

Monetary Policy In Dollarized Economies Occasional Paper International Monetary Fund

This paper extends the framework derived by Jeanne and Rancière (2006) by explicitly incorporating the dollarization of bank deposits into the analysis of the optimal level of foreign reserves for prudential purposes. In the extended model, a sudden stop in capital flows occurs in tandem with a run on dollar deposits. Reserves can smooth consumption in a crisis but are costly to carry. The resulting expression for the optimal level of reserves is calibrated for Uruguay, a country with high dollarization of bank deposits. The baseline calibration indicates that the gap between actual and optimal reserves has declined sharply since the 2002 crisis due to a substantial reduction in vulnerabilities. While the results suggest that reserves are now near optimal levels, further accumulation may be desirable going forward, partly because banks' currently high liquidity levels are likely to decline as the credit recovery matures.

We re-appraise the cross-country evidence on the dollarization of financial systems in emerging market economies. Amidst striking heterogeneity of patterns across regions, we identify a broad global trend towards financial sector de-dollarization from the early 2000s to the eve of the global financial crisis of 2008–09. Since then, de-dollarization has broadly stalled or even reversed in many economies. Yet a few of them have continued to de-dollarize. This suggests that domestic factors are also important and interact with global factors. To gain insight into such an interaction, we examine the experience of Peru since the early 1990s and find that low global interest rates, low global risk-aversion, and high commodity prices have fostered de-dollarization. Domestic macro-prudential measures that raise the relative cost of domestic dollar loans and the introduction and adherence to inflation targeting have also been key.

The use of the US dollar for domestic monetary transactions outside the USA has gone on for many years now – Panama in 1904 being the earliest example. Since the advent of the Euro, the debate over the benefits of monetary integration has warmed up – particularly for NAFTA countries. This collection, with contributions from experts such as Philip Arestis, Malcolm Sawyer and Stephanie Bell, examines the various problems and benefits involved in monetary integration and covers the causes of Euro instability, monetary policy in non-optimal currency unions, financial openness and dollarization and the question of dollarization in Canada. This book addresses one of the burning policy issues in Europe and America: is monetary union worthwhile? The readable yet comprehensive style of this book will make it of interest not only to academics and students involved in European integration, financial liberalization and dollarization, but will also be an important book for policy-makers at intergovernmental level.

Analyzes the costs and benefits of full dollarization, or the adoption by one country of another country's currency. Potential advantages include lower borrowing costs and deeper integration into world markets. But countries lose the ability to devalue, and become dependent on the U.S. Compares with currency board option.

Good Or Bad?

Monetary Transmission in Dollarized and Non-Dollarized Economies

Monetary Unions and Hard Pegs

Monetary Policy in Dollarized Economies

Dollarization and Financial Development

The Monetary Transmission in Dollarized and Non-Dollarized Economies

Financial services with global reach are becoming ever more important in the conduct and organization of the trade and investment of nations, and currencies that lack international standing lose out in this business. The result of financial development has been destabilizing currency and portfolio substitution – in favour of international currencies and against local ones. This book analyses formal approaches to overcoming monetary divisions within countries and within integrating regions, focusing on the consequences of monetary union for trade among union members and their financial development and stability. The authors discuss hard pegs such as those attempted by the currency board of Argentina, outright dollarization, such as in Ecuador, and multilateral monetary union, as in Europe, the least reversible form of monetary union and the most powerful elixir of financial integration and trade. The political classes and central banks in most countries have been reluctant to admit the market- and technology-driven forces of currency consolidation, much less yield to them. International financial institutions too are still in the habit of proffering advice about national monetary and exchange-rate policies on the assumption that getting rid of both is not even an option. Emerging-market countries, in particular, have to choose between retaining what independent monetary means they still have – and can safely use in the presence of widespread liability dollarization and currency mismatches – and formally replacing the domestic with an international currency to reduce exposure to debilitating financial crises. In concrete investigations of

this choice, this volume shows that monetary union deserves a much more sympathetic hearing. Exchange rate targeting is considered the best policy option in dollarized economies when wages and prices are indexed to the exchange rate. Croatia is a highly dollarized economy, but empirical investigation conducted in this paper shows that exchange rate pass-through has been low after stabilization. This finding, which is robust to different methodologies (VAR, cointegration), would suggest that dollarization is mostly limited to financial assets and therefore that strict exchange rate targeting may not necessarily be the best option. However, policy implications are unclear due to the endogeneity of the pass-through to the policy regime.

We examine the implications of high degrees of dollarization for the choice of exchange rate regime and the information content of various monetary aggregates in developing countries. We conclude that a high degree of currency substitution argues for a more fixed exchange rate regime, while asset substitution may imply that either more rigid or more flexible regimes may be appropriate. We also ask whether the most informative monetary aggregates include dollar assets. Based on an analysis of five countries, we conclude inter alia that broader aggregates that include dollar assets perform better than those that do not.

Over the past decade, Cambodia has become Asia's most dollarized economy. In contrast, dollarization in neighboring Lao P.D.R., Mongolia, and Vietnam has been either declining or broadly stable. Somewhat paradoxically, growing dollarization in Cambodia has occurred against the backdrop of greater macroeconomic and political stability. The usual motive, currency substitution, does not appear to have been a factor. As the volume of dollars increased over the years, so has the volume of riel. A strong inward flow of dollars related to garments sector exports, tourism receipts, foreign direct investment, and aid, has benefitted the dollar based urban economy. The riel based rural economy has, however, lagged behind. Given international experience in de-dollarization, a carefully managed market based strategy, supported by a continued stable macroeconomic environment is essential for Cambodia's de-dollarization.

Causes and Impact of Partial Dollarization on Developing and Emerging Markets

Financial Stability in Dollarized Economies

Its Effectson El Salvador

Concepts and Implications for Monetary and Exchange Rate Policy in the Philippines

Dollarization of the Banking System

Dollarization in Cambodia

The shift to inflation targeting has contributed to the relatively low inflation observed in some emerging market economies although, as noted by many economists, the preconditions required for a successful implementation were not in place. The existence of managed exchange rate regimes, a narrow base of domestic nominal financial assets, the lack of market instruments to hedge exchange rate risks, together with fear of floating and dollarization, have been stressed as factors that might weaken the efficacy of monetary policy. By examining various aspects of monetary transmission and policy formulation in two highly dollarized economies (Peru and Bolivia) vis-à-vis two economies with low levels of dollarization (Chile and Colombia), we found that, while dollarization imposes differences in both the transmission capacity of monetary policy and its impact on real and financial sectors, it does not preclude the use of inflation targeting as a policy regime.

This book gives a broad overview of the main monetary policy challenges faced by countries that are in the lower income range, have an underdeveloped financial sector, and are weakly integrated to the international capital market.

This paper quantifies the effects of external risks for Peru, with particular attention to two major external risks, China's investment slowdown and the U.S. monetary policy tightening. In particular, a macroeconomic model for a small open and partially dollarized economy is developed and estimated for Peru to measure the risk spillovers, and simulate domestic macroeconomic responses in different scenarios with these two external risks. The simulation results suggest that Peru's output is vulnerable to both risks, particularly the U.S. monetary policy tightening. Simulations also highlight the importance of higher exchange rate flexibility and a lower degree of dollarization, which could help mitigate the negative spillover effects of these external risks.

This paper explores how real dollarization (dollar indexing of wages), financial dollarization (dollar denomination of financial contracts), and monetary policy interact in a general equilibrium, new open-economy macroeconomics model with real shocks. Real dollarization is avoided as long as the home monetary authorities conduct monetary policy optimally (maximize local welfare). Suboptimal monetary policies are more likely to induce real dollarization when the correlation between domestic and external shocks is high, since in this case the (presumably optimal) foreign monetary policy guarantees a better level of protection against macroeconomic uncertainty. While real dollarization contributes to financial dollarization, important asymmetries between the two were found.

The Determinants of Banks' Liquidity Buffers in Central America

The Role of Financial Dollarization

Monetary Policy in an Open Economy

Dollarization and De-dollarization in Transitional Economies of Southeast Asia

Insights from a Macroeconomic Model for a Small Open and Partially Dollarized Economy

My dissertation has four chapters. I use dynamic stochastic general equilibrium (DSGE) models to study the welfare implications of exchange rate, monetary, and fiscal policies in de facto dollarized economies. Dollarization is a common phenomenon in emerging economies. In many of them economic agents hold liabilities in foreign currency while most income is earned in domestic currency. Thus, a sudden depreciation of the domestic currency may cause significant adverse effects on domestic agents' wealth and welfare. That is why governments try to design and implement macroeconomic policies that help reduce these adverse effects. My work aims at contributing to the design and implementation of these policies. In the first chapter, I study alternative exchange rate regimes in a dollarized economy. I develop a DSGE model and pursue Bayesian estimation using data from Singapore. The main conclusion is that the flexible exchange rate regime is better than the fixed exchange rate. In the second chapter, I work on an extension of my first chapter by introducing nontradable goods, which allows me to study a broader set of exchange rate regimes in a dollarized economy. I develop a DSGE model and pursue Bayesian estimation using data from Peru. The main conclusion is that a policy that pegs the domestic currency price of exports is better than a flexible exchange rate regime that targets the consumer price index, which in turn is better than the fixed

exchange rate. The third chapter studies the optimal fiscal rule for a dollarized economy. Using a DSGE model with endogenous dollarization, I obtain that an optimal fiscal rule should take into account deviations (from their steady state values) of the level of government debt, government spending, and inflation. The fourth chapter characterizes the optimal exchange rate policy in a dollarized economy using a method developed by Devereux and Sutherland (2007, 2008). The method allows me to use a DSGE model in order to compute the optimal currency composition of the portfolio of (foreign) liabilities in the long-run equilibrium and its dynamics. The main finding is that the flexible exchange rate is better than the fixed rate.

This book takes a global approach to one of today's most controversial topics in business: Dollarization. With the collapse of the former Soviet Union, and the formation of the Euro in Europe, many countries are debating whether or not a common currency is in their best interest. This intriguing volume brings together the leading participants in the current dollarization debates.

"Dollarization, in a broad sense, is increasingly a defining characteristic of many emerging market economies. How important is this trend quantitatively and how important is it for the conduct of monetary policy and the choice of exchange rate regimes? Though these questions have become a hot topic in both the theory and policy literature, most efforts are remarkably uninformed by evidence, in no small part because meaningful data has been lacking, except for a very narrow range of assets. This paper attempts to move the discussion forward and shed light on the critical questions by proposing a measure of dollarization that is broad both conceptually and in terms of country coverage. We use this measure to identify trends in the evolution of dollarization in the developing world in the last two decades, and to ascertain the consequences that dollarization has had on the effectiveness of monetary and exchange rate policy. We find that, contrary to the general presumption in the literature, a high degree of dollarization does not seem to be an obstacle to monetary control or to disinflation. A level of dollarization does, however, appear to increase exchange rate pass-through, reinforcing the claim that fear of floating' is a greater problem for highly dollarized economies. We also review the developing countries' record in combating their addiction to dollars. Concretely, we try to explain why some countries have been able to avoid certain forms of the addiction, and examine the evidence on successful de-dollarization"--NBER website

Despite significant strides in financial development over the past decades, financial dollarization, as reflected in elevated shares of foreign currency deposits and credit in the banking system, remains common in developing economies. We study the impact of financial dollarization, differentiating across foreign currency deposits and credit on financial depth, access and efficiency for a large sample of emerging market and developing countries over the past two decades. Panel regressions estimated using system GMM show that deposit dollarization has a negative impact on financial deepening on average. This negative impact is dampened in cases with past periods of high inflation. There is also some evidence that dollarization hampers financial efficiency. The results suggest that policy efforts to reduce dollarization can spur faster and safer financial development.

Monetary Transmission Mechanisms in Belarus

Causes and Policy Implications

Effects on Trade, Financial Development, and Stability

Understanding Dollarization

The Policy Agenda

Official Dollarization As a Monetary Regime

This paper examines El Salvador's transition to official dollarization by comparing aspects of this regime to the fixed exchange rate regime prevailing in the 1990s. Commercial bank interest rates are analyzed under an uncovered interest parity framework, and it is found that dollarization lowered rates by 4 to 5 percent by reducing currency risk. This has generated net annual savings averaging 1/2 percent of GDP for the private sector and 1/4 percent of GDP for the public sector (net of the losses from foregone seigniorage). Estimated Taylor rules show a strong positive association between Salvadoran output and U.S. Federal Reserve policy since dollarization, implying that this policy has served to stabilize economic activity more than it did under the peg and more than policy rates in Central American countries with independent monetary policy have done. Dollarization does not appear to have affected the transmission mechanism, as pass-through of monetary policy to commercial interest rates has been similar to pass-through under the peg and in the rest of Central America.

The paper looks at the challenges of conducting monetary policy in a context of high dollarization of the banking system and weak institutions in the Democratic Republic of the Congo. The empirical analysis confirms the limited effectiveness of the Central Bank of Congo in controlling inflation, despite a rapid policy response to inflation shocks. Options available to enhance the effectiveness of monetary policy are limited. After exploring the pros and cons of different exchange regimes we conclude that strengthening the current monetary policy framework remains the first-best option, given the country's exposure to frequent terms-of-trade shocks.

The process of dollarization can take multiple forms, including when a country adopts the US dollar either as its predominant currency, or establishes a bicurrency system with the local currency. This publication examines how to establish an adequate supervisory and crisis management framework in dollarized economies, particularly when central banks and regulators may be constrained in the use of standard monetary and financial policy tools. It is based on a paper produced by the IMF Executive Board, as part of the policy development work conducted by the IMF's Monetary and Financial Systems Department.

Banks' liquidity holdings are comfortably above legal or prudential requirements in most Central American countries. While good for financial stability, high systemic liquidity may nonetheless hinder monetary policy transmission and financial markets development. Using a panel of about 100 commercial banks from the region, we find that the demand for precautionary liquidity buffers is associated with measures of bank size, profitability, capitalization, and financial development. Deposit dollarization is also associated with higher liquidity, reinforcing the monetary policy and market development challenges in highly dollarized economies. Improvements in supervision and measures to promote dedollarization, including developing local currency capital markets, would help enhance financial systems' efficiency and promote intermediation in the region.

Optimal Monetary Policy in a Dollarized Economy

Dollarization, Monetary Policy, and the Pass-Through

Dollarization

Monetary Policy Rules for Financially Vulnerable Economies

Good or Bad?

Addicted to Dollars

This study examines the challenges and issues facing policymakers in highly dollarized economies. Focusing on Cambodia, which achieved almost complete dollarization during 1991-95, the authors review recent developments in the literature on dollarization and examine the costs and benefits of dollarization in Cambodia, including the ensuing macroeconomic policy implications. They carry out an econometric estimation of cash foreign currency circulation in Cambodia in order to gauge the degree of dollarization. In addition to this analysis, the authors present a short description of Cambodia's economic, financial, and structural background.

One distinguishable characteristic of emerging market economies is that they are not financially robust. These economies are incapable of smoothing out large external shocks, as sudden capital outflows imply large and abrupt swings in the real exchange rate. Using a small open-economy model, this paper examines alternative monetary policy rules for economies with different degrees of liability dollarization. The paper answers the question of how efficient it is to use inflation targeting under high liability dollarization. Our findings suggest that it might be optimal to follow a nonlinear policy rule that defends the real exchange rate in a financially vulnerable economy.

This volume provides a rigorous and balanced perspective on the causes and implications of dollarization, and the basic policies and options to deal with it: the adaptation of the monetary and prudential frameworks, the development of local-currency substitutes, and the scope for limiting dollarization through administrative restrictions.

This paper assesses the benefits and risks associated with dollarization of the banking system. We provide novel empirical evidence on the determinants of dollarization, its role in promoting financial development, and on whether dollarization is associated with financial instability. We find that: (a) the credibility of macroeconomic policy and the quality of institutions are both key determinants of cross-country variations in dollarization; (b) dollarization is likely to promote financial deepening only in a high inflation environment; and (c) financial instability is likely higher in dollarized economies. The implications of these findings for financial sector and monetary policies are discussed.

The Case of Eurasian Economic Union

Economic Policy in a Highly Dollarized Economy

Inflation Targeting in Dollarized Economies

The Choice of Exchange Rate Regime and Monetary Target in Highly Dollarized Economies

Exchange Rate Pass-Through and Monetary Policy in Croatia

Monetary Policy in Low Financial Development Countries

This book sheds light on the dollarization trends of four transitional economies in Southeast Asia: Cambodia, Lao PDR, Myanmar, and Vietnam. Moving beyond the tendency to focus on the Latin American experience of dollarization and prolonged high inflation, the chapters in this book compare how payment dollarization has been more persistent than other types of dollarization in this region due to network externalities. The book illustrates that dollarization started in the underdeveloped financial system in these countries and that dollarization interacted with financial development, which is in contrast to dollarization in Latin America. This project extends the frontiers of empirical studies on dollarization. It will be of interest to students, researchers and policy makers concerned with dollarization and economics in Southeast Asia.

Despite the general improvement in controlling price levels over the last two decades, substantial amount of the population in developing world still save and borrow in foreign denominated currencies. There are reasons to believe that high degree of financial dollarization might impose difficulties in both the transmission capacity of monetary policy and the overall functioning of the financial sector. Correspondingly, the case of a typical emerging market economy, where external debts are denominated in foreign currency, whereas domestic firms heavily rely on receipts in national currency, potentially causes a higher vulnerability in the domestic banking sector due to currency mismatch issues and large fluctuations in the exchange rates, which is also one of the features of Inflation Targeting monetary policy. The aim of this paper is to investigate various features of high level of financial dollarization, its challenges for conducting Inflation Targeting monetary policy, and formulate a number of relevant policy recommendations and implications.

This paper presents a portfolio model of financial intermediation in which currency choice is determined by hedging decisions on both sides of banks' balance sheets. Minimum variance portfolio (MVP) allocations are found to provide a natural benchmark to estimate the scope for dollarization of bank deposits and loans as a function of macroeconomic uncertainty. In particular, dollarization hysteresis is shown to occur when the expected volatility of the inflation rate is high in relation to that of the real exchange rate. The evidence seems to support these conclusions as MVP dollarization generally approximates actual dollarization closely for a broad sample of countries. The paper also shows that deviations from MVP can result, inter alia, from shifts in the location of bank deposits, the level and currency composition of domestic public debt, and the implicit taxation of financial intermediation through reserve requirements. The implications for altering dollarization and conducting monetary policy in dollarized economies are explored.

Dollarization - the holding by residents of a substantial portion of their assets in foreign-currency-denominated assets- is a common feature of developing and transition economies, and therefore typical of many countries with IMF - supported adjustment programs. This paper analyzes policy issues that arise-and various monetary strategies that may be pursued- when the monetary sector is dollarized, and it considers the implications that dollarization has for the design of IMF programs.

Making Monetary Policy More Effective: The Case of the Democratic Republic of the Congo

Lessons from Europe for the Americas

Full Dollarization

A Global Perspective and the Peruvian Experience

Measuring External Risks for Peru

Dollarization in Transition Economies

We explore monetary policy transmission by estimating VAR impulse response functions to illustrate the Belorussian economy's response to unexpected changes in policy and exogenous variables. We find a significant exchange rate pass-through to prices, and interest rate policy following, rather than leading, financial market developments. Our estimated monetary policy reaction function shows the central bank striking a balance between real exchange rate stability and containing inflation. We discuss dollarization, administrative interventions, and other features complicating monetary policy transmission, review specific constraints and vulnerabilities, and conclude with observations on possible measures that could raise the effectiveness of monetary policy in Belarus

Theoretical and empirical analysis of de jure dollarization.

Monetary Policy in Dollarized Economies International Monetary Fund

The paper conducts a comparative study of the monetary policy transmission in two economies that run a well-established IT regime, Chile and New Zealand, vis-à-vis two economies operating under relatively newer IT regimes, and which are exposed to a significant degree of dollarization, Peru and Uruguay. It is shown that the traditional interest rate channel is effective in Chile and New Zealand. For Peru and Uruguay, the exchange rate channel is instead more relevant in the transmission of monetary policy. This latter result follows from the limited impact of the policy rate in curbing inflationary pressures in these two countries, in combination with the fact that they have a relatively large and persistent exchange rate pass through. Finally, it is shown that the on-going de-dollarization process of Peru and Uruguay has somewhat strengthened their monetary transmission through the interest rate channel.

The Optimal Level of Foreign Reserves in Financial Dollarized Economies

The Cases of Chile, New Zealand, Peru and Uruguay

The Case of Cambodia

The Dollarization Debate

The Pros and Cons

The Case of Uruguay

A very commonly observed phenomenon in developing and emerging market economies is the use of another country's currency (whether the US dollar or another currency) in lieu or in addition to the local currency. The most common type of this financial phenomenon is partial (de facto) dollarization where foreign currencies are used side by side with local currency for saving and borrowing purposes in addition to serving as medium of exchange. Governments in these countries have been encouraging dollarization for years by allowing their citizens to save and borrow from local banks in foreign currency. Yet the existence of multiple currencies on banks' balance sheets on both the asset and liability side poses risks to the health and stability of the banking system.

This book evaluates the practical aspects of partial dollarization in countries such as Turkey, South Korea, Peru, and Cambodia among others. Starting with the origins of the phenomenon, the impact on banking systems and financial depth of the credit markets are discussed along with risks to the banking systems. Challenges faced by Central Banks and banking regulators are evaluated using recent country studies.

This paper extends the Gerali et al. (2010) model to an open economy framework with dual-currency banking and endogenously determined dollarization. The model incorporates a portfolio allocation problem in households' and entrepreneurs' decisions, so that they choose optimal currency structure of their deposits and loans based on interest rate differentials and their expectations about exchange rate movements. The optimal structure of deposit and loan portfolios yields in disparate dollarization rates. The model is estimated for Armenia using the data from 2004 to 2015. The comparison of models with and without dollarization reveals significant differences in macroeconomic effects of monetary policy in dollarized economies, since it primarily affects the economic activity by exchange rate channel, rather than by interest rate channel. Also we find that partial dollarization is welfare increasing and inflation stabilization can be achieved with lower welfare costs in dollarized economies.

Causes and Policy Consequences

Dollarization of Financial Intermediation

Financial Dollarization

Evidence and Policy Implications

Financial De-Dollarization

Monetary Policy Under Financial Dollarization