***Boom, Bust, Recovery: Forensics of the Latvia Crisis***

OLIVIER J. BLANCHARD, MARK GRIFFITHS and BERTRAND GRUSS

**Online Appendix II – Computing the Cyclically Adjusted Fiscal Balance**

This annex explains how the cyclically adjusted fiscal balances plotted in Figure 5 were constructed.

The cyclically adjusted fiscal balance is defined as:

where denotes the estimated cyclically adjusted fiscal balance for year using the output gap estimate for that year as of vintage (as explained below); is the headline fiscal balance, as given by general government net lending/borrowing in nominal terms (from the IMF WEO database); is nominal GDP (from the IMF WEO database); is the output gap estimate for year as reported in vintage year ‘’ of the European Commission Economic Forecast[[1]](#footnote-2), expressed as a percent of potential output (shown in Figure II.1). We used the Autumn vintages from 2006 to 2009 and the Spring vintage (the latest available) for 2013; is the semi-elasticity of the budget balance (as a % of GDP) with respect to the output gap.



A key parameter for computing the reported in Figure 5 in the paper is . We used the estimate for Latvia in European Commission (2005), 0.3, which is obtained by aggregating estimated revenue (personal income taxes, corporate taxes, social security contributions and indirect taxes) and expenditure (unemployment-related expenditures) elasticities.

As a robustness check, Figure II.1 reports the same exercise but assuming an alternative value of 0.44 for —the value estimated for the average of the European Union in European Commission (2005). Using this alternative value, the cyclically adjusted fiscal balance in 2007 would have been -0.6% in real time (as opposed to -0.2% when using ), and ‑4.4% under the latest output gap estimate for 2007 (as opposed to the -2.8% reported in Figure 5 in the paper). But the message in the paper regarding the fiscal stance in Latvia during the boom remains unaltered.



**References**

European Commission, 2005, "*New and updated budgetary sensitivities for the EU budgetary surveillance”,* <http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/budg_sensitivities_092005_v02_en.pdf>

1. The different vintages of the European Commission’s *Autumn* and *Spring Economic Forecast* are available at <http://ec.europa.eu/economy_finance/publications/european_economy/forecasts_en.htm> [↑](#footnote-ref-2)