PROCYCLICAL BEHAVIOUR OF THE ALBANIAN FINANCIAL SYSTEM

Natasha Ahmetaj [1]
Ela Golemi [2]

ABSTRACT

This paper evaluates the procyclical relations that have emerged in the Albanian economy and the correlation with the banking sector. Based on the analysis of correlation coefficients and data since 2002, the results show that there is a strong causal two-way correlation between economic growth and credit, where the slowdown in the expansion of the deposit base has mitigated the effect from the procyclical deceleration of credit. The assessment of the linear correlation between economic growth as an independent variable and capital buffers above the minimum regulatory capital (as a dependent variable) shows that, although the positive coefficient shows a positive procyclical relation between the two indicators, where the acceleration of the economy is reflected in a higher level of capital addition, it remains weak and statistically insignificant.

1. Background

Lehman Brothers was a lecture at a high cost on the effective management of the financial crisis. It showed that the system could not be left to its fate, in a free fall, because the consequences would be detrimental to all. The governing instinct guided the politicians toward an energetic intervention without waiting on comprehensive modeling and information. Once the crisis is legitimized, there is no time for calculations and scientific forecasts. The further fall should be prevented and this is always done in the absence of a clear picture.

This reasoning helped the advanced economies to intervene adequately through the bail-out tool, irrespective of its cost in public balance sheets. Non-intervention would have worsened those balance sheets significantly. The battle with the financial crisis was won by containing the consequences at the limits of a recession, although large, but without allowing it to precipitate in the area of a depression.

Yet, after this first victory, the next post-crisis one is not taking a clear shape. Even after eight years, recession, stronger in some places and weaker in others, remains present. Nonetheless, efforts continue to correct what resulted as inadequate for preventing the crisis.

---

[1] Bank of Albania, Sheshi Skenderbej, Tirane, nahmetaj@bankofalbania.org
[2] University of Durres, Faculty of Business, Durres golemiela31@yahoo.com

2. Reforms, resilience and procyclical behavior

Structural reforms are the keyword of all remedies. They are mostly seen as a golden key to successfully terminate this prolonged recession, bringing about a positive fiscal result.

But, the structural reform is important not merely for the fiscal result. It is equally important for the effectiveness of the monetary policy and price stability, taking into consideration that they, in a positive and permanent manner, change the supply side of the economy. This implies that they give rise to two essential effects: shifts upward the aggregate supply curve and, subsequently, the trajectory along which the potential product moves, and enhances the economy's resilience to shocks. A higher *resilience* increases the flexibility of price adaptation, reducing thus the effect of histeresia once the shock has passed, improving, therefore, stability. Thanks to structural reforms applied extensively insofar in European Union countries, researchers explain a stronger inflation-unemployment correlation, and therefore a steeper *Philips* curve.

On the other hand, a low potential product becomes an obstacle to new investments, limiting a further rapid growth. This slow-growing GDP implies, at the same time, a challenge to financial stability due to the negative effects it introduces to the procyclical behavior and the aggregate level of systemic risk. As the monetary policy focuses mainly on price stability, it is the macroprudential policy that assumes the management of such risks to financial stability. The coordination of these policies to provide synergy instead of overlapping becomes necessary. The mission of the macroprudential policy is to mitigate the systemic risk arising from the pronounced procyclicality and correlations.

Mostly, procyclicality and systemic risks stem from errors in the macroprudential or monetary policies.

They may originate mainly from three sources:

-strategic complementarity of financial institutions, through which weaknesses are outlined,

-so-called *fire-sales* and simultaneous contraction of credit, which is realized due to the fall in asset prices balance sheet contraction - financing drying up -contraction of the business cycle,

-interconnectedness within the network, which disseminates the contagion due to the *spillover* effect through the interbank market, other reciprocal exposures with each other, change in asset prices that affect the entire market, suffering the same *feedback* for the real economy.

About the banking system, these sources of systemic risk arise mainly from three forms of its activity: a) financial intermediation, b) transformation of maturities, and c) financial leverage (Blundell-Wignall, 2014). These activities extend beyond the banking sector, to what is known as shadow banking.

Thus, the macroprudential policy aims at identifying misbalances in the financial system before they materialize in a systemic risk, choosing an appropriate instrument to mitigate this risk and coordinating these instruments with other policies with a view to reducing the procyclicality in the economy.

Given the main share of the banking sector in the financial system, its contribution to the overall financial stability is significant; therefore, identifying systemic risks that arise from it and constructing in due time buffers against them, are a matter of priority. In the light of accomplishing this mission, it is essential to understand the procyclical relation that arises from the banking activity and factors that are sources of systemic risks.

The financial system stability is an essential condition for the financial system, to enhance its effectiveness in intermediation. The Bank of Albania has made over time decisions in response to economic developments and financial cycle in Albania. Until 2008, they were oriented to keep

credit growth in check, under the conditions of a financial cycle expansion. After the crisis, the policies were aimed at endorsing credit expansion to mitigate the financial cycle. In 2006, the central bank requested capital addition in the event the growth of the credit portfolio exceeded 30%, overall. The intervention of the Bank of Albania with regard to credit did not aim at preventing lending but discouraging rapid credit growth.
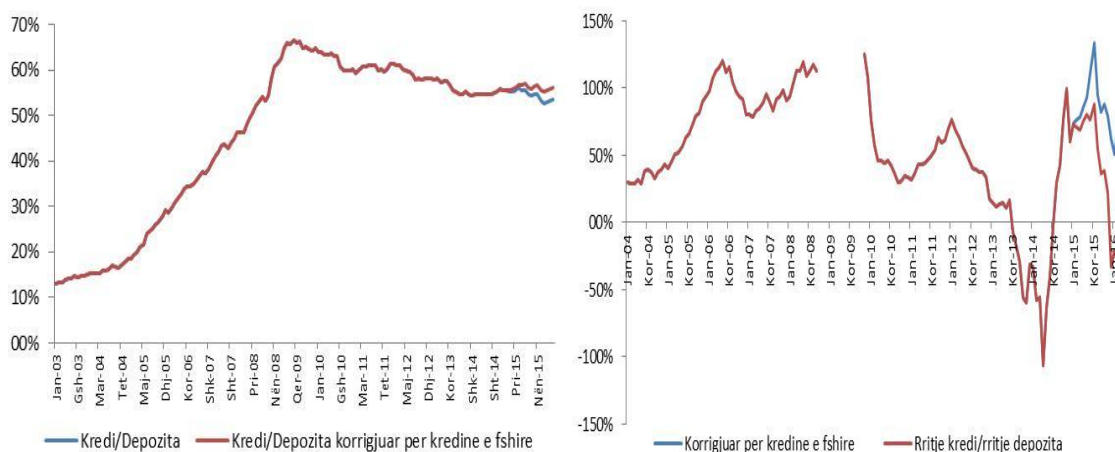
After the financial crisis in 2008, the banking environment in Albania has changed, reflecting international developments, and restrictions imposed by parent banks and host country regulators. Banks faced liquidity problems due to deposit withdrawals at the end of 2008 until June 2009. However, by the end of 2009, the level of deposits returned to that of 2008. In the meantime, credit has fallen significantly, due to the slowdown of economic growth, which has affected credit demand, as well as to the increase in non-performing loans.

In 2013, the Bank of Albania introduced some new macroprudential measures, which treated directly the procyclicality of credit in the economy. In essence, the package consisted in promoting credit growth. It created stimuli for channeling bank funds to the economy, through easing capital requirements for credit and strengthening requirements for investment abroad. The stimulation of credit through these measures is envisaged to remain in force until the end of 2017. The primary aim of this package and other instruments that may be added later is to mitigate concerns that may arise for the financial stability in various forms of the procyclicality.

The first element of procyclicality, which have been addressed in the above-mentioned package, pertains to the level of financial intermediation in the banking system in Albania.

If we analyze the balance sheet structure of the Albanian banking system over the years, specific elements of this structure assess a downward cycle of financial intermediation in Albania. The credit/deposit indicator has contracted to 53% (chart 2). However, the share of deposit expansion in the banking sector, which is transmitted in credit expansion by the banking sector shows that adjusted for the value of written off loans, the banking sector continues to credit the economy following the sources of its financing. The slowdown in the expansion of the deposit base has mitigated the effect of the procyclic slowdown credit activity.

Chart 1.Credit/deposit ratio in terms of stock and flows[3] (right)

Source: Bank of Albania.

---

[3]The graphic presentation does not include the bank run period in 2009.

The diversification of credit in loans to households and loans to business is a derivate of this procyclicality. Financial intermediation has slowed down to around 40% of GDP, as the financial intermediation deepened with loans to households expanding faster than loans to businesses (chart 3). Although the outstanding loans to enterprises continue to have a higher share in the credit portfolio, the countercyclical policies with regard to supporting the households sector with credit would accelerate the deepening of financial intermediation in Albania.
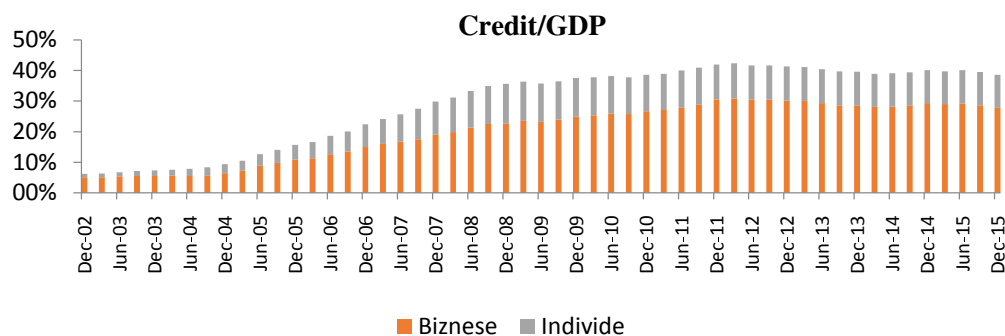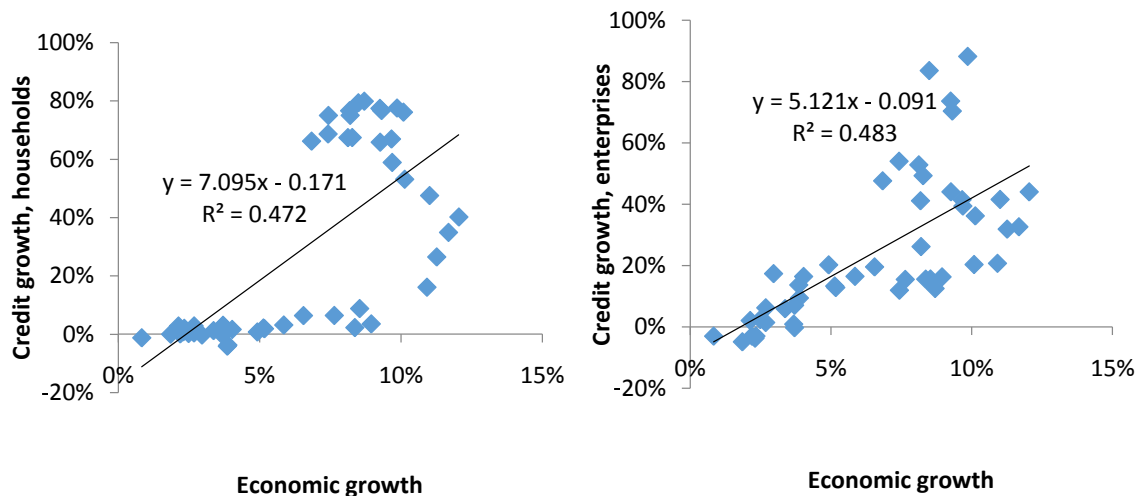
Chart 2. Credit to GDP per year
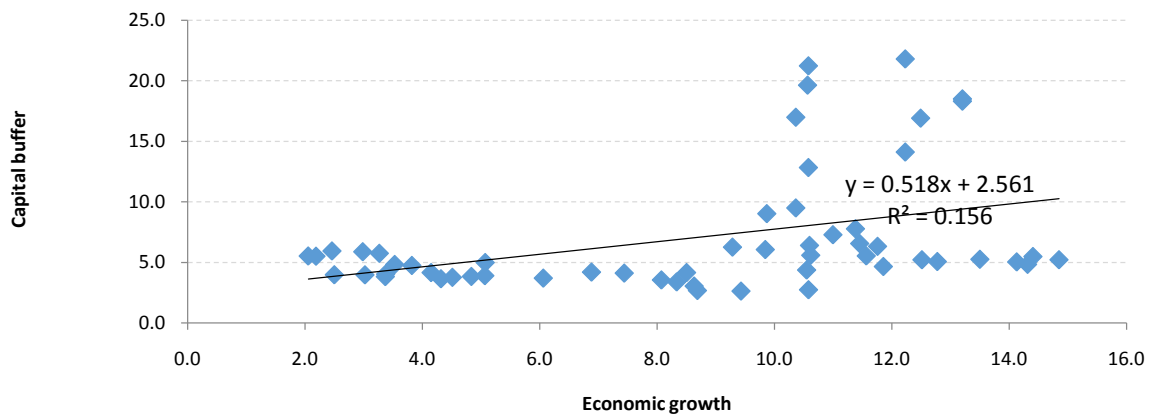

Chart 3. Credit growth and economic growth

Source: Bank of Albania, author's estimates

Other procyclicality elements are similar to those noted internationally. Overall, economists agree on two main elements as sources of procyclicality in the banking sector. The first element relates to the *capital buffer*. The risk management policy determines that banks should maintain the regulatory capital above the required level by the Supervisory Authority (Isepy, 2008). Keeping higher regulatory levels allows banks to absorb potential financial losses without falling below the minimum level required by the regulator. Consequently, having this function, the size of this "cushion" is closely linked to the degree of diversification in the credit portfolio, which is one of the main sources of losses and depend on its quality. Linquist K. G, (2004) argues that the more

diversified the credit portfolio, the lower the level of the *capital buffer* that the banking sector should keep.

But, the literature suggests, on the other hand, a negative correlation between the *capital buffer* and the business cycle. When the economy contracts, the correlation between the two turns procyclical and becomes stronger (Suyeter, 2004). For emerging economies, such as Albania, with a low financial intermediation level, (credit/GDP ratio), results are shown in Chart 4.

Chart 4. Procyclicality of capital buffer and economic growth

Source: Bank of Albania, author's estimates

The evaluation of the linear correlation between economic growth, as a dependent variable, and the addition of capital above the regulatory minimum requirement (as a dependent variable) shows that the correlation is positive but weak with a low explanation coefficient at 16%. Although the positive coefficient evaluates a positive procyclical correlation between the two indicators, where the acceleration of the economy is reflected in a higher level of capital addition, it remains weak and statistically insignificant. These results are confirmed also by the analysis of correlation coefficients between the economic growth rate and capital addition. In this analysis, we construct two alternative hypothesis of statistical significance of the correlation coefficient:
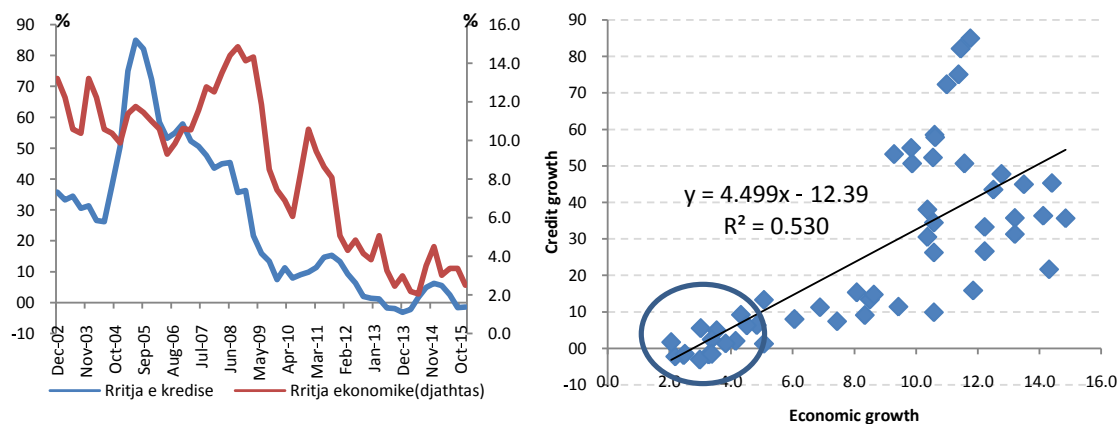
> *Ho: economic growth and capital addition to the regulatory capital requirement are not correlated.*
> *H1: correlation is statistically significant.*

Results show that the correlation is low and statistically insignificant, at 0.18 (p-value=0.37). These results confirm that it is difficult to evaluate the direct correlation of economic developments in the capital addition held by banks. This relation is affected by another third external factor, the banks' asset quality.

The second element of procyclicality pertains to credit growth. The theoretical approach suggests that credit expansion and economic growth are mutually inter-dependent. The evaluation of the cause-effect direction in various countries shows that credit affects the business cycle of an economy; however, the opposite relation is also important. For Albania, the close procyclical correlation between credit and economic growth is very clear, as shown in Chart 5.

Chart 5. Procyclicality of credit and economic growth

Source: Bank of Albania, author's estimates

The evaluation of the linear correlation between economic growth as an independent variable and credit growth shows that the correlation is positive with a satisfactory explanation coefficient at 53%. The results are supported also by the evaluation of the correlation coefficient, which results at 0.73 and is statistically significant at 5% (p-value=0.0) reliability. The economic growth slowdown at around 3%, in annual terms, is accompanied by the significant slowdown in the pace of credit expansion.
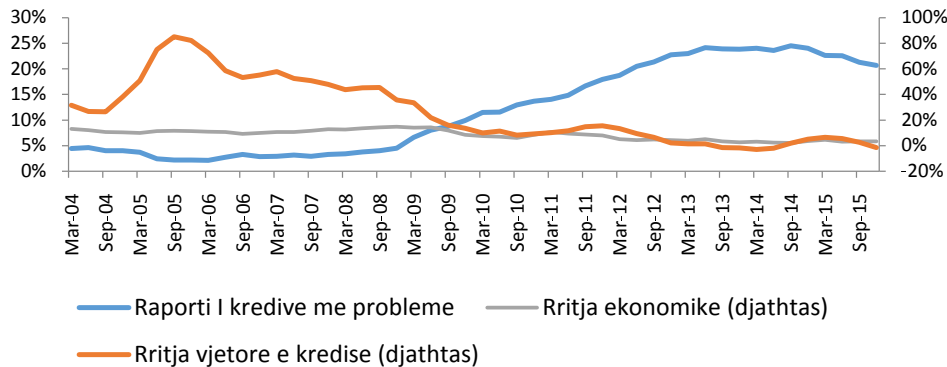
Literature suggests that there is an important correlation in the credit performance and economic growth, especially for countries such as Albania, where alternative capital markets are not present, and credit is the only source of financing the economy. Evaluations for the pre-crisis period in Albania suggest that, in the long run, there is a long-term positive correlation between all the indicators that measure financial development (credit and monetary aggregates) and economic growth (Dushku, 2009). Meanwhile, in the short run, this double correlation is proven for developments in the credit performance.

To evaluate the cause-effect correlation between credit and economic growth, we may rely on test results based on the Granger Causality method, which serves to evaluate short-term developments of causality between the two variables.

In our application, the test includes two results for the direction of causality. The baseline hypothesis that economic growth does not cause credit is null because it has a probability at 7% (p-value=0.0713). Consequently, the alternative hypothesis that economic growth causes credit, is accepted. In relation to the second baseline hypothesis, credit does not cause economic growth, is again null (p-value=0.0812) and the alternative hypothesis that credit causes economic growth is accepted. These results confirm that there is a mutual correlation between economic growth and credit in Albania.

The procyclicality of credit and economic growth is closely related also to developments in its quality. The economic growth slowdown, following the global financial crisis, was reflected in a rapid deterioration of the non-performing loans ratio (chart 6).
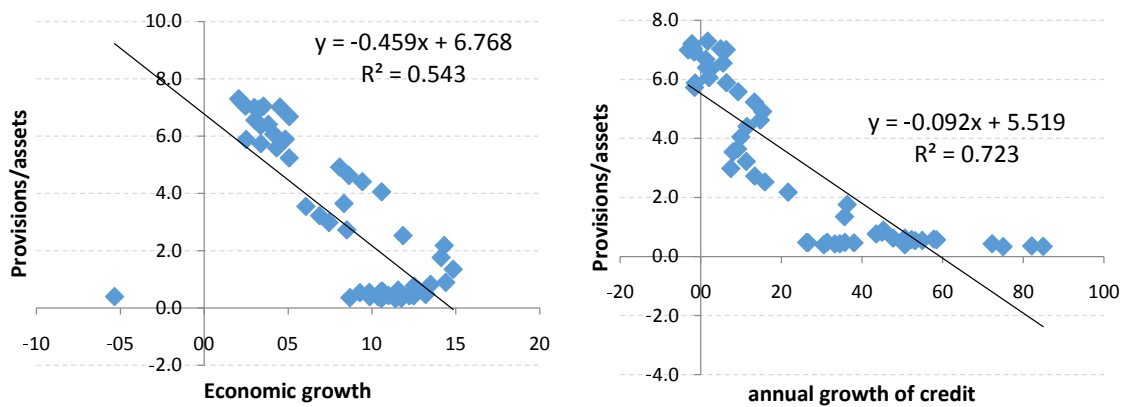
Chart 6. Developments in economic growth, annual credit growth, and non-performing loans ratio

Raporti I kredive me probleme — Rritja ekonomike (djathtas)

Rritja vjetore e kredise (djathtas)

Source: Bank of Albania, author's estimates

The materialization of credit risk through the increase in this ratio is reflected in the rapid increase in provisioning expenses, which, similar to other countries, increase during periods of economic downturn (Borio et.al 2001, Laeven et.al, 2003). This assessment is especially accurate for countries such as Albania, which require the banking sector to acknowledge losses as provisioning expenses, for the materialized credit risk, and does not include the concept of "expected losses" (Li, 2009).

Chart 7. Procyclicality of provisioning

$y = -0.459x + 6.768$
$R^2 = 0.543$

$y = -0.092x + 5.519$
$R^2 = 0.723$

Source: Bank of Albania, author's estimates

The ratio of stock for provisioning to banking sector assets reflects a strong negative correlation with developments in economic growth and annual credit growth (chart 7). The respective correlation coefficients are at -0.74 for the correlation of the provisioning stock with economic growth, which is statistically significant at 5% (p-value =0.0), and -0.43 for the correlation of provisioning to credit growth, which is also statistically significant at 5% (p-value = 0.02).

3. Conclusions

Local financial market characteristics play significant role for the contribution of a specific element in procyclicality. Interventions through countercyclical instruments by the Bank of Albania have been clear, in an appropriate time of the cycle, and in harmony with the message that they aimed to transmit to both the banking sector and the economy in Albania. Constantly enriching and calibrating the matrix of these instruments remains the subject of the future activity of the Bank of Albania.

However, the elements addressed above are not the only ones that generate procyclicality effects on financial stability in Albania.

Prolonged periods of low-interest rates may be accompanied by premises for affecting stability due to their eventual changes in the long term. This makes it necessary to monitor developments in these markets and acts in advance with appropriate and timely interventions through supervision and macroprudential instruments. The application in practice of countercyclical instruments requires a determination by the regulatory authority, being overall not in line with short-term interests of the banking sector. The actual macroprudential policy addresses mainly the banking sector. But, it is time now for a similar policy to be projected also for the so-called "shadow banking", which is becoming increasingly important, especially in the sector of investment funds.

References

1. Blundell-Wignall, A. and C. Roulet (2012), "Business Models of Banks, Leverage and the Distance to Default", OECD Journal: Financial Market Trends, Vol. 2012, Issue No. 2.
2. Borio, c., Furfine, c., Lowe, p. (2001) Procyclicality of the financial system and financial stability: issue and policy options. BIS Working Papers, 1, 1-57.
3. Dushku, Elona (2009), "Zhvillimi financiar dhe rritja ekonomike: Rasti i Shqipërisë", Banka e Shqipërisë, material diskutimi.
4. Isépy Tamás, (2008), Banking regulation and procyclicality – cross-country analysis in EMU, Banks and Bank Systems, Volume 3, Issue 2, 2008
5. Laeven, L. and G. Majnoni (2003). Loan loss provisioning and economic slowdowns: Too much, too late? Journal of Financial Intermediation 12, 178-197.
6. Li, Grace (2009): "A comparison of loan loss allowance practices in Asia", Asia Focus, Federal Reserve Bank of San Francisco, June.
7. Lindquist, K.-G. (2004) Banks' buffer capital: how important is the risk. Journal of International Money and Finance, 23.
8. Reserve Bank of Dallas, Globalisation and Monetary Policy Institute, Working Paper, No. 126(September).
9. Suyter, A. (2004) Risikomanagement Aktuelle Entwicklungen und Auswirkungen auf Banken und Unternehmen. Fritz Knapp Verlag.
10. White, W. (2012), "Ultra Easy Monetary Policy and the Law of Unintended Consequences", Federal Reserve Bank of Dallas. August.