COMMENTS ON SESSION 1: CYCLICAL ADJUSTMENT

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Introduction

First, I would like to congratulate the contributors to this session for their excellent papers and presentations. As I do not have the time to comment on each paper, I will only focus on two themes that emerged during the session:

- the uncertainty in the evaluation of the Cyclically-Adjusted Balance (CAB) and its implications for the surveillance of budgetary policy;
- oil revenues, public finance and golden eggs (the role of eggs will become apparent later).

1. Uncertainty in the estimate of the CAB

The uncertainty surrounding the estimates on CAB comes from two sources: the assessment of output gap and the evaluation of the effects of the cycle on the budget.

Policies makers were – and probably are – not fully aware of it. Orphanides (2002)[1] analyses the high inflation that marked the US in the '70s and shows that policy mistakes (recognised as such later) were done in good faith. Monetary policy decisions, in fact, were based on the "modern approach" (as succinctly expressed by the Taylor rule), but economic outcomes were disastrous, mainly as a consequence of severe misjudgements about the *natural rate* and the implied output gap.

Turning to budgetary policy, in theory the CAB allows to evaluate the policy stance by singling out the cyclical component of budgetary developments. The nominal budget balance (the only observable variable) properly reflects policy measures only when actual growth is equal to both expected growth and potential growth. Since this is generally not the case, the appropriate evaluation of the fiscal stance requires that the effects of the economic cycle be netted out from the nominal budget balance.

In practice, estimating the CAB is a tricky business. The measure of the CAB depends on the estimation of potential output and output gap. It thus suffers from the same pitfalls affecting the assessment of these two unobservable variables – be they derived from a purely statistical approach or from methods based on economic theory. Indeed, in the EU budgetary surveillance process, it took the ECOFIN

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[1] Orphanides, A. (2002), "Monetary-Policy Rules and the Great Inflation", *The American Economic Review*, Vol. 92, No. 2, pp. 115-20.

Council to endorse, in the July 2002 meeting, the use of the production function approach (instead of the purely statistical approach based on the Hodrick-Prescott filter) as the reference method for calculating output gaps, which in turn underpin, through the measure of CAB, the assessment of the Stability and Convergence programmes presented by EU Member States.

In recent years, these measurement difficulties and the related uncertainty on the "true value" of the CAB have been compounded by yet another issue: the revision in the estimates of potential output. If such revisions are not explicitly taken into account, the assessment of budgetary policies is blurred, particularly as regards one key variable: the *change* in CAB (ΔCAB) – which, after the Eurogroup resolution of October 2002, has become a major benchmark to evaluate the efforts in budgetary-adjustment by Member States.

Some algebra can help clarify this point. The CAB is in practice calculated by subtracting from the change in the nominal budget (which is observable) the effects of the business cycle, as estimated on the basis of the output gap (which for convenience can be approximated as the previous year's output gap plus the current year's difference between actual and potential growth); that is:

$$CAB_t = NB_t - \alpha OG_t \cong NB_t - \alpha\left[\left(\dot{Y}_t - \dot{Y}_t^P\right) + OG_{t-1}\right]$$

where the superscript P denotes potential, $\dot{Y}$ stands for output growth, NB for the nominal budget balance, OG for the output gap (positive when output is above potential) and α is the relevant elasticity. The change in CAB can be easily derived from this formula. Typically, this calculation of ΔCAB and the related policy assessments assume that potential output remains constant. If conversely it changes (as has often been the case in recent years), this will have an impact on ΔCAB as the formula shows:

$$\Delta CAB_t = \Delta NB_t - \alpha\left[\dot{Y}_t - \dot{Y}_t^{\,p}\right] \equiv \Delta NB_t - \alpha\left[\left(\dot{Y}_t - \dot{Y}_t^{\,P,SP}\right) + \left(\dot{Y}_t^{\,P,SP} - \dot{Y}_t^{\,P}\right)\right]$$

where SP superscript refers to the starting period's estimate of potential output.

This expression clearly shows that the traditional approach to the calculation of CAB biases the estimate of the impact of the cycle on the budget because it lumps together both the effects of the cycle and those stemming from the unexpected change in potential output, which results from the revision in its estimate due to the availability of new data. This leads to an inaccurate assessment of the policy adjustment.

In order to avoid such a bias, the measure of the change in CAB relevant for policy analysis should be calculated by correcting the nominal budget only for the effects of the cycle (the so-called automatic stabilisers), and not for the effects of (unforeseeable) changes in potential growth, *i.e.*:

$$\Delta CAB_t^{corr} = \Delta NB_t - a\left(\dot{Y}_t - Y_t^{P,SP}\right) \equiv \Delta CAB_t + \alpha(\dot{Y}_t^{\,P,SP} - \dot{Y}_t^{\,P})$$

Table 1

Assessment of the Change in 2003 CAB (*ΔCAB*)

	Conventional *ΔCAB* (1) = (2)–(3)–(4)	**Change in nominal balance in 2003 (2)**	**Correction for the cycle (3)**	**Correction for the change in potential (4)**	**Corrected ΔCAB (5) = (1)+(4) = = (2)–(3)**
Germany	–0.1	–0.7	–0.8	0.2	0.1
France	–0.2	–1.1	–1.0	0.1	–0.1
Italy	0.2	–0.3	–0.7	0.2	0.4

The effects on the policy assessment of this correction are by no means negligible, as the following table illustrates for three EU countries with reference to 2003 (with respect to 2002).

2. Oil and golden eggs

Revenues from extractive industries should be an important engine for economic growth leading to sustainable development. However, some countries rich in oil, gas and minerals have under-performed relative to other countries less endowed with natural resources. Exporting energy products often was more a curse than a boon. Indeed, there seems to be a close correlation between the countries rich in natural resources and the countries with high levels of poverty. Oil revenues are a windfall gain that is tempting to consume straight away. In many oil producing countries, oil revenues are a source of corruption.

Against this background, governments' preferences (alike those of myopic consumers) can be described by hyperbolic discounting functions, which are characterised by a higher discount rate over short horizons. This preference structure creates a conflict between today's preferences, and the preferences that will be held in the future, as convincingly argued in Laibson (1997) paper[2] – where preferences are expressed as:

$$U_t = E\left[u(c_t) + \beta \sum_{t=1}^{T-t} u(c_{t+\tau}) \right]$$

In analogy with the arrangements for individuals discussed by Laibson, a way to correct the distortions and inconsistencies deriving by this kind of utility function is the introduction of institutional "golden eggs", that is the creation of institutional

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[2] Laibson, D. (1997), "Golden Eggs and Hyperbolic Discounting", *The Quarterly Journal of Economic*, Vol. 112, No. 2, pp. 443-77.

and political constraints to avoid that revenues from energy exports are immediately turned into consumption (often by a small elite only), rather than financing investment and smoothing the prevision of public goods over time.

Transparency over payments and revenues related to the exploitation of natural resources can be regarded as a key way to buttress such commitments. It increases accountability and therefore the likelihood that revenues generated by such exports are used in an efficient and equitable manner. It can also reduce the risk of diversion or misappropriation of financial resources. For this reason, I would like to conclude my discussion by recalling an important institutional initiative to this end: the Extractive Industry Transparency Initiative (EITI).[3] EITI is a partnerships between government, companies, and civil society, which was established at the 2002 World Summit on Sustainable Development in Johannesburg and aims at increasing the transparency in the transactions between governments and companies within extractive industries.

[3] www.eitransparency.org