Goodbye Inflation Targeting, Hello Fear of Floating? Latin America after the Global Financial Crisis*

Carmen M Reinhart Harvard University

Abstract

This paper focuses on some of the macroeconomic risks that lie ahead for Latin America. The discussion is informed by my work on crises and capital flows and their macroeconomic consequences. The trends and initial conditions that allowed the region to weather the global economic storm of 2008-2009 are discussed, as is the subsequent reversal of some of those benign trends. I review the historical patterns connecting large capital inflow surges, or "capital flow bonanzas," with the likelihood of a variety of crises—banking, currency, external default and inflation. For Latin America, in particular, large capital flow bonanzas have seldom ended well. The implications for inflation of importing (via less than fully flexible exchange rates) the expansionary policy of the "North" are discussed.

JEL: E31, F3, G01, N16, N26

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Introduction

This time really was different. Latin America, which is notorious for volatility and crises, successfully weathered the perfect storm of a worldwide recession. That is not to say that there were no setbacks: almost every country in the world, except for Japan and Switzerland, experienced some form of a currency crash in the fall of 2008 and early 2009. Nearly all countries saw output and exports contract and in numerous cases collapse. But Latin American adroitly handled this crisis and avoided a repeat of the Great Depression.¹ Instead of following the Global North into a deep recession and financial crisis, the Global South largely was able to maintain relatively robust levels of economic growth. Coping well with an external crisis, however, does not imply that the region has become impervious to old risks in their many guises. In fact, after years of a capital flow bonanza and importing the loose monetary policy of the North, a number of countries in Latin America may be "ripe" for a crisis of their own or if not an outright crisis a serious hard landing. In this paper, I will focus on some of those macroeconomic risks.

The trends and initial conditions that allowed Latin America to weather the global economic storm of 2008-2009 are discussed in Section II while Section III, examines the historical patterns connecting large capital inflow surges, or "capital flow bonanzas," with the likelihood of a variety of crises—banking, currency, external default and inflation. This section draws extensively on Reinhart and Reinhart (2009). For Latin America, in particular, large capital flow bonanzas rarely end well. Section IV focuses on the reversal of some of the benign trends that kept the region out of trouble during 2008-2009 and the inflationary implications of

¹ For a contrast to the 1930s and 1980s, see Diaz Alejandro (1983) and (1984).

importing (via less than fully flexible exchange rates) the expansionary policy of the "North." The concluding remarks stress the importance for policymakers of becoming increasingly watchful during a potentially risky turning point.

II. Latin America at the Outset of the Global Crisis

In contrast to previous periods of global economic turmoil, Latin America was remarkably well positioned to weather the headwinds of the Great Recession. Nowhere was this better seen than in a comparison of global external debt figures. As Figure 1 demonstrates, Latin America had among the lowest levels of external debt in the world during the six years preceding the financial crisis. Not only that, but Latin America was deleveraging at an extraordinary fast pace, resulting in debt levels the rivaled those of the early 1970s, among the brightest periods of Latin American economic growth.

Figure1 (from Reinhart and Rogoff, 2010) is based on 2003-2009 gross external debt as a percent of GDP. The left hand panel of the figure indicates whether there has been an increase in indebtedness to GDP over the 2003-2009 period, or a decrease (deleveraging). The right hand panel gives the ratio of gross external debt to GDP as of the end of the second quarter of 2009. The group averages are based on a total data set of 59 countries.

Figure 1.Gross External Debt as a Percent of GDP: Averages for Selected 59 Countries, 2003-2009 (*in percent*)



Sources: International Monetary Fund, World Economic Outlook, World, Bank, Quarterly External Debt Statistics (QEDS), and authors' calculations.

Notes: Data for 2009 end in the second quarter. The countries participating in QEDS included in these calculations are listed in what follows by region. Advanced-Europe: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, (15 countries). If Ireland were included, the averages would be substantially higher for this group; Emerging Europe: Bulgaria, Croatia, Czech Republic, Estonia, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovenia, and Turkey, (11 countries). Former Soviet Union: Armenia, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russia, and the Ukraine (8 countries). Africa: Egypt, South Africa, and Tunisia (3 countries). Asia-Emerging: Hong Kong, India, Indonesia, Korea, Malaysia, Thailand (6 countries). Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Paraguay, Peru, and Uruguay (12 countries). There are a total of 19 advanced economies and 40 emerging markets.

As the right hand side of the figure illustrates, external debt burdens at the time of the crisis were particularly high in Europe, with an average external debt to GDP ratio across advanced European economies of over 200 percent, and an average external debt to GDP across emerging European economies roughly 100 percent. A sizable share of the debt is intra-European, but nonetheless external to the country.

Famously profligate Latin America, by contrast to the advanced economies, at the time of the global crisis had gross external debt liabilities averaging only around 50 percent of GDP. Moreover, in contrast to the advanced countries who added an average of 50 percent of GDP to gross external debt during the recent period, Latin American countries actually reduced external debt by more than 30 percent of GDP.

Importantly, Latin America lowered its foreign currency liabilities and shifted away from dollarized to domestic-denominated debt, avoiding one of the major pitfalls of emerging market borrowing. Additionally, current accounts for most of the region were in surplus, a relative rarity for the region. Indeed, domestic conditions in Latin America were so strong that one could not find a newspaper in the fall of 2008 and in 2009 that ran an article about the possibility of default in Latin America as a result of the global economic meltdown--itself a rarity.

This sharp deleveraging in the run-up to 2008-2009 is intimately connected with the drought in capital inflows to the region for several years. The first blow to inflows after their surge post-Brady Plan restructuring in late 1980s early 1990s came from the Mexican crisis of late 1994.² The second downturn came during the latter stages of the Asian crisis and the outbreak of the Russian crisis in the fall of 1998—this was followed by the collapse of the Real Inflation Stabilization Plan in Brazil in early 1999; the final nail in the coffin of a capital flow reversal or Calvostyle sudden stop came in end 2001 with the Argentine default and its consequences for Uruguay (which culminated in a debt restructuring in 2003).³ The drought would become a torrential downpour subsequently.

²² See, for instance, Calvo and Mendoza (1996).

³ For the original sudden stop concept see Calvo (1998).

III. Capital Inflow Bonanzas and Their Risks

In this section we describe some of the global factors that gave rise to one of the longest (if not the longest) capital flow bonanza episodes on record in the region. We later turn to focus to their attendant risks.

The North

More than five years after the crisis, the advanced economies are struggling with a public and private a debt overhang of historic proportions. The deleveraging process is still in its early stages in the Global North (especially in Europe), and efforts to tackle deficits have been hindered by chronic unemployment, and tepid growth. Because of the combination of high debt and low growth, some periphery countries in Europe are in dire need of debt restructuring, a problem that is unlikely to end with Greece and Cyprus.

The monetary policy response in the North has been to bring policy interest rates to levels that are at or near zero, a reasonable response to the fragility of the financial systems and the prolonged weakness in these economies. As a result, real interest rates have been extremely low and often negative. Figure 2 (from Reinhart and Sbrancia, 2011) shows a frequency distribution of real interest rates on government bonds in 22 advanced economies.

During the era of financial repression, capital controls, interest rate ceilings (1945-1980), nearly 47 percent of countries had interest rates at or below zero percent. ⁴After 1980, the advanced economies began to liberalize their financial

⁴ Financial repression includes directed lending to the government by captive domestic audiences (such as pension funds or domestic banks), explicit or implicit caps on interest rates, regulation of cross-border capital movements, and (generally) a tighter connection between government and banks, either explicitly through public ownership of some of the banks or through heavy "moral

markets, and between 1980 and 2007, real interest rates rose dramatically and the number of countries with interest rates at or below zero percent fell to 10.5 percent. Since the crisis in 2008, advanced economies have witnessed a return of financial repression, which has had a disproportionate impact on real interest rates. Between 2008 and 2011, it was extremely hard to find real interest rates above 2 percent anywhere in the developed world—in effect, as shown in the inset to Figure 2, less than three percent of the observations fall into the above two percent category.





Source: International Monetary Fund, International Financial Statistics, Reinhart and Sbrancia (2011).

suasion". Financial repression is also sometimes associated with relatively high reserve requirements (or liquidity requirements), securities transaction taxes, prohibition of gold purchases (as in the US from 1933 to 1974), or the placement of significant amounts of government debt that is nonmarketable.

In the current policy discussion, financial repression issues come under the broad umbrella of "macroprudential regulation."

At the same time, real interest rates were low or negative, commodity prices remained relatively high. This combination made many Latin American economies (and other emerging markets) comparatively attractive investments. The result has been a huge inflow of capital into the region.

Defining a capital flow bonanza: A summary of Reinhart and Reinhart (2009)

Capital flow bonanzas rarely end well. As Mendoza and Terrones (2012) summarized in their paper on credit booms, "not every credit boom ends in crisis, but every crisis has been preceded by a credit boom." One could say the exact same thing about capital flow bonanzas.

Here we summarize the Reinhart and Reinhart (2009) –henceforth RR-approach to dating a capital flow bonanza. An inflow bonanza can end with a bang or with a whimper. In this sense, the approach parallels the analysis of Goldfajn and Valdes (1999), who rather than starting their analysis with currency crises dates, began by documenting episodes of cumulative real exchange rate appreciations of varying degrees and then sorted out which episodes unwound through an abrupt nominal exchange rate crash and which did so through reductions in inflation versus their trading partners.

The current account balance as a percent of GDP is the benchmark indicator, as it is measured more consistently across time and international boundaries than its capital account and financial account counterpart. ⁵ The preferred RR algorithm provided uniform treatment across countries but was flexible enough to allow for significant cross-country variation in the current account. As in Kaminsky and

⁵ For the more recent period, the same filter rules are applied to the capital and financial account balances as a robustness check.

Reinhart (1999), RR select a threshold to define bonanzas that is common across countries (in this case the 20th percentile). This threshold included most of the better known episodes in the literature but was not so inclusive as to label a bonanza more "routine" deteriorations in the current account. Because the underlying frequency distributions vary widely across countries, the common threshold produces quite disperse country-specific cutoffs.

Do capital flow bonanzas make countries more crisis prone?

Are capital flow bonanzas a blessing or a curse? Or, for that matter, are they neutral as regards their role in making financial crises more likely or more severe? The literature is filled with famous case studies of capital flow bonanzas that ended in spectacular crises. The papers range from the infamous episodes in the Southern Cone in the late 1970s-early 1980s (see, for instance, Diaz Alejandro's 1985 classic) to Calvo and Talvi (2005), who place great store in the capital flow sudden stop following the Russian 1998 crisis in explaining Argentina's subsequent crash. Rather than focusing on specific episodes that are either as famous or more obscure, in this section we systematically examine the potential links between the likelihood of a capital inflow bonanza and financial crises. Our analysis is conducted on a country-by-country basis as well as at the "global" level consistent with the aim of providing an encompassing approach. RR's comprehensive database on the dates of bonanza and crises episodes allows us to uncover novel results on the systematic connection between the *incidence* of bonanzas and debt, currency, inflation, and banking crises. Hence, their analysis sheds light on the first part of the question of whether financial crises are more likely.

Bonanzas and crises: preamble and evidence

The preceding section delineated the RR criteria used to define a capital flow bonanza. This section summarizes the RR results on the potential links with financial crises of various stripes. Our crisis analysis is taken directly from Reinhart and Rogoff (2009). These crises definitions are reproduced in Table 1.

From the crises dates and the bonanza dates RR constructed a family of country-specific probabilities. For each country this implies four unconditional crisis probabilities, that of: default (or restructuring) on external sovereign debt, a currency crash, an inflation crisis, and a banking crisis. RR also construct the probability of each type of crisis within a window of three years before and after the bonanza year or years, this we refer to as the conditional probability of a crisis. If capital flow bonanzas make countries more crises prone, the conditional probability, $P(Crisis_i | Bonanza)$ should be greater than the unconditional probability of a crisis, $P(Crisis_i)$, where the subscript i refers to the ith "type" of crisis (currency, etc.).

Type of Crisis	Definition and or Criteria	Comments
Banking crisis	We mark a banking crisis by two types of events: (1) bank runs that lead to the closure, merging, or takeover by the public sector of one or more financial institutions; and (2) if there are no runs, the closure, merging, takeover, or large-scale government assistance of an important financial institution (or group of institutions), that marks the start of a string of similar outcomes for other financial institutions.	This approach to dating the beginning of the banking crises is not without drawbacks. It could date the crises too late, because the financial problems usually begin well before a bank is finally closed or merged; it could also date the crises too early, because the worst of crisis may come later. Unlike external debt crisis (see below), which have well-defined closure dates, it is often difficult or impossible to accurately pinpoint the year in which the crisis ended.
External Debt crises	A sovereign default is defined as the failure to meet a principal or interest payment on the due date (or within the specified grace period). The episodes also include instances where rescheduled debt is ultimately extinguished in terms less favorable than the original obligation.	While the time of default is accurately classified as a crisis year there are a large number of cases where the final resolution with the creditors (if it ever did take place) seems interminable. For this reason we also work with a crisis dummy that only picks up the first year
Inflation crisis	An annual inflation rate 20 percent or higher. We also examine separately the incidence of more extreme cases where inflation exceeds 40 percent per annum.	All consecutive years where the threshold is met or exceeded are counted as a part of the same inflation crisis.
Currency crash	An annual depreciation versus the US dollar (or the relevant anchor currency— historically the UK pound, the French franc, or the German DM and presently the euro) of 15 percent or more. This is similar to the Frankel and Rose (1996) approach to dating crashes.	In parallel treatment to the inflation crisis dating, all consecutive years where the threshold is met or exceeded are counted as a part of the same inflation crisis.

Table 1. Defining crises by events: a summary

Source: Reinhart and Rogoff (2009).

Table 3 reports a subset of the RR results, most relevant to Latin America,

focusing on the middle and lower income groups.

The test statistic for the equality between two proportions,

$$Z = \frac{(p_1 - p_2)}{\left\{P(1 - P)\left[\frac{1}{n_1} + \frac{1}{n_2}\right]\right\}^{1/2}}, \text{ where } P = \frac{p_1n_1 + p_2n_2}{n_1 + n_2}$$

is calculated for each pair of probabilities, where $n_1 = n_2$ = number of observations in each group. The instances where the difference in proportions is significantly different at the one percent confidence level are reported in Table 2 in *italics*.

The main results are summarized as follows.

For the full sample, the probability of any of the four varieties of crises conditional on a capital flow bonanza is significantly higher than the unconditional probability. Put differently, the incidence of a financial crisis is higher around a capital inflow bonanza. The bottom row of Table 2 provides the share of countries for which $P(Crisis_i | Bonanza) \ge P(Crisis_i)$ as an additional indication of how commonplace is it across countries to see bonanzas associated with a more crisisprone environment. For sovereign defaults, less than half the countries record an increase in default probabilities around capital flow bonanzas. (Here, it is important to recall that about one-third of the countries in the core sample are high income.) For currency, banking, and inflation crises, the majority of countries register a higher propensity to crisis around bonanza periods.

Beyond the aggregate results presented in Table 2, Figures 3 and 4 for debt, currency, inflation, and banking crises present a comparison of conditional and unconditional probabilities for individual countries, where the differences in crisis probabilities were greatest. (Hence, the country list varies from one figure to the next). While the advanced economies register much lower (conditional and unconditional) crisis probabilities than their lower income counterparts, the

likelihood of crisis is higher around bonanza episodes in several instances. Notably, Argentina, Bolivia, Chile, Colombia, Mexico, Peru, Venezuela among others record a higher probability of a banking crisis during the vicinity of a capital flow bonanza, while Brazil, Chile, Ecuador, and most of the Central American countries show a greater predisposition to a currency crash when bonanzas are present (Figure 3). The higher debt and inflation crises probabilities conditional on previous capital inflow bonanzas for most of the countries in the region present the same pattern.

It is worth noting that the RR results for the advanced economies resemble that of emerging markets far more closely once the sample is extended to include the numerous crises of 2007-2013 that were preceded by capital inflow bonanzas, as documented in Reinhart and Reinhart (2011) and Table 3.

Probability of crisis	External	Currency	Inflation	Banking			
(in percent)	Default	Crash	Crisis	Crisis			
Middle and low income							
Conditional on a bonanza							
(three-year window)	29.6	31.5	31.7	20.7			
Unconditional	21.0	22.7	23.5	14.3			
Difference	8.6	8.8	8.2	6.4			
All countries							
Conditional on a bonanza							
(three-year window)	22.2	25.8	24.2	18.4			
Unconditional	15.7	19.1	18.0	13.2			
Difference	6.5	6.7	6.2	5.2			
Percent of countries for which conditional probability is greater than							
unconditional							
	42.2	65.6	59.4	60.9			

Table 2. Are Bonanza Episodes More Crisis Prone?66 Countries, 1960-2007

Notes: The three-year window encompasses three years before the bonanza years. *Italics* denote significance at the one percent confidence level.

Sources: Reinhart and Reinhart (2009).

Figure 3. Conditional and Unconditional Probability of a Banking Crisis and Currency Crash



Probabilities of a Banking Crisis: 1960-2007



Probabilities of a Currency Crash: 1960-2007

Source: Reinhart and Reinhart (2009).



Figure 4. Conditional and Unconditional Probability of External Default and Inflation



Source: Reinhart and Reinhart (2009).

Countries with bonanzas during 2005-2007	Crisis type (if any)
Australia	Currency crash 2009
Finland	Currency crash 2009
Greece	Banking and default/restructuring 2008-
Iceland	Banking and private restructuring 2007-2013
Ireland	Banking and default/restructuring 2007-
New Zealand	Currency crash 2009-
Portugal	Banking crisis 2008-
Spain	Banking crisis 2008-
UK	Banking crisis 2007-
US	Banking crisis 2007-

Table 3: Capital Flow Bonanzas and Crises: Advanced Economies, 2005-2013

Sources: Reinhart and Reinhart (2011) and sources cited therein.

IV. Fear of Floating, Inflation, and Other Risks

The capital inflow bonanza that Latin America has experienced over these past years makes a number of these countries more vulnerable to a host of economic crises, including external defaults, currency crashes, inflation crises, and banking crises. Of these, we view default risk as the least likely at the regional level at present. Of course, Argentina is still technically in default and in Venezuela's turbulent economic and political environment an external default cannot be ruled out despite the fact that total (public plus private) external debt to GDP as of 2011 was only about 22 percent. In what follows, we focus on other vulnerabilities.

Banking crises and hidden debts

Given asset price and domestic credit booms in countries like Brazil and Peru, for instance, banking sector problems are a more imminent source of concern. Also a currency crash, which usually goes hand in hand with a capital flow reversal, is another source of risk. While the public sector has importantly reoriented its borrowing toward domestic currency debt, private sector borrowing in the form of bond issuance has climbed dramatically in recent years. Technically, much of this borrowing is not classified as external (as the bonds are issued under the domestic jurisdiction). In reality, the trend toward borrowing in US dollars to take advantage of the exceptionally low short term interest rates in the US has escalated in several countries in the region, notably Brazil. In recent years, the return of the phenomenon described in Calvo and Reinhart (2002) "fear of floating" or in this particular instance "fear of appreciation" (see Levy-Yeyati and Sturzenegger, 2007 for compelling documentation for the pre-crisis period) may have, once again, reduced incentives to hedge exchange rate exposures. The potential for currency mismatches this kind of activity carries poses risks to financial stability and, indeed, it is a claim on foreign exchange reserves should a run ensued. Nor is Latin America is not alone from these "shadow banking risks" (see Shin, 2011). India, China, and other important Asian emerging market economies have also seen these risks escalate.

Inflation

As noted, during a capital inflow, as demand for domestic currency increases, there is a tendency for the currency to appreciate. Most developing countries, including Latin American countries, have not been entirely content to let their currencies appreciate and have instead worked to stabilize the exchange rate.

However, as these countries attempted to stabilize their currencies, they also began to import the expansionary monetary policies of advanced economies. Figure 5, which traces from 1900-2012 the share of countries in the region where inflation today (time=T) is higher than inflation ten years ago (T-10) has been creeping steadily higher since the great push to inflation stabilization was largely completed by the early 2000s. While the pass-through from exchange rates to prices has declined in the region (in large part to the improved inflation performance and inflation targeting), the impact of a currency crash from a capital flow reversal could quickly accelerate the trend shown in Figure 5.

Though Figure 5 is silent about the magnitude or level of inflation, it is clear that there are periods during which the region as a whole tended to move towards higher inflation. The late 1960s and 1970s present a situation that is relevant to the present conjuncture. Owing to a combination of factors including the oil shocks and the Vietnam War, the United States began to run persistent deficits and the dollar came under increasing pressure. The period of relative price stability and high growth after World War II came to an end with the end of Bretton Woods in the early 1970s. Past the fall of Bretton Woods, Latin American countries continued to peg their currencies to the dollar and imported the United States' very expansionary monetary policy at a time in which such monetary stimulus was largely incompatible with their domestic needs. Inflation began its upward march.

Political and economic stability instability in much of the region in the 1970s and 1980s lent itself to the heavy reliance on inflationary finance, a process that

ultimately yielded hyperinflation in no less than five countries (Argentina, Bolivia, Brazil, Nicaragua, and Peru) and chronically high inflation in many more.

Since the crisis of 2007-2009, many Latin American countries have been aggressively intervening (in some cases essentially pegging) in the foreign exchange markets to avoid nominal appreciation of their currencies and as a result, are (once again) importing the United States' expansionary monetary policy during this period. Hopefully inflation targeting framework will avoid a replay of the past but at present, it is too early to tell.





Sources: Reinhart and Rogoff (2009) and International Monetary Fund, World Economic Outlook.

V. Concluding Observations

The praise that Latin America has received for its macroeconomic management is at once deserved and undeserved. Because Latin America was able to markedly deleverage, and in some cases, restructure its public and private debts in the decade preceding the Great Contraction, the region was able to emerge from a period of global economic turmoil relatively quickly and practically unscathed. Low levels of inflation (by the historical standards of the region), a substantial war chest of foreign exchange reserves, and competitive currencies facilitated the adjustment in the face of a massive external shock from the crises in the advanced economies. But the benign influence of external factors in the form of low and stable international interest rates, high commodity prices, and spectacular growth in China cannot be underestimated during this period.

While it is true that the majority Latin American countries do not face the imminent risk of an external default, the idea that the region has entered a new golden era of low vulnerabilities is not only a fallacy but bespeaks of a complacency not warranted by the present economic and financial fundamentals. The risks of an economic slowdown accompanied by rising inflation and currency depreciation have been the norm following capital inflow bonanzas, as discussed here. During consecutive years of low international interest rates and high commodity prices, domestic credit booms and marked increases in real estate and other asset prices unfolded in several countries in a pattern that is all too reminiscent of the antecedents of many financial crises in both advanced and emerging market economies. Public and private domestic debts have increased markedly in recent

years. Some of these debts are recorded and others remain hidden from view. Domestic bond markets have seen record private issuance.

In line with the nearly global efforts to counteract the effects of the crisis, Latin American governments engaged in fiscal stimulus programs that were a priori supposed to be temporary. This one-step increase in government consumption was for the most part not reversed, as the economies quickly and sharply recovered from the turmoil of 2008-2009. The all-too-familiar tendency of policymakers in the region to treat good shocks as permanent has, once again resurfaced.

About twenty years ago Calvo, Leiderman and Reinhart (1993) wrote about the fickleness of external economic conditions and the nagging credibility problems accompanying domestic economic reforms. In good times vulnerabilities in the external and fiscal accounts are masked, but sometime after a relatively brief spell with countercyclical polices, fiscal procyclicality has re-emerged in varying degrees.⁶

It is premature and even dangerous to declare victory over macroeconomic instability in the region. In the advanced economies the (relatively brief) "Great Moderation" era was anchored in the view that the business cycle had been tamed. We know how well that episode ended. Latin America remains vulnerable to the devastating shocks from within and from without that have defined the region's economies for over two centuries. Memories of past crises should be a critical part of the public discussion, for in keeping those memories alive lies the hope that past policy mistakes are avoided or at least caught early.

⁶ See Frankel, Vegh and Vuletin (2013) for a recent examination of the old fiscal procyclicality question in Latin American and emerging markets more broadly.

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