SCIENTIFIC NOVELTIES AT THE BANK OF ALBANIA

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I. FRIDAY SEMINARS

The first Friday Seminar for the second half of 2009 started with the presentation by Didar Erdinc, faculty member at the American University of Bulgaria. Ms. Erdinc presented her evaluation of the question "Does high crediting increase banking system fragility? Transition challenges in the Bulgarian banking sector for the period 1997-2007." This study identifies several indicators of the fast rise of credit in Bulgaria, and then it evaluates whether this rise has led to greater banking system fragility. The analysis uses a panel data approach for 30 banks in Bulgaria for the period 1999-2006. By using fixed effects models and GMM to evaluate the link between credit and banking capital, the results show that there is an increased risk when credit grows quickly, and that the effect on the Bulgarian banking system is evident. This study showed that higher crediting activity in Bulgaria has been conducted on the shoulders of greater fragility in the country's banking system, thereby increasing default rates of banks in the case of a possible financial liquidity reduction at the global level, which was a troublesome reality in 2008.

In the last quarter of 2009, Lorina Green and Rezart Erindi from the Department of Monetary Operations presented the following topic: "Using KMV-Merton model to forecast the likelihood of default of firms when paying off their outstanding debt." Since there has been an increased tendency by firms to use debt instruments and other credit derivatives, there has been a growing interest in making use of models that can predict the likelihood of default by firms while paying off their respective debt. One such new forecasting model that is widely used both in practice and in academic research, is a special version of the Merton model (1974), developed by the KMV corporation. This material presents the model and raises the possibility of using it at the Bank of Albania.

Another presentation in this series is the one conducted by Rezart Erindi and Valbona Luga from the Department of Monetary Operations, with the following topic: "Choosing a strategic benchmark: theoretical and practical aspects." Choosing a strategic benchmark can be described as a process through which

an institution decides on how to neutrally distribute its income from investments (financial instruments) to achieve long term investment objectives. This process moves along the following steps:

1. formulating objectives and establishing institutional duties
2. establishing rates or return, risk tolerance, and time period
3. identifying various instruments classes in which one could invest, as well as identify market tendencies
4. making the decision regarding the strategic benchmark
5. applying the benchmark and evaluating the decision

The authors of this material focus on the last steps of the process by describing the methodology that can be followed when proposing a strategic benchmark and the process needed to evaluate such a decision through time. Also, they establish the several instruments classes that are appropriate for investment.

In November, Armela Mancellari from the Research Department presented "Short term evaluation of real GDP." The goal of this study is to build models for short term forecasting of the actual value of the country's GDP. For making an informed decision, it is necessary to have timeliness data that give a current account of the state of the real economy through various methods and prospects. Since GDP data for Albania are published with a 12 week lag, it is necessary to forecast this indicator before it is published. This study uses data from real sales, repair and sale of automobiles, and from several confidence indexes to forecast GDP for the current quarter based on econometric models.

The first material presented in December was a study by Zoltan Jakab, Director of Macroeconomic Analysis in the Office of Fiscal Counseling of the Republic of Hungary. The study analyzed the following topic: "Does the fiscal multiplier exist? Fiscal and monetary reactions, confidence and fiscal multipliers in Hungary." The material is intended to assess fiscal policy multipliers in Hungary through the use of a DSGE model. Results show that the multipliers of different indicators of fiscal policy differ from each other. Perception of economic agents about the continuity of fiscal stimulus has a significant impact on multipliers. Also, multipliers change when evaluating how to finance expansionist fiscal policy in the future. The findings suggest that in a small open economy, where monetary policy reacts mostly to inflation, the accommodation that it offers to fiscal policy does not affect the fiscal multipliers.

The last presentation of the quarter was "Modeling quarterly GDP - the role of economic indicators and observations" by Evelina Celiku, Ermelinda Kristo, and Merita Boka from the Department of Monetary Policy. The aim of this study is to make a short term assessment of the quarterly GDP trend in Albania by using three main approaches: a. ARIMA models with seasonal components; b. Bridge models, and c. VAR models. The use of these models has made it possible to take a short term evaluative picture on the dynamics of the economic activity around the main trend in the current quarter (nowcasting) and moving further out up to two subsequent quarters (forecasting). The material concludes with the conviction that the variables observed and the information gathered contain

valuable information that can be used to make short term forecasts of quarterly GDP. Also, the best forecast is the average of all forecasts from all different models (not including ARIMA models).

Finally, the forecasting performance beyond the period will be the one that will play a weighting role when selecting the appropriate models in calculating an average forecast.

II. RECENTLY CONCLUDED RESEARCH PAPERS

1. "AN ADDITIONAL POINT OF VIEW ON THE RELATION BETWEEN MONEY DEMAND AND THE BLACK MARKET PREMIUM" – BY ALTIN TANKU, RESEARCH DEPARTMENT

The purpose of this study is to measure the confidence in economic policies, focusing on developments in the demand for money and the fluctuations in informal currency markets, as reflected in the black market premium.

Confidence is a necessary precondition for the success of any political or economic reform. It has been a concern for less developed countries, for developing countries, as well as developed ones. At any time, economic agents perceive that the authorities give priority to their short-term goals against long-term macroeconomic stability. Also, these agents do not trust the stated policy objectives and therefore do not model their expectations based on them. This paper examines the long-term demand for money under the assumption that the exchange rate serves as a measure of the cost of holding cash.

By using ARDL (Autoregressive Distributed lag) and bound testing approach to cointegration on quarterly data from eight developing countries, this material studies

the behavior of the demand for money in the midst of short-term fluctuations of the premium on the black market exchange rate. In this context, the material suggests a new method to test the credibility of economic policies implemented in the countries included in the study. The test includes an assessment of the black market premium instead of the exchange rate itself, of the role of money, and an evaluation of the latter through an Error Correction Mechanism.

The results obtained show that this link has the potential to provide data on the credibility of economic policies and on the way these policies are perceived by the economic agents.

2. "A STOCK-FLOW APPROACH TO THE EQUILIBRIUM LEK/EURO EXCHANGE RATE" BY ILIR VIKA (RESEARCH DEPARTMENT) AND ERJON LUÇI (WORLD BANK, ALBANIA)

This paper seeks to identify the factors determining exchange rate developments, to estimate an equilibrium exchange rate and to establish whether the actual exchange rate is misaligned from its equilibrium level. The determinants of the equilibrium exchange rate considered in

the study include the productivity gap, net foreign assets, government expenditure, the interest rate gap, the degree of openness of the economy, remittances and terms of trade. The paper relies on the ARDL (Autoregressive Distributed Lag) methodology developed by Pesaran and Shin (1999). The authors conclude that the real exchange rate does not appear to deviate considerably from its medium term equilibrium.

3. "INFLATION PERSISTANCE IN ALBANIA" BY VASILIKA KOTA, RESEARCH DEPARTMENT

This study carries out an evaluation of inflation persistence in the period 1993-2008. According to the author, inflation in Albania is persistent and there is considerable divergence between average inflation rates for two periods corresponding to different monetary regimes, and base inflation shows a higher persistence than headline inflation.

One key conclusion of the paper is that the monetary policy of the central bank has been effective in bringing inflation down.

4. "ANALYSIS OF THE ALBANIAN BANKING SYSTEM FROM A RISK-PERFORMANCE PERSPECTIVE" - BY IRINI KALLUCI, RESEARCH DEPARTMENT

The banking industry is the biggest and most important component of the Albanian financial system; as such, its financial analyses requires great attention. This paper looks at indicators of risk and return both theoretically and analytically and provides for the first time a methodology for calculating a risk index for the Albanian banking system, based on the model suggested in Hannan dhe Hanweck (1988). The study decomposes the ROE indicator through the modified DuPont model and identifies the factors that most impact this indicator. Additionally, the paper presents a matrix of 28 ratios – based on quantitative indicators - useful for the financial analysis of the banking system. The aim of the study is not only to analyze some financial ratios of risk and performance, but above all to suggest some new indicators and an index that can be used by supervisors in their work. The analysis of financial ratios suggested in this paper is currently being used by the Department of Financial stability in their periodic analyses and reports.

5. "FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH – THE CASE OF ALBANIA" - BY ELONA DUSHKU, RESEARCH DEPARTMENT

This material examines the cause and effect relationship between financial development and economic growth in the case of Albania using the Granger-Causality test for five different indicators of financial development. The empirical findings of the paper show that in the long run there is a positive relationship between all indicators measuring financial development and economic growth. However, in the short run this relationship is not clear, as different indicators yield different results. The paper uses data from the 1996-2007 time period.

6. "STRESS-TESTING THE INDIRECT CREDIT RISK IN ALBANIA" - BY HILDA SHIJAKU (FINANCIAL STABILITETY DEPARTMENT) AND KLITI CECA (RESEARCH DEPARTMENT)

The methodology used to measure indirect credit risk relies on the case proposed by Wong et al. (2006), who transforms a single equation into a system of equations. The authors conclude that changes in the Lek/Euro exchange rate and the Euribor rate have a considerable impact on the non performing loans ratio, while the effect of GDP growth is present but small.

III. ARTICLES AND WORKING PAPERS IN PROGRESS

During this period, research at the Bank of Albania has focused on the following topics:

1. "THE GAP MACROMODEL FOR ALBANIA" – RESEARCH DEPARTMENT

The Research Department is working on building a small macroeconomic model consisting of four estimated equations. The model will aim to make projections of the GDP, inflation, the interest rate and the exchange rate, all in terms of deviations from their equilibrium levels, this being the reason behind the GAP name attached to it. The model has the advantage of being fairly simple and transparent while considering the key economic variables of interest for monetary policy analysis. The model is a cross between elements of New Keynesian Theory (the role of aggregate demand in production) and DSGE models with rational expectations. The model is a structural model because the equations have an economic interpretation and it includes a general equilibrium of the economy because the endogenous variables are codependent. At the moment, work is focused on evaluating the equations and determining potential values for each of the macroeconomic variables.

2. "THE OPTIMAL LEVEL OF RESERVES: THE CASE OF ALBANIA" - BY GERTI SHIJAKU, RESEARCH DEPARTMENT

The goal of this paper is to present an empirical model of the optimal level of foreign reserve holdings for a small open economy like Albania, considering various exogenous shocks that could hit its macroeconomic environment.

3. "DOES FISCAL POLICY IN ALBANIA NEED A FISCAL RULE?- EVIDENCE FROM THE CROWDING OUT EFFECT AND TWIN DEFICITS" - BY ARMELA MANÇELLARI AND GERTI SHIJAKU, RESEARCH DEPARTMENT

This material seeks to evaluate the effectiveness of fiscal policy in Albania as well as to consider various economic

indicators with the aim of identifying a fiscal rule. The main focus of the paper is the crowding out effect on private consumption and investment as and an inquiry into the twin deficits hypothesis.

4. "FINANCIAL DEVELOPMENT AND INFLATION IN ALBANIA" - BY VASILIKA KOTA, RESEARCH DEPARTMENT

The study evaluates the relationship between inflation and financial development in Albania. Studies have generally shown that this relationship is not linear. Normally, a rise in inflation has a small positive effect when inflation is initially low and a negative effect when initial inflation is high. The study seeks to test if such hypothesis holds in the case of Albania by analyzing the relationship between inflation and financial penetration, controlling for GDP per capita, the country's openness to trade and public consumption to GDP.

5. "A STUDY OF THE PROBABILITY OF DEFAULT OF THE BANKING SYSTEM" - BY IRINI KALLUCI AND ORIELA KODRA, RESEARCH DEPARTMENT

This paper seeks to provide and apply a methodology for measuring the probability of default as a component of credit risk for banks operating in Albania. Measuring this probability is important in view of the First Pillar of Basel II, which pays particular attention to the main

risks faced by banks and to credit risk in particular.

6. "AN EVALUATION OF THE LONG TERM EFFECT OF TOURISM ON ECONOMIC GROWTH IN ALBANIAN" - BY JONEL KRISTO, RESEARCH DEPARTMENT

This study seeks to measure the effect of the tourism sector on the general economic growth of the country in the 1995-2008 time period. The long term relationship between tourism and growth is analyzed using data on the flow of foreign visitors and total real income in the economy.

7. "STRESS-TEST OF THE INDIRECT CREDIT RISK IN ALBANIA BASED ON BANK CHARACTERISTICS" - BY KLITI CECA (RESEARCH DEPARTMENT) DHE HILDA SHIJAKU (FINANCIAL STABILITY DEPARTMENT)

The paper investigates the response of the nonperforming loans radio to the macroeconomic conditions causing deterioration in the solvency of borrowers via the channels of the credit risk under banks specific characteristics, such as size, ownership, capitalization and other features of the loan portfolio. Empirically the modeling is enabled through panel estimation of Albanian banks data and would be of value added in evaluating parameters used for stress testing for individual banks.

V. OTHER ITEMS

The third regional meeting: "Economic Research in the South-Eastern Europe

On November 19-21, 2009, the Bank of Albania in collaboration with the Bank of Greece organized the 3rd annual meeting, "Economic Research in South-Eastern Europe", which was held at the Bank of Greece, Athens. There were 13 representatives from the Bank of Albania (presenters and discussants) and 30 representatives from the central banks of the region, Banca d'Italia, Osterreische National Bank, the European Commission, Eurobank EFG Group, National Bank of Greece, who participated in this workshop.

The aim of the workshop, now consolidated, is to further improve the economic research and to enhance the knowledge of the region's central banks on the characteristics and specific economic developments of our countries. The 3rd workshop lasted 2 days, and was structured in 6 sessions. The key issues addressed were: financial and economic stability; banking and finance; and domestic and external imbalances.

The first day was opened by the deputy governor of the Bank of Greece, Eleni Dendrinou, who gave the word to Gikas Hardouvelis, the chief economist at Eurobank EFG Group, who referred the study on "South-Eastern Europe after the crisis: Challenges and Perspectives", thus opening the first session "Macroeconomic Characteristics in the South-Eastern Europe". Afterwards, the session continued with the presentation of Altin

Tanku "A different point of view on the relationship between money demand and informal market premium". (See recently concluded papers). The second presentation was that of Vasilika Kota on "Persistence of inflation in Albania". This study offers an assessment of the inflation persistence during 1993-2008 (See recently concluded papers).

The second session "Central Banking in the South-Eastern Europe: Issues of Measurement and Policies" started with the opening speech of Carlos Martinez Mongay – head of sector at the European Commission, who discussed on " Economic Forecasts of the European Commission: The methodology employed and the current Outlook". Later, Oriela Kodra presented her study on "Evaluation of weights for the Index of Monetary Conditions in Albania". The aim of this study is to determine the relative weight of interest rate on the exchange rate in computing the index of monetary conditions in Albania, through OLS estimation.

The representative from the National Bank of Bulgaria presented "The model of a small open economy: The case of Bulgaria", discussed by Armela Mançellari. A particular and interesting topic was that of Arta Pisha on "Euro Area indices: A new model for measuring the central bank independence in the Euro Area". The author proposes a new way of measuring the independence of the central banks in the Euro Area. The proposed index suggests that the Bank of Albania should improve its legislation regarding

the budget and financial independence as well as the staff independence.

The second day began with the session on "Financial Stability and Sovereign Risk", where the first presenter was Georgios Moschovis- the European Commission – who described "Fiscal consolidation in candidate countries and potential candidates: the role of European integration objective". Altin Tanku discussed this presentation. Afterwards, Sophia Lazaretou (the Bank of Greece, and also the co-coordinator of the workshop), Mirna Dumičić (the National Bank of Croatia), and George Stubos (the Bank of Greece) presented their respective studies on the exposure of Greek banking system in the South-Eastern Europe, determinants of the risk premium on sovereign debt in emerging European economies…

The fourth session of the workshop on "Risk reduction techniques in local banking systems" opened with the presentation of Thomas Scheiber "Surveys findings on the euroization level in South-Eastern European economies. Afterwards, Arjan Kadareja – member of the Supervisory Council of the Bank of Albania- presented his study on "Outdated information, shocks and volatility", which was prepared in collaboration with Reint Groupp – European Business School and ZEW. Authors propose a new approach to measuring the effect of the unobserved private information on the volatility of the stocks earnings. The data support their hypothesis that the more outdated the available public information is, the higher are the effects of its volatility and persistence, given that investors' private information becomes more important in the decision-making process. One of the

main implications of such result is that banks' transparency, the level of details for off-balance-sheet accounts, and the frequency of information disclosure, are highly valued by investors. Then, the representative of the Bank of Turkey, Musa Orak, continued with his presentation on "Measuring the market expectations about monetary policy decision", which was discussed by Arjan Kadareja. The last topic addressed in this session was "Indirect credit risk stress-testing in Albania", by Hilda Shijaku and Kliti Ceca. (See recently concluded papers)

The fifth session opened with the presentation of Irini Kalluci "Analysis of the Albanian Banking System under the risk-performance perspective". (See recently concluded papers). This paper was discussed by Rajna Hoxholli and Sofika Note. This presentation was followed by the study of Rilind Kabashi and Mihajlo Vaskov – The Bank of the Republic of Macedonia - on the determinants of the loan rates in Macedonia. Elsa Kristo, representative of the Raiffessen Bank Albania, presented the study on "Awareness of the banking fraud risk", which was discussed by Elsida Orhan. Discussions on banking system risks were followed by the representative of the Bank of Russia, Tatiana Malakhova, who also concluded the fifth session.

The last session, led by Altin Tanku, aimed at discussing the regional integration into global financial environment. In such framework, Ilir Vika, presented "A stock-flow approach to exchange rate equilibrium Lek/Euro", in collaboration with Erjon Luçi (World Bank, Albania) (See recently concluded papers). The next presentations were those of Dimitros Dapontas (the University of

Peleponesse) and of Dimitros Sideris (The Bank of Greece), respectively on "Foreign exchange crisis: The Case of Hungary" and "The performance of Balkan countries in the European integration process".

This workshop had vast participation, which reflects the growing interest for research and economic discussion in the region and for the region. The collaboration resulted fruitful and successful. In the future, we expect to have other collaborations with other central banks of the region. As stated in its purpose, the Workshop of "Economic Research in South-Eastern Europe" is contributing enough to increasing the degree of integration, the level of research and the cooperation among banks of the region and beyond.

The Crisis Diary

At the beginning of the second half of the 2009, Irini Kalluci, Armela Mançellari and Gerti Shijaku, specialists of the Research Department, concluded the drafting of the memo "The Crisis Diary". This "diary" offers detailed information in a chronological order, about the regulatory changes that have occurred and the measures taken by the Bank of Albania during 2007, 2008 and the first half of the 2009. Also, "The Crisis Diary" comprises measures taken during the first half of 2009 by foreign institutions, such as: European Central Bank, the Federal Reserve Bank, other central banks, other governments, and parent banks or shareholders of banks operating in Albania.

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)