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### GOVERNMENT FINANCE INDICATORS: TRUTH AND MYTH

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## GOVERNMENT FINANCE INDICATORS: TRUTH AND MYTH

### 1. Introduction

“With growth weakening in many parts of the world and downside risks on the rise, fiscal consolidation remains challenging”<sup>1</sup>.

To have sound public finances remains a key requirement for growth in all countries. Financial markets look at government deficit and debt in determining credit worthiness of a national government and its economy more generally. Government deficit concerns the annual borrowing requirement of government, whereas government debt relates to the total level of debt accumulated over previous years. A government that has a deficit year after year increases its government debt.

One can distinguish two main schools of thought about government deficit. According to the first one, economists, mainly those in the Keynesian school, believe that, during recessions and periods of high unemployment, governments should intentionally run deficits to stimulate the economy and compensate for lack of private demand, and that, during times of strong economic growth and full employment, governments should consolidate their finances and work to balance their budget, or even to run a surplus. Economists of the second school believe that governments are not able to target expansive (or contractive) measures in such a way that they alleviate the ups and downs of the business cycle. Bad timing may even amplify the ups and downs in economic growth. In their opinion, government should predominantly focus on a more structural approach of having sound public finances.

Whatever the school of thought, the two headline indicators, deficit and debt as a percentage of GDP, have been scrutinised in most OECD countries to assess the health of government finances for many years. This has been even more true during the recent economic and financial crisis, showing significantly rising deficits and debts, and a number of countries no longer being able to attract the necessary funds from the financial markets to finance their deficits and to re-finance the down payments of existing debt.

More specifically, since 1992, countries of the European Union are required to meet specific criteria regarding the level of their deficit and debt (see box 1), with the aims to achieve the Economic and Monetary Union and to arrive at better integrated economies within the Euro Area.

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1. IMF Fiscal Monitor publication, October 2012.

### **Box 1. The Maastricht Treaty and Stability Growth and Pact**

On 7 February 1992, the Maastricht Treaty signed by the members of the European Union (EU), established five convergence criteria, which guided the introduction of a common currency in line with the principle “One market, one currency”. EU member states must comply with these criteria to achieve the Economic and Monetary Union (EMU):

1. The inflation rate of a given member state must not exceed by more than 1.5 percentage point above the average of the three countries with the lowest inflation rates.
2. Exchange rates must be kept within “normal” fluctuation margins of Europe’s exchange-rate mechanism.
3. Nominal long-term interest rates must not exceed by more than 2 percentage points those of the three best performing member states in terms of price stability.
4. The annual government deficit must not exceed 3% of GDP.
5. Government debt must not exceed 60% of GDP.

The first three convergence criteria were designed to ensure monetary stability by supporting a fixed exchange rate regime among member countries. The stability of the euro is reinforced by the last two criteria, which protect the European Union from threats of inflation which may arise from government budget deficits.

In 1997, the Stability and Growth Pact, endorsed by the European Council, defined the rules for the budgetary discipline of the member states. The Pact stipulates that sustainable public finances are seen as a precondition for a common viable European currency. It builds on the last two convergence criteria of the Maastricht treaty. The Pact, according to the so-called Excessive Deficit Procedure (EDP), binds all parties to engage in the prompt implementation of counter-measures, should any of them fail to meet the agreements of the Pact.

Government deficit and debt data are defined in accordance with the European System of Accounts (1995 ESA) which is the European equivalent of the global standards for the compilation of national accounts, the 1993 System of National Accounts (SNA)<sup>2</sup>. EU countries are legally bound to follow the ESA standards for the compilation of their national accounts. The assessment of government deficit and debt is carried out by the Statistical Office of the EU (Eurostat), on the basis of data provided by the statistical authorities of each member state. Eurostat checks the comparability of the data across countries as well as their compilation according to the ESA standards.

The use of certain national accounts indicators, like government deficit and debt, for rather specific purposes of monitoring, is a prime example of a more general tendency to use national accounts data for so-called “administrative purposes”. Another example concerns the use of Gross National Income (GNI) to determine a country’s contribution to the EU Budget. This type of use of statistical data tends to put special (political) attention on certain parts of the national accounts framework, with clear advantages and disadvantages as a consequence.

<sup>2</sup> Recently, the relevant standards have been revised, into ESA 2010 and SNA 2008, respectively. For EU-countries, the ESA 2010 will come into force starting September 1, 2014.

Indeed, the special focus on certain national accounts aggregates has resulted in an improvement of the relevant indicators in terms of their reliability and their international comparability. It has also brought to the fore the importance of having adequate statistics for evidence based policy making. On the other hand however, as said, there are also potentially negative consequences. Looking at the focus on the two headline indicators on government finance, while it may provide a single and clear message on the status of public finances within the EU to the politicians and the public at large, it has also created great incentives to governments to compile figures on deficit and debt that look good, instead of them being good from an economic substance point of view. There is a clear tendency to continuously look for “grey areas” to manipulate the relevant national accounts data, in order to stay within the stipulated deficit and debt limits. These practices have substantially increased in “popularity” since the start of the financial crisis during which significant pressures on government finance emerged, amongst others by the direct and indirect effects of the economic downturn and the bailouts of banks.

In relation to government deficit and (gross) debt, one can additionally question the appropriateness of the two relevant headline indicators. From a conceptual point of view, other indicators may provide a much better picture of the status of government finance. That being said, more generally, one can question the almost exclusive focus on the two headline indicators, as they will always provide a partial and somewhat one-dimensional picture, not telling the whole story.

This paper mainly addresses issues in relation to statistics on government finance. Section 2 will discuss the present status. After a more general discussion of the administrative use of statistical data and a presentation of the current headline indicators for government deficit and (gross) debt, the advantages and disadvantages of the current focus on these indicators will be dwelt upon in much more detail. Subsequently, section 3 will discuss the (in)appropriateness of the current indicators. Doing so, some alternative indicators will be presented for government deficit and debt that may be more relevant from a conceptual point of view. The section will also discuss the need to consistently provide a broader picture, not relying on too simple messages that can be derived from single indicators. The paper closes with some conclusions and a possible way forward.

## **2. The current status of statistics on government finance**

### ***2.1 General overview on the use of statistical data for administrative purposes***

In addition to the more general use for economic research as well as macro-economic surveillance and policy making, economic statistics in general, and national accounts in particular, are used for administrative purposes. Regarding this administrative use, one can distinguish two different types of use:

- The use of macro-economic indicators for the determination of the contribution of a country to international organisations, and the establishment of e.g. the capital share of participating countries in, for example, the European Central Bank (ECB);
- The use of macro-economic indicators for monitoring purposes, in which the surpassing of certain thresholds may have a direct impact, often regulated by law, on the economic policy of a country.

The use for administrative purposes is widespread. For example, the contribution of Member States to the OECD is based on the level of Gross National Income (GNI) (at factor costs). Also the IMF-quotas are, amongst others, based on the relative shares of Gross Domestic Product (GDP) of participating countries, whereas the level of GNI per capita determines whether a country is considered as a developing country, eligible for the support, in the form of low-interest loans, interest-free credits or grants of the World Bank.

Notwithstanding this widespread use, this is negligible as compared to the administrative use of national accounts data within the European Union and the Euro Area. In addition to the above mentioned

use for the ECB capital share, the most prominent example of the first category is the use of Gross National Income (GNI) and Value Added Tax (based on harmonised calculations using detailed national accounts data) for the determination of the contribution of Member States to the budget of the European Union (EU). In comparison to other international organisations, it can be noted that the EU budget is relatively large, amounting to approximately one percent of GNI. In relation to the EU, also the use of regional GDP per capita for the eligibility of a region for financial contributions from the EU Structural Funds can be mentioned.

When it comes to monitoring purposes, the politically most relevant example is the use of government deficit and debt (as a percentage of GDP) in the Excessive Deficit Procedure (EDP). Recently, this type of use of macro-economic statistics has gained a new momentum with the agreement within the EU of the so-called “Excessive Imbalances Procedure” (EIP), according to which several indicators are used to establish whether or not a country’s economy has some elements which are considered as being economically unsustainable. If the latter shows to be the case, a mechanism is put in place by law which may oblige countries to address the imbalance(s).

As stated in the introduction, the use of statistics for administrative purposes has clear advantages and disadvantages. In addition to making politics and the public at large more aware of the fact that statistics are important and do matter, it has clearly improved the quality of the relevant statistics, in terms of reliability, international comparability and transparency. As a consequence of the political and/or financial importance of the relevant indicators, a number of controls and procedures have increasingly been developed to ensure that the relevant data are calculated according to high quality standards. To give the example of GNI for EU own resources, methods have been developed to ensure the exhaustiveness of national accounts in relation to the inclusion of hidden and informal activities. Each and every country also has to deliver a very detailed record of the sources and methods for estimating GNI, often amounting to documents in the range of 500 pages. These reports are subsequently scrutinised by Eurostat, the statistical office of the EU, with the support of the GNI-committee in which all Member States are represented. If it shows that the estimates are not compiled according to international standards (the European System of Accounts, ESA) and/or according to agreed methodologies, countries will receive “reservations” in relation to their GNI-estimates for as long as they have not changed their compilation practices in an adequate way.

The same kind of procedures can be noticed in relation to the statistics on government deficit and debt. In addition, a whole body of jurisprudence has been developed on the appropriate interpretation of the international standards, mainly needed because the compilation of government deficit and debt – different from the compilation of GNI-estimates – involves a proper definition and recording of a substantial number of transactions within the system of national accounts and also requires a proper delineation of the population of units included in government. To arrive at this more detailed interpretation of the standards, procedures have been put in place, involving preparations by specific Task Forces, formal advice from the Committee on Monetary, Financial and Balance of Payments statistics (CMFB), a decision by Eurostat, and finally inclusion in the Manual on Government Deficit and Debt (see [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-RA-13-001/EN/KS-RA-13-001-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-13-001/EN/KS-RA-13-001-EN.PDF)). Furthermore, in response to misreporting by the Greek authorities, the legal entitlements of Eurostat to monitor the appropriateness of the estimates have been extended, for example by allowing for in-depth “methodological visits” and having admittance to the underlying administrative records of a national government’s bookkeeping system. Nowadays, statisticians can also be prosecuted for deliberate misreporting.

Notwithstanding the undisputable increase in the quality of the indicators that are used for administrative purposes, clear disadvantages can be observed as well. First of all, when it comes to the allocation of human and financial resources, priority is given to those parts of national accounts that are relevant for the administrative use of data, simply because of its political importance and the risk of

possible mismeasurement. In respect of the latter, one has to realise that timely estimates, e.g. 90 days after the end of a reporting period, always require estimation procedures because of lack of timely source data. As a consequence of this, in some way quite understandable and justifiable prioritisation, a significantly decreased inclination to look at other demands, more related to general economic policy and economic research can be noticed.

Furthermore, the administrative use of national accounts data also gives impetus to what we would like to describe as being “exactly wrong instead of being approximately right”. In some cases, one is inclined to be against the application of a concept that, from an economic substance point of view, is to be preferred, because it may create problems related to the exact measurability of the relevant concept or definition. A recent example relates to the discussion on the definition of gross debt for EDP purposes, more specifically to whether or not to include “other accounts payable” into the definition. From a conceptual point of view, this would clearly be preferable. Yet, quite a number of countries have doubts because of the difficulty to arrive at a high-quality, internationally comparable measures for this item. However, even in the case of lower quality estimates, in our opinion, international comparability of gross debt as a measure of indebtedness of a country’s government would be enhanced by including other accounts payable.

Another example of the above relates to the distinction between market and non-market production, which has consequences not only on the calculation of GDP but also on the delineation of government. Without going into too much detail, the worldwide System of National Accounts (SNA) 2008 prefers to apply the somewhat looser criterion of “economically significant prices”, whereas the ESA 2010 prescribes a much more exact criterion in the form of having sales exceeding 50% of the production costs for classifying a unit as a market producer outside general government. Here, one can argue that the looser SNA-criterion, although preferable from an economic substance point of view, may contain so much room for interpretability that it may actually hamper the compilation of internationally comparable data. However, there are many more examples in which the argument of measurability feeds into the discussion for, as we would say, the wrong reasons.

A final point concerns the, implicit or explicit, political interference into the process of defining and interpreting international standards for the compilation of national accounts, in cases of significant impacts on the indicators used for administrative purposes. The most prominent examples of this interference are related to government deficit and debt, and will be discussed in much more detail in a next subsection. Also other related problems will be dwelt upon. Before doing so, the two headline indicators in the EDP will be introduced in somewhat more detail.

## ***2.2 Government Deficit and Debt for EDP purposes***

The two headline indicators on government deficit and debt, as defined in the Excessive Deficit Procedure (EDP), also known as the Maastricht deficit and debt, play a significant role in measuring the state of government finances within the European Union (EU). Due to the political impact on government policy in the case the relevant indicators go beyond certain pre-defined thresholds (in general terms: a deficit of 3% of GDP and a debt of 60% of GDP), the analysis of government finances tends to focus entirely and almost exclusively on these indicators.

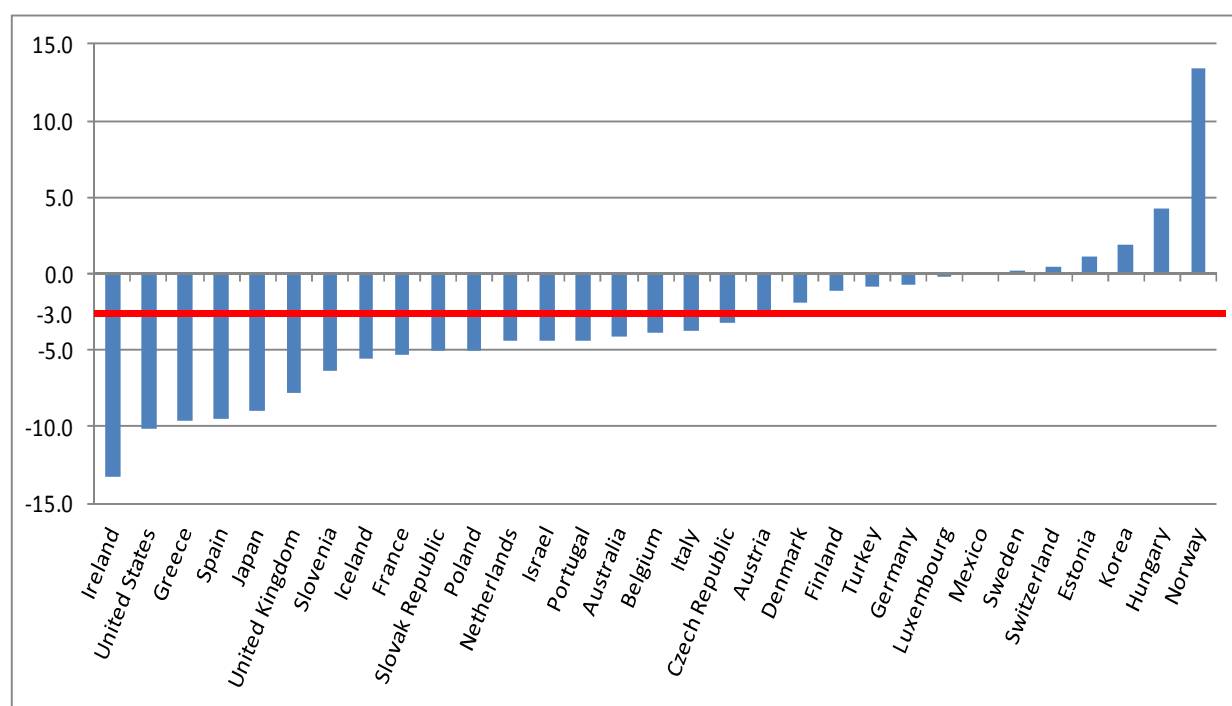
According to the EDP, EU Member States have to submit annual government deficit and debt data twice a year (before April 1<sup>st</sup> and October 1<sup>st</sup>) to the EU Commission (Eurostat). Moreover, in the EDP framework, Eurostat also reviews quarterly government debt data (ESA table 28) as provided by EU Member States, and checks it against annual data. Figures 1 and 2 provide a graphical presentation of the two EDP headline indicators for the OECD countries. In relation to government deficit, data are presented according to the more generic definitions of the worldwide System of National Accounts. The difference

with the Maastricht definition is not very large, as it only consists of the adjustment for the treatment of interest related to swaps. Figure 1 shows net lending/net borrowing (*i.e.* deficit) of general government as a percentage of GDP in 2011 for all OECD countries, with the exception of Canada, Chile, and New Zealand, for which data were not available at the time of the writing.

In 2011, almost all European countries exceeded the 3% threshold for deficit. The most significant deficits within Europe were recorded in Ireland (-13.3%), Greece (-9.6%), Spain (-9.4%), the United Kingdom (-7.8%), Slovenia (-6.4%), France (-5.6%) and the Slovak Republic (-5.1%). The United States (-10.1%), Japan (-8.9%) and Iceland (-5.6%) also had substantial deficits. On the other hand Norway (13.4%), Hungary<sup>3</sup> (4.2%), Korea (2.0%), Estonia (1.2%) and Switzerland (0.5%) recorded a surplus in 2011.

Figure 2 shows gross debt (*i.e.* Maastricht debt) of general government as a percentage of GDP in 2011 for all OECD countries, with the exception of Iceland and Turkey, for which data are not available. Sixteen OECD countries recorded high gross debt-to-GDP ratios, exceeding 60% of GDP (as defined in the EDP) in 2011. The highest debt ratios, going beyond 100%, were recorded in Japan (219%), Greece (170%), Italy (121%), Portugal (108%) and Ireland (106%). The lowest debt ratios were recorded in Estonia (6%), Chile (14%) and Luxembourg (18%). For Poland and the Netherlands, the debt-to-GDP ratio was close to 60% of GDP. Here, it should be noted that differences in definition do limit the international comparability of the data concerned. For some countries (Chile, Japan, Korea), data are not consolidated, which may have a quite significant impact, if parts of government hold substantial amounts of government issued debt. Furthermore, in some cases, data are derived either from the quarterly public sector debt dataset or from financial accounts, with government issued securities valued at market prices for some countries instead of face value (EU countries) or nominal value.

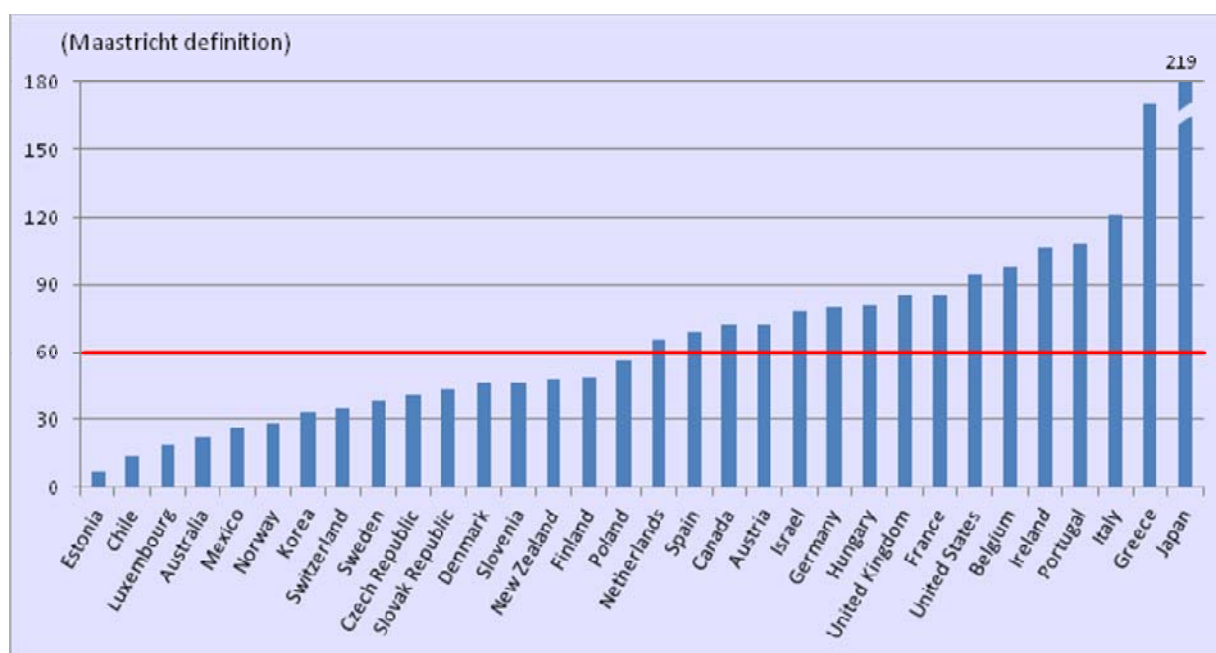
**Figure 1. Net lending/net borrowing of general government in 2011**  
As a percentage of GDP



Sources: OECD General Government accounts – Government deficit/surplus, revenue, expenditure and main aggregates.

<sup>3</sup> See section 3.1 for the exceptional reasons explaining the Hungarian net lending position in 2011.

**Figure 2. Gross debt of general government in 2011**  
As a percentage of GDP



- Sources:
  - EUROSTAT Quarterly government debt (ESA table 28) for the EU countries.
  - OECD Quarterly public sector debt for Australia, Canada, Japan, Mexico, New Zealand, Switzerland and USA.
  - OECD Annual financial balance sheets for Chile, Israel and Korea.
- Gross debt data are consolidated, except for Chile, Japan and Korea.

### 2.3 The Excessive Deficit Procedure in practice

The extensive attention for both headline indicators for EDP purposes has serious consequences for the statistical practices within the European Union. In addition to the previously discussed, more general pros and cons of the use of statistical data for administrative purposes, this section will deal in more detail with the statistical practice of government deficit and debt. As such, it is also an attempt to answer the question whether the outcome of this focus is healthy for countries and whether or not the advantages outweigh the disadvantages.

Without any exaggeration, one can state the EDP headline indicators are the single most scrutinised statistical data in the world. As mentioned before, extensive procedures surround the compilation of these government data. Given its definition and the related interpretation of standards, and disregarding any incidental misreporting, like in the case of Greece, the reliability, the international comparability and the transparency of the compilation practices of the relevant data have been significantly enhanced.

The focus on the two headline indicators also brings a single and clear message on general government finance to politicians, financial market analysts and government policy economists as well as the public at large. Because of their comprehensiveness, they are continuously cited in the media, and used in economic policy debates and financial market analysis, in addition to their original monitoring purposes. However, being so clear, simple and straightforward, they also bear the danger of over-simplifying the status of government finance. They will always remain, by their nature, one-dimensional.

Because of the political sensitivity and the related focus on the two indicators, one can also observe unwanted side-effects on the compilation practices and on economic policy alike. Below, the development

of fiscal gimmickries to embellish government accounts will be discussed. In addition, some of the consequences on government policy will be examined, by way of two examples: the backtrack on pension reforms because of its impact on government deficit and debt, and the pressure on government investments in the time of financial and economic crisis and rapidly increasing deficits.

### ***Fiscal gimmickries***

The high political focus on the EDP indicators has clearly created a momentum for administrative creativity. In their 2005 study “Fiscal Gimmickry in Europe<sup>4</sup>”, Koen and Van den Noord, define the term fiscal gimmickry as “measures that temporarily embellish both the headline and the cyclical-adjusted fiscal position as reported in the stability programmes, without a commensurate improvement in the underlying fiscal position”. They distinguish two concepts: *instances of creative accounting* and *one-off measures* and provide examples to illustrate it.

*Creative accounting* refers to the “more or less unorthodox treatment of operations involving general government, which affects the fiscal balance or public debt but not, or far less, government net worth”. In 2006, Bernoth and Wolf define the term creative accounting as “any measure that hides deficits through the use of window-dressing or shifting fiscal expenditures off the budget”.

An example of creative accounting relates to the “recording of a particular deficit or transaction increasing the public debt within a public corporation’s balance sheet”. As public corporations producing market goods and services are not part of general government, this will not affect government deficit and debt according to the Maastricht definitions. More generally, creative accounting appears “when a government fails to register a transaction within its accounts or when it misclassifies a transaction to enhance the fiscal balance or the public debt”. The prime example of course relates to Greece, as shown in the report of the European Commission after its methodological visit in November 2009; see [http://epp.eurostat.ec.europa.eu/cache/ITY\\_PUBLIC/COM\\_2010\\_REPORT\\_GREEK/EN/COM\\_2010\\_REPORT\\_GREEK-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/COM_2010_REPORT_GREEK/EN/COM_2010_REPORT_GREEK-EN.PDF).

With respect to misclassification of an operation, very often, a transaction may be misclassified as “below the line”, which means that the transaction is not recorded in the current and capital accounts above the deficit line (more precisely referred to as the balancing item “net lending/net borrowing” of the capital account), but recorded in the financial accounts. In this case, the transaction does not have an impact on the deficit and only affects debt. For example, a capital injection into a financial corporation, which records a loss, could be misclassified as an acquisition of shares, and not as a capital transfer affecting deficit. The classification of capital injections as either above or below the deficit line became very relevant during the economic and financial crisis, when several governments had to intervene into the banking system. In response, more precise rules were formulated, according to which these capital injections could only be recorded as the purchase of financial assets, if the expected future return on these investments was in line with the thresholds of the European Commission’s State Aid rules<sup>5</sup>.

Other examples of creative accounting, quoted by Koen and Van den Noord, are Public-Private Partnerships (PPPs). In this case, “instead of government investing in an asset and operating it, a private entity invests and owns the asset (at least partly and at least during the period of exploitation), selling the corresponding services to the government”. PPPs may have been justified on the basis of government policy regarding privatisation. However, they do have the “positive” side-effect that the relevant

<sup>4</sup> Koen, V. and P. van den Noord (2005), “Fiscal Gimmickry in Europe: One-Off Measures and Creative Accounting”, *OECD Economics Department Working Papers, No. 417*, OECD Publishing.

<sup>5</sup> [http://ec.europa.eu/competition/state\\_aid/overview/](http://ec.europa.eu/competition/state_aid/overview/)

investments do not affect government deficit and debt<sup>6</sup>. Whatever the case, PPPs gained in popularity in several EU countries since the late 1990s.

A final example of creative accounting concerns the assumption of pension obligations towards employees of public corporations by government. In 1996, France Telecom made a huge one-time payment to the government and in return the government took over the responsibility for the relevant pension liabilities. After a long and tense discussion, it was decided to record the payment to government as a capital transfer, thereby improving deficit (and debt). However, this decision was based on a rather “technical” and “procedural” interpretation of the ESA standards, and one clearly had the feeling that other than content-related arguments have fed into the process. From an economic substance point of view, government simply received cash in return for taking over a liability, clearly a purely financial transaction, not having an impact on government deficit. Moreover, the cash transfer enabled the government to diminish or increase to a lesser extent its gross debt, as future pension obligations are not included in the EDP-definition of government debt. Anyhow, the decision enabled France to meet the 3% threshold, it accounted for almost half of France’s deficit reduction in 1997 (0.5% of GDP). Subsequently, many EU countries copied the French “trick”: Belgium, in 2003, with the transfer of Belgacom pension liabilities; Portugal, in 2010, with the transfer of Portugal Telecom Comunicações pension fund obligations, etc.

According to Koen and Van den Noord, the concept of a *one-off measure* refers to “government decisions of a non-recurrent nature, which affect general government deficit in a given year or for a few years, but not permanently”. As an example of a one-off measure, they mention the privatisation of non-financial assets owned by government, at market prices. The revenues of the sale enhance the deficit of the government in the year it occurs, and lower its stock of gross debt. However, in the following years, the impact depends on the difference between the decrease (or less increase) on interest payments on government debt and the net return on the assets being sold.

All in all, three types of creative accounting and one-off measures can be distinguished. The first one concerns deliberate misreporting, which in some way is not to be considered as creative accounting, but simply as a form of fraud. The second one relates to measures that do improve either government deficit or debt, according to the EDP definitions, but which – looking at it from an economic point of view – do not improve the financial situation of government finance from a broader perspective. The third type concerns the search for “grey areas”. In this respect, one has to realise that how exact and precise the standards and definitions may be, there is always room for interpretation, or perhaps better, for misinterpretation. This continuous search for “grey areas” has led to a vast amount of additional guidance and rules, which are laid down in the Manual on Government Deficit and Debt; see also section 2.1.

### ***Fiscal gimmickries and the economic and financial crisis***

During the economic and financial crisis, governments had to take emergency measures to support failing financial institutions. This added, for some countries substantially, to the increase of government deficit and debt. In addition to the before-mentioned discussion on the treatment of capital injections, these emergency measures led to several issues regarding the recording of transactions and units involved, and added to the problems of straightforwardly interpreting the usual headline indicators.

One of the issues relates to *contingent liabilities*. In both the SNA and the ESA framework, these are not recorded as liabilities (and therefore as part of government debt), unless they are absolutely certain to be called upon. During the economic and financial crisis, the level of guarantees granted by governments,

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<sup>6</sup> That is as long as the PPP can indeed be considered as not being part of government. For the determination of PPPs either or not having to be recorded as part of government, special rules have been formulated, mainly based on whether or not risks and rewards are mainly born by government.

one of the major components of contingent liabilities, increased dramatically in some countries. For instance, in 2008, the Irish government established a guarantee scheme called Credit Institutions Financial Support Scheme (CIFS) covering the liabilities of six credit institutions. The CIFS amounted to 352 billion Euros and represented three times the value of Irish GDP. Other countries such as Denmark and the United Kingdom, reached high levels of contingent liabilities in 2009. Information of the levels of outstanding guarantees is necessary for evaluating the sustainability of public finances. In this respect, Eurostat nowadays asks EU member states to report the amount of guarantees in the EDP framework.

Government interventions into the banking sector also led to the creation of new entities, the so-called “*financial defeasance structures*”<sup>7</sup>. The aim of such units was to manage the “non-performing” assets of distressed institutions and restore the profitability of the transferring bank. As one will understand, the allocation of such units to either the government sector or the financial sector can have a substantial impact on general government debt. For instance, the creation of a new unit by the French government, in October 2008, in order to refinance credit institutions and, its sector classification in national accounts drew the attention in Europe. The financial corporation called *Société de Financement de l’Economie Française (SFEF)* was created to provide liquidity funding to French banks. The SFEF raised fund on the capital markets by issuing securities guaranteed by the French government. SFEF was majority owned by the banks, but, as the bonds issued were guaranteed by the government, the French State kept an overall right of veto on all operations of SFEF. Eurostat concluded that, on the basis of its majority private ownership, this type of unit could be classified outside the government. Equally, in December 2009, the Irish government established a *National Assets Management Agency (NAMA)* and used a SFEF type structure to acquire non-performing loans assets from Irish banks. NAMA created a Special Purpose Vehicle (SPV) to acquire the assets. The SPV is owned by private investors for 51% and by the government for 49%. The State guarantees 95% of the securities provided by NAMA in payment for the assets acquired from the banks, and in counterpart, NAMA conserves a veto right over all activities of the SPV affecting the interest of both NAMA and the State. After long discussions with the Irish Statistical Office, Eurostat decided that the SPV could be classified outside the government. On the other hand, this was not the case of the first German winding-up Agency “*Erste Abwicklungsanstalt, EAA*”, created in December 2009 by the German Financial Stabilisation Authority (FMSA). Its task was the liquidation of the risk positions and non-strategic assets transferred to it. The EAA is a government-sponsored defeasance structure which acts on behalf of the government. It is a publicly owned unit. Because of the latter ownership share of government, Eurostat decided that it should be classified inside the general government sector. The direct impact on government debt is approximately 23 billion Euros (around 1.0 % of GDP).

In 2009, there was a tough discussion on the recording of financial defeasance structures. In short, the CMFB advice was to disregard the formal ownership structure, and to look at the economic substance, boiling down to who decides, and who guarantees and pays for eventual losses. If government is the one, then the structure should be consolidated within the government. Notwithstanding this advice, Eurostat, in its decision of July 2009, set up rules according to which, under certain restrictive conditions, these types of unit could be classified outside government, on the basis of its majority private ownership. With the introduction of the ownership criteria for the sector classification, similar rescue units are now treated in different ways. This is the case of the German EAA, which is classified within the government sector, whereas the Irish NAMA or the SFEF, are both classified outside the government sector. And yet, all these units can be considered as “bad banks” acquiring non-performing assets and receiving State guarantees. It

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<sup>7</sup> This paragraph heavily relies on two documents: “*Challenges in improving the measurement of the government financial position and in the classification of units as public or private*” co-written by Albert Braakmann and Thomas Forster from the German Federal Statistical Office, and “*Treatment of special bank interventions in Irish government statistics*”, co-written by Mary Cussen from the Central Bank of Ireland and Mick Lucey from the Irish Central Statistical Office.

is clear that the rules based on formal ownership criteria make it relatively easy to manipulate the organisation of the structure in such a way that it can be excluded from the government accounts.

***Negative impact on government policy: pension reforms<sup>8</sup>***

In the late 1990s and early 2000s, Poland, Hungary and other Central and Eastern countries started to reform their pension systems in response to pressures from growing pension benefits due to the aging population. In addition to the public first pillar (Pay-As-You-Go system – PAYG), they introduced a private, pre-funded, defined contribution second pillar pension system. The aim of the reform was to diversify the risks, enhance long-term fiscal sustainability and stimulate private and national saving. One of the measures in Poland and other countries was to redirect a part of the first pillar contributions to the pre-funded second pillar system. The relevant funds were accumulated in individual accounts and managed by the private pension funds.

As a consequence of the above, the PAYG system received less contributions, while on the other hand they distributed the same level of pension benefits to current pensioners. Without any additional fiscal consolidation measures, this led to a contribution-benefit gap (and a growing deficit) that the government had to cover by issuing debt. In Poland, the gap amounted to about 1.5-2.0 percent of GDP between 2000 and 2010. In this respect, it should be noted that, according to international standards, the second pillar systems and the pension assets accumulated by these funds are to be recorded outside the government accounts. Financing of pre-funding the future pension liabilities by the accumulation of debt represented a total of 15% of GDP at the end of 2010, which was equivalent to almost one third of Poland total public debt.

To relieve countries for part of the pressure of the pension reforms on government deficits, it was decided at some stage that for EDP purposes, countries could adjust their deficits for the full amount in the first year, gradually decreasing to zero after a period of five years. However, the pressure on government deficits from these reforms is of course far more long lasting, and with quickly growing deficits and debt levels as a consequence of the economic and financial crisis, Poland and other emerging European countries engaged in the reform of their pension systems could not conform to the Stability and Growth Pact (SGP) fiscal limits. This did not provide an equal treatment compared to countries with similar PAYG-systems who did not engage in reforms (e.g., France, Germany, Italy, Portugal and Spain), and whose deficits and debt levels may be lower at the moment, but forecasted to increase in the coming years while facing growing pension benefits as part of their PAYG-systems.

In 2010, the reformers requested from the European Council (EC) a full adjustment of the EDP thresholds to accommodate the impact on pension reforms. In the absence of a suitable response from the European Commission, the reformers decided to stop or reduce the contributions to the second pillar pension system, to improve the level of their deficit and debt. Even more far-reaching, Hungary redirected all contributions to the first pillar pension system by stopping mandatory contributions to the private system and by strongly encouraging pensioners to also redirect their pension assets to the public system. In May 2011, Poland reduced contributions from 7.3% to 2.3% of wages to cut back its deficit. As a consequence, the reformers did not have time to experience any benefits of a pre-funded pension system. Indeed, expected benefits on capital markets and risks could take more than 10 years to appear. For instance, in Chile, reforms on pension systems demonstrated that a second pillar pension system can lead to positive effects provided that these reforms last several years and are supplemented by fiscal consolidation measures.

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<sup>8</sup> This part of the document heavily relies on the paper “*Pension reforms in emerging Europe: the uncertain road ahead*”, written by Delia Velculescu from the IMF.

The main problem is related to the recording of PAYG systems according to the international standards for the compilation of national accounts, and the related definitions of government deficit and debt. PAYG-systems are not recorded on a full accruals basis, according to which the contributions (and the compensation of employees) should equal the growth in future pension entitlements through a year's employment and the increase in pension entitlements are directly recognised in the balance sheets. If that were the case, and gross debt were adjusted accordingly, there would have been a level playing field and a more appropriate recording of fiscal sustainability, without giving incentives to less favourable policies from an economic point of view, just because of its "positive" impact on the deficit and debt, as presently defined. When discussing the recently revised standards for national accounts, SNA 2008 and ESA 2010, the recording of the PAYG systems was extensively discussed. However, an agreement could not be reached, and a compromise was reached allowing countries some "flexibility"<sup>9</sup> in the recording of the relevant government sponsored schemes. In addition, however, it was also agreed that, outside the core system of national accounts, additional data will have to be provided showing pension entitlements arising from all pension systems whether or not they are pre-funded. Within the EU, it has been agreed that such data will be provided on a three years basis, starting in 2017.

Notwithstanding the above changes in the future provision of data, which do not affect the EDP headline indicators, it is clear that the current and future framework of the Stability and Growth Pact "penalizes" countries who would like to introduce a pension reform. The headline indicators are simply not adequate enough, as they do not fully account for the future pension obligations of government.

***Negative impact on government policy: creating pressure on investments during the crisis***

Government deficit includes the expenditures on investments, such as those related to electricity, telecommunication, transport (public infrastructure), education, public health, environmental protection, military defence, research and development, etc. As a consequence, spending on public investments has a negative impact on government deficit (and debt). On the other hand however, it is well documented by economic research that public investments stimulate economic growth and generally have a positive impact on productivity in the private sector. Both from a business cycle point of view and for reasons of structural economic policy, one could therefore argue that governments preferably should try to maintain expenditures on public investments over and above expenditures with a more current nature, in order to generate future income and restore long-term growth.

Notwithstanding the above, due to the economic and financial crisis, and the subsequent pressures and almost exclusive focus on government deficit and debt, a majority of OECD countries have been lowering their gross capital formation since 2009 (see figure 3). Between 2009 and 2011, the most important decreases as a percentage of GDP, were recorded in Iceland (-1.7), Spain (-1.6), Czech Republic (-1.4), Greece (-1.4), Ireland (-1.2), Estonia (-1.0), Slovenia (-1.0), Australia (-0.7) and Italy (-0.6). Only Poland increased its public investments between 2009 and 2011 (+0.5), with Denmark, Belgium and Israel also showing a marginal increase (+0.1).

Within the EU, public investments are especially beneficial for the Central and Eastern European countries (CEECs) for which the development of public infrastructure can help them to reach the level of economic development of other EU members. In fact, stimulated by the CEEC's joining the EU in 2003-2004, public investment of CEECs has grown strongly. Unfortunately, due to the economic and financial crisis, governments had to choose between encouraging further infrastructure development and minimising the deficit. In the end, most governments decided to reduce their investment expenditures (see figure 4). Despite a substantial deficit (-7.4% of GDP in 2009), Poland continued to invest until 2011, but also here government decreased its investment expenditures from 5.8% of GDP in 2011 to 4.7% of GDP in 2012. On

<sup>9</sup> For more details, see SNA 2008, paragraphs A3.127 & A3.128.

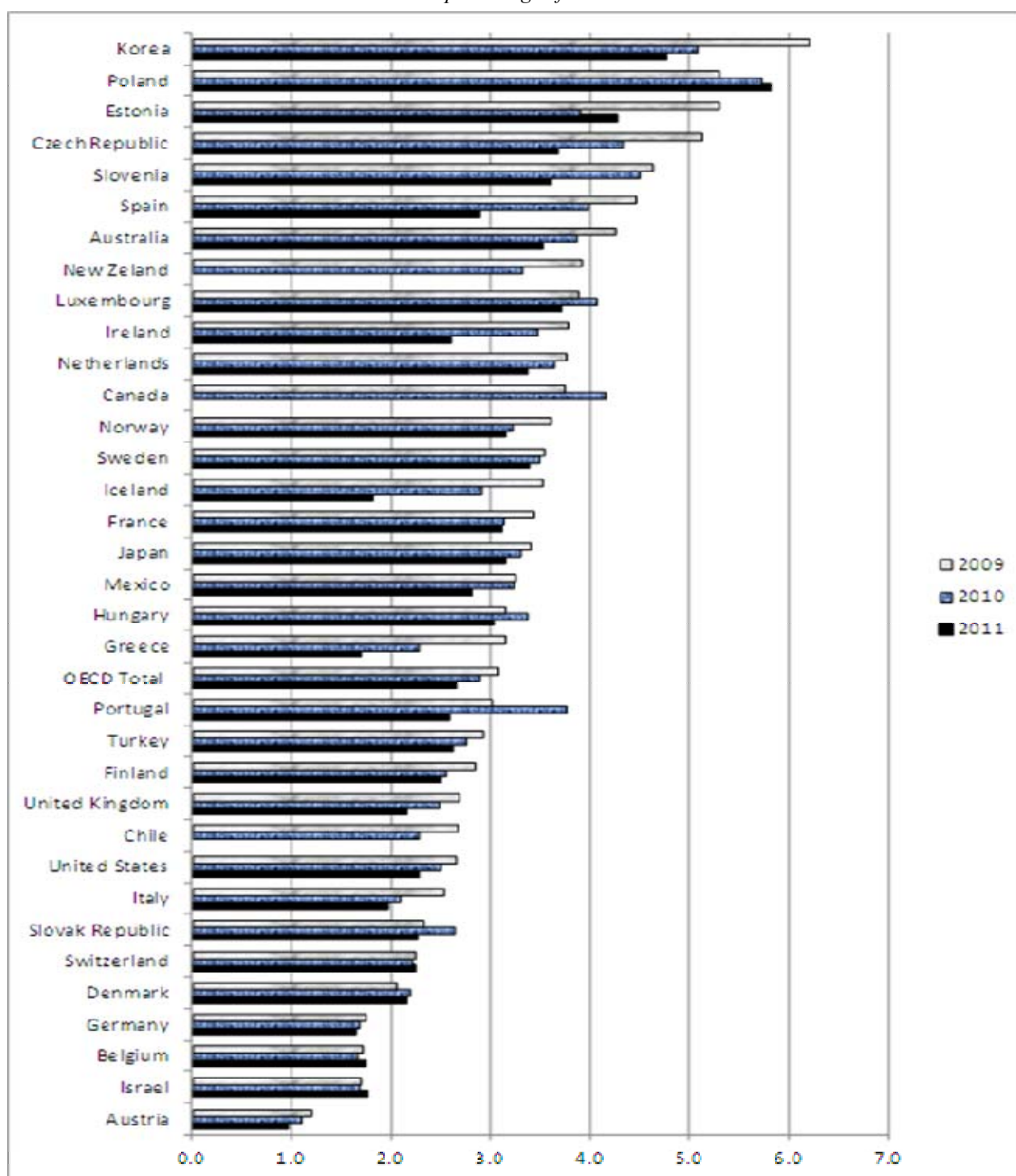
the other hand, since 2010, Estonia has quickly recovered from the recession and has resumed public investments, unlike the others.

For all OECD countries, including Central and Eastern European countries, investments in transport related activities (roads, railroads, airports, etc.) represent the largest share of total public investment, except in France and in the United Kingdom, where more is invested in education (mainly schools): see figure 5. A first concern for CEECs seems to be the improvement of their transport infrastructure, to make up for serious backlogs in the maintenance of roads, etc. However, “investment in inland transport infrastructure declined by 11% in real terms from 2009 to 2010<sup>10</sup>”.

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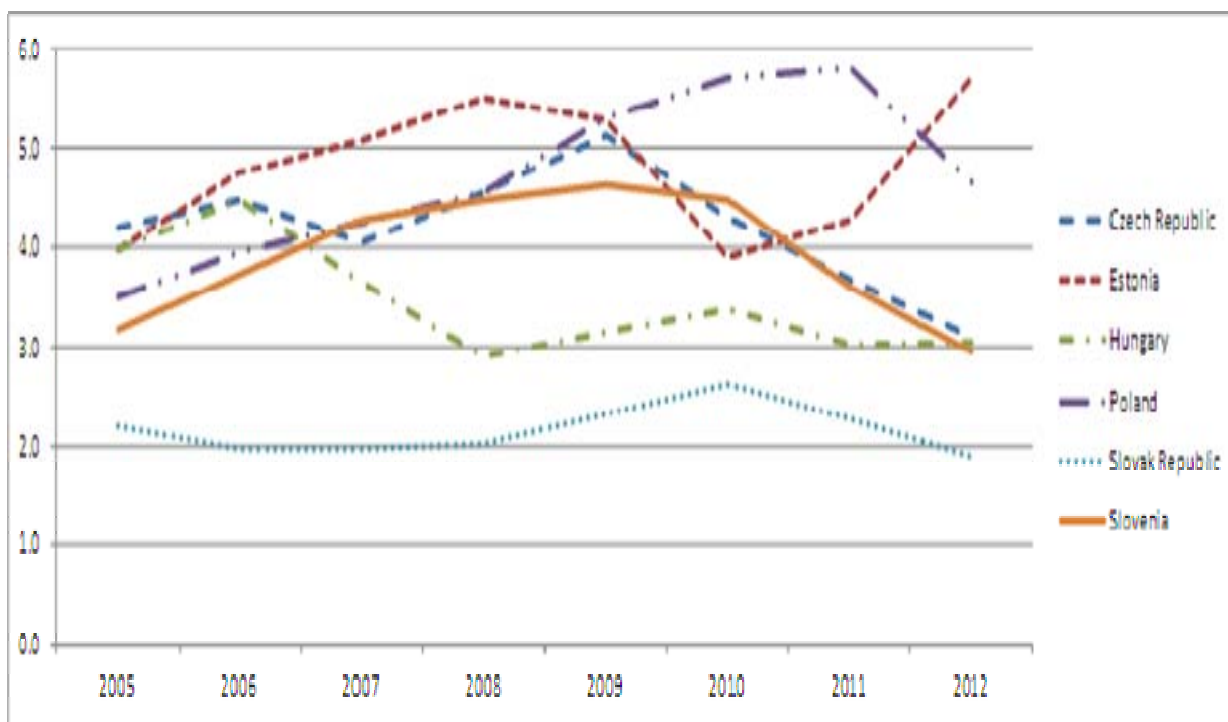
<sup>10</sup> OECD, International transport forum, Statistics Brief, June 2012.

**Figure 3. Public Investment**  
As a percentage of GDP



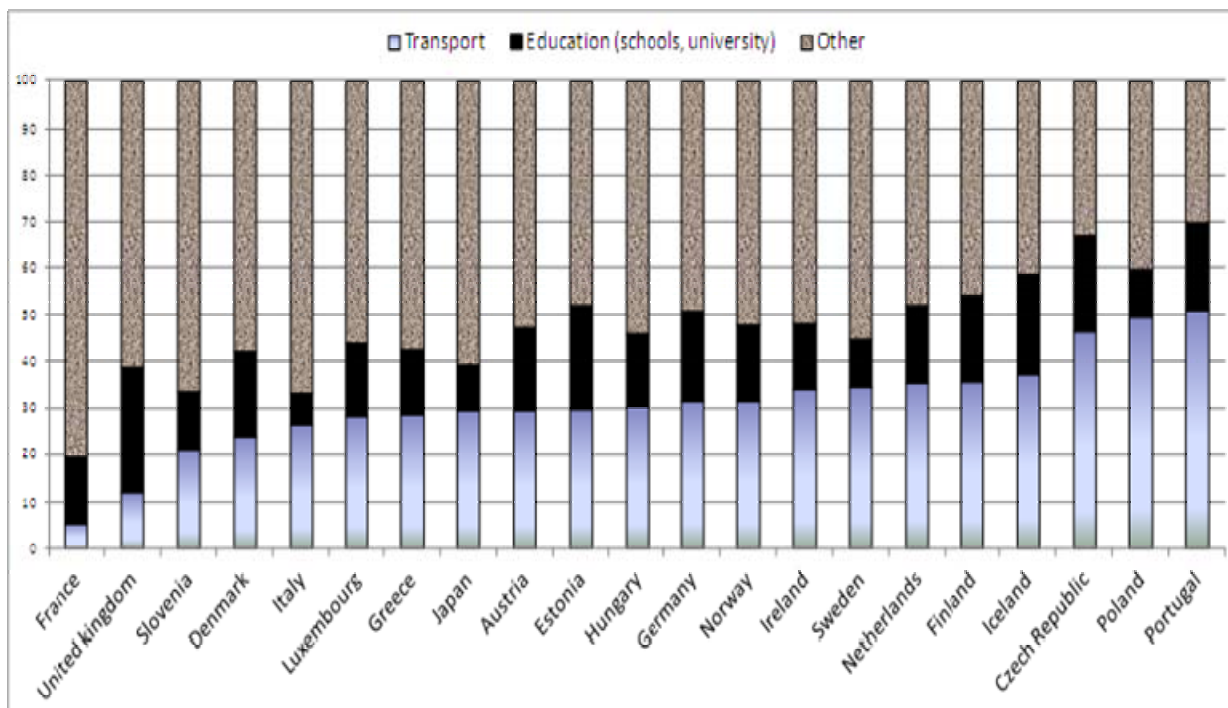
Source: OECD, National Accounts of OECD countries, Government Main Aggregates.

**Figure 4. Public Investment in CEECs**  
As a percentage of GDP



Source: OECD, National Accounts of OECD countries, Government Main Aggregates.

**Figure 5. Government Investment in Transport and Education in 2011**  
As a percentage of total investment



Sources: OECD, National Accounts of OECD countries, Government Expenditure by Function

### 3. The appropriateness of the present headline indicators

Section 2 of this paper has pointed out a number of limitations when almost exclusively focusing on two single headline indicators to analyse government finance. This section conceptually questions the appropriateness of the two EDP headline indicators currently used, and proposes alternative indicators. Although the alternative indicators may provide a better picture, it should be noted that focussing on a limited number of headline indicators will always have certain limitations. In section 4, therefore, proposals will be put forward to combine the headline indicators with additional information, to provide a more complete and better picture of public finances of an economy.

#### 3.1 *Net saving versus net lending/net borrowing, as a percentage of GDP*

Net lending/net borrowing (B9), usually referred to as *deficit* when negative, is the balancing item of the capital account. It consists of gross (net) saving *plus* net capital transfers received *minus* gross capital formation. Gross (net) saving represents current receipts *minus* current expenditure excluding (including) depreciation. Net lending/net borrowing is also the balancing item of the financial account and represents the net acquisition of financial assets *minus* net incurrence of liabilities. In theory, the two “B9s” are equal, but in practice, a statistical discrepancy may exist due to different sources used to estimate non-financial and financial transactions. Net lending shows the extent to which the sum of saving and capital transfers is actually used to finance the acquisition of non-financial assets and how much is lent to other sectors. When there is net borrowing, saving plus capital transfers are insufficient to finance all the acquisitions of non-financial assets, and borrowing from other sectors is necessary.

By definition, net lending/net borrowing of government includes the expenditures on investment as well as net capital transfers paid or received by government. As a result, when governments increase investment expenditures, deficit increases as well. Therefore, as shown in the previous section, in a period of budget constraints, e.g. as a consequence of an economic and financial crisis, governments tend to reduce their public investment to limit the level of deficit. This puts pressure on government investments, which may be important to generate future income and growth.

Capital transfers also directly impact on government deficit. They relate to “unrequited transfers where either the party making the transfer realises the funds involved by disposing of an asset (other than cash or inventories), by relinquishing a financial claim (other than accounts receivable) or the party receiving the transfer is obliged to acquire an asset (other than cash or inventories) or both conditions are met” (SNA 2008, para. 10.200). Capital transfers can be broken down into capital taxes (D.91), which consist of taxes levied at irregular and very infrequent intervals, investment grants (D.92), which consist of capital transfers in cash or in kind made by governments or by the rest of the world to other resident or non-resident institutional units to finance all or part of the costs of their acquisition of fixed assets, and other capital transfers (D.99). See SNA 2008, para. 10.207–212 for more details. Some examples of capital transfers relating to government are the following:

- Inheritance and gift taxes;
- General government capital transfers to private schools for the construction of science blocks or libraries and transfers to charitable organisations for the construction of homes for the aged;
- Capital injections into publicly and privately owned enterprises to cover large deficits accumulated over a number of years, including capital injections into banks;
- Payments in compensation for extensive damages or serious injuries not covered by insurance policies;
- Cancellation of debt by mutual agreement between the creditor and debtor.

Very often, capital transfers are large and irregular (relating to one-off measures), and may distort the more structural analysis of government accounts. Table 1 shows, where available, net capital transfers across OECD countries as a percentage of GDP from 2005 to 2012. Hungary, Iceland, and Ireland recorded high net capital transfers in 2011, 2008 and 2010 respectively. In 2011, Hungary had a net capital transfer of +9.6% of GDP, which corresponds to the transfer of funds from the private sector to the state-controlled first pillar of the pension system, enabled by the parliament's adoption of an amended pension act. This move improved government deficit in the short term. The related capital transfers received by government exceeded 10 billion Euros and converted the deficit in 2010 (-4.4%) into a surplus in 2011 (+4.2%). It is clear, however, that this decision will have an adverse effect on public finances in the longer term.

**Table 1. Net capital transfers of OECD countries**

*As a percentage of GDP*

D9R-D9P%GDP	2005	2006	2007	2008	2009	2010	2011	2012
Australia	-0.3	-0.5	-0.4	-0.4	-0.8	-0.5	-0.8	
Austria	-2.0	-2.1	-2.3	-2.2	-2.4	-3.0	-2.4	<b>-3.0</b>
Belgium	-2.7	-0.3	-0.5	-0.4	-0.9	-0.4	-0.7	-0.9
Canada	-0.1	-0.2	-0.1	-0.1	-0.2	-0.2		
Chile				-1.1	-1.3	-1.5		
Czech Republic	<b>-4.5</b>	-2.9	-1.4	-1.9	-0.2	-0.1	-0.1	-2.1
Denmark	0.2	0.3	0.2	-0.2	0.0	-0.3	-0.4	-1.7
Estonia	0.0	-0.1	-0.4	-0.8	0.9	0.4	0.6	1.0
Finland	0.0	0.1	0.0	0.1	-0.1	0.0	0.0	0.0
France	0.2	-0.3	-0.4	-0.6	-0.5	-0.5	-0.5	-0.5
Germany	-1.1	-0.9	-0.8	-1.0	-0.9	-2.0	-0.7	-0.7
Greece	0.2	1.3	1.1	0.4	-0.5	0.4	0.5	<b>-3.4</b>
Hungary	-0.9	-1.0	-1.0	-0.8	0.2	1.4	<b>9.6</b>	1.2
Iceland	-0.7	-0.6	-0.5	<b>-13.7</b>	-1.2	<b>-4.5</b>	-1.7	-1.4
Ireland	0.4	0.6	0.6	-0.5	-2.4	<b>-20.0</b>	<b>-4.0</b>	-0.2
Israel	-0.7	-0.7	-0.9	-1.0	-1.2	-0.7	-0.5	
Italy	-1.3	-2.3	-1.4	-1.3	-0.8	-0.8	-0.6	-0.8
Japan	0.2	2.1	0.8	1.6	0.7	0.7	0.0	
Korea	-0.6	-0.6	-0.6	-0.6	-0.9	-0.5	-0.6	
Luxembourg	-1.3	-1.2	-1.1	-1.0	-1.3	-1.2	-1.0	-1.1
Mexico	-0.5	-0.4	-0.5	-2.8	1.8	0.6	0.3	
Netherlands	-0.2	-0.1	-0.2	-0.4	-1.0	-0.9	-0.5	-0.5
New Zealand	0.3	0.2	0.4	0.1	0.2	<b>-4.6</b>		
Norway	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
Poland	-0.3	-0.3	-0.1	-0.5	-0.3	0.6	1.1	0.7
Portugal	0.3	0.3	0.1	-0.4	-0.1	0.9	<b>3.0</b>	-0.1
Slovak Republic	-1.7	-1.1	-0.8	-1.3	-2.0	-0.5	-0.5	-0.3
Slovenia	-0.9	-0.7	-0.5	-1.0	-1.1	-1.0	-1.8	-0.7
Spain	-0.6	-0.7	-0.8	-1.0	-1.3	-1.0	-1.4	<b>-4.2</b>
Sweden	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	0.2
Switzerland	-1.1	-0.9	-1.0	-1.6	-1.1	-1.2	-1.4	
Turkey		-0.9	-1.0	-0.6	-0.7	-0.8	-0.6	
United Kingdom	-1.7	-0.8	-0.7	-1.1	-2.1	-1.1	-0.7	1.2
United States	-0.1	0.1	0.0	-0.5	-1.0	-0.5	-0.4	

Regarding Iceland, in 2008, net capital transfers amounted to -13.7% of GDP. The negative result was due to the recapitalisation of Iceland's banking system, which required massive government support. In 2008, capital transfers paid by government for economic affairs (COFOG 40) alone represented 13.1% of GDP. The government's bailout of the financial sector increased government deficit substantially, to 13.5% of GDP in 2008. On the other hand, net saving, which represents gross saving, after deduction of depreciation costs, remained positive in 2008 (3% of GDP). Like Iceland, Ireland recorded a very large negative net capital transfer of -20% of GDP, in 2010. Here too, it reflected capital injections into banks (excluding those made via share acquisitions). The relevant transfers amounted to 4 billion Euros in favour of Anglo in 2009, 31 billion Euros of Promissory Notes to Anglo/INBS in 2010, and around 5 billion Euros of AIB/EBS recapitalisation in 2011. In 2009, government deficit in Ireland was more or less similar to that of Iceland in 2008, accounting for 13.9% of GDP. In 2010, Irish deficit increased strongly because of the government interventions into banks, to 30.9% of GDP. However, unlike Iceland, Irish government's net saving was also negative, both in 2009 (-9.3% of GDP) and in 2010 (-9.0% of GDP). In response, Irish government investment expenditure declined markedly, from 5.4% of GDP in 2008 to 2.6% in 2011. Table 1 also shows a negative net capital transfer of -4.6% of GDP for New Zealand in 2010. This reflects capital transfers paid by government to reimburse (part of) the damages incurred in the wake of the Canterbury earthquakes.

Instead of using government deficit as the headline indicator, one could also opt for two alternative indicators: net saving, or changes in net worth due to saving and capital transfers. As stated before, net saving is the balancing item of the use of income account and represents current receipts *minus* current expenditures including depreciation. It excludes the expenditures on investment and capital transfers. Changes in net worth due to saving and capital transfers equals the balancing item net saving plus net capital transfers received. Compared to government deficit, it does not include net investments. It represents the balance of all income and expenditure that is available for investing in non-financial and financial assets.

Unlike government deficit, net saving has the advantage of avoiding possible distortions made by extra-ordinary and possibly very large capital transfers (see the above examples). It also avoids putting too much pressure on government investments in times of austerity programs. More in general, it represents in how far current expenditures (including depreciation) that do not give rise to future benefits exceed current receipts. Over a longer period of time, net saving should more or less balance, otherwise one may run into an unsustainable situation for government finance. On the other hand however, one could argue that the more regular elements of capital transfers should be included. Indeed, by including these net payments as well, a negative balance over a longer period of time would show the consistent run down of net wealth (net worth) of government over time. Vice-versa, some may argue that (parts of) expenditures on education should be excluded, as they represent an investment in the human capital of future generations, providing the necessary basis for an economy to generate income in the future.

Another reason to favour changes in net worth due to saving and capital transfers is related to potential fiscal gimmickries. On the one hand, using net saving and thereby excluding capital transfers would close the road of using the assumption of pension entitlements of public corporations to improve government deficit. In this respect however, it can be noted that with the recently revised international standards this possibility has been closed anyway<sup>11</sup>. On the other hand, excluding capital transfers could provide an incentive for governments to let public corporations run deficits over a longer period of time, and occasionally provide a capital injection to cover the losses over the past longer period of time. Instead of paying annual current transfers to cover the relevant losses, which affect net saving, one would record the payment of an (irregular) capital transfer not having an impact on saving. This would again raise the question whether one should go for a pure accrual accounting of the income (or loss) from majority owned

<sup>11</sup> For more details, see SNA 2008, par. 17.188, and ESA 2010, par. 20.273, 20.274 & 20.275

corporations, for which the distribution of profits is exclusively determined by the owner. Such a recording would be symmetric to the recording of foreign direct investment corporations, according to which the undistributed part of profits (losses) is also recorded as part of property income, the so-called “reinvested earnings”. As a consequence, each year’s total profits (losses) are recorded as being distributed (reimbursed). The undistributed part is subsequently recorded as a financial re-investment in the relevant subsidiary corporation.

All in all, in our opinion, the preferable option is to use changes in net worth due to saving and capital transfers as the headline indicator, however excluding incidental and large capital transfers, such as the ones related to interventions into the banking system during the economic and financial crisis, the payments of capital transfers related to major catastrophic events, and incidental capital transfers to cover accumulated losses of public corporations. Anyhow, to substantiate the consequences of a possible alternative headline indicator, figure 6 shows general government net saving versus net lending/net borrowing, as a percentage of GDP in 2005 and in 2011 in OECD countries. It illustrates the substantial differences between the two ratios before and during the economic and financial crisis.

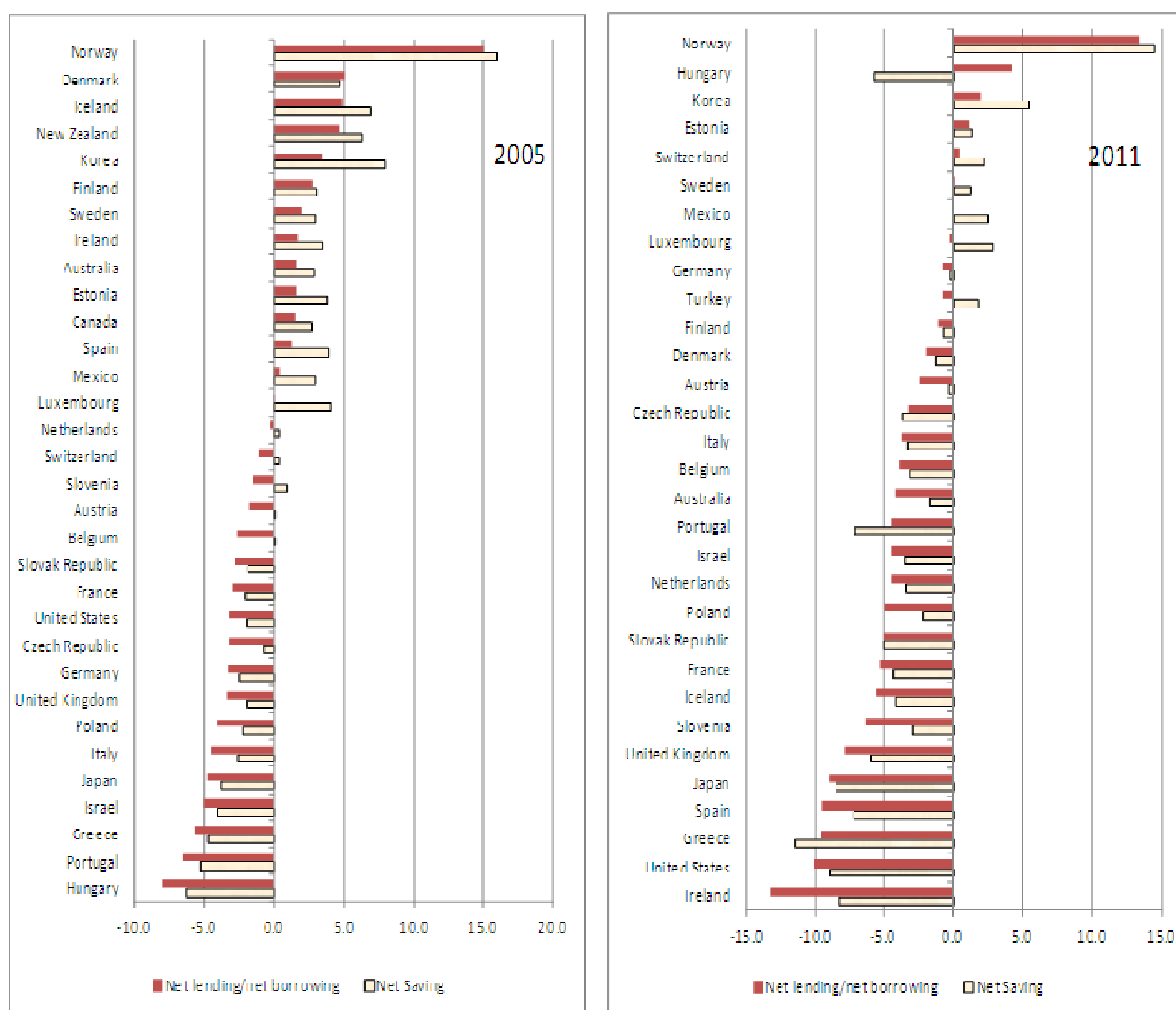
In a period of economic growth, when pressure on government budget is lower, net lending/net borrowing and net saving are close to each other, and government investment expenditure represents the main part of the difference between the two indicators. In general, net saving is slightly higher (less negative) than net lending/net borrowing, except for Denmark in 2005, for which net saving amounted to +4.6% of GDP, whereas net lending/net borrowing was at 5.0% of GDP. In 2005, the most noticeable differences between the two ratios were recorded for Korea (4.5%-points) and Luxembourg (4.0%-points), which also mainly corresponded to government investment expenditures.

Since the economic and financial crisis, net saving and net lending/net borrowing have not always evolved in the same way. For example, in 2011, Hungary recorded a net lending/net borrowing of +4.2% of GDP, while its net saving was the opposite: -5.2% of GDP. As previously explained, the reason for this difference in 2011 was the transfer of funds from the private sector to the state-controlled first pillar of the pension system.

Looking at Luxembourg and Turkey, in 2011, net saving was positive while net lending/net borrowing was negative. Again, the difference between the two ratios, amounting to respectively 3.0%-points and 2.6%-points, mainly corresponded to government investment. Concerning Ireland, the difference between net saving and net lending/net borrowing was high and amounted to 5.0%-points in 2011. As mentioned before, it reflected the capital injections made by the Irish government into the banking sector. Slovenia and Poland also recorded high differences between the two ratios: 3.4%-points and 2.7%-points respectively in 2011.

Finally, like Hungary, several OECD countries recorded in 2011 a net saving ratio which was worse than their deficit: Portugal (-7.1% versus -4.4%), Greece (-11.5% versus -9.6%), and Czech Republic (-3.7% versus -3.3 %). In 2011, Portugal transferred various pension fund obligations from the banking sector to government. These capital transfers received by the general government accounted for 3.5% of GDP.

**Figure 6. General Government Net Saving vs. Net lending/net borrowing**  
As a percentage of GDP



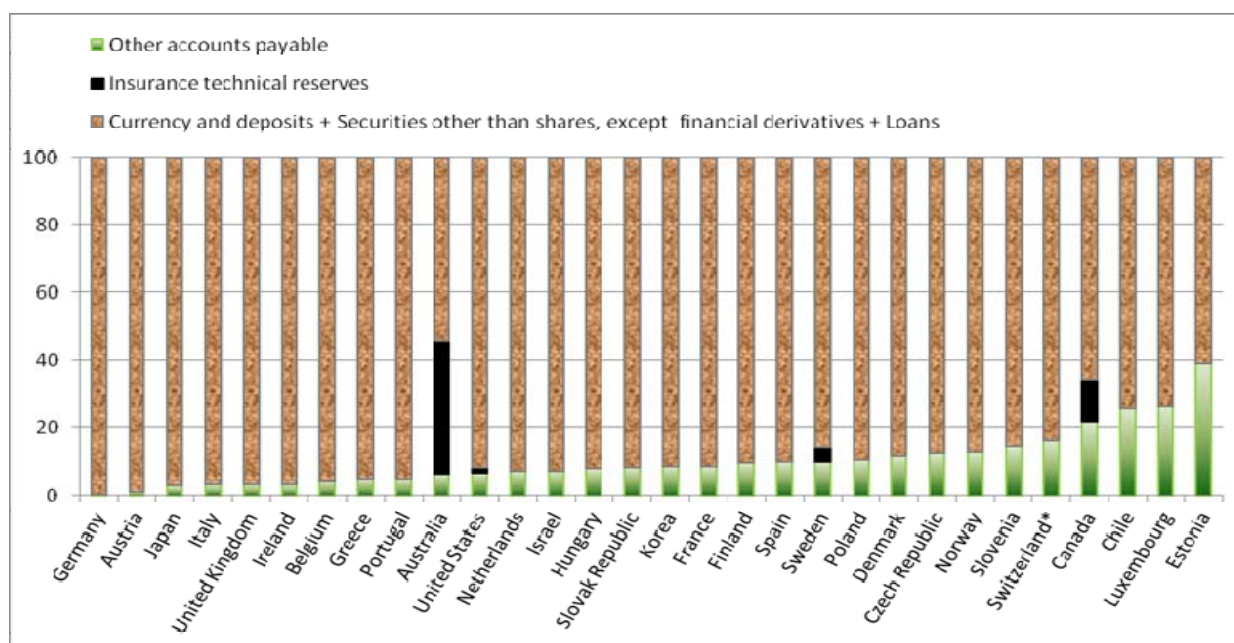
### 3.2 Net debt versus gross debt, as a percentage of GDP

For gross government debt, several definitions exist in international statistical databases. Differences may relate to the coverage of financial instruments, the valuation of tradable securities<sup>12</sup> and whether or not the data are consolidated for assets/liabilities within the government sector. As in the case of government deficit, also the population *i.e.* the coverage of the sector may differ. The most frequently applied population relates to general government, which includes central government, state government, local government (provinces, municipalities, etc.) and social security funds. However, central government is often used, because of lack of adequate data on local governments. Occasionally, the population may relate to the public sector, which includes both general government and corporations that are majority owned and controlled by government. More details are available in Annex 1.

<sup>12</sup> Also the valuation of loans may differ (face value versus nominal value); see later in the text.

The Maastricht debt covers the following liabilities: currency and deposits; securities other than shares, excluding financial derivatives; and loans. As a consequence, the Maastricht debt does not include all government liabilities, in particular pension liabilities sponsored by government and other accounts payable (trade credits and advances) are excluded. For a few OECD countries, the share of (pension) insurance technical reserves (AF6) and other accounts payable (AF7) may be quite substantial. In Australia, it represents 45.3% of total general government debt in 2011, in Canada 34.2%, and in Sweden 14.1%. For several EU countries, the share of other accounts payable ranges from 11.5% (Denmark) to 39% (Estonia) in 2011 (see figure 7).

**Figure 7. Composition of general government debt (SNA definition) in 2011**



1. Sources: OECD Annual financial balance sheet.
2. Data are consolidated except Chile, Japan, Korea and the United Kingdom
- \* 2010 data.

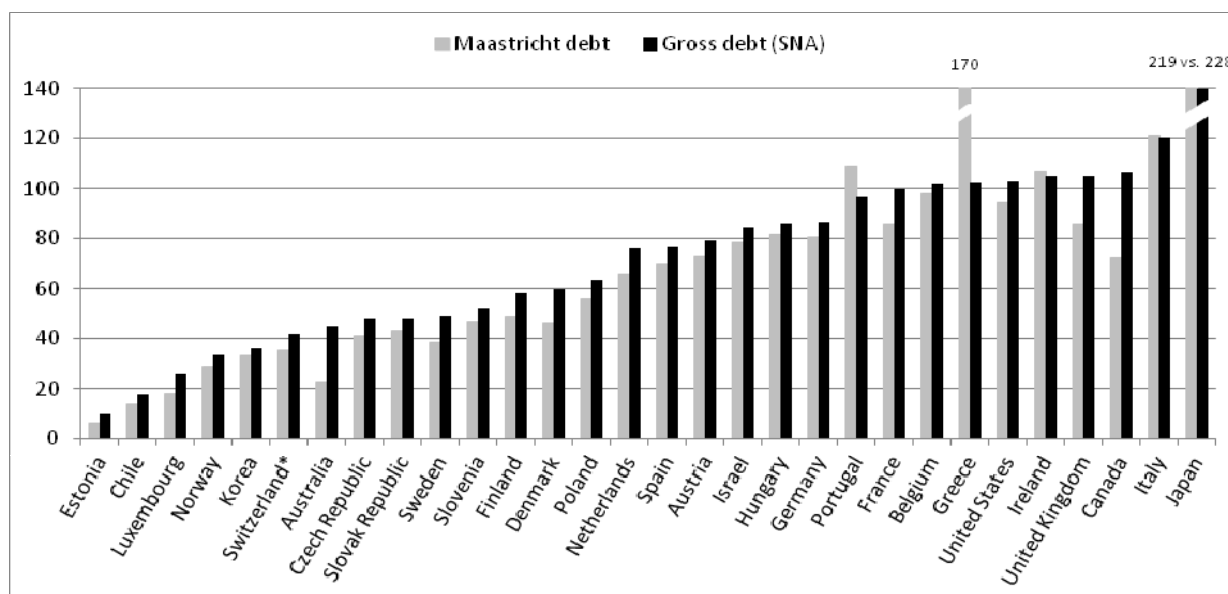
Figure 8 shows the differences between the Maastricht and the SNA general government debt in percentage of GDP in 2011 for all OECD countries, except for Iceland, Mexico, New Zealand, Switzerland and Turkey, using the currently available data according to the 1993 SNA and the 1995 ESA. For Australia, Canada and Greece, the difference is significant and accounts for respectively 22%, 34% and 68 % of GDP. In other OECD countries, the difference is less important but still ranges from 3% to 19% of GDP. In this respect, it should be noted that currently the relevant international standards (SNA 1993 and ESA 1995) do not recognize any unfunded pension liabilities. For that reason, the share of insurance technical reserves is rather low or null for most countries, as the government sponsored schemes to be recorded within general government predominantly relate to Pay-As-You-Go (PAYG) pension schemes<sup>13</sup>. As previously stated, the new 2008 SNA standards allow for some flexibility regarding the recording of the relevant pension systems, although it has been agreed to compile data for all pension entitlements, whether or not they are funded and recorded in the core system of national accounts. It is clear, however, that one would prefer to include the relevant pension obligations, in order to arrive at a more internationally comparable set of data on government finance. Also from a national perspective, adding the pension

<sup>13</sup> It should be noted here that autonomous funded pension schemes sponsored by government are to be recorded outside government, as part of the financial corporations sector.

obligations, especially considering the increasing pressures from aging societies, seems preferable. Indeed, in 2006, pension entitlements for (unfunded) government employee pension schemes ranged from 4% (the Netherlands) to 53% (France) of GDP according to the Freiburg model<sup>14</sup>. With respect to pension entitlements for social security pension schemes, the estimated entitlements ranged from 129% (the Netherlands) to 255% (Poland) of GDP in 2006<sup>15</sup>.

Another issue concerning the present definition of debt relates to the valuation of government securities which can be at face value (Maastricht valuation), at nominal value, or at market value (SNA valuation). The difference between face value and nominal value relates to the inclusion (nominal value) or exclusion (face value) of accrued interest. The difference between market value and the other types of valuation can be quite substantial in cases where the market interest rate changes considerably. In times of increasing interest rates, the market value of the government securities would typically be (substantially) lower than the nominal value. Indeed, in figure 8, for some countries, the difference between the two definitions of government debt can be partly explained by the difference in valuation of government securities. The latter difference amounted to 74% of GDP for Greece and 19% for Portugal in 2011. One can argue that both valuations are relevant, as governments could decide to issuing new debt instruments at the market rate, and using the available funds to purchase the previously issued securities from the market, thereby also lowering their nominal debt.

**Figure 8. The Maastricht and SNA general government debt in 2011**  
As a percentage of GDP



- Sources for Maastricht debt:
  - EUROSTAT Quarterly government debt (ESA table 28) for the EU countries.
  - OECD Quarterly public sector debt for Australia, Canada, Japan, and USA.
  - OECD Annual financial balance sheets for Chile, Israel, and Korea.
- Sources for SNA gross debt: OECD annual financial balance sheets.
- For Maastricht debt, data are consolidated, except for Chile, Japan, and Korea.
- For SNA gross debt, data are consolidated, except for Chile, Japan, Korea and the United Kingdom.

<sup>14</sup> See “Concept of Modelling Pension Entitlements – The Freiburg Model”, written by M. Heidler, C. Muller, and O. Weddige (<http://www.ecb.europa.eu/pub/pdf/other/ecbeurostatworkshoponpensions201002en.pdf>).

<sup>15</sup> For more information, see also the final report of the Eurostat/ECB Task Force on the statistical measurement of the assets and liabilities of pension schemes in general government to the CMFB.

Most data on government debt, including the one according to the Maastricht definition, record debt on a “gross” basis. As a consequence, they do not take into account government’s asset holdings, and a country having a government gross debt of say 100% of GDP with equivalent holding of assets is put on a par with a country where government debt of the same size is not counterbalanced by an equivalent amount of assets. Also from a country’s perspective, a more complete picture of a government’s asset position would help to properly analyse (risks to) fiscal sustainability. In this respect, the concept of net worth would be preferable to gross debt, as it subtracts from government gross debt the value of both financial and non-financial assets that could be sold to reduce gross debt.

The availability of data on financial assets is rather good in most OECD countries. In general, the measurement of financial assets is also not an issue, except for unquoted shares for which different methods may be used in compiling estimates. Unfortunately however, the availability of data on government’s non-financial assets is only partial, which complicates the task of creating a comprehensive balance sheet. Only six OECD countries report data for all non-financial assets. Seventeen almost exclusively report data on buildings and structures only. Regarding non-produced assets, which can be important sources of wealth and revenues for governments, only six OECD countries provide data on non-produced assets, in particular land and subsoil assets.

Furthermore, data comparability across countries is limited, as in addition to differences in the coverage of assets, methodologies for the valuation of non-financial assets may differ substantially for e.g. land, subsoil assets and national monuments. For produced assets, most countries apply the so-called Perpetual Inventory Method (PIM). The latter uses data on past acquisitions of assets to build up an estimate of the total capital stock. Doing so, it adjusts the value of the assets at acquisition over time to account for price changes, acquisitions and disposals, and depreciation. However, in the application of the PIM model, the international comparability of the results may also be hampered by differing assumptions in relation to the key parameters of the model (asset service life, asset retirement distribution, depreciation function, etc.). More importantly, however, the resulting estimates may differ from the market value. This is especially relevant for e.g. transport infrastructure, public investments in the development of building sites, and defense structures for flooding, etc.

The issue regarding the valuation of non-financial assets is also related to the more general issue of their marketability. Not all non-financial assets owned by government can or, to take a more moral point of view, should be sold. The nature of the asset and the availability of a market are two main criteria to define whether or not an asset is for sale, which in the context of this paper is something to consider. For example, selling historical monuments like for example the “Eiffel Tower” may have significant impact on the safeguarding of culture and national heritage. Also the question to either sell government’s public infrastructure goes beyond a purely economic decision, also political considerations on the organization of society feed into the process. In respect of the latter example of public infrastructure, it should also be noted that an asset only has a market value if future income flows can be generated from it. A free road system owned by government will not have a value on the market, unless the government sells it to a private company under the condition that the company may establish a toll road system.

It should also be acknowledged that the sale of an asset usually entails lower receipts and/or higher expenditures in the future. An obvious example is governments selling office buildings and subsequently requiring alternative space to be leased, and running into additional costs. In 2006, the French government decided to sell 3% of its offices for public administration. The receipts accounted for EUR 3.5 billion (0.2% of GDP)<sup>16</sup>. Fifteen percent of the proceeds had to contribute to the reduction of public debt. In practice, the majority of the receipts have been used for the relocation of offices and personnel, leaving a very small amount for debt reduction.

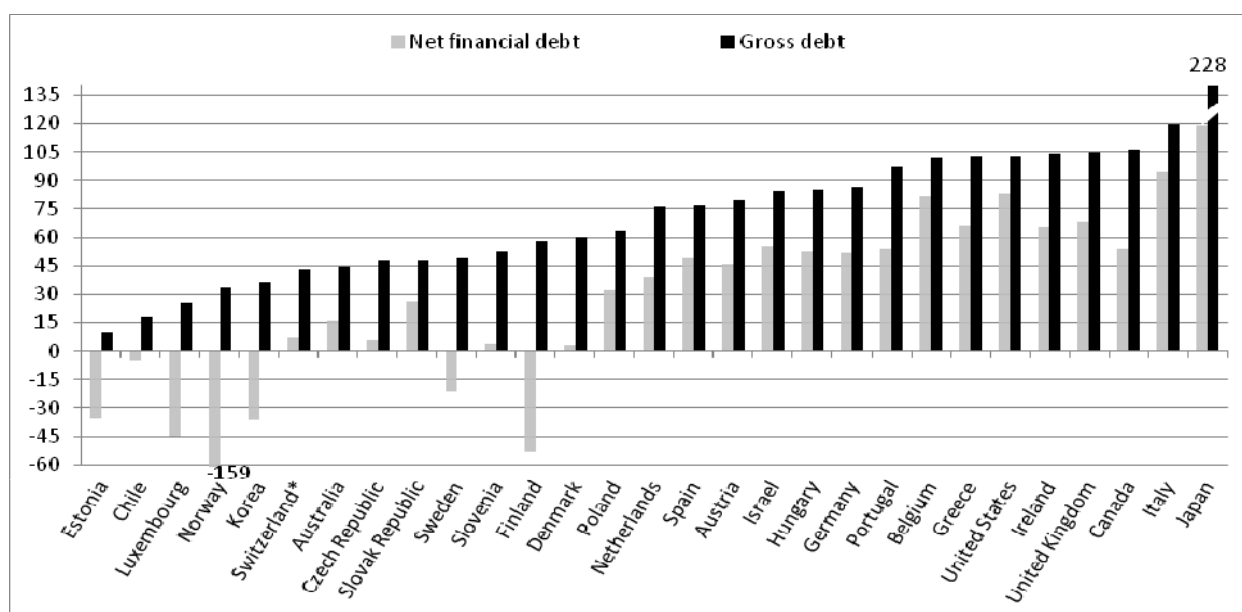
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<sup>16</sup> Source: INSEE

There are several pros and cons regarding the inclusion of non-financial assets, and using net worth as the headline indicator for government finance. Data availability and lack of international comparability prohibit a fair internationally comparable assessment of governments' net worth. In addition, there are issues related to the marketability of the non-financial assets. On the other hand, it is clear that non-financial assets, even if they relate to non-marketable public infrastructure assets, do add to the proper analysis of fiscal sustainability. For example, a well-preserved system of public transport infrastructure, as compared to a deteriorating system due to a lack of adequate maintenance investments, does say something about the future sustainability of public finance. Furthermore, one should acknowledge the possible reciprocity between non-financial and financial assets. Depending on the organisation of a country's government and society at large, government can, for example, own non-financial assets, or it can own shares in a public corporation outside government which owns and exploits the relevant assets. Mainly due to the lack of internationally comparable data on non-financial assets, it is proposed here to use the concept of net financial debt, usually referred to as *net debt*, rather than net worth, as the main indicator. Net financial debt equals gross debt (according to the SNA definition) minus all financial assets.

Government financial assets can be sold to reduce debt. Here, as for non-financial assets but to a (far) lesser extent, attention should be drawn on whether the financial assets are liquid and can indeed be mobilised to redeem debt. However, it goes without saying that focusing on government gross debt does provide an incomplete picture, particularly when an increase in government liabilities is accompanied by a simultaneous increase in government financial assets. This happened quite frequently during the financial crisis when governments took over assets of a certain value from or "bought" the shares of a financial institution in difficulties. Moreover, international comparability of gross debt suffers from the fact that some countries do not report consolidated data, netting out intra-governmental debt holdings, while most other countries do provide, as required, consolidated statements for general government's balance sheets. The prime example relates to Japan. Figure 9 shows general government net financial debt versus gross debt as a percentage of GDP in 2011 for all OECD countries except Iceland, New Zealand, Mexico and Turkey, for which data are not available.

**Figure 9. Net financial debt vs. Gross debt of general government in 2011**  
As a percentage of GDP



1. Sources: OECD Annual financial balance sheets.
  2. Data are consolidated except for Chile, Japan, Korea and the UK.
- \* 2010 data.

Using net financial debt leads to significantly different results. The ranking of OECD countries changes and seven countries actually show a negative debt, i.e. they own more financial assets than the total of the liabilities. Figure 9 clearly illustrates the average discrepancy between the two ratios which accounts for 49%-point on average. In 2011, for Norway, Finland and Japan, the difference between the two indicators was higher than 100%-points, and represented respectively 192%-point, 112% and 109%. Japan and Italy remained the countries with the highest government indebtedness, followed by the United States and Belgium, and not anymore by Canada and the United Kingdom in the case of the gross debt ratio. On the other hand, Norway, Finland, Luxembourg, Korea, Estonia, Sweden and Chile recorded a net asset position in 2011.

The picture for public finances in Japan is (relatively) far better when considering net financial debt. Indeed, Japan, known for its huge general government debt, had a far lower, although still relatively high, indebtedness of general government, when using net financial debt (119% of GDP) instead of using gross debt (228%) in 2011. For Japan, it has to be noted that the gross debt ratio is based on non-consolidated data. Not cancelling out holdings of central government liabilities, like for example Japanese government bonds (JGBs), by other government units inflated gross debt. Moreover, the majority of general government debt is owned by large and stable domestic institutional investors, including the Japan Post Bank and the Government Pension Fund, which hold nearly half of the public domestic debt. As a result, Japan does not depend on foreign investors. Additionally, the Bank of Japan owns almost one-tenth of the debt and this leads to greater flexibility and stability in debt management. On the asset side, the Japanese government holds substantial foreign exchange reserves, through which the government can purchase financial assets such as bonds issued by other countries, which can be liquidated to redeem debt. In 2011, the general government total financial assets amounted to 109% of GDP.

In Norway, general government receives substantial revenues from the petroleum activities, which are invested in financial assets through the Government Pension Fund Global (GPF), initially called *Government Petroleum Fund*, as a consequence of which the Norwegian government holds vast amounts of financial assets, accounting for 192% of GDP in 2011. The aim of GPF is to manage revenues from the petroleum sector for the long-term, and to facilitate government savings for growing expenditures related to the aging population. The non-oil fiscal budget deficit is financed by transfers coming from the GPF. However, the Norwegian general government wants to preserve the GPF for future generations, and it prefers to borrow money on the debt market and to draw on government cash reserves for the payment of its obligations, such as the down payments on government debt, at all times. Therefore, despite its wealth, Norway holds some gross debt.

#### **4. Conclusions and the Way Forward**

In this paper, the pros and cons of emphasising a few headline indicators for the analysis of government finance have been addressed. Perhaps, the single most important message coming from this analysis is that an almost exclusive focus on the two headline indicators, government deficit and (gross) debt may provide a single and clear message for communication purposes, but that it also provides a (very) partial view on government finance and sustainability, and may even give rise to less adequate policy decisions. The use of these indicators is further hampered by the continuous search by countries for “grey areas” in the standards and related fiscal gimmickries to embellish the results, as a consequence of the political importance and political sensitivity of the indicators, mainly but not solely in the European Union.

In addition to the above, the appropriateness of the headline indicators as currently used has been questioned. It has been argued that net saving (or changes in net worth due to saving and capital transfers) and net financial debt (or net worth) may be preferable, as they provide a better picture of the status of government finance. In the case of debt, it is proposed to concentrate on net financial debt, instead of net worth, mainly because of issues related to data availability and international comparability. However, it

should be acknowledged that also these alternative indicators do not provide the full picture. Consequently, it is desirable to calculate and publish more indicators on government finance, together with the two headline indicators. Below, some proposals for a way forward are presented. Doing so, a distinction is made between the improvement of information on the proposed headline indicators, net saving and net financial debt, and the publication of additional indicators.

When it comes to the proposed headline indicators, a first priority concerns the improvement of the international comparability. This mainly relates to the methodologies applied to value (governments') holdings of shares and other equity, but also to the measurement of other accounts receivable and payable. Furthermore, in relation to the population and the coverage of instruments, it is suggested to primarily focus on general government and the full range of financial instruments, according to the international standards for national accounts. Regarding the valuation of debt securities on the liability side, it would be useful to have both data at nominal value and at market value.

Somewhat in between the improvement of the proposed headline indicators and the provision of additional indicators concerns the full accrual accounting for government sponsored pension systems, including the measurement of the related pension obligations, which at the moment, and possibly also in the foreseeable future, are not recognised in the core system of national accounts. In our opinion, it is of the utmost importance that internationally comparable data are provided for these implicit pension entitlements, for the reasons mentioned in the main body of this paper. In this respect, the completion of table 17.10 of the SNA 2008, and thus the provision of additional information on the non-recognised pension obligations of government, would significantly enhance the analysis of government finance. Within the EU, it has already been decided that table 29 in the ESA Transmission Programme (the equivalence of SNA table 17.10) has to be provided every three years on a mandatory basis, starting in 2017.

When it comes to providing a broader picture, it would be useful to have available additional details on the two proposed headline indicators. For example, the totals of current revenues and current expenditures, details on large one-off capital transfers and investments, and last but not least government deficit. In relation to net financial debt, additional details on assets and liabilities broken down by instrument and by counterparty sector (especially the distinction between domestic sectors and the rest of the world) would be helpful to analysing the financial situation of government.

Furthermore, we would like to propose (the enhancement of) the compilation of the following three elements:

- Internationally comparable data on non-financial assets owned by government in order to compile data on net worth;
- Data on the public sector, i.e. general government *plus* public corporations majority owned by government, to improve the sector coverage;
- Data on contingent liabilities in order to improve government debt data.

In relation to the latter addition, it should be noted that both the SNA and the ESA standards do not record governments' contingent liabilities (and assets) in the balance sheets. However, these assets and liabilities may become explicit in the future and affect government debt. As contingent liabilities are liabilities that may or may not be incurred depending on future events, they are not recognised in the standards, as is also the case in business accounting. Nevertheless, these contingencies may provide valuable information to analyse public finances of a country.

A typical example of contingent liabilities is the guarantee schemes provided by governments to secure bank liabilities. During the economic and financial crisis, governments supported the financial

sector by providing guarantees to secure inter-bank lending and debt issued by financial defeasance structures. During the period 2008-2010, guarantees issued by euro area governments amounted to 6.5% of GDP<sup>17</sup>. Greece granted guarantees amounting to 25.1% of GDP in order to maintain the stability of the Greek banking system.

As a response to the above mentioned challenges and in order to get a more complete picture of government finance, in 2013, Eurostat decided to introduce a supplement to the existing EDP questionnaires to be collected once annually in December. This supplement consists of three tables:

- Table 1 on government guarantees;
- Table 2 on off balance sheet Public Private Partnerships and;
- Table 3 on non-performing loans.

The first data transmission will start in December 2014 and will cover the previous year (2013) as a first step. Eurostat has also proposed to broaden the definition of the (gross) debt by including trade credits, to present it at nominal value (as defined in the ESA 2010), and to introduce the concept of net financial debt. In addition, as previously mentioned, the EU has agreed to transmit on a mandatory basis the level of implicit pension liabilities.

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<sup>17</sup> Source: European System of Central Banks

## Annex 1. A Comparison of various definitions for (gross) government debt

Methodological comparison on general government deficit and debt definitions			
	<i>Maastricht</i>	<i>Public Sector Debt/GFS</i>	<i>SNA/ESA</i>
<b>Sector delineation</b>	General government sector (S.13)		
<b>Deficit</b>	Incl. interests of swaps	Not relevant	Excl. interests of swaps
<b>Debt - Gross concept</b>	Gross debt (i.e. financial assets of general government are not deducted in the calculation of the debt).		
<b>- Financial instrument coverage</b>	Currency and deposits AF2; securities other than shares, excluding derivatives AF33; and loans AF4	Special Drawing Rights (SDRs) AF12; currency and deposits AF2; securities other than shares, excl. derivatives AF33; loans AF4; insurance, pensions and standardized guarantee schemes AF6 and other accounts payable AF7	Special Drawing Rights (SDRs) AF12; currency and deposits AF2; securities other than shares, excl. derivatives AF33; loans AF4; insurance, pensions and standardized guarantee schemes AF6. and other accounts payable AF7
<b>- Valuation rules</b>	Nominal value	Nominal value	Market value
<b>- Consolidation</b>	Consolidated (across the general government sector)	Consolidated (across the general government sector)	Both non-consolidated and consolidated
<b>- Frequency</b>	Annual	Quarterly	Annual/quarterly

GFS: Government Finance Statistics

### Data collections on government statistics

The *System of National Accounts (SNA)* is the international standard for the compilation of national accounts data. The European Union uses the *European System of Accounts (ESA)* for its member states, which is almost fully consistent with the SNA. International organisations such as the International Monetary Fund (IMF), the World Bank, the Organisation for Economic Cooperation and Development (OECD), the European Central Bank (ECB) and Eurostat, collect national accounts data according to the SNA/ESA central framework.

In addition, there are also several other, more specific data collections related to (gross) government debt:

- Eurostat collects government data from EU member states and certain other European countries, via two channels: the EDP Notification Tables and, the ESA Transmission Program (ESATP). In the framework of the EDP, all EU countries report their annual government deficit and debt to Eurostat. In the framework of the ESATP, quarterly government debt data is compiled separately by EU member states. The Maastricht debt definition differs from the SNA definition in terms of instrument coverage and valuation (see the above table).
- The International Monetary Fund (IMF) collects and disseminates Government Finance Statistics. These annual statistics usually cover the general government sector and its sub-sectors and are presented according the Government Finance Statistics Manual. The latest version of the Manual is consistent with the SNA, although some transactions may be defined slightly different, and also the terminology may differ slightly. This however does not affect government deficit and debt.

- The OECD, in collaboration with the IMF and the World Bank, collects quarterly data on Public Sector Debt. It covers government and public sector debt, broken down by details on instruments, maturity, the residence of creditor, and currency. It is aligned with the *Public Sector Debt Statistics: Guide for Compilers*. The definition of debt is in compliance with the SNA definition, except the valuation which is at nominal value instead of market value (see the above table).

## REFERENCES

- Bernoth K. and Wolff G. (2006), “*Fool the Markets? Creative accounting, Fiscal Transparency and Sovereign Risk Premia*”, DNB Working Paper, No. 103.
- Bova E., et Al. (2013), “*Another look at Governments’ Balance Sheets: The Role of Nonfinancial Assets*”, IMF Working Paper 13/95.
- Braakmann A. and T. Forster (2011), “*Challenges in improving the measurement of the government financial position and in the classification of units as public or private*”, paper presented at the 2011 ISI World Statistics Congress.
- Cussen M. and M. Lucey (2011), “*Treatment of special bank interventions in Irish government statistics*”, Central Bank of Ireland Quarterly Bulletin, 78-92.
- Eurostat/ECB Final Report on the statistical measurement of the assets and liabilities of pension schemes in general government to the CMFB (2008).
- Eurostat, ESA95 Manual on Government Deficit and Debt, 2013 edition.
- Heidler M., C. Muller, and O. Weddige, “*Concept of Modelling Pension Entitlements – The Freiburg Model*”, paper presented at the joint ECB/Eurostat workshop on Pensions, April 2009.
- International Monetary Fund Fiscal Monitor publication, October 2012.
- Koen, V. and P. van den Noord (2005), “*Fiscal Gimmickry in Europe: One-Off Measures and Creative Accounting*”, OECD Economic Department Working Paper, No. 417.
- OECD, International transport forum, Statistics Brief, June 2012.
- Velculescu D. (2010), “*Pension reforms in emerging Europe: the uncertain road ahead*”, paper presented at the workshop “Pension system in emerging Europe: reform in the age of austerity”, organised by the European Bank for Reconstruction and Development, April 2011.