

SCIENTIFIC NOVELTIES AT THE BANK OF ALBANIA

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I. FRIDAY SEMINARS

During the period July-December 2010, the Friday Seminar Series welcomed several works from the Bank of Albania representatives, and other institutions. The main topics brought up in these seminars relate to issues of financial and monetary stability, fiscal policy, and the competitiveness of the Albanian economy in terms of labour productivity and cost. The following provides a more detailed description of the presented papers.

The first paper presented during the second half of 2010 was "Stress-Testing on Indirect Credit Risk in Albania, based on Banks' Characteristics" by Kliti Ceca, Research Department, and Hilda Shijaku, Financial Stability Department. This study aims to analyze the response of the non-performing loans ratio to potential macroeconomic risks, such as: exchange rate, interest rates and economic growth. The estimation is enabled through the assessment of panel data, including data of 10 banks operating in Albania, during 2005Q1-2009Q4.

"Corporate Governance in Banks: Why is it Important and Peculiar? What does it

mean?" by Sonila Biçaku, representative of IFC (International Finance Cooperation-Europe and Central Asia). Some of the issues in this study concerned the corporate governance in general, the reason of paying attention to governance in banks, and the peculiarities and problems that emerge while governing banks.

The paper "Stabilization and Association Agreement with EU, Trade Integration and its Economic Implications" by Alban Pllaha, Research Department. The main issues of this study relate to the stabilization and association process and the regional integration in general. This study provides a viewpoint on the Albanian economy during the transition period and estimates the actual and potential level of Albania's trade and its trading partners, based on the empirical assessments of the Gravity Model for Albania. A main conclusion of this paper is that European integration promotes further economic growth. Another conclusion shows that trade between the regional countries and Albania will enhance by further integration of our country towards the EU and the regional countries.

“Macroeconomic Effects of Fiscal Policy in Albania: The SVAR Approach” by Armela Mançellari, Research Department. The main purpose of this study is to assess the effect of fiscal policy on Gross Domestic Product, prices and interest rates in Albania through the Structural Vector Autoregressive model, for the period 1998Q2-2009Q4. The empirical findings show that fiscal policy in Albania has a considerable effect on the economy, while the analysis of fiscal multipliers confirmed that the tax cut policy is the most stimulating policy in economy.

“The Key Macroeconomic Factors defining Credit Risk: The Case of Albania” by Irini Kalluci and Oriela Kodra, Research Department. The main purpose of this study is to identify the key determinants defining the non-performing loans ratio, disbursed to both businesses and households. The methodology employed

is Ordinary Least Square, estimated over the period 2002Q2-2009Q4. Some of this study findings show that the non-performing loans ratio is influenced by the T-bills interest rates, REER, exports, M3 monetary aggregate, and the consumer price index.

“The Competitive Position of the Albanian Economy in terms of Productivity and Labour Cost” by Evelina Çeliku and Iris Metani, Monetary Policy Department. This study aims to measure, recognize and analyze the labour productivity and the unit labour cost while taking into consideration the importance and implications of these indicators to the monetary policy. Based on the comparative analysis of the relative indicators of labour productivity and unit cost, we conclude that the fragility and the lack of competitive advantages of the Albanian economy arise from the high differences in labour productivity.

II. RECENTLY CONCLUDED RESEARCH PAPERS

“STABILIZATION AND ASSOCIATION AGREEMENT EU-ALBANIA” BY ALBAN PLLAHA, RESEARCH DEPARTMENT

This study analyzes the bilateral free trade relationships between Albania and the European Union. It focuses on the Stabilization and Association Agreement, Free Trade Agreement with the countries in the region, the results derived from trade exchanges between the parties, and the application of the “Gravity Model”. This model generates predictive data that enable the comparison between the actual and potential trading volumes. The results of the model suggest that trading volumes between Albania and the EU

countries, like Greece and Italy, are close to the possible potential equilibrium. Regarding trade with Germany, there is room for further intensification of trade exchanges. The findings of the model also show that the trading volumes with the regional countries are well below the potential equilibrium. The study suggests that the upgrade of the network infrastructure may intensify the trade exchanges between Albania and the countries in the region further. Furthermore, a complete application of the SAA would substantially enhance Albania’s trading volumes, not only with its main traditional trading partners but also with other EU countries.

“MACROECONOMIC EFFECTS OF FISCAL POLICY IN ALBANIA: THE SVAR APPROACH” BY ARMELA MANÇELLARI, RESEARCH DEPARTMENT

This paper attempts to estimate the effect of fiscal policy on Gross Domestic Product, prices and interest rates in Albania. We discriminate between two different types of fiscal policy: a tax decrease and an expenditure stimulus. We employ a Structural Vector Auto Regressive model to estimate fiscal policy for the period 1998Q2-2009Q4. To identify fiscal shocks, the tax code and fiscal policy decision lags are exploited, following the methodology developed by Blanchard and Perotti (2002). The main findings show that a tax cut stimulus has the highest cumulative GDP multiplier, suggesting thus the absence of Ricardian equivalence at Albanian consumers. Between capital and current spending, the GDP multiplier of capital spending is found to be higher than the current spending multiplier. The impact of fiscal spending on interest rates is not statistically significant, while a tax cut policy is found to slightly decrease the interest rates. Lastly, an increase in the current spending causes a slight increase in prices; while a tax cut policy decreases prices significantly by 55 basis points.

“THE KEY MACROECONOMIC FACTORS DEFINING CREDIT RISK: THE CASE OF ALBANIA” BY IRINI KALLUCI AND ORIELA KODRA, RESEARCH DEPARTMENT

This study aims to examine the determinants of non-performing loans in the Albanian banking system, both for total loans and their respective subcategories

(business and individual loans). The empirical results based on Ordinary Least Squares methodology show that the non-performing loans disbursed to individuals are affected by the 12-month T-bills rate, the Lek/Euro exchange rate and the house and rent price indices. While the quality of loans disbursed to businesses is affected by the 3-month T-bills rate, the real effective exchange rate, the M3 money aggregate, exports' growth rate and GDP growth.

“ESTIMATING A BENCHMARK FOR CURRENT ACCOUNT SUSTAINABILITY IN ALBANIA” BY ILIR VIKA, RESEARCH DEPARTMENT

This study aims to measure the size of the current account based on two methodologies: the accounting framework and the econometric techniques, in order to provide a more real view on the sustainability of the external position. The simple structure of the first methodology makes its implications easily understandable. According to this methodology, the sensitivity analysis gives us quicker estimations about the response of the external account to GDP growth and the reduction of the difference between debt returns. Thus, the compilations obtained from the accounting framework serve as useful points of reference. The econometric techniques are based on empirical estimations, which test various determinants of the current account, either directly or indirectly, not being constrained from the theoretical framework.

“A BAYESIAN ESTIMATION OF A SMALL STRUCTURAL MODEL FOR THE

“ALBANIAN ECONOMY” BY ELONA DUSHKU AND VASILIKA KOTA, RESEARCH DEPARTMENT

This paper aims to introduce a small structural model for the Albanian economy, using Bayesian estimation techniques, in Dynare and Matlab. This model is quite suitable for the Albanian economy as it takes into consideration all of its characteristics and provides all the linkages (relationships) between monetary policy instrument and key macroeconomic variables, like: output, inflation, exchange rate and unemployment. The structure of the model is based on the study of Carabenciov et al. (2008), but it is enriched with the exchange rate channel, as an important channel for the Albanian economy. This study presents the first estimation results, the performance of the model and the response of the main variables in the model to various shocks on output gap, inflation, and monetary policy interest rate.

“STRESS-TESTING ON THE INDIRECT CREDIT RISK IN ALBANIA, BASED ON BANKS’ CHARACTERISTICS” BY KLITI CECA, RESEARCH DEPARTMENT, AND HILDA SHIJAKU, FINANCIAL STABILITY DEPARTMENT

This paper studies the response of the non-performing loans ratio to macroeconomic conditions, which deteriorate the solvency of borrowers in the Albanian banking system. This influence can be seen through the credit risk channel, based on the banks’ main characteristics, such as: size, ownership, capitalization, and other features of the loan portfolio. Empirically, this model is estimated through the panel data methodology, for 10 banks operating

in Albania during the period 2005-2009. The study shows that the loan portfolio quality depends on the GDP shocks. Also, there is no evidence of the loan portfolio denominated in ALL, thus suggesting that the credit channel is slightly influenced by the monetary policy transmission. Lastly, the exchange rate and the interest rates in foreign currency are the main determinants of the loan portfolio quality.

“MACROECONOMIC DETERMINANTS OF REMITTANCES IN ALBANIA” BY ESIDA ABAZAJ, RESEARCH DEPARTMENT

This study aims to empirically estimate the macroeconomic determinants of emigrants’ transfers to Albania during the period 1996-2009. The study employs two methodologies: the Ordinary Least Square Method and the Vector Error Correction Model, which study the long- and short-term dynamics of remittances. In the first approach, remittances to Albania are found to increase with an appreciation of ALL and a higher inflation rate, thus making up for the loss in purchasing power in the home country. In the second approach, the altruism effect of the exchange rate loses its significance. In both approaches, remittances are found to be highly sensitive to the economic activity in the Euro Area, where most of the Albanian emigrants are located.

“EVALUATION OF THE LONG-TERM IMPACT OF TOURISM ON THE ALBANIAN ECONOMIC GROWTH” BY JONEL KRISTO, RESEARCH DEPARTMENT

This study aims to measure the impact of tourism sector on the overall economic growth of our country during the period

1995-2008. The long-term relationship between tourism and economic growth is studied by analyzing the inflows of foreign visitors and total real earnings in the economy. The main finding shows that an increase of sustainable growth in tourism real earnings by 5% causes an increase of economic growth by 1%.

“REGIONAL INTEGRATION AND ITS EFFECTS ON THE ECONOMIC GROWTH: IMPLICATIONS TO FDI AND TRADE” BY JONEL KRISTO, RESEARCH DEPARTMENT

This study adopts the regional approach to development, by taking into

consideration the economic effects as the preliminary stage to EU integration. Much emphasis is placed on the role of foreign direct investment and international trade. The panel methodology, using fixed effects, and the main analysis results suggest that an agglomerated region benefits more from trade intensification and inter-industrial convergence to the international level, when compared to a region lacking in these initiatives. Also, an agglomerated region attracts more FDI, though the analysis shows that its precondition is a competent and available labour force. The results are useful in the context of a region dominated by industry cost and the absence of high-tech industry.

III. WORKING PAPERS IN PROCESS

“PUBLIC DEBT, UNIT ROOT HYPOTHESIS, AND STRUCTURAL BREAKS: THE ALBANIAN CASE” BY GERTI SHIJAKU, RESEARCH DEPARTMENT

This study aims to estimate the sustainability of fiscal policy in Albania according to the approach adopted by Trahan and Walsh (1991) and Taylor (2002). The main focus is attributed to non-linear diagnostic tests. The results can be used as references in the stage of estimating and identifying a fiscal rule, but they cannot provide estimation for the future behaviour of fiscal policy.

“FINANCIAL STABILITY IN A DSGE FRAMEWORK” BY ARDIAN FULLANI, GOVERNOR OF THE BANK OF ALBANIA AND ALTIN TANKU, RESEARCH DEPARTMENT

This paper aims to apply a theoretical model, Dynamic Stochastic General Equilibrium (DSGE), which is based on two production factors and on the financial stability, incorporated within it. This paper also introduces the way how the model should be solved towards a long-run equilibrium level with long-run restrictions for the financial stability, based on the methodology applied by Blanchard and Kahn (1980).

“MONTE-CARLO SIMULATION AT MEAM” BY KLITI CECA, RESEARCH DEPARTMENT

This paper aims to build confidence intervals for the projections resulting from using the MEAM model, and also to provide estimates of the statistical error. In view of this purpose, we employ

the Monte Carlo methods, which are probability techniques, designed to find ways in generating random numbers.

“ALTERNATIVE MONETARY AGGREGATION IN ALBANIA BY WEIGHING COMPONENTS’ LIQUID QUALITIES” BY JONEL KRISTO, RESEARCH DEPARTMENT

Monetary aggregation is currently done by the simple arithmetic sum

of its components, assuming that its liquid qualities are similar. This implies that each component can be used as a substitution of the other to fulfil the money functions. Theoretically, this approach is monetary inaccurate, because monetary aggregates change substantially in their liquid qualities. This study proposes monetary aggregation by assigning specific weights to each component in accordance to their liquidity level and opportunity cost of money.

IV. ARTICLES

The articles prepared by the Research Department during the second half of 2010 are as follows:

“AN ANALYSIS OF RISK AND RETURN FOR THE ALBANIAN BANKING SYSTEM” BY IRINI KALLUCI, RESEARCH DEPARTMENT

This article is based on the analysis of risk and performance of the Albanian banking system based on the risk index for the Albanian banking system. The compilation of this index is based on

the methodology presented by Hannan and Hanweck in 1988. Based on the performance of this index for the Albanian banking system, we notice that this index has fluctuated through time, but its average value in the December 2001-September 2010 period reached 7.2 units. This index took values below its average value during the global financial crisis, which indicates an expectation for a higher level of risk. Contrary, an improvement of the index value indicates a more optimistic expectation and a recovery of the banking activity.

V. MISCELLANEOUS

THE COOPERATION AGREEMENT WITH THE UNIVERSITY OF OXFORD

On September 8th 2010, the Bank of Albania signed the cooperation agreement with the University of Oxford for the forthcoming three years, aiming to increase the research capacities, to deepen the knowledge for the

development of economic policies and for a better confrontation with continuous challenges. These policies need to be undertaken by Albania and other countries in the region to enhance economic growth in the context of regional cooperation and integration towards EU. The cooperation will consist in undertaking various studies on the

economic policy of the country and the region, which will enhance the scientific debate about the economic growth model, supported also by a regional viewpoint at a social, economic and political level. The cooperation will also consist in issues concerning the monetary policy effectiveness, importance of internal and external economic anchors, build-up of research capacities serving the implementation of the monetary policy, communication, and public education. The right approach to these issues is a necessity for the monetary policy and for its essential role in achieving economic prosperity.

THE FOURTH REGIONAL WORKSHOP: "ECONOMIC RESEARCH IN SOUTH- EASTERN EUROPE"

On November 18th-19th, the Bank of Albania organized in Tirana the fourth regional workshop entitled "Economic Research in South-Eastern Europe". 25 representatives (presenters and discussants) from the Bank of Albania and other central banks in the region like: Bank of Italy, Bank of Austria, Bank of Poland, Bank of Greece etc., attended this workshop. Following the success of the three previous annual workshops, the aim of this workshop was to further improve the cooperation and open dialogue among economic researchers, and also to further widen the knowledge of regional central banks over some characteristics and specific developments of the participant countries.

The fourth regional workshop lasted two days and was organized in three main sessions, divided as follows:

1. The global crises and the financial and macroeconomic sectors of South-East European economies, with the main focus on:
 - Lessons from the crisis,
 - Potential risks and stress-test analysis, which need to be developed and implemented by central banks.
2. New anchors for economic policy.
3. Internal and external imbalances adjustment: the need for continuous attempts through structural reforms designed to enhance a sustainable economic growth.

A listing of the papers presented in this workshop is as follows:

1. "Testing for East-West Contagion in the European Banking System during the Financial Crisis" by Emidio Coccozza, Banca d'Italia
2. "Estimating the Capital-Risk Relationship of Commercial Banks in the South-East European Region" by Panayioits Athanasoglou, Bank of Greece
3. "A Model for the Credit Risk in Albania using Banks' Panel Data" by Kliti Ceca and Hilda Shijaku, Bank of Albania
4. "Macroeconomic Determinants of Credit Risk" by Irimi Kalluci and Oriela Kodra, Bank of Albania
5. "Foreign Currency Loans Exposure of Households in CESEE EU Member States and Croatia" by Katharina Steiner, Österreichische Nationalbank
6. "Optimal Level of International Reserve: The Case of Albania" by Gerti Shijaku, Bank of Albania

7. "A Bayesian Estimation of a Small Structural Model for the Albanian Economy" by Elona Dushku and Vasilika Kota, Bank of Albania
8. "Macroeconomic Effects of Fiscal Policy in Albania: A SVAR Approach" by Armela Mançellari, Bank of Albania
9. "Did the Crisis Change it all? Evidence from Monetary and Fiscal Policy" by Ljupka Georgievska, National Bank of the Republic of Macedonia
10. "Financial Stability in a DSGE Framework" by Altin Tanku, Bank of Albania
11. "Inflation and Financial Development" by Vasilika Kota, Bank of Albania
12. "Bulgaria's Export Prices and Pricing-to-Market Behaviour" by Emilia Penkova and Peter Sinclair, Bulgarian National Bank
13. "Estimating a Benchmark for Current Account Sustainability in Albania" by Ilir Vika, Bank of Albania
14. "Monetary Policy Transmission Disturbances during the Financial Crisis: The Case of an Emerging Market Economy" by Ewa Wrobel et al., National Bank of Poland
15. "Determinants of Remittances in Albania" by Esida Abazaj, Bank of Albania
16. "Gravity Model for Trade" by Alban Pllaha, Bank of Albania
17. "Agglomeration Economies and the Regional Approach to Growth in SEE" by Jonel Kristo, Bank of Albania

Every paper was followed by discussion, which introduced the main findings of the paper and its contribution while providing comments and suggestions for further research or improvement. This workshop turned out to be fruitful and successful,

clearly showing, for the fourth time, the increasing interest for research and economic discussion, in the region and for the region. Therefore, we are convinced that such cooperation with other central banks of the region will be intensified in the future.

THE GOVERNOR'S AWARD FOR THE BEST DIPLOMA THESIS FOR THE YEAR 2010

For the fourth consecutive year, the Bank of Albania organized the Governor's Award for the Best Diploma Thesis for the year 2010. This award encourages the Albanian students, graduating either in Albania or abroad, to participate with their research works concerning fields like: monetary economics, financial stability, the economic integration of the Balkan countries towards Europe, Bank of Albania's activity, the Albanian banking sector, and the Albanian economy in general. This is a good tradition that helps foster research culture and create a supportive structure with newcomers who are knowledgeable and willing to study economic phenomena in the country and in the region.

In 2010, the first prize went to Ms. Lorena Skufi, student at University of Tirana, for the Diploma Thesis "Sustainable Development of Tourism: An Empirical Approach for the Case of Albania".

The second prize went to Ms. Fabiola Hysenbelliu, who graduated from London School of Economics and Political Science, for the Diploma Thesis "To what Extent is Albania's Integration Agenda

Progressing towards EU's Standards Requirements in Relation to its Politics and Government?".

The third prize went to Ms. Evis Kopliku, who finished her postgraduate studies at Eastern Mediterranean University of North Cyprus, for the Diploma Thesis "The Impact of Global Financial Crisis on South-Eastern European Economies".

TECHNICAL SEMINARS

Another activity conducted by the Research Department within the framework of the Medium Term Development Strategy of Research at the Bank of Albania is the Technical Seminars series organized bimonthly. This seminar aims to introduce the latest scientific novelties in the field of economics, new methods of solving various problems, the development of original mathematical models of processes and phenomena and the results obtained from using them, etc. During the period between July and December 2010, the presentations covered the two following topics:

- i) Practical Approach to Monte Carlo Simulation, and
- ii) GMM and TSLS Methods.

The topic on "Practical Approach to Monte Carlo Simulation" was introduced by Kliti Ceca, Research Department. This seminar follows the previous one: "Monte Carlo simulation, Principles and Methods", presented in the first half of 2010. The aim

of this seminar was to introduce different examples of generating various variables, and also to introduce the processes that are most widely applied in practice.

The topic on "GMM and TSLS Methods" was presented by Gerti Shijaku, Research Department. This seminar aimed to introduce two other methods for empirical estimations: Generalized Method of Moments (GMM) and Two-Stage Least Square (TSLS). The GMM method derives from the so-called generalized conditions of moments or from the assumptions of the empirical model. GMM method is considered as a useful estimation approach to conduct analysis on non-linear dynamic models, in absence of complete information on the data probability distribution.

The TSLS method is another way to estimate the empirical models, which do not fulfil the base assumptions of the OLS approach, especially the exogeneity assumption. This model consists in two stages:

1. In the first stage, TSLS finds the endogenous and exogenous variables that can be attributed to instruments. This stage includes the estimation of an OLS regression of every variable on the group of instruments.
2. In the second stage, TSLS estimates the original equation with all the substituted variables from the first-stage regression. The regression coefficients are estimations of the TSLS method.

LINKS:**RESEARCH AT OTHER CENTRAL BANKS**

European Central Bank (<http://www.ecb.int/home/html/researcher.en.html>)

Bank of Greece (<http://eng.bankofgreece.gr/en/publications/research.asp>)

Deutsche Bundesbank (http://www.bundesbank.de/vfz/vfz_diskussionspapiere_2009.en.php)

Oesterreichische Nationalbank (http://www.oenb.at/en/presse_pub/research/research.jsp)

Banca d'Italia (<http://www.bancaditalia.it/studiricerche>)

Czech National Bank (<http://www.cnb.cz/en/research/>)

Banco de Espana (<http://www.bde.es/informes/be/docs/docse.htm>)

Bank of Finland (http://www.bof.fi/en/julkaisut/bofit_julkaisut/index.htm)

Bank of England (<http://www.bankofengland.co.uk/publications/workingpapers/index.htm>)

Federal Reserve (<http://www.federalreserve.gov/econresdata/default.htm>)

OTHER

BIS Central Bank Research Hub (<http://www.bis.org/cbhub/index.htm>)

International Journal of Central Banking (<http://www.ijcb.org/>)

National Bureau of Economic Research (<http://www.nber.org/>)

International Monetary Fund (<http://www.imf.org/external/pubind.htm>)

ECB Research Bulletin (<http://www.ecb.int/pub/pdf/other>)

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