity value obtained for the period 1993-1994 deserves higher credibility because during this time no substantial changes of the tax structure occurred and general economic conditions were much more settled than ever before. The results (based on current prices) obtained here reinforce the findings of the purely arithmetical method used earlier which suggested an elasticity of 0.66 for 1994. Moreover, the linear trend line method seems to overcome the shortcomings of the arithmetical method which produced the elasticity -0.09 for 1993, thus becoming a "victim" of the small GDP growth in that year.

A longer-term elasticity of indirect taxes (with turnover tax in force from 1990 until 1992 and VAT + excise tax in force after 1993) with respect to nominal GDP is potrayed by *Chart 34*. The finding that higher than unit elasticity (1.8) of indirect taxes throughout the period of 1990-1994 is confirmed by even higher elasticity (1.95 during 1993-1994 (*Chart 35*). While the first elasticity would be supported by *Chart 9,* which shows the declining ratio of taxes on goods and services in the medium run (implying a diminishing role of that tax within total receipts) the second one contradicts *Chart 9* proving that a certain rise in the ratio occurred during 1993-1994. Thus, the real behaviour of VAT with respect to GDP is unclear from the empirical evidence. It could be assumed that we shall obtain a more consistent view when robust economic growth begins.

On the other hand, the elasticity of corporate income tax (-0.004) with respect to GDP seems to prove unambiguously a rather loose (if any) relation indicating the prevalence of discretionary policy over autonomous development of the receipts (*Chart 36*). This reflects the trend of easing the tax burden imposed on enterprises in the period after the tax reform.

Let us turn to the expenditures side. Expenditures on employment policy (or unemployment benefits respectively) are traditionally considered as the only important cyclically sensitive item. *Chart 37* shows that the elasticity of expenditures on employment policy with respect to the unemployment rate is surprisingly high: 2.3 during the period 1993-1994. This result is inconclusive when compared with the most neat-looking relation between the expenditures on employment policy and the rate of unemployment (based on quarterly data) during the period 1990-1994 (*Chart 38*). The close relationship between both variables implies a strong regularity in this area. As the rate of unemployment in the Czech republic does not yet pose any substantial macroeconomic problem, the magnitude of fluctuation of this expenditure item is so small that it has only a marginal and negligible impact on the results of our analysis. As mentioned earlier, the

expenditure side of the budget is driven predominantly by a discretionary policy (following the target of balancing the budget on a yearly basis) off-setting thus virtually all fiscal reactions derived from autonomous economic development.

4.3.3 Estimation of the fiscal stance: summary

We can put our findings related to the income elasticities of fiscal revenue into the full employment budget framework. *Table 7* contains three sets (each containing two subsets derived from two fiscal methodologies) of estimations of the fiscal stance. The same methodology of estimation applies to all sets. The main differences in values between individual sets derive from the use of different elasticities for each set. The estimations of fiscal stance are based on the estimation of the GDP gaps for individual years derived in *Table 3* (and *Chart 18*). Then, both revenue and expenditures are adjusted. While the former are adjusted according to three different sets of elasticities the adjustment of the latter is uniform throughout all three sets of estimations of the fiscal stance. The first set of revenue elasticities is derived from the elasticities computed on the basis of current prices which are smoothed. The smoothing uses the three-year moving average in case of data based on the MF methodology (first subset of fiscal stance estimate within this elasticity adjustment) and an arithmetical average[59] in case of data based on the GFS methodology (second subset of fiscal stance estimate within this elasticity adjustment). Then, the revenue ("Potential GDP Revenue") which would be reached if the economy worked with fully employed resources is calculated for both fiscal methodologies. As mentioned earlier, a revenue adjustment is based on a positive (pro-cyclical) correlation between business cycle and budget revenue: the higher the cyclical upswing (or smaller the GDP gap) the higher the budget revenue, other things being equal. Consequently, with an emerging GDP gap the current budget revenue has to be adjusted **upwards** to arrive at potential GDP revenue.

The expenditures ("Potential GDP Expenditures") which would hypothetically be reached with the rate of unemployment at some average level are calculated and applied uniformly to all three fiscal stance estimations. In contrast to revenue, the expenditures are negatively (anti-cyclically) correlated with the business cycle: the higher the cyclical upswing (or smaller the GDP gap), the lower the expenditures, other thing being equal. Thus, with an emerging GDP gap the current budget expenditures have to be adjusted **downwards** to arrive at potential GDP expenditure. Specifically, the formula for the expenditure adjustment with respect to the rate of unemployment is that each extra percentage point of unemployment rate above the average level (or quasi natural rate of unemployment) of 3.05 % recorded during period 1991-1994 causes an increase of approximately 1.5 bn CSK in expenditures on employment policy[60]. The calculation of this ratio is derived from *Table 8*.

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[59] Arithmetical average rather than smoothing is used in case of GFS-methodology because of the excessive fluctuation of actual elasticities in some years.

Table 8

	1993 - actual	1994 - plan	1994 - actual
Rate of unemployment (%)	**3.0**	**5**	**3.3**
Expenditures on employment policy (bn CSK)	**2.174**	**5.473**	**2.572**

There are basically two ways of estimating this ratio. One consists of an *ex ante* forecast made by the government in the preparatory phase of the budget for 1994. The second one attempts to measure the ratio *ex post* from the actual development of both variables. We can see that the envisaged increase in the unemployment rate by two percentage points in 1994 against 1993 was expected to cause an extra expenditures amounting to 3.3 bn CSK, implying a ratio of 1 : 1.65 between both variables. On the other hand, the actual increase in the unemployment rate was 0.3 percentage points in 1994 against 1993. The parallel increase in expenditures on employment policy by 0.4 bn CSK yields the ratio 1 : 1.32. Thus, the resulting average ratio of both ratios is about 1 : 1.5. Although this ratio has been derived for the year 1994, its value is applied uniformly to the whole period under consideration, reflecting the basically unchanged rules of unemployment policy legislation.

To sum up, while the revenue is adjusted on the basis of the GDP gap, the expenditures are adjusted on the basis of the unemployment rate gap which existed between the rate of unemployment in a given year and the average unemployment rate derived from the period 1991-1994.

After explaining the technical basis for the computations made in *Table 7* we are in a position to make a final assessment of the fiscal stance based on the concept of the full employment budget. The results are illustrated in *Charts 39* to *50*. All twelve charts constitute six ways of seeing the issue according to the two fiscal methodologies. The first pair (*Chart 39* and *40*) juxtaposes actual budget balance and nominal GDP. As we saw earlier, the MF methodology shows a temporary emergence of deficits (in 1991 and 1992) followed by a surpluses thereafter. The application of the GFS methodology

yields only surpluses throughout the whole period, with surpluses of unprecedented magnitude in the recessionary years 1991 and 1992. Indeed, both methodologies converge after 1993. The second pair (*Charts 41* and *42*) portrays actual budget balances as a percentage of potential output against GDP gaps (as computed in *Table 3*). It is interesting to see (according to the MF methodology) that despite the prevalence of a GDP gap after 1992 the actual deficits were transformed into actual surpluses, implying an increasing level of fiscal tightening. Similarly, the GFS methodology

[60] It is useful to note that expenditures on employment policy consist of two major groups: the first (and larger) group refers to a so called "passive" employment policy represented mainly by unemployment benefits. The average monthly level of unemployment benefits was 1 805,- CSK in 1994. The share of unemployed who received these benefits was in the range 45 - 48 % of all unemployed persons. The average number of unemployed persons was 172 064 in 1994. The second (and smaller) group refers to "active" employment policy oriented towards re-training programmes, public works, support of the disabled, etc. Although the unemployment benefits represent the major part of expenditures on employment policy it would be conceptually wrong to mix both terms.

indicates an increasing level of fiscal tightening with a progressively widening the GDP gap. The third and the fourth pairs (*Charts 43 - 46*) constitute the core of this study and the very aim of our full employment budget exercise. If the potential output estimates are more or less credible these charts show clearly how misleading the actual budget can be as an indicator of the fiscal stance. While the lower curves (on *Charts 43* and *44*) show the actual budget balance, the upper one portrays the fiscal stance when using the computed income elasticities of revenue in individual years. *Chart 43* applies the MF methodology and the smoothed elasticities (three year moving average) derived from current prices, and *Chart 44* applies the GFS methodology and average level of elasticities, again, based on current prices. The vertical distance between both curves quantifies the scope of bias when relying on actual budget revenue and expenditures.

One or two comments should be made here. Clearly, the whole analysis is critically dependent on two basic parameters: the GDP gap and the magnitude of the income elasticity of revenue. These are the main driving forces behind the concept of the full employment budget. In *Chart 43* we can identify the following tendencies: in the somewhat peculiar year of 1990, with a negative GDP gap (actual GDP was higher than potential GDP) fiscal policy was more loose than the actual balance would indicate. In this respect, the fears of some policy-makers that the fiscal policy could generate or at least contribute to inflationary pressures were substantiated, although the magnitude of these pressures was unimportant. The reverse trend of both variables occurred in 1991 and persist until now. A widening of the GDP gap has been driving the full employment budget toward significant surpluses, implying a substantially higher level of fiscal restriction than is implied by the fact that the actual budget balance is negative in those two years. The intensification of fiscal restriction during 1991-1992 was interrupted in 1993, with what was basically a stagnation of the GDP gap. A further robust increase of nominal GDP which would lead *ceteris paribus* to growth of the full employment surplus (a pure example of fiscal drag) was fully off set by a further decrease in the smoothed revenue elasticity in 1993. Another increase in fiscal restriction (in nominal terms) in 1994 had two main causes: **1)** a further growth of nominal GDP (14 per cent on a year-to-year basis), acting again as a fiscal drag, and **2)** an increase of the actual budget surplus which, under the existing GDP gap, contributed to the existing fiscal restriction. A somewhat modified view is provided by *Chart 44* using the GFS methodology. It indicates an even stronger restriction at the beginning of the transformation, followed by a certain "relaxation" in 1993 but renewed tightness in 1994. The evaluation of the fiscal stance in 1993 should not be taken as granted, since the GFS methodology reflected the split of the country in a very different way from that of the Ministry of Finance.

The same story, but this time in terms of the ratios of given variables to the GDP, is told by *Charts 45* and *46*. In order to eliminate the optical distortions stemming from the use of nominal values, the GDP gaps and budget balance are expressed as fractions of the potential output, all based on current prices. It is obvious from *Chart 45* that initial permissiveness in 1990, not even reaching one per cent of the potential output, was rapidly transformed into a high level of fiscal restriction corresponding to a level of about 5 per cent of potential GDP in the period 1992-1994. A similar conclusion could be obtained from *Chart 46*. When using the GFS methodology, the overall

increase in fiscal restriction during the period of 1990-1994 is not so dramatic as in the preceding case.

As already noted, the estimation of full employment surplus is a tricky task with a high bias towards subjective evaluation by a given analyst. In order to correct the bias somewhat we present two more adjustments of revenue elasticities. While the fifth pair of charts (*Chart 47* and *48*) gives revenue elasticities in all years under consideration as equal to 1, the last pair of charts (*Chart 49* and *50*) puts the elasticities equal to 0.5. Both elasticities might be taken as benchmark cases which limit the area outside which the estimation of the real fiscal stance is less likely to occur. We should be aware of three circumstances: **1)** It is obvious that a higher level of revenue elasticity causes more volatile magnitudes of full employment budget, while a lower level of elasticity produces a lesser volatility. **2)** A relative development of the fiscal stance based on fixed elasticities during the period under consideration is less realistic because it disregards the diminishing marginal tax rates which were definitely the case during the transformation period. Such adjustment tends to **overestimate** the level of revenue elasticities more toward the **end of the period** in case of an **upper** boundary of elasticity and **underestimate** the level of revenue elasticity more toward the **beginning of the period** in case of a **lower** boundary. In other words, if we take the upper benchmark of the elasticity we may expect fiscal tightness to be overestimated in 1993 and 1994, and if we take the lower benchmark of the elasticity we may anticipate underestimated fiscal tightness in 1990 and 1991 than would be the case if a more flexible approach is applied. **3)** As the revenue elasticities remain constant, their "off setting" role is wiped out from the analysis which puts more weight on the movements of potential output in defining fiscal stance. These circumstances are discernible from *Charts 47 - 50*. Although the price of choosing unchanged elasticities is **diminished realism in the relative development of fiscal stance during the period under consideration,** the benefit of such an approach is that it identifies the likely borders within which the whole evaluation of the fiscal stance stands on a relatively firm basis.

Taking into account all the issues discussed above we can summarize the findings related to the estimations of fiscal stance in the Czech Republic during the transformation period 1989-1994 as follows:

1. There is an important difference between the recorded actual budget balance and a hypothetical full employment budget balance as proved by our analysis. The paths are similar at the beginning of transformation but start to diverge substantially later on.

2. The main driving force behind this divergence is, indeed, the development of the GDP gap. The wider the GDP gap, the wider the difference between the actual and the high employment budget and the more revealing is the effort to find an alternative fiscal measure which would more appropriately reflect the real fiscal stance.

3. A necessary step in estimating the fiscal stance is an identification of the responsiveness of both revenue and expenditures to the business cycle. The responsiveness is reflected by revenue- and expenditure elasticities. The estimations of elasticities are subject to difficulties. The revenue

elasticities derived from constant prices are excessively volatile and sensitive to small changes in both GDP and budget revenue. The uncertainty of these estimates is aggravated by a lack of reliable deflators. The elasticities actually derived from current prices display much smaller volatility but they do not allow effectively separation of the discretionary changes in revenue from autonomous changes. Certain adjustments of actual elasticities, such as smoothing, are needed in any case. It is reasonable to assume diminishing values of elasticities during the transformation period because of the longer-term decrease in marginal tax rates, which is one of the very aims of a general fiscal (tax) restructuring. In addition to the actual revenue elasticities derived from current prices, two benchmark cases are presented in order to outline the field of the most probable outcomes.

4. The accounting differences in two fiscal methodologies (Ministry of Finance methodology and GFS methodology) have an important consequence for the estimation of the fiscal stance. While the calculation of the full employment budget based on the MF methodology indicates a small level of fiscal permissiveness in 1990 and thereafter a growing level of restriction, the GFS methodology always indicates a very high level of restriction. The GFS methodology is more sensitive to data disturbances and discontinuities caused by the split of the former CSFR in 1993. As the fiscal data based on the GFS methodology were not used in policy-making, we advocate as more reliable the data obtained by the MF methodology. The GFS methodology data are used for the purpose of illustration and comparison.

5. There is a certain asymmetry between the dependence of budget revenue and budget expenditures on the business cycle. The dependence of revenue is much higher as it reflects the movement of the nominal GDP. On the other hand, the dependence of expenditures is very low, which is caused by the fact that a negligible portion of expenditures is sensitive to a cyclical fluctuations. This portion refers predominantly to the expenditures on employment policy (and more specifically to unemployment benefits). This is even more the case when the rate of unemployment is very low and fairly stable.

6. The estimation of the fiscal stance derived from the MF methodology (when using actual smoothed elasticities) shows that the fiscal policy was permissive to an extent amounting to about 0.7 per cent of potential GDP in 1990. Despite the emergence of actual deficits in 1991 and 1992 the fiscal stance was transformed into restriction, amounting to 2.4 per cent of potential output in 1991, and an even higher restriction in the range of 4.5 - 5.25 per cent during 1992-1994. Even if we apply a lower elasticity benchmark equal to 0.5, the fiscal restriction ranges from 2.6 to 4.5 per cent during 1992-1994. It may reasonably be assumed that the restriction did not surpass the level of 8 per cent of potential output at the end of a given period as a rather extreme case of unitary elasticity might suggest.

4.3.4 Possible ways of further refining the full employment budget analysis

After summarizing our analysis with respect to existing statistical and methodological bottlenecks we will outline several approaches which could contribute to the robustness of the full employment budget analysis and which could present a challenge to those who would attempt to provide a better insight into the fiscal stance estimates. These are the following:

A) An important refinement of the methodology should aim at disaggregating the national income into the main income components and to investigate the revenue elasticities of these individual income components. Thus, instead of looking at the responsiveness of the total budget revenue to the GDP fluctuations, a more detailed analysis could focus on the elasticity of personal income revenue with respect to personal income, of corporate profit revenue with respect to corporate profits, of indirect business tax revenue with respect to GDP, and of social security contributions with respect to average wages and total employment, other things being equal. We can reasonably assume that even if these partial elasticities were relatively stable (which was probably not the case), massive fluctuations of the income components (which was definitely the case) could not but drive the "aggregate" elasticity of total revenue into high fluctuation. Unless we know more about the evolution of the main income components and their individual elasticities, even our *ex post* view is inescapably distorted and the predictions regarding future development uncomfortably imprecise. In particular, the question of whether the fluctuation of the income components was caused by discretionary policy measures of different natures or by autonomous economic developments should be answered.

B) A very important task would be to identify reliably the extent of individual discretionary budget changes which were carried out by the government during the transformation of the fiscal sphere in all its fascinating complexity, as outlined in *Section 3*. The existing records of the Ministry of Finance do not, however, provide a sufficient and consistent overview of what might have been approximate impact on the budget revenue of those many particular cases of fiscal adjustment (witnessed over the past years) both on the revenue and the expenditure side. The magnitudes of all really provable cases of discretionary measures taken in individual years whould then need to be deducted from the values of the full employment budget figures in those years to arrive at a "pure" fiscal stance isolated from all cycle-driven and autonomous fiscal responses.

C) A degree of simplification of estimations of the income elasticities of the main income components might be obtained by dividing a weighted average of marginal tax rates by a weighted average of average tax rates. This approach assumes a sound knowledge of all major tax laws and of the distribution of income groups into the individual tax brackets. Even if we might not find the precise values of the elasticities in individual years we are likely to obtain a better picture of the evolution of a given elasticity during the period we are focusing on. As a year-to-year reduction of the marginal tax rates was one of the priorities of tax policy during the transformation period, a step-by-step reduction of revenue elasticities (as reflected in the

elasticity smoothing "adjustment I" according to the MF methodology - *Charts 43* and *45*) contains a good deal of realism. This approach would shed more light on the steepness of the decrease in revenue elasticities.

D) Another refinement might focus on the identification and quantification of time lags which elapse between a certain kind of independent economic development and a dependent autonomous fiscal reaction. A related re-definition of the relevant time periods which serve as the basis for computing the actual elasticities could contribute to more realistic figures and put the whole analysis on a firmer footing.

E) The existence of a consolidated budgetary data series is of crucial importance for delivering a more robust analysis. Such consolidation should ensure the methodological (accounting) consistency of the data and the best possible bridging between the two fundamentally different tax systems. In addition to this, consistent treatment of local budgets related to vast redistribution processes and transfers should be ensured. An approach leading to adjustments to inter-budgetary and inter-republican transfers is badly needed considering the massive budget restructuring which occurred during the transformation period.

F) Special attention should be given to analysing, the fiscal drag, i.e. the impact of real economic growth and price increases on budget revenue and on the resulting budget balance in general. Due to rather high inflation throughout the whole period (and especially in 1991 and 1993), and to repeated budget revisions (usually in the second half of the year) we suggest (without offering additional proofs here) that the second factor had significant impact on actual budget development. This issue is related to the inflation tax or seigniorage.

The above points pose a serious challenge for those who want to penetrate deeper into the issue of estimation of the fiscal stance in the transformation period. A general recommendation stemming from the difficulties mentioned above is to find (or wait for) some "normal" year in the future during which: 1) all discretionary changes would be small, negligible or at least "provable"; 2) the fiscal methodology would be unchanged; 3) time lags would be obvious; 4) income shares would be more or less fixed; 5) inter-budgetary transfers would be stabilized; 6) inflation would be zero or close to zero; 7) GDP gap estimates would be credible; and 8) economic growth would be positive and not lower than 2 percentage points per year. In such a year it would be easy to compute both income elasticity of revenue and all partial elasticities of the main groups of revenue in an *ex post* way and to announce unambiguously only one figure describing the fiscal stance, applying the full employment budget concept. We do not see many difficulties with an evaluation of the fiscal stance in some future "normal" year, but we are well aware of the problems of arriving at an *ex post* estimate focusing on highly turbulent reform years. The above circumstances, which might be fulfilled in the future, do pose several serious obstacles to a better understanding of the transformation past.

5. Summary and Conclusions

In this study, we have seen that fiscal policy in the Czech republic went through substantial re-shaping during the transformation period 1989-1994. The general aims of the fundamental budgetary changes within the framework of other economic policy reforms common to all economies in transition were illuminated briefly in *Section 3.1*. The Czech way of coping with fiscal policy during transformation was examined and described in *Section 3.2*. We saw that, at the beginning of the economic reform, Czech policy makers relied predominantly on the macroeconomic stabilization capability of fiscal policy in the effort to tame the inflationary pressures which were believed to have been inherited from the past and to threaten the success of transformation itself. The initial intention to run fiscal surpluses in 1991 and retain balanced budgets thereafter was not successful when measured according to the Ministry of Finance methodology. The deficits which emerged, however, were not serious and stayed within reasonable limits not only with respect to other economies in transition but also with respect to many established market economies. One of the important factors which contributed to the non-fulfillmet of the budgetary targets consisted in the step-by-step split-up of the country, which effectively started to take place from 1991, but was formally completed at the end of 1992. At the beginning of 1993 a new tax reform was implemented and the budget ran surpluses from then on.

The main objective of this study was to challenge the widely-shared opinion, promoted especially by the government, that the relevant indicator of fiscal stance is the balance of current revenue and current expenditure. In other words, whenever the current budget recorded a deficit, fiscal policy was labelled as permissive, and *vice versa;* whenever the budget reached black numbers it was presented as restrictive. Such an approach stems from an inappropriately narrow accounting-style interpretation which completely ignores standard economic wisdom. This wisdom claims that the full employment budget matters. The very concept (although not free from several methodological, conceptual and measurement biases) tries to mitigate the most striking shortcomings of the current revenue and expenditures as relevant fiscal indicators and substitutes them with hypohtetical variables which presumably reflect more precisely the real fiscal stance. More specifically, the concept of the full employment budget models the budget revenue and expenditure which would be reached when using all employed resources fully. In doing that, it attempts to disentangle the budgetary changes caused by economic developments (autonomous changes) from those caused by policy makers (budgetary discretion), thus defining a difference between cyclical deficits and structural deficits respectively. It is assumed that the only relevant fiscal indicator is the amount of structural deficit, as this is a "pure" result of the fiscal policy in isolation from "cyclical noise" related to the impacts of economic developments. The aim of this study is to investigate the applicability of this concept to an economy in transition based on the example of the Czech Republic. Some details regarding the methodology are presented in *Sections 4.1* and *4.2*. Then, an attempt to quantify the fiscal stance follows in *Section 4.3*.

It is obvious that the quantitative results of the whole fiscal stance analysis are crucially dependent on the estimation of the potential output (see *Section 4.3.1*) of the economy and of the ensuing GDP gaps in individual years. Another crucial step consists in estimating the income

elasticities of revenue and the income elasticity of expenditures respectively (see *Section 4.3.2*). The estimation of these elasticities is a substantial prerequisite for adjusting the current budget revenue and expenditures to obtain full (high) employment revenue and full (high) employment expenditure implying a full (high) employment budget as the variable sought. *Section 4.3.4* presents several issues whose satisfactory clarification could contribute to enhancing of the explanatory power of the full employment budget concept when applied to the Czech economy during the transformation period.

The main conclusion of this study is that, unlike the generally shared opinion that the fiscal policy was permissive in 1991 and to a lesser degree also in 1992, converting its stance into a restrictive one thereafter (as inspection of the current budget balance figures in those years might suggest), the full employment budget concept indicates a small fiscal permission in 1990 followed by a huge restriction thereafter amounting to 2.5 per cent of the potential GDP in 1991 and an unprecedented 4.5 - 5.25 per cent during 1992-1994 (see *Chart 45* in the *Appendix*) when using the data based on the Ministry of Finance methodology. The same picture of the fiscal stance (although with a different magnitude) is obtained if we use two benchmark revenue elasticities: when the elasticity equals 1 ("one") throughout the whole period (see *Chart 47*), the highest level of fiscal restriction amounts to 8 per cent of the potential GDP and when the elasticity equals 0.5, the fiscal restriction is not higher than 5 per cent of the potential GDP (see *Chart 49*), leaving only a small margin for fiscal permission in 1990 in both cases. All fiscal stance indicators would be shifted toward a lesser restriction if a smaller GDP gap emerged (see *Chart 18*). Considering the scale of the ongoing economic restructuring and also the slack in overall economic performance which occurred during the last 3 - 4 years, we assume that the GDP gap amounting to 7 per cent of potential GDP stays within reasonable probability limits. Even if we accepted a smaller GDP gap and a lower level of revenue elasticity we would observe an important difference between the actual budget balance and the hypothetical high employment balance which indicates how misleading it might to apply the former rather than the latter as a fiscal policy indicator.

Our analysis also suggests strongly that despite a precipitous decline in economic output (and an inevitable decrease in budget revenue) fiscal policy management retained a strong element of fiscal discretion which more than off set all major autonomous budgetary changes in the medium-term. The stubborn insistence of the government of the "rule" of achieving a balanced budget strongly "endogenized" the evolution of expenditures, thus confirming a rather active fiscal policy. Despite a slackening of budgetary discipline in 1991 and to a lesser degree also in 1992, fiscal policy, in general, managed to transform "external" (or reform-induced) revenue disturbances into corresponding expenditure cuts (both in relation to the GDP) and thus exacerbated the constraints existing in other segments of the economy.

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Appendix

Table 1

Public Budgets (1989-1994)

MF-methodology (in bn CSK, CZK)

	1989			1990			1991			1992			1993			1994		
	Original budget	Modified budget	Final budget	Original budget	Modified budget	Final budget	Original budget	Modified budget	Final budget	Original budget	Modified budget	Final budget	Original budget	Modified budget	Final budget	Original budget	Modified budget	Final budget
Federal Budget - CSFR																		
Revenue total			194,3			144,0	108,5	123,9	124,0	134,7	134,7	124,0						
Expenditure			192,9			143,3	102,3	117,7	117,6	134,7	134,7	131,0						
Own expenditure			69,3			87,4			117,6	129,7	129,7	126,0						
Subsidies to Czech and Slovak budgets			123,6			55,9			0,0	5,0	5,0	5,0						
Balance			1,4			0,7	6,2	6,2	6,4	0,0	0,0	-7,0						
State Budget																		
Revenue total			154,0	157,3	163,1	168,4	182,6	241,0	226,6	255,9	249,9	251,4	342,2	354,0	358,0	381,8	385,3	390,5
Own receipts			78,7	123,0	128,6	131,3			226,6		246,6	248,1	342,2	354,0	358,0	381,8	385,3	390,5
Subsidies from Federal Budget			75,3	34,3	34,5	37,1			0,0	3,3	3,3	3,3	0,0	0,0	0,0	0,0	0,0	0,0
Expenditure total			155,3	157,3	163,1	168,2	181,5	239,9	240,2	255,9	249,9	253,1	342,2	354,0	356,9	381,8	385,3	380,1
Expenditure of government bodies			118,4	120,1	124,8	127,6	163,7	167,5	175,3		219,7	219,4	325,2	326,7	329,9	366,5	356,1	350,9
Transfers and subsidies to Local Budgets			36,9	37,2	38,3	40,6	17,8	72,4	64,9		30,2	33,7	17,0	27,3	27,0	15,3	29,2	29,2
Balance			-1,3	0,0	0,0	0,2	1,1	1,1	-13,6	0,0	0,0	-1,7	0,0	0,0	1,1	0,0	0,0	10,4
Local Budgets																		
Revenue total				102,4		113,6			94,8	40,6	49,2	84,6	58,0	68,3	91,0	67,3	81,3	111,0
Own receipts				64,1		73,0			13,3	10,4	9,2	17,2	31,0	31,0	63,2	52,0	52,0	82,6
Subsidies from State Budget				38,3		40,6			64,9	30,2	32,5	33,7	17,0	17,0	17,0	15,3	15,5	15,5
Miscellaneous						0,0			16,6	0,0	7,5	33,7						
Expenditure total				102,4		110,8			89,6	40,6	49,2	76,8	58,0	68,3	90,2	67,3	81,3	112,1
Balance				0,0		2,8			5,2	0,0	0,0	7,8	0,0	0,0	0,8	0,0	0,0	-1,1
Public Budget (State budget + Local budgets)																		
Revenue total									251,2	266,3	261,4	296,0	383,2	395,0	422,0	433,8	437,3	472,2
Receipts of State Budget									226,6	255,9	249,9	251,4	342,2	354,0	358,0	381,8	385,3	390,5
incl. Subsidies from Federal Budget									0,0	3,3	3,3	3,3	0,0	0,0	0,0	0,0	0,0	0,0
Own Receipts of Local Budgets									24,6	10,4	11,5	44,6	41,0	41,0	64,0	52,0	52,0	81,7
Expenditure total									259,6	266,3	261,4	289,9	383,2	395,0	420,1	433,8	437,3	462,9
Expenditure of State Budget									170,0	197,5	212,2	213,1	325,2	326,7	329,9	366,5	356,1	350,8
Expenditure of Local Budgets									89,6	68,8	49,2	76,8	58,0	68,3	90,2	67,3	81,2	112,1
Balance									-8,4	0,0	0,0	6,1	0,0	0,0	1,9	0,0	0,0	9,3
Balance of State Budget									-13,6	0,0	0,0	-1,7	0,0	0,0	1,1	0,0	0,0	10,4
Balance of Local Budgets									5,2	0,0	0,0	7,8	0,0	0,0	0,8	0,0	0,0	-1,1
State Budget - consolidated (own computation)																		
Revenue			208,2			227,3	254,9	323,6	309,3	342,4	336,4	330,7	342,2	354,0	358,0	381,8	385,3	390,5
Expenditure			201,5			226,5	249,7	318,4	318,6	342,4	336,4	337,1	342,2	354,0	356,9	381,8	385,3	380,1
Balance			6,7			0,8	5,2	5,2	-9,3	0,0	0,0	-6,4	0,0	0,0	1,1	0,0	0,0	10,4

Source: State Final Account(s) 1990, 1991, 1992, 1993, 1994, Federal Ministry of Finance, Czech Ministry of Finance.
Own computation (Consolidation of data: 2/3 of the of Federal budget were added to the State budget data for 1989-92; subsidies excluded)
Government expenditure deflator taken from: Odhad tvorby a uziti hrubeho domaciho produktu 4. ctvrtleti 1994, Czech Statistical Office, Prague, 1994.

Table 1

MF-methodology
(bn CSK, CZK))

State Budget - consolidated	1989	1990	1991	1992	1993	1994
Revenue - original budget			254,9	342,4	342,2	381,8
Revenue - modified budget			323,6	336,4	354,0	385,3
Revenue - final budget	208,2	227,3	309,3	330,7	358,0	390,5
Expenditure - original budget			249,7	342,4	342,2	381,8
Expenditure - modified budget			318,4	336,4	354,0	385,3
Expenditure - final budget	201,5	226,5	318,6	337,1	356,9	380,1
Balance - original budget			5,2	0,0	0,0	0,0
Balance - modified budget			5,2	0,0	0,0	0,0
Balance - final budget	6,7	0,8	-9,3	-6,4	1,1	10,4
Revenue final - Revenue original (bn CSK, CZK)			54,3	-11,7	15,8	8,7
Revenue fin. - Revenue orig./Rev. orig. (in %)			21,3%	-3,4%	4,6%	2,3%

TOTAL REVENUE ELASTICITIES

State Budget - consolidated	1989	1990	1991	1992	1993	1994
Revenue - final budget (bn CSK, CZK)	208,2	227,3	309,3	330,7	358,0	390,5
Revenue - % change to previous period		9,16%	36,06%	6,95%	8,24%	9,08%
GDP at current prices (bn CSK, CZK)	524,5	567,3	716,6	791,0	910,6	1037,5
GDP - % change to previous period		8,16%	26,32%	10,38%	15,12%	13,94%
Income elast. of Total revenue - cur. prices		**1,12**	**1,37**	**0,67**	**0,54**	**0,65**
GDP at 1984 prices	509,9	503,7	432,1	404,5	400,7	411,2
GDP at 1984 prices - % change to prev. period		-1,22%	-14,2%	-6,39%	-0,94%	2,62%
Consumer Price Index (annual average)	101,4	109,6	156,6	111,1	120,8	110,0
GDP deflator (annual average)	97,7	109,5	147,2	117,9	116,2	111,0
Gov. Expenditure deflator (prev. year =100)	99,7	98,9	131,4	125,4	130,7	110,6
Revenue (1984 prices) - CPI	205,4	207,4	197,5	297,7	296,4	355,0
		0,99%	-4,78%	50,75%	-0,45%	19,79%
Revenue (1984 prices) - GDP deflator	213,1	207,6	210,1	280,5	308,1	351,8
		-2,61%	1,21%	33,53%	9,82%	14,19%
Revenue (1984 prices) - Gov. Exp. deflator	208,9	229,8	235,4	263,8	273,9	353,1
		10,04%	2,40%	12,07%	3,85%	28,90%
Income elast. of Total revenue - CPI		**-0,81**	**0,34**	**-7,95**	**0,48**	**7,55**
Income elast. of Total revenue - GDP deflator		**2,14**	**-0,09**	**-5,25**	**-10,46**	**5,41**
Income elast. of Total revenue - Gov.Exp.defl.		**-8,26**	**-0,17**	**-1,89**	**-4,10**	**11,03**

Chart 1

Budget Revenue - original, modified and final budgets

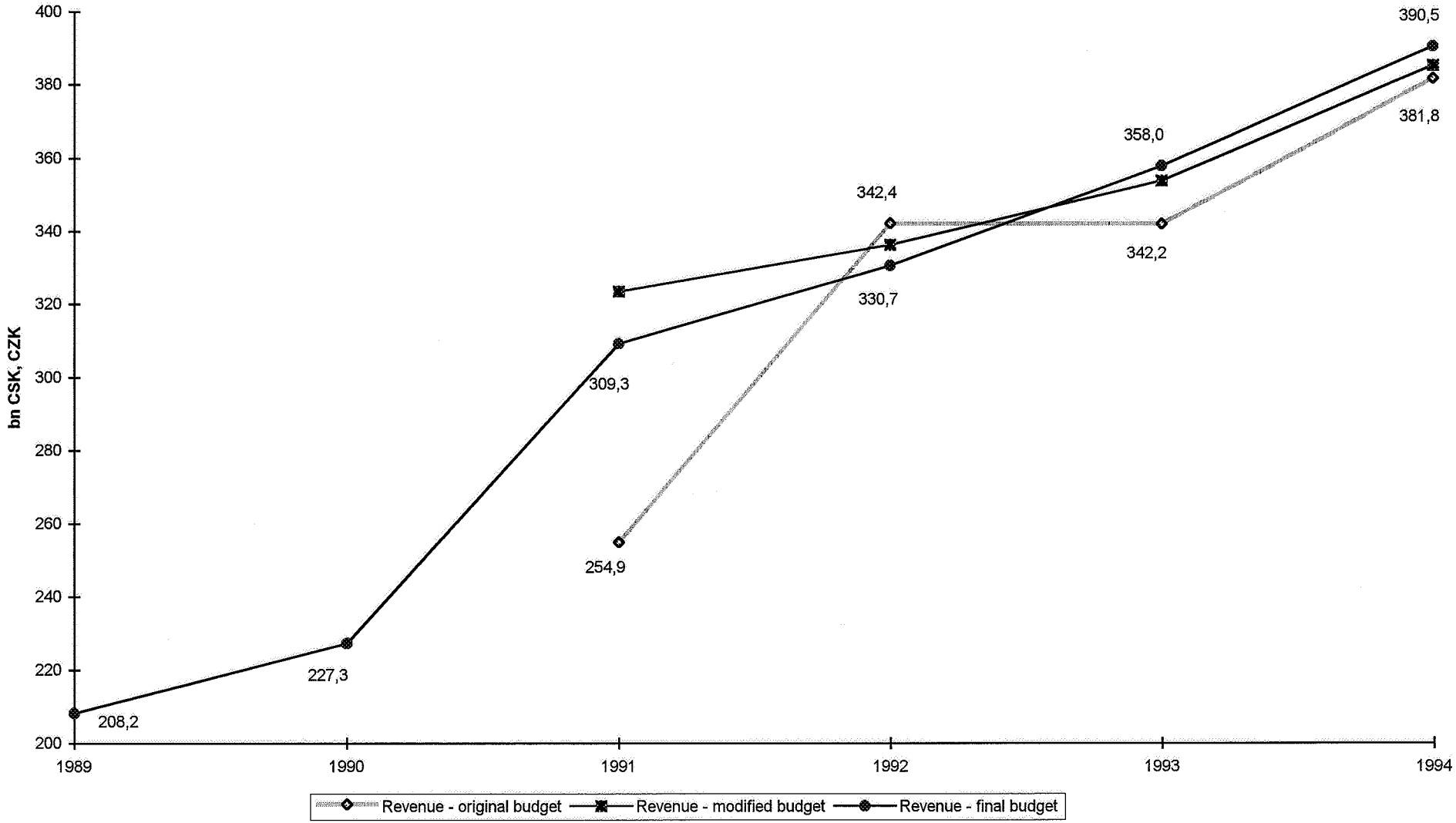


Chart 2

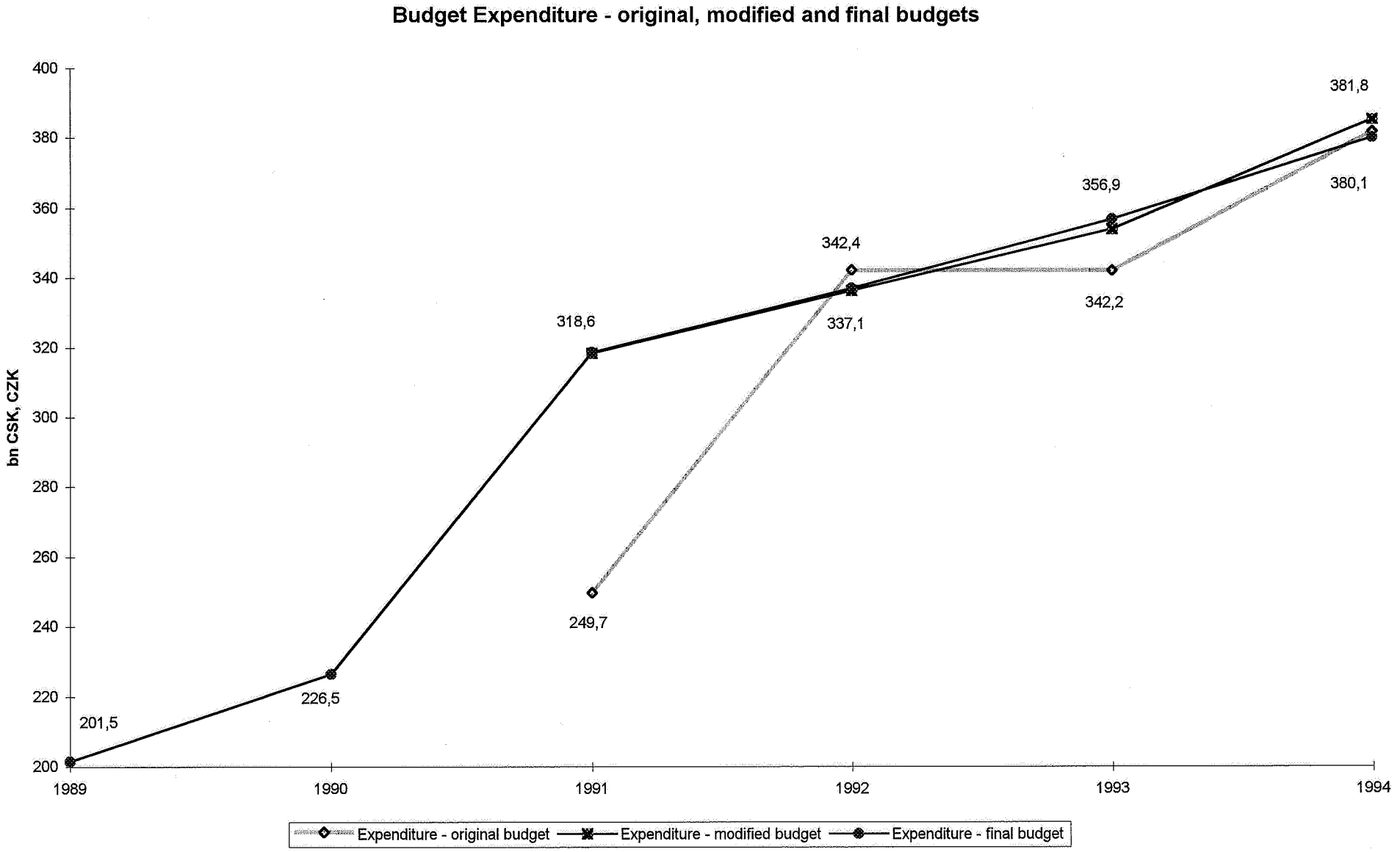

Budget Expenditure - original, modified and final budgets
bn CSK, CZK
400
380
360
340
320
300
280
260
240
220
200
1989
1990
1991
1992
1993
1994
201,5
226,5
318,6
249,7
342,4
337,1
356,9
342,2
381,8
380,1
Expenditure - original budget
Expenditure - modified budget
Expenditure - final budget

Chart 3

Budget Balance - original, modified and final budgets

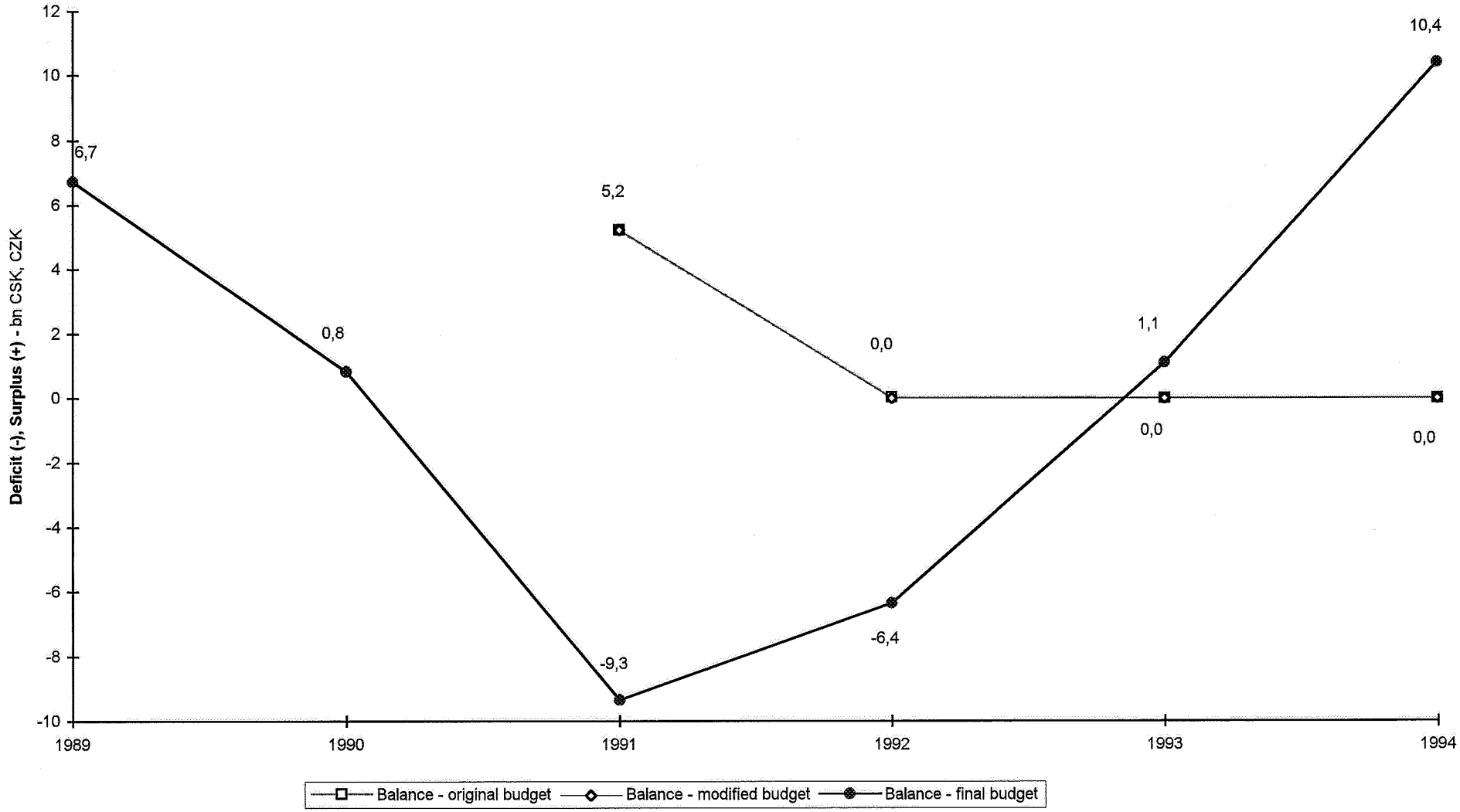


Table 2

Public Budget Development in the Czech Republic in 1989 - 1994 (bn CSK, CZK)

GFS-methodology (bn CSK, CZK)

	1989	1990	1991	1992	1993	1994
REVENUE						
Central Government Revenue	**261,8**	**264,3**	**332,6**	**354,1**	**349,1**	**381,1**
Tax Revenue	228,9	251,1	304,9	326,1	333,7	360,1
Taxes on income	61,7	71,6	140,2	137,0	72,4	70,2
Individuals	0,1	0,2	41,1	51,4	1,5	5,8
Corporations	61,6	71,4	99,1	85,6	70,9	64,4
Taxes on payroll	67,3	67,6	61,4	74,1	0,0	0,0
Taxes on property	0,0	0,0	6,8	1,4	0,8	2,1
Recurrent tax on immovable property	0,0	0,0	0,0	0,0	0,0	
Inheritance, gift, and imm. property transfer	0,0	0,0	6,8	1,4	0,8	
Taxes on goods and services	96,9	110,2	96,5	105,8	136,6	153,7
VAT (turnover tax)	84,8	90,2	88,8	94,2	77,1	85,8
Excises					40,0	46,4
Custom duties	0,4	4,3	7,7	11,6	15,2	17,4
Other (FENZO)	11,7	15,7	0,0			
Motor vehicle tax					4,3	4,1
Other tax revenue	3,0	1,7	0,0	0,2	14,8	4,1
Social security contributions	0,0	0,0	0,0	7,6	109,1	130,0
Employees	0,0	0,0	0,0	7,6	27,3	
Employers	0,0	0,0	0,0	0,0	81,8	
Non-tax Revenue	31,0	19,3	27,7	24,7	15,4	21,0
Entrepreneurial and property income	23,6	12,1	10,4	11,9	11,9	16,6
Enterprises and organizations	23,6	12,1	8,3	7,9	8,3	13,1
Credit interest			2,1	4,0	3,6	3,5
Others	7,4	7,2	17,3	12,8	3,5	4,4
Capital revenue	0,0	0,0	0,0	0,0	0,0	0,0
Transfers from OLNG				3,3		
Timing adjustments	1,9	-6,1				
Local Government Revenue	**101,9**	**109,0**	**91,9**	**79,0**	**91,1**	**111,0**
Tax revenue	53,1	56,3	7,8	9,1	36,0	53,2
Taxes on income	40,5	43,0	3,2	5,9	28,2	48,8
Individuals	36,5	37,5	1,1	5,1	28,2	48,7
Corporations	4,0	5,5	2,1	0,8		0,1
Social security contributions	0,0	0,1	0,0	0,0		
Taxes on payroll	12,3	12,9	4,3	2,5		
Taxes on property	0,3	0,3	0,3	0,7	3,0	3,8
Other taxes	0,0	0,0	0,0	0,0	4,8	0,6
Other revenue	10,8	9,9	14,0	36,2	28,1	26,8
Grants from OLNG	38,0	42,8	70,1	33,7	27,0	31,0
Public Budget Revenue	**325,7**	**330,5**	**354,4**	**399,4**	**413,2**	**461,1**

Source: The State Final Account of CSFR and the Czech Republic

Notes: 1) The federal taxes for 1989-1992 were splitted between the Czech Republic and the Slovak Republic according to the principle of the origin (where technically possible) or in proportion 2:1.

2) The data for Public Budget are aggregates of State and Local Budget data.

3) The budgetary data are compiled according to the IMF methodology

4) The data for 1993 exclude the Health Insurance Fund receipts and expenditure originally financed through State Budget

Table 2

	1989	1990	1991	1992	1993	1994
EXPENDITURE						
Central Government Expenditure	**236,8**	**248,0**	**313,2**	**332,8**	**347,9**	**370,6**
Current expenditure	207,8	214,2	283,0	304,9	325,5	332,7
Expenditure on goods and services	51,7	53,5	54,3	88,1	115,5	120,3
Wages and salaries	11,2	11,2	17,5	28,1	30,0	
Other	40,5	42,3	36,8	60,0	85,5	
Current transfers	155,5	158,9	224,6	203,1	195,7	212,0
Transfers to households	68,4	72,8	103,2	106,2	118,1	137,0
Pensions	?	?	55,9	63,7	102,6	123,8
Sick pay	?	?	7,2	8,1	0,0	
Family benefits	?	?	15,1	14,7	?	
Unemployment benefit		?	?	2,0	2,2	2,6
General income support		?	21,6	14,4	13,3	10,6
Others			3,4	3,3	0,0	0,0
Subsidies to enterprises	66,3	62,1	47,9	22,4	25,5	27,5
Transfers to subsidized organizations	1,0	1,6	14,9	40,8	22,1	24,6
Transfers to local budgets	19,3	22,4	58,6	30,4	27,0	22,4
Transfers to extrabudgetary funds	0,5	0,0	0,0	3,3	3,0	0,5
Interest payments	0,1	1,1	3,5	7,8	13,7	
Transfers abroad	0,5	0,7	0,6		0,6	0,7
Other current transfers	0,0	0,0	0,0	5,9	0,0	
Capital Expenditure and Transfers	27,5	33,2	32,1	29,1	26,3	40,1
Budgetary organizations	3,7	4,2	10,2	13,4	13,1	19,7
Capital transfers	23,8	29,0	21,9	15,7	13,2	20,4
To local budgets	18,7	20,4	11,5	3,3	0,0	6,8
To extra-budgetary funds			0,0	0,0	0,0	
To subsidized organizations			3,9	6,8	8,0	9,6
To enterprises	3,6	3,8	5,6	5,6	5,2	3,7
Others	1,5	4,8	0,9			0,3
Net lending	0,0	0,0	-1,9	-1,2	-3,9	-2,2
Timing adjustments	1,5	0,6				
Local Government Expenditure	**102,1**	**110,8**	**89,5**	**78,7**	**90,2**	**112,1**
Public Budget Expenditure	**300,9**	**316,0**	**332,6**	**377,8**	**411,1**	**453,5**
Central Government Surplus or Deficit (-)	**25,0**	**16,3**	**19,4**	**21,3**	**1,2**	**10,4**
Local Government Surplus or Deficit (-)	**-0,2**	**-1,8**	**2,4**	**0,3**	**0,9**	**-1,1**
Public Budget Surplus or Deficit (-)	**24,8**	**14,5**	**21,8**	**21,6**	**2,1**	**9,3**
Memorandum items						
GDP at current prices (bn CZK)	524,5	567,3	716,6	791,0	910,6	1037,5
GDP at 1984 prices	509,9	503,7	432,1	404,5	400,7	411,2
Consumer Price Index (annual average)	101,4	109,6	156,6	111,1	120,8	110,0
GDP deflator (annual average) (prev. year = 100)	97,7	109,5	147,2	117,9	116,2	111,0
Unemployment rate (average rate in %)	0	0,3	2,8	3,1	3	3,3
State debt (end of year; bn CZK)	NA	NA	144,6	162,8	158,8	161,7
Central government expenditure/GDP (in %)	45,1	43,7	43,7	42,1	38,2	35,7
Public budget expenditure/GDP (in %)	57,4	55,7	46,4	47,8	45,1	43,7
Central government balance/GDP (in %)	4,8	2,9	2,7	2,7	0,1	1,0
Public budget balance/GDP (in %)	4,7	2,6	3,0	2,7	0,2	0,9
State debt/GDP (in %)	NA	NA	20,2	20,6	17,4	15,6

Table 2

Budget Revenue in current prices (Chart 1)	1989	1990	1991	1992	1993	1994
Central government revenue	261,8	264,3	332,6	354,1	349,1	381,1
Local government revenue	101,9	109,0	91,9	79,0	91,1	111,0
Public budget revenue	325,7	330,5	354,4	399,4	413,2	461,1
Memorandum items						
GDP at current prices	524,5	567,3	716,6	791,0	910,6	1037,5
CPI annual average (prev. year = 100)	101,4	109,6	156,6	111,1	120,8	110,0
GDP deflator (annual average) (prev. year = 100)	97,7	109,5	147,2	117,9	116,2	111,0

Budget Revenue in real terms (CPI) (Chart 2)	1989	1990	1991	1992	1993	1994
Central government revenue	258,2	241,1	212,4	318,7	289,0	346,5
Local government revenue	100,5	99,5	58,7	71,1	75,4	100,9
Public budget revenue	321,2	301,6	226,3	359,5	342,1	419,2

Budget Revenue in real terms (GDP deflator)	1989	1990	1991	1992	1993	1994
Central government revenue	268,0	241,4	226,0	300,3	300,4	343,3
Local government revenue	104,3	99,5	62,4	67,0	78,4	100,0
Public budget revenue	333,4	301,8	240,8	338,8	355,6	415,4

Ratio of Budget Revenue to GDP (Current prices) (Chart 3)	1989	1990	1991	1992	1993	1994
Central Gov. Rev./GDP (in %)	49,9	46,6	46,4	44,8	38,3	36,7
Local Gov. Rev./GDP (in %)	19,4	19,2	12,8	10,0	10,0	10,7
Public Budget Rev./GDP (in %)	62,1	58,3	49,5	50,5	45,4	44,4

Major Central Government Revenue in current prices (Ch 4)	1989	1990	1991	1992	1993	1994
Income taxes: corporations + individuals	61,7	71,6	140,2	137,0	72,4	70,2
Payroll taxes (Social security contributions - since 1993)	67,3	67,6	61,4	81,7	109,1	130,0
Taxes on goods and services	96,9	110,2	96,5	105,8	136,6	153,7
Non-tax revenues plus capital revenue	31,0	19,3	27,7	24,7	15,4	21,0
Other and Miscellaneous	4,9	-4,4	6,8	4,9	15,6	6,2

Major Central Gov. Revenue in real terms (CPI) (Chart 5)	1989	1990	1991	1992	1993	1994
Income taxes: corporations + individuals	60,8	65,3	89,5	123,3	59,9	63,8
Payroll taxes (Social security contributions - since 1993)	66,4	61,7	39,2	73,5	90,3	118,2
Taxes on goods and services	95,6	100,5	61,6	95,2	113,1	139,7
Non-tax revenues plus capital revenue	30,6	17,6	17,7	22,2	12,7	19,1
Other and Miscellaneous	4,8	-4,0	4,3	4,4	12,9	5,6

Major Central Gov. Revenue in real terms (GDP defl.)	1989	1990	1991	1992	1993	1994
Income taxes: corporations + individuals	63,2	65,4	95,2	116,2	62,3	63,2
Payroll taxes (Social security contributions - since 1993)	68,9	61,7	41,7	69,3	93,9	117,1
Taxes on goods and services	99,2	100,6	65,6	89,7	117,6	138,5
Non-tax revenues plus capital revenue	31,7	17,6	18,8	20,9	13,3	18,9
Other and Miscellaneous	5,0	-4,0	4,6	4,2	13,4	5,6

Ratio of Major Central Gov. Rev. to GDP (Cur. prices) (Ch 6)	1989	1990	1991	1992	1993	1994
Income taxes/GDP (in %)	11,8	12,6	19,6	17,3	8,0	6,8
Payroll taxes (Social sec. contr./GDP) (in %)	12,8	11,9	8,6	10,3	12,0	12,5
Taxes on goods and services/GDP (in %)	18,5	19,4	13,5	13,4	15,0	14,8
Non-tax revenues plus capital revenue/GDP (in %)	5,9	3,4	3,9	3,1	1,7	2,0
Other and Miscellaneous/GDP (in %)	0,9	-0,8	0,9	0,6	1,7	0,6

Table 2

Share of Major Central Gov. Revenue in Total (in %) (Ch 7)	1989	1990	1991	1992	1993	1994
Income taxes/GDP (in %)	23,6	27,1	42,2	38,7	20,7	18,4
Payroll taxes (Social sec. contr./GDP) (in %)	25,7	25,6	18,5	23,1	31,3	34,1
Taxes on goods and services/GDP (in %)	37,0	41,7	29,0	29,9	39,1	40,3
Non-tax revenues plus capital revenue/GDP (in %)	11,8	7,3	8,3	7,0	4,4	5,5
Other and Miscellaneous/GDP (in %)	1,9	-1,7	2,0	1,4	4,5	1,6
Total	100,0	100,0	100,0	100,0	100,0	100,0

Budget Expenditure in current prices (Chart 8)	1989	1990	1991	1992	1993	1994
Central government expenditure	236,8	248,0	313,2	332,8	347,9	370,6
Local government expenditure	102,1	110,8	89,5	78,7	90,2	112,1
Public budget expenditure	300,9	316,0	332,6	377,8	411,1	453,5
Memorandum items						
GDP at current prices	524,5	567,3	716,6	791,0	910,6	1037,5
CPI annual average (prev. year = 100)	101,4	109,6	156,6	111,1	120,8	110,0
GDP deflator (annual average) (prev. year = 100)	97,7	109,5	147,2	117,9	116,2	111,0

Budget Expenditure in real terms (CPI) (Chart 9)	1989	1990	1991	1992	1993	1994
Central government expenditure	233,5	226,3	200,0	299,5	288,0	336,9
Local government expenditure	100,7	101,1	57,2	70,8	74,7	101,9
Public budget expenditure	296,7	288,3	212,4	340,1	340,3	412,3

Budget Expenditure in real terms (GDP deflator)	1989	1990	1991	1992	1993	1994
Central government expenditure	242,4	226,5	212,8	282,3	299,4	333,9
Local government expenditure	104,5	101,2	60,8	66,8	77,6	101,0
Public budget expenditure	308,0	288,6	226,0	320,4	353,8	408,6

Ratio of Budget Exp. to GDP (Current prices) (Chart 10)	1989	1990	1991	1992	1993	1994
Central Gov. Exp./GDP (in %)	45,1	43,7	43,7	42,1	38,2	35,7
Local Gov. Exp./GDP (in %)	19,5	19,5	12,5	9,9	9,9	10,8
Public Budget Exp./GDP (in %)	57,4	55,7	46,4	47,8	45,1	43,7

Major Central Gov. Exp. in current prices (Chart 11)	1989	1990	1991	1992	1993	1994
Expenditure on goods and services	51,7	53,5	54,3	88,1	115,5	120,3
Current and capital transfers to enterpr., budg.and subsid.organ.	74,6	71,7	82,5	89,0	73,9	85,1
Transfers to households	68,4	72,8	103,2	106,2	118,1	137,0
Transfers to local budgets and extrabudgetary funds	38,5	42,8	70,1	37,0	30,0	29,7
Interest payments	0,1	1,1	3,5	7,8	13,7	0,0
Other and miscellaneous	3,5	6,1	-0,4	-1,2	-3,3	-1,2

Major Central Gov. Expenditure in real terms (CPI) (Ch 12)	1989	1990	1991	1992	1993	1994
Expenditure on goods and services	51,0	48,8	34,7	79,3	95,6	109,4
Current and capital transfers to enterpr., budg.and subsid.organ.	73,6	65,4	52,7	80,1	61,2	77,4
Transfers to households	67,5	66,4	65,9	95,6	97,8	124,5
Transfers to local budgets and extrabudgetary funds	38,0	39,1	44,8	33,3	24,8	27,0
Interest payments	0,1	1,0	2,2	7,0	11,3	0,0
Other and miscellaneous	3,5	5,6	-0,3	-1,1	-2,7	-1,1

Chart 4

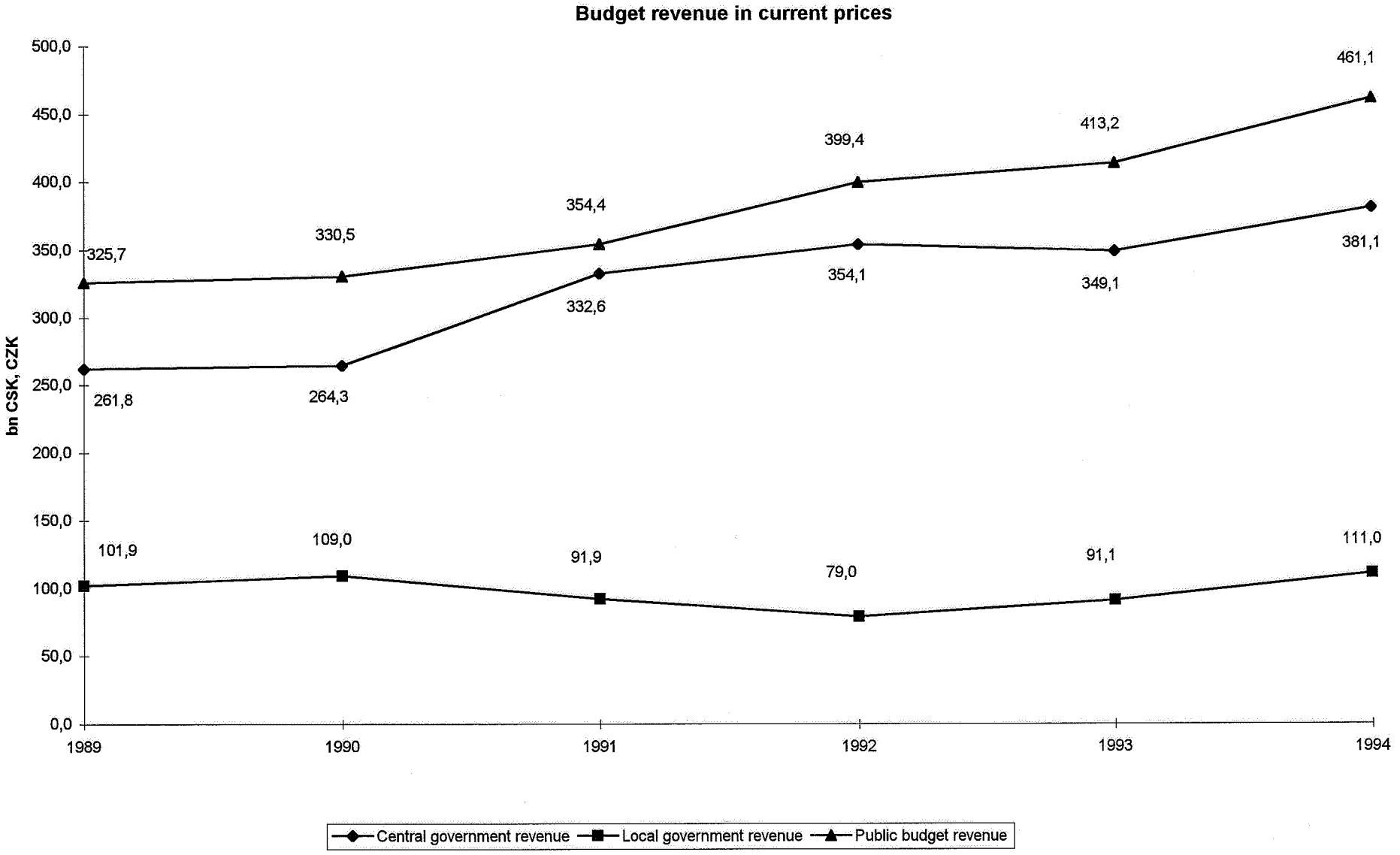

Budget revenue in current prices
bn CSK, CZK
500,0
450,0
400,0
350,0
300,0
250,0
200,0
150,0
100,0
50,0
0,0
1989
1990
1991
1992
1993
1994
325,7
330,5
354,4
399,4
413,2
461,1
261,8
264,3
332,6
354,1
349,1
381,1
101,9
109,0
91,9
79,0
91,1
111,0
Central government revenue
Local government revenue
Public budget revenue

Chart 5

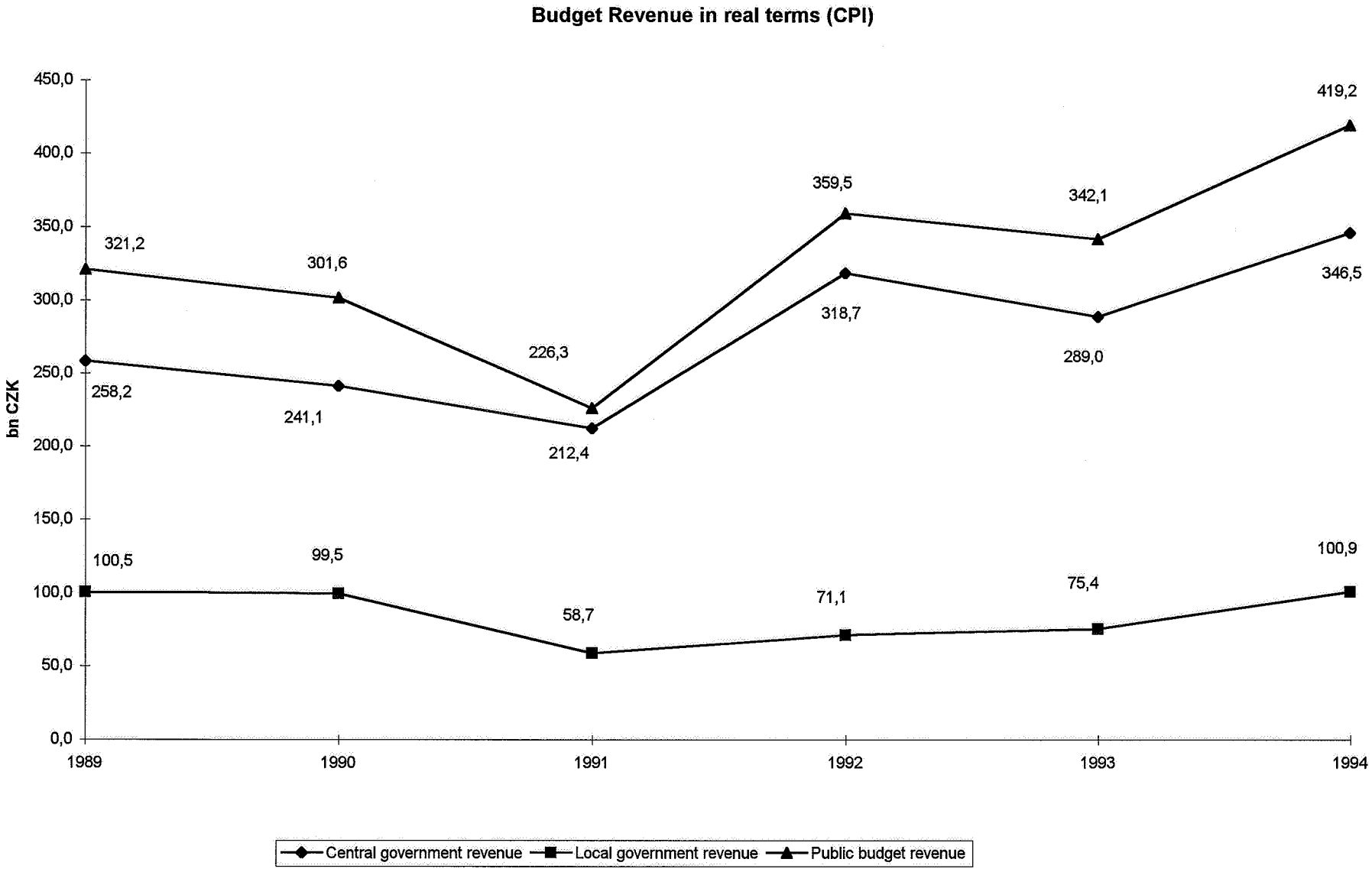

Budget Revenue in real terms (CPI)
bn CZK
450,0
400,0
350,0
300,0
250,0
200,0
150,0
100,0
50,0
0,0
1989
1990
1991
1992
1993
1994
321,2
301,6
226,3
359,5
342,1
419,2
258,2
241,1
212,4
318,7
289,0
346,5
100,5
99,5
58,7
71,1
75,4
100,9
Central government revenue
Local government revenue
Public budget revenue

Chart 6

Ratio of Budget Revenue to GDP (current prices)

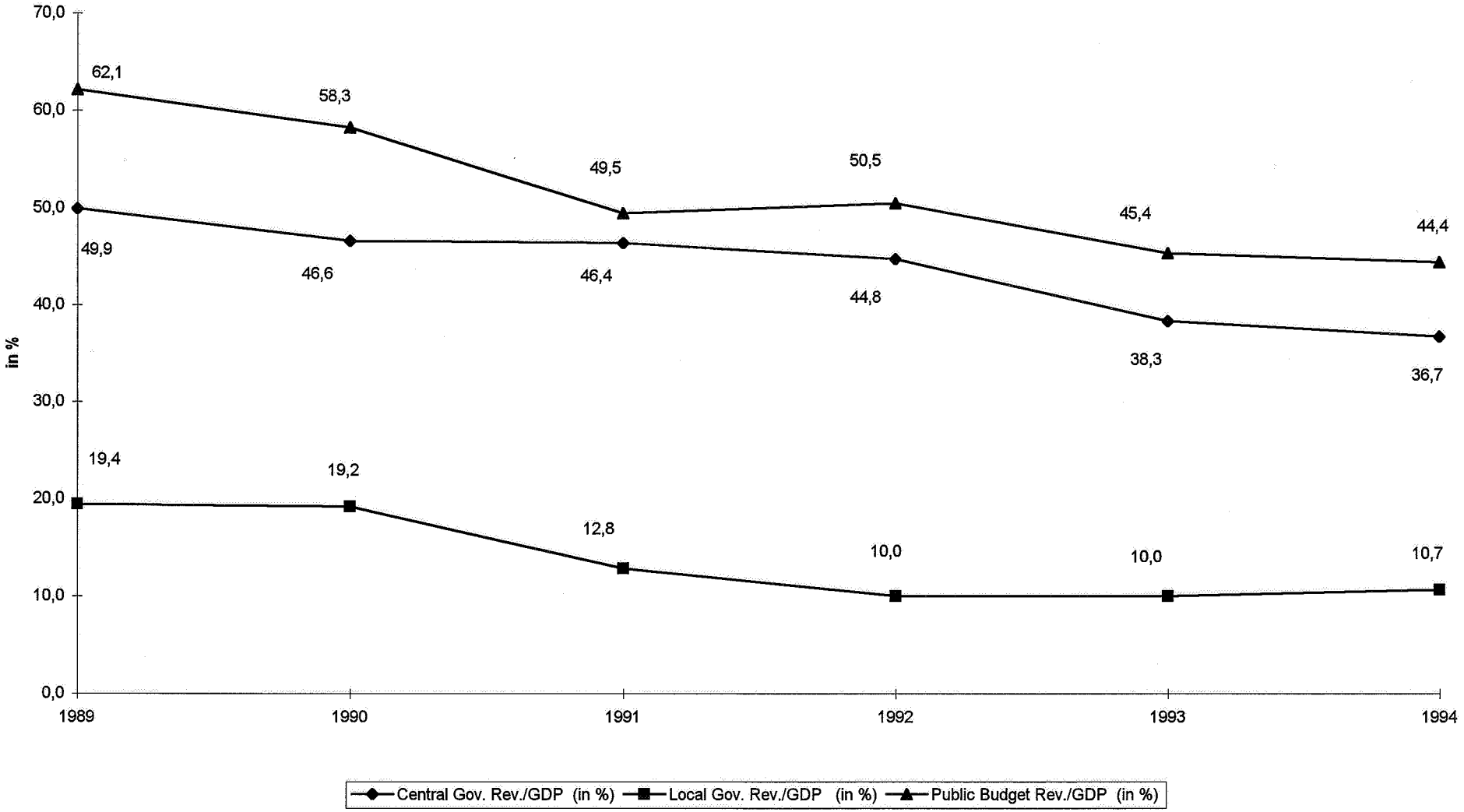


Chart 7

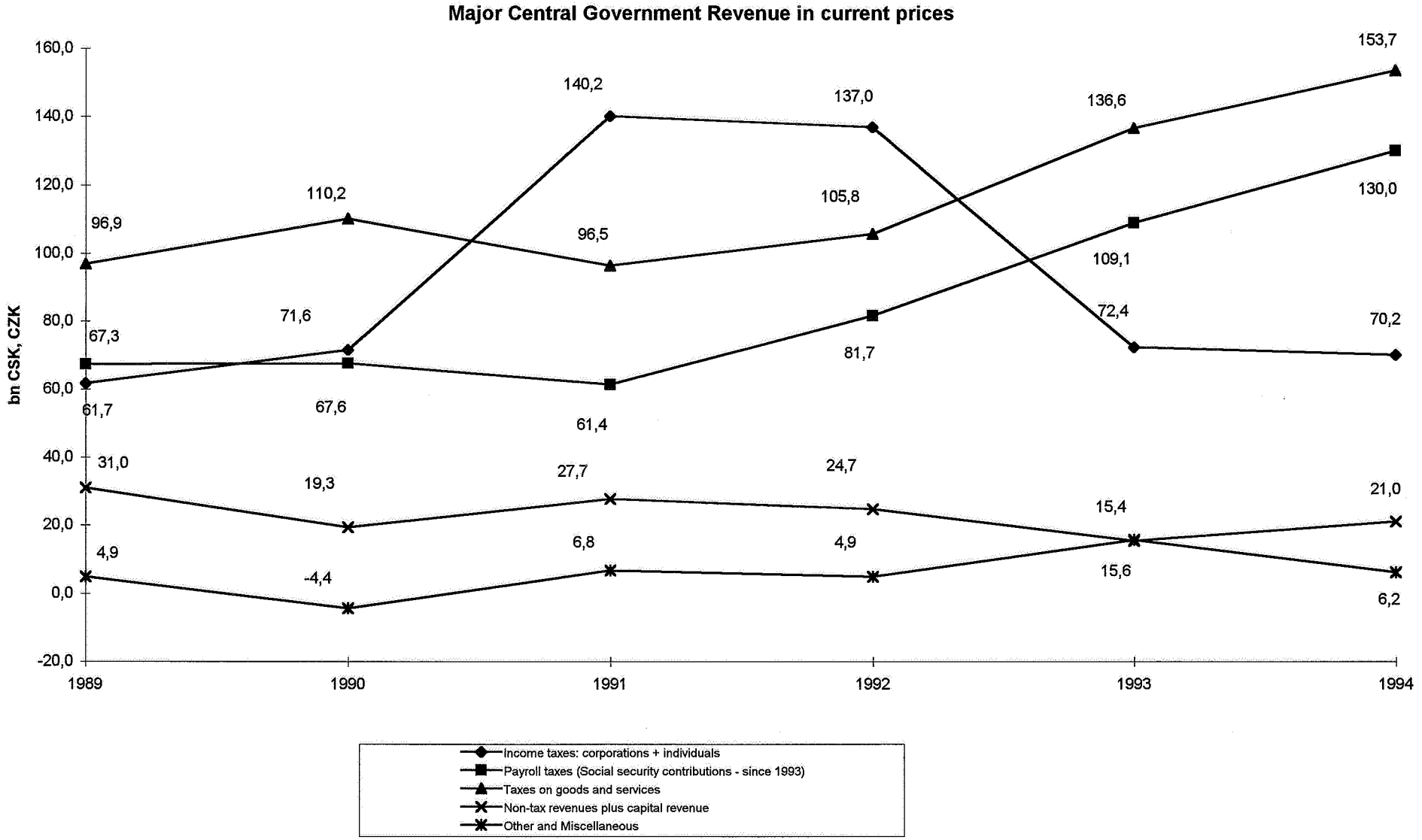

Major Central Government Revenue in current prices
bn CSK, CZK
160,0
140,0
120,0
100,0
80,0
60,0
40,0
20,0
0,0
-20,0
1989
1990
1991
1992
1993
1994
96,9
110,2
96,5
105,8
136,6
153,7
67,3
71,6
140,2
137,0
72,4
70,2
61,7
67,6
61,4
81,7
109,1
130,0
31,0
19,3
27,7
24,7
15,4
21,0
4,9
-4,4
6,8
4,9
15,6
6,2
Income taxes: corporations + individuals
Payroll taxes (Social security contributions - since 1993)
Taxes on goods and services
Non-tax revenues plus capital revenue
Other and Miscellaneous

Chart 8

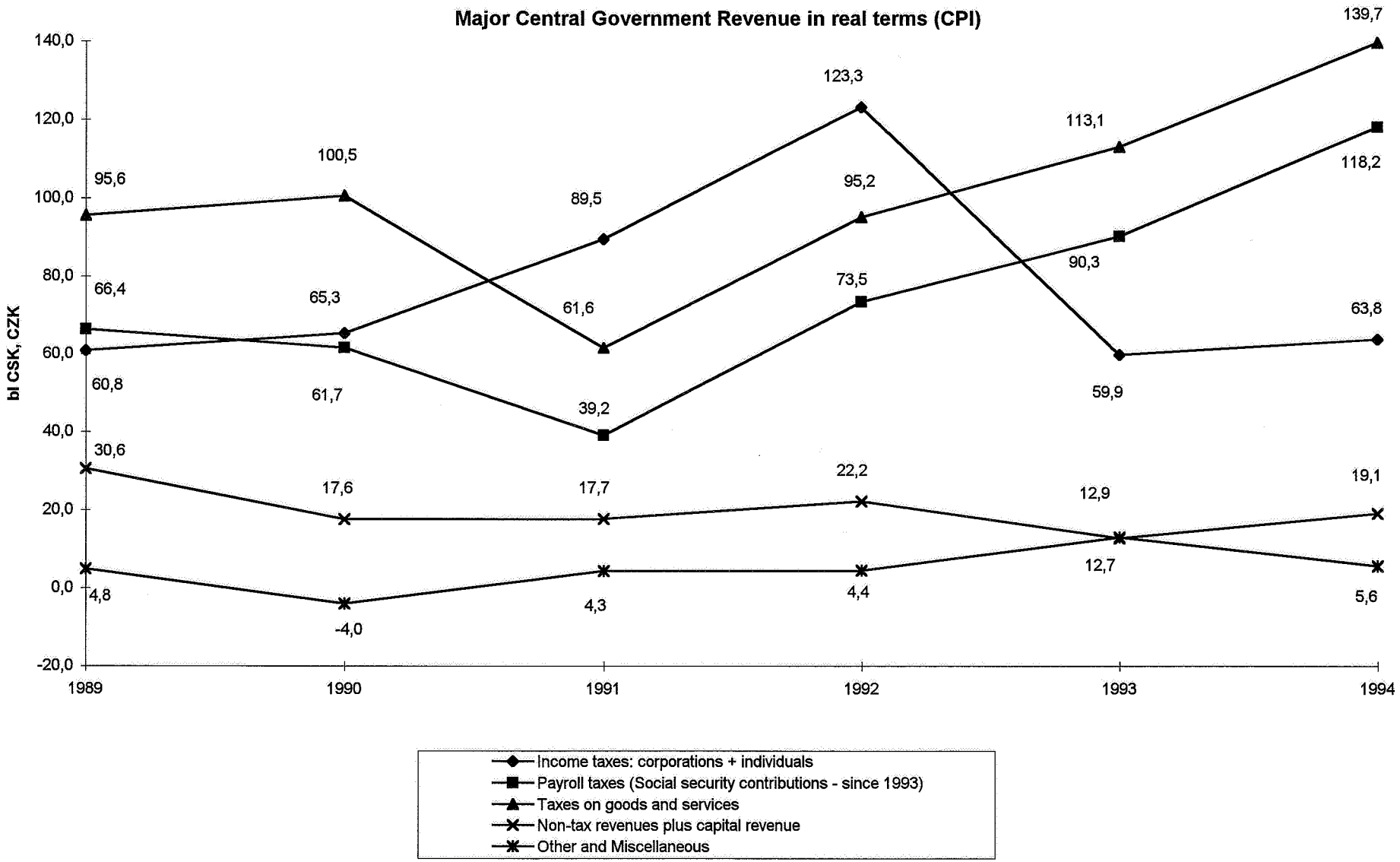

Major Central Government Revenue in real terms (CPI)
bl CSK, CZK
140,0
120,0
100,0
80,0
60,0
40,0
20,0
0,0
-20,0
1989
1990
1991
1992
1993
1994
95,6
100,5
89,5
113,1
139,7
66,4
65,3
61,6
95,2
118,2
60,8
61,7
39,2
73,5
90,3
59,9
63,8
30,6
17,6
17,7
22,2
12,9
19,1
4,8
-4,0
4,3
4,4
12,7
5,6
123,3
Income taxes: corporations + individuals
Payroll taxes (Social security contributions - since 1993)
Taxes on goods and services
Non-tax revenues plus capital revenue
Other and Miscellaneous

Chart 9

Ratio of Major Central Government Revenue to GDP (cur. prices)

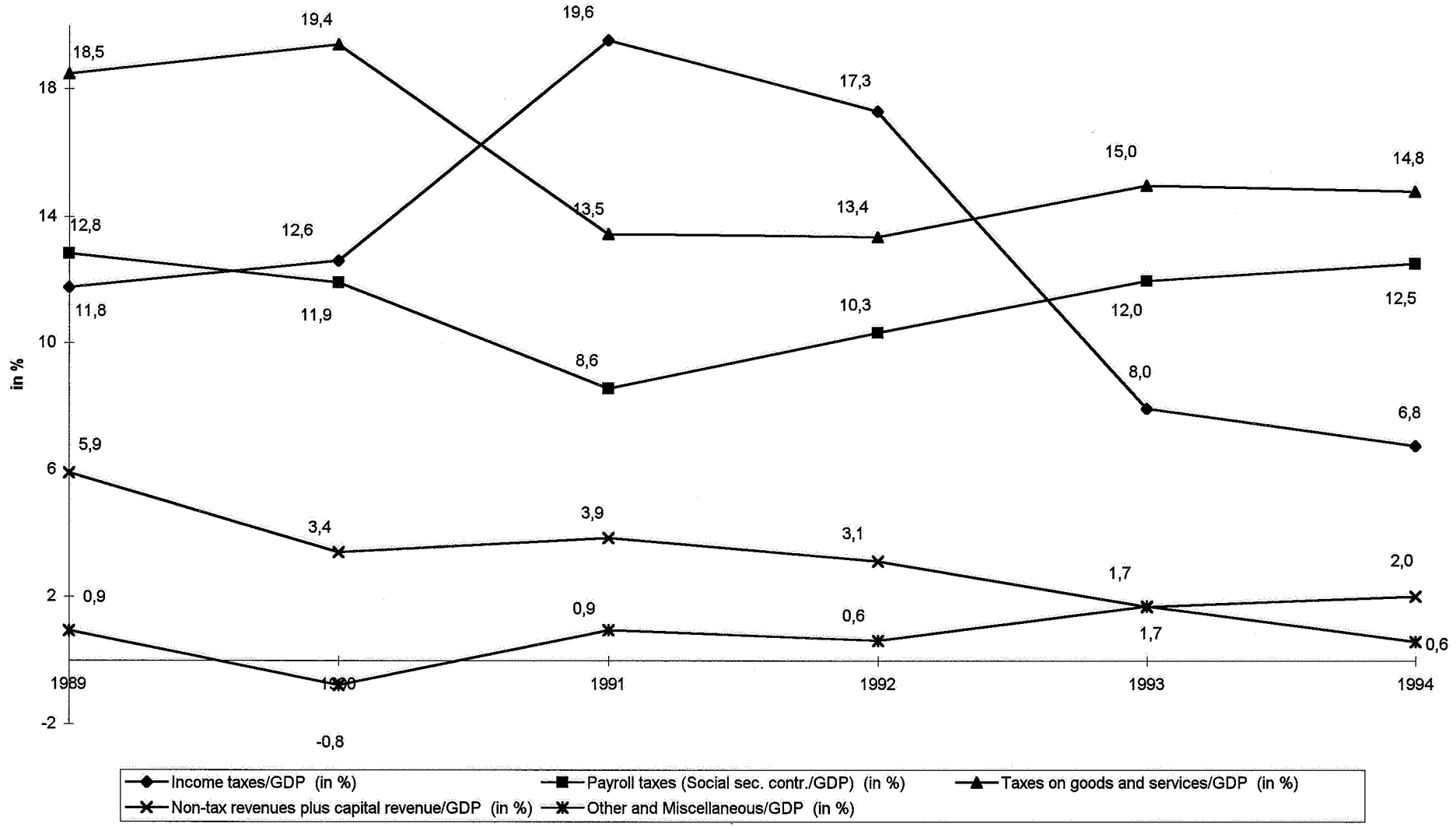


Chart 10

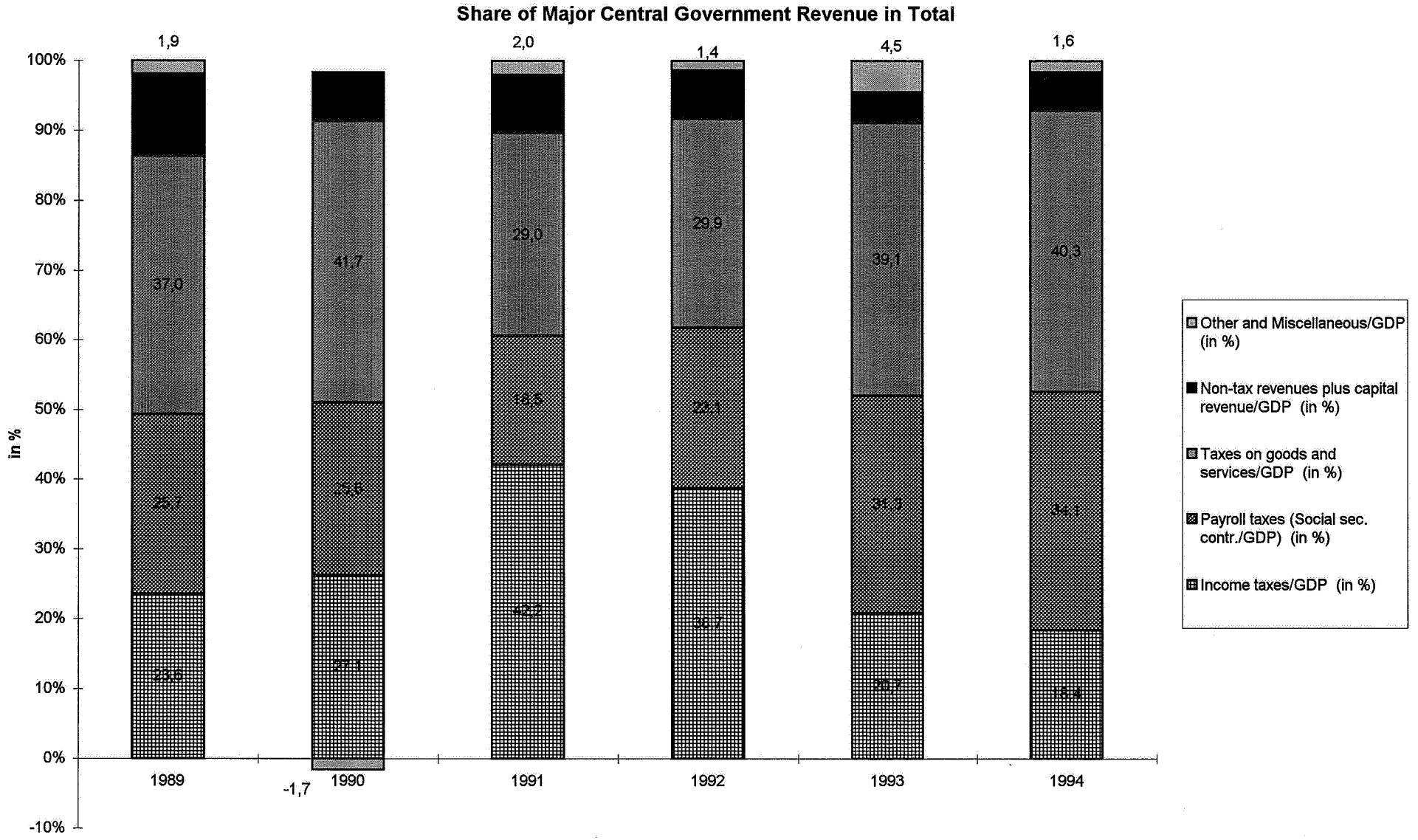

Share of Major Central Government Revenue in Total
in %
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
-10%
1,9
2,0
1,4
4,5
1,6
37,0
41,7
29,0
29,9
39,1
40,3
25,7
25,5
16,5
22,1
31,3
34,1
23,6
27,1
42,2
36,7
26,7
24,4
-1,7
1989
1990
1991
1992
1993
1994
Other and Miscellaneous/GDP (in %)
Non-tax revenues plus capital revenue/GDP (in %)
Taxes on goods and services/GDP (in %)
Payroll taxes (Social sec. contr./GDP) (in %)
Income taxes/GDP (in %)

Chart 11

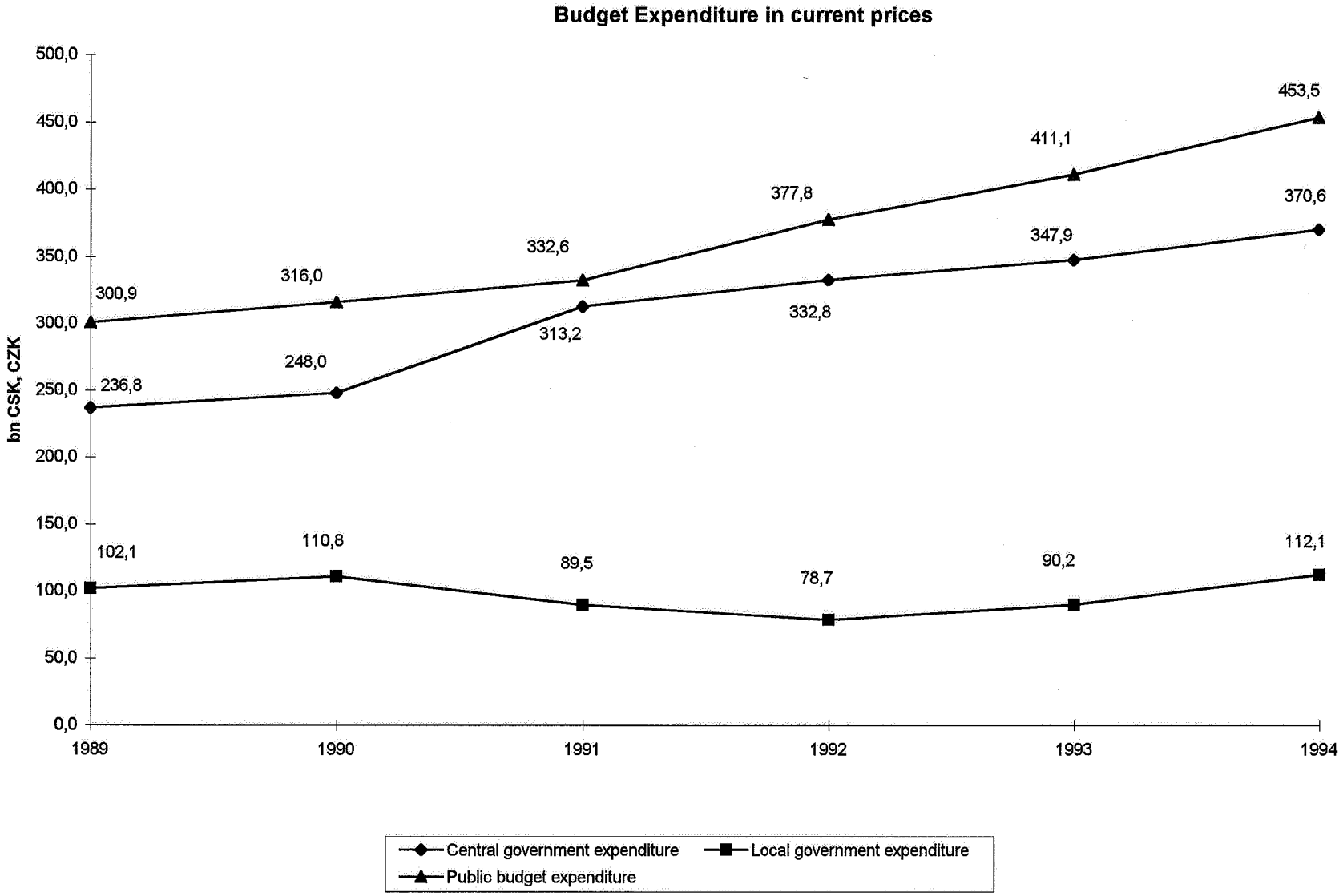

Budget Expenditure in current prices
bn CSK, CZK
500,0
450,0
400,0
350,0
300,0
250,0
200,0
150,0
100,0
50,0
0,0
1989
1990
1991
1992
1993
1994
300,9
316,0
332,6
377,8
411,1
453,5
236,8
248,0
313,2
332,8
347,9
370,6
102,1
110,8
89,5
78,7
90,2
112,1
Central government expenditure
Local government expenditure
Public budget expenditure

Chart 12

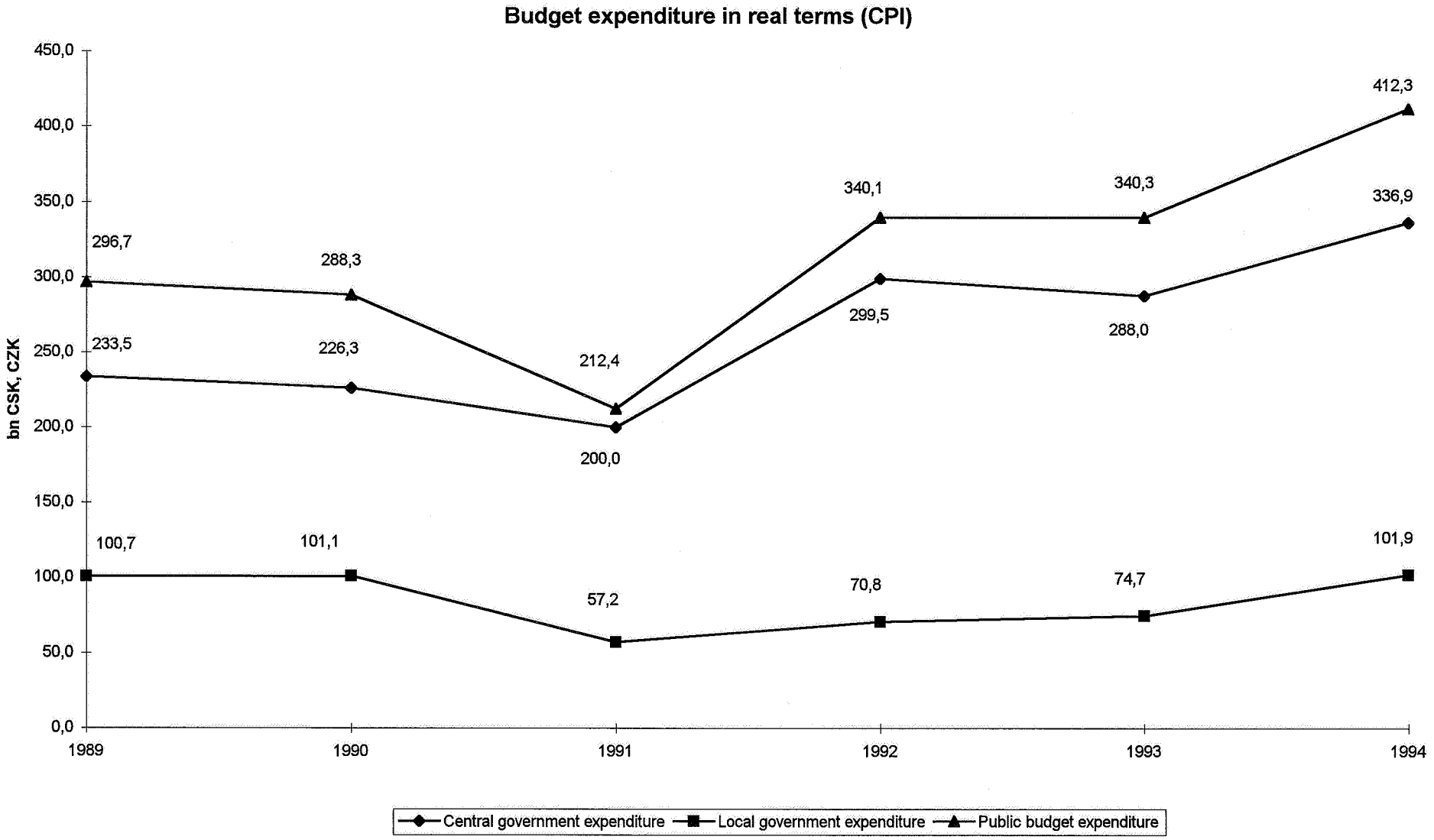

Budget expenditure in real terms (CPI)
bn CSK, CZK
450,0
400,0
350,0
300,0
250,0
200,0
150,0
100,0
50,0
0,0
1989
1990
1991
1992
1993
1994
296,7
288,3
212,4
340,1
340,3
412,3
233,5
226,3
200,0
299,5
288,0
336,9
100,7
101,1
57,2
70,8
74,7
101,9
Central government expenditure
Local government expenditure
Public budget expenditure

Chart 13

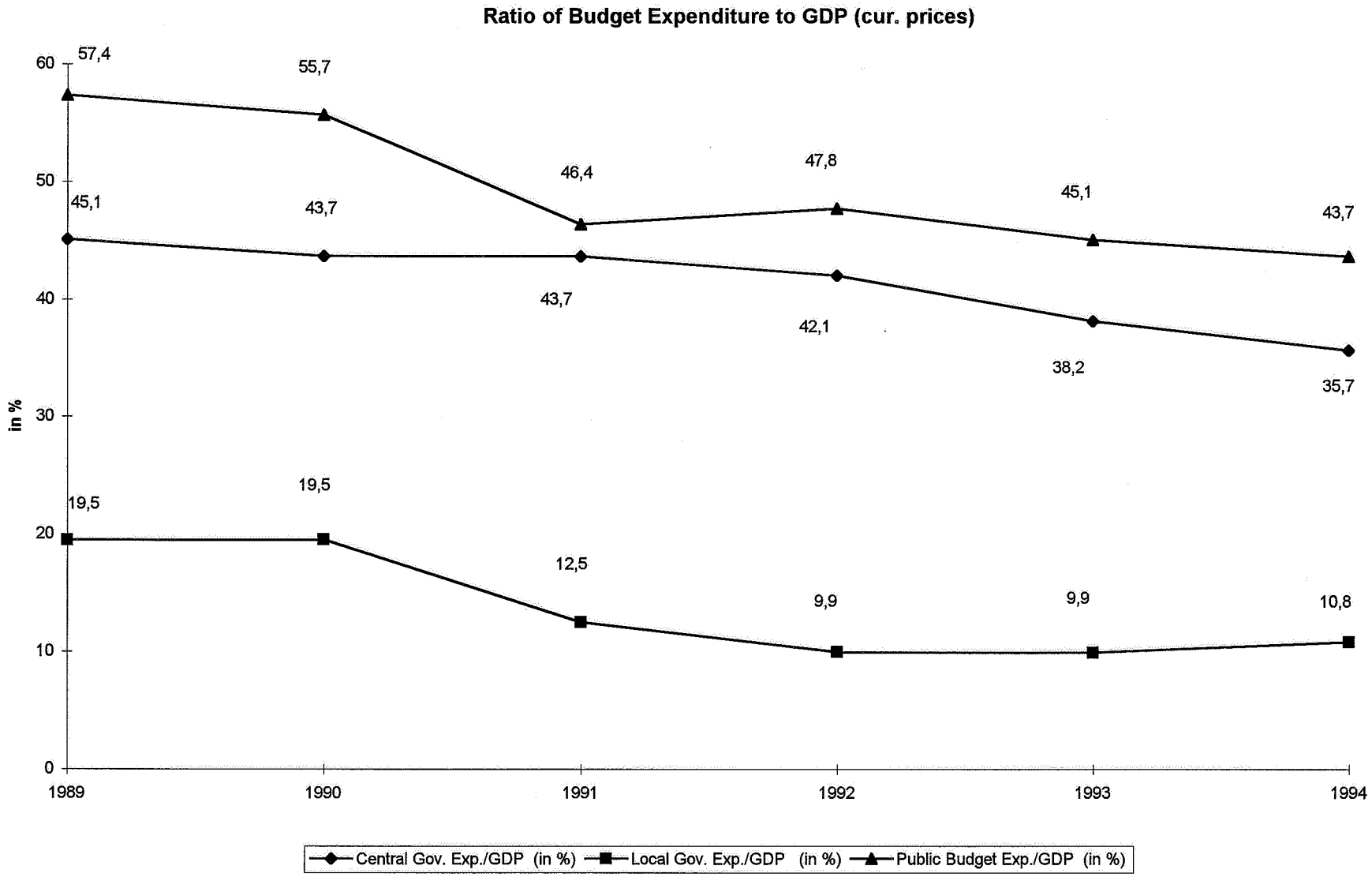

Ratio of Budget Expenditure to GDP (cur. prices)
in %
60
50
40
30
20
10
0
1989
1990
1991
1992
1993
1994
57,4
55,7
46,4
47,8
45,1
43,7
45,1
43,7
43,7
42,1
38,2
35,7
19,5
19,5
12,5
9,9
9,9
10,8
Central Gov. Exp./GDP (in %)
Local Gov. Exp./GDP (in %)
Public Budget Exp./GDP (in %)

Chart 14

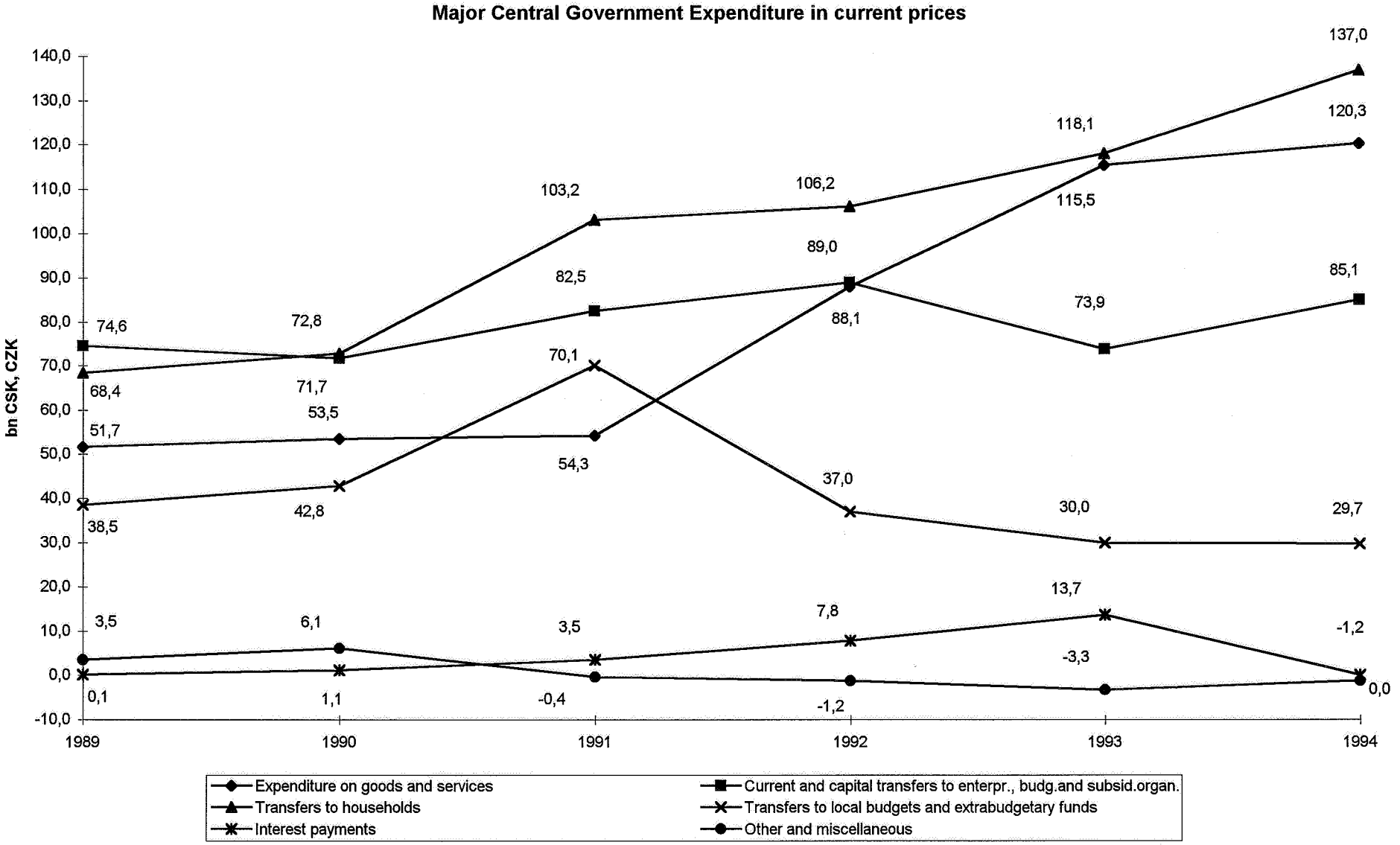

Major Central Government Expenditure in current prices
bn CSK, CZK
140,0
130,0
120,0
110,0
100,0
90,0
80,0
70,0
60,0
50,0
40,0
30,0
20,0
10,0
0,0
-10,0
1989
1990
1991
1992
1993
1994
74,6
72,8
71,7
82,5
89,0
88,1
73,9
85,1
68,4
103,2
106,2
118,1
137,0
51,7
53,5
54,3
115,5
120,3
38,5
42,8
70,1
37,0
30,0
29,7
3,5
6,1
3,5
7,8
13,7
-1,2
0,1
1,1
-0,4
-1,2
-3,3
0,0
Expenditure on goods and services
Current and capital transfers to enterpr., budg.and subsid.organ.
Transfers to households
Transfers to local budgets and extrabudgetary funds
Interest payments
Other and miscellaneous

Chart 15

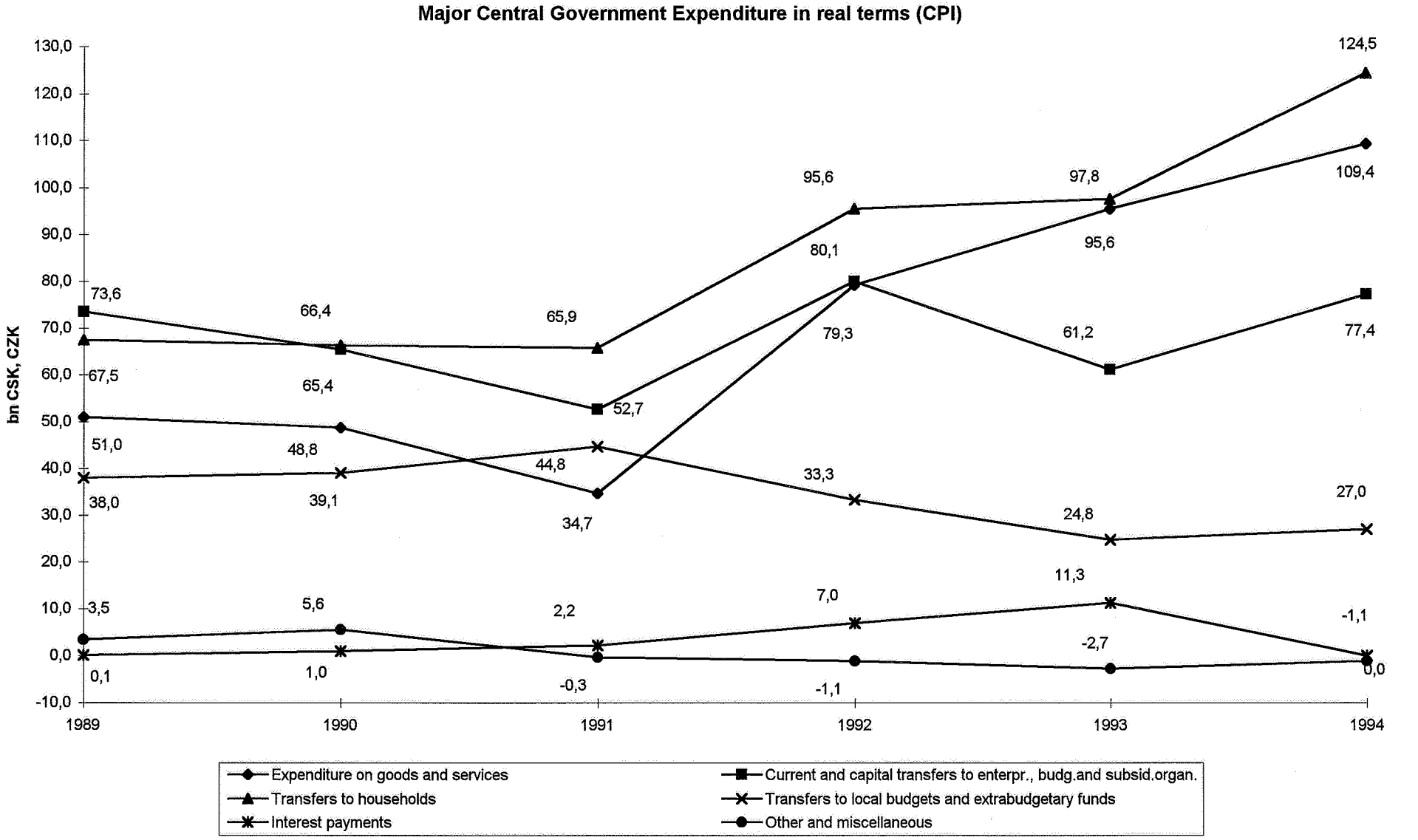

Major Central Government Expenditure in real terms (CPI)
bn CSK, CZK
130,0
120,0
110,0
100,0
90,0
80,0
70,0
60,0
50,0
40,0
30,0
20,0
10,0
0,0
-10,0
1989
1990
1991
1992
1993
1994
73,6
66,4
65,9
95,6
97,8
124,5
67,5
65,4
52,7
80,1
95,6
109,4
51,0
48,8
34,7
79,3
61,2
77,4
38,0
39,1
44,8
33,3
24,8
27,0
3,5
5,6
2,2
7,0
11,3
-1,1
0,1
1,0
-0,3
-1,1
-2,7
0,0
Expenditure on goods and services
Current and capital transfers to enterpr., budg.and subsid.organ.
Transfers to households
Transfers to local budgets and extrabudgetary funds
Interest payments
Other and miscellaneous

Chart 16

Ratio of Major Central Gov. Expenditure to GDP (cur. prices)

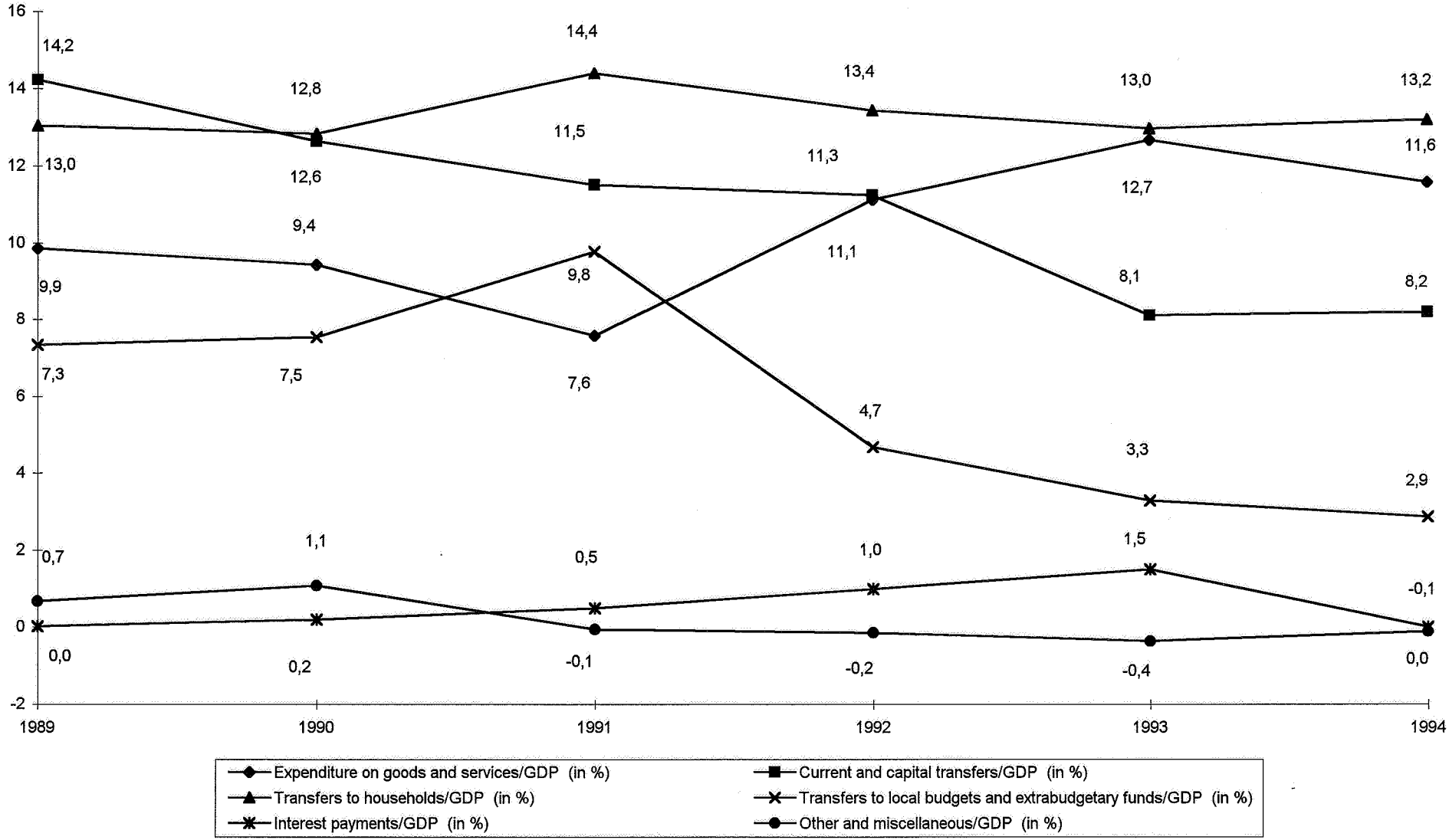


Chart 17

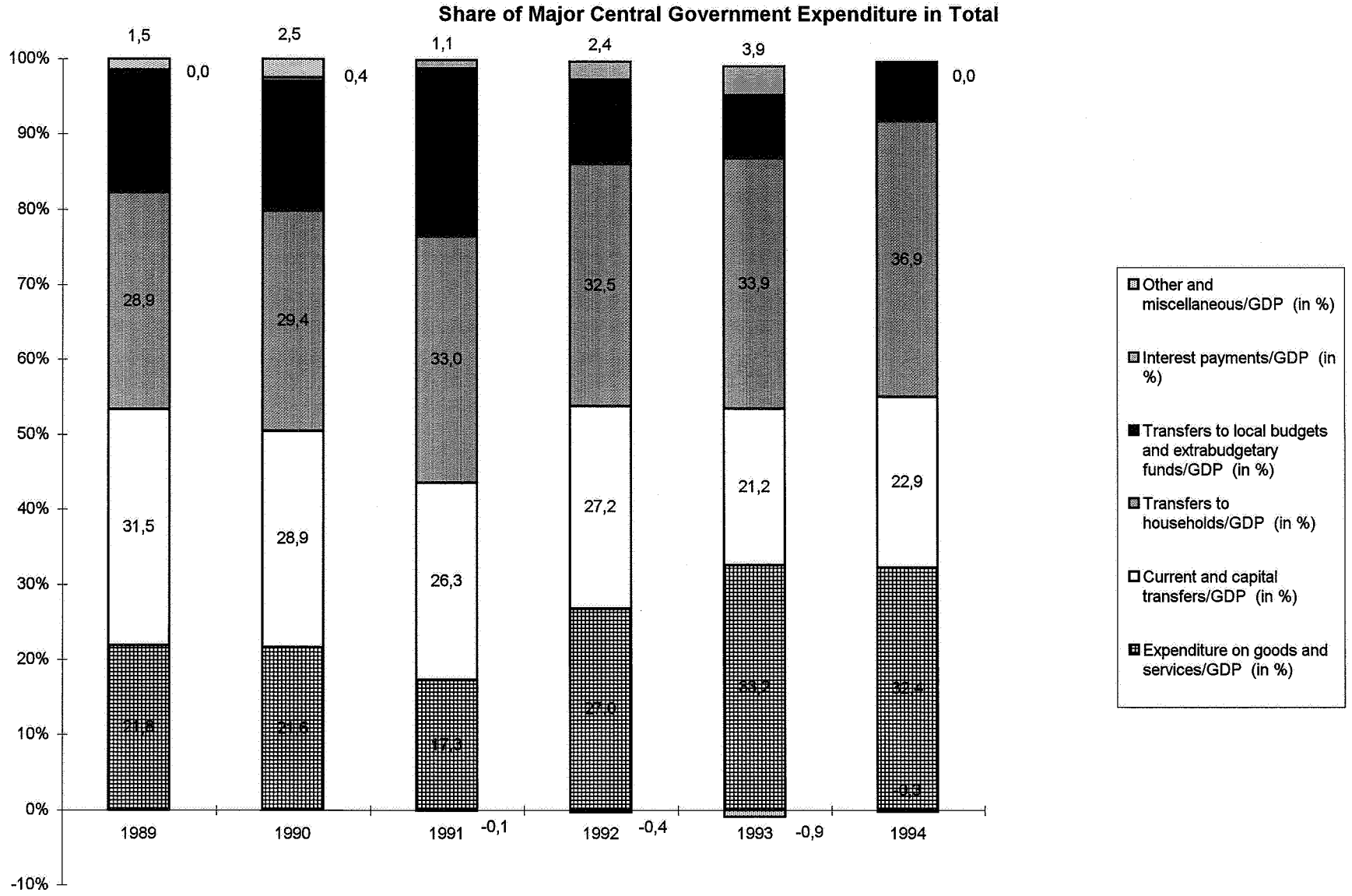

Share of Major Central Government Expenditure in Total
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
-10%
1,5
2,5
1,1
2,4
3,9
0,0
0,4
0,0
28,9
29,4
33,0
32,5
33,9
36,9
31,5
28,9
26,3
27,2
21,2
22,9
-0,1
-0,4
-0,9
1989
1990
1991
1992
1993
1994
Other and miscellaneous/GDP (in %)
Interest payments/GDP (in %)
Transfers to local budgets and extrabudgetary funds/GDP (in %)
Transfers to households/GDP (in %)
Current and capital transfers/GDP (in %)
Expenditure on goods and services/GDP (in %)

Table 3

Estimation of Potential Output, 1989-1994

	1989	1990	1991	1992	1993	1994
Actual GDP - 1984 prices (bn CSK, CZK)	509,9	503,7	432,1	404,5	400,7	411,2
Actual employment (in 1000 employees)	5403	5351	5059	4927	4848	4899
Actual productivity [=Actual GDP/Actual employment]	0,094	0,094	0,085	0,082	0,083	0,084
Actual productivity (1989 = 100)	100	99,74	90,50	86,99	87,58	88,94
Employment adjustment						
"Inherited" over-employment (in % of total actual labour force)	5%	4,7%	4%	3%	2%	1%
Labor hoarding (in 1000 empl.) [= 1% of actual labor force per 5 % of cumulative output decline since 1989]	0,00	13,01	154,38	203,69	207,65	189,66
Labor hoarding (in % of actual labor force)	0,00%	0,24%	3,05%	4,13%	4,28%	3,87%
Employment adjusted (in 1000 employees) [= Actual employment - Labor hoarding - Over-employment]	5133	5086	4702	4576	4543	4660
Productivity adjustment						
Productivity adjusted with respect to employment [= Actual GDP/Employment adjusted]	0,0993	0,0990	0,0919	0,0884	0,0882	0,0882
Productivity adjusted (1989 = 100)	100	99,68	92,50	88,99	88,78	88,82
Productivity adjustment due to economic restructuring and external trade shocks	100 % of 198	99 % of 1989	96 % of 1989	96 % of 1989	96 % of 1989	96 % of 1989
Productivity benchmark [= Productivity adjusted at the level of 1989 for the period 1989-94]	0,0993	0,0983	0,0954	0,0954	0,0954	0,0954
Potential GDP - 1984 prices [= Productivity benchmark * Employment adjusted]	509,9	500,2	448,4	436,4	433,3	444,4
GDP gap (bn CSK, CZK) [= Potential GDP - Actual GDP]	0,0	-3,5	16,3	31,9	32,6	33,2
GDP gap (as % of Potential GDP) [= GDP gap/Potential GDP]	0,00%	-0,69%	3,64%	7,30%	7,52%	7,48%

Chart 18

Actual and Potential Output

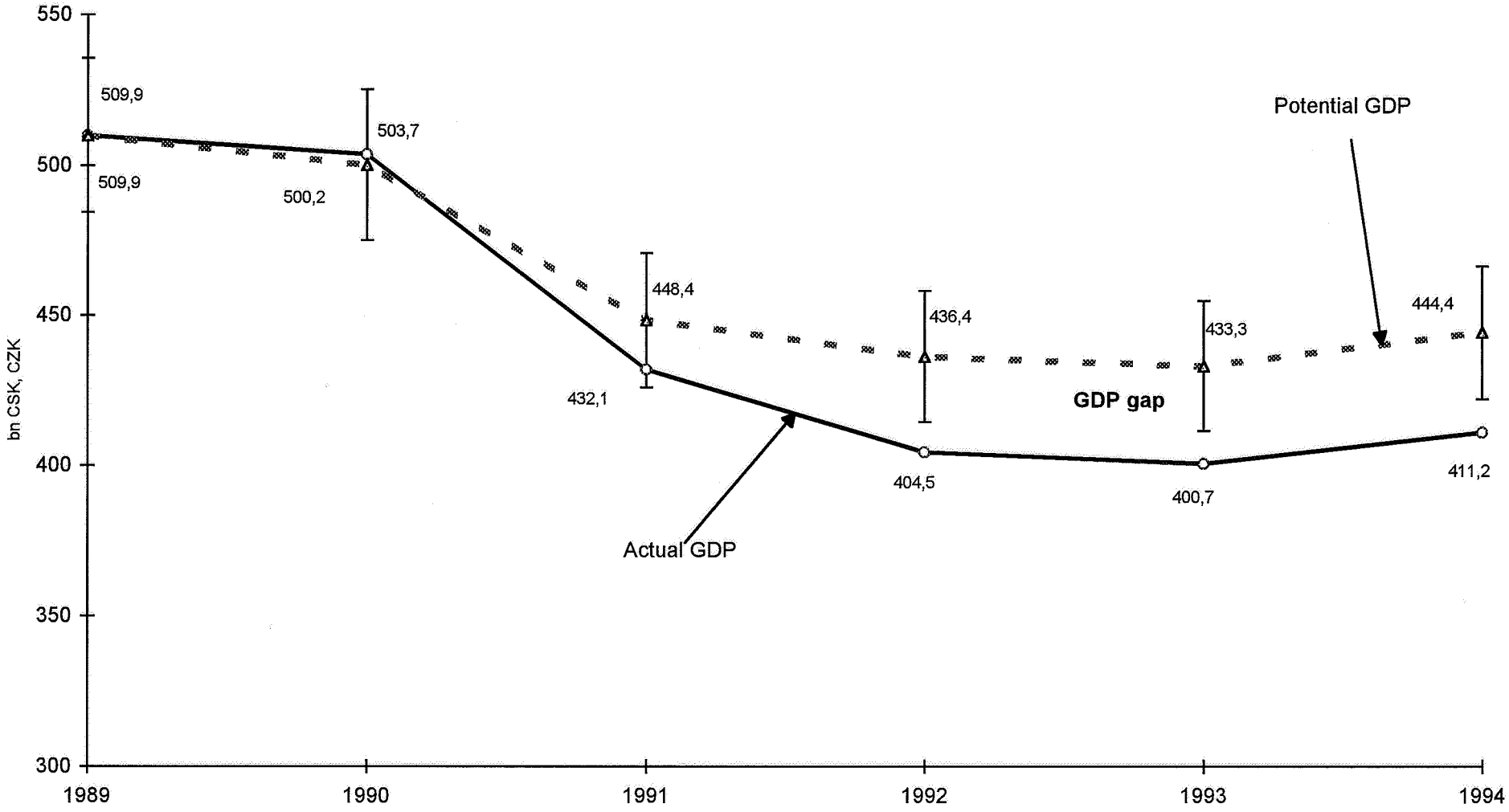


Table 4

Revenue and Income Elasticities of Revenue in the Czech Republic in 1989 - 1994

GFS-methodology (bn CSK, CZK)

	1989	1990	1991	1992	1993	1994	(90-89)/89 1990	(91-90)/90 1991	(92-91)/91 1992	(93-92)/92 1993	(94-93)/93 1994	(92-90)/90 90-92	(93-90)/90 90-93	(94-90)/90 90-94	(94-92)/92 92-94
REVENUE															
Central Government Revenue	261,8	264,3	332,6	354,1	349,1	381,1	1,0%	25,8%	6,5%	-1,4%	9,2%	34,0%	32,1%	44,2%	7,6%
Tax Revenue	228,9	251,1	304,9	326,1	333,7	360,1	9,7%	21,4%	7,0%	2,3%	7,9%	29,9%	32,9%	43,4%	10,4%
Taxes on income	61,7	71,6	140,2	137,0	72,4	70,2	16,0%	95,8%	-2,3%	-47,2%	-3,0%	91,3%	1,1%	-2,0%	-48,8%
Corporations	61,6	71,4	99,1	85,6	70,9	64,6	15,9%	38,8%	-13,6%	-17,2%	-8,9%	19,9%	-0,7%	-9,5%	-24,5%
Payroll taxes (Social sec. contr. - since 1993)	67,3	67,6	61,4	81,7	109,1	130,0	0,4%	-9,2%	33,1%	33,5%	19,2%	20,9%	61,4%	92,3%	59,1%
Taxes on goods and services (indirect taxes)	96,9	110,2	96,5	105,8	136,6	153,7	13,7%	-12,4%	9,6%	29,1%	12,5%	-4,0%	24,0%	39,5%	45,3%
Turnover tax (VAT - since 1993)	84,8	90,2	88,8	94,2	77,1	85,8	6,4%	-1,6%	6,1%	-18,2%	11,3%	4,4%	-14,5%	-4,9%	-8,9%
Excises					40,0	46,4					16,0%				
Local Government Revenue	101,9	109,0	91,9	79,0	91,1	111,0	7,0%	-15,7%	-14,0%	15,3%	21,8%	-27,5%	-16,4%	1,8%	40,5%
Public Budget Revenue	325,7	330,5	354,4	399,4	413,2	461,1	1,5%	7,2%	12,7%	3,5%	11,6%	20,8%	25,0%	39,5%	15,4%
Memorandum items															
GDP at current prices (bn CSK, CZK)	524,5	567,3	716,6	791,0	910,6	1037,5	8,2%	26,3%	10,4%	15,1%	13,9%	39,4%	60,5%	82,9%	31,2%
GDP at 1984 prices	509,9	503,7	432,1	404,5	400,7	411,2	-1,2%	-14,2%	-6,4%	-0,9%	2,6%	-19,7%	-20,4%	-18,4%	1,7%
Consumer Price Index (annual average)	101,4	109,6	156,6	111,1	120,8	110,0									
GDP deflator (annual average) (prev. year = 100)	97,7	109,5	147,2	117,9	116,2	111,0									
Government Expenditure deflator (prev. year = 100)	99,7	98,9	131,4	125,4	130,7	110,6									
Unemployment rate (average rate in %)	0	0,3	2,8	3,1	3	3,3									

REVENUE ELASTICITIES

							1990	1991	1992	1993	1994	90-92	90-93	90-94	92-94
Income elasticity of C. G. Revenue (current prices)	[= C. G. Revenue/GDP at current prices]						**0,12**	**0,98**	**0,62**	**-0,09**	**0,66**	**0,86**	**0,53**	**0,53**	**0,24**
Centr. Gov. Revenue (1984 prices) (CPI)	258,2	241,1	212,4	318,7	289,0	346,5	-6,6%	-11,9%	50,1%	-9,3%	19,9%	32,2%	19,8%	43,7%	8,7%
Centr. Gov. Revenue (1984 prices) (GDP deflator)	268,0	241,4	226,0	300,3	300,4	343,3	-9,9%	-6,4%	32,9%	0,0%	14,3%	24,4%	24,5%	42,2%	14,3%
Centr. Gov. Revenue (1984 prices) (Gov. Expen. deflator)	262,6	267,2	253,1	282,4	267,1	344,6	1,8%	-5,3%	11,6%	-5,4%	29,0%	5,7%	-0,1%	28,9%	22,0%
Income elasticity of C.G.Revenue (1984 - CPI)	[= C. G. Revenue (1984 - CPI)/GDP 1984]						**5,43**	**0,84**	**-7,84**	**9,93**	**7,59**	**-1,63**	**-0,97**	**-2,38**	**5,25**
Income elasticity of C.G.Revenue (1984 - GDP defl.)	[= C. G. Revenue (1984 - GDP defl.)/GDP 1984]						**8,16**	**0,45**	**-5,15**	**-0,03**	**5,45**	**-1,24**	**-1,20**	**-2,30**	**8,64**
Income elasticity of C.G.Revenue (1984 - G. E. defl.)	[= C. G. Revenue (1984 - G.E. defl.)/GDP 1984]						**-1,46**	**0,37**	**-1,81**	**5,76**	**11,07**	**-0,29**	**0,00**	**-1,58**	**13,30**
Income elasticity of Tax Revenue (current prices)	[= Tax Revenue/GDP at current prices]						**1,19**	**0,81**	**0,67**	**0,15**	**0,57**	**0,76**	**0,54**	**0,52**	**0,33**
Tax Revenue (1984 prices) (CPI)	225,7	229,1	194,7	293,5	276,2	327,4	1,5%	-15,0%	50,8%	-5,9%	18,5%	28,1%	20,6%	42,9%	11,5%
Tax Revenue (1984 prices) (GDP deflator)	234,3	229,3	207,1	276,6	287,2	324,4	-2,1%	-9,7%	33,5%	3,8%	13,0%	20,6%	25,2%	41,5%	17,3%
Tax Revenue (1984 prices) (Gov. Expen. deflator)	229,6	253,9	232,0	260,0	255,3	325,6	10,6%	-8,6%	12,1%	-1,8%	27,5%	2,4%	0,6%	28,2%	25,2%
Income elasticity of Tax Revenue (1984 - CPI)	[= Tax Revenue (1984 - CPI)/GDP 1984]						**-1,23**	**1,06**	**-7,95**	**6,27**	**7,06**	**-1,43**	**-1,01**	**-2,34**	**6,96**
Income elasticity of Tax Revenue (1984 - GDP defl.)	[= Tax Revenue (1984 - GDP defl.)/GDP 1984]						**1,75**	**0,68**	**-5,25**	**-4,07**	**4,95**	**-1,05**	**-1,23**	**-2,26**	**10,44**
Income elasticity of Tax Revenue (1984 - G. E. defl.)	[= Tax Revenue (1984 - G.E. defl.)/GDP 1984]						**-8,71**	**0,61**	**-1,89**	**1,94**	**10,50**	**-0,12**	**-0,03**	**-1,54**	**15,22**

Table 4

REVENUE ELASTICITIES

							1990	1991	1992	1993	1994	90-92	90-93	90-94	92-94
Income elasticity of turnover tax (VAT) - cur. prices	[= Turnover tax/GDP at current prices]						**0,78**	**-0,06**	**0,59**	**-1,20**	**0,81**	**0,11**	**-0,24**	**-0,06**	**-0,29**
Turnover tax (VAT) (1984 - CPI)	83,6	82,3	56,7	84,8	63,8	78,0	-1,6%	-31,1%	49,5%	-24,7%	22,2%	3,0%	-22,4%	-5,2%	-8,0%
Turnover tax (VAT) (1984 - GDP defl.)	86,8	82,4	60,3	79,9	66,4	77,3	-5,1%	-26,8%	32,4%	-17,0%	16,5%	-3,0%	-19,5%	-6,2%	-3,3%
Income elasticity of turnover t. (VAT) (1984-CPI)	[= Turnover tax (VAT)(1984-CPI)/GDP 1984]						**1,31**	**2,19**	**-7,75**	**26,32**	**8,48**	**-0,15**	**1,10**	**0,28**	**-4,83**
Income elasticity of turnover t. (VAT) (1984-GDP defl.)	[= Turnover tax (VAT)(1984-GDP defl.)/GDP 1984]						**4,19**	**1,88**	**-5,08**	**18,05**	**6,30**	**0,15**	**0,95**	**0,34**	**-1,97**
Income elast.of indirect taxes (VAT + Excise) - cur. pr.	[= Taxes on goods and services/GDP at cur. pr.]						**1,68**	**-0,47**	**0,93**	**1,93**	**0,90**	**-0,10**	**0,40**	**0,48**	**1,45**
Indirect taxes (1984 - CPI)	95,6	100,5	61,6	95,2	113,1	139,7	5,2%	-38,7%	54,5%	18,7%	23,6%	-5,3%	12,5%	39,0%	46,7%
Indirect taxes (1984 - GDP defl.)	99,2	100,6	65,6	89,7	117,6	138,5	1,5%	-34,9%	36,9%	31,0%	17,8%	-10,8%	16,8%	37,6%	54,3%
Income elasticity of indirect taxes (1984-CPI)	[= Taxes on goods and services/GDP 1984 - CPI]						**-4,29**	**2,72**	**-8,54**	**-19,95**	**8,99**	**0,27**	**-0,61**	**-2,12**	**28,21**
Income elasticity of indirect taxes (1984-GDP defl.)	[= Taxes on goods and services/GDP 1984 defl.]						**-1,21**	**2,45**	**-5,77**	**-33,00**	**6,79**	**0,55**	**-0,82**	**-2,05**	**32,79**
Income elasticity of Public Bud. Rev. (cur. prices)	[= Public G. Revenue/GDP at current prices]						**0,18**	**0,27**	**1,22**	**0,23**	**0,83**	**0,53**	**0,41**	**0,48**	**0,50**
Public Gov. Revenue (1984 prices) (CPI)	321,2	301,6	226,3	359,5	342,1	419,2	-6,1%	-25,0%	58,9%	-4,9%	22,5%	19,2%	13,4%	39,0%	16,6%
Public Gov. Revenue (1984 prices) (GDP deflator)	333,4	301,8	240,8	338,8	355,6	415,4	-9,5%	-20,2%	40,7%	5,0%	16,8%	12,2%	17,8%	37,6%	22,6%
Public Gov. Revenue (1984 prices) (Gov. Expen. deflator)	326,7	334,2	269,7	318,5	316,1	416,9	2,3%	-19,3%	18,1%	-0,7%	31,9%	-4,7%	-5,4%	24,8%	30,9%
Income elasticity of Public Bud. Rev. (1984 - CPI)	[= Public G. Revenue (1984 - CPI)/GDP 1984]						**5,03**	**1,76**	**-9,21**	**5,16**	**8,61**	**-0,98**	**-0,66**	**-2,12**	**10,02**
Income elasticity of Public Bud. Rev. (1984 - GDP defl.)	[= Public G. Revenue (1984 - GDP defl.)/GDP 1984]						**7,78**	**1,42**	**-6,37**	**-5,29**	**6,42**	**-0,62**	**-0,87**	**-2,05**	**13,66**
Income elasticity of Public Bud. Rev. (1984 - G. E. defl.)	[= Public G. Revenue (1984 - G.E. defl.)/GDP 1984]						**-1,89**	**1,36**	**-2,83**	**0,79**	**12,16**	**0,24**	**0,26**	**-1,35**	**18,65**

Source: State Final Account(s), 1990, 1991, 1992, 1993, 1994, Federal Ministry of Finance, Czech Ministry of Finance; own computations.
own computations
Government expenditure deflator - Odhad tvorby a uziti hrubeho domaciho produktu 4. ctvrtleti 1994, Czech Statistical Office, Prague, 1994.

Chart 19

Relative Changes of Central Government Revenue and GDP

(current prices)

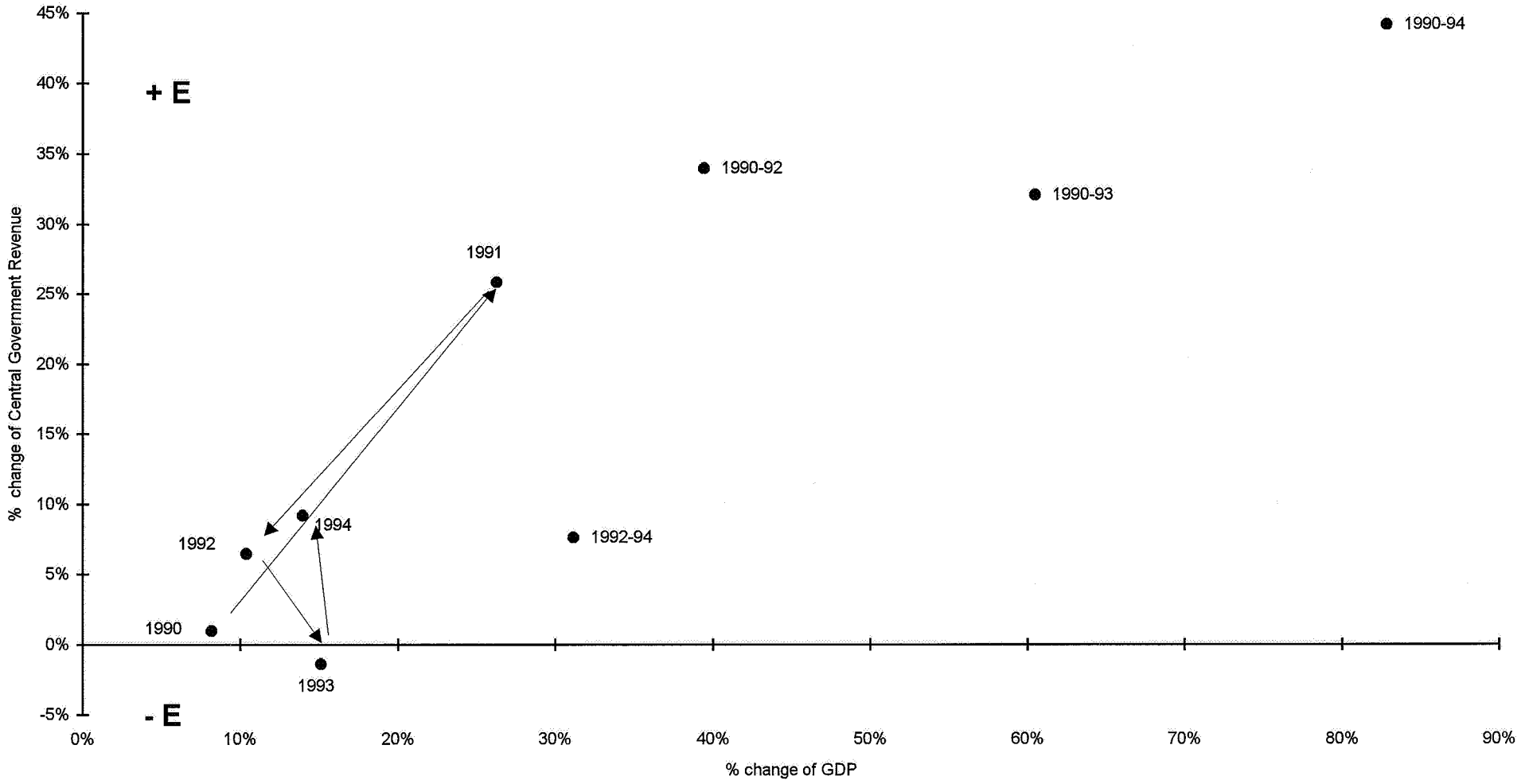


Chart 20

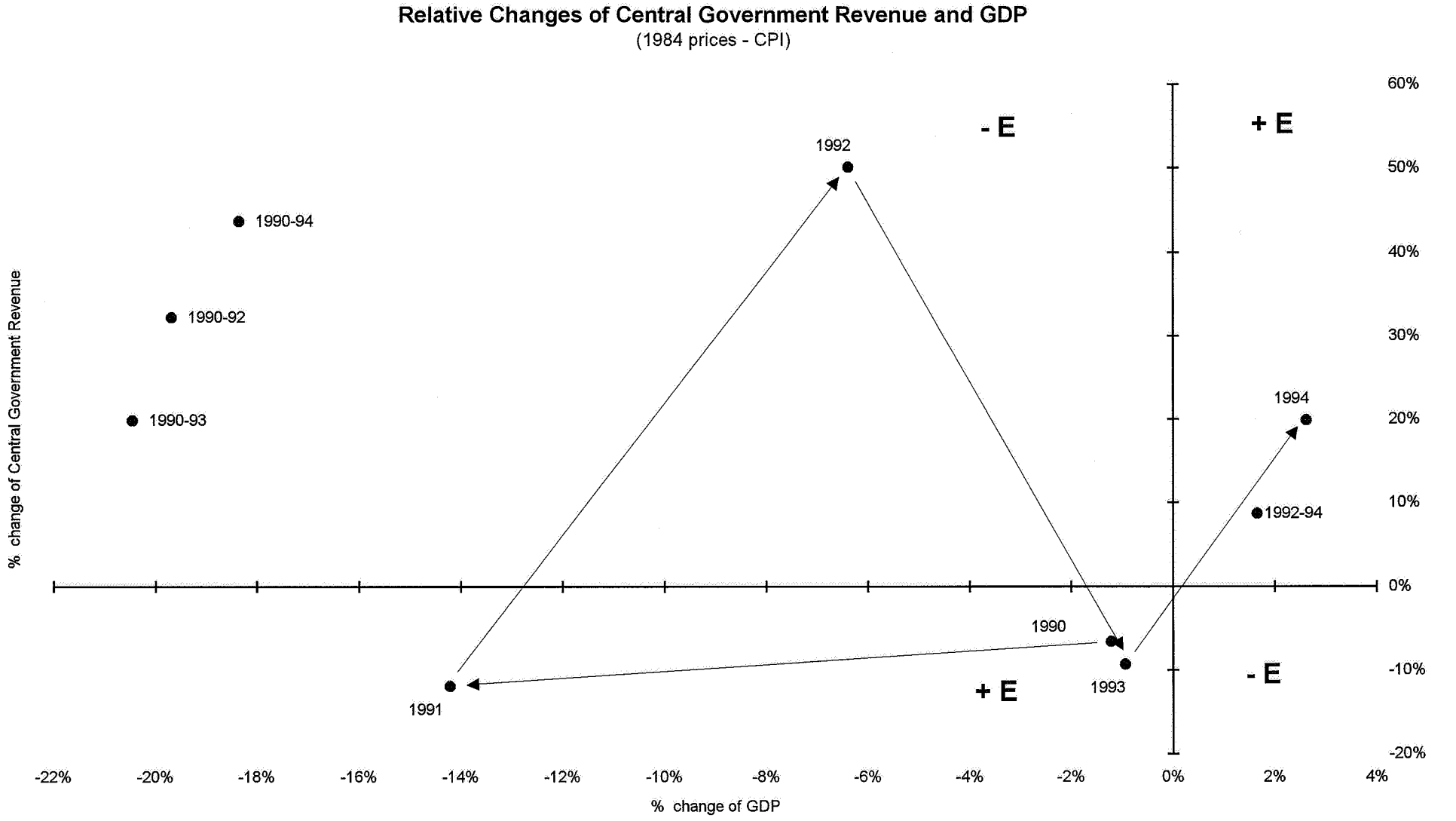

Relative Changes of Central Government Revenue and GDP
(1984 prices - CPI)
- E
+ E
+ E
- E
1992
1990-94
1990-92
1990-93
1994
1992-94
1990
1991
1993
% change of Central Government Revenue
% change of GDP
60%
50%
40%
30%
20%
10%
0%
-10%
-20%
-22%
-20%
-18%
-16%
-14%
-12%
-10%
-8%
-6%
-4%
-2%
0%
2%
4%

Chart 21

Income Elasticity of Central Government Revenue

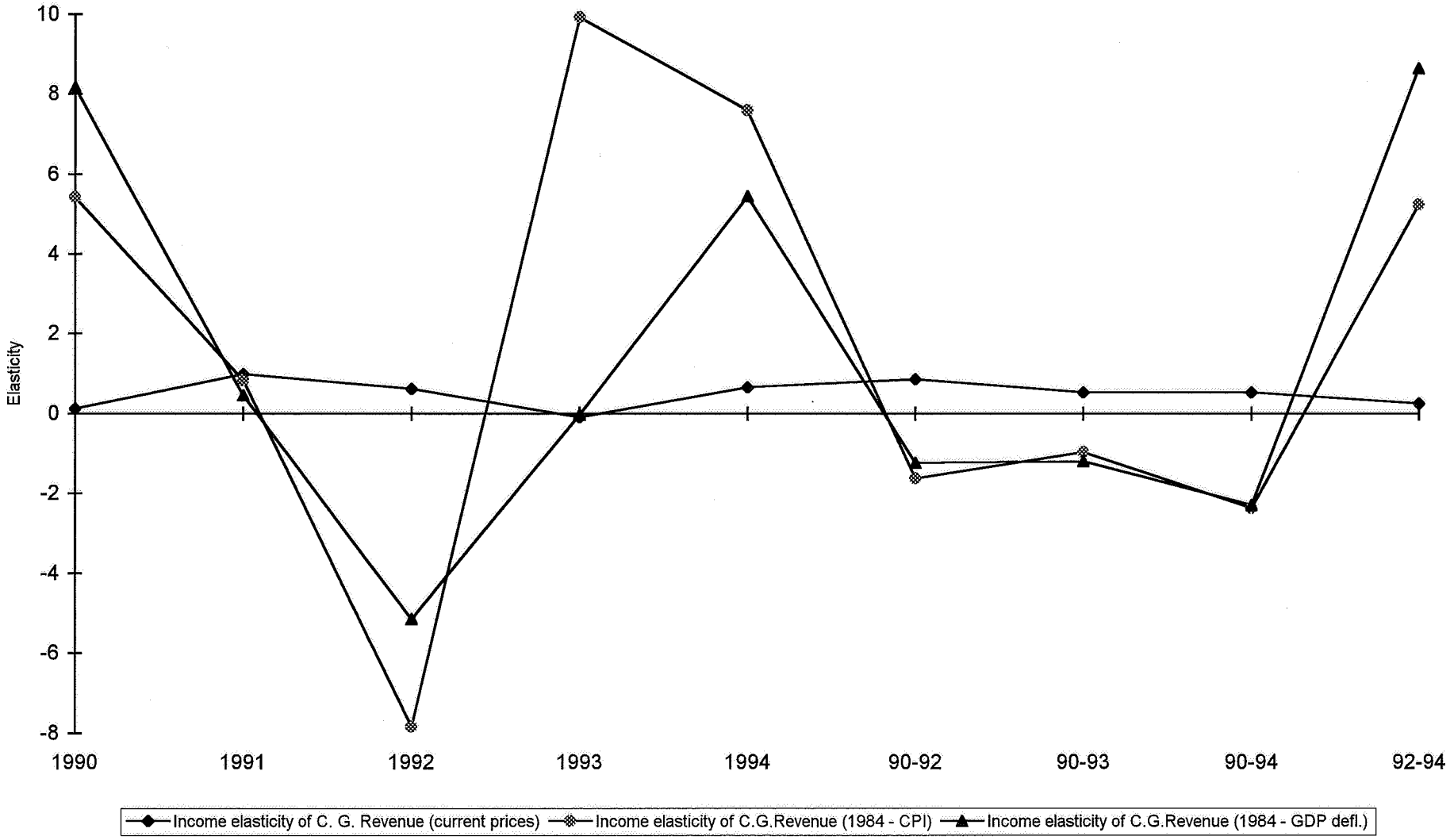


Chart 22

Income Elasticity of Turnover Tax (VAT since 1993)

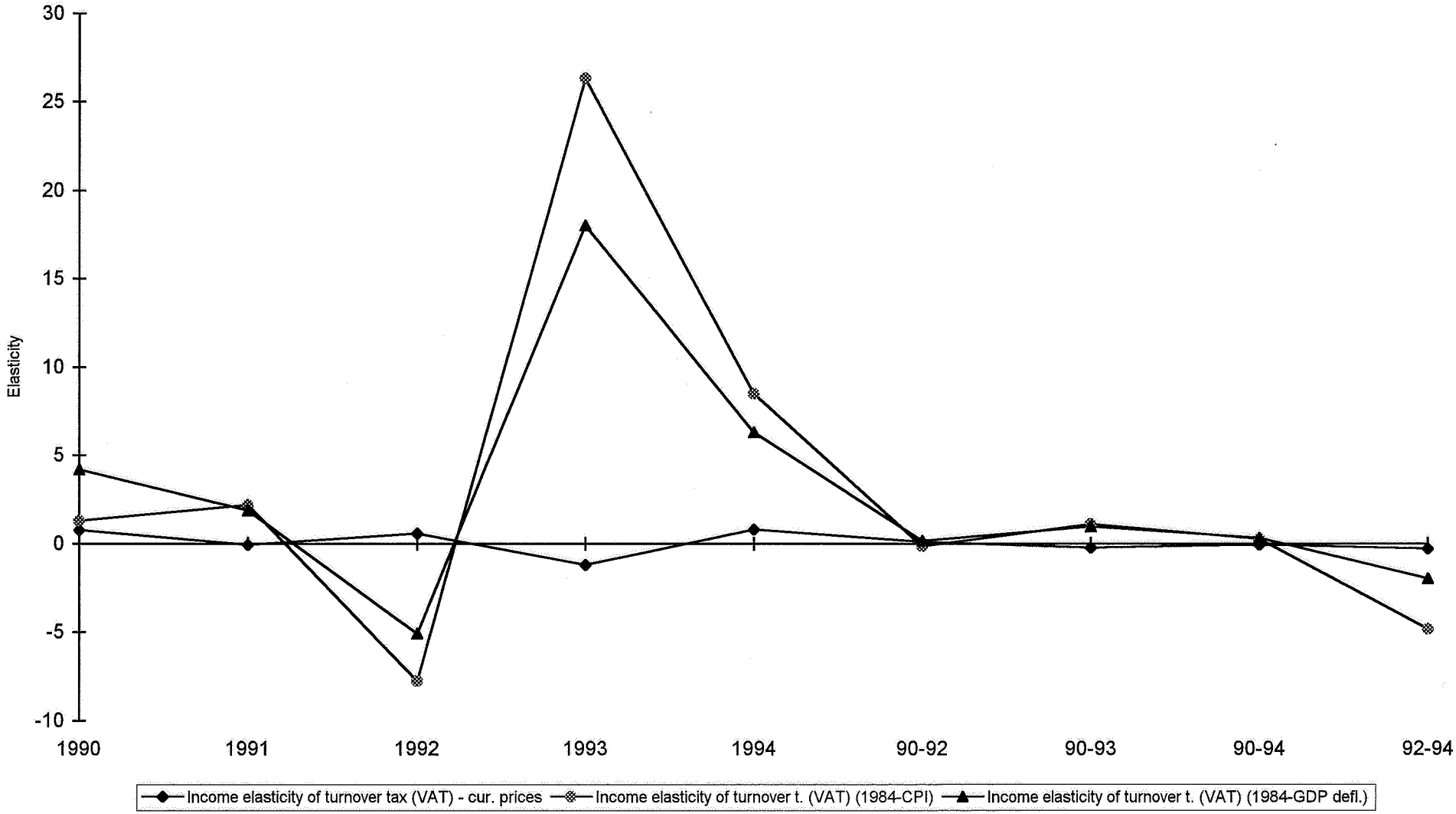


Table 5

State Budget Revenue and Expenditure in 1991-1994 (quarterly data)

(in bn CSK, CZK)

	91/Q1	91/Q2	91/Q3	91/Q4	92/Q1	92/Q2	92/Q3	92/Q4	93/Q1	93/Q2	93/Q3	93/Q4	94/Q1	94/Q2	94/Q3	94/Q4
Revenue total (*)	49,2	48,6	71,3	56,2	56,9	63,1	62,0	69,4	86,4	88,7	83,4	99,4	89,3	97,5	96,7	107,0
Revenue total (**)	55,7	60,5	53,0	57,4	58,9	61,1	62,0	69,4								
Turnover tax	13,0	12,4	11,3	12,6	11,6	12,0	13,7	14,9								
Corporate profit tax	14,9	16,8	9,3	10,1	11,4	11,6	10,3	9,7								
Payroll tax	15,6	16,6	18,3	16,9	17,8	16,8	18,5	21,0								
Wage tax	9,4	10,0	10,0	11,3	11,1	12,5	12,9	14,8								
Expenditure total (*)	45,1	45,9	78,3	70,8	52,3	61,5	64,5	74,7	76,0	93,6	84,6	102,7	84,4	92,7	80,8	122,1
Expenditure total (**)	51,6	57,8	60,0	70,9	52,3	61,5	64,5	74,7								
Balance (*)	4,1	2,7	-7,0	-14,6	4,6	1,6	-2,5	-5,3	10,4	-4,9	-1,2	-3,3	4,9	4,8	15,9	-15,1
Balance (**)	4,1	2,7	-7,0	-13,5	6,6	-0,4	-2,5	-5,3								
GDP in current prices (bil. CZK) - quarterly	173,3	181,1	181,5	180,7	180,7	193,0	207,8	209,5	211,6	228,4	237,1	233,5	241,7	257,1	270,9	267,8
Revenue total (*)/GDP in current prices (%)	28,4%	26,8%	39,3%	31,1%	31,5%	32,7%	29,8%	33,1%	40,8%	38,8%	35,2%	42,6%	36,9%	37,9%	35,7%	40,0%
Expenditure total (*)/GDP in cur. prices (%)	26,0%	25,3%	43,1%	39,2%	28,9%	31,9%	31,0%	35,7%	35,9%	41,0%	35,7%	44,0%	34,9%	36,1%	29,8%	45,6%
Balance (*)/GDP nominal prices (%)	2,4%	1,5%	-3,9%	-8,1%	2,5%	0,8%	-1,2%	-2,5%	4,9%	-2,1%	-0,5%	-1,4%	2,0%	1,9%	5,9%	-5,6%

Tax Receipts in 1993-1994

	91/Q1	91/Q2	91/Q3	91/Q4	92/Q1	92/Q2	92/Q3	92/Q4	93/Q1	93/Q2	93/Q3	93/Q4	94/Q1	94/Q2	94/Q3	94/Q4
VAT									22,4	20,8	14,7	19,2	16,1	23,2	20,6	25,9
Excise									10,6	8,8	9,9	10,6	8,7	11,9	12,3	13,4
Corporate income tax									14,2	19,0	17,0	20,6	19,7	14,3	15,3	15,2
Social security contributions									20,8	26,5	28,1	33,6	29,4	31,8	33,4	35,4

Source: (*) Indicators of Social and Economic Development of the Czech Republic No. 4/1994, Czech Statistical Office, Prague, 1994.
(**) State Final Account, 1992, 1994, Czech Ministry of Finance
own computations

Table 5

	91/Q1	91/Q2	91/Q3	91/Q4	92/Q1	92/Q2	92/Q3	92/Q4	93/Q1	93/Q2	93/Q3	93/Q4	94/Q1	94/Q2	94/Q3	94/Q4
141,825																
GDP in current prices (bn CZK) - quarterly	173,3	181,1	181,5	180,7	180,7	193,0	207,8	209,5	211,6	228,4	237,1	233,5	241,7	257,1	270,9	267,8
GDP (cur. prices) average 1990 = 100	122,2	127,7	128,0	127,4	127,4	136,1	146,5	147,7	149,2	161,0	167,2	164,6	170,4	181,3	191,0	188,8
GDP in 1984 prices (bn CZK) - quarterly	116,6	109,1	106,0	100,4	95,2	100,9	105,8	102,6	96,3	101,6	104,9	97,9	98,8	102,8	107,0	102,6
40,62825																
Revenue total (*)	49,2	48,6	71,3	56,2	56,9	63,1	62,0	69,4	86,4	88,7	83,4	99,4	89,3	97,5	96,7	107,0
Revenue total (*) - average 1990 =100	121,1	119,6	175,5	138,3	140,1	155,3	152,6	170,8	212,7	218,3	205,3	244,7	219,8	240,0	238,0	263,4
40,88925																
Expenditure total (*)	45,1	45,9	78,3	70,8	52,3	61,5	64,5	74,7	76,0	93,6	84,6	102,7	84,4	92,7	80,8	122,1
Expenditure total (*) - average 1990 = 100	110,3	112,3	191,5	173,2	127,9	150,4	157,7	182,7	185,9	228,9	206,9	251,2	206,4	226,7	197,6	298,6
Income Elasticities																1,39
Nom. GDP - % change to prev. period	7,5%	4,5%	0,2%	-0,4%	0,0%	6,8%	7,7%	0,8%	1,0%	7,9%	3,8%	-1,5%	3,5%	6,4%	5,4%	-1,1%
Revenue total (*) - % change to prev. period		-1,2%	46,7%	-21,2%	1,2%	10,9%	-1,7%	11,9%	24,5%	2,7%	-6,0%	19,2%	-10,2%	9,2%	-0,8%	10,7%
Income elasticity of revenue (*)		-0,27	211,47	48,05	#DIV/0!	1,60	-0,23	14,59	24,44	0,34	-1,57	-12,64	-2,89	1,44	-0,15	-9,31
Expenditure total (*) - % change to prev. per.		1,8%	70,6%	-9,6%	-26,1%	17,6%	4,9%	15,8%	1,7%	23,2%	-9,6%	21,4%	-17,8%	9,8%	-12,8%	51,1%
Income elasticity of expenditure (*)		0,39	319,59	21,73	#DIV/0!	2,58	0,64	19,33	1,74	2,92	-2,52	-14,09	-5,07	1,54	-2,39	-44,67
VAT - % change to prev. period										-7,1%	-29,3%	30,6%	-16,1%	44,1%	-11,2%	25,7%
Income elasticity of VAT										-0,90	-7,70	-20,16	-4,60	6,92	-2,09	-22,48
Nom. GDP - % change to Q-4	32,6%	31,5%	31,8%	12,1%	4,3%	6,6%	14,5%	15,9%	17,1%	18,3%	14,1%	11,5%	14,2%	12,6%	14,3%	14,7%
Revenue total - % change to Q-4					15,7%	29,8%	-13,0%	23,5%	51,8%	40,6%	34,5%	43,2%	3,4%	9,9%	15,9%	7,6%
Income elasticity of revenue (Q-4)					3,64	4,52	-0,90	1,48	3,03	2,22	2,45	3,76	0,24	0,79	1,12	0,52
VAT - % change to Q-4													-28,1%	11,5%	40,1%	34,9%
Income elasticity of VAT (Q-4)													-1,98	0,92	2,81	2,37

Source: (*) Indicators of Social and Economic Development of the Czech Republic No. 4/1994, Czech Statistical Office, Prague, 1994.
(**) State Final Account, 1992, 1994, Czech Ministry of Finance
own computations

Chart 23

State Budget Revenue, Expenditure and Balance, 1991 - 1994

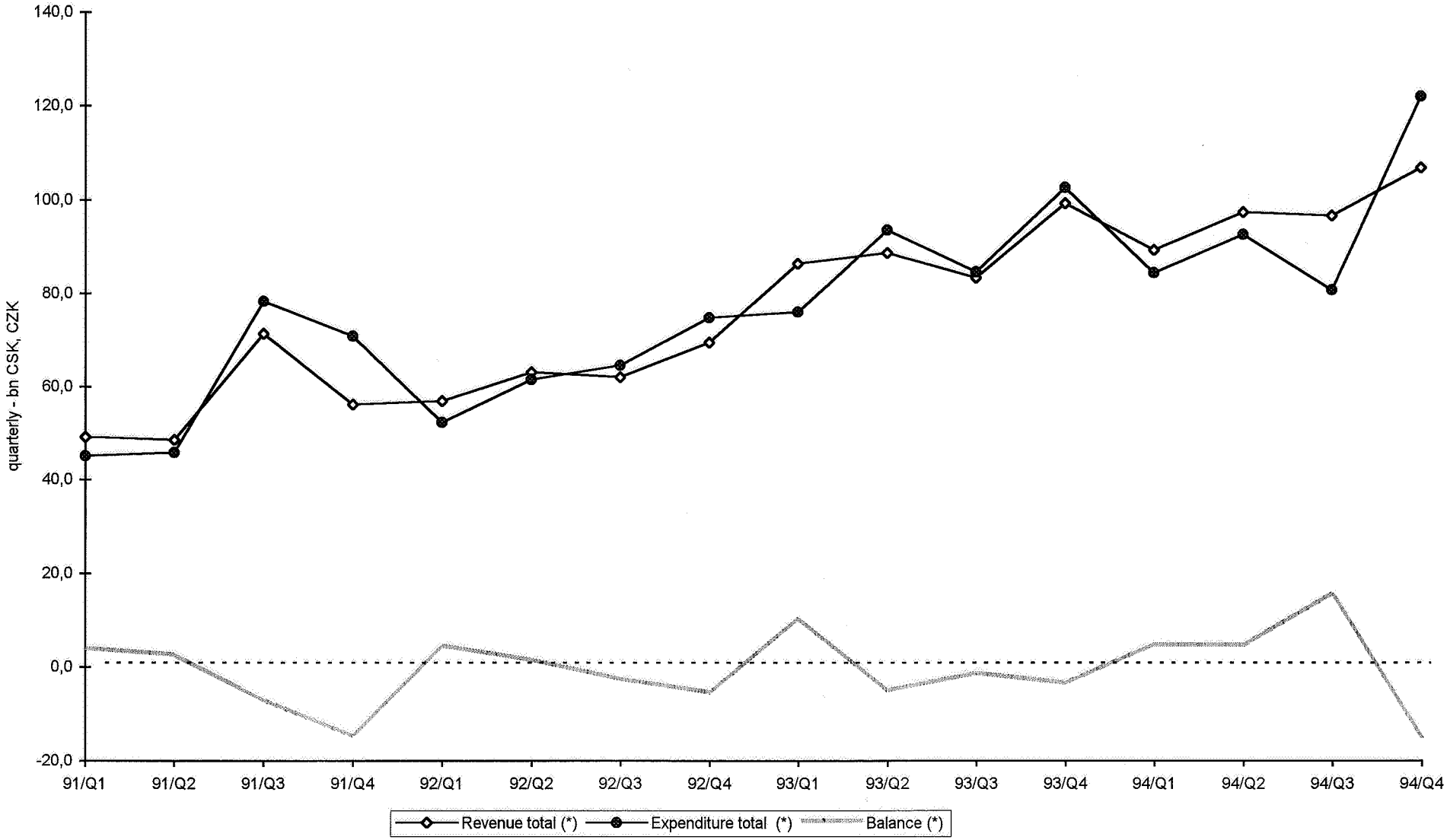


Chart 24

Major State Budget Receipts, 1991 - 1992

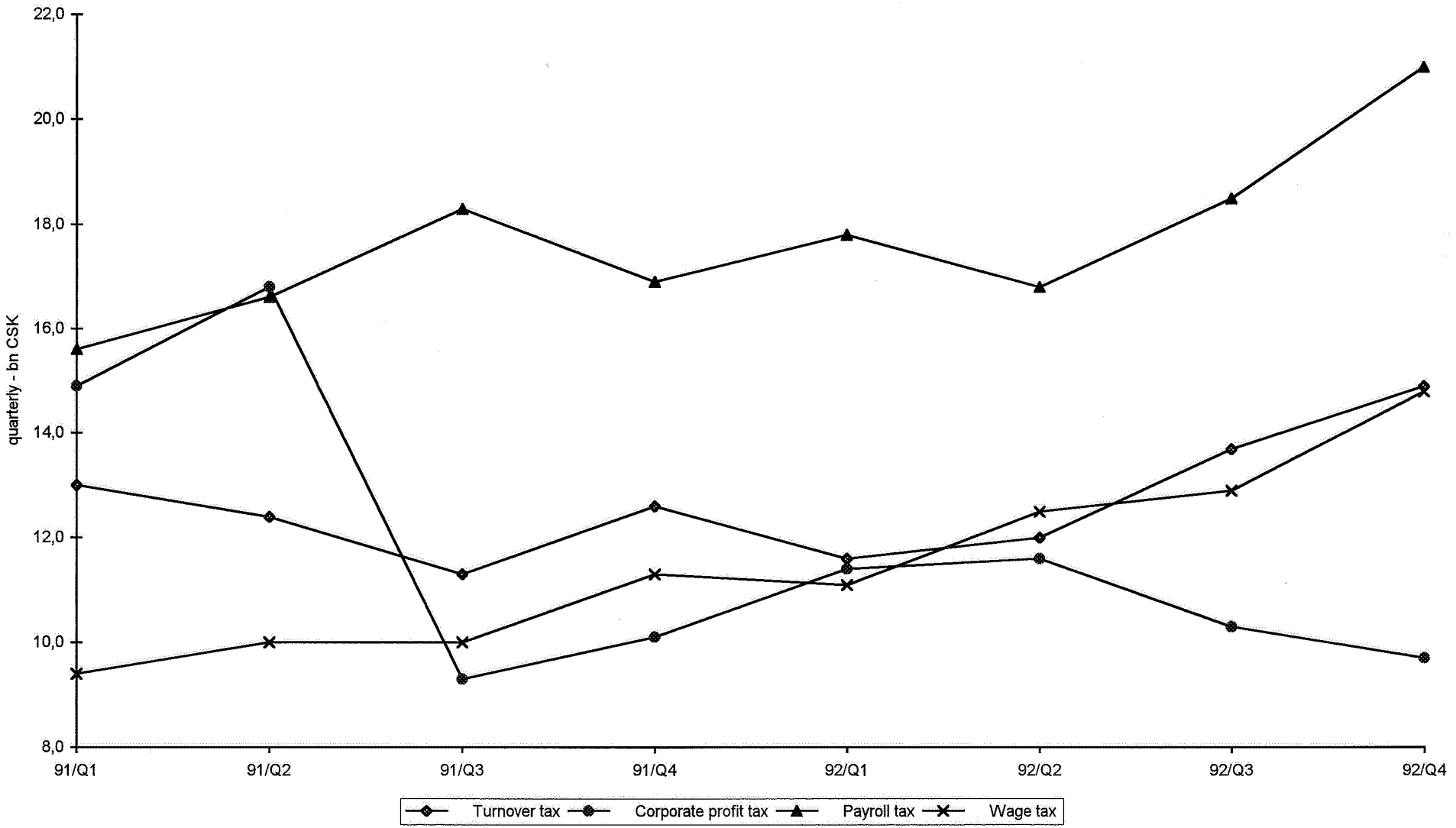


Chart 25

Major State Budget Receipts, 1993 - 1994

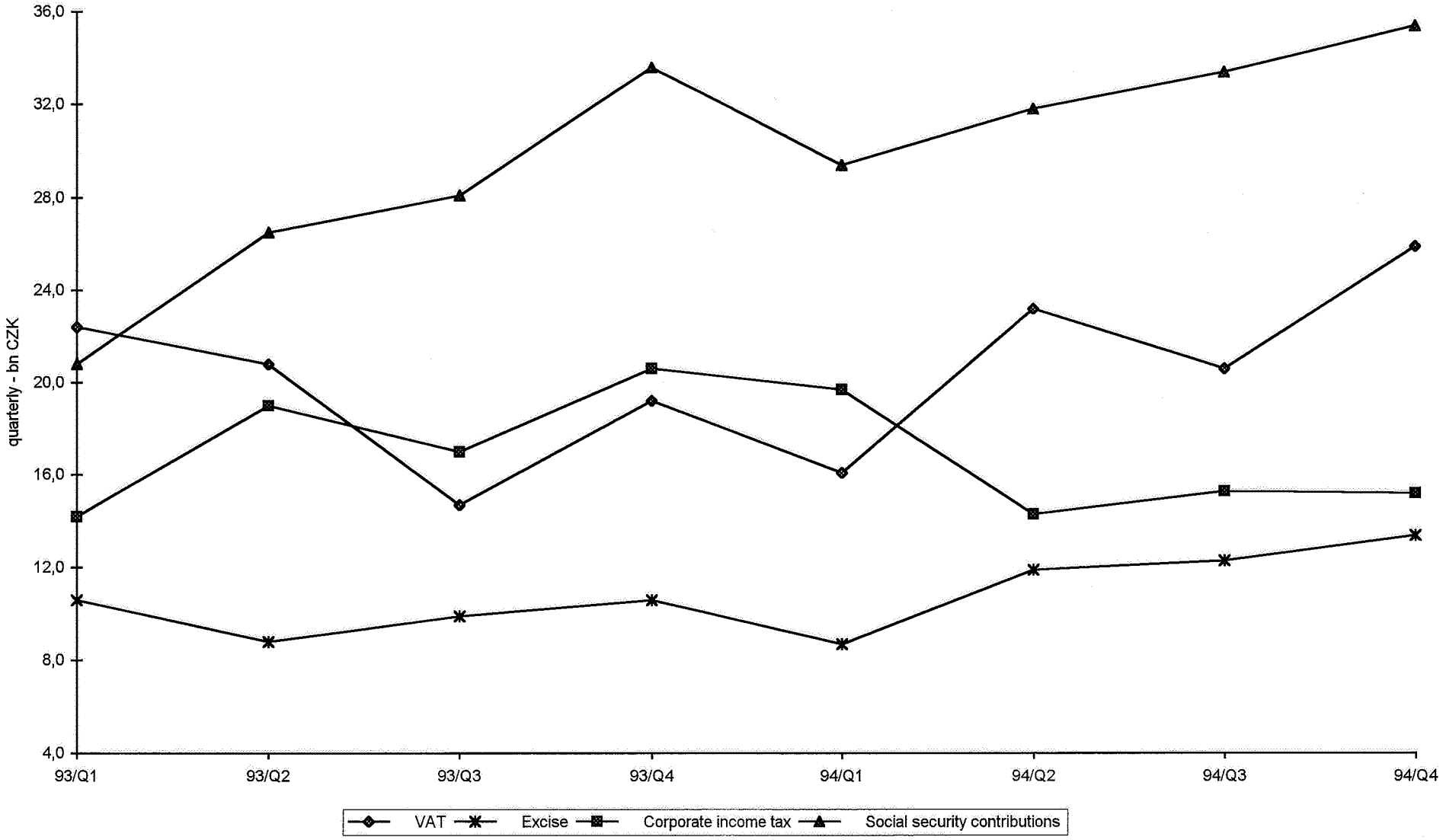


Table 6

Czech Republic Consolidated budget	1989												1990					
	Jan.89	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan.90	Feb	Mar	Apr	May	Jun
Revenue																		
Turnover tax [VAT + Excises (since 1993)]	4764	3116	3814	4077	3614	3594	4015	4351	4239	5058	4647	4326	4899	3659	2003	3887	2936	3746
Corporate income tax	4409	5408	4532	2682	3785	6142	5244	4062	4506	5998	3568	5661	3883	5034	3137	5707	4431	4862
Individuals income tax																		
Taxes on payroll [Social sec. contr. (since 1993)]	4530	5041	5069	6807	5480	5727	5412	5803	5792	5607	6103	6209	4930	5453	5831	6260	7079	5827
Miscellaneous	1614	1238	1200	5002	2177	1895	3006	3105	2787	3833	4181	7793	1823	2179	2663	3197	2701	2943
Total Revenue [Total tax revenue (since 1993)]	15318	14803	14615	18568	15057	17358	17677	17322	17323	20496	18499	23989	15535	16326	13635	19050	17147	17377
Subsidies from federal budget [Non-tax revenue (since 1993)]	4950	5774	7775	7881	6413	0	5783	5576	8649	6937	4889	10738	1255	1881	2567	3350	1565	2693
Total Revenue incl. federal subsidies [Total revenue (since 1993)]	20268	20577	22390	26449	21470	17358	23460	22898	25972	27433	23388	34727	16790	18207	16202	22400	18712	20070
												211026						
Expenditure												286391						
Subsidies to enerprises	673	1009	1290	1295	2017	1118	1355	1167	2085	1624	1672	2749	870	1163	1308	1514	1306	1569
Investment subsidies to enterprises	157	146	219	429	275	372	442	355	41	239	225	588	113	185	220	227	349	373
Non-investment subsidies to enterprises	516	863	1072	866	1742	746	914	812	2044	1385	1447	2161	756	978	1088	1286	956	1196
Investment expenditure to enterprises	293	210	254	380	256	344	443	330	312	423	373	1117	207	212	212	379	292	352
Non-investment expenditure to enterprises	4554	4487	5759	5250	5004	4932	5381	3543	4119	6092	5640	6291	4116	3441	4880	5776	7112	4241
Expenditure on goods and services																		
Social security expenditure	5140	5260	5442	5423	8611	1974	5203	5158	5241	5224	5360	5299	5276	5396	5253	5453	5358	5522
General income support																		
Expenditures on employment policy																		
Transfers and subsidies to local budgets	3978	1733	2002	2434	2367	2866	3460	2425	2713	3080	3675	6179	3148	1893	2640	3635	3056	3272
Miscellaneous	187	827	941	1161	1873	1401	1287	1033	1613	1682	2058	3967	544	319	709	1483	1461	1330
Total expenditure	14826	13526	15688	15943	20128	12635	17129	13655	16084	18125	18779	25602	14161	12424	15002	18240	18585	16286
Memorandum items																		
GDP in current prices (bn CZK) - quarterly															130,7			137,7
GDP in 1984 prices (bn CZK) - quarterly															119,4			125,7
Rate of unemployment (%) - monthly													0,1	0,1	0,1	0,1	0,1	0,1
Rate of unemployment (%) - quarterly															0,07			0,13
Civil employment (1 000 persons)																		
Average wage (CZK)																		
Social security contributions (mn CZK)																		
Social security benefits (mn CZK)															16460			16881
Expenditures on employment policy (mn CZK)															0			0
Budget Balance	492	1277	-1074	2625	-5071	4723	548	3666	1240	2370	-280	-1613	1374	3902	-1366	810	-1438	1091

Table 6

						1991													**1992**							
Jul	Aug	Sep	Oct	Nov	Dec	Jan.91	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan.92	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5398	6452	6546	8259	8501	6458	7234	6930	6527	7218	6940	5298	6384	5616	5977	6483	6030	7498	6819	5558	5762	6354	5994	6406	7487	6844	7062
5809	2412	3605	5617	5478	9819	3830	9579	11250	10377	9861	5865	7887	4181	4140	5693	4637	6112	5262	8447	5622	6719	5632	7156	7240	4608	6271
						3474	3282	2601	3436	3314	3293	3385	3405	3254	3428	3778	4081	4149	3572	3406	4042	4036	4384	4213	4427	4221
5340	5618	5846	5875	6379	6778	4913	5620	5053	5876	5696	5027	5758	6714	5807	5757	5838	5262	5626	6881	5317	5773	4454	6617	6011	5553	6900
2676	3544	2919	3225	2095	9205	3250	3289	2908	4911	6017	4428	5913	6328	4115	4642	4352	7448	3631	5324	4133	6057	6478	6538	8464	5275	5193
19223	18025	18917	22977	22452	32261	22701	28701	28339	31818	31828	23911	29326	26245	23293	26002	24635	30401	25486	29782	24240	28945	26595	31100	33415	26707	29647
3542	4293	3616	2770	3304	6271																					
22765	22318	22533	25747	25756	38532																					
					232926												327199									
					270033																					
1624	1384	1659	2050	1725	4361	3418	4089	2067	3671	3248	1858	6941	3353	7282	6126	4457	6074	10212	2540	4574	7739	5731	5605	6234	6439	4415
410	298	139	286	258	966	656	205	261	762	464	468	754	702	799	1805	463	1903	67	1080	783	1333	692	1048	980	1332	405
1214	1086	1520	1764	1467	3395	2762	3883	1806	2909	2784	1390	6186	2651	6483	4321	3994	4171	10145	1460	3791	6406	5039	4557	5254	5107	4010
370	278	318	599	638	1390	271	392	284	573	612	369	871	544	759	1115	838	2894	237	275	478	756	570	592	911	289	2387
6312	8191	5468	8860	7065	13151	7627	5419	4970	7867	7890	7324	4378	5821	233	6497	7841	13982	4688	5265	5738	8077	8742	6901	8599	6387	4825
5398	5303	5410	5269	5891	6043	5927	6078	6939	6813	6818	6784	7014	7090	7205	7306	7566	8390	7418	12631	2660	7628	7629	7816	9443	6397	9543
						1410	1411	1427	1452	1425	1442	2570	1889	1822	1847	1833	1945	1221	1193	1194	1219	1252	1215	1193	1184	1202
3928	2583	2562	4074	4338	5505	3879	7972	4357	7192	5879	4678	9613	5556	1335	4101	7148	2850	3126	4484	700	5929	3148	345	5639	429	6229
1150	1127	1577	1405	1704	3461	5	157	383	446	175	476	363	2144	751	312	1578	905	451	106	414	305	18	1781	1607	73	1537
18782	18866	16993	22258	21360	33912	22537	25517	20426	28015	26047	22931	31750	26397	19388	27304	31260	37040	27353	26494	15758	31652	27090	24254	33626	21198	30138
		137,7			161,2			173,3			181,1			181,5			180,7			180,7			193			207,8
		125,5			133,1			116,6			109,1			106			100,4			95,2			100,9			105,8
0,2	0,3	0,5	0,6	0,7	0,8	1,1	1,4	1,7	2	2,2	2,6	3,1	3,4	3,8	3,9	4	4,1	4,4	4,1	3,7	3,2	2,9	2,7	2,7	2,7	2,6
		0,46			0,73			1,67			2,6			3,77			4,13			3,72			2,7			2,61
		20903			22263			22903			24443			26926			27533			26354			26857			27393
		60			81			172			321			501			723			604			387			296
441	-841	1923	719	1092	-1651	164	3184	7912	3803	5781	980	-2424	-152	3905	-1302	-6625	-6638	-1867	3288	8482	-2707	-495	6846	-211	5509	-491

Table 6

			1993													**1994**										in 1 000 000 CS
Oct	Nov	Dec	Jan.93	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan.94	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8255	8436	6578	1327	8720	13915	11507	8164	10061	10020	6336	8098	10311	8305	20323	11012	3174	10611	12363	10036	12733	13515	8472	10908	14358	11063	13964
4957	6333	6684	917	6253	7058	6804	5819	5974	6224	5718	5467	5463	5394	9789	3970	5459	10240	699	1144	12444	4161	5630	5481	5014	3568	6626
4455	4715	5598	4	29	61	130	116	112	163	131	119	239	163	242	2283	168	199	327	378	361	432	321	335	493	200	307
5602	6052	9333	5244	7557	7988	8520	8898	9106	9441	9496	9163	9313	10013	14229	10611	8730	10041	10903	9629	10703	11098	10873	11982	9255	11751	14412
5254	6755	12495	13345	11437	-756	2645	1777	2066	2444	2232	1826	2338	2607	-6827	2314	2934	1975	2490	2485	1890	2722	2131	1861	2864	2490	1537
28524	32290	40688	20837	33996	28266	29606	24774	27319	28292	23913	24673	27664	26482	37756	30190	20465	33066	26782	23672	38131	31928	27427	30567	31984	29072	36846
			939	678	1733	2697	6131	-1773	1372	3210	1935	3243	1877	2380	1499	1944	2096	2913	2358	3668	3342	2019	1457	3191	2259	3632
			21776	34674	29999	32303	30905	25546	29664	27123	26608	30907	28359	40136	31689	22409	35162	29695	26030	41799	35270	29446	32024	35175	31331	40478
		357420												333578												360130
														358000												390508
7188	7208	8132	3598	1673	1809	3838	1376	3039	3839	1842	2088	4706	3135	16968	5358	2453	3451	6771	3313	3738	6730	2964	6244	8597	3230	-3569
1206	1212	2550																								
5982	5996	5582																								
963	1586	2619	184	1103	1736	2285	1853	2451	1870	1999	6565	2963	3386	-76	649	1536	3172	3017	2967	3692	2760	3536	2624	3465	4260	1669
12214	9767	14059																								
			10752	7382	7823	16770	17403	7860	11998	12194	2426	8785	12476	-2503	9520	6655	7551	9918	7615	9861	10240	5383	1854	25021	11754	15779
8184	8557	8007	6448	10416	8147	9029	8138	8264	8556	8151	7929	8517	9233	9765	10858	9920	10667	9305	9731	11118	8334	9495	12905	6621	9991	14833
1185	1190	1177	1118	1065	1128	598	1155	1086	693	1813	1660	778	1150	1046	693	1024	1001	662	1101	1019	696	998	1006	718	1179	541
			74	80	388	213	187	193	183	175	198	202	49	233	197	217	225	220	209	220	184	189	211	215	223	262
3036	665	3161	2000	4400	380	3120	0	545	2061	2200	2305	0	0	10016	1380	1380	4072	43	792	5000	2657	0	0	159	0	13767
1732	3195	-385	352	0	3978	1907	985	1306	443	1291	2142	2859	2624	6351	110	423	1868	479	258	1640	129	309	1395	1543	211	1678
34503	32169	36770	24526	26119	25389	37760	31097	24744	29643	29665	25313	28810	32053	41800	28765	23608	32007	30415	25986	36288	31730	22874	26239	46339	30848	44960
		209,5			211,6			228,4			237,1			233,5			241,7			257,1			270,9			267,8
		102,6			96,3			101,6			104,9			97,9			98,8			102,8			107			102,6
2,5	2,5	2,6	3	3	2,9	2,7	2,6	2,6	2,8	3	3,2	3,2	3,3	3,5	3,8	3,7	3,5	3,3	3,1	3,1	3,2	3,1	3,1	3,1	3,1	3,2
		2,57			2,88			2,63			3,17			3,52			3,5			3,1			3,15			3,19
																	4810			4849			4941			4997
																	6001			6773			6889			7899
					35523			43368			45028			45140			47765			48437			51577			55510
		28536			28446			30256			30601			32562			33863			34715			36363			35408
		136			315			320			340			442			535			454			415			440
-5979	122	3918	-3689	7877	2877	-8154	-6323	2575	-1351	-5752	-640	-1146	-5571	-4044	1425	-3143	1059	-3633	-2314	1843	198	4553	4328	-14355	-1776	-8114

Chart 26

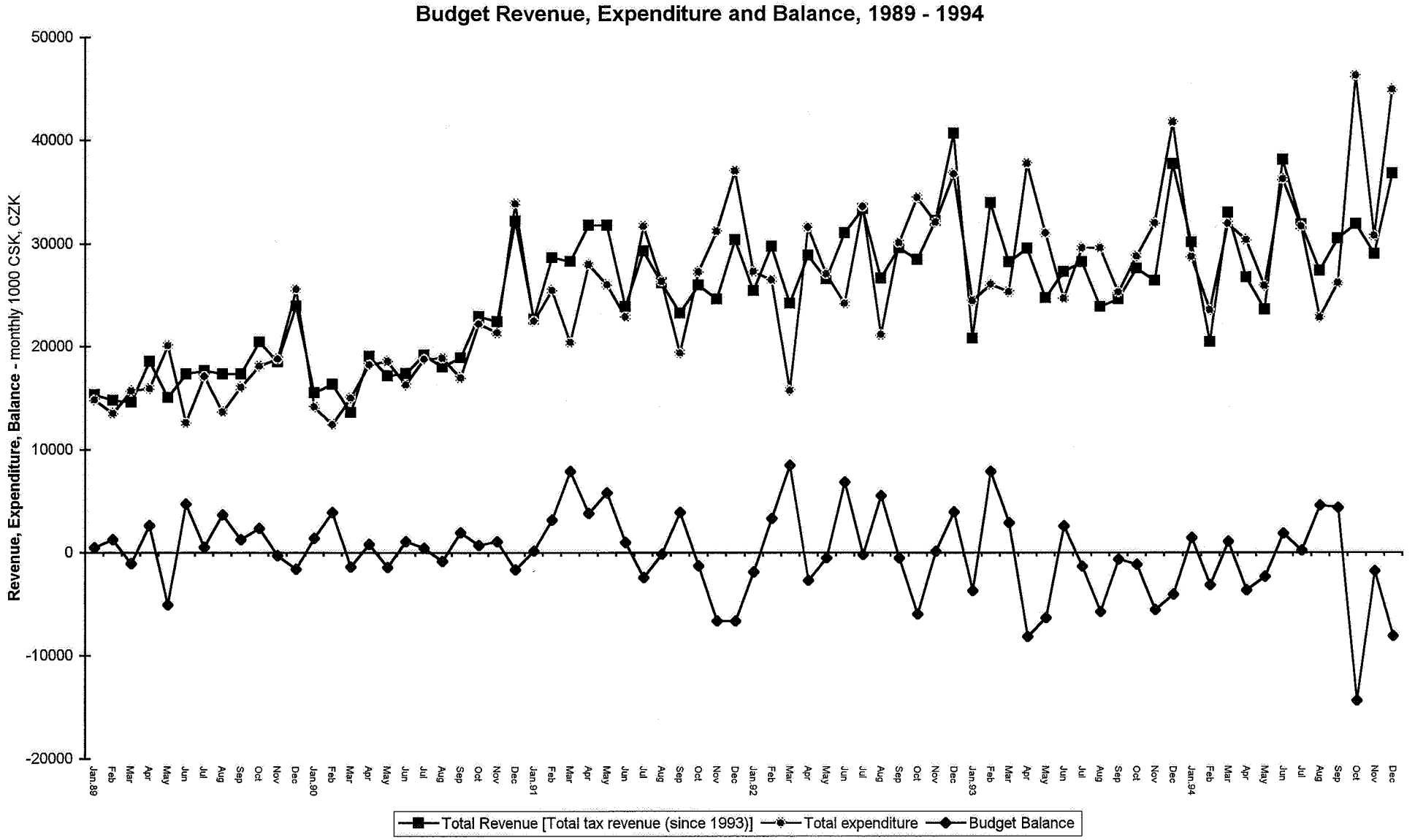

Budget Revenue, Expenditure and Balance, 1989 - 1994
Revenue, Expenditure, Balance - monthly 1000 CSK, CZK
50000
40000
30000
20000
10000
0
-10000
-20000
Jan.89 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.90 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.91 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.92 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.93 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.94 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Total Revenue [Total tax revenue (since 1993)]
Total expenditure
Budget Balance

Chart 27

Budget Revenue, Expenditure and Balance, 1989 - 1994

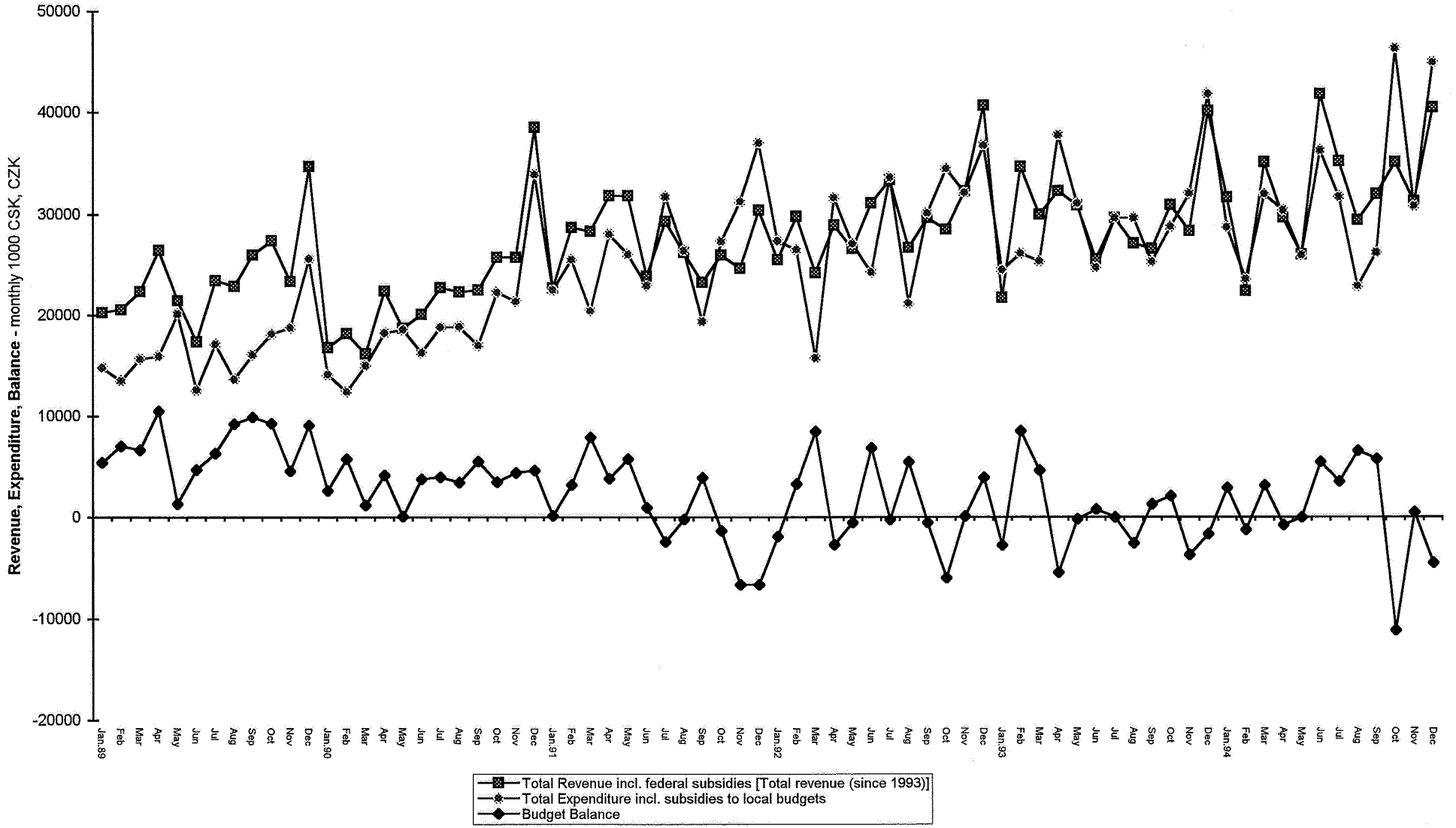


Chart 28

Turnover tax [VAT + Excises (since 1993)]

Chart 29

Corporate profit tax [Corporate income tax (since 1993)]

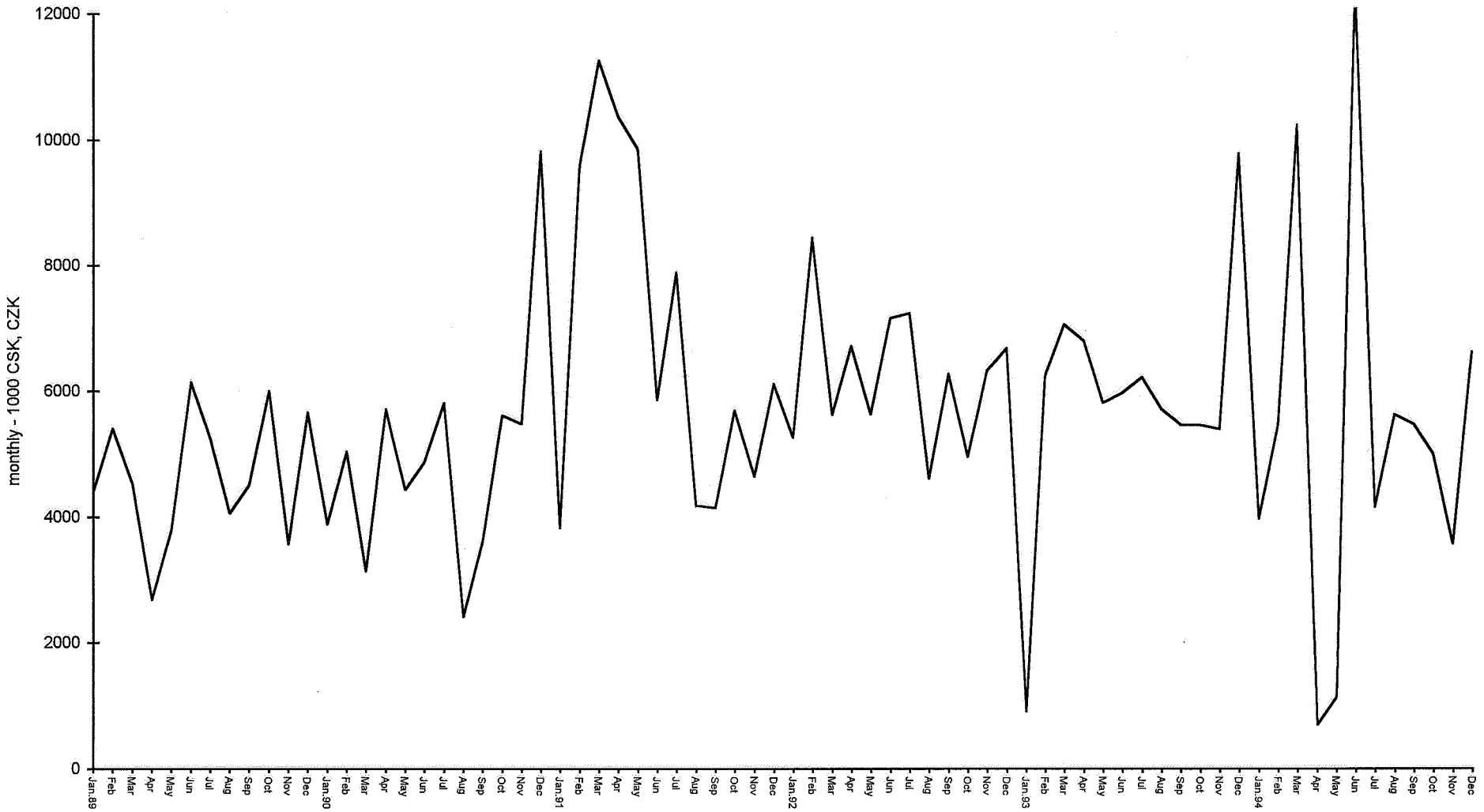
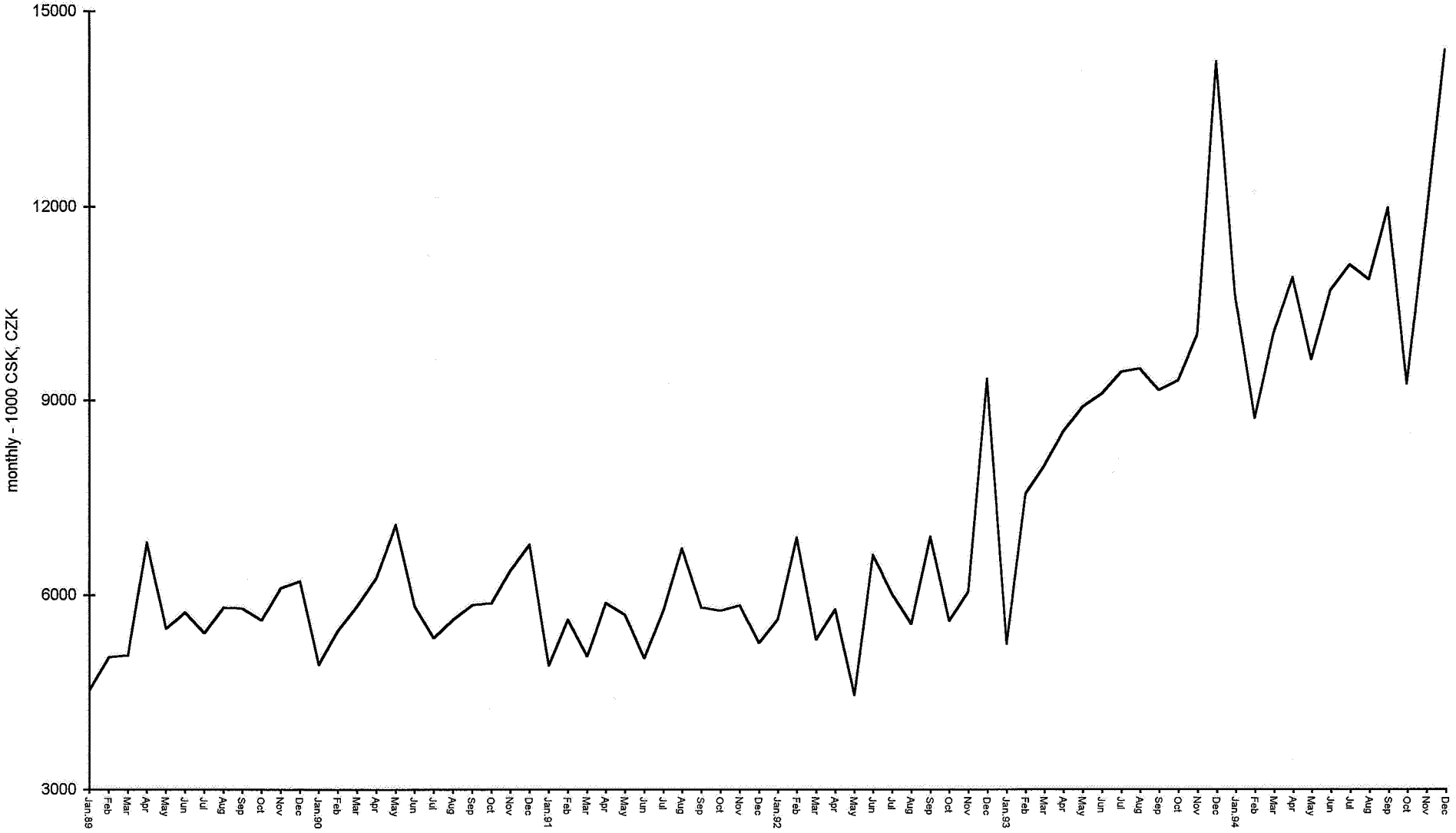
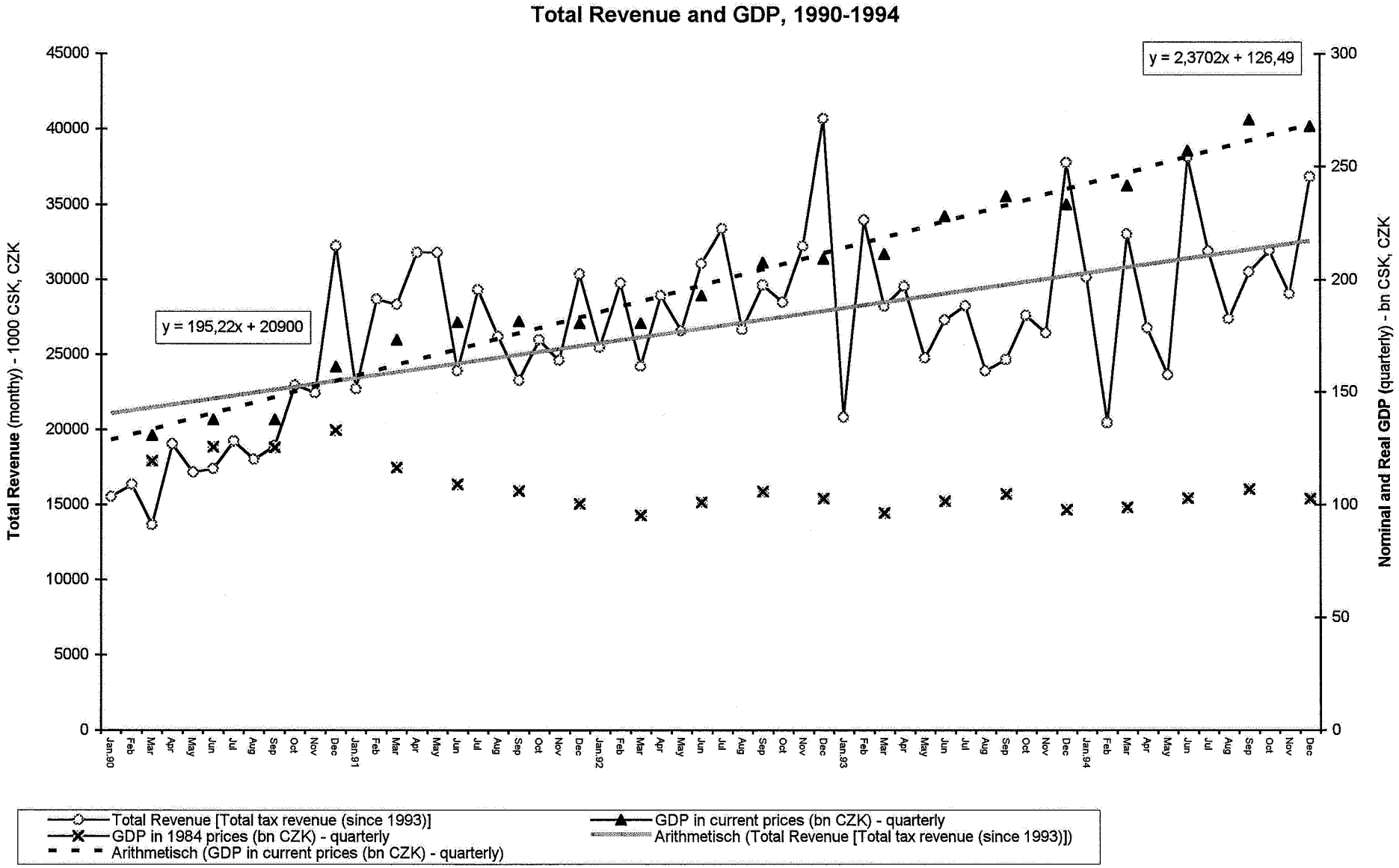


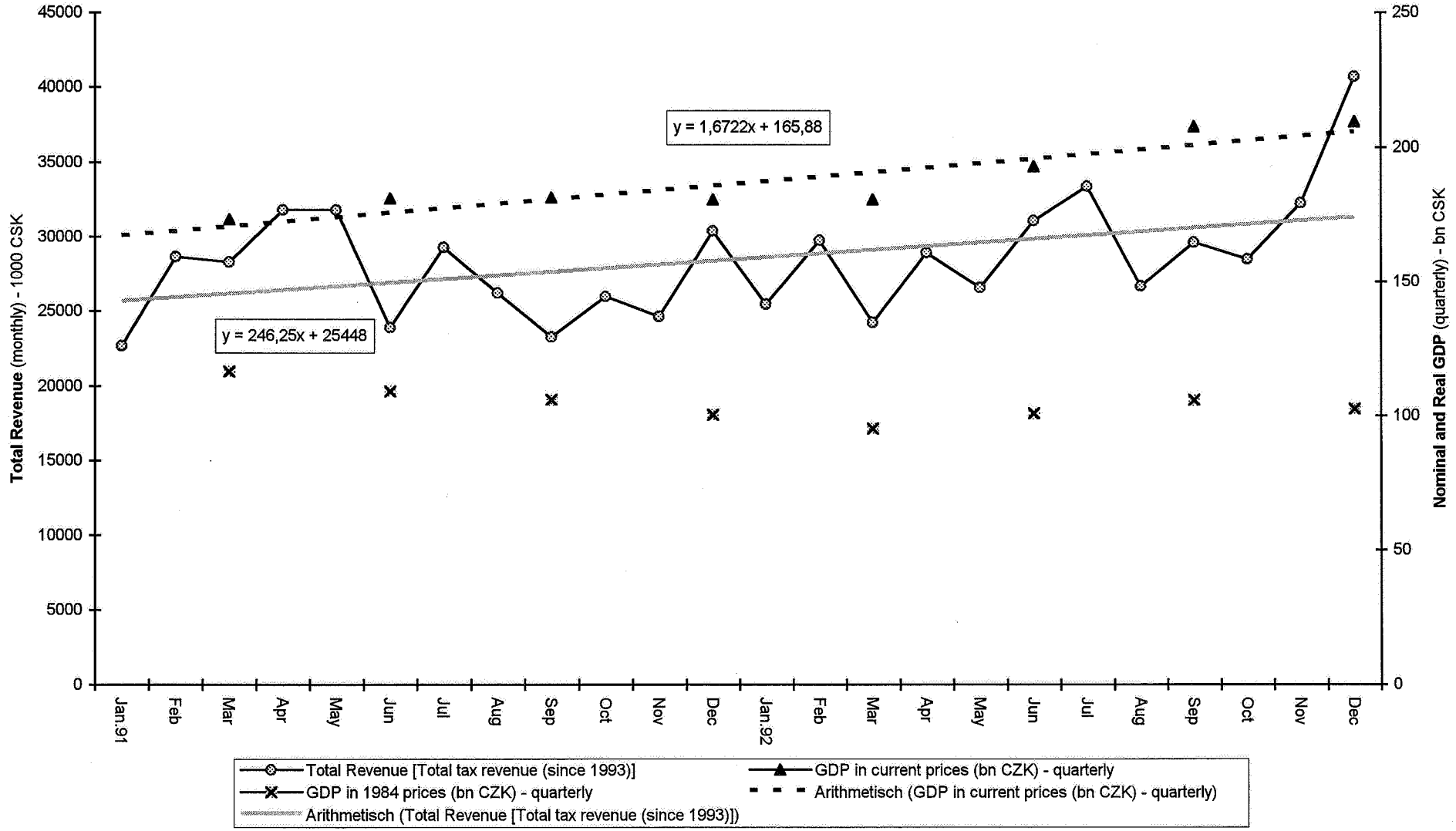
Chart 30

Taxes on payroll [Social sec. contr. (since 1993)]

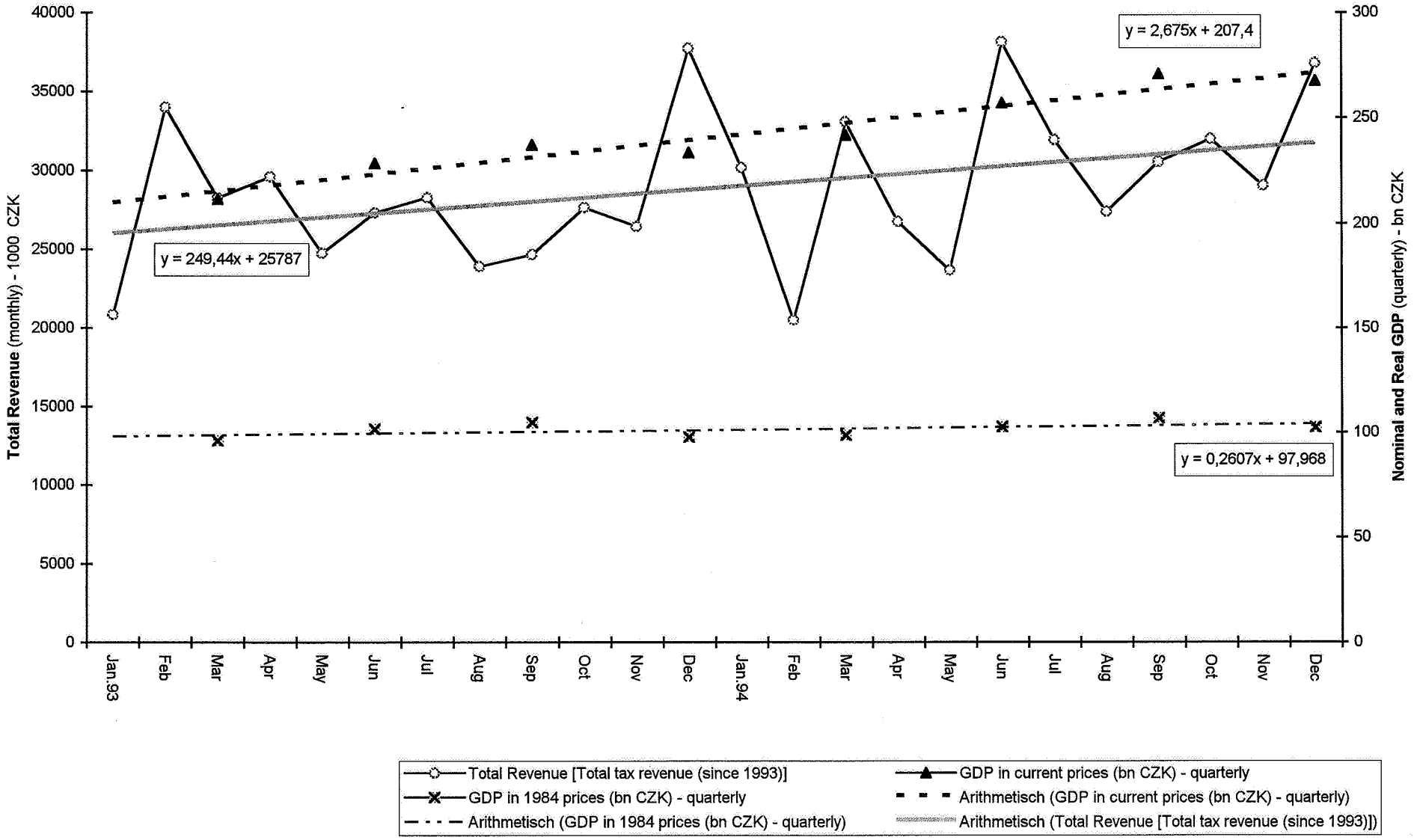


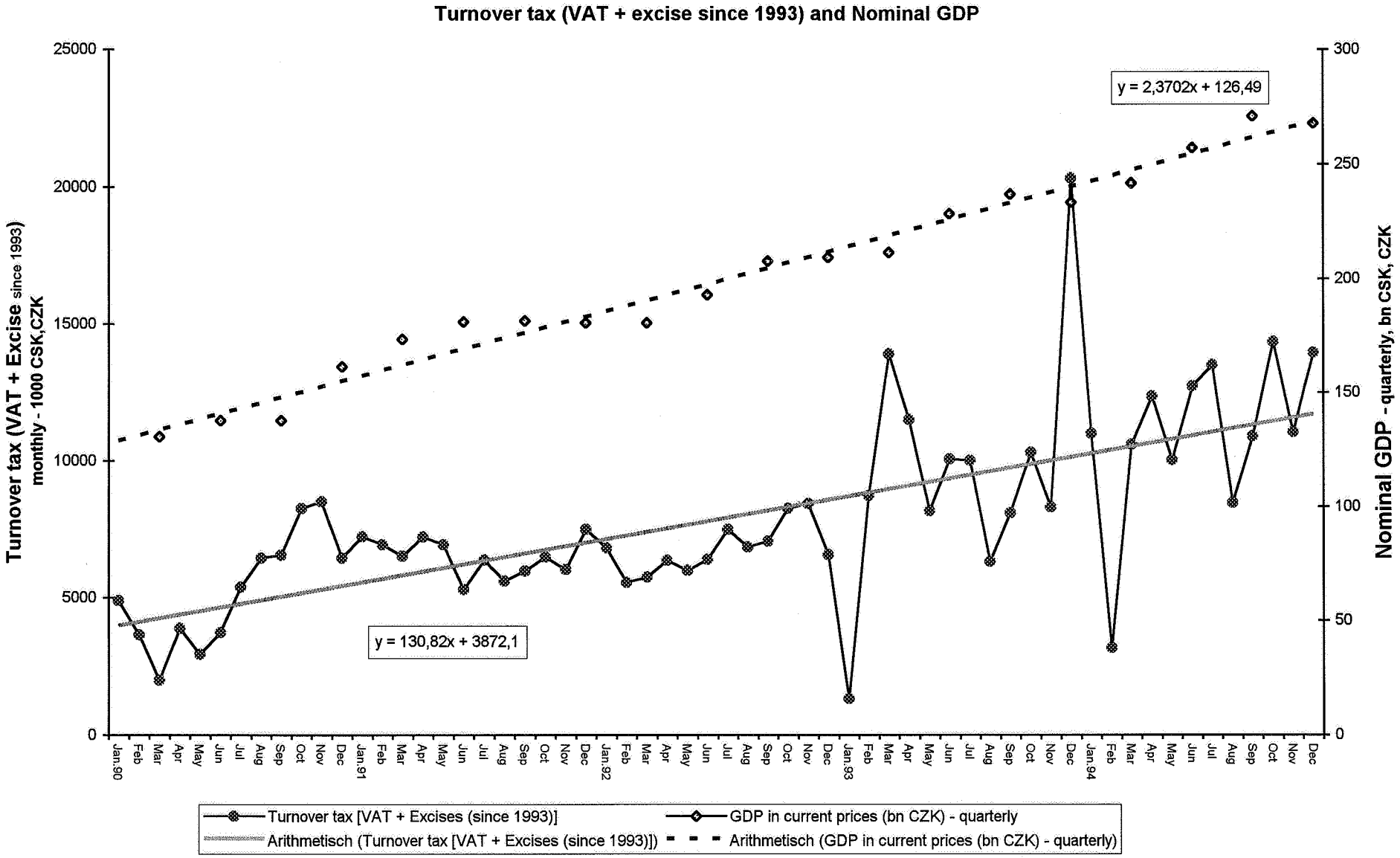

Total Revenue and GDP, 1990-1994
y = 2,3702x + 126,49
y = 195,22x + 20900
Total Revenue (monthy) - 1000 CSK, CZK
Nominal and Real GDP (quarterly) - bn CSK, CZK
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
300
250
200
150
100
50
0
Jan.90 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.91 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.92 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.93 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.94 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Total Revenue [Total tax revenue (since 1993)]
GDP in current prices (bn CZK) - quarterly
GDP in 1984 prices (bn CZK) - quarterly
Arithmetisch (Total Revenue [Total tax revenue (since 1993)])
Arithmetisch (GDP in current prices (bn CZK) - quarterly)

Total Revenue and GDP, 1991-1992

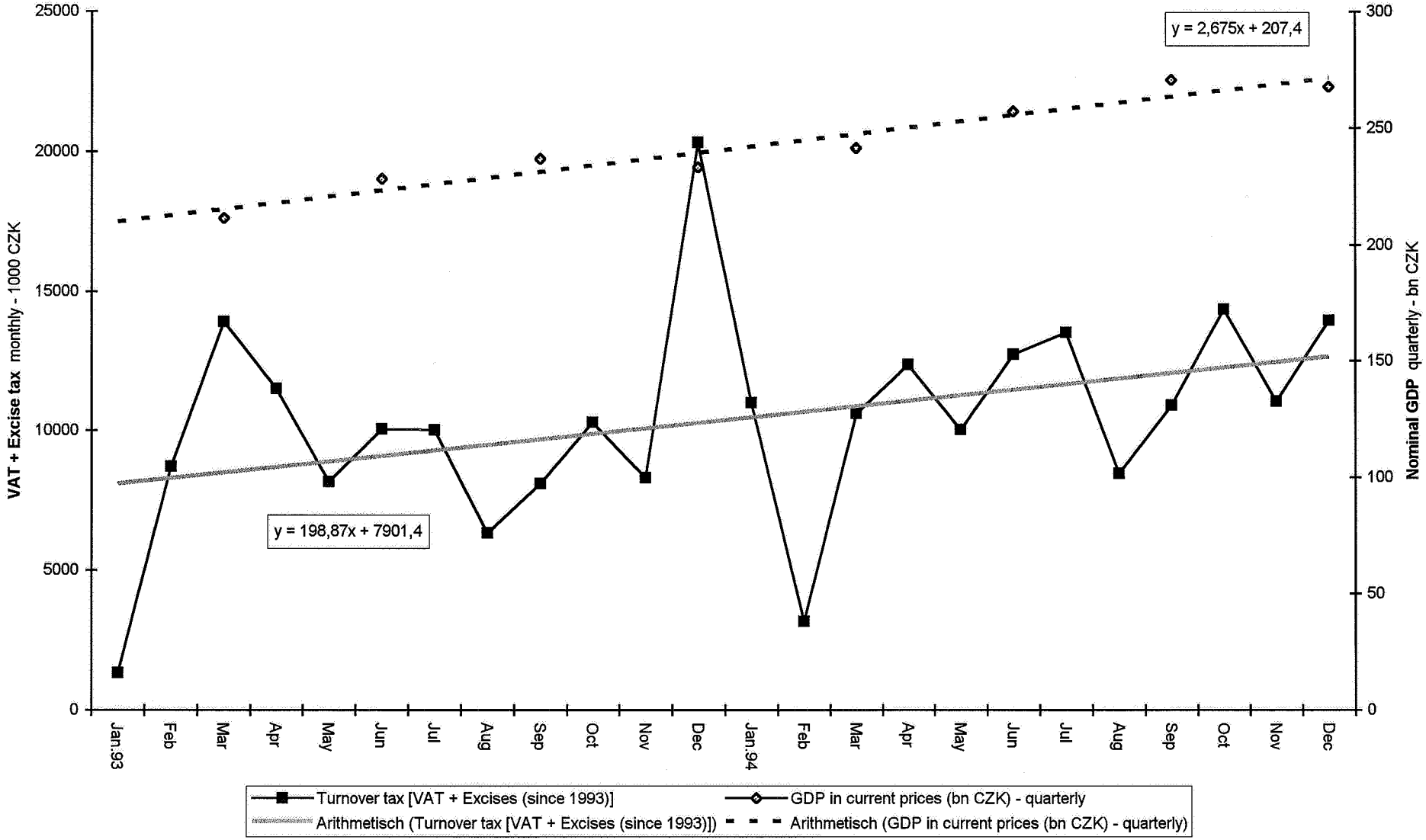


Total Revenue and GDP, 1993-1994

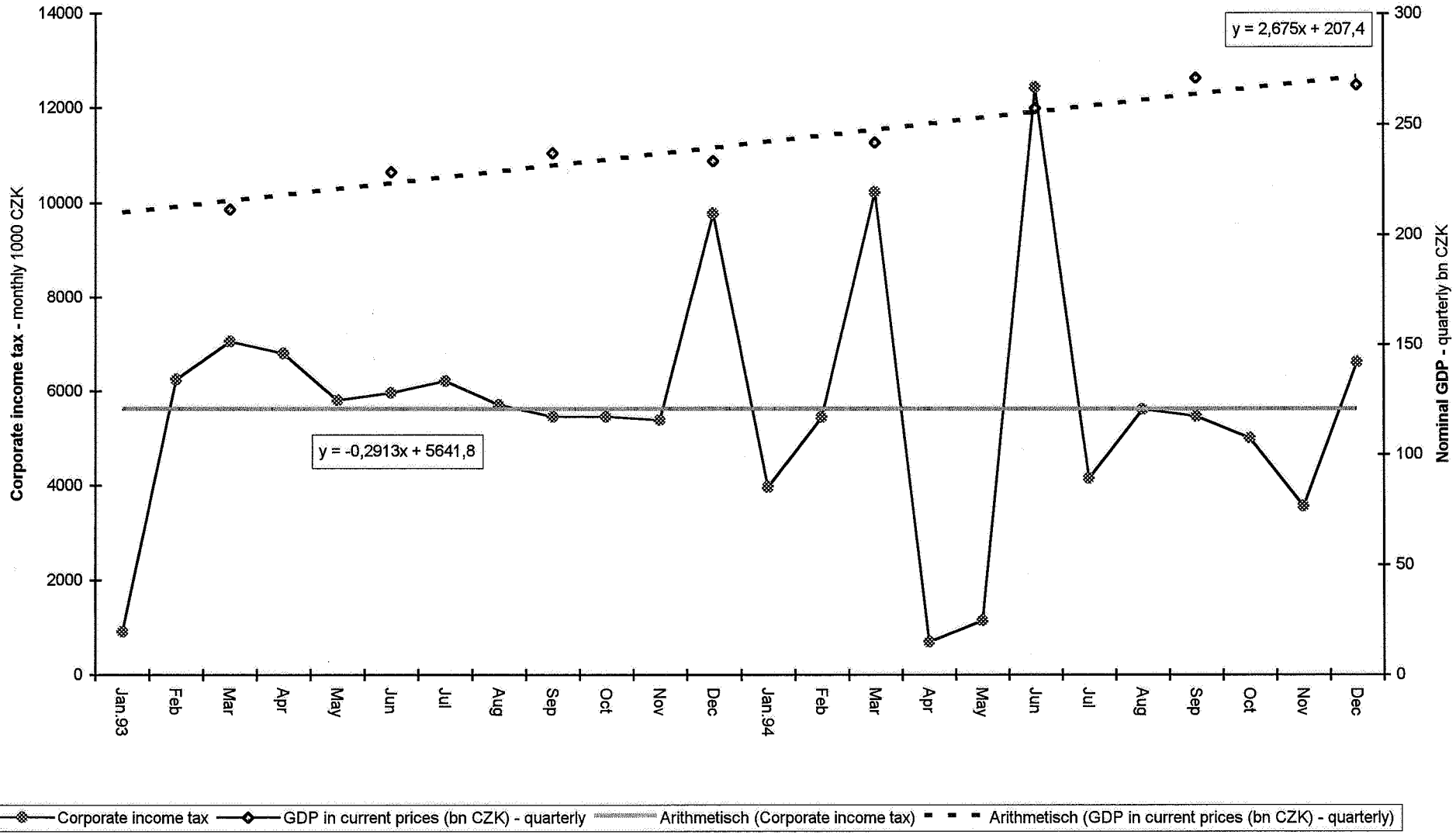



Turnover tax (VAT + excise since 1993) and Nominal GDP
Turnover tax (VAT + Excise since 1993) monthly - 1000 CSK,CZK
Nominal GDP - quarterly, bn CSK, CZK
y = 2,3702x + 126,49
y = 130,82x + 3872,1
25000
20000
15000
10000
5000
0
300
250
200
150
100
50
0
Jan.90 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.91 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.92 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.93 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan.94 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turnover tax [VAT + Excises (since 1993)]
GDP in current prices (bn CZK) - quarterly
Arithmetisch (Turnover tax [VAT + Excises (since 1993)])
Arithmetisch (GDP in current prices (bn CZK) - quarterly)

VAT + Excise Tax and Nominal GDP, 1993-1994

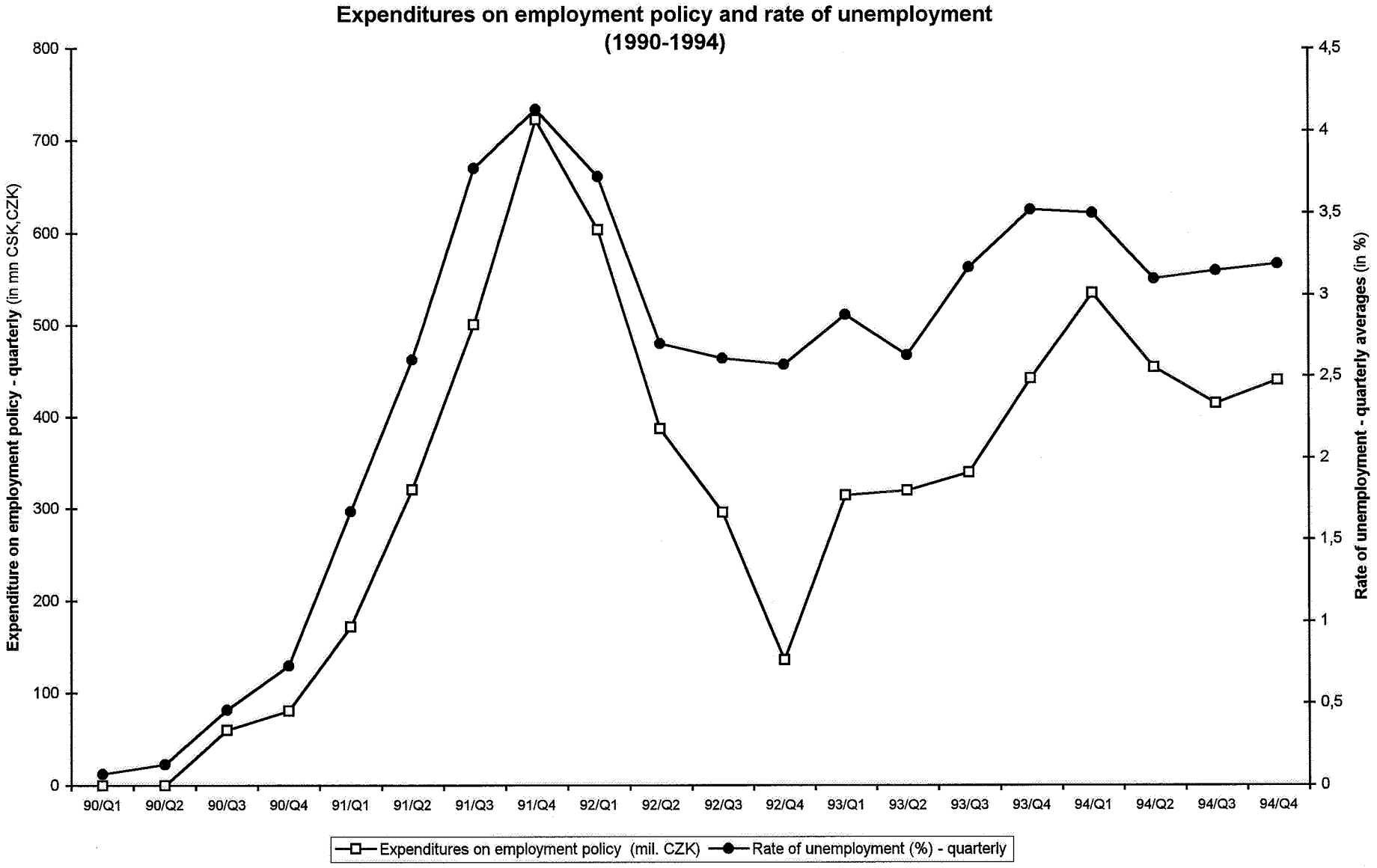


Corporate income tax and Nominal GDP, 1993-1994




Expenditures on employment policy and rate of unemployment
(1993-1994)
y = 0,0176x + 2,9091
y = 2,3343x + 168,61
Expenditures on employment policy (in mn CZK)
Unemployment rate (in %)
400
350
300
250
200
150
100
50
0
4
3,5
3
2,5
2
1,5
1
0,5
0
Jan.93
Feb
Mar
Aug
Sep
Oct
Nov
Dec
Expenditures on employment policy
Rate of unemployment (%) - monthly
Arithmetisch (Rate of unemployment (%) - monthly)
Arithmetisch (Expenditures on employment policy)

Chart 38


Expenditures on employment policy and rate of unemployment
(1990-1994)
Expenditure on employment policy - quarterly (in mn CSK,CZK)
Rate of unemployment - quarterly averages (in %)
800
700
600
500
400
300
200
100
0
4,5
4
3,5
3
2,5
2
1,5
1
0,5
0
90/Q1
90/Q2
90/Q3
90/Q4
91/Q1
91/Q2
91/Q3
91/Q4
92/Q1
92/Q2
92/Q3
92/Q4
93/Q1
93/Q2
93/Q3
93/Q4
94/Q1
94/Q2
94/Q3
94/Q4
Expenditures on employment policy (mil. CZK)
Rate of unemployment (%) - quarterly

Fiscal Stance of the State Budget 1989-1994: Summary

	1989	1990	1991	1992	1993	1994
Nominal GDP (current prices) (bn CSK, CZK)	524,5	567,3	716,6	791,0	910,6	1037,5
Rate of Growth of Nominal GDP (%)		*8,16%*	*26,32%*	*10,38%*	*15,12%*	*13,94%*
Real GDP (1984 prices) (bn CSK, CZK)	509,9	503,7	432,1	404,5	400,7	411,2
Rate of Growth of Real GDP (%)		*-1,22%*	*-14,21%*	*-6,39%*	*-0,94%*	*2,62%*
Potential GDP (1984 prices) (bn CSK, CZK)	509,9	500,2	448,4	436,4	433,3	444,4
Rate of Growth of Potential GDP (1984 prices)(%)		*-1,89%*	*-10,36%*	*-2,70%*	*-0,70%*	*2,57%*
GDP gap (GDP gap as % of Potential GDP)	0,00%	-0,69%	3,64%	7,30%	7,52%	7,48%
Potential GDP - (current prices) (bn CSK, CZK)	524,5	563,4	742,7	848,7	979,1	1115,1
Rate of Growth of Potential GDP (cur. prices)(%)		*7,41%*	*31,83%*	*14,28%*	*15,36%*	*13,89%*
Unemployment rate (%)	0,0%	0,3%	2,8%	3,1%	3,0%	3,3%
Differential from Average Rate of Un. (1991-1994)			0,25%	-0,05%	0,05%	-0,25%
MF-methodology - consolidated						
Actual Revenue (bn CSK, CZK)	208,2	227,3	309,3	330,7	358,0	390,5
Actual Expenditure (bn CSK, CZK)	201,5	226,5	318,6	337,1	356,9	380,1
Actual Balance (bn CSK, CZK)	6,7	0,8	-9,3	-6,4	1,1	10,4
Actual Balance as % of Actual Expenditures	3,34%	0,37%	-2,93%	-1,88%	0,31%	2,74%
Actual Balance as % of Nominal GDP (cur. prices)	1,28%	0,15%	-1,30%	-0,80%	0,12%	1,00%
Actual Balance as % of Potential GDP (cur. prices)	1,28%	0,15%	-1,26%	-0,75%	0,11%	0,93%
GFS-methodology						
Actual Revenue (bn CSK, CZK)	261,8	264,3	332,6	354,1	349,1	381,1
Actual Expenditure (bn CSK, CZK)	236,8	248,0	313,2	332,8	347,9	370,7
Actual Balance (bn CSK, CZK)	25,0	16,3	19,4	21,3	1,2	10,4
Actual Balance as % of Actual Expenditures	10,56%	6,57%	6,19%	6,40%	0,34%	2,81%
Actual Balance as % of Nominal GDP (cur. prices)	4,77%	2,87%	2,71%	2,69%	0,13%	1,00%
Actual Balance as % of Potential GDP (cur. prices)	4,77%	2,89%	2,61%	2,51%	0,12%	0,93%
Adjustment I - smoothing						
MF-methodology - consolidated						
Income Elasticity of Revenue - cur. prices [Table 1]		1,12	1,37	0,67	0,54	0,65
Income Elast. of Revenue (cur. prices) - **smoothed**	1,20	1,20	1,05	0,86	0,62	0,62
Potential GDP Revenue I (bn CSK, CZK)	208,2	222,6	336,8	380,5	400,6	438,3
Potential GDP Expenditure (bn CSK, CZK)	201,5	226,5	319,0	337,0	357,0	379,7
Potential GDP Balance I (bn CSK, CZK)	6,7	-3,9	17,8	43,5	43,6	58,6
Potential GDP Balance I as % of Potential GDP (cur.pr.)	1,28%	-0,69%	2,40%	5,12%	4,45%	5,25%
GDP gap	1,0000	1,0069	0,9636	0,9270	0,9248	0,9252
Actual Balance as % of Potential GDP (cur.pr.)	**1,28%**	**0,15%**	**-1,26%**	**-0,75%**	**0,11%**	**0,93%**
Potential GDP Balance I as % of Pot. GDP (cur.pr.)	**1,28%**	**-0,69%**	**2,40%**	**5,12%**	**4,45%**	**5,25%**
GFS-methodology						
Income Elasticity of Revenue - cur. prices [Table 3]		0,12	0,98	0,62	-0,09	0,66
Income Elast. of Revenue (cur. prices) - **average**	0,46	0,46	0,46	0,46	0,46	0,46
Potential GDP Revenue I (bn CSK, CZK)	261,8	262,5	344,5	380,5	380,4	416,6
Potential GDP Expenditure (bn CSK, CZK)	236,8	248,0	313,6	332,7	348,0	370,3
Potential GDP Balance I (bn CSK, CZK)	25,0	14,5	31,0	47,8	32,4	46,3
Potential GDP Balance I as % of Potential GDP (cur.pr.)	4,77%	2,57%	4,17%	5,63%	3,31%	4,15%
GDP gap	1,0000	1,0069	0,9636	0,9270	0,9248	0,9252
Actual Balance as % of Potential GDP (cur.pr.)	**4,77%**	**2,89%**	**2,61%**	**2,51%**	**0,12%**	**0,93%**
Potential GDP Balance I as % of Pot. GDP (cur.pr.)	**4,77%**	**2,57%**	**4,17%**	**5,63%**	**3,31%**	**4,15%**

Table 7

Potential GDP Balance - Actual Balance (bn CSK, CZK) - *MF*	0,0	-4,7	27,1	49,8	42,5	48,2
Potential GDP Balance - Actual Balance (bn CSK, CZK) - *GFS*	0,0	-1,8	11,6	26,5	31,2	35,9
Potential - Actual Balance/Potential GDP - *MF*	0,0%	-0,8%	3,7%	5,9%	4,3%	4,3%
Potential - Actual Balance/Potential GDP - *GFS*	0,0%	-0,3%	1,6%	3,1%	3,2%	3,2%
MF-methodology - consolidated						
GDP gap	1,0000	1,0069	0,9636	0,9270	0,9248	0,9252
Actual Balance as % of Potential GDP (cur. pr.)	**1,28%**	**0,15%**	**-1,26%**	**-0,75%**	**0,11%**	**0,93%**
Potential GDP Balance I as % of Pot. GDP (cur.pr.)	**1,28%**	**-0,69%**	**2,40%**	**5,12%**	**4,45%**	**5,25%**
GFS-methodology						
GDP gap	1,0000	1,0069	0,9636	0,9270	0,9248	0,9252
Actual Balance as % of Potential GDP (cur. pr.)	**4,77%**	**2,89%**	**2,61%**	**2,51%**	**0,12%**	**0,93%**
Potential GDP Balance I as % of Pot. GDP (cur.pr.)	**4,77%**	**2,57%**	**4,17%**	**5,63%**	**3,31%**	**4,15%**
Adjustment II - elasticity 1.0						
MF-methodology - consolidated						
Income Elasticity of Revenue II = 1.0	1	1	1	1	1	1
Potential GDP Revenue II (bn CSK, CZK)	208,2	223,4	335,4	388,5	426,5	468,1
Potential GDP Expenditure (bn CSK, CZK)	201,5	226,5	319,0	337,0	357,0	379,7
Potential GDP Balance II (bn CSK, CZK)	6,7	-3,1	16,4	51,5	69,5	88,4
Potential GDP Balance II as % of Potential GDP (cur.pr.)	1,28%	-0,55%	2,21%	6,06%	7,10%	7,93%
GDP gap	1,0000	1,0069	0,9636	0,9270	0,9248	0,9252
Actual Balance as % of Potential GDP (cur.pr.)	**1,28%**	**0,15%**	**-1,26%**	**-0,75%**	**0,11%**	**0,93%**
Potential GDP Balance II as % of Pot. GDP (cur.pr.)	**1,28%**	**-0,55%**	**2,21%**	**6,06%**	**7,10%**	**7,93%**
GFS-methodology						
Income Elasticity of Revenue II = 1.0	1	1	1	1	1	1
Potential GDP Revenue II (bn CSK, CZK)	261,8	260,4	358,7	411,8	417,6	458,7
Potential GDP Expenditure (bn CSK, CZK)	236,8	248,0	313,6	332,7	348,0	370,3
Potential GDP Balance II (bn CSK, CZK)	25,0	12,4	45,1	79,1	69,6	88,4
Potential GDP Balance II as % of Potential GDP (cur.pr.)	4,77%	2,20%	6,08%	9,32%	7,11%	7,93%
GDP gap	1,0000	1,0069	0,9636	0,9270	0,9248	0,9252
Actual Balance as % of Potential GDP (cur.pr.)	**4,77%**	**2,89%**	**2,61%**	**2,51%**	**0,12%**	**0,93%**
Potential GDP Balance II as % of Pot. GDP (cur.pr.)	**4,77%**	**2,20%**	**6,08%**	**9,32%**	**7,11%**	**7,93%**
Adjustment III - elasticity 0.5						
MF-methodology - consolidated						
Income Elasticity of Revenue III = 0.5	0,5	0,5	0,5	0,5	0,5	0,5
Potential GDP Revenue III (bn CSK, CZK)	208,2	225,3	322,3	359,6	392,2	429,3
Potential GDP Expenditure (bn CSK, CZK)	201,5	226,5	319,0	337,0	357,0	379,7
Potential GDP Balance III (bn CSK, CZK)	6,7	-1,1	3,3	22,6	35,3	49,6
Potential GDP Balance III as % of Potential GDP (cur.pr.)	1,28%	-0,20%	0,45%	2,66%	3,60%	4,45%
GDP gap	1,0000	1,0069	0,9636	0,9270	0,9248	0,9252
Actual Balance as % of Potential GDP (cur.pr.)	**1,28%**	**0,15%**	**-1,26%**	**-0,75%**	**0,11%**	**0,93%**
Potential GDP Balance III as % of Pot. GDP (cur.pr.)	**1,28%**	**-0,20%**	**0,45%**	**2,66%**	**3,60%**	**4,45%**
GFS-methodology						
Income Elasticity of Revenue III = 0.5	0,5	0,5	0,5	0,5	0,5	0,5
Potential GDP Revenue III (bn CSK, CZK)	261,8	262,3	345,7	383,0	383,3	419,9
Potential GDP Expenditure (bn CSK, CZK)	236,8	248,0	313,6	332,7	348,0	370,3
Potential GDP Balance III (bn CSK, CZK)	25,0	14,3	32,1	50,2	35,4	49,6
Potential GDP Balance III as % of Potential GDP (cur.pr.)	4,77%	2,55%	4,32%	5,92%	3,61%	4,45%
GDP gap	1,0000	1,0069	0,9636	0,9270	0,9248	0,9252
Actual Balance as % of Potential GDP (cur.pr.)	**4,77%**	**2,89%**	**2,61%**	**2,51%**	**0,12%**	**0,93%**
Potential GDP Balance III as % of Pot. GDP (cur.pr.)	**4,77%**	**2,55%**	**4,32%**	**5,92%**	**3,61%**	**4,45%**

Chart 39

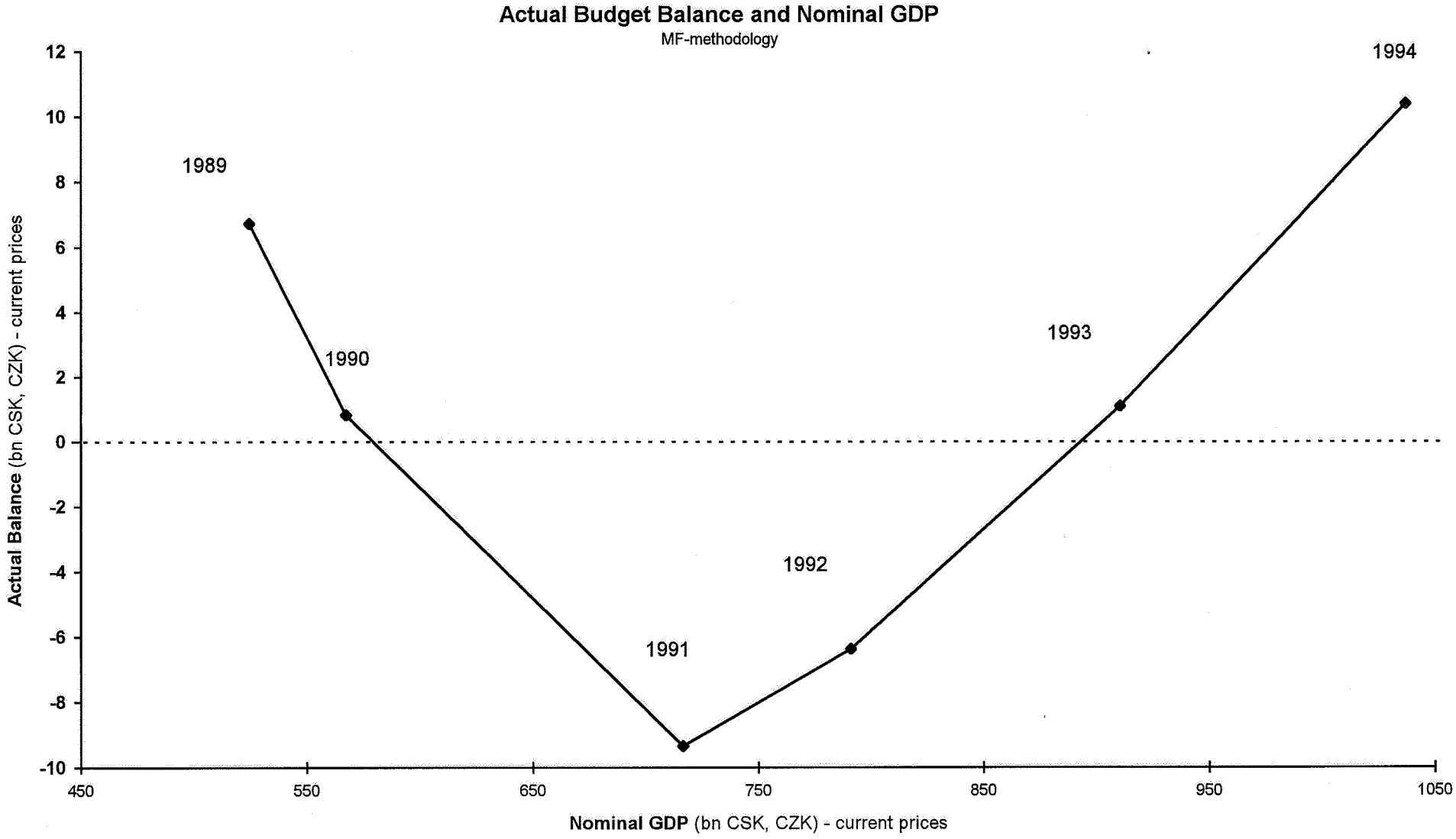

Actual Budget Balance and Nominal GDP
MF-methodology
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
1989
1990
1991
1992
1993
1994
Actual Balance (bn CSK, CZK) - current prices
450
550
650
750
850
950
1050
Nominal GDP (bn CSK, CZK) - current prices

Chart 40

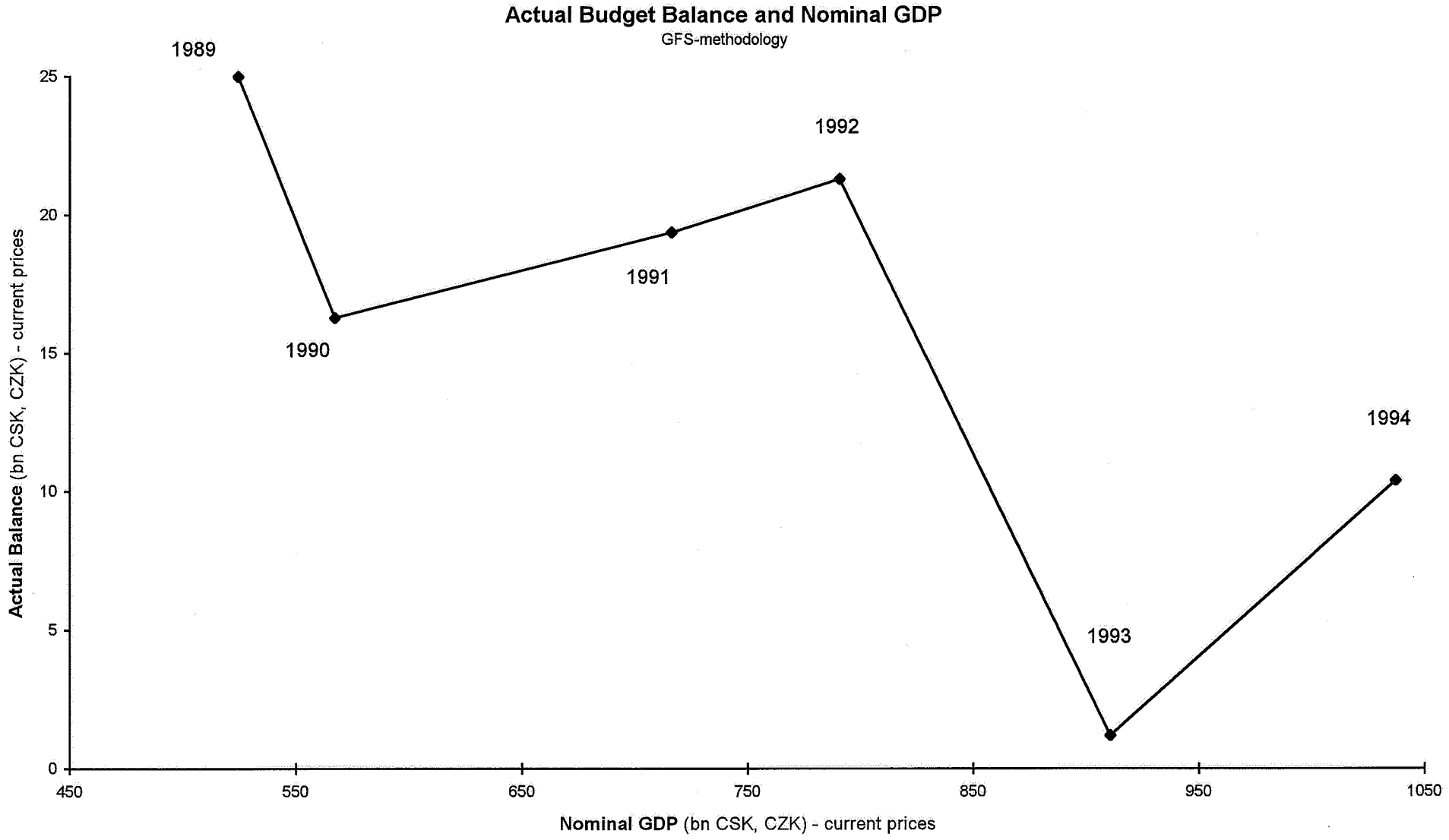

Actual Budget Balance and Nominal GDP
GFS-methodology
1989
1990
1991
1992
1993
1994
25
20
15
10
5
0
450
550
650
750
850
950
1050
Actual Balance (bn CSK, CZK) - current prices
Nominal GDP (bn CSK, CZK) - current prices

Chart 41

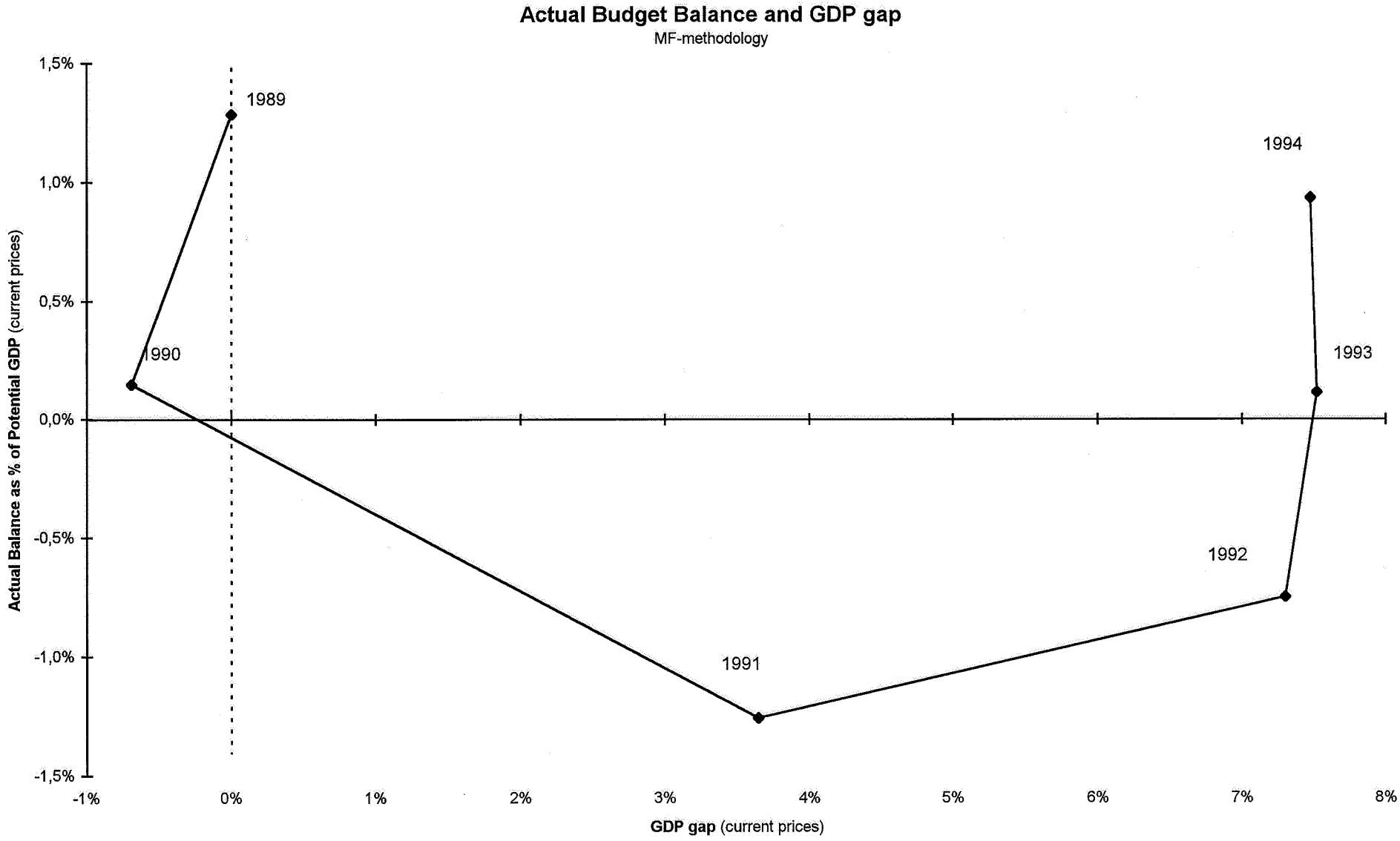

Actual Budget Balance and GDP gap
MF-methodology
1,5%
1,0%
0,5%
0,0%
-0,5%
-1,0%
-1,5%
Actual Balance as % of Potential GDP (current prices)
1989
1990
1991
1992
1993
1994
-1%
0%
1%
2%
3%
4%
5%
6%
7%
8%
GDP gap (current prices)

Chart 42

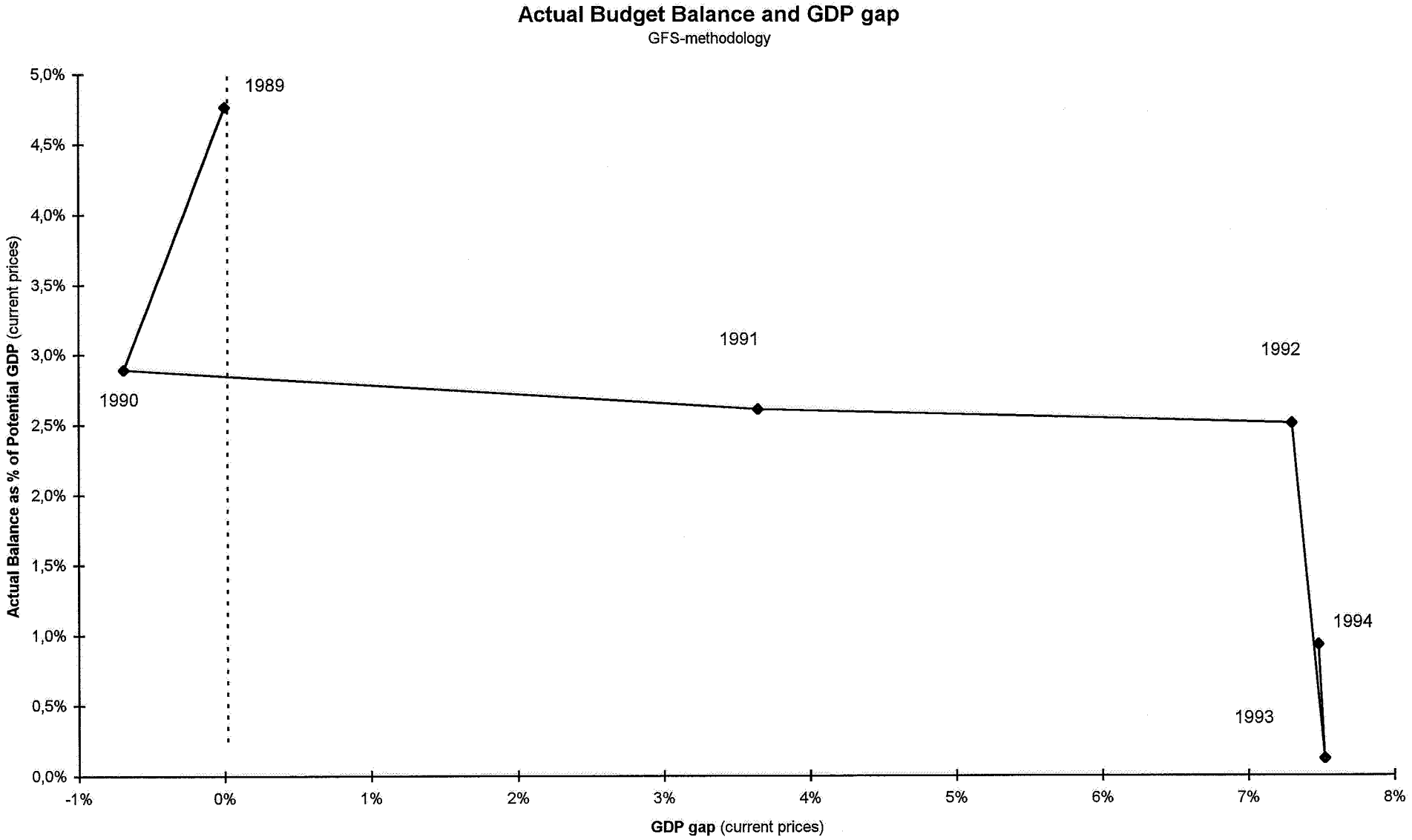

Actual Budget Balance and GDP gap
GFS-methodology
Actual Balance as % of Potential GDP (current prices)
5,0%
4,5%
4,0%
3,5%
3,0%
2,5%
2,0%
1,5%
1,0%
0,5%
0,0%
1989
1990
1991
1992
1993
1994
-1%
0%
1%
2%
3%
4%
5%
6%
7%
8%
GDP gap (current prices)

Chart 43

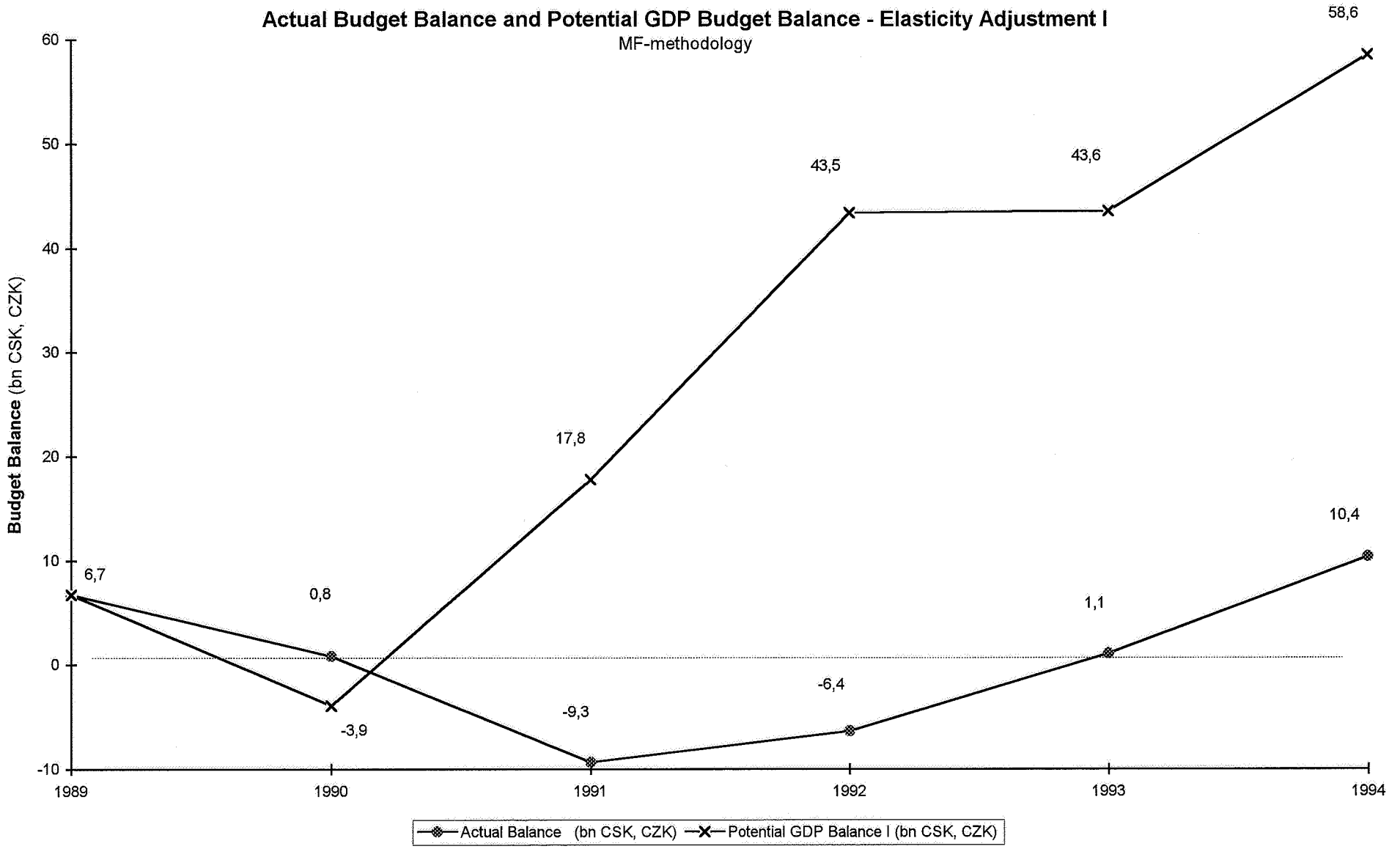

Actual Budget Balance and Potential GDP Budget Balance - Elasticity Adjustment I
MF-methodology
Budget Balance (bn CSK, CZK)
60
50
40
30
20
10
0
-10
1989
1990
1991
1992
1993
1994
6,7
0,8
-3,9
17,8
43,5
-9,3
-6,4
43,6
1,1
58,6
10,4
Actual Balance (bn CSK, CZK)
Potential GDP Balance I (bn CSK, CZK)

Chart 44

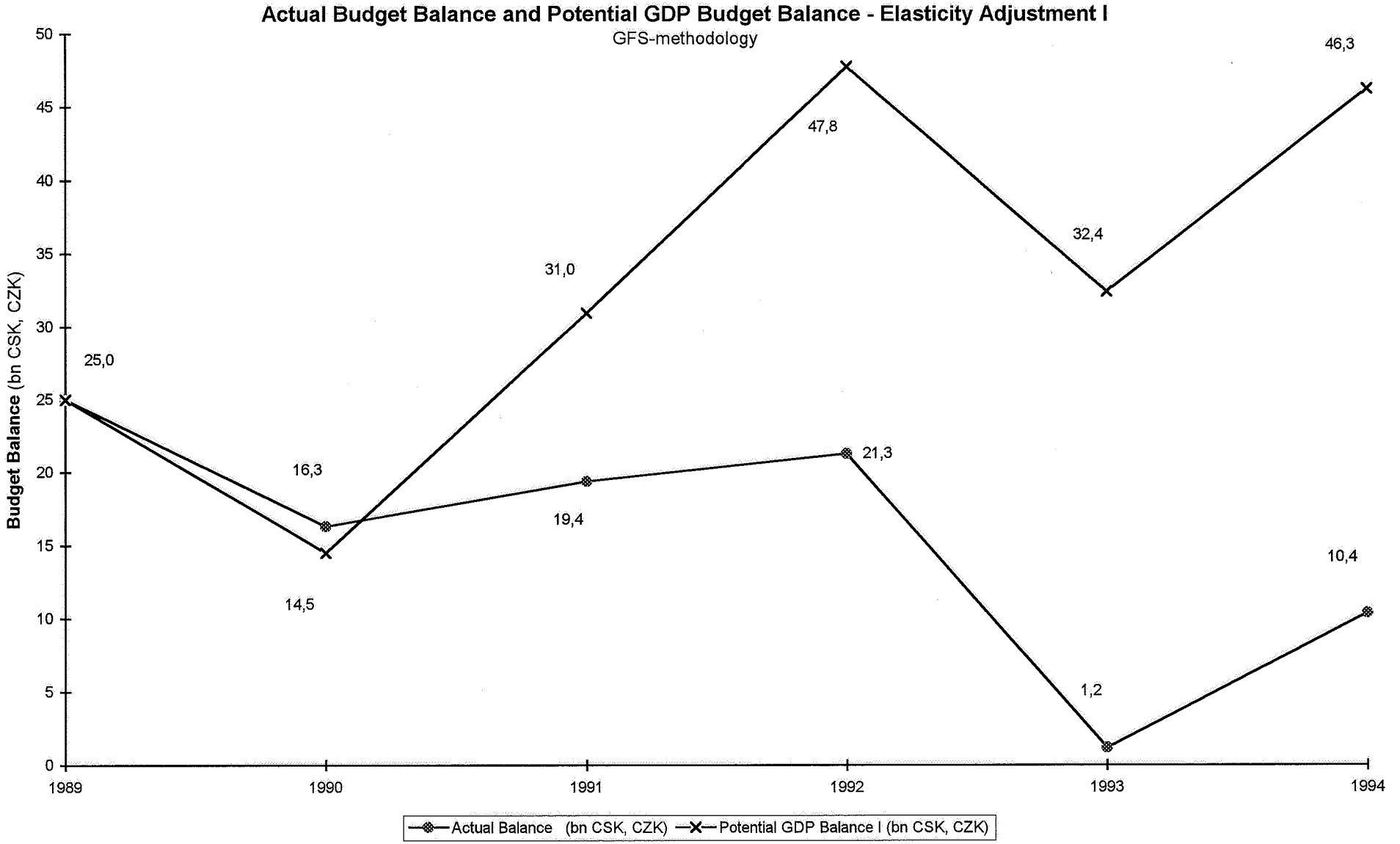

Actual Budget Balance and Potential GDP Budget Balance - Elasticity Adjustment I
GFS-methodology
Budget Balance (bn CSK, CZK)
50
45
40
35
30
25
20
15
10
5
0
1989
1990
1991
1992
1993
1994
25,0
16,3
14,5
31,0
47,8
19,4
21,3
32,4
1,2
46,3
10,4
Actual Balance (bn CSK, CZK)
Potential GDP Balance I (bn CSK, CZK)

Chart 45

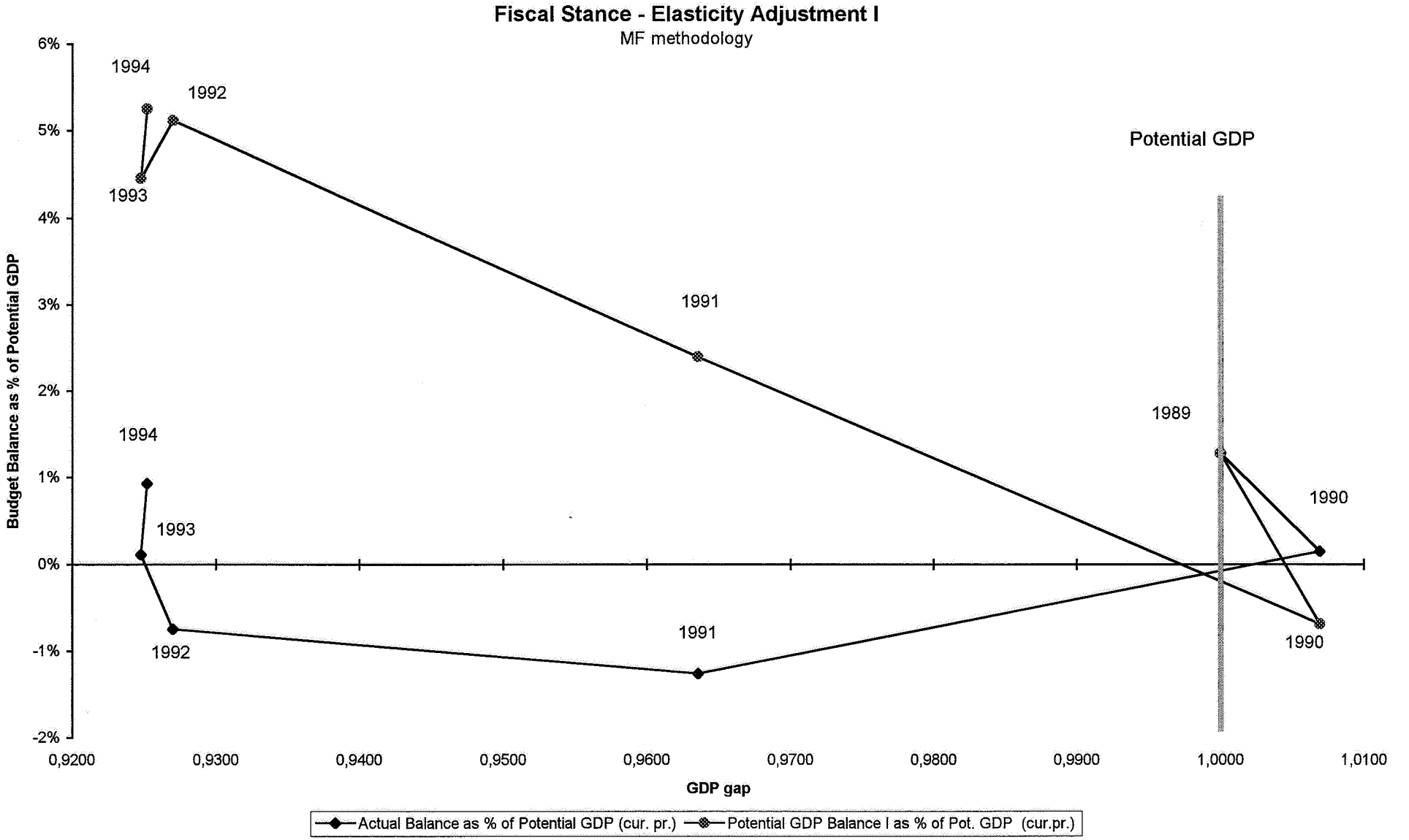

Fiscal Stance - Elasticity Adjustment I
MF methodology
Potential GDP
Budget Balance as % of Potential GDP
GDP gap
6%
5%
4%
3%
2%
1%
0%
-1%
-2%
0,9200
0,9300
0,9400
0,9500
0,9600
0,9700
0,9800
0,9900
1,0000
1,0100
1994
1992
1993
1991
1989
1990
1994
1993
1992
1991
1990
Actual Balance as % of Potential GDP (cur. pr.)
Potential GDP Balance I as % of Pot. GDP (cur.pr.)

Chart 46

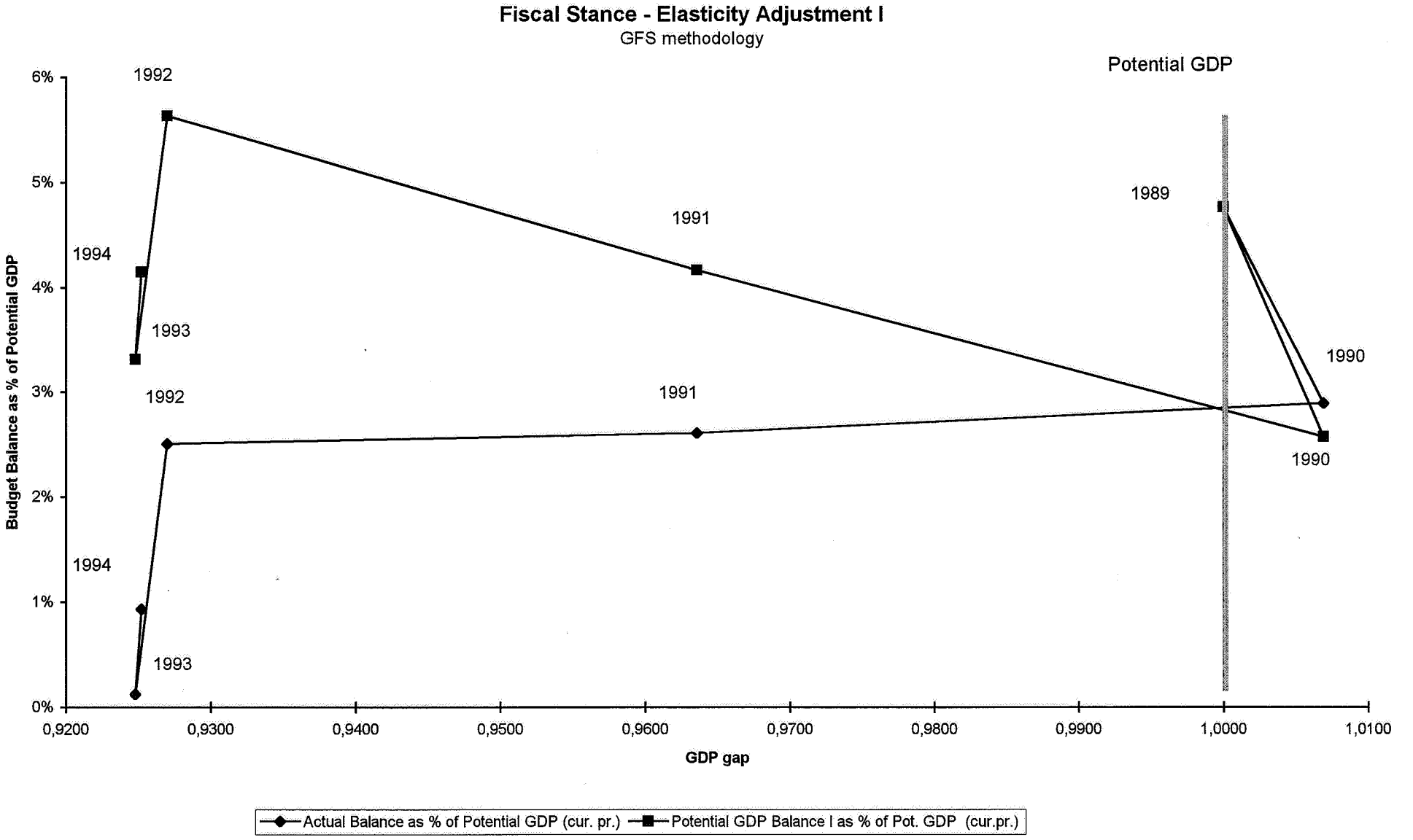

Fiscal Stance - Elasticity Adjustment I
GFS methodology
Potential GDP
1992
1991
1989
1994
1993
1990
1992
1991
1990
1994
1993
6%
5%
4%
3%
2%
1%
0%
Budget Balance as % of Potential GDP
0,9200
0,9300
0,9400
0,9500
0,9600
0,9700
0,9800
0,9900
1,0000
1,0100
GDP gap
Actual Balance as % of Potential GDP (cur. pr.)
Potential GDP Balance I as % of Pot. GDP (cur.pr.)

Chart 47

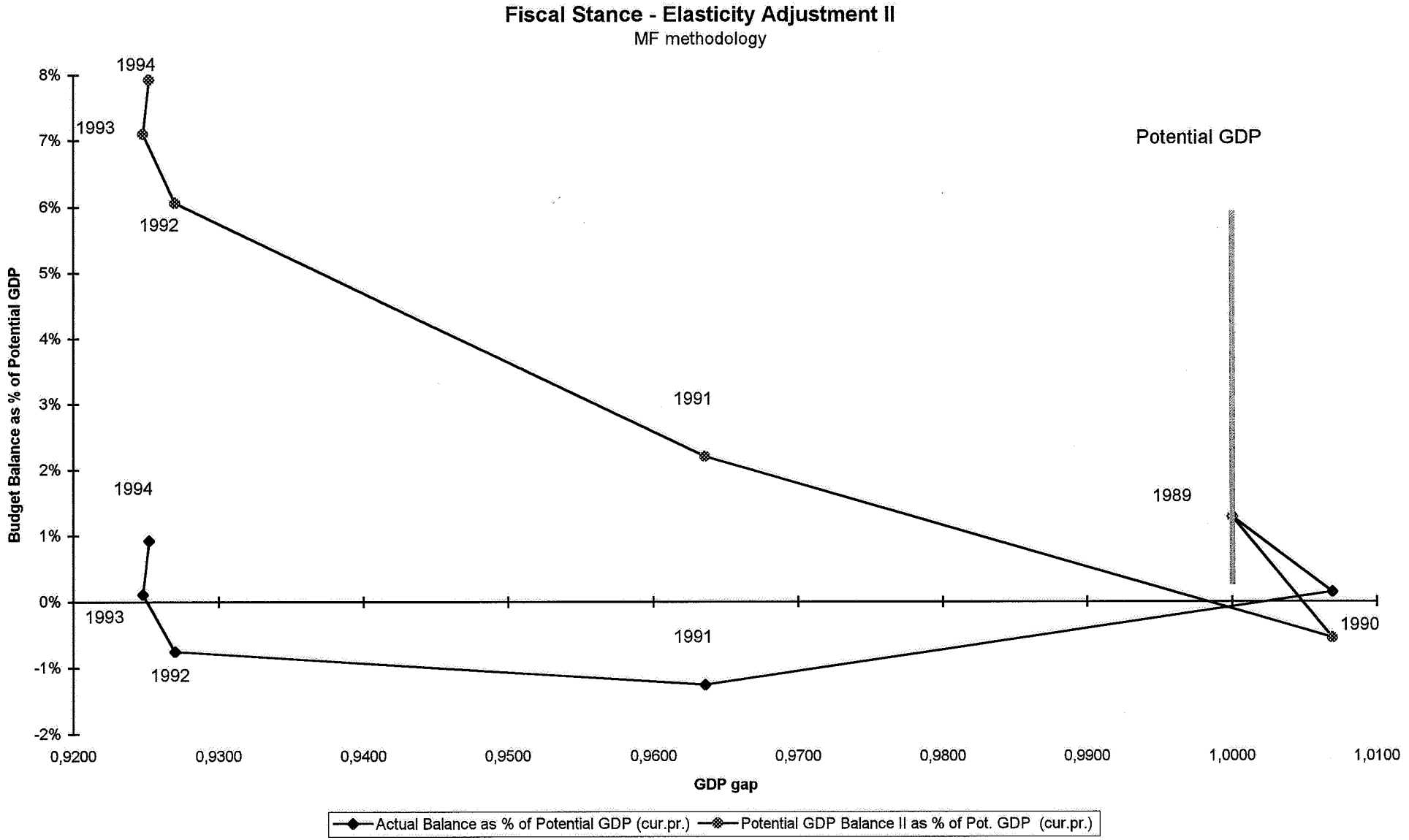

Fiscal Stance - Elasticity Adjustment II
MF methodology
Potential GDP
Budget Balance as % of Potential GDP
8%
7%
6%
5%
4%
3%
2%
1%
0%
-1%
-2%
1994
1993
1992
1991
1989
1990
0,9200
0,9300
0,9400
0,9500
0,9600
0,9700
0,9800
0,9900
1,0000
1,0100
GDP gap
Actual Balance as % of Potential GDP (cur.pr.)
Potential GDP Balance II as % of Pot. GDP (cur.pr.)

Chart 48

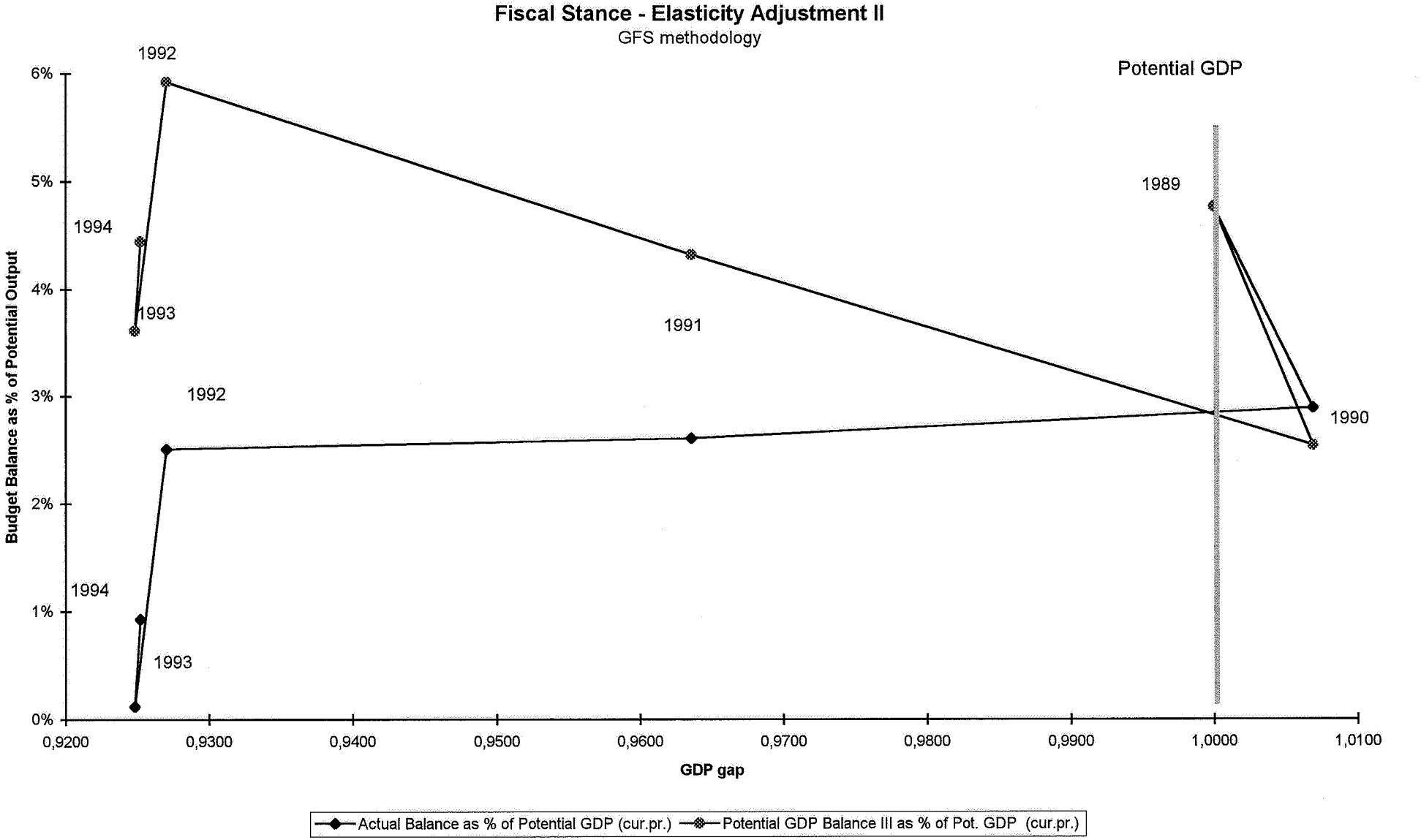

Fiscal Stance - Elasticity Adjustment II
GFS methodology
Potential GDP
1992
1994
1993
1991
1989
1990
1992
1994
1993
6%
5%
4%
3%
2%
1%
0%
Budget Balance as % of Potential Output
0,9200
0,9300
0,9400
0,9500
0,9600
0,9700
0,9800
0,9900
1,0000
1,0100
GDP gap
Actual Balance as % of Potential GDP (cur.pr.)
Potential GDP Balance III as % of Pot. GDP (cur.pr.)

Chart 49

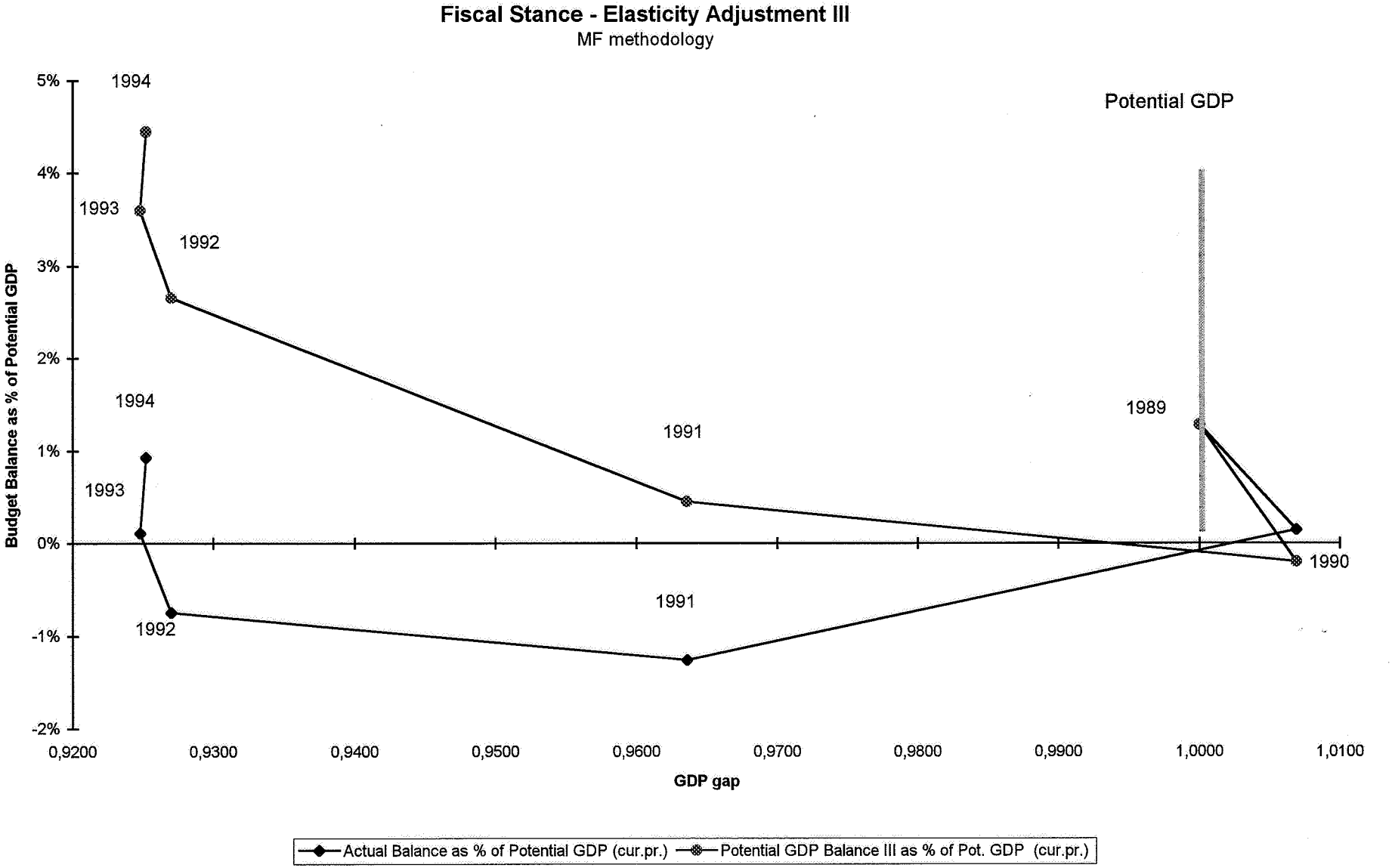
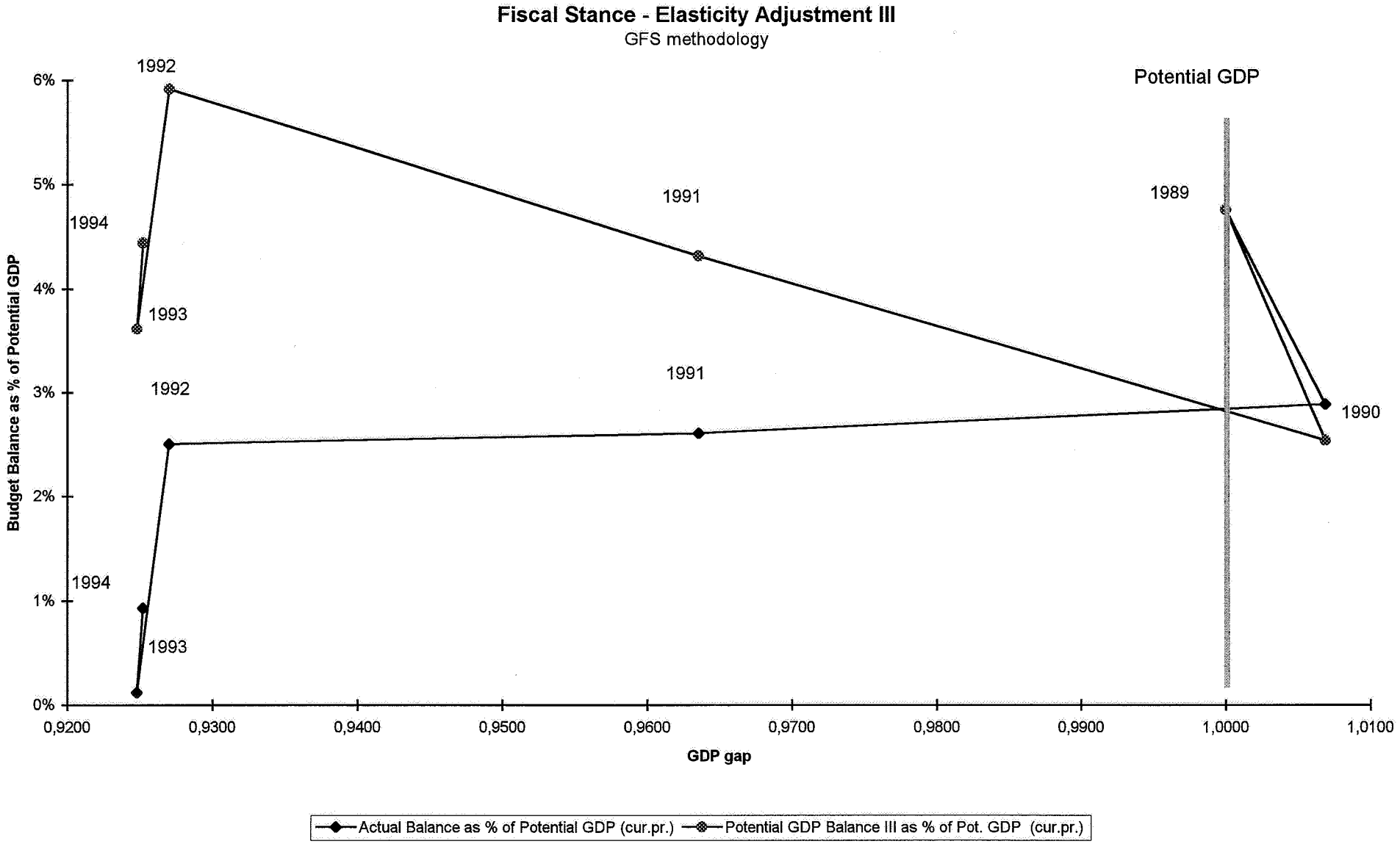

Fiscal Stance - Elasticity Adjustment III
MF methodology
Potential GDP
Budget Balance as % of Potential GDP
GDP gap
5%
4%
3%
2%
1%
0%
-1%
-2%
0,9200
0,9300
0,9400
0,9500
0,9600
0,9700
0,9800
0,9900
1,0000
1,0100
1994
1993
1992
1991
1989
1990
1994
1993
1991
1992
Actual Balance as % of Potential GDP (cur.pr.)
Potential GDP Balance III as % of Pot. GDP (cur.pr.)

Chart 50


Fiscal Stance - Elasticity Adjustment III
GFS methodology
Potential GDP
1992
1991
1989
1994
1993
1991
1992
1990
1994
1993
6%
5%
4%
3%
2%
1%
0%
Budget Balance as % of Potential GDP
0,9200
0,9300
0,9400
0,9500
0,9600
0,9700
0,9800
0,9900
1,0000
1,0100
GDP gap
Actual Balance as % of Potential GDP (cur.pr.)
Potential GDP Balance III as % of Pot. GDP (cur.pr.)