Assessing optimal credit growth for an emerging banking system

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A R T I C L E   I N F O

A B S T R A C T

The paper sets forth a novel way to estimate the optimal level of credit growth for an emerging banking system. Contrary to the traditional credit-to-GDP gap indicator, credit growth is considered to be optimal when it does not accelerate credit risk measured by loan loss provisions. We provide empirical support for modelling the provision charge ratio dynamic by the quadratic function of the credit growth deviation from its optimal level. The operational framework consists of a simplified financial satellite with two equations representing credit growth and change in the provision charge ratio. Our empirical results show that a 3 percent (±1pp margin) quarterly increase in credit to the private sector is, in nominal terms, optimal for financial stability and sustainable growth in Romania.

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1. Introduction

Credit growth is considered to be a good indicator of banking sector stability by investors, academics and central banks alike (IMF, 2004, 2011; Hilbers et al., 2005; Jordà et al., 2010). The fast-paced expansion

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of bank financing may translate into a worsening of asset quality over time, which is revealed by the short-lived nature of tempting economic growth given the build-up of considerable external vulnerabilities.

One of the elements envisaged by the reform of prudential regulations which should prevent systemic vulnerabilities related to reckless lending is the countercyclical capital buffer. This macro-prudential tool aims to reduce banks' appetite for lending through the increase of capital need and will be implemented simultaneously by all EU Member States. The mechanism proposed by the European Commission has two stages: the build-up of buffers during growth periods and their release in times of crisis. Various analyses carried out by the Basel Committee, the European Central Bank and other stakeholders revealed that the credit-to-GDP gap indicator may have certain drawbacks and may thus not transmit the right signals in all circumstances concerning the build-up and release of the buffer (ECB, 2011). The buffer guide should therefore be accompanied by other indicators of systemic vulnerabilities, selected by macroprudential authorities according to local specificities.

Against this backdrop, this paper proposes to develop a new mechanism to identify the level of sound lending dynamics that should hinge on the symmetry of the adverse reaction of credit risk costs to strongly negative or positive shifts in credit to the private sector. With a view to provide an adequate response to this line of research, the operational objective of this empirical endeavour is to build a financial satellite modelling the decision-making behaviour of credit institutions in connection with changes in loan supply, together with the consequences on provision charge. In this study, we focus on the case of Romania due to (1) the ample credit cycle relative to most of its CESEE peers that did not experience a major disruption within the banking system after the onset of the international financial crisis; and (2) the conservative provisioning standards and their diligent enforcement in this jurisdiction. Despite our focus on the Romanian banking sector, the proposed methodology can be applied to any emerging or transition economy where the traditional credit-to-GDP gap indicator may not be appropriate.

The well-established method resorted to for identifying the optimal pace of credit growth is the bank intermediation gap (Borio et al., 2001; Borio and Drehmann, 2009). The mechanism of countercyclical capital buffers envisaged by the experts working with the Bank for International Settlements (BCBS, 2010) sets forth that the buffers should be built up in times of economic boom depending on the dynamics of the gap resulting from the ratio of non-government credit to GDP. The gap is calculated based on the deviation of credit growth from its long-term trend by using a Hodrick–Prescott filter.

Even though it benefits from frequent use in determining trends in macroeconomic variables, the HP filter has its limits. The trend in a time series depends to a fairly large extent on its time coverage, which makes the implementation of the filter rather difficult, especially in emerging economies, whereas the result of the calculations is very sensitive to the smoothing parameter (lambda). Moreover, estimating the trend is a process vulnerable to structural shifts in the sector under review, such as those driven by privatisation or changes in the commercial policies of large credit institutions. However, the strongest criticism of this method is that it does not take into account the economic fundamentals with an economy-wide impact on the steady state of the loan stock.

To identify the optimal credit growth in emerging economies that belong to the new member states based on economic fundamentals is difficult given that the endogenous variables, i.e. developments in lending, might not be stationary. In fact, recent papers focusing on CEE economies (Becker et al., 2010) show that the faster integration process in the financial sector compared to other sectors of the economy was one of the drivers of liquidity surplus in these economies, causing the departure of the business pattern from a sustainable development path. Thus, a mere factor-based decomposition of lending dynamics applied to an emerging economy subject to this assessment does not serve the purpose of this analysis.

To overcome this hindrance, the dedicated literature (Kiss et al., 2006; Égert et al., 2006; Geršl and Seidler, 2011) suggests using as a reference a number of countries, usually developed countries that are members of the EU or the OECD and whose economic performance is balanced, also in terms of developments in the bank loan stock. The most resorted-to analytical method consists of panel estimation, while the macroeconomic variables identified as vital for balanced credit growth are