SCIENTIFIC NOVELTIES AT THE BANK OF ALBANIA

A few words...

*W*hen we first discussed the title of this publication, I asked my associates, - What is the fundamental difference between scientific research and novelties? Our discussion naturally converged to the conclusion that every scientific research starts with or brings about a novelty or at least represents an attempt for new knowledge. However, in research this new knowledge consists in derived results from meticulous study on well documented data by well-established scientific methods. Actually, research at the Bank of Albania satisfies both requirements. It represents a process that starts with the institution's need for adequate and appropriate policy making; and continues with the effort to produce results that might find application even beyond the Bank. Research at the Bank of Albania has been continuously linked to the Bank's main activities. It has been useful in terms of broader and more thorough understanding of economic developments, and has also helped in implementing an efficient monetary policy.

Research in our institution is designed as a well organized and focused activity that pursues and benefits from persistent optimization of research resources within the Bank and proper classification of our policy needs. In this respect, we have drafted and developed a scientific research agenda, which will be further discussed in the upcoming year. At the end of this period, such proposal shall become the midterm research strategy. The framework for the development of this important activity will guide the scientific research toward the following main areas:

1. *Empirical Macroeconomic Modeling.*
2. *Financial development and financial stability.*
3. *Economic activity and business cycles.*
4. *Empirical research in monetary policy and its transmission mechanism.*

As such, scientific research will be able to fulfill its main objective: serve the decision-making process at the Bank of Albania; while in the meantime providing vital information which benefits the entire Albanian economy. That is why we are introducing this newsletter, which will regularly bring all interested parties up to date with the outcome of economic research at the Bank of Albania.

The Governor

INTRODUCTION

This newsletter is a new publication of the Bank of Albania, primarily targeting professional researchers, inside and outside the Bank, although other interested parties are more than welcome to use it in their daily work. It aims at informing on the scientific research carried out at the Bank of Albania, and on its usefulness to the Bank's decision making process, and beyond.

Its contents is organized in such a manner, as to inform on new research at the Bank, and simultaneously draw all interested parties' attention on recent past research.

This periodical will be distributed according to the Discussion Papers' distribution list. Nonetheless, the list is not exclusive; all interested parties can request from the Bank of Albania to receive this newsletter periodically.

Contents:

I.   Friday Seminar.
II. Recently published research papers.
III. Working papers and articles.
IV. Articles, interviews, speeches of Bank managers or employees, published in daily press.
V.   Other.

I. FRIDAY SEMINAR

Friday Seminar is a novelty of the past two years at the Bank of Albania. As of January 2007, the Research Department at the Bank of Albania has been holding "The Friday Seminar". It invites all the Bank of Albania employees, researchers from academia and other financial, research and scientific institutions to present and discuss their theoretical and empirical research work.

Friday Seminar provides a good opportunity to strengthen and facilitate the communication between the Bank of Albania, universities and other research and scientific institutions that analyze economic developments in Albania, as well as assist in transmitting the expertise from researchers to decision-makers.

This seminar is held every two weeks at the Bank of Albania premises, with an interruption of two months—in July and August. The duration of each session is 60-90 minutes and each author is given around 30-40 minutes to present the paper. The remaining time is reserved for questions and comments. So far (December 2008), the Friday Seminar has hosted 27 researchers with 26 papers—mostly Bank of Albania employees from the Research and Monetary Policy Departments.

The most recent discussion paper presented at the Friday Seminar is "Euro Area Indices: A New Model for Measuring Central Bank Independence in the Euro Area", by Arta Pisha, Statistics Department.

The purpose of this paper is the discussion of four specific quantitative indices for measuring central bank independence in candidate countries for accession in the European Monetary Union (EMU), according to criteria well-defined in the European Union (EU) Constitution.

The central bank independence criteria, determined by EU, comprise the highest level of central bank independence in candidate countries for EU accession, and were valued at the maximum level of 1. The proposed indices range from 0 to 1. When the respective legislation does not ensure high independence for a certain central bank, the index takes close to 0 values; whereas it takes values close to 1 when the law guarantees central bank independence.

The proposed indices are *de-jure* ones. They are based on criteria that are well-defined by the EU, unlike some other indices that rely on criteria defined by the author that builds them. Preconditions for integration with the EMU, with regard to central bank independence, are the foundations for building the "Euro Area Indices": (i) Functional independence index, (ii) institutional independence index, (iii) staff independence index, and (iv) fiscal budget financing independence index.

In cases when EU legislation does not sanction specific areas of central bank independence, the author has used other criteria that serve as a comparison basis among candidate countries for EMU accession.

Such indices were used to measure central bank independence in South-Eastern European countries—candidate countries for EU integration—including Albania. Results show that the Bank of Albania has high degrees of functional independence and institutional independence (0.85 and 0.92, respectively)—very close to EU criteria. The paper recommends possible improvements in the current Bank of Albania legislation, with regard to higher fiscal independence, and staff independence, which were estimated 0.43 and 0.4 points, respectively.

II. RECENTLY PUBLISHED RESEARCH PAPERS

1. "MEASURING IMPORT AND EXPORT FUNCTIONS IN ALBANIA", ILIR VIKA, RESEARCH DEPARTMENT
(full pdf text)

This paper uses an Error Correction Model to measure the elasticity of merchandise import (export) flows to (from) Albania with respect to domestic (foreign) real demand, developments in relative prices abroad and at home, and local currency market fluctuations. The model specification is intended to find out whether trade flows respond differently to the explanatory variables in the long and short run. The estimated trade elasticities are useful for forecasting future trade flows as well as

to policymakers who need to evaluate commercial policies or exchange rate devaluation options to improve the merchandise trade balance.

2. "EXCHANGE RATE PASS-THROUGH IN ALBANIA", KLODIANA ISTREFI AND VALENTINA SEMI, RESEARCH DEPARTMENT AND MONETARY POLICY DEPARTMENT
(full pdf text)

This paper assesses the extent and the speed of exchange rate pass-through to consumer prices in Albania, using vector autoregression models—VAR. Evidence shows that exchange rate pass-through for the period 1996-2006 is complete within a year.

Meanwhile, a sub-sample analysis shows the incompleteness and the decline of pass-through to consumer prices after 2000. Developments in market structures, the stability of our currency, ALL, the low inflation environment and higher credibility in the Bank of Albania, rank as good justifiers to such behavior.

Nevertheless, this does not mean that exchange rate developments are no longer important for consumer price formation. This paper shows that the effect of exchange rate on prices is not easily captured by direct analyses of data on exchange rate and consumer prices. Therefore, the monetary authority should be cautious, and choose the right reaction toward exchange rate movements. If the volatility of exchange rate increases in the future, there is no guarantee that the reaction of the economy and especially consumer prices will not change.

3. "NEW CORE INFLATION MEASURES: THEIR USAGE IN FORECASTS AND ANALYSIS", EVELINA ÇELIKU AND RAJNA HOXHOLLI, MONETARY POLICY DEPARTMENT
(full pdf text)

The practice of core inflation measures provides various approaches. Is there any perfect and universal method to measure it? Until now, no such thing has been concluded. Selecting a method on whose basis a proper core inflation series is constructed is a debatable issue in academic and central bankers' circles.

Central banks employ different core inflation measures based on: (i) whether their ultimate target is core or headline inflation; (ii) whether they use it or not to forecast headline inflation. In all cases, it is aimed at selecting those methods that provide clear information to the decision-makers, economic agents and the public at large, on the long-term inflation trends. This research brings about arguments related to on-going discussions at the Bank of Albania on forecasting inflation in general, and core inflation in particular.

This paper examines several measures of core inflation. A summary of methods, of corresponding priorities and problems is made with regard to each measure. Then, based on the outcome of some statistical criteria, on tests about the degree of basic component persistence, on the predictive

abilities of core inflation measures for the headline inflation, efforts are made to evidence the optimal measure to be used under Albania's case.

Based on a complete estimation process, this paper presents forecasting models of various core inflation measures, exploring the possibility to obtain through them the most accurate headline inflation forecast. Making a balance between priorities and problems of the alternatives of various core inflation measures, the authors draw the conclusion that the most appropriate measure – which

simultaneously meets the statistical criteria and enables the headline inflation forecasting – is the one that permanently excludes some items from the basket. This model is preferred to be applied largely by different central banks, because of the high degree of transparency and better understanding by the public.

The research concludes by providing concrete proposals for including information on core inflation measures to Bank of Albania's periodical analyses on the developments of the economy in general, and of prices in particular.

III. WORKING PAPERS AND ARTICLES IN PROCESS

At this time, research at the Bank of Albania is mainly focused on inflation and financial markets. Meanwhile, the following studies are close to completion and discussion with the group of experts:

"Financial Development and Economic Growth: The Case of Albania", by Elona Dushku.

"Persistence of Inflation in Albania", by Vasilika Kota.
"Indirect Credit Risk Stress Testing in Albania", by Hilda Shijaku and Kliti Ceca.

You will very soon be able to attend or be part of discussions during the presentation of these studies.

V. OTHER

As a general rule, the working papers do not necessarily represent the official view of the Bank of Albania. They express the ideas and views of the respective author(s).

The first Working Paper published in English is "Comparative Analysis of Tax Systems with Some Countries of the Region", by Selami Xhepa, September 2000. (Link: www.bankofalbania.org/ Publications/ Research and Working Papers).

The first working paper presented in the Friday Seminar is "Money Demand in Albania", by Altin Tanku, January 12, 2007.

"The Governor's Award for the Best Diploma Thesis" is an open competition dedicated to Albanian students graduating in Albania or abroad, for their research work in fields like monetary economics, financial stability, economic integration of the Balkan countries toward Europe, Bank of Albania's activity, the Albanian banking sector, the Albanian economy as a whole etc..

In 2008, the awards went to:

• First Prize: Vasil Zaho, student at Middlesex Business School University, for the Diploma Thesis "Efficiency and Productivity Growth of Albanian Banks from 1996 to 2006".

• Second Prize: Arens Arbana, student at La Sapienza University, Rome, for the Diploma Thesis "The Consumer Price Index: Analysis of the Historical Series in Albania".

• Third prize: Leon Petani, student at Dokuz Eylul University in Turkey, for the Diploma Thesis "Foreign Banks Entrance into the Banking Systems of Transition Countries: The Case of Albania".

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

On November 13-14, 2008, the Bank of Albania organized in Tirana the 2nd workshop "Economic Research in South-Eastern Europe". A number of economic analysts and researchers from seven South-Eastern European central banks, and from the Central Banks of Italy, Poland and Turkey, participated in this workshop.

Following the first workshop, which was organized in 2007, the second one aimed to encourage the co-operation and the dialogue among economic researchers of the region, and to discuss different topics of high interest for central banking, as well. All the discussions and critiques had a direct focus on the research standards and the empirical or econometric methods used. The workshop was structured in five sessions and comprised of 16 paper presentations and also the discussions for the respective papers.

Discussions mainly focused on three topics, of primary interest to the central banks nowadays: monetary policy, macro-modeling and economic and financial integration. Separate sessions were dedicated to the first two topics, while the third one was reflected in three other sections.

The first session concentrated on monetary policy issues and included the presentation and discussion of three papers. The first one, "Monetary Transmission Mechanism in Turkey in the Context of Inflation Targeting: The Effect of the Monetary Policy on the Financial Markets", focused on the first stage of monetary transmission mechanism; from the policy rate to the different maturity treasury bills, the exchange rate, stock exchange markets and risk premium in the case of Turkey. The effects of the *expected* and *surprise* components of policy decisions were separately treated by the authors. According to the authors, the main effects on the returns of treasury bills derived from the surprise

component. The two other papers, "Feasibility of Inflation Targeting in the Case of Albania" and "The Role of the Monetary Aggregates in the Monetary Policy of the Bank of Albania", focused on the perspective of the monetary policy framework, by explaining the limitation of their findings due to data quality and availability.

The second session included presentations and discussions related to the exchange rate, as one of the channels of financial and economic integration. Two working papers were presented in this session. The first one was "The Flexible Exchange Rate as a Stabilizing Instrument: The Case of Poland". The author concludes that demand shocks in Poland relative to the Euro Area have largely been asymmetric and, that the flexible exchange rate of the Polish Zloty against the Euro has, to some extent, acted as a shock absorbing instrument.

Unless shocks in Poland become more symmetric relative to the Euro Area, an initial increase in output volatility after the adoption of the Euro might be expected. In any case, the results are very sensitive to model specification.

The second paper, "Assessing Motives behind the Bank of Albania's Purchase Interventions in the Forex Market", is based on the Probit and non-linear testing models. The results show that the ALL deviations from its trend, notably the longer-term and more persistent deviations, increase the probability for the Bank of Albania's interventions. The Central Bank has been more attentive to the interventions in response to exchange rate volatility.

The third session was dedicated to issues of the banking system, as one of the areas that requires more attention, notably in the actual circumstances. Three working papers were presented in this session. The first one, "The Determinants of Net Interest Margin in the Albanian Banking System", is based on the analysis of the determinants of net interest margin, by using panel data and fixed effects for individual banks in the case of Albania.

The results show that the net interest margin as a tool of expressing the costs and the efficiency of financial intermediation, in large part is affected by the volatility of interest rates of the domestic currency and Euribor, and less by the volatility of Libor. Furthermore, the net interest margin is affected by operating expenses, the mandatory reserves that banks deposit in the central bank, management quality and the level of bank capitalization.

The second paper discussed, "Foreign Bank Presence: The Experience of South-East European Countries during the Transition Process", offered an analysis of the banking sector developments in these countries as they moved toward the market economy. Particular attention was paid to the role of foreign banks in the development of domestic banking sectors. Among the paper's main findings are the sustainable growth of financial indicators despite the low levels of financial intermediation as well as the greater contribution of foreign banks compared to domestic banks to the growth of assets, crediting and geographical distribution. Despite these findings, empirical results show that ownership structure is not a strong explanatory variable for the

differences in crediting or in levels of sensitivity to GDP fluctuations between foreign and domestic banks.

The subject of the third paper, "Contagion Risk in the Croatian Banking System", was systemic risk in the Croatian interbank market, with special emphasis on credit risk. The author measures the risk of contagion through simulations of idiosyncratic bank failures and macroeconomic shocks. The study finds that the interbank market is small in size, with a manifold structure centered on money, where two-way exposures are concentrated only in a few big banks. As a result of the shallow domestic market, the conditions for contagion caused by idiosyncratic failure are not fulfilled. On the other hand, contagion due to macroeconomic shocks occurs only in the case of impossible scenarios.

The fourth session was dedicated precisely to macro-modeling. Among its four presentations, the first offered a lesson on the need for models at a central bank and the types of models that should be built in accordance with their purpose and the available data.

Models are important for central banks in order to gather information from a series of indicators, and understand how they relate, to final objectives; to present this information in a systematic and integrated fashion; to structure discussions within central banks as well as to facilitate external communication. The author states that macro-models are best built through cooperation among different structures within central banks and that they should be made available to the entire staff. At the same time, it is

recommended that several macro-models built around different conceptualizations be used, so that their robustness might be checked through comparison. This presentation also provided a brief description of the main models used by the Bank of Italy.

The second presentation of the session was on the macro-econometric model built and used by the Bank of Albania. This model is constrained by short run dynamics on the demand side and long run dynamics on the supply side. An error correction methodology is used to estimate behavioral equations and the model also features several identities. This model is mainly used to simulate scenarios.

The third presentation described the quarterly projection models used by the National Bank of Bulgaria. Long run relationships are mainly calibrated within a neoclassic optimization framework, while short run equations are estimated through an error correction, Engle-Granger two-step procedure. Expectations are backward looking.

The new macro-model of the Polish economy was presented fourth. This model has a hybrid modeling structure similar to that of its predecessor, but models the supply side in greater detail and models expectations explicitly. The model takes into account the features of a converging economy as well as structural changes. It is mainly used for inflation and GDP projections as well as for various simulations.

All presentations provided detailed explanations of the main equations

and results from different simulation exercises.

The fifth session of the workshop centered on issues like economic growth, investments and remittances, discussed in four working papers.

The first paper, "Estimation of the Investment Function for the Republic of Macedonia", describes the application of the Johansen cointegration method for building an investment function. Estimation results show that investments are affected in the short run not only by the aggregate demand but also by the marginal cost of capital.

The second paper, "Growth Dynamics of the Turkish Economy", focused on the estimation of productivity as a determinant of economic growth, with special emphasis on the effects of cyclical factors as well as internal and external shocks. The author concludes that the main source of Turkish economic growth for the past years has been capital accumulation, while the employment rate and productivity have only had a minor influence.

The third and fourth papers, "Determinants of Remittances: The Case of Kosovo" and "Macroeconomic Impact of Remittances in Romania" discussed the subject of immigrant remittances and their effects on some key economic indicators,

an issue that is also of particular importance for the Albanian economy.

In the third discussion, the author tested different micro-founded theories on the motivation of Kosovo migrants to remit to their country. Results suggest that motives to invest and perceptions about the business environment are two of the most significant determinants of remittances. This implies that there is room for policy-makers to improve infrastructure, fighting corruption, etc. The author considers remittances an important contributor to economic growth, and concludes that policy-makers should pay special attention to channeling remittances through the formal banking system.

The last paper focused on measuring remittances' impact on private consumption and private investment in Romania. The author uses ARDL (Autoregressive Distributed Lag) technique and estimates two equations. Stressing on the limitations of the study, mostly due to short time series data, the author concludes that remittances have provided and continue to provide a positive contribution to investments, and a negative one to private consumption.

This panel of economic researchers in Tirana was concluded with the conviction that such workshops are very useful, and should be more frequent in the future.

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)