Analysis of investment activity of Ukrainian commercial banks

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Abstract* – *The article analyses the investment activity of Ukrainian commercial banks, common characteristics, ways of improvement of current regulatory policy and implementation of macroprudential policy. Author reviewed tools of analysis (time series and fractal analysis).

Key words – bank, investment activity of commercial banks, macroprudential policy, systemic risk, time series, Ukraine, fractal analysis.

I. Introduction

Modern economic development of Ukraine is affected by post-crisis consequences. Regulation of activity of commercial banks became one of the most important economics topics. Numerous scientific researches, which were made by Ukrainian and foreign scholars, identified investment banking as priority in order to overcome the crisis, provide important funding for enterprises and create foundation for further development and progress.

A considerable contribution into defining the role of domestic banks in investment processes was made by following leading domestic scientists and economists: B. Lutsiv, V.Matvienko, A. Peresada, T. Mayorova, A. Kryklyi,

Investment activity of commercial banks influences not only on micro-level of economy, but also correlates with macroeconomic situation, financial stability and systemic risk. The Basel Agreement, the harmonization of bank systems, a concepts of new, safe and sound monetary policy and implementation of macroprudential regulation as an addition to microprudential are disputed both in domestic (V. Kovalenko, V. Mishenko [7], G. Karcheva, V. Belinska [1]) and foreign economic studies.

II. Risks of investment banking in post-crisis period and macroprudential regulation

According to the research, which was conducted by International Monetary Fund [4], a wide array of indicators is used to monitor systemic risk. Asset quality and liquidity indicators were considered the most important to monitor systemic risk. The most frequently cited indicators are banks' non-performing loans to total loans and the ratio of liquid assets to short-term liabilities. Financial sector risks with a systemic dimension may be grouped into six broad categories: credit risk, systemic liquidity risk, excessive leverage risk, foreign currency exposure risk, asset price risk, and risks associated with capital flows. [4]

Macroprudential policy is perfect method of control and monitoring of financial stability, because its priority is transformation of the domestic financial system, which consists of commercial banks, which are aimed at modernization and innovative development of the real sector. The bank system as part of the financial system is most relevant institution for tasks connected with the financing of innovation development through long-term investment loans. [1].

According to Mishchenko [7], National Bank of Ukraine should create a subdivision that would be carried out macroprudential regulation and supervision, and was responsible for monitoring and ensuring financial stability. Given the international experience, this subsection shall be named the Financial Stability department, which is subordinated directly to the Chairman of the National Bank. This unit will provide operational independence and its ability to effectively monitor and support financial stability and macro-prudential supervision. [7]

The National Institute of Strategic Studies (NISS) defines one of the main obstacles to engage banks in modernization process of national economy are inefficient current regulation and numerous risks. Unfortunately these risks aggravated post-crisis situation in Ukraine. Both of the issues can be resolved by introducing procedures, which were designed by NISS.

These procedure are concerned: removal of accumulated imbalances; improvement of existing and development of new regulatory policy of bank system with regards to the recommendations of the Basel and European Committee, which concern to introduction of risk-based monitoring; development and implementation of qualitative and quantitative risk assessments of banks in order to improve risk management of complex financial transactions; implementation of standards recommended by the Basel Committee; decriminalization of the banking system by increasing the transparency of bank activities; promotion of development of tools which enable financial institutions to accumulate long-term funds.[8]

All these procedures are highly recommended in order to activate investment activity of banks and initiate macroprudential monitotring.

A variety of models were proposed to prevent and foresee risk related situations in the future. The models include early warning models of financial crises (e.g., Kaminsky and Reinhart), asset price/real estate valuation models (e.g., fundamental analysis models), single-institution risk models (e.g., Merton-type, distance-to-default models, VaR models), systemic financial sector risk models (e.g., systemic CCA models, CoVaR models, distress dependence models), contagion risk models (e.g., Extreme Value Theory-based contagion models, domestic and cross-country network models), and macro-financial linkages models (e.g., sovereign CCA models, rating agency Z-score models). Stress testing is also used by many countries as an important tool for systemic risk identification and assessment. [4]

III. Statistical tools of analysis of investment activity of banks as a dynamic process

Growth rate of securities in portfolio of commercial banks of Ukraine has irregular movement, while growth rate of loans to business is significant. Rate of loans to business have tipping point in year 2008, this is result of crisis and afterwards growth rate stays low. Nowadays, one of the biggest share of banks portfolio belongs to the states bonds due to low risk. Growth rate of securities in

2013 increase in 1.3% a due to purchases of share of financial intermediaries.

Distribution of shares in the portfolio of banks is the reflection of the development of economy and its industries. Structure of bank's portfolio demonstrates most observed participation of banks in the capital of non-financial corporations (34%).

During 2002-2007 the market of financial services did not have considerable market and as a result we can observe an insignificant part of shares of financial corporations in the portfolio of banks. However, it should be noted that nowadays shares of financial corporations (39%) are one of the main investment assets in the investment portfolio of banks; this trend is a result of expansion of bank institution services and interest in a speculative income.

Unfortunately investment portfolio of commercial banks of Ukraine is small compare to the Loans and Deposits (Fig.1). The biggest share in structural aspect belong to the Loans, but after 2009 this share decreased by 8 percentage points from 65% in 2009 to 57% in 2010. Simultaneously we can see growth of the investment portfolio. After 2008 banks were interested to buy bond, but in 2010 due to liquidity issues banks decided to sell bonds, as a result it slow down growth rate of investment portfolio.

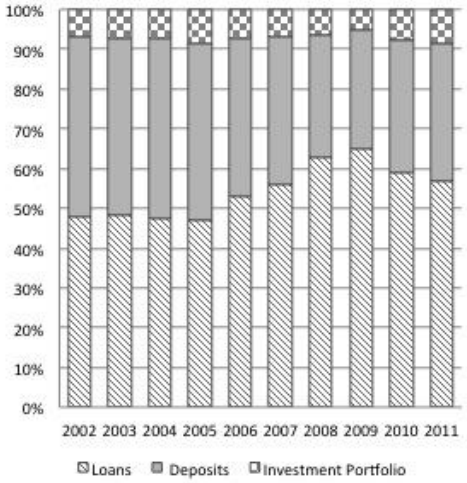

Fig.1 Structural ratio of Loans, Deposits and Investment Portfolio

During 2002-2007 period investment activity of commercial banks had the biggest growth rate, however in 2008 growth rate of investment activity of bank reach its minimum. Fluctuation of the structure of the investment portfolio of the commercial banks is chaotic and hard to simulate by the standard statistic tools.

To study dynamics of the investment activity of commercial banks we propose to analyse data by using time series and fractal analysis [5]. This technique allows us to understand investment activity as a dynamic process, which is influenced by inflation rates, exchange rate, stock exchange rates and other relevant macroeconomic factors. Observations of this type can be described using models ARCH [3] and GARCH [2], the essence of which lies in defining volatility clustering, which was described by Mandelbort [6].

Using these technics will allows us to define tipping point and repeating pattern (cycle) in statistical data. The results of the analysis can be used in the creation of the policy, to understand significance of the current situation, to prevent future cyclic crisis, to reduce harmful influence of unreasonable policy, to prevent systemic risks.

Conclusion

In this paper the main characteristics of investment activity of commercial banks were described and offered ways of improvements of policy and analytical procedures. Macroprudential policy was proposed as an effective measure to monitor system risk and financial stability. Author describes main advantages of the time series approach in analysing of the investment banking as a dynamic process with clustering of volatility.

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