



Ensayos sobre POLÍTICA ECONÓMICA

www.elsevier.es/espe



Asset price bubbles and monetary policy in a small open economy[☆]



Martha López

Research Unit, Banco de la República, Cra 7. # 14-78, Colombia

ARTICLE INFO

Article history:

Received 21 July 2014

Accepted 25 November 2014

Available online 7 February 2015

JEL classification:

E32 R40 E47 E52

Keywords:

Exogenous bubble

Monetary policy

Macroeconomic volatility

DSGE model

ABSTRACT

In this paper we expanded the closed economy model by Bernanke and Gertler (1999) in order to account for the macroeconomic effects of an asset price bubble in the context of a small open economy model. During the nineties emerging market economies opened their financial accounts to foreign investment but generated growing macroeconomic imbalances in these economies. Our goal in this paper is twofold: first we want to analyze if the conclusions of Bernanke and Gertler (1999) remain in the case of a small open economy. And second, we want to compare the results in terms of macroeconomic volatility of the model for a closed economy versus the model for a small open economy. Our results show that the conclusion about the fact that the Central Bank should not react to asset price remains as in the case of a closed economy model, and that small open economies are more vulnerable to asset prices bubbles due to capital inflows and the exchange rate mechanism of the monetary policy. Therefore in small open economies the business cycle is deeper. Finally, in the face of a boom followed by a bust in an asset price bubble, macroeconomic volatility would be dampened if the monetary authority focuses only on inflation.

© 2014 Banco de la República de Colombia. Published by Elsevier España, S.L.U. All rights reserved.

Burbuja de precio de los activos y política monetaria en economía abierta pequeña

RESUMEN

En el presente ensayo ampliamos el modelo de economía cerrada de Bernanke y Gertler (1999) con el fin de tener en cuenta los efectos macroeconómicos de la burbuja de precios de los activos en el contexto de un modelo de economía pequeña y abierta. Durante los noventa, las economías emergentes abrieron sus cuentas financieras a las inversiones extranjeras, pero esto generó un desequilibrio macroeconómico creciente en estas economías. Nuestro objetivo con este estudio es doble: en primer lugar, queremos analizar si las conclusiones de Bernanke y Gertler (1999) se mantienen en el caso de una economía abierta y pequeña. En segundo lugar, queremos comparar los resultados en el ámbito de la volatilidad macroeconómica del modelo en una economía cerrada frente al modelo de una economía abierta y pequeña. Nuestros resultados demuestran que la conclusión acerca de que el Banco Central no debería reaccionar ante los precios de los activos se mantiene como en el caso del modelo económico cerrado, y que las economías abiertas pequeñas son más vulnerables a las burbujas de precios de los activos debido a la afluencia de capital y al mecanismo de tipos de cambio de la política monetaria. Por lo tanto, el ciclo económico está más acentuado en las economías abiertas pequeñas. Por último, ante un rápido incremento seguido de una caída repentina de la burbuja de precios de los activos la volatilidad macroeconómica se vería amortiguada en caso de que la autoridad monetaria se centrara únicamente en la inflación.

© 2014 Banco de la República de Colombia. Publicado por Elsevier España, S.L.U. Todos los derechos reservados.

Palabras clave:

burbuja exógena

política monetaria

volatilidad macroeconómica

modelo EGDE

[☆] I thank Hernando Vargas and Eduardo Sarmiento Gómez for comments on earlier drafts. The views expressed in the paper are those of the author and do not represent those of the Banco de la República or its Board of Directors.

E-mail address: mlopezpi@banrep.gov.co

<http://dx.doi.org/10.1016/j.espe.2014.11.003>

0120-4483/© 2014 Banco de la República de Colombia. Published by Elsevier España, S.L.U. All rights reserved.

1. Introduction

Asset price bubbles are of major concern for scholars and policy makers because of the devastating consequences on the real economy if the bubble bursts. During the nineties emerging market economies opened their financial accounts to foreign investment but it generated growing macroeconomic unbalances in these economies.

The liberalization of financial markets and the globalization of capital markets have improved the provision of financial services and the allocation of resources, but they are also related to more pronounced financial cycles. The deepness of these cycles has usually come hand-in-hand with strong movements in asset prices, amplifying the business cycle and sometimes ending in banking and exchange market crises. Although industrial and emerging market economies had been affected, emerging markets like the ones in Latin America and Asia, had incurred the heaviest costs (Collins & Senhadji, 2003).

During the 2000s the emerging market economies introduced some regulatory measures to prevent crises like the ones presented at the end of the 1990s. However, capital inflows continue to be a major concern for these economies as they present strong correlation with asset prices overvaluations. As we can observe in Fig. 1, the surge of capital inflows during the 2000s in some Latin American countries has been related with strong movements in asset prices, especially since 2004.

As Herrera and Perry (2003) document, the determinants of bubbles in Latin America are not only common external factors (like the degree of overvaluation in U.S. asset prices and the spread between 10-year bonds and three month Treasury-bills) but also some country specific factors like capital flows and terms of trade shocks.

Similarly, during the 1990s, countries like Indonesia, Philippines, Thailand and Korea experienced an extreme capital and asset prices cycle. “Key features of the build up included heady belief in an “East Asian Miracle” capable of delivering rapid economic growth over an extended period; capital account and financial market liberalization that contributed to heavy capital inflows intermediated in considerable part through the banking system; and high rates of investment and rapid increase in asset prices. Subsequently, economic growth suffered set backs, asset markets reversed, and both financial and corporate balance sheets deteriorated” (Collins & Senhadji, 2003).

In the case of Asian countries, the initial 2007s cracks in the financial system of the West had relatively limited impact. In part, the Asian banking model reflected the relatively conservative regulatory regime developed in the 2000s, in light of the lessons learned during the Asian financial crisis of the late 1990s. Regulators took a relatively conservative approach toward financial stability issues and risk management, Filardo (2011). Additionally, fiscal authorities strengthened their policy in the 2000s generating important fiscal surpluses. Finally, the region had accumulated massive quantities of foreign reserves throughout the decade. However, despite the strong fundamentals of the region, it was finally hit by the international financial crisis in 2008. Research by Kim, Loretan and Remolona (2010) found that most of the sharp increase in the sovereign CDS spreads in the region was due to changes in risk appetite. Along with a rapid reversal of commodity prices it was present a massive wave of investor pessimism that led to an abrupt swing in the mispricing of risk: from a large underpricing of risk before the crisis to a significant overpricing of risks after it. The severe disruption in international, especially U.S.-dollar-denominated, money and capital markets was a major characteristic of the international financial crisis. One lesson from the crisis was that those economies most vulnerable to a shock to external demand suffered heavily, Filardo (2011). Cross-border

capital outflows aggravated the situation in countries like Korea which is an economy with fairly liquid and open equity markets.

But asset price volatility is also of major concern for policy makers in industrialized countries. Even though Central Banks have inflation under control, financial instability is one of the major concerns, of which one important dimension is the increased volatility of asset prices, especially since the 1990s. However, as pointed out by Bernanke (2010), even though capital inflows from emerging markets to industrial countries can help to explain asset price appreciation in the countries receiving the funds, we can say that the main source of this financial instability are not the capital inflows but that for example in the recent financial crisis of the United States in the late 2000s, the availability of alternative mortgage products prove to be quite important in the building up of the housing bubble.

Turning now to the study of the proper reaction of the monetary authorities to the presence of bubbles, in their seminal paper of 1999, Bernanke and Gertler address the question of how central banks ought to respond to asset price volatility in an overall strategy for monetary policy. In doing so, they set up a closed economy model, which we will describe below, and they ask the question if the Central Bank, with its nominal interest rate, should react not only to the inflation rate but also to asset prices in the face of an asset price bubble. Their conclusion, as we will replicate it below, is that no, it should not react to asset prices.

In this paper, we extended their model to account for capital inflows and real exchange rate appreciation in the context of a small open economy model. Our goal in this paper is twofold: first we want to analyze if the conclusions of Bernanke and Gertler (1999) remain in the case of a small open economy. And second, we want to compare the results in terms of macroeconomic volatility of the model for a closed economy versus the model for a small open economy.

Our results show that the conclusions about the fact that the Central Bank should not react to asset prices remains as in the case of a closed economy model, and that small open economies are more vulnerable to asset prices bubbles due to the exchange rate mechanism of the monetary policy. Therefore in small open economies the business cycle is deeper. Finally, in the face of a boom followed by a bust in an asset price bubble, macroeconomic volatility would be dampened if the monetary authority focuses only on inflation.

The paper is organized as follows: the first section is this introduction; the second section describes the Bernanke and Gertler (1999) closed economy model; the third section presents our small open economy model and its simulations; the four section concludes.

2. The Bernanke–Gertler model: closed economy model

In their seminal paper, Bernanke and Gertler (1999, 2001) present a closed economy model (CEM) based on the model of financial accelerator by Bernanke, Gertler and Gilchrist (1999) (BGG from now on) but adding an exogenous bubble. The model is a dynamic new Keynesian framework with financial frictions. The agents in the economy are a household sector, a business sector and a government that manages fiscal and monetary authority. Households are infinitely lived and decide labor supply, consumption and savings. The firms are divided into two groups: one that is the group of entrepreneurs who produce wholesale goods and make the investment decisions related with the financing of acquisition of capital; the other group of firms is the retailers that differentiate the wholesale good and make the price setting in the economy à la Calvo (1983).

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات