

## MONETARY POLICY IN DOLLARIZED ECONOMIES

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*Governor and distinguished guests,*

I am honored to address you on the occasion of the fifth international conference of the Bank of Albania. The topic of my talk is Monetary Policy in Dollarized Economies. I would like to contrast the recent experiences in transition economies with the experiences of Latin American countries that have had more entrenched dollarization.

In particular, I want to explore the question of the effectiveness of monetary policy in bringing down dollarization: has tight monetary policy helped reduce the degree of dollarization?

Since monetary policy effectiveness depends to a large extent on the credibility of the central bank, one could speculate that central banks in transition economies still have more credibility than those in Latin America, since there have been considerably fewer episodes of macroeconomic instability in the former.

The structure of my talk is as follows: I will start by mentioning the two principal reasons why dollarization is important for a central bank: (i) it impacts financial stability; and (ii) it affects monetary policy. I will move on to discussing some data issues, and then I will

present some stylized facts about dollarization over the last 10 years or so, looking at dollarization trends of groups of transition and Latin American countries. Subsequently, I will present the methodology and results of the analysis of monetary policy effectiveness across the sample. The conclusions are that there are quite clear differences in monetary policy effectiveness, with Latin American countries getting very little result in terms of a reduction in the degree of dollarization, despite tight monetary policies.

As is now quite generally accepted, the term dollarization is used in cases where foreign currency is held in the domestic economy. Another term used in the region is Euroization, referring to the use of the euro instead of the dollar. But that doesn't exactly roll off one's tongue. I would like to use a more general term, such as FX-ization, or forexization, to encompass all foreign currency use, but I will spare you having to listen to such neologisms, so I will stick with dollarization. The most important reason for a central bank to worry about dollarization is the concern with stability of the financial system. If significant parts of the financial system are dollarized, there are two major risks to stability: liquidity risk and solvency risk. Liquidity risk of foreign currency deposits is qualitatively different from that of domestic currency deposits:

For domestic currency deposits, the central bank can step in as lender of last resort, since it can create domestic currency in case of emergency, with possible inflationary consequences. For foreign currency deposits, strictly limited international reserves are the only buffer that exists to stem a liquidity crisis. So, bank runs on foreign currency deposits have much more serious consequences. Argentina is a good (bad) example of what can go wrong when liquidity risk materializes in the context of a highly dollarized economy.

The other risk that a central bank is concerned about is solvency risk: major declines in the exchange rate can affect solvency of financial institutions, as well as that of their clients.

Looking now at the links between monetary policy and dollarization, let us state clearly that some blame for dollarization has to be laid at the feet of central bankers. Typically, dollarization is a response to

the rapidly eroding value of the domestic currency through inflation and depreciation of the exchange rate. A central banker may in turn try to shift the blame to the Government for having insisted that the central bank finance its deficit. Regardless, finding a safe haven in a foreign currency times is a rational reaction to episodes of macroeconomic instability. In Latin America, a phrase was coined to describe the systematic resort to inflation to finance government spending: “inflation tax”. In that terminology, inflation not only had bad consequences, but also contributed to financing the budget deficit. It is not too surprising that a side effect of intentionally high levels of inflation was the emergence of dollarization in the region.

On the issue of the consequences of dollarization for monetary policy, suffice it to say that there is a loss of monetary policy effectiveness when dollarization is important, since monetary policy instruments principally affect the shrinking share of domestic currency assets and liabilities. In addition, there is a loss in seigniorage that can be quite significant in economies with growing money demand. So there is a real fiscal benefit to reversing dollarization.

Before we take a look at the data, it is important to realize that dollarization data are usually not very complete. First, there is very little accurate information on cash foreign currency holdings, even though such holdings are known to be significant. Second, residents can and will hold funds abroad if there are excessive regulations. There is ample documentation on how tighter regulations typically only temporarily reverse dollarization. Although the BIS publishes data on cross-border deposits, these also have problems—for example, residents from the Virgin Islands are probably not the ultimate beneficiary owners of the deposits they place. Third, the difference between dollarization and financial contracting in domestic currency indexed to a foreign currency is not very big, although the liquidity risk is less. These data are often not captured as such. Many countries do not report foreign currency deposits separately, and compliance with statistical methodologies in the monetary and financial area has steadily increased, which means that the data are not strictly comparable over time or across countries. In light of these difficulties, we are left to analyze broad trends in the share of foreign currency deposits in total deposits.

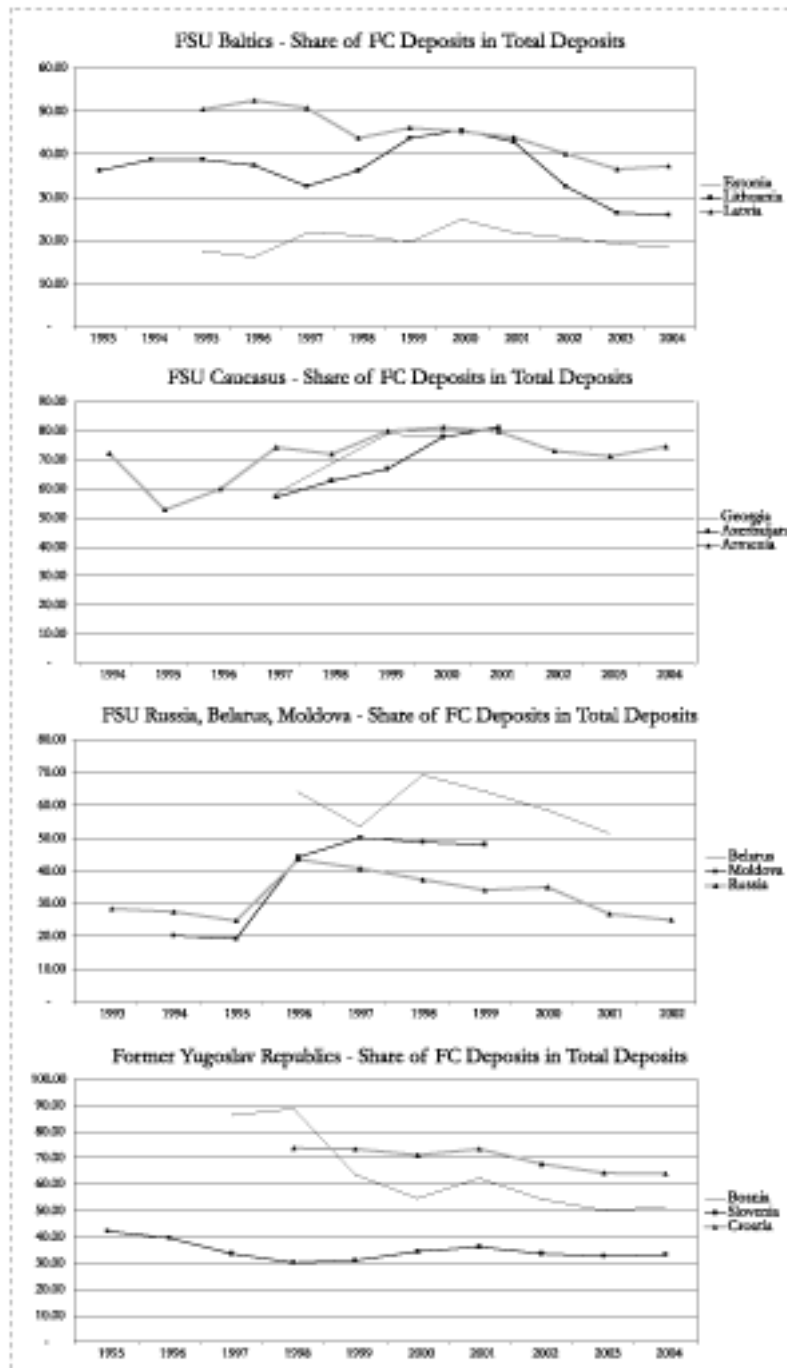
Let us now turn to the numbers. When looking at the data, one can usefully distinguish the following groups that share some similar characteristics: (i) Former Soviet Union (FSU) states – Baltic states; (ii) FSU – Caucasus; (iii) FSU – Russia, Belarus, Moldova; (iv) Former Yugoslav states; (v) other transition economies; and (vi) Latin American countries.

Among the FSU republics, the Baltic states have managed to limit dollarization as a result of relatively rapid macroeconomic stabilization, including the adoption of highly credible monetary-policy frameworks, including currency boards and fixed exchange rate regimes backed by supporting fiscal policy. Figures on the extent of dollarization in Baltic states are now in 20–40 percent range.

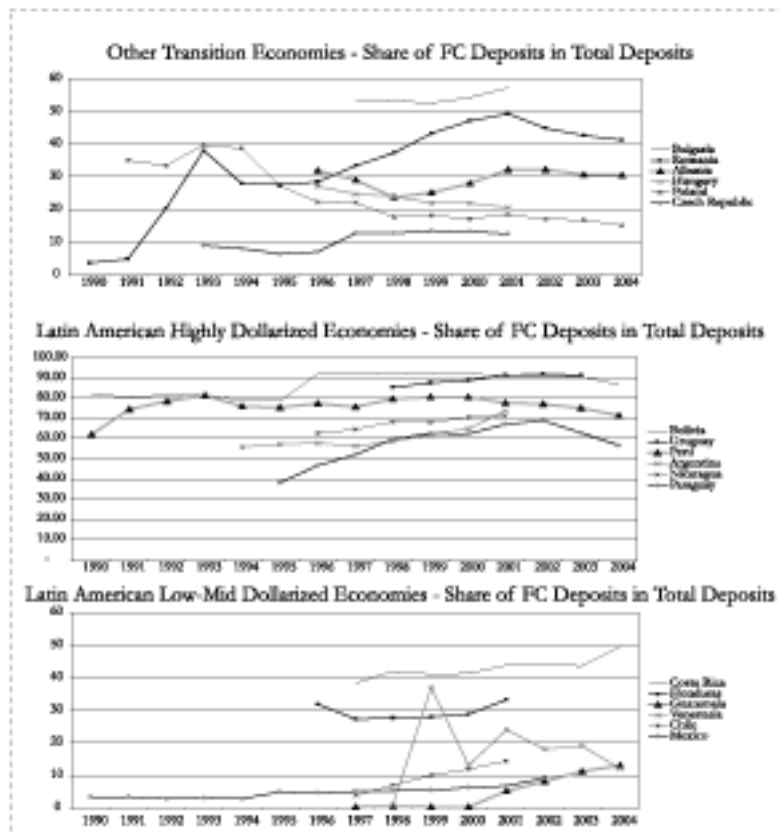
At the other extreme, political instability in the Caucasus region led to rapidly entrenched dollarization, which is in the range of 70–80 percent of all deposits. This is also the range in which the heavily dollarized Latin American economies are operating.

Russia, Moldova, and Belarus are somewhere in the middle, with a greater degree of macroeconomic instability, including the major financial crisis in Russia in 1997–8.

For the three former Yugoslav republics in the sample, Slovenia missed part of the hyperinflation that occurred in the former Yugoslavia as a result of stepping out early. Bosnia and Croatia ended with substantial flight to the DM, and thus high dollarization. Whereas Bosnia and Herzegovina opted for a currency board, Croatia maintained its own currency.



For the remaining transition countries, Bulgaria had a financial crisis and shifted to its Currency Board in 1998. Romania continued to experience high (but stable) inflation as part of its stabilization policy based on a crawling peg. Poland is often cited as a successful case of de-dollarization, helped by a strengthening currency after foreign exchange market liberalization left the zloty undervalued. Albania is a middle-of-the-road case, with no clear trend towards de-dollarization yet. Turning now to Latin America, it is convenient to look at three different groups: (i) countries with recent high levels of dollarization; (ii) countries with middle to low levels of dollarization; and (iii) the so-called dollarization graduates Brazil, Mexico, Chile. The latter have had significant dollarization in the past, and these countries exited the high-dollarization situation by adopting a highly indexed economy, with Brazil going the farthest, by taking the index as the new low inflation currency (real).



Let us now turn to the main topic, namely the effectiveness of monetary policy in reversing dollarization. The methodology used here is as follows: We use data for 1991-2004, to the extent it is available for all variables of interest; dollarization data is typically available only from about 1997-98 onwards. The sample contains 16 transition economies and 7 Latin American countries. Data is obtained from IMF's International Financial Statistics, and supplemented by that from individual countries. Step 1 is to calculate average annual changes in the degree of dollarization, where dollarization is measured as the share of foreign currency deposits in total deposits. Step 2 is to calculate monetary policy tightness over the period as the average real return on deposits, where the CPI is used as a deflator. This real return can be positive or negative; a positive return would typically imply that dollarization would not have been necessary if the objective had been to purchase local goods. Step 3 is to remove the effect of exchange rate changes on the share of foreign currency deposits in total deposits: See following example:

If there are 60 units of foreign currency deposits (FCD), and 40 units of local currency deposits (LCD), and the exchange rate depreciates by 10 percent, the FCD go up from 60 to 66 units. Since the LCD remain unchanged, there are now 106 units, and the share of FCD in total is  $66/106 = 62$  percent. So, if next period's share of FCD is 58, the postulated effect of monetary policy is the difference between the corrected level of dollarization and the new level—that is,  $62 - 58 = 4$  percentage points.

It can be argued that monetary policy has an effect on the exchange rate, in the sense that tight monetary policy will tend to appreciate the currency or stem the depreciation; this point will be taken up for future research. Before we look at the results, it is useful to conceptually classify the quadrants in the following diagram that graph dollarization against the real rate of return on local currency deposits.

		Good	Bad	Real return (+)
Better	(I)			Worse
de-dollarization				dollarization
		(III)		(IV)
				Real return (-)

The upper left quadrant is where you want to be: de-dollarization occurred, and a positive real rate of return prevailed: it is tempting to conclude that monetary policy may have contributed to de-dollarization. In the upper right quadrant, dollarization has occurred despite a positive real rate of return: monetary policy seems ineffective in reversing dollarization. In the lower right quadrant: Monetary policy might be effective, but real returns are negative: it is possible that de-dollarization would occur if monetary policy were tightened. In the lower left quadrant: de-dollarization occurred, despite a negative real return. There may have been other factors that either (i) boosted central bank credibility; or (ii) increased regulatory restrictions on holding FCD.

Turning now to the numbers, the group of countries that, on average, experienced de-dollarization is composed exclusively of transition economies. The majority of the de-dollarizing countries are in the good-to-better quadrant, including Albania: they exhibit positive real returns and de-dollarization. The countries marked gray did not “need” a positive real rate of return to accomplish the de-dollarization. Estonia and Bulgaria introduced currency boards and might have obtained additional credibility as a result. Hungary had very small negative returns in the period.

De-dollarizers	De-dollarization	Return
Bosnia and Herzegovina	-8.84	4.50
Lithuania	-6.51	2.23
Latvia	-5.75	1.50
Croatia	-1.78	-0.87
Armenia	-1.22	16.38
Estonia	-0.91	-2.51
Poland	-0.76	3.75
Hungary	-0.56	-0.07
Slovenia	-0.35	1.99
Albania	-0.19	6.25
Bulgaria	-0.02	-3.46

If we now turn to the dollarizing countries, we find all Latin American countries in this group, supplemented by several transition economies. Almost all dollarizers are in the bad to worse quadrant, where monetary policy tightness does not translate to a reduction in dollarization. In addition to all Latin American countries, the group contains Azerbaijan and Moldova. Somewhat surprisingly,

the Czech Republic is in the quadrant in which dollarization co-exists with negative real returns, together with Russia and Belarus, although the dollarization is very limited. It is not surprising that the massively low real returns in Russia and Belarus have contributed to dollarization.

Dollarizers	Dollarization	Return
Czech Republic	0.36	-1.18
Azerbaijan	0.63	13.22
Uruguay	1.68	7.12
Guatemala	1.79	0.99
Costa Rica	2.13	1.47
Nicaragua	2.31	0.89
Moldova	2.74	3.67
Chile	2.88	5.49
Russia	4.03	-15.82
Venezuela	4.96	1.52
Paraguay	5.73	6.90
Belarus	10.55	-35.79

The above results must be interpreted with care: As noted above, there are data issues. Also, the rates of return (from the IMF's International Financial Statistics (IFS) line 60L deposit rates) may not apply to the largest share of local currency deposits and thus may not be representative. Also, regulatory restrictions or the threat thereof can counteract monetary policy; other factors, such as political stability, also clearly play a role (for example in the case of Armenia and Azerbaijan), so the de-dollarization cannot be attributed solely to the monetary policy stance.

There are some unanswered questions that are interesting for future work: First, does effectiveness of monetary policy change over time? Preliminary results indicate yes; countries seem to rotate clockwise as their credibility is eroded; eventually they move into the second quadrant. Second, does the rate of change in dollarization depend on the rate of return? In other words, do high rates of return encourage higher rates of de-dollarization? Third, what would happen if we calculated the real return using exchange rates instead of the Consumer Price Index (CPI), or some average of the two: so instead of monetary policy trying to give a country the ability to purchase the local basket of goods, it aims to deliver the ability to purchase foreign currency. Fourth, an alternative calculation of dollarization would take into account the exchange rate change that could be attributed

to monetary policy (by isolating the common dollar weakness of the last years, for example). Last: the analysis could be made forward looking, as opposed to the delivered or ex post real returns. Would it be possible to model ex ante central bank credibility by focusing on expected returns? This might capture the introduction of currency boards and other strong and credible monetary policy and exchange rate frameworks.

Let me summarize as follows. Latin American countries see very little effectiveness from their monetary policy in bringing down dollarization: they show consistently high real interest rates but continued dollarization. Most transition economies, on the contrary, see a payoff from tight monetary policy; some even have additional sources of credibility that help them reduce dollarization without having to resort to tight monetary policy. Albania is in the latter group of countries that experience results from tight monetary policy, but the data show that relatively high real returns were needed to reduce effective dollarization only slightly. This underscores the need to continue to build up credibility.

*Thank you.*

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