

THE GROWTH OF EMERGING ECONOMIES AND GLOBAL MACROECONOMIC STABILITY

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Abstract

This paper studies how the unprecedented growth within emerging countries during the last two decades has affected global macroeconomic stability in both emerging and industrialized countries. To address this question I develop a two-country model (representative of industrialized and emerging economies) where financial intermediaries play a central role in the intermediation of funds and crises could emerge from self-fulfilling expectations about the liquidity of the banking sector. By increasing the worldwide demand for safe financial assets, the growth of emerging countries has increased the incentive of banks to leverage, which in turn has contributed to greater financial and macroeconomic instability in both industrialized and emerging economies.

1 Introduction

During the last two decades we have witnessed unprecedented growth within emerging countries. As a result of the sustained growth, the size of these economies has increased dramatically compared to industrialized countries. The top panel of Figure 1 shows that, in PPP terms, the GDP of emerging

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countries at the beginning of the 1990s was 46 percent the GDP of industrialized countries. This number has increased to 90 percent by 2011. When the GDP comparison is based on nominal exchange rates, the relative size of emerging economies has increased from 17 to 52 percent.

During the same period, emerging economies have increased the foreign holdings of safe financial assets. It is customary to divide foreign assets in four classes: (i) debt instruments and international reserves; (ii) portfolio investments; (iii) foreign direct investments; (iv) other investments (see Gourinchas and Rey (2007) and Lane and Milesi-Ferretti (2007)). The net foreign position in the first class of assets—debt and international reserves—is plotted in the bottom panel of Figure 1 separately for industrialized and emerging countries. The figure shows that, since the early 1990s, emerging countries have accumulated ‘positive’ net positions while industrialized countries have accumulated ‘negative’ net positions.

There are several theories proposed in the literature to explain why emerging economies accumulate safe assets issued by industrialized countries. One explanation posits that emerging countries have pursued policies aimed at keeping their currencies undervalued and, to achieve this, they have purchased large volumes of foreign financial assets, especially securities issued by foreign governments in advanced economies. Another explanation is based on differences in the characteristics of financial markets. The idea is that lower financial development in emerging countries impairs the ability of these countries to create viable saving instruments for intertemporal smoothing (Caballero, Farhi, and Gourinchas (2008)) or for insurance purpose (Mendoza, Quadrini, and Ríos-Rull (2009)). Because of this limitations, they turn to industrialized countries for the acquisition of these assets. A third explanation is based on greater idiosyncratic uncertainty faced by consumers and firms in emerging countries due, for example, to higher idiosyncratic risk or lower safety net provided by the public sector.

Independently of the particular mechanism that could generate the high demand for safe financial assets from emerging economies, as the relative size of these countries increases, so does the global demand for these assets. The goal of this paper is to study how this affects financial and macroeconomic stability in both emerging and industrialized countries.

To address this question I develop a two-country model where financial intermediaries play a central role in the intermediation of funds from agents in excess of funds (lenders) to agents in need of funds (borrowers). Financial intermediaries issue liabilities and make loans. Differently from recent

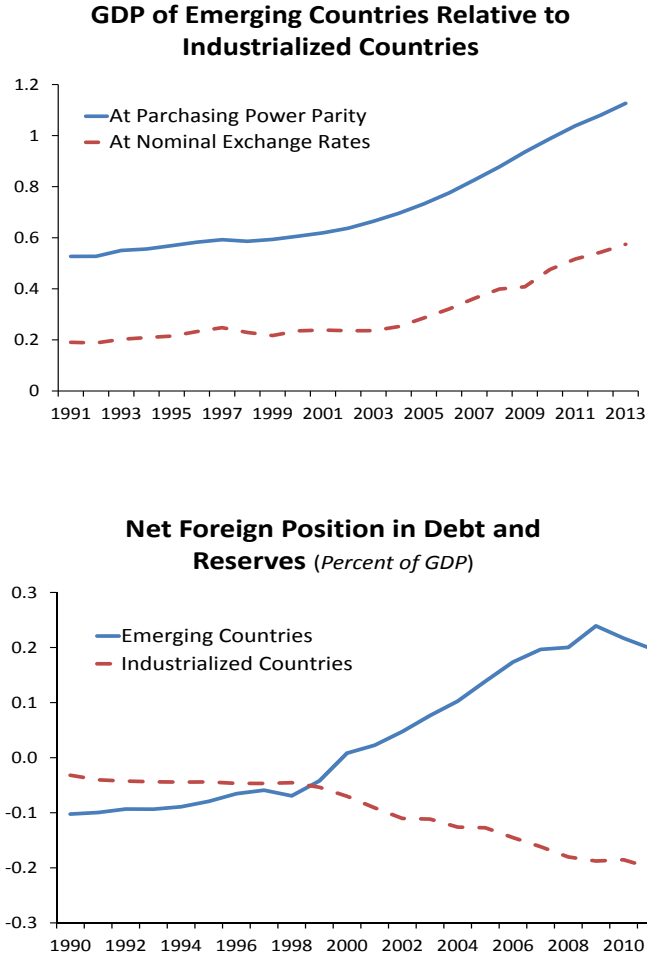


Figure 1: Gross domestic product and net foreign positions in debt instruments and international reserves of emerging and industrialized countries. **Emerging countries:** Argentina, Brazil, Bulgaria, Chile, China, Hong.Kong, Colombia, Estonia, Hungary, India, Indonesia, South Korea, Latvia, Lithuania, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Romania, Russia, South Africa, Thailand, Turkey, Ukraine, Venezuela. **Industrialized countries:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United.Kingdom, United.States. **Sources:** World Development Indicators (World Bank) and External Wealth of Nations Mark II database (Lane and Milesi-Ferretti (2007)).

macroeconomic models proposed in the literature,¹ I emphasize the central

¹See, for example, Van den Heuvel (2008), Meh and Moran (2010), Brunnermeier and

role of banks in issuing liabilities (or facilitating the issuance of liabilities) rather than its lending role for macroeconomic dynamics.

Bank liabilities play an important role as insurance instruments. When the stock of bank liabilities held by other sectors of the economy increases, agents are better insured and willing to engage in activities that are individually risky. In aggregate, this allows for sustained employment, production and consumption. However, when banks issue more liabilities, they also create the conditions for a liquidity crisis. A crisis generates a drop in the volume of intermediated funds and with it a fall in the stock of bank liabilities held by the nonfinancial sector. As a consequence of this, the nonfinancial sector will be less willing to engage in risky activities with a consequent macroeconomic contraction.

A central feature of the model is that the probability and macroeconomic consequences of a liquidity crisis depend on the leverage chosen by banks, which in turn depends on the interest rate paid on their liabilities (funding cost). When the interest rate is low, banks have more incentives to leverage, which in turn increases the likelihood of a liquidity crisis. It is then easy to see how the growth of emerging countries could contribute to global economic instability. As the share of these countries in the world economy increases, the worldwide demand for financial assets (bank liabilities in the model) rises. This drives down the interest rate paid by banks on their liabilities, increasing the incentives to take more leverage. But as the banking sector becomes more leveraged, the likelihood of a crisis starts to emerge and/or the consequences become bigger. As long as a crisis does not materialize, the economy enjoys sustained levels of financial intermediation, asset prices and economic activity. Eventually, however, a crisis does materialize, inducing a reversal in financial intermediation with consequent contractions in asset prices and overall economic activity.

The organization of the paper is as follows. Section 2 describes the model and characterizes the equilibrium. Section 3 applies the model to study the central question addressed in the paper, that is, how the growth of emerging economies affects the financial and macroeconomic stability of both emerging and industrialized countries. Section 4 concludes.

Sannikov (2010), Gertler and Kiyotaki (2010), Mendoza and Quadrini (2010), De Fiore and Uhlig (2011), Gertler and Karadi (2011), Boissay, Collard, and Smets (2010), Corbae and D’Erasmus (2012), Rampini and Viswanathan (2012), Adrian, Colla, and Shin (2013).

2 Model

There are two countries in the model, indexed by $j \in \{1, 2\}$. The first country is representative of industrialized economies and the second is representative of emerging economies. In each of the two countries there are two non-financial sectors: the entrepreneurial sector and the worker sector. In addition, there is a financial intermediation sector populated by profit-maximizing banks that operate globally in a regime of international capital mobility. The role of banks is to facilitate the transfer of resources between entrepreneurs and workers and across countries. The ownership of banks by country 1 or country 2 is irrelevant as will become clear later. What is important is that banks operate globally, that is, they can issue liabilities and make loans in both countries.

Countries are heterogeneous in two dimensions: (i) economic size captured by differences in aggregate productivity $A_{j,t}$; and (ii) financial market development captured by a parameter η_j . While productivity is allowed to change over time, financial market development is assumed to remain constant, which explains the time subscript in $A_{j,t}$ but not in η_j . Although changes in the relative size of countries could also be a consequence of other factors besides productivity (for example population growth, investment, real exchange rates), in the model these additional changes are isomorphic to productivity changes. Finally, the assumption that only cross-country productivity (as a proxy for economic size) changes over time while differences in financial markets development remain constant, is consistent with the main question addressed in this paper, that is, how the increasing economic size of emerging countries impacts financial and macroeconomic stability in a globalized world. In order to isolate the effect of the change in economic size from other factors, I keep everything else constant including the financial characteristics of these countries. As we will see, it is the financial heterogeneity of the two countries—captured by the parameter η_j —that will make the change in the relative size of emerging countries important for global macroeconomic stability.