International Journal of Business, Human and Social Sciences
ISSN: 2517-9411
Vol:9, No:4, 2015

Best Option for Countercyclical Capital Buffer Implementation - Scenarios for Baltic States

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***Abstract*—**The objective of countercyclical capital buffer is to encourage banks to build up buffers in good times that can be drawn down in bad times. The aim of the report is to assess such decisions by banks derived from three approaches. The approaches are the aggregate credit-to-GDP ratio, credit growth as well as banking sector profits. The approaches are implemented for Estonia, Latvia and Lithuania for the time period 2000-2012. The report compares three approaches and analyses their relevance to the Baltic States by testing the correlation between a growth in studied variables and a growth of corresponding gaps. Methods used in the empirical part of the report are econometric analysis as well as economic analysis, development indicators, relative and absolute indicators and other methods. The research outcome is a cross-Baltic comparison of two alternative approaches to establish or release a countercyclical capital buffer by banks and their implications for each Baltic country.

***Keywords*—**Basel III, countercyclical capital buffer, banks, credit growth, Baltic States.
***JEL classification codes*—**E22, E32, E51.

I. Introduction

THE first international capital standard, Basel I, was issued by Basel Committee on Banking Supervision (BCBS) in 1988, and was fully implemented in 1992 by the G-10 countries. The main objective was to secure the holdings of banks, so credit institutions would be capable to absorb losses from the crediting activity [1].

This standard only addressed the exposure of banking institutions to credit risk, the amount of capital required to protect against losses by assuring that they hold a capital level of 8% of the total risk-weighted assets [1].

According to [1] after the issue of the first agreement, there was a positive development of methods and techniques of risk assessment and in 2004 Basel II was issued. Basel II offered banks the opportunity to design their own internal models to estimate risk, and at the same time conserving the 8% capital adequacy. To establish the total capital adequacy, credit institutions had to primary determine individual risk exposures to credit risk, market risk and operational risk, and finally add the individual exposures [2].

Between mid-2007 and end-2010, major global banking institutions reported cumulative write-downs to the tune of $1.3 trillion [3]. Output declined dramatically. The cumulative impact over 2008–10 on economic activity in the harder-hit advanced economies exceeded 10 percent of their respective GDP, and average unemployment rates shot up from about 5 percent to nearly 9 percent. Between mid-2008 and mid-2009, world GDP contracted by 1.6 percent for the first time in recent memory [4]. Unsurprisingly, the experience added impetus to policymakers' and academic economists' efforts to better understand the mechanisms that drive financial system procyclicality and to devise policy tools that can mitigate it [5], [6].

To address the market failures revealed by the crisis, a revised framework, Basel III, was proposed by BCBS, suggesting a more sensitive approach to the extreme and unforeseen changes in the market. These reforms are meant to strengthen the banking sector and raise the resilience of individual banking institutions to periods of stress with two different approaches, a microprudential focus and a macroprudential focus. These reforms address the system-wide risks that can build up across the banking sector as well as the procyclical amplification of these risks over time. Basel Committee considers that after its implementation, the agreement will greatly reduce the likelihood and severity of a crisis in the banking sector, while enhancing global financial stability. The main objective of this agreement is to improve the banking sector's ability to absorb shocks from economic and financial crises, thereby reducing the risk of contagion from the financial sector to the real economy.

Since their first meeting during the financial turmoil, which took place in Sao Paolo on the second weekend of November 2008, the G-20 has been aware of the problem of procyclicality in the regulatory framework. They agreed that it was important "to address the issue of pro-cyclicality in financial markets regulations and supervisory systems." One week later, in Washington, they referred again to this problem, now under one of the five principles for reform of financial markets, namely the principle of "enhancing sound regulation." They also instructed the International Monetary Fund (IMF), the Financial Stability Forum (FSF), later renamed Financial Stability Board (FSB), and the Basel Committee on Banking Supervision (BCBS) "to develop recommendations to mitigate pro-cyclicality, including the review of how valuation and leverage, bank capital, executive compensation, and provisioning practices may exacerbate cyclical trends. Not only these institutions, but also the G-20 Finance Ministers were requested to formulate recommendations on mitigating against pro-cyclicality in regulatory policy [7]. Therefore, since the beginning of the crisis pro-cyclicality was regarded a key issue to be addressed

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[8], [9].

Basel III reforms are meant to strengthen the banking sector and raise the resilience of individual banking institutions to periods of stress. One of the Basel III objectives is to reduce procyclicality and promote countercyclical buffers. According to the Committee one of the most destabilizing elements of the crisis was the procyclical amplification of financial shocks throughout the banking system, financial markets and the economy [10]. As the amount of credits in the economy increased, which was followed by an increase in credit losses, banks have adopted a prudent position immediately, resulting in a restraining credit supply. Their actions intensified the initial crisis, pushing the economy into a deeper recession, with declining asset prices and rising level of unproductive loans [11].

II. Countercyclical Capital Buffer Proposal

According to the Committee one of the most destabilizing elements of the crisis was the procyclical amplification of financial shocks throughout the banking system, financial markets and the economy. As the amount of credits in the economy increased, which was followed by an increase in credit losses, banks have adopted a prudent position immediately, resulting in a restraining credit supply. Banking institutions were forced to further restrict their crediting activity, because even during the crisis, they considered it necessary to pay dividends or compensation, so avoiding the transmition of negative signs to markets. Their actions intensified the initial crisis, pushing the economy into a deeper recession, with declining asset prices and rising level of unproductive loans. The Basel Committee introduced measures to make banks more resilient to such procyclical dynamics. These measures will help ensure that the banking sector serves as a shock absorber, instead of a transmitter of risk to the financial system and broader economy [12].

Countercyclical capital buffer is designed to ensure that the banking system has a buffer of capital to protect it against future potential losses when excess aggregate credit growth is judged to be associated with a build-up of system-wide risk. Credit institutions will have to conserve a countercyclical buffer that varies between zero and 2.5% to total risk weighted assets [13].

Any countercyclical capital scheme will be an overlay over the minimum capital requirements. The cyclicality of the minimum is therefore an important element for the credibility of the overall scheme. Very sensitive point-in-time capital requirements could imply that in good economic times risk-weighted assets decrease by so much that only limited capital is built up relative to unweighted assets. Similarly, in bad times, a highly cyclical minimum could eat into the available capital resources, as the increase in risk-weighted assets adds to the erosion associated with losses. However, it is less important whether the smoothing is achieved by adjusting inputs or outputs. In the absence of smoothing inputs, more of the work would have to be done by the adjustment factor to obtain the desired degree of capital in different stages of the cycle [13].

Any scheme will need to involve two elements: (i) choosing a conditioning variable that signals the time to build up and release capital buffers; and (ii) choosing an adjustment factor that determines how changes in the conditioning variable map into capital requirements.

According to [14] key Characteristics of an Effective Instrument are:

(i) It should signal the proper *timing* for the accumulation and release of the capital buffer. This means that it should identify good and bad times.
(ii) It should ensure that the *size* of the buffer built up in good times is sufficient to absorb subsequent losses, when these materialize, without triggering serious strains.
(iii) It should be *robust to regulatory arbitrage*. This includes being difficult to manipulate by individual institutions as well as being applicable to banking organizations that operate across borders.
(iv) It should be as *rule based as possible*, *transparent*, and *cost effective*.

A number of variables come to mind, such as measures of bank performance (eg earnings, losses or asset quality, such as non-performing loans), financial activity (e.g. credit), as well as the cost and availability of credit (eg credit spreads).

Borio and Drehmann [15] and Alessi and Detkens [16] analysed the performance of different conditioning variables by visually inspecting their evolution around historical banking crises. They considered the variables measured as deviations from a long-term trend or average, in order to identify the cyclical component.

A. Macroeconomical Variables

Real GDP growth: this is the most natural indicator of the aggregate business cycle for an economy. However, the business and the financial cycle, although intertwined, need not be fully synchronised at all points in time. In particular, financial strains do not arise with every recession.

Aggregate Real Credit Growth: the cycle is often defined with reference to credit availability. Aggregate credit growth could be a natural measure of supply, in particular if not only bank credit but all other sources of credit are taken into account. As boom periods are characterised by rapid credit expansion and declines in overall credit are typically considered symptomatic of a credit crunch, deviations of credit growth from a trend could be an informative variable to use.

Credit-to-GDP Ratio: The credit-to-GDP ratio provides a normalisation of the credit variable to take into account the fact that credit demand and supply grow in line with the size of the economy. In addition, there is a strong link, historically, between faster than average credit-to-GDP growth and banking crises.

Asset Price Growth: Financial assets and in particular property prices tend to show exceptionally strong growth in periods that precede systemic banking events. They fall precipitously during periods of financial stress. Similar to the credit-to-GDP ratio, we consider deviation of aggregate property prices from their long-term trend, where aggregate

property prices are a value-weighted average of residential and commercial property prices.17

B. Banking Sector Activity Variables

Bank Credit Growth (also normalized by GDP): Aggregate measures of bank activity tend to be coincident with the broader business and financial cycle. Linking the countercyclical instrument to the growth rate of lending or bank income can be motivated on the basis of attempting to smooth the intermediation (credit) cycle measured more narrowly as in relation to banks as opposed to the financial sector at large.

Banking Sector Profits: This is a key indicator of performance for the sector. Earnings are high in good times and quickly reflect losses in times of stress. However, profit figures can be the subject of strategic management by banks that can distort their information content.

Aggregate Losses: This indicator of performance focuses on the cost side (non-performing loans, provisions etc). The financial cycle is frequently identified by the rise and fall of the realised losses.

C. Cost of Funding

Banking Sector Credit Spreads (Indices): These are indicators of vulnerabilities in the banking sector (in the sense of the market assessment of the risk of bank failures). By being closely tied to the financial condition of banks they may be subject to manipulation by them, a drawback mitigated by relying on broad indices where they exist. In the analysis we will look at the average of CDS spreads for the largest banks in each country.

Cost of Liquidity: These are indicators of the average cost that the banking sector has to pay to raise short-term liquidity. They are closely linked to banks' health and the aggregate funding conditions in markets.

Corporate Bond Spreads (Aggregate Average): An indicator of credit quality for the economy at large and a point-in-time measure of (credit) risk. Periods of boom are typically characterised by spreads that are lower than their average levels, while periods of stress are often marked by rapidly widening spreads.

Analysis of [14] showed that the best variables to signal the pace and size of the *build-up* of the buffers differ from those that provide the best signals for their *release*. Credit, measured by the deviation of the credit-to-GDP ratio from its trend, emerges as the best variable for the build-up phase, as it has the strongest leading indicator properties for financial system distress. A side benefit of using this variable as the anchor is that it could help to restrain the credit boom and hence risk taking to some extent.

For a top-down approach, the analysis shows that the best variables as signals for the pace and size of the accumulation of the buffers are not necessarily the best for the timing and intensity of the release. Credit seems to be preferable for the build-up phase. In particular when measured by the deviation of the credit-to-GDP ratio from its trend, it has proven leading indicator properties for financial distress. The corresponding data are also available in all jurisdictions, in contrast to other variables, such as CDS spreads.

According to [17], the variable that performs best as an indicator for the build-up phase is the gap between the ratio of credit to GDP and its long-term trend (the credit-to-GDP gap).

The credit-to-GDP gap, however, is not a reliable coincident indicator of systemic stress in the banking sector. In general, a prompt and sizable release of the buffer is desirable. Banks would then be free to use the capital to absorb write-downs.

Repullo and Saurina [18] in their analysis also make clear that any operational framework would need to incorporate an element of judgment, especially in the release phase. As in other fields of economic policy, rules provide invaluable discipline but may not work well in all circumstances.

Given the relatively early stage in the economic analysis of the interactions between the real and financial sectors of the economy, it would be premature to claim that any rule can be sufficiently robust across countries and time. Moreover, the political economy of the design and application of macroprudential instruments, such as the countercyclical capital buffer, is a field in which much more analysis is needed.

The calculation methodology presented in the Credit/GDP guide includes the following steps to determine the credit-to-GDP ratio, its deviation from its long-term trend and the level of countercyclical capital buffer [9]:

1. Calculating the Credit-to-GDP Ratio

$$\text{Ratio (t)} = \text{CREDIT (t)/GDP (t)} \times 100\% \quad (1)$$

CREDIT (t) is a broad measure of credit to the private, non-financial sector in period t, while represents the Gross Domestic Product. Both are defined in nominal terms for year t, and national authorities are advised to calculate this ratio on a quarterly basis.

2. Calculating the Credit-to-GDP Gap

In this phase the credit-to-GDP ratio is compared to its long term trend, this being equal to GAP. If there is a large positive gap, namely the credit-to-GDP ratio is significantly above its trend, this may denote that credit level in the economy may exceeded the economy's growth rate. The GAP (t) in period t for each country is calculated as the actual credit-to-GDP ratio, minus its long-term trend *TREND(t):*

$$\text{GAP (t)} = \text{RATIO (t)} - \text{TREND (t)} \quad (2)$$

where TREND (t) is an approximation of the average of the credit-to-GDP ratio, based on the historical values of each economy. The Hodrick-Prescott filter was used to smooth the series, because it has the advantage that recent observations are given higher weights. The Hodrick-Prescott filter is a methodology of decomposing the observed series, to separate the cyclical component of a time series. It seeks to extract from the series, the trend τt, and its cyclical component, ct, $yt = \tau t + ct$, where the cyclical component is the difference

between the original series and its trend, τt is a trend component that will minimize:

$$\sum_1^T (y(t) - \tau(t))^2 + \gamma \sum_2^{T-1} \big((\tau + 1) - \tau(t)\big) - \tau(t-1))^2 \quad (3)$$

The first term of the sum represents the y (t) squared deviations from trend τt. The second terms contains λ, and measures the sum of the squares of the trend component's second differences. This second term penalizes variations in the growth rate of the trend component. The larger the value of λ, the higher is the penalty. The Committee suggest a value for λ of 400,000, since they consider that this is an appropriate value to capture the long-term trend in the behaviour of the credit/GDP ratio.

3. Transforming the Credit-to-GDP Gap into the Guide Buffer Add-On

According to BCBS additional capital, or the buffer add-on (VBt), which is expressed in percent of risk-weighted assets, is zero when theis below a certain threshold, L. When the varies between the minimum and the higher threshold, H, then it will be equal to its variation, and when exceeds H, the buffer will be equal with the maximum level, VBmax. So the lower and upper thresholds L and H represent the key point in determining the timing, and the speed of the adjustment of the buffer add-on. The Committee suggests L = 2 and H = 10, considering that these may represent an optimal level, even though they depend to some extent the choice of smoothing parameter (λ), the length of both series. A threshold of L-2 means:

$$((\text{CREDIT (t)/GDP (t)}) \times 100\%) - (\text{TREND(t)}) < 2\% \quad (4)$$

and the buffer add-on in this case will be zero, while a threshold of 10 means H:

$$((\text{CREDIT (t)/GDP (t)}) \times 100\%) - (\text{TREND(t)}) > 10\% \quad (5)$$

where the buffer add-on will be at its maximum level, namely 2.5% of risk-weighted assets.

According to [19], BCBS points out that the credit-to-GDP ratio and its long-term trend are powerful signals of banking crises. The Committee therefore recommends that the authorities carefully choose thresholds, and the levels of L and H are only a recommendation. So L should be low enough, so that banks have time and the ability to build up capital before a potential crisis. As banks are given one year to raise additional capital, this means that the indicator should signalize the crisis at least 2-3 years before. At the same time L should be high enough, so that no additional capital is required during normal times. For H, at which point no additional capital would be required, even if the gap would continue to increase, should be low enough, so that the buffer would be at its maximum prior to major banking crises.

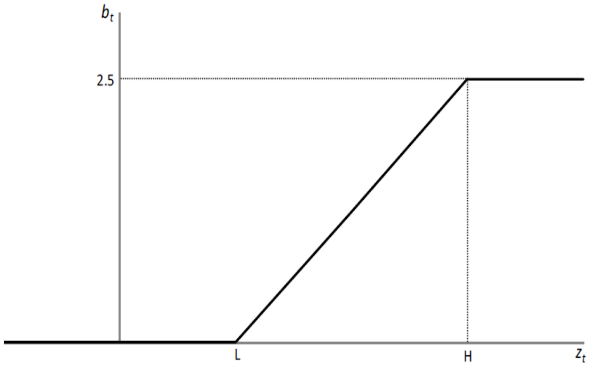

Fig. 1 Relationship between the countercyclical capital buffer and credit-to-GDP gap

III. Countercyclical Capital Buffer Alternatives in Baltic States

The methodology developed by Basel III and described above to mitigate the pro-cyclicality and minimize system wide risk by establishing a countercyclical capital buffer is applied to Estonia, Latvia and Lithuania retrospectively for the time period of 2000-2012. The countercyclical capital buffer models, constructed in accordance with the theoretical framework of the given article, include following input variables:

1. Credit to GDP ratio;
2. Credit growth;
3. Banking profit (aggregated for the industry).

Analytically, one can assume that the credit to GDP will have the smallest volatility because of its relatively stable base (i.e. GDP); credit growth will be more volatile than credit to GDP, but less volatile than banking profit. Also, credit growth can be considered analytically to be the most relevant variable in countercyclical capital buffer decisions because, in contrast to other variables, it includes only credit components and thus purely reflects the loan issuing business of banks. Credit to GDP variable is impacted by GDP developments, which might not be related to banking loans at all. Additionally, banking profit is also not an exclusive outcome of loan issue business. Therefore, the purpose of the empirical analysis is to assess retrospectively the fit of these three models for countercyclical capital buffer decisions both logically, by comparing the model outcome with economic developments and statistically, by measuring a correlation between given variables and their gaps.

Even though the Basel Committee recommends using quarterly calculations, the derived numbers do not produce consistent results because of extra fast growth and seasonal volatility of GDP for the given time periods. Therefore annual data of the credits, GDP and banking profit are analyzed. With the assistance of the Hodrick-Prescott filter, the long-term trend of the credit to GDP ratio, credit growth as well as banking profit growth was identified. Anytime the actual ratio goes above the trend, a positive gap is identified, which is expected to trigger the start of establishment of the counter-cyclical capital buffer. Logically, when a negative gap is

identified (i.e. actual numbers are below the long term trend), a bank is allowed to release a capital buffer in accordance with the formula given in the theoretical part. Moreover, authors take into consideration the recommendation of the Basel Committee to establish a capital buffer within one year of first signals to do so while the capital buffer can be released immediately after receiving corresponding signals. The authors find it reasonable because in practice establishing a capital buffer might require longer time than releasing it. Besides this assumption is very important for the given research because authors consider three input parameters, which are likely to demonstrate different volatility- credit to GDP intuitively the lowest whereas banking profit will tend to show the highest volatility. Thus by implementing the assumption of a one year delay in establishment of a capital buffer potentially false signals of the model emerged from volatility of its input parameters will be mitigated. The summary findings for Latvia are presented in Fig. 2.

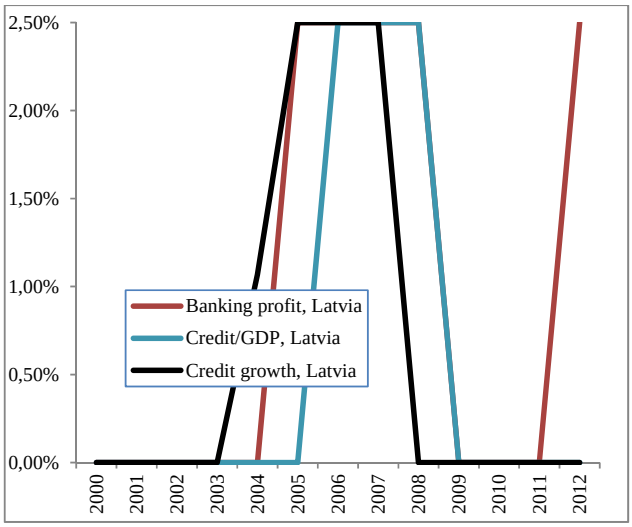

Fig. 2 Credit to GDP, Credit growth and banking profit capital buffer alternatives with one year delay for Latvia

Obviously, in case of Latvia the credit growth methodology leads to a faster establishment of the countercyclical buffer being about one year ahead of banking profit and two years ahead of credit to GDP. Both credit growth and banking profit measures signal the release of the buffer at the same time- in 2008 while credit to GDP methodology suggests doing that only in 2009. Interestingly, that the banking profit methodology sends repeated calls for establishing a counter cyclical capital buffer in 2012 when none of the rest two techniques do so. Looking at these outcomes retrospectively, the credit growth methodology should be preferred over others because it signals about the need to establish a capital buffer exactly at the beginning of the extra fast economic growth in Latvia and allows to release it in the final year of the GDP growth right before its major collapse in 2009.

The Lithuanian scenario provides a more controversial picture. Specifically, all three discussed techniques provide different timing for both establishing and release of the counter cyclical capital buffer. Similarly to the Latvian case, the banking profit based model signals about the need to establish a counter cyclical capital buffer in 2012 the latest while no other methodology produces the same conclusion. If looked retrospectively from the economic timing point of view, the credit growth methodology seems to be able of identifying overheating symptoms quite on time as well as afterwards issuing orders to release the buffer. Credit to GDP driven model seems to provide a very late reaction to economic developments both in terms of the establishment of the buffer and its release. The banking profit based model produces the least credible results and also urges to keep the maximum capital buffer for the longest time period- from 2003 till 2009. The findings of the Lithuanian case are plotted on Fig. 3.

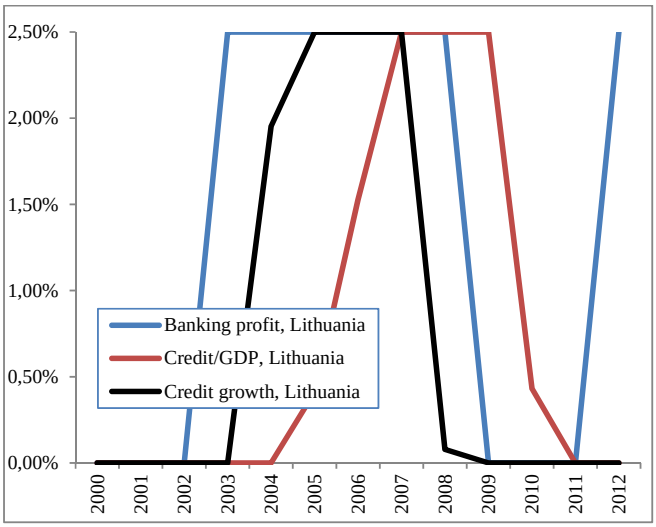

Fig. 3 Credit to GDP, Credit growth and banking profit capital buffer alternatives with one year delay for Lithuania

Nonetheless a relatively low indebtedness of the Lithuanian economy still does not mean that different capital buffer decisions will be derived from the methodology described above. Since Lithuania enjoys low starting points for both an absolute volume of credits and the credit to GDP ratio, both methodologies end up in clear decisions that countercyclical capital buffer is also needed. As in cases described above, estimates derived from the Credit growth methodology lead to a faster capital buffer establishment and its faster release, thus outpacing hyper fast growth or contraction in the economy.

Finally, authors consider the Estonian case. Obviously, similar conclusions can be derived. First obvious thing is that banking profit is again the only technique, which suggests establishing a countercyclical capital buffer in 2012 again. Taking into account economic developments retrospectively, the credit growth based model is considered to provide the most credible results. The banking profit based model does not look inappropriate either because its main difference compared to the credit growth is a release of the capital buffer

one year later. Credit to GDP methodology again was proved to provide too late response. Countercyclical capital buffer developments are summarized on Fig. 4.

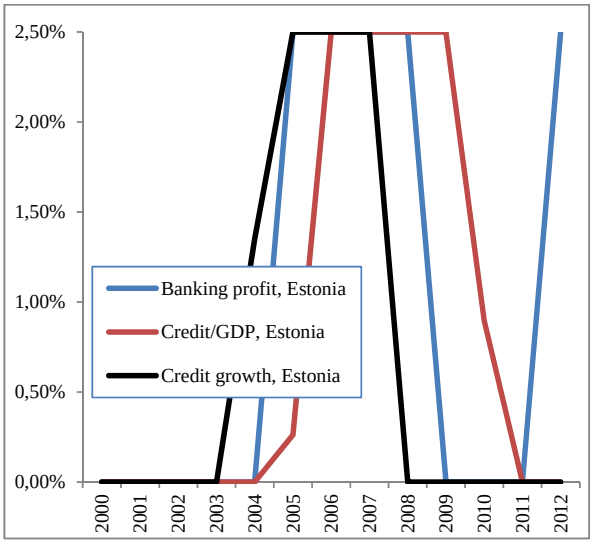

Fig. 4 Credit to GDP, Credit growth and banking profit capital buffer alternatives with one year delay for Estonia

To sum up the analysis section, for all three Baltic countries Estonia, Latvia and Lithuania pro-cyclical capital buffer was needed to be established during fast expansion of national economies of these countries in 2003-2011. Moreover, the amount of the capital buffer required the most of the time was at the upper limit of 2,5%. It is quite important to mention that the countries of the research have different credits to GDP ratios where Latvia and Estonia can be largely placed in one group. Lithuania initially enjoyed a much lower ratio because it was much less indebted by credits. If a capital buffer establishment is allowed to be deferred by one year, the total period when such capital buffer is needed gets shorter. The Credit growth method results in a faster establishment of the capital buffer compared to the Credit to GDP ratio because of a fast economic growth fuelled by credits. The only exception is Lithuania where for some reason banking profit outpaces the credit growth and signals about the capital buffer need.

The Credit growth method also results in a faster release of the buffer capital in all three instances. Logically, it might have had a better preventive impact on the economy of Estonia, Latvia and Lithuania if compared to the Credits to GDP ratio or banking profit method, which proved to lag behind. Statistical findings for the GDP growth and the GDP growth gap, credit growth and the credit growth gap as well as banking profit and its gap for Estonia, Latvia and Lithuania are shown in Table I.

TABLE I
CORRELATION BETWEEN CREDIT GROWTH, GDP GROWTH AND CORRESPONDING GAPS FOR ESTONIA, LATVIA AND LITHUANIA

Correlation parameter	Estonia	Latvia	Lithuania
GDP growth and gap	-0.29	0.45	-0.10
Credit growth and gap	0.71	0.57	0.77
Banking profit and gap	0.97	0.99	0.89

There is major positive correlation found between credit growth and credit growth gap and banking profit and its gap for all countries, which suggests that the methodology enables identifying a positive gap at good times and negative gap at bad times. The statistical findings for correlation between GDP growth and GDP growth gap is both statistically weak (i.e. ranging from -0.29 to 0.45) and not consistent being positive for Latvia and negative for Estonia and Lithuania. Thus, it brings an implication that the credit growth as well as banking profit methodology is capable of providing estimates, which can mitigate the credit cycle effects while there is not such evidence for the GDP growth approach. However, credit growth methodology is considered superior to banking profit, if the retrospective analytical perspective of economic developments is taken into account.

Suggested proposals for further research include a comparison of the credit growth, credit to GDP ratio and banking profit methodologies by studying other countries, figuring out an impact on the economy of a condition to defer an establishment of the capital buffer by one year and whether adjustments to methodologies are needed in case countries have substantially different starting points in some of the examined variables.

IV. CONCLUSIONS

We have retrospectively examined different countercyclical capital buffer alternatives, focusing our discussion around the main proposed techniques, which is the difference between the aggregate credit-to-GDP ratio and its trend (the credit-to-GDP gap), credit growth and a corresponding gap as well as aggregate banking profit and its gap. The assessment was performed by taking into account analytical, logical and statistical perspective. According to our findings, Estonia, Latvia and Lithuania needed to establish pro-cyclical capital buffer during extra fast economic growth witnessed in 2003-2011. The amount of the capital buffer required the most of the time was at the upper limit of 2,5%.

The Credit growth method mostly results in a faster establishment of the capital buffer compared to the credit to GDP ratio because of a fast economic growth fuelled by credits. Banking profit, except the Lithuanian case, also lags behind. The credit growth method also signals a faster release of the buffer capital. Logically, it might have had a better preventive impact on the economy of Estonia, Latvia and Lithuania if compared to the credits to GDP ratio method or banking profit, which proved to lag behind. There is major positive correlation found between credit growth and credit growth gap and banking profit and its gap for all countries, which suggests that the methodology enables identifying a

positive gap at good times and negative gap at bad times. The statistical findings for correlation between GDP growth and GDP growth gap is both statistically weak (i.e. ranging from -0.29 to 0.45) and not consistent being positive for Latvia and negative for Estonia and Lithuania. Thus, it brings an implication that the credit growth as well as banking profit methodology is capable of providing estimates, which can mitigate the credit cycle effects while there is not such evidence for the GDP growth approach. However, credit growth methodology is considered superior to banking profit, if the retrospective analytical perspective of economic developments is taken into account.

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