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論文の内容の要旨

This dissertation aims to examine the monetary policy rule and its macro-economic performance in Mongolia. The Part I investigates the history of the Mongolian monetary policy in relation with its macroeconomic conditions during 1990-2016. The Part II focuses on empirical studies of monetary policy rule and its transmission mechanism under the inflation targeting framework since its adoption in 2007.

The Part I reviews the history of the macroeconomic condition and monetary policy challenges during 1990-2016. Chapter 1 examines the main macroeconomic indicators in Mongolian economy. The main fact-findings are summarized as follows. First, Mongolia began its transformation from a centrally planned economy to a market-based economy in the early 1990s. Second, the Mongolian economy experienced high inflation throughout history. Third, after the economic transition process, Mongolian government paid more attention to improving the foreign trade policy. The Mongolia joined World Trade Organization in 1997 and became a member of the ADB, IMF and World bank in 1991.

Chapter 2 indicates the financial system and monetary policy challenges during 1990-2006. The major fact-findings are summarized as follows. First, during the economic transition process a great number of economic reforms were undertaken. In 1991, Mongolia approved a new banking law and two-tier banking system was organized. Under the new system, the Bank of Mongolia was identified as a central bank. Mongolia also shifted to floating exchange rate regime in 1993. Second, the banking sector experienced a number of challenges during 1990-2006. The Mongolian

banking system suffered from three times crises in 1994, 1996 and 1998. Facing the crises, the Mongolian government and the BOM successfully implemented the policy, which aimed at strengthening banking system with the support of international financial institutions. Third, the BOM had a monetary aggregate targeting framework since the mid of 1990s until 2007, with reserve money as the operational target and money supply as the intermediate target.

Chapter 3 indicates the economic conditions and monetary policy changes during 2007-2016. The main fact-findings are summarized as follows. First, Mongolian economy expanded rapidly and economic growth reached the peak in history. After the economic crises in 2008, Mongolia explored the giant mining project, Turquoise hill, of copper and other coal projects, which made Mongolia a popular spot for foreign investors. Based on the mining sector development, foreign direct investment increased rapidly and GDP growth reached 17.3 percent in 2011. Second, monetary policy framework and tools have been changed based on economic condition. Since 2007, the monetary policy shifted to inflation targeting framework. Under this new framework, the BOM introduced the policy rate in 2007. Then, the BOM has been representing a forward looking monetary policy framework named the Forecasting and Analysis System in 2011. In 2013, the BOM initiated the interest rate corridor, which was a critical reformation of the policy rate transmission mechanism. Third, the BOM has been managing monetary policy in a flexible way according to economic conditions. For instance, the inflation rate recorded double digit during the period of 2010–2014. In order to reduce demand-side pressure on inflation, the BOM tightened its monetary policy and increased the reserve ratio requirement of commercial banks in the first half of 2012. Furthermore, in an effort to reduce the supply-side pressure on inflation, the BOM initiated the "Price stabilization program" (PSP) in conjunction with the Government of Mongolia in the second half of 2012. Since 2013, however, the BOM faced a number of challenges due to a decline in commodity price, capital outflows and Chinese economic slowdown. In 2013, the BOM cut the policy rate 3 times by 2.75 percentage point in total for promoting credit growth and real sector activity. Fourth, the BOM has been implementing managed-floating exchange rate regime. The BOM intervened in the exchange rate market in the case of the exchange market`s fluctuation and excessive volatility.

Focusing on the Mongolian monetary policy throughout the Part I, its framework has made the progresses to cope with inflation, including the adoption of an inflation targeting, the introduction of a policy rate as an operating target, the application of a forward-looking framework and the establishment of an interest rate corridor. In spite of these progresses, the Mongolian monetary policy management has faced difficulties by internal and external factors: the monetary policy has often been confronting with

expansionary fiscal policy in managing inflation, and also been disturbed by exchange rate fluctuation and massive flows of foreign capital. The history of Mongolian monetary policy, in this sense, contained not only a positive side of the progresses in its framework, but also a negative side of policy dilemma with internal and external factors.

The Part II reviews the monetary policy rule and its transmission mechanism in Mongolia under the inflation targeting framework since its adoption in 2007. Chapter 1 overviews the progress in monetary policy frameworks again. The first empirical analysis in Chapter 2 estimates the policy reaction function to see if the inflation targeting has been linked with a monetary policy rule emphasizing on inflation stabilization. The study contributes to the literature by examining the linkage between Mongolian monetary policy rule and inflation targeting directly and thoroughly for the first time and also by taking into account a recent progress in the inflation targeting framework toward forward-looking mode since 2012. The main findings through the estimation outcomes of policy reaction functions are as follows. First, the Mongolian current monetary policy rule under inflation targeting is characterized as inflation-responsive rule with forward-looking manner (one quarter ahead). It might reflect the progress in inflation targeting framework toward forward-looking mode by adopting the FPAS since 2011. Second, the inflation-responsiveness is, however, not powerful enough to stabilize inflation in the sense that the real policy rate tends to be still pro-cyclical to inflation pressure. It would be quite different from the monetary policy reactions of advanced economies. Third, the Mongolian monetary policy rule is also responsive to exchange rate movement, due to the "fear of floating". The policy reaction to exchange rate is typically represented by the fact that the BOM has still kept its policy rate at higher than ten percent even under the inflation rate below the targeted rate after 2015 to prevent currency value from falling. The "fear of floating" might weaken the policy reaction to inflation and output gap. The strategic policy implication to enhance monetary autonomy in the Mongolian monetary policy would be the serious necessities to have more foreign reserves to cope with foreign capital mobility and to diversify manufacturing industries to acquire a resilience against currency depreciation in the long run.

The second empirical analysis in Chapter 3 examines the monetary policy transmission mechanism under the inflation targeting in Mongolia by applying a structural vector-autoregressive (VAR) model. Under the inflation targeting framework, the BOM has introduced the policy rate since July 2007, and has established the interest rate corridor since February 2013, for the purpose of improving the interest rate channel of the transmission mechanism. The study then contributes to the literature by assessing whether the interest rate corridor has really improved the policy

rate transmission effects by comparing the effects between the pre-corridor and the post-corridor period. The main findings of this study are as follows. First, there is a clear contrast in the responses of the lending rate and inflation rate to the policy rate shock between the pre-corridor period and the post-corridor one: in the post-corridor period the effect of policy rate is clearly transmitted to the lending rate and inflation rate through the longer responses of interbank market rate, whereas the pre-corridor period does not represent any significant interest rate transmission effects. This outcome implies that the framework of the interest rate corridor has contributed successfully to enhancing monetary policy transmission mechanism, in particular, in controlling inflation rate. Second, the responses of exchange rate and industrial production to the policy rate shock are not significant even after the adoption of the interest rate corridor. This insignificance might come from the sticky policy rate to stabilize the exchange rate, so-called a "fear of floating".

The conclusion throughout the Part I and II is that the Mongolian monetary policy has shown steady progresses in its framework by adopting an inflation targeting and improving its operations; there have been still a serious problem, however, in its management in the sense that the "fear of floating" has prevented its policy rule from working effectively; therefore, the enrichment of foreign reserves in the short-run and the diversification of industries in the long-run should be recommended to enhance the monetary autonomy of Mongolia.

論文審査の結果の要旨

In the final examination, the following suggestions including those for the future research works were pointed out. The first point is about the "Macro-prudential" policy issue. There have still been a plenty of debates on its definition, its purpose and its concrete instruments. In case that Mongolia government and the BOM have conducted the Macro-prudential policy as a major policy target, there would be much room for this issue to be investigated also from the academic perspective.

Second, the dissertation could be improved if the methodological progresses in a structural VAR model was taken into account. As far as the monetary variables are concerned in a structural VAR model estimation, many technical progresses have been made to enhance the sophistication of analyses. The dissertation should review these progresses and then justify the choice of a rather traditional methodology, i.e., the Cholesky decomposition method, among many of sophisticated methods.

Third, the dissertation could enrich the explanation on why the interest rate corridor adopted since February 2013 is considered to enhance the transmission mechanism of policy rate from the practical aspect in Chapter 3 of Part II. This

clarification would make it easier to understand the reason why the estimation sample was divided into pre-corridor period and post-corridor one.

Forth, the discussion on transmission mechanism of interest rates usually accompanies the "yield-curve" issue. It could be attractive to examine some effects of the BOM policy-changes on the structure of interest rates with different time-horizons.

Lastly, the inconsistency between the estimated monetary policy rule as pro-cyclical one against inflation in Chapter 2 of Part II and the estimated transmission of policy rate as an effective one on inflation in Chapter 3 could be addressed by applying a "non-linear" estimation to policy reaction functions instead of the linear one as the future research work.

Although there has been much room for improvements, the dissertation is considered to have a lot of contributions to the existing literature on Mongolian monetary policy rule and its performances under the inflation targeting, from the perspective of its originality: the study addresses the estimation of Mongolian monetary policy rule for the first time and clarifies its position among the rules in emerging market economies; and the study evaluates the recent progresses in monetary policy framework such as the adoption of forward-looking framework and the implementation of interest-rate corridor.

Through comprehensive consideration, consequently, the committee unanimously agreed that the dissertation meets the requirement for the Doctorate's degree.