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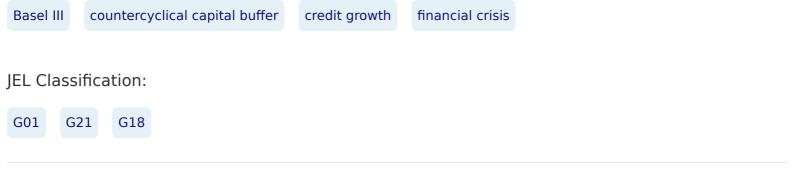




### **Abstract**

Under Basel III, banks are required to build up countercyclical capital buffers during periods of excessive credit growth to cover future credit losses. Based on a review of the credit boom episodes in sixteen Central, Eastern, and Southeastern European countries during 2000s, two measures of excessive credit are calculated: one based on the Hodrick-Prescott filter, as suggested by the Basel Committee for the activation of the countercyclical buffer, and the other based on an estimate of equilibrium credit. While the filtering-based measure signals future credit losses quite well, using the measure based on equilibrium credit improves the forecast of future deleveraging and its impact on GDP.

Keywords:



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The findings, interpretations, and conclusions expressed in this article are entirely those of the authors and do not represent the views of the institutions with which the authors are affiliated.

## **Notes**

- <sup>1</sup> In this article, the group of CESEE countries includes the following sixteen countries (ordered alphabetically): Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, FYR Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, and Slovenia.
- $^2$  In exceptional circumstances, the authorities can also set the buffer rate above 2.5%.
- <sup>3</sup> One way of dealing with end-point bias is to extend the time series into the future by means of prediction. This, however, can introduce further uncertainty into the estimate linked with the quality of the prediction.
- <sup>4</sup> We have left out the countries that were strongly hit by the European sovereign crisis (Portugal, Italy, Ireland, Greece, and Spain), as they seem to have accumulated excess leverage in both the private and public sectors, which would bias the results.
- <sup>5</sup> The Basel Committee recommends using total credit to the private sector rather than just bank credit. However, given the limited data availability on total credit, the underlying calculations in BCBS (2010) and Drehmann et al. (2010) were also done only with bank credit.

<sup>6</sup> Based on the Hausman test, we cannot reject the null hypothesis of PMG being an efficient estimator, so PMG is preferred over its mean-group (MG) counterpart. The MG estimator is the simple nonweighted mean of the regression estimates for each country. The Hausman statistic  $\chi^2(2)$  is equal to 0.9 (p-value = 0.637). Furthermore, only those variables that were significant at least at the 10% confidence level were kept in the estimated equation. Also, a more empirical approach was used, as in Sekine (2001), so inflation is present in the short-run part of the equation but not in the long-run part. Moreover, the low value of the correlation coefficient between cons/gdp and gdp/pop indicates that there is no possible multicollinearity problem.

<sup>7</sup> <u>Appendix 2</u> includes figures for all sixteen CESEE countries, showing the development of the credit-to-GDP ratio since the mid-1990s, the estimated (one-sided) HP-trend credit, the equilibrium credit, and both alternative measures of the credit-to-GDP gap.

<sup>8</sup> As a robustness check, we have also tested the signaling power of the 2006 levels, and the results do not differ substantially.

# Additional information

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