Chapter 19
Effects of Commodity and Asset Bubbles on Inflation in Indonesia

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ABSTRACT

This chapter aims to investigate the possible impacts of commodity and asset bubbles on inflation in Indonesian economics. The analysis is facilitated by a macroeconomic model described by a couple of structural equations which consist of several exogenous variables as shock generators. The model is basically a linear rational expectation model (LREM) and solved by implementing undetermined coefficient methods. A series of simulation based on the state space representation of the model with respect to an impulse response function is performed to highlight some of key features of current inflation trends. It is shown that consumer price inflation can be propagated by both hikes in international commodity prices and assets prices. Consequently, inflation can be more difficult to manage during an episode of commodity and asset bubbles. Indeed, such an episode is very common to emerging economies during the last few years and thereby it is not surprising that monetary authorities tend to miss the inflation target very often. It suggests that the authorities should take into account the future movement of commodity and assets prices when setting the target.

INFLATION TARGETING FRAMEWORK

Inflation targeting framework (ITF) is increasingly epidemic amongst central bankers of today. Indonesia, like many emerging economies, for instance, by law gives her central bank inflation stabilization as a sole formal mandate. Thus all efforts, resources and functions of the central bank have to be directed to achieve a pre-specified inflation target. Technically speaking, this will simplify the task of the central bank, making it
easier to fulfill the mandate. Despite that, however, as shown by the Indonesian experience, this single objective is not easy to carry. The nature of a small open economy which is prone to any kind of global shocks, among other things, seems to make the authority has limited capacity to direct price equilibrium toward a certain intended level.

Studies on inflation targeting in Indonesia economics are some. Chowdhury and Siregar (2004) explore the relationship between inflation and growth under fiscal and monetary constraints, which indicate a higher inflation rate than what is currently targeted. Moreover, Chowdhury and Ham (2009) examine, by using the threshold VAR model, changes in the relationship between inflation and growth for searching a threshold level of inflation. Siregar and Goo (2010) highlight basic features of the inflation targeting policies adopted by Indonesia and evaluate the commitment of the monetary authorities and the overall performances, showing that the country has had some success. Alamsyah, Joseph, Agung, and Zulverdy (2001) conduct a comprehensive study on the implementation of inflation targeting in Indonesia before, during, and after crisis period, leading to an outline of a preliminary design for a suitable inflation targeting framework for Indonesia. In boarder case, Ito and Hayashi (2004) provide the first comprehensive survey and assessment of inflation targeting in Asia including Indonesia. Lessons of inflation targeting in international perspectives can be found in Bernanke, Laubach, Mishkin, and Posen (1999).

Some descriptions about current trend in Indonesia’s inflation rate are as follows. In January 2008, the inflation rate was just about 6 percent, which for the Indonesian case could be considered as normal. It then accelerated very rapidly and by June it already reached a mere 12 percent level. In just a few months, it became double. In January 2009, it begun to decelerate very quickly and by August it was just slightly below 3 percent. Short after that, the inflation gained a momentum to increase again and by the end of 2010 it already backs to the 7 percent level. Starting 2011, the inflation decelerated again. Figure 1 clearly shows this roller-coaster type of inflation from January 2008 to September 2011 (45 periods).

In the same figure it is also shown the policy rate, i.e., BI-rate implemented by Bank Indonesia, which is stubbornly constant during the episode. Some would suggest that the authority did nothing to inflation. Other may conclude that it was too difficult for the authority to manage it. What is clear is that inflation does not seem to move toward the intended level.

This paper shed lights on the issue that ITF might not be an easy task to be carried out within a small open economy context. The boom and bust of commodities and assets prices may impair any small countries to stabilize inflation. The ups and downs of global prices of commodities and assets are not new. But the volatilities during the last ten years have reached an unprecedented level. Indeed, it is the size of volatilities that poses the challenge.

More specifically, this paper addresses the consequences of two global shocks, i.e., commodity and asset prices, on inflation management in a small open economy. The links between international price and domestic price are already well known. Price of tradable goods is part of the CPI composite. However, the effect of asset price on inflation is somewhat less clear. In this case, one of the contributions of this paper is in simplifying such effect under rational expectation framework.

It is well understood that a series of crises: subprime mortgage crisis in 2006, the banking credit crisis in 2007, and the global financial crisis in 2008, is originated from an asset bubble in real estate. In 2005 the price of real estate rises quickly over a short period of time due to excess demand as many people bought homes for investments to sell as prices kept rising. Unfortunately, prices started to fall in 2006 and triggered a series of consequences. The financial crisis has turned the attention of economists to asset price bubbles, or, more generally, to financial instability, led to a consensus on the need for a new paradigm of
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