

**IMF Working Paper**

© aa International Monetary Fund

WP/97/

INTERNATIONAL MONETARY FUND

Fiscal Affairs Department

**The Inadequacies of Maastricht “Excessive Deficit” Rules  
and the Scope for Opportunistic Budgetary–Accounting Behaviors**

Prepared by Francesco Forte

Authorized by Vito Tanzi

October 1997

**Abstract**

After analysis of the Maastricht fiscal rules, the *inadequacies* of their *accounting framework* - i.e. the European System of Integrated Accounts, ESA 1978 and a 1993 EU Regulation- are examined. A pressure to elude the constraints, by opportunistic behaviors, is common to any fiscal constitution and ESA has been conceived for statistics, not for budgetary planning. Are then considered 13 opportunistic budgetary–accounting categories on the revenue side; other 15 on the expenditure side; and the contingent liabilities in the *borderline* areas of guarantees, *economic- policy* assets, pensions debt. The conclusion stresses that the above inadequacies may be corrected.

**JELL Classification Numbers: \*\*\*\*\*TO BE INSERTED\*\*\*\*\***

**Keywords:** “ ” “

**Author's E–Mail Address:** “ ” “

## Contents

<b>Summary</b> .....	<b>3</b>
<b>I. Introduction</b> .....	<b>4</b>
<b>II. The Inadequacies of the Accounting Setting of the Maastricht Fiscal Constitution</b>	
<b>Rules</b> .....	<b>4</b>
A. Maastricht Fiscal Constitution .....	4
B. Relationship Between the Three Percent Deficit and the Sixty Percent Debt Ratio and the Rate of Growth of GDP .....	5
C. ESA 1978, ESA 1995 and EC Regulations accounting inadequacies .....	6
D. Value and fiscal policy effects of <i>Economic Policy</i> Financial Assets. ....	8
<b>III. Limits of National Income Statistics as <i>Fiscal Constitution</i> Accounting</b>	<b>..10</b>
A. Accounting, Fiscal Constitution, Opportunistic Behavior .....	10
B. Influence of Keynesian Ideology on ESA .....	10
C. Inadequacies of indicators for <i>Budgetary</i> Planning in ESA .....	11
D. Accrual versus Cash <i>.Concepts versus Facts</i> .....	12
E. Dual <i>Time Dimension</i> of Obligations.     13	
F. Four meanings of Payment <i>Due</i> .....	15
<b>IV. Categories of Opportunistic Behaviors in the Maastricht Budgetary Accounting.</b>	
<b>The Revenue Side</b> .....	<b>16</b>
A. Ideal Matrix of Opportunistic Behaviors in Budgetary Accounting .....	16
B. Categories as for the <i>Deficit</i> Rule.....	16
C. Categories as for the <i>Debt</i> Rule.....	19
<b>V. Categories of Opportunistic Behaviors in the Maastricht Budgetary Accounting.</b>	
<b>The Expenditure Side</b> .....	<b>20</b>
A. Categories as for the <i>Deficit</i> Rule. ....	20
B. Categories as for the <i>Debt</i> Rule.....	23
<b>VI. Contingent Liabilities</b> .....	<b>24</b>
A. Inadequacies of Maastricht Accounting this Borderline Area .....	24
B. Recording of Government's Guarantees as Derivatives in a Collateral Account ..	24
C. Recording of Social Security Pensions Debts in a Collateral Account .....	25
<b>VII. Concluding Remarks</b>	27

Any constraining rule is bound to give origin to opportunistic behaviors you elude it. As for the Maastricht budgetary rules one, therefore, should expect *opportunistic accounting* behaviors, i.e. *creative accounting*. They are stimulated by accounting inadequacies, which may be tolerated or even fostered, by the authorities controlling the respect of these rules, to gain bargaining power and to smooth their application, particularly in an initial stage.

Section II shows that Maastricht rules have a practical origin, and are their results may not be entirely rational. European System of Accounts (ESA), on accrual basis, considered is that of 78 not the new of 95. Regulation 360/93 excludes from gross debt, as resulting on a cash basis, several items contemplated by ESA, while for deficit relies on its accrual. Section III focuses on the problems arising from adoption of ESA *statistical* accounting for *operational budgetary accounting*: mere *informational* objectives lead to lower pressure for opportunistic behaviors than the *operational* ones and accrual, if not properly defined, is suitable to opportunistic accounting behaviors.

Section IV considers 10 *possible* opportunistic accounting categories on the revenue side, as for the *deficit* rule: extraordinary taxes to be reimbursed; transformation of funded social insurances in social security; *one off* anticipation of future tax revenues; recording of dubious revenues and of taxes gross of the rebates; dividend from the revaluation of the gold of Central Bank; capital gains from selling assets and leasing back; selling indexed bonds at a price *higher than their face value*; dividends from public corporations selling properties with a nominal capital gain; nominal capital gains from the sale of land. As for the *debt* rule, additionally: sale of gold of the Central Bank; temporary reduction of public debt by drawing call money from financial institutions; transformation of public services governmental firms in autonomous institutions to shift their debt outside the government.

On the expenditure side, in Section V, as for *deficit*, 13 categories of opportunistic accounting: apparent delay of public investments; *artificial* containment of public pensions and of wage increases to public employees by shifting backward or forward their obligations; forward shifting of rebates; nationalization of amortizable debt of public corporations; financing public investment by paying interest and amortization service to autonomous entities; recording at their *face* value the purchase of unrentable assets; postponing the accounting of *imputed* interests on zero coupon bonds and on saving deposits; recording as loans to private entities of transfers to nonprofit *de facto* public; nonconsolidation in the government of losses of public service public enterprises; guarantees to risky operations to replace grants and concessional loans; postponement of transfers due by avoiding their specification as credits. And specifically for *gross debt*; non-recording of liabilities of non profit institutions and autonomous public services entities selling at a price below the market price, by a formal definition of them as non-governmental institutions; artificial postponement of payments for the sole purpose of reducing the debt figure.

Section VI suggests the accounting of contingent liabilities of guarantees and of pension debt in collateral accounts. The conclusion stresses that, through adopting and adapting ESA 95 to the new *fiscal constitution* tasks and adding *collateral accounts*, much of Maastricht budgetary accounting inadequacies, opportunistic behaviors and related lack of

transparency *might* be removed.

## **I. INTRODUCTION**Errore. Il segnalibro non è definito.

Any constraining rules are bound to give origin to opportunistic behaviors to elude it. As for the Maastricht budgetary rules, therefore, one should expect opportunistic accounting behaviors. These may be named “creative accounting” meaning that they do not reflect the reality but imaginations. They may be considered a peculiar chapter of intended or unintended *fiscal illusion*.<sup>1</sup> Their study therefore is in the core of the issue of *budgetary transparency*.

Because of the room for opportunistic behaviors, in some quarters, there is skepticism about the possibility of truly enforcing constitutional fiscal rules, consisting of parametric constraints [Von Hagen, 1991]. But, at least as for the Maastricht rules, the possibilities of “closing the gaps” do exist. The real problem is the willingness of really accepting to be bound by *inescapable* constitutional fiscal constraints.

## **II. THE INADEQUACIES IN THE ACCOUNTING SETTING OF THE MAASTRICHT FISCAL CONSTITUTION RULES**Errore. Il segnalibro non è definito.

### **A. Maastricht Fiscal Constitution** Errore. Il segnalibro non è definito.

The Treaty of Maastricht of 1992, introduces, for the countries expected to become members of the European Monetary Union, a set of rules constraining the budget and the public debt which may be seen as a *fiscal constitution*, being unmodifiable by the laws of the member countries and being subject to penalties if and when violated. These fiscal rules aim to hinder the “excessive deficit”<sup>2</sup> of the budget of the general government. They are given for the ratios of the planned and actual deficit and debt to GDP, setting the following limits:

- 3 percent for the ratio to GDP of the general government *deficit*, as *net borrowing*, as defined in the European System of Integrated Economic Accounts (ESA);

---

<sup>1</sup>On fiscal illusion see, Puviani, 1903, Fasiani, 1951, Vol 1, Book I, Breden and Hunter 1975, Wagner 1976, Buhanan and Wagner, 1977, Misolek and Elder, 1988, Alesina and Perotti, 1994, Dollerey and Worthington, Forte 1997 (Quarterly Review Banca Nazionale del Lavoro forthcoming).

<sup>2</sup>No consideration is given to the size of the public sector as ratio to the GDP, on the expenditure side and on tax and social security burdens as ratio to GDP. Thus these rules appear essentially as a fiscal constitution for *monetary* purposes; not for purposes of equilibrium between *private market* economy and the *government* and *public sector* and for the objectives of growth and employment, where government size may be very relevant [Peden & Bradley].

- 60 percent for the ratio to GDP of the general government *debt*, as *gross debt* at nominal value outstanding at the end of the year, as defined in the ESA.

**B. Relationship of the Three Percent Deficit and the Sixty Percent Debt Ratio and the GDP Growth**Errore. Il segnalibro non è definito.

Why just 3 percent for the deficit and 60 percent for the gross debt as ratios to the domestic GDPs? If a country has a debt at 60 percent of its GDP and cannot grow at least at the nominal rate of 5 percent of GDP, it shall not be allowed a deficit of 3 percent of GDP, unless it benefits from a devaluation of its liabilities or sells financial assets. Indeed, to keep invariant the ratio of gross deficit to GDP at 60 percent, when GDP grows by 5 percent, *ceteris paribus*, a 3 percent of GDP increase in net liabilities, is the maximum allowed. Indeed, calling  $d$ , the maximum deficit allowed,  $d$  the debt,  $Y$  the GDP and that the rate of growth of  $Y$ , is  $=5$ , the value of  $d$ , which keeps constant  $G/Y$ , shall be given by the following proportion:

$$d: 5 = G:Y$$

and when  $G/Y=60$ , then also  $d/5=60$  and  $d=60 \times 5=3$ .

The European Union (EU) in the 1979-92 period had experienced a real rate of growth of GDP of 2.2 percent.<sup>3</sup> The target of Maastricht, as for inflation, was that of the best performing countries. The German rate then, had been around 3 percent until German reunification; and it was considered excessive. Thus assuming a rate of inflation of 2.5 percent and a rate of growth of 2.5 percent one would get precisely that 5 percent rate of growth of GDP. However, as such, the 3 percent of deficit rule, without any further qualification, is inherently *procyclical*. Indeed, in years of depression and low inflation, when the rate of growth of GDP could easily be as low as 2.5–3 percent (inflation at 1.5 percent and growth at 1–1.5 percent), the permitted deficit would be only 1.5–1.8 percent. Unless the flexibility in respecting the parameters,<sup>4</sup> as for the ratio of debts to GDP was interpreted loosely—a deficit of 3 percent, could not be allowed, unless in the boom years the deficit was *below the 3 percent*. Creative accounting may, implicitly, be allowed at the European level, to ease the strictures thus created.

The reasons which seem to have induced take 60 percent as the limit to the ratio of debt to GDP appear also to be of a practical kind. With a ceiling lower than 60 percent, Germany would have been disqualified, because the burden of the Eastern Germany debt was leading total gross debt to a percentage close to 60 percent. But the Federal Republic was approaching that level after 15 years of no more than 40 percent, and the 60 percent did

---

<sup>3</sup>The Maastricht Treaty was drafted in 1991, when the forecasts of main economic data for 1992 were likely to be present to the experts in Brussels, as well to those in the member countries.

<sup>4</sup>Allowed by Article 104c, 2, second paragraph.

appear as an extreme limit.

One thus may conclude that both the 3 percent and the 60 percent parameters are "applied economics" parameters, grounded in practical experience and feasibility, rather than on theoretical principles. Thus opportunistic accounting, as a means of easing the rules without openly admitting it, could appear, also for the best performing countries—and not only for those lagging behind, as at first sight would appear logical—a pragmatically acceptable way out, to *speed up* the Monetary Union's realization. But this may not be an equally satisfactory approach in a *structural, medium-term* view.

### C. ESA 78, ESA 95, EC Regulations' Accounting Inadequacies

Council Regulation 3605/93 refers to the second (old) edition of 1978. Reference to the third edition ESA 95, officially adopted by a Council Regulation of June 25, 1996, has been postponed for the Maastricht fiscal rules to 1999. Are thus allowed several accounting possibilities, prevented or dubious under that new accounting framework. Regulation 3605/93, by restricting the Maastricht definition of *the increase of gross debt*, to arrive at a meaningful concept, unintentionally opens some further possibility of creative accounting. Government debt, according to it,<sup>5</sup> is constituted only of currency and deposits, bills and short-, and long-term bonds, other short-term loans, other medium- and long-term loans as defined by ESA 78. Are thus excluded from gross debt, short- and long-term *trade loans*, *accounts payable*<sup>6</sup> and *technical reserves* of assurances. Only the deficit of the cash budget, in the broad definition, as "besoin de financement," whether through bonds or any other financial instrument, plus (minus) the change in value of public debt<sup>7</sup> denominated in foreign currency, is relevant for the gross indebtedness of the considered year.

---

<sup>5</sup>See Article 1, paragraph 5, second indent of Regulation 3605/93.

<sup>6</sup>ESA 78, paragraph n.558 (p.106) defines "accounts receivable and payable" as "financial claims resulting from the time lag which sometimes occurs between the conclusion of certain transactions and the actual receipt of the payments involved." Obviously to postpone payments for public expenditure, by cash policies, shall not reduce the deficit, in the Maastricht definition, because measured on accrual basis, with the inclusion of credits payable. However, it reduces the debt: this is a very important effect, for some countries who can easily qualify, as for the Maastricht deficit parameter, but may have problems, as for the debt parameter.

<sup>7</sup>According to ESA assets and liabilities must be assessed at their value at the end of the year. Regulation 3605/93, article 1, 5, indents 3-5 state that "the nominal value of a liability outstanding at the end of the year is the face value" but that "the nominal value of an index-linked liability corresponds to its face value adjusted by the index-related capital uplift accrued to the end of the year" and that "liabilities denominated in foreign currency shall be converted into the national currency at the representative market exchange rate prevailing on the last working day of each year."

This definition, which *per se* is well grounded,<sup>8</sup> however opens the way to some creative accounting practices, to contain gross debt.<sup>9</sup>

Regulation 3605/93, following ESA 78 and ESA 95, defines government, whether central or local, in a subjective way, excluding the ***commercial operations done by non-government institutions***. Thus general government “comprises only institutional units producing nonmarket services as *their main activity*.” As a result, autonomous public entities running deficitarian public services, who finance their investment by debts, because defined, by ESA, as *commercial operations*, are let outside the realm of government, even if they actually supply impure public goods,<sup>10</sup> with the result of enticing *off budget* accounting. Some other opportunistic accounting is eased by ESA’s narrow definition of *liabilities*, excluding debts of the public enterprises of which the government has to fully respond. Recent public accounting rules, in some country, require that government guarantees to private or public entities should be recorded as ***liabilities***, in official statements. However, given their non-market nature, they do not appear among the gross liabilities in ESA 87 financial assets and liabilities accounts and there fore are excluded from Maastricht accounting. For ESA 78, all assets must be recorded at their *nominal value* or at their *purchase value*. ESA 95, while still not considering government guarantees because of non-endowed market value, adopts more realistic valuations, as for the assets and liabilities,

---

<sup>8</sup>Indeed, if in the gross debt all the government non-financial liabilities were included, i.e. its obligations on the expenditure side of the budget, without considering the credits of the government on the revenue side, a misleading relation between the deficit on accrual basis and the debt would emerge, with the gross debt increasing of an amount greater than that of the deficit. It is true that doing the opposite, the increase in debt may be smaller than the deficit. But at least, in this case, one gets the nice figure of the liquidity constraint, which is much relevant not only from a solvency point of view, but also from the point of view of the monetary effects of fiscal policy. See the discussion in the text below.

<sup>9</sup>As we shall see below, it is not only possible to reduce the increase of gross public debt by delays in payments of existing expenditures (V, E, 18), but also to reduce it by fictitious revenues, as that of the sale of gold obtained from the Central bank by issuing commercial loans; that of the sale of public debt to (partially) funded social security institutions and that of the cash obtained—to redeem public debt—from financial institutions, credited with accounts payable (IV,C,12,13, 14 and D).

<sup>10</sup>See Regulation 3605/93, Article 1, paragraph 2, and ESA 78, Chapter II, 239–40, page 31, and ESA 95, Chapter II, 2.68–2.74. The IMF accounting methodology (IMF1986 known as *GFSM*) adopts a distinction between general government and public enterprises based on the nature of the activities that they perform rather than on institutional or legal classification (Stella 1993). Obviously grants given to these entities by the governments enter the expenditure side of the budget. But the purchase of their assets, by the government is not recorded, as for its grant component, among the government expenditures. The problem may be particularly delicate for the municipal and regional transportation services and for some other corporation in the “ecological” sector. See para D, below for the problems of *economic policy* purchases of financial assets.

relevant for government accounting, taking into account their *market price* or the present *discounted value of their future returns*.<sup>11</sup> Thus the *net lending* nature<sup>12</sup> of government public policy purchase of assets may be recognized.

ESA 78, neither considers the methodological problems of *ex ante* valuations, nor those of medium term Maastricht.<sup>13</sup> Only in a medium term perspective,<sup>14</sup> the respect of parameters as those of the Maastricht Treaty, can be assessed in a convincing way. But the "planned deficit" mentioned in the Maastricht Treaty<sup>15</sup> merely refer to the *next year*. And Regulation 3605/93 only requires the member states to present "before March of the year n, an up-to-date estimate of their actual government deficit for year n-1, and their actual government deficits for years n-2, n-3 and n-4."

**Errore. Il segnalibro non è definito.** *Gross indebtedness*, in the present Maastricht accounting framework, because of Regulation 3605/93, as seen, it is virtually the liquidity constraint, i.e., the cash deficit in the broad sense of "besoin de financement." In addition to it, only includes the changes in value of the assets denominated in foreign currency. In a *Monetary Union*, as that devised by the Maastricht Treaty, it would have been paradoxical not to have a measure of the liquidity constraint of the general governments of the member countries. It is not enough to keep, as measure of deficit an *accrual basis*, which certainly is a meaningful fiscal policy figure in terms of *real economic resources*. Provided that the deficit as *net cash requirement* seems necessary for monetary policy coordination,<sup>16</sup> however, it

---

<sup>11</sup>See ESA 78, Chapter V, 706, page 128, and ESA 95, Chapters 7, 7.25–7.32 and 7.47.–7.57, pages 131–134.

<sup>12</sup>In the sense of GFS1986, see Blejer and Cheasty, 1991, p.1647-48.

<sup>13</sup>ESA 95, Ch. 12 Quarterly Economic Accounts, particularly 12.04 and 12.05 begins to consider the problem of *ex ante* estimates, as for the quarterly accounts of the last part of a year whose *ex post* data are available as for the first quarters.

<sup>14</sup>Tanzi (1993) notes that there are *one off* measures which, while reducing the size of the deficit in the short run, do little or nothing to the improvement of the fiscal situation and that for this reason it would be desirable to present a measure of the fiscal deficit that would remove the impact of such short term measures. "This adjustment would give and underlying or *core deficit* [italics added] that would better reflect the fiscal situation of the country over the longer run."

<sup>15</sup>See Article 104c, 2, second indent of Maastricht Treaty and Protocol 5, Article 1, first indent annex to it and Article 4, 1–3 of Regulation 3605/93.

<sup>16</sup>In the French public accounting terminology this is the "besoin de financement," while in the German one is the "Finanzierungsaldo." The Italian present budgetary accounting system employes the word "fabbisogno" for the above cash-deficit concept, while the accrual budgetary deficit is named as "saldo netto da finanziare." On the usefulness of this concept, in the Italian fiscal policy, see Balassone and Franco (1996).



would appear better, from a transparency point of view, to require that this figure should be given and *constrained*, as an *additional deficit* figure, not as a *debt* figure. The indebtedment should be a comprehensive *accrual* figure, since it has to do with stocks not with flows. Obviously one may argue that if it is correct to maintain that the general government *debt* as *stock* affecting net wealth should include all debts, however it may be misleading to add to the financial debts the non-financial debts of the government, considering that a part of them are matched by credits for revenues. This addition would lead to an indebtedment inconsistent with the accrual deficit, likely *systematically* bigger. However, if by this reasoning all the non-financial debts of government are excluded, from the official figure of public debt, a bias is introduced, again disconnecting the gross indebtedment from the accrual deficit figure. And this new accounting bias may entice the government in running in non-financial indebtedment, throwing part of its financial problems on the market economy operators. A natural bad tendency of some government, which does not need a further stimulus. Inconsistencies and biases are avoided both ways and the concept of gross debt is better approached, if to the government financial debt, at the end of the year, the algebraic sum of the government non-financial debt is added. This last total, indeed, is a rough measure of the stock of financial requirements drawn from the economy, in the production and distribution process, by the government in the *time lags* of its transaction, over and above that resulting from their *economic resources* gap. With average times lags on the revenue side equal to the average time lags on the expenditure side, the only gap would be the resource gap. No financial requirement would be needed by the government as circulating capital.

#### **D. Value and Fiscal Policy Effects of *Economic Policy* Financial Assets**

##### **Errore. Il segnalibro non è definito.**

Deficit under ESA 78, as noted, is viewed as liabilities net of any asset purchased. There is no *government-wealth justification* or *fiscal policy* reason for mixing *economic policy* purchase of assets with purchases for mere liquidity management (Blejer and Cheasty 1993). The former, as general government *net lending* in the GFS 1986 terminology, of the government, given their concessional character, which may be particularly relevant in the case of public enterprises, because of their *hidden grant component*, have an economic impacts similar to those of unrequited capital and current expenditures directed to similar destinations. And their real and monetary macroeconomic impulse, may be greater than those resulting by this *hidden grant* component, because of a leverage effect on the aggregate financing capability of the beneficiaries. In a genuine government-wealth ricardian perspective, the property of these assets more than often has a small or zero worth and some time even a negative one.<sup>17</sup>

Truly governments may purchase assets of industrial and financial corporations which are not expected to have systematic losses. But as it has been stressed by Tanzi 1993, if these public enterprises had to raise their finance entirely on the market, normally their investment

---

<sup>17</sup> An example of zero value is that of n.9 of Section V, A. Possible cases of negative value may take place with category n.6, there if beside the lending a guarantee has been given to the aided bad bank, so that the net result is a loss additional to that of the loan plus interests thereof.

behavior and pricing policies would have been less expansionary. On the other hand, to consider as *government* wealth, the financial assets, officially belonging to the government, whose corresponding real value these enterprises are able to increase, through reinvesting their profits, is an untenable, ideologically biased assumption. These public technocrats are not obliged to respond to the government in terms of profits distributed or negotiable capital gains. These are, for the taxpayer, *abstract property rights*. These assets, therefore, should not be assessed as government wealth unless there is a perspective of their realization (whose likely receipt should be discounted) and/or a revenue for the government (whose likely flow should be capitalized).

Government purchases of new *shares* of (public) corporations might be employed to *cover* their *losses*: here their similarity with grants is complete. As is well known, both grants and disguised grants to (public) corporations are forbidden in the EU, except in some peculiar situations, because it may distort competition. Therefore those above considered, may appear as cases of diminishing importance.<sup>18</sup> More important is the purchase of *stocks* and *bonds* of public entities or of mixed public and private corporations guaranteed by the government, to finance *public utilities* and *infrastructures*, replacing direct investment. These *quasi-public* or *quasi-market* operations may be helpful in solving the problems of providing public services and collective infrastructures at a reduced cost for the government. So that they, per unit of public expenditure, shall have a real and monetary impact on the economy greater than that of a similar direct public investments. But, they create government contingent liabilities, by the concession of government's guarantees to these operations. Here, again, assess whether here there is any true government asset one should assess how much property effectively the government may have, to be monetized in the future, in terms of flow or stock. On the other hand, one should assess the liabilities that the government may take, with the above guarantees. The sum, for some item, may be negative, rather than positive. The transparency of the budget may be paradoxically violated, by writing a positive entry instead of a negative one.

Finally, some public financing consists in giving *loans* at *concessionary* conditions to public or private entrepreneurs for their investments, without any government responsibility in their results. Here, clearly, there is a component of grant, with real and monetary effects particularly relevant if these loans are *long-term* operations *at low rates*. In a government-wealth perspective, these loans should be recorded, in the balance sheet, at a value discounting their concessionary component, while in the budget the transfer component shall be recorded on the expenditure side and the full loan on the revenue side. But in a fiscal policy perspective, this recording may be misleading because their expansionary effect may exceed the difference between the market value of these assets and the expenditure to purchase the Maastricht.

As noted above, opportunistic accounting and lack of transparency arising in this area

---

<sup>18</sup>But Maastricht fiscal rules are likely to be employed also to assess the financial requisites of other countries asking for admission to EU; and there the sector of public enterprises it is still very important.

could be reduced adopting the financial assets valuation rules of ESA 95. However, one shouldn't capitalize the expected flow of revenues of the enterprises whose assess the government has purchased, to get the value of them *for the government*. It must capitalize the flow of revenues that the *government's budget* is likely to be able to withdraw.<sup>19</sup> Nor would it be correct to consider the market value of the stocks of these enterprises, in so far as the government is not expected to be willing to *dispose of the* Maastricht.

### III. LIMITS OF NATIONAL INCOME STATISTICS AS FISCAL CONSTITUTION ACCOUNTING

**Errore. Il segnalibro non è definito.**

#### A. Accounting, Fiscal Constitution, Opportunistic Behavior

**Errore. Il segnalibro non è definito.**

There is no such entity as the *best accounting system*. Maastricht accounting must perform several objectives. And it must also be transparent. Functional perfectionism may lead to complexities that reduce easiness of interpretation of the figures. The pressure for *opportunistic behaviors* must be taken into account. Reference to ESA 78 as for the accounting framework of the Maastricht fiscal rules allowed to rely on a ready-made system, known to everybody and supposedly impartial. However, being conceived for *national income* statistics and not for operational government budgetary planning, its definitions—while opened to unexpected pressures for opportunistic behaviors—sometimes lack the perspective relevant for fiscal analysis. For instance, the notion of obligation *due*, for a statistician means that *he*, on *objective basis* should assess whether and when it is *due*. In the *budget accounting*, one must specify who—either the administration or the taxpayer or some third impartial observer, similar to the national accounting statistician—has to assess *whether* is due. And rules on *when* is due should be more specified, to avoid discretionary *opportunistic* time choices.

Statisticians of national accounting, indeed, have no *property rights* or other *similar direct interest* in the situations which they record. Private and public administrators have a direct interest in the institutions which they manage; they may interfere with their internal documentation and adjust their administrative behaviors and legal institutions to opportunistic accounting behaviors. They may be inclined to window dress their actions and results by fiscal illusions.

#### B. Influence of Keynesian Ideology on ESA

**Errore. Il segnalibro non è definito.**

Accounting may be heavily influenced by *ideologies*. This appears to be the case for the UN system of national accounting and for ESA which is its most notable derivative. It has a strong ideological bias, in terms of Keynesian flows reflecting the belief in short run planning. It had a conception of the government as a benevolent productive institutions. The

---

<sup>19</sup>Thus the criterion of putting the entire amount of this “net lending” above the line suggested Blejer and Cheasty (1991) may be, on balance, the best on practical grounds.

essence of the market was *pricing*, not *property rights*. Distribution as a process of payments for the factors of production appears the same as for the market economy and the public economy; and it is mixed with redistribution, in a unique view of distributive transactions.<sup>20</sup> The *wealth* approach is not relevant. This methodology cannot be of much help in making medium term budgetary planning with *credible forecasts*.

ESA view of social security reflects the ideology of a pervasive welfare protection intrinsically different from that offered by insurances. Thus social insurances are distinguished from social security. This last, as a *government* activity, for ESA, only consists of the *general regimes*; the sectoral ones, whether funded or unfunded are recorded as social insurance and excluded from government. Even state employees social insurances, therefore, are excluded *generally* from social security.<sup>21</sup>

The lack of an accepted accounting frame for medium term structural budgetary analysis of ESA entices a formalistic interpretation of the Maastricht fiscal rules: the exceptions laid down in MaastrichtTreaty<sup>22</sup> to a precise respect of its deficit and debt parameters, are presented as mere numerical sequences. Those who maintain a "political interpretation" of the respect of these parameters may easily adopt, as an argument in their favor, the fragility of such a numerical lecture of the Maastricht rules together with the above mentioned lack of an accepted frame for structural fiscal analysis. Short run opportunistic accounting, may help the alternative political interpretation of the parameters.

---

<sup>20</sup> For ESA 95, Chapter 4, (Distributive Transactions), 4.01 these transactions consists of those "by means of which the value added generated by production is distributed to labor, capital and government and of transactions involving the redistribution of income and wealth": which government transactions are meant not to be distributive but redistributive remains unspecified.

<sup>21</sup> ESA 78, Chapter II, 2.24-2.25, defines as social security funds all central and local government units whose principal activity is to provide social benefits and those main resources are derived from compulsory social contributions paid by other units. Thus the social insurance funds run by institutions different from the central or the local government are not part of the security sector, even if raise compulsory contributions and give social benefits to employees who are exempted from the general system, which they actually replace. ESA 95 Chapter II, 2.74, p. 29 and Chapter IV, 4.88, p. 79 consider as social security schemes only those "covering the entire community or sections of the community which are imposed, controlled and financed by governments units." The word "section" means an *entire class* of income perceivers. Even social insurance schemes organized by the government for their own employees are classified as private schemes (see para 4.89), by ESA 95. GFS 1986 excludes from social security "funded government employee pension schemes invested in the capital market or in loan and securities other than those of the employing government," if they are segregated from the employing government fund and do not cover other employees (as those of the local governments).

<sup>22</sup>See article 104c, n.2 a) and b).

**D. Accrual versus Cash.  
Errore. Il segnalibro non è definito.**

Accrual correspond to *concepts with a strong factual (economic resource)* content, cash simply means “money going in or out.” Thus the former, if not carefully and consistently specified, is suitable to *definitional* manipulations. On the other hand, cash data may allude about the effective *economic resources* situations of fiscal economy versus market economy, through postponing payment of standing obligations and artificial acceleration of revenues, with *one off* effects.

Any accounting, whether of business or of government or of national income, to give a truthful comprehensive representation of the revenues and expenditures as economic resources flows drawn from and given to the economy and of the meaning of government gross debt, cannot be but on accrual terms. The mere flows accounting may be deceptive if the changes in the stocks are not taken in account. Flows of revenues are overvalued when they cause a clear diminutions in the stocks while are undervalued when accompanied by clear increments in stocks. Flows of expenditures are undervalued, when new liabilities linked to them are overlooked and may be overvalued, if give origin to clear stocks increments. On the other hand a complete stock-flows accounting, considering all stock fluctuations inclusive of the probabilistic expectations, may imply excessive informational requirements and may lead to indefinite results, thus lacking transparency as the herculean efforts of Buiter 1984 and Buiter 1995 demonstrate.<sup>23</sup>

Obligations, relevant for accrual, particularly if related to peripheral branches, may, some time, get unnoticed when born, or their value may be misrepresented, due to leakages in their documentation. Thus for budgetary short term accounting it arises the delicate question of time of recording for obligations known by the (central) government after the years in which came in existence. It is argued that they must be retroactively imputed to the *budgets* of the past, when they *actually accrued*, as in ESA accounting is actually done. But the expectation of this backward shifting “game,” may entice a purposive easiness as for timely recording. And this time-accounting behavior fosters fiscal illusion. To increase the deficits of the past has no effect on the current financial flows, while the obligations pertaining to the past, discovered now, do create present problems of disbursement to face them.

**E. Dual Meaning of the Time Dimension of *Obligations*: How Time Discretion in Accrual Can Become Similar to That Under Cash Accounting.**

---

<sup>23</sup> On a measurement of deficit all inclusive of capital variations and future claims and liabilities see *pro* Eisner 1986, Auerbach, Gokhale and Kotlikoff 1994; *contra* Havemann 1994. Notes of caution by Stotsky and Sunley, 1994.

According to the standard definition (SNA, ESA 83, ESA 95, IMF 1996<sup>24</sup>) a positive or negative flow “is accounted for, under the accrual method when an economic value is created, transformed, or extinguished, or when claims and obligations arise, are transformed or are canceled.” But what means exactly that an *economic value is* created ? What means that an *obligation arose*? To begin with the first questions, as for governments supply of goods and services ESA gives different answers, distinguishing the purchase of intermediate goods, government of value added for collective consumption and its capital formation. As for the first, generally, the time of recording is that of *purchase*; but for goods withdrawn from stocks (as strategic stocks, emergency stocks and stocks held by regulatory organizations) the time of recording is delayed until the goods are drawn from the stocks to be employed. This obvious definition of national accounting appears wrong for the *government’s* accrual accounting. For the supply of collective consumption goods, time of recording, for ESA 78 is that of the costs incurred. Here, however, ESA 78 contradicts itself stating that the *compensation of employees*<sup>25</sup> shall be recorded, when *payment is due*.<sup>26</sup> So that delayed obligations relating on wages may be recorded after the time when the corresponding services were performed.<sup>27</sup> As a general rule, for ESA 78, capital goods should be recorded when made available to the purchasers. And when production extends over several period, the value of the works made available in each period, should be accounted for in that period. However, shall be recorded at the end of the accounting period, buildings and construction works whose construction extends over several periods and for which a buyer [in our case the government] has been found during a previous period. Thus, time of recording of public works expenditures may be postponed under ESA 95, the room for discretion in this last area is not reduced. Capital goods purchased by the government, are accounted when the fixed asset is transferred; and for construction works extending over several periods, the output produced in any given stage is treated as being sold to the purchaser as the later takes *legal possession* of the output.<sup>28</sup> However, compensations to employees are always recorded in the period during which the work is done, thus recognizing the accounting difference between the payments to the factors of the production as *distribution* and *transfers as redistribution*.

---

<sup>24</sup>See ESA 78, Chapter V, section “Time of Recording Transactions,” pp. 129 ff. More precisely, ESA 95, Chapter I, paragraph 1.57 (Time of Recording), pp. 13-14 where a general definition of accrual is given. As the time “when economic value is created, transformed or extinguished, or when claims and obligations arise, are transformed or are canceled and IMF 1996, Chapter III, paragraphs 64–72 (basis of recording) which, basically, follows the same definition.

<sup>25</sup>See ESA 78, Chapter 7, 707, *Final consumption*, second indent, p.129 and Chapter 3, 317 p.47.

<sup>26</sup>See ESA 78, Chapter 7, 708, *Compensation of employees*, p.130.

<sup>27</sup>See below, Section V, n.3.

<sup>28</sup>See ESA 95, Chapter 3, 3.52 and 3.59 and 3.112, first indent.

As for the *obligations*, the *legal* complexity of this notion seems to escape to ESA economists. Indeed, in several unilateral and bilateral transaction, there is an *initial* obligation consisting of a *legal* commitment to do or undergo something, under given conditions and terms and a *terminal* obligation consisting of the specific execution of that commitment. The order by a Minister of Defense of an aircraft, implies both an *initial obligation to pay* it when delivered and a subsequent, *terminal obligation of paying* because the aircraft has been delivered, as stipulated. A central government may be mandated by the yearly budget to credit the local governments with a given amount of transfers but only after has decided to distribute them an obligation to pay arises. Too often ESA accrual to the last phase for expenditures, while principles of prudent fiscal management<sup>29</sup> would suggest the opposite.

Cash budgeting is suitable to *ad hoc* maneuvering to hide the real financial situation, as by postponing payments already due and accelerating the collection of taxes. These behaviors per se cannot be defined creative accounting, under cash basis, but help in producing *accrual* opportunistic accounting. Operational cash budgets may be employed as first basic step to obtain the accrual budgets, adding to their revenues and expenditures the sums credits for revenues and debts for expenditures.<sup>30</sup> If the procedure of payment by the government starts with a request of authorization to be issued by the Treasury to the various spending units, credits without this authorization shall not give origin to *obligations of payment*. This *cash* deferral, per se perfectly orthodox, being endowed of *accrual* formal effects may become an opportunistic behavior, if accrual is not defined in a more substantial way.<sup>31</sup> A symmetrical game may be played on the revenue side, as for direct taxes and social security contributions, by acceleration of requests of payments, because here the accrual basis is that of “payment due.”<sup>32</sup>

The *phenomenology* of cash may be deceptive about the true outlays because not all financial obligations imply an immediate disbursement of interests. But following the concept of accrual as terminal obligation of payment, also for ESA 78 *imputed* interests must be recorded only when expires the whole credit to which they are linked. This authorizes extensive creative accounting.<sup>33</sup>

---

<sup>29</sup>On prudent fiscal accounting and fiscal responsible management it is particularly interesting the Fiscal Responsibility Act of 1994, of New Zealand. See The Treasury(1995).

<sup>30</sup>See European Commission, 1995, II422/95, EN, II, C.2, page 9, “Most public accounting systems register government revenue and expenditure on a predominantly cash basis, whereas national accounts are, predominantly, based upon an accrual basis; consequently, an adjustment will often have to be made so as to include the *accounts receivable and payable* [italics added].”

<sup>31</sup>According to the Italian Court of Accounts, in year.

<sup>32</sup> The same cannot happen as for consumption taxes because here the time of recording is that of the production of the goods and services to whom they are linked.

<sup>33</sup>Which we shall examine below, in Section V. ESA 95 corrects this imperfection.

### **F. Four Meanings of *Payment Due*.**

**Errore. Il segnalibro non è definito.** For wages, salaries, rents, interests and for all unilateral transfers,<sup>34</sup> ESA 78 states that, in principle, they must be recorded when the *payment is due*. The word *due* may have, here, four different meanings. It may mean either that the obligation to pay exists *according to the Public Administration* or that stands also from an *objective* point of view; that obligation to pay has been merely specified in its existence and amount or that its payment cannot be avoided. The second together with the last meaning is adopted, for current taxes on income and wealth, where ESA 78 specifies that "this [i.e., the date when the payment is *due*] is the last date on which they may be paid without penalty." As for indirect taxes, ESA 78 adopts the first and the third meaning, stating that taxes linked to production and imports are recorded at the time when the goods and services are *produced, sold, or imported*. This expression allows to record, as indirect taxes *due*, those that the tax administration *claims to be due*, even if the taxpayer resists in the court and is able to delay the payment—without penalties. In the social security area, both as for contribution on wages and salaries and for those on other incomes, ESA 78 again adopts the first and the third meaning, stating that "they [the social security contributions] should be recorded when they are due." ESA 95 excludes the first meaning both for direct and indirect taxes as well, specifying that "the amounts to be recorded in the system are determined by the amounts due for payment only when evidenced by tax assessments, declarations or other instruments which create liabilities in the form of clear obligations to pay on the part of taxpayers." As for social security contributions, however, even with ESA 95, the possibility remains of recording receipts merely due according to the public administration.

For wages and pensions to public employees, the first and the fourth meaning may be applied, thus recording them not when a *general liability* to pay them arises, but when the treasure decides to authorize their payment. This option, normally, is not available to the European government for the regular sums of wages, salaries and pensions monthly due. But it may be taken for *increases* of wages and salaries and for the pensions of newly retiring peoples, even if the obligations may, *retroactively*, cover the entire period from when these rights were born. Similarly, for miscellaneous current and capital transfers and investment grants.

### **Errore. Il segnalibro non è definito. IV. CATEGORIES OF OPPORTUNISTIC BEHAVIORS IN MAASTRICHT BUDGETARY ACCOUNTING. THE REVENUE SIDE**

#### **A. Ideal Matrix of Opportunistic Behaviors in Maastricht Budgetary Acco**Errore. Il

---

<sup>34</sup>Taxes and social security contributions are listed by ESA among the transfers.



segnalibro non è definito. **unting**

Categories of opportunistic behaviors in the budgetary accounting experimented or possible, both on the revenue and on the expenditure side, may be organized in double entry or matrix tables, considering, on one dimension two entries for the rule on net deficit and for that on debt; and on the other as many entries as one may find, as for the various categories of creative accounting, classified in “transparent” and “non-transparent” practices.

**B. Categories, as for the *Deficit Rule*Errore. Il segnalibro non è definito.**

Opportunistic behaviors in the revenue accounting, to elude the *deficit* rule, may consist in recording, as revenues:

- 1. *One off revenues which may be reimbursed.* It may be the case of an extraordinary tax which, according to political promises, shall be reimbursed in future times, thus becoming a sort of compulsory loan at zero interest rate. This device, obviously, lacks transparency.
- 2. *Revenues from the acquisition to the general government budget of the technical reserves of a social insurance, run by a corporation, by merging this insurance in the government general social security system, with the commitment of paying, the future pension liabilities by its pay as you go system.* Maastricht,<sup>35</sup> however paradoxical, this accounting opportunistic behavior is, at least, transparent.
- 3. *Anticipation one off of taxes due in next years, reducing the future revenues,* so that in a medium-term perspective this revenue vanishes. An example is the *one off* anticipation of the taxes on the benefits due, by the employers to the employee, at the termination of a labor contract. They, normally, are collected, through withholding, when the *benefits are distributed*, not in the years in which their rights mature. If the anticipation is rendered permanent, there shall be a *one off* revenue in the initial period. Because the distribution of the losses on the future budgets is difficult to assess, this measure may be classified among the non-transparent ones.
- 4. *Recording of apparent revenues* consisting in claims by the general government of taxes and social security contribution which only in a *distant future* or *never* shall be actually paid.<sup>36</sup> Obviously this non-transparent creative accounting.

---

<sup>35</sup>This possibility arises because of the seen restrictive definition of social security by ESA 78 still persisting with ESA 95. Paradoxically, this “nationalization,” may be a useful component of a privatization process, relieving a state company to be privatized from the management of a social insurance. Its funds, however massive, might be insufficient, in case of peculiar pension liabilities deriving from early retirement of personnel, due to downsizing.

<sup>36</sup>The case has been already examined above in IIIG. As seen ESA 95 reduces very much its relevance.

- 5. *Recording of apparent revenues* consisting in assessing taxes *gross rather than net of the reimbursements* due to the taxpayers. This non-transparent accounting behavior is important both for the *provisional withholding* taxes on wages and interests incomes and for the value-added tax on exports.<sup>37</sup>
- 6. *Revenues obtained as dividend* from *revaluation* of the *gold reserves* of the Central Bank of whom the government is stockholder. This operation can only be performed if there is an (unlikely) consensus of the considered (autonomous) central bank or by issuing a special piece of legislation.<sup>38</sup> The revaluation of gold reserves, recorded at purchase lower value, would not produce any real capital gain. Therefore to claim a dividend from the central bank, would imply a reduction in its real assets. The government would expand the money supply, in a way worse than if it was allowed to draw banknotes from the central bank, without becoming her debtor.<sup>39</sup> A sophisticated chapter in fiscal illusion, mentioned here only for the record.<sup>40</sup>
- 7. *Capital gains* from the *sale of real property with subsequent renting or lease back*. This may be the case with the sales of infrastructures for public services, to an entity, which to finance the purchase, raises funds on the financial market, with government guarantee.<sup>41</sup> Even if the purpose of these operations may be an “outsourcing” to reduce the size of the government to obtain financial savings and more efficient provision of the services, the accounting of these receipts as a revenue<sup>42</sup> appears a

---

<sup>37</sup> ESA 95 seem to suggest that value added taxes should be assessed, by sector of activity, net of rebates. The net tax, when rebates are due, is negative. It might then be classified as a subsidy: and for them, ESA normally applies the same time reference than for value added taxes. See ESA 78, paragraph 708, page 130, and ESA 95, paragraph 9.44–9.45, page.219.

<sup>38</sup> A similar proposal, suggested in Germany, had to be withdrawn, almost immediately, because of an overriding majority of dissenters, both in the public opinion, the central bank, the parliament and the government, for the reasons given in the text and in the next footnote

<sup>39</sup> Worse, because, here, the net effect is a reduction of the reserves of the central bank plus an exogenous money creation.

<sup>40</sup> With ESA 95 requiring that assets must be recorded at their true market value, this kind of creative accounting behavior would be precluded.

<sup>41</sup> However, if the institutions acquiring the considered properties is capable of raising funds on the market, on own means, these operations should be left out creative accounting, becoming true ways of reducing the scope of government without reducing public services, by an increased role of the market in their provision.

<sup>42</sup> However, has been allowed by the European Statistical Office, because the more comprehensive treatments of leasing adopted after ESA 78 and before ESA 95 are not relevant for the Maastricht definition of deficit . With ESA 95 this category of creative accounting will loose relevance.

non-transparent opportunistic accounting behavior.

- 8. *Apparent revenue* from the *purchase of existing public debt assets* in exchange for *indexed bonds* sold at a price higher than their face value, because having an interest rate to close to that of the non-indexed bonds. Here there is a fiscal illusion: indeed, the (apparent) capital gain is compensated by an higher (future) flow of interest services. Accrual accompanied by government net wealth comprehensive accounting would blow up this illusion.
- 9. *Revenues* drawn by the government as *dividend* from a public holding, consisting of distribution of (part of) the *nominal capital gains* obtained by that holding selling on the market at a price higher than their previous *book value*, not reflecting their actual value.<sup>43</sup> Here, again, the accounting opportunistic behavior implies a lack of transparency.
- 10. *Nominal capital gains* resulting from the *sale of land of the domain*,<sup>44</sup> recorded in the books at low value, but already endowed of a good market value. Privatization of real estates may be a sound policy, particularly for a heavily indebted country. Under accrual, correctly interpreted,<sup>45</sup> only a change of destination may originate a real assets revaluation, i.e., a reduction in net borrowing. Comments done for 9, above, apply here too.

### C. Categories as for the *Debt Rule* **Errore. Il segnalibro non è definito.**

Budget accounting reducing *net liabilities* may also automatically affect *gross liabilities*, i.e., the ratio of public debt to GDP. This happens for cases 1–6, and for cases 7–9.

In addition, opportunistic accounting may reduce the gross liabilities of general government, as in the following cases:

- 11. *Sale* by the central government of *gold* purchased from the *Central bank*, credited of long term *commercial*<sup>46</sup> loans. While this operation does not change the deficit,

---

<sup>43</sup>Again, ESA 95 makes impossible this creative accounting practice. The case, anyway, is different if the increase in stocks value is caused by the fact that the government renounces to control the company or to condition its management and investment policy through a golden share. Here the increase in value is real and should be accounted for on the revenue side of the budget.

<sup>44</sup>This opportunistic accounting practice is not possible in countries where the receipts of sales of assets, whether non-financial or financial, is excluded from the budget revenues, being devoted to the fund for the amortization of public debt.

<sup>45</sup> As indeed with ESA 95.

<sup>46</sup>The loan is a commercial one, because the gold has to be demonetized to be sold on the free

because the revenue for the government is matched by its debt with the central bank, a reduction in debt of the government here arises, if it employs these revenues to purchase its bonds, because of the exclusion of the short and long term commercial loans from the public debt, set forth with Regulation 3605/93. This opportunistic accounting practice disguises a borrowing of the government from the central bank implying money creation by the Treasury, as a substitute to public debt. The lack of transparency here relates to the government's monetary behavior.

- 12. *Temporary Sale* to autonomous financial institutions *by the government, for less than a week, at the end of the year 1, of public debt, to be repurchased in year 2*. The purchase by the financial institution is recorded in year 1, that of the government in year 2, following ESA 78 accounting rules. The temporary flow of money going to the government gets unrecorded being the counterpart of a financial transaction.<sup>47</sup> Because the ratio of public debt to GDP is that of the last working day of the year, by this operation lasting only few days, the illusion is created that the government debt has been *permanently* reduced to that level. Being a financial transaction, this operation has no impact on the deficit, except for the (small) difference between the excess of the reimbursement of the government over the cash received, in exchange for its temporary cessation of public debt. Obviously, under ESA 78 this difference shall be imputed to the budget of the year of debt repurchase.
- 13 *Transformation in autonomous legal entities*, controlled by the (central or local) government and guaranteed by it, of enterprises formerly included in the government, shifting to them former government debts related to their investments. If the guarantees of the government are kept on this debt, this is a non-transparent creative accounting.

## V. CATEGORIES OF OPPORTUNISTIC BEHAVIORS IN THE MAASTRICHT BUDGETARY ACCOUNTING. THE EXPENDITURE SIDE

### A. Categories as for the *Deficit Rule* Errore. Il segnalibro non è definito.

Beginning with the net deficit limit, the following categories deserve consideration.

- 1. *Apparent postponing of public investment* expenditure by delaying the legal

---

market.

<sup>47</sup>See above footnote 9. To this exotic brand of creative accounting, the Wall Street Journal has devoted severe criticism in a number of articles. ESA 95 makes this creative accounting impossible.

recognition of the purchase of work done.<sup>48</sup> Outstanding debts are thus hidden and transparency violated. This operation may not be done on a large scale and for a long period of time, because the contractors may legally question the delay. Thus the following *escamotage* may be pursued.

- 2. *Apparent postponing of financing of public investments*, undertaken by autonomous market economy corporations or by quasi-private entities, by delaying the official approval of grants to them, but guaranteeing the debts made by them on the market to pay their contractors, so that the investment may be made on time (likely with some additional costs), without appearing as an expenditure in the year of realization.<sup>49</sup> Obviously this ingenuous device implies non-transparent creative accounting.
- 3. *Artificial containment of pensions and wages expenditure*, in a given year by *shifting backward* or *forward* the time of the obligation by manipulating the *legal* aspect of the procedures leading to the payments due. The first policy (*shift back*) may be particularly applied for claims of additional benefits, on already *existing* pensions. The second policy—that of *shifting forward*—may be adopted, for the *new early retirement* new pensions claims, to reduce the pressure for reforms, of the system arising from their cost, by shifting the examination of the claims from the end of one year to the beginning of a subsequent year. As for wage increases, the operation may consist in retarding their recognition, in the individual cases, with a backward maturity, to conceal their real cost. While it does not appear in full in the present budget, it shall be subsequently recorded in it, once its examination has been officially done and approval given.<sup>50</sup> The aim here, clearly, is to give origin to non-transparent budgetary burdens.
- 4. *Postponement of legal quantification of the rebates* due to taxpayers for taxes paid in excess<sup>51</sup> considering them due only when the *individual* credits have been *officially*

---

<sup>48</sup> See above, Section III, E.

<sup>49</sup> According to ESA 78, Chapter VII. O7, para 3, third indent, page 707, the output of goods whose production extends over several periods of *time* is to be recorded at the end of each period on the basis of the value of the work carried out during that period, so that if the above considered expenditure was directly undertaken by a contractor for the government, it costs should be recorded when the work is realized in spite of the fact that no legal obligation was yet perfected, as for the payments due to Maastricht. But if the government deals with an autonomous market quasi-market entity which in turn contracts the works, there is no direct relation between the government and the contractor and thus the ESA rule on accounting for expenditures on goods whose production extends over a period of time may be eluded.

<sup>50</sup> While normally the beneficiaries, being familiar with the content of these clauses, directly affecting them, are aware of their quantitative effects on their pays and fringe benefits.

<sup>51</sup> See above, Section IV. B., under 5 the corresponding creative accounting on the *revenue side*.

ascertained.<sup>52</sup> Thus both the revenue and the expenditure are made non-transparent.

- 5. *Apparent reduction of the expenses for public investments* through assumption by the government of the obligation of paying the interest and amortization service of debt issued by the subsidized autonomous entities actually engaged in the projects. This may be a sound practice, to reduce the public intervention and public debt, but it is an inherently no transparent behavior, which may create an illusion about the costs of public projects, which should vanish by long-term budget planning.<sup>53</sup>
- 6. *Recording at nominal value of purchases of bad assets of corporations and financial autonomous entities.* This may be particularly the case, when the subscription of new shares is a way to replenish the capital of enterprises systematically in deficit or of banks engulfed with faulty credits or to constitute the endowment of *rescue banks* to which the *bad credits* are sold, at nonmarket prices.<sup>54</sup> Obviously these transactions are mostly are non-transparent subsidies and not purchases of assets.
- 7. Issuance of *zero coupon bonds recording the implicit interests* consisting in the difference between the price of issuance and the face value, *exclusively in the year of reimbursement*, as allowed by ESA 78. ESA 95, adhering more consistently to the accrual method, adopts the transparent imputation of the implicit interest service to every year of duration of the bonds.
- 8. Accounting of *imputed* interests on Post Office *capitalization-savings deposits* in the year of withdrawal of the deposits, on the basis of the above referred rule of ESA 78. ESA 95 adopts the transparent device of budgeting year by year the interests credited to the savers.
- 9. *Loans to nonprofit institutions* which according to the ESA 78 definition are *not included in the government*, because *more than 50 percent of the costs* are covered by sales, even if a large part of these sales are actually purchases by social security institutions on behalf of their beneficiaries.<sup>55</sup> This is *off budget non-transparent*

---

<sup>52</sup>This opportunistic behavior may not be convenient for the Government if the law specifies that rebates payed after a given time period shall be increased by high interest rates.

<sup>53</sup>This issue shall be dealt with below, under VI, B, together with that arising in the case mentioned in n.7 of Part IV B.

<sup>54</sup>Whereas in principle the EU considers these kind of rescue operation as *forbidden* because *distorting competition*, in violation of the rules existing after the adoption of the “unique market” changes of the Rome Treaty approved in 1985, several cases of this kind, particularly in the banking sector are continuously coming up.

<sup>55</sup>These peculiar kinds of revenues, which actually have a government source are included in market revenues also by ESA 95, Chapter III, 3.34, page 42: its dirigistic ideology, prevents it

accounting.

- 10. *Direct assumption, by the government, of loans* and other financial instruments issued by institutions to which it was previously committed to a *debt service*, consisting of both interests and amortization. By this *debt nationalization*, the sole expenditure for interests is to be accounted for in the government budget, since amortization changes are not contemplated in the *government* budget. This may be the case with public utility entities as the state railway, for whom the European Union allows that the costs of the infrastructures should be substantially borne by the state. The EU requires that their exercise should be run, as far as possible, with economic criteria, to avoid the distortion of competition. While unintentionally creative, this is transparent accounting.
- 11. *Nonconsolidation*, in the aggregate deficit of the general government, of *deficits of public enterprises running public services* owned by the state or by the local authorities who respond of their debts. This possibility of hiding deficits in *off-budget entities* arises because of the formalistic definition of government by ESA.<sup>56</sup>
- 12. *Concession* to financial institutions of *guarantees to raise finance* or to *give insurances* to support risky operations, replacing more costly but more transparent grants to the Maastricht Treaty. This type of operation is similar to net lending (in the GFS 86 meaning), because of the implicit grant component.
- 13. *Postponement of obligations due* for transfers to public and private entities, due for given years, by denying the Treasury authorization to the recognition that these credits are *due*. The burden is this shifted, in a non-transparent way, on the future budgets. While this postponement may be a legitimate cash operation, to reduce the solvency constraint and postpone the creation of public debt, nevertheless creates a transitory illusion of reduction in expenditures in the primary budget. The operation may be particularly justified, from the liquidity constraint point of view, when interest rates on public debt are falling so that the primary budget's surplus requirement is also expected to diminish in subsequent periods.

## B. Categories as for the *Debt Rule*

Most of the above seen finance and accounting techniques by whom governments may elude, on the *expenditure side*, Maastricht *deficits* constraints, automatically, also limit the ratio of *debt* to GDP. This is true for rules 1–6, 8, 9, 11–13. However, the opposite may

---

from distinguishing *true market economy* from the *conventional market or quasi market*, created by government purchases from its autonomous entities.

<sup>56</sup>IMF 1996 GFS, I, 46, to avoid the above problems, distinguishes government as such and *government activities* and includes them in government even when done by formally autonomous entities.

happen in cases 7 and 10. Zero coupon bonds, being sold at a price lower than the face value, to include in the asset's price the interest rate, as required by the market, artificially increase the debt outstanding of the year of their issuance. The same, with a greater leverage, happens with the assumption by the government of debts of institutions outside the government (narrowly defined) to whom it was paying a debt service, in order to spare the accounting of the amortization charges. Here the effective increase of the public debt consists of the entire amount of the value of the assets involved.<sup>57</sup>

In addition to the above, on the expenditure side, one may list the following categories of opportunistic non-transparent accounting helping to contain the *debt*:

- 14. *Omission of recording of the existing stock of net*<sup>58</sup> liabilities of autonomous public enterprises and of nonprofit institutions formally not included in the general government, who is likely to be called for respond of them.<sup>59</sup>
- 15. *Delay of payments* (with or without recognition of interests) to reduce the *debt* ratio: a possibility permitted by the definition of gross debt as a *cash concept*, provided by Regulation 3605/93. Again, this postponement may enter the rightful cash discretion. However, excessive delays throwing a hidden duty of financing the public budget on the households and the firms may be a non-transparent *escamotage* to reduce, the level of public debt below the limits permitted by the Maastricht rules, without liquidity constraint effective motivations.

## **VI. CONTINGENT LIABILITIES Errore. Il segnalibro non è definito.**

### **A. Inadequacies of Maastricht Accounting in this Borderline Area Errore. Il segnalibro non è definito.**

Three important areas of potential deficits and debts, under the present Maastricht budgetary accounting framework remain hidden, because of the combination between ESA 78 and Regulation 3605/93: that of guarantees, that of assets purchased for economic policy purposes and that of pension debt. All of these may be defined as issues of *accounting for*

---

<sup>57</sup>Suppose a debt of 120 percent of GDP, a nominal growth rate of GDP of 3.5 (a low rate indeed) and a deficit of 3.2 percent of GDP: even in this *pessimistic* case there shall, automatically, be a reduction of 0.36 percent of the ratio of debt to GDP.

<sup>58</sup>*Net* and not *gross* because consolidation of autonomous public enterprises, to avoid a misleading picture of the government sector, should be done only for their net deficits and debt not for their total revenues, expenditures, assets and liabilities.

<sup>59</sup>See note 10.



*contingent liabilities* in the borderline area between the conventional notions of budget and of public debt and development of quasi-government and quasi-market activities in areas where traditionally there was a government provision of public goods.<sup>60</sup>

**B. Recording of Government's Guarantees as Derivatives in a Collateral Account**  
**Errore. Il segnalibro non è definito.**

Guarantees of government to other non-government institutions may be a perverse practice of *broadening* the public intervention sphere in the economy and society or a sound practice to *reduce* the government direct activities in the provision of public goods by replacing them with *private investment initiatives* in the area of public investment and *quasi-market* operations (Sawkins and McMaster 1997, H.Maastricht Treasury, 1995). Cases of this second kind have been contemplated above. Granted that giving guarantees by the government may be a *sound-finance* choice, particularly if, in this way, private initiative replaces government activity, it matters to *record them*, as contingent liabilities, by some *prudential accounting criteria*, to make transparent the potential risks arising from them and their beneficiaries. ESA 95 allows recording of *derivatives*, when negotiable and therefore endowed of a sort of market value. On the other hand, derivatives accounting is a topical question, but raises peculiar problems, not only as for *public accounting* but also in *business accounting*.<sup>61</sup> To put the guarantees, assessed as derivatives, in the general budget, may be too confusing. Nor would it solve the problem of having a transparent picture of the burden of the government due to the existing stock of guarantees. It would seem better to list them in appendixes to the budget, at their face value, adding in footnotes their hidden grant component as net liability, as assessed by *prudential* accounting.

**C. Recording of contingent liabilities of social security pensions**  
**debts in a collateral account. Errore. Il segnalibro non è definito.**

A substantial part of these debts consists of standing liabilities of the social security institutions, for rights already matured by the present workers. But they may be confronted with the future contributions, to get the net liabilities thus arising; and, to this effect, these existing liabilities cannot be separated from the not yet matured future liabilities, so that, also for the pension debt of pay as you go government institutions, we have, *from their point of view*, a *global contingent liabilities* issue. The central government is responsible, *politically*, even if not always legally, for these liabilities, so that they might be considered, at the general government level, a sort of *options* i.e., of *derivatives*. The deficits, discounted to the present, at a given rate of interest, giving origin to the present pensions debt (Towe, 1993 ) may be considered, in the social security institution's perspective, as a *contingent liability*, in so far as the size of that deficit depends from the level of aggregate future incomes liable to the social security contributions. In principle, this may not be the case when the system is based

---

<sup>60</sup>For similar issues as for the Asian "Tigers" economies, see Heller (1997), private circulation.

<sup>61</sup>See ESA 95, Chapter 5.65–5.66 and Chapter VII, 7.50, first and second indent. The problems of *prudential accounting* for general government *contingent liabilities* are briefly dealt with in the "Concluding Remarks."

on actuarial fairness or even on actuarial balance (Towe, 1993), because they should balance. But regimes, like the Italian, in principle based on actuarial balance, have a long transition period and suffer from exceptions which lead to a sizable future deficit (Rostagno 1997, Haman, 1997). The time dimension of the flow, as seen in the social security institutions perspective, should be that relating to the maximum period in which the existing potential liabilities shall be translated in pension rights: i.e., according to the present rules on retirement age, 40 years.

The European Commission (EC II/422/95–EN), analyzing the measure of gross debt adopted by Maastricht Treaty as complemented by Regulation 3605/93, recognizes that, on theoretical grounds, the inclusion in government debt of contingent liabilities as those of public pensions (or expected losses on guarantees and loans) improves the comparison of government indebtedness among different countries. However it maintains that they have not been included in the official definition of *gross debt*, because of the difficulty of choosing an uncontroversial rates of interest.” It has proven very difficult—it writes—to come up with an accurate and clear quantification of contingent liabilities, as the calculation depends crucially on the discount rate used to calculate the present value of these contingent liabilities consideration of data availability and transparency plead in favor of relatively simple concept that can be easily produced and monitored.

From the fact that measurements of the stock of pensions debt is a *controversial* issue does not follow that to disregard it, even in accounts collateral to that of the debt stock, resulting from standing debts, improves *fiscal transparency*. It may improve the simplicity of the data but the transparency is damaged, since this debt, partially matured but not yet liquid and partly not yet matured, however measured, may represent an important part of the whole public debt burden, in an comprehensive view. A serious, undesirable fiscal policy consequence of this “accounting deficit” is the unilateral emphasis laid on whether the 3 percent limit is *exactly* respected, while overlooking *a major*—and for some countries—*the* major source of structural deficits.

It should be noted that, as a *derivative*, this contingent liability appears to be a *marginal one*: in the sense that the liability is certain, up to a given amount. And the discount may be less controversial than the EC asserts as for the rate of discount, given the existence of official European interest rates, according to the Maastricht Convergence rules. These European convergence rate of interests may represent well the opportunity cost of not-funding in each EU country ( Kune, Petit and Pinxt, 1993, Rostagno 1997, Kotlikoff, 1984, Towe, 1993).

## **VII. Concluding Remarks****Errore. Il segnalibro non è definito.**

Adopting ESA 95 as seen, a host of categories of opportunistic accounting behaviors would be precluded, both on the revenue and on the expenditure side, as for deficits and, *par consequence*, for debt. *Dubious direct and indirect tax revenues* could not be accounted as revenues *due*, in the accrual–basis budget. The same rule could be extended, by interpretation, to social security contributions. Rebates on withholding taxes should be

excluded from revenue, because they do not imply a tax obligation. Value-added taxes should be accounted *net of rebates*, as stated by ESA 95, as for sectors of activity.<sup>62</sup> *Apparent capital gains* resulting from the sale of assets valued in the books at prices lower than their true value also should be prevented by adoption of ESA 95. The same shall be true for the apparent revenue from the revaluation of the book value of gold.<sup>63</sup> On the expenditure side, ESA 95 precludes the possibility of postponing the accounting of the imputed interests bilateral financial transactions shall be recorded when the first takes place. Purchases of assets for *economic policy* reasons, under ESA 95 shall give origin to an expenditure for the difference between their nominal value and their effective value, as resulting to the government by the capitalization of their expected revenues or realization.<sup>64</sup>

It does not appear difficult to introduce, *for the purposes of Maastricht* rules, some changes in ESA definitions, for a more comprehensive scope of the general government sector. There is no reason why the definition of gross debt should not be the comprehensive one theorized above. On the other hand, if the member states were obliged to report their planned deficits and levels of government debt on a pluriannual basis, the accounting manipulations consisting in *artificially shifting back and forward obligations* relating to pensions, wages, transfers to private and public entities would lose much of their relevance.

While general government debt is, for the taxpayer, an *already existing* debt, the net liabilities of the “commercial” public enterprises, which may become a government liability, the pension debt and the contingent liabilities relating to the government guarantees are liabilities which, for the taxpayer, by *timely interventions* may be substantially reduced or even taken off. Or they may become oppressive for the future taxpayers, if, by illusionistic budgetary accounting, attention is diverted from the Maastricht treaty. Their recording, in collateral accounts, seems important, in absence of a government balance sheet requirement.

The budgetary accounting, relevant for the Maastricht fiscal constitution at the EU level, it is likely to become the *standard budgetary* accounting presented by EU countries, also outside the EU, to the international institutions and to the international markets. Furthermore at least eleven countries shall in the next decade demand to be admitted to the European Union, in one form or the other. And it is likely that their budgetary accounting shall be scrutinized with the present Maastricht accounting framework. Thus do retain full importance also some of the opportunistic budgetary-accounting behaviors, mostly relevant in the initial years of examination of the fiscal parameters, which otherwise might have been considered a matter of technical curiosity.

---

<sup>62</sup>As for withholding taxes, the accounting of them gross of rebates should be, correctly precluded also under ESA 78, because rebates do not form part of the *tax due*.

<sup>63</sup>Which, however, should be also prevented as mere money creation, precluded to the government.

<sup>64</sup>See ESA 95, Ch.V, Accounting Rules for Financial Transactions, pages 11–113.

## References

- Alesina, A., and Perotti, A., 1994, "The Political Economy of Budget Deficits," International Monetary Fund Working Paper WP/94/85, August 1991.
- Auerbach, A. J., Gokhale, J. and Kotlikoff, L.J., 1994, "Generational Accounting: a Meaningful Way to Evaluate Fiscal Policy," *Journal of Economic Perspectives*, vol. 8, n.1, winter, pp. 73-94.
- Auerbach, A.J., and Kotlikoff, L.J., 1987, *Dynamic Fiscal Policy*, New York, Cambridge University Press.
- Balassone, F., and Franco, D., 1996, "Il fabbisogno finanziario pubblico," *Temi di discussione del Servizio Studi*, No. 277, Roma, Banca di Italia.
- Blanchard, O.J., Chouraqui, J. Hageman, R.P., and Sartor, N., 1990, "The Sustainability of Fiscal Policy: New Answers to an Old Question," *OECD Economic Studies*, No. 15, Autumn, Paris, OECD.
- Blejer, Maastricht I., and Cheasty, A., 1991, "The Measurement of Fiscal Deficits: Analytical and Methodological Issues," *Journal of Economic Literature*, Vol. XXIX, December, pp.1644-1678.
- Buchanan, J. and Wagner, R.E., 1977, *Democracy in Deficit*, Academic Press.
- Buiter, W.H., 1984, "Measuring Aspects of Fiscal and Financial Policy," NBER Working Paper 1332, Cambridge, Mass., National Bureau of Economic Research.
- 1993, "Measurement of the Public Sector Deficit and Its Implications for Policy Evaluation and Design," in Bleyer Maastricht L., and Cheasty A., Ed., *How to Measure the Fiscal Deficit, Analytical and Methodological Issues*, Washington D.C. International Monetary Fund, pp.297-344.
- Buiter, W.H. and Corsetti, G., and Roubini, N., 1993, "Excessive Deficit: Sense and Nonsense in the Treaty of Maastricht," *Economic Policy*, No. 16, pp.57-100.
- Castellino, O., 1987, "Debito pubblico e debito previdenziale: analogie e differenze," in Bruni, F., Ed. *Debito pubblico e politica economica*, Collana Giorgio Rota, No. 1, Roma, Sipi.
- de Callatay E., and Turtelbom, B., 1996, "Pension Reform in Belgium," International Monetary Fund Working Paper WP/96/74, July 1996.
- Dollery, B.E., and Worthington, A.C., 1996, "The Empirical Analysis of Fiscal Illusion," *Journal of Economic Theory*, Vol. 10, No. 3, pp. 262-95.

Eisner, R., 1986, *How Real is the Federal Deficit*, New York, The Free Press, Macmillan.

European Union, 1993, *Treaty establishing the European Community* (adjourned with the Maastricht Treaty's amendments), Brussels, Luxembourg (EU).

European Commission, 1995, "Methodological and operational aspects of the reporting of government deficits and debt levels in the context of the excessive deficit procedure," *Directorate General II, Economic and Financial Affairs*, II/422/95-EN.II.C.2.

European Community, 1993, "Council Regulation (EC) No. 3605/93, of November 22, 1993, on the application of the Protocol on the excessive deficit procedure annexed to the Treaty establishing the European Community," *Official Journal*, No. C324, 1.12.93, (EC).

Eurostat, 1979, *ESA 78, European System of Accounts*, 2nd edition, Brussels, Luxembourg (EC).

\_\_\_\_\_, 1996, *ESA 95, Europeans System of Accounts*, Brussels, Luxembourg (EC).

Fasiani, Maastricht, 1951, *Principi di Scienza delle Finanze*, Vol.I. Libro I. Torino, Giappichelli.

Forte, F., 1996, *Myth and Paradoxes of Pensions Schemes as Intergenerational Social Contracts*, unpublished manuscript, present to the 1996 meeting at University of Pavia, of SIPI (Societa' Italiana di Economia Pubblica. The Italian version is forthcoming in Da Empoli D. and Muraro, G., *Verso un Nuovo Stato Sociale*, 1997, Milano, Angeli.

----- 1997, "The Italian Republican Fiscal Constitution: Reasons of a Failure," *European Journal of Law and Economics*, forthcoming.

\_\_\_\_\_, 1997, "The Measurement of 'Fiscal Burden' on GDP instead than on National Net Value Added Produced: A Chapter in Fiscal Illusion," *Quarterly Review Banca Nazionale del Lavoro*, 1997, No. 202, page 337.

\_\_\_\_\_, 1997, "I bilanci pubblici italiani alla luce della costituzione fiscale di Maastricht," *Economia Pubblica*, No. 4, pp.5-56.

Hamann, A.J., 1997, "The Reform of the Pension System in Italy," *IMF Working Paper*, WP/97/18.

Haveman, R., 1994, "Should Generational Account Replace Public Budgets and Deficits?," *Journal of Economic Perspectives*, vol.8, n.1. Winter, pp.95-111.

Heller P. S., 1997, "Aging in the Asian 'Tigers': Challenges for Fiscal Policy," *International*

- Monetary Fund, private circulation.
- H.Maastricht Treasury, 1995, *Private opportunity, public benefit. Progressing the private finance initiative*, London, H.Maastricht Treasury.
- International Monetary Fund, 1996, *Government Finance Statistics Manual. Annotated Outline*, (Washington: International Monetary Fund).
- \_\_\_\_\_, 1986, *A Manual of Government Finance Statistics*, (Washington: International Monetary Fund).
- \_\_\_\_\_, *World Economic Outlook*, issues from May 1993 to May 1997.
- Kotlikoff, L. J., 1984, "Economic Impact of Deficit Financing", *Staff Papers*, IMF, Vol. 31 (September 1984), pp.549– 82
- Kune, J.B., and Petit, W.F.Maastricht and Pinxt A.J.H., 1993, "The Hidden Liabilities of Basic Pension Systems in the European Community," CEPS Working Document, 80.
- Mackenzie, G.A.(1993) "Are All Summary Indicators of Stance of Fiscal Policy Misleading?" in Blejer Maastricht J. and Cheasty A., *How to Measure the Fiscal Deficit*, Washington D.C., International Monetary Fund, pp.21– 51.
- Merton, R.C. "An Analytic Derivation of the Cost of Deposit Insurance and Loan Guarantees," *Journal of Banking and Finance*, Vol.1 (June 1977), pp. 3–11.
- Puviani, A., 1903, *Teoria dell'illusione finanziaria*, re– edited by VOLPI F., 1973, Milano, ISEDI.
- Rossi, N., 1988, "Government Spending, the Real Interest Rate, and the Behaviour of Liquidity–Constrained Consumers in Developing Countries," *Staff Papers* IMF, Washington, Vol.35 (March 1988) pp.104– 40.
- Rostagno, Maastricht, 1977, "Il percorso della riforma: 1922– 1995. Nuovi indicatori di consistenza e sostenibilita' per il FPLD, in PADOA SCHIOPPA, F., 1997, Bologna, Il Mulino, pp.325– 97.
- Selling, T.I., and Stickney, C.P., "Pension Accounting and Future Cash Flow", *Journal of Accounting and Public Policy*, vol. V. (Winter 1986), pp.267– 58.
- Sawkins, J.W., and McMaster, R., 1997, "Quasy Markets for Water Services Reviving the Auld Alliance?," *Hume Monograph No.1*, The David Hume Institute, Edinburgh, Pace Print.

- Stella, P., 1993, "Toward Defining and Measuring the Fiscal Impact of Public Enterprises," in Blejer, Maastricht J. and Cheasty, A., ed. *How to Measure the Fiscal Deficit*, Washington D.C. International Monetary Fund, pp.207– 235.
- Stotsky, J.G. and Sunley, E.Maastricht, 1994 "The Tax System of the United States", *Tax Notes International*, 9, Dec. pp. 1755-11783.
- Tanzi, V.,1993, " Fiscal Deficit Measurement:Basic Issues," in Blejer Maastricht I. and Cheasty A. Eds. *How to Measure Fiscal Deficit*, Washington D.C. International Monetary Fund pp.13– 20.
- Tanzi, V., Blejer, MaastrichtI., and Teijero, MaastrichtO., 1988, "The Effects of Inflation on the Measurement of Fiscal Deficits," in Blejer, MaastrichtI. and Chu, K. Eds., *Measurement of Fiscal Impact: Methodological Issues*, (Washington: International Monetary Fund).
- Tanzi, V.,1977, "Inflation, Lags in Collection and the Real Value of Tax Revenue," *International Monetary Fund Staff Papers*, March, 24 (I), pp.154–167.
- The Treasury, ( 1995 and 1996), *Fiscal Responsibility Act, an Explanation*, Wellington, New Zeland, The Treasury.
- Towe, C.Maastricht,1993," Government Contingent Liabilities and Measurement of Fiscal Impact," in Blejer MaastrichtI., and Cheasty A., Eds. *How to Measure Fiscal Deficit*, Washington D. C. pp. 363–389. International Monetary Fund.
- United Nations, 1868, *A System of National Accounts (SNA)*, New York, UN.
- Von Hagen, J., 1992, "A Note on the Empirical Effectiveness of Formal Fiscal Restraints," *Journal of Public Economics*, No. 44, 99–110.
- Wagner, R.E., 1976, "Revenue Structure, Fiscal Illusion and Budgetary Choices," *Public Choice*, No. 25, pp.45–61.
- Wildavsky, A. and Zapico Goni, A., Eds. 1993, *National Budgeting for Economic and Monetary Union*, Maastricht, European Institute of Public Administration.