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GOOD POLICIES?**

Waldo Mendoza Bellido

DEPARTAMENTO
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RESUMEN

La economía peruana ha tenido un desempeño extraordinario en los últimos 10 años. El PBI per cápita de 2012 está un 66 por ciento por encima del de 2002 y es más del doble de su nivel de 1992. En una perspectiva de largo plazo, el crecimiento acumulado del PBI per cápita registrado en los últimos 10 años ha sido el más vigoroso desde 1900. Este es el “milagro peruano”.

Este artículo tiene como propósito encontrar los factores determinantes del milagro peruano. En teoría, el desempeño macroeconómico de los países puede estar determinado por dos razones: i) el “efecto buena (mala) suerte” que tiene que ver con el contexto internacional que puede ser favorable o desfavorable; y ii) el efecto “buenas (malas) políticas”, asociado a las políticas macroeconómicas de corto plazo o a las reformas estructurales, que son políticas que alteran el modelo de desarrollo vigente.

La hipótesis de este trabajo es que el milagro peruano de los últimos 10 años tiene mucho que ver con la buena suerte y, en parte, con las buenas políticas macroeconómicas de corto plazo.

Códigos JEL: F36, F41, F42 y F43.

Palabras clave: Rendimiento macroeconómico, contexto internacional, América Latina y el Perú.

ABSTRACT

The Peruvian economy has had an extraordinary performance in the last 10 years. The 2012 per capita GDP is 66 percent over 2002 and more than double its 1992 level. In a long term perspective, the cumulative growth of GDP per capita recorded in the last 10 years has been the strongest since 1900. This is the "Peruvian miracle".

This paper aims to find the determinants of Peruvian miracle. In theory, countries' macroeconomic performance can be determined by two factors: i) the “good (bad) luck effect” that is related to the international context, which can be favorable or unfavorable, and ii) the “good (bad) policies effects”, associated with short-term macroeconomic policies or structural reforms, which are policies that alter the current development model.

The hypothesis of this work is that the Peruvian miracle of the last 10 years has much to do with good luck and, in part, with good short-term macroeconomic policies.

JEL Classification: F36, F41, F42 and F43.

Key words: Macroeconomic performance, international context, Latin America and Peru.

PERUVIAN MIRACLE: GOOD LUCK OR GOOD POLICIES?*

Waldo Mendoza Bellido¹

INTRODUCTION

The Peruvian economy has performed extraordinarily over the last ten years. The GDP per capita in 2012 was 66% higher than in 2002, and more than double the 1992 figure. The average inflation rate in that period was 2.7% per annum. From a longer-term perspective, the accumulated growth of GDP per capita over the last ten years has been the most vigorous since 1990.

There is therefore some justification for terming this astonishing performance, unprecedented in Peruvian history, "the Peruvian miracle".

But just as we have seen a "Peruvian miracle" over the last ten years, a "Latin American miracle" has also been in evidence. The GDP per capita in Latin America and the Caribbean (LAC) in 2012 was 32% higher than in 2002, and 46% greater than was the case in 1992. Moreover, the average inflation rate in the region over the last ten years is 6.8%, versus the 121% recorded in the eighties, and the 94% for the nineties. As with Peru, LAC has not had ten years as good as these in contemporary history.

There would appear to be, in consequence, an element in common, despite the distinct development models and macroeconomic policies applied in the countries of the region, that has enabled this widespread good economic performance. This common factor, this "good luck effect", has been the international context, which has been rather benevolent to the continent. In the region's recent history, notwithstanding the brief recession of 2008-2009, no better ten years have been recorded in terms of: high terms of trade,

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growth in the world economy, interest rate at its lowest historical level, and massive capital inflows.

This good luck effect therefore seems to explain, to a large extent, the region's good economic performance.²

Nonetheless, despite the boom having been widespread, Peru's economic performance has been quite exceptional: in the last ten years, Peru had the second-highest economic growth, and the lowest inflation, in the region. Over the period 2002-2012, Peruvian GDP grew at a rate of 6.3% per annum, compared with the LAC average of 3.7%. Likewise, the average inflation rate was 2.7%, while the region recorded a figure of 6.8%.

One question thus remains to be answered: Why did Peru perform so much better than the rest of the LAC countries? It is clear that the "good luck" effect does not fully explain the Peruvian miracle.

In theory, the macroeconomic performance of small open countries can be determined by two factors: 1) the "good (bad) luck effect", which is totally exogenous and relates to the international context, which may be favorable or unfavorable; and ii) the "good) (bad) policy effect", which relates to short-term macroeconomic policies, or to structural reforms, which are policies that seek to alter the existing development model.

Peru's development model has not changed whatsoever since 1990. Alejandro Toledo, Alan Garcia and Ollanta Humala have not altered the "neoliberal" development model set in motion by Alberto Fujimori. Therefore, the Peruvian miracle over the last ten years cannot be explained by structural reforms, as there have been none. The only possible

² We will not take notice of the atypical cases of Argentina and Venezuela where, evidently, the deplorable results in recent years run counter to the excellent international context. The economic management of those countries has many elements in common with the economic policies pursued by Alan Garcia in his first administrations, which returned GDP per capita in 1990 to the 1960 level. When economic management reaches such levels of incompetence, it can be bad even when the external context is very good.

explanation remains, therefore, the role played by short-term macroeconomic policies as a local determining factor for the Peruvian miracle.

This hypothesis does stand to reason. The design of fiscal and monetary policy has experienced significant changes over the last ten years. The system of monetary and fiscal policies is substantially different to that of the nineties and, of course, to the "Chavista" macroeconomic policies of Alan García's first government.

The main hypothesis in this work is, therefore, that the Peruvian miracle over the last ten years has much to do with good luck, the excellent current international context, in the main, over this period, and good policies, marked by the correct short-term macroeconomic policies. What has been the most important factor? Good luck or good policies? By the end of this work, that question will have been answered in part.

This work is organized as follows: In the following section, we provide a description of the macroeconomic performance of Latin America and the Caribbean (LAC) and its connection with good (bad) luck and good (bad) policies. In section 2, we do the same for the Peruvian case. In section 3, we describe the changes that have occurred in macroeconomic policy over the last ten years in Peru. Finally, in section 4, we set out some conclusions.

1. LATIN AMERICA AND THE CARIBBEAN 1980-2012: MACROECONOMIC POLICY AND THE EXTERNAL CONTEXT³

The long-term macroeconomic performance of a small open economy, as most LAC economies are, can be determined by three factors: The development model (lesser or greater degree of State participation in the economy; lesser or greater degree of openness to trade), the short-term macroeconomic policy, and fluctuations in the world economy.

³ This section is based on Mendoza (2012a). See also IMF (1993, 2008, 2012a and 2012b) and, especially, Izquierdo, Romero and Talvi (2008)

In this section, we will focus our description on the connections between the performance of LAC economies over the period 1980-2020, the evolution of the international economy, and the responses from domestic macroeconomic policy. In this description, we abstract the role of the development model in LAC macroeconomic performance. In a recent work by the IMF (2012a, Ch. 4), it was found that the evolution of GDP per capita over the last sixty years, in a sample of 100 emerging countries, is associated with external shocks and short-term macroeconomic policies, while the influence of the development model ("structural characteristics" of the economy) is almost non-existent.

First of all, we will describe the international context relevant to LAC, and then we will look at how this external context has influenced the level of economic activity and inflation in the region.

1.1 The international context for Latin America and the Caribbean

Small open economies, which include most of those in LAC, are exposed to changes in international conditions. The basic transmission channels that connect these economies with the rest of the world are: the level of worldwide economic activity, which affects export prices and volumes; and the inflows and outflows of financial capital, which affect cost and the availability of domestic financing. Analytically, we have considered capital inflows into the region as events that are basically exogenous to the region, as per the classic work by Calvo, Leiderman and Reinhart (1993).

As regards the level of world economic activity, over the period 1980-2012 worldwide GDP grew by 197% in real terms: a greater rate than that of the LAC, as well as the OECD, countries (157% and 108%, respectively).

The world growth trajectory has not been uniform. This trajectory has been marked by the performance of the world's largest economy, the United States. The slowdowns or falls in worldwide GDP outlined in Graph 1 show that these are preceded by, or coincide with, the level of economic activity in the United States.

Thus, the abrupt slowdown of the world economy at the start of the eighties is associated with the economic crisis in the United States in that period, which meant that the GDP in that country stagnated over the period 1980-1982.

By 1978, the United States had overcome the ravages of the oil shock of 1973-1974 and the economy was growing at rates approaching 5.6% per annum, until the new oil shock of 1979 interrupted this growth phase, with inflation on the rise. Due to the oil shock, inflation jumped from 7.7% in 1978 to 11% per annum in 1979.

In August, 1979, Paul Volcker was appointed president of the Federal Reserve of the United States (FED), setting in motion one of the most contractionary monetary policies in the history of that country. The interest rate was raised from 10% at the start of his tenure to 12% by October, reaching 21.5% in December, 1980. Inflation was slow in decreasing, but the recessionary effects of the high interest rate, which crashed the stock markets and brought credit to a halt, were inevitable. The American GDP fell by 0.3% and 1.9% in 1980 and 1982, respectively.

Then came a phase of sustained worldwide economic growth, interrupted in 1991, again with the decline in the US GDP that year: as shown in Graph 1. From October 1987, the American economy was affected by the so-called "Black Monday", when the Dow Jones Industrial Average fell by around 22% in a single day. The economy seemed to recover over the next few years, but inflation was on the rise again, going from 1.94% in 1986 to 5.4% in 1990. The FED, with Alan Greenspan at the helm from 1987, was forced to put up the interest rate from 6.7% that same year, reaching a new peak of 9.2% in 1989. This had the effect of arresting the GDP's growth rate. Following the Gulf War and the subsequent rise in the price of oil, the American GDP went down by 0.3% in 1991, bringing to an end a 3% annual growth rate between 1980 and 1990.

The worldwide economic expansion continued in the years that followed, only to be weakened by the crisis in Asia and Russia of 1997-1998. Between July and October of 1997, a number of Southeast Asian economies were forced to abandon a fixed dollar

exchange rate system, letting their currencies float thereafter. The currency of Thailand was devalued by 17% in a single day, followed by those of the Philippines, Malaysia, Singapore, Indonesia, Vietnam and Taiwan. On account of this crisis, there was a prolonged growth in the region's current account deficit, as well as an overvalued exchange rate, rapid credit growth, and a sharp rise in short-term external debt. A financial bubble was formed that caused widespread panic when it burst, resulting in mass private capital flight and intensifying the crisis in the region.

Meanwhile, in August 1998, the Russian government announced the restructuring of its public debt (local currency), the 90-day moratorium on external debt payment, and a devaluation of the ruble. The strongest symptoms of this crisis emerged the previous year, when the country was hit by the Asian crisis, prompting a fall in demand for export products. The Russian government faced a series of political problems in reactivating the economy, which hit investors' confidence, and led to the sale of shares. To defend their currency, the Central Bank of Russia used its foreign-exchange reserves to the point of near-depletion, triggering a typical balance of payments crisis that plunged Russia into its worst crisis since the fall of Communism. This spread to other emerging countries with similar elements of vulnerability to those of the Russian economy. The effects on the Latin American economies, in particular, were severe.

These two consecutive crises led to a fall in the world economic growth rate, from the 4.1% posted in 1997, to 2.6% in 1998. In particular, the crisis served as a reminder of the importance of the external context to the Latin American economies. As the risk perception increased, the capital inflows to the region were interrupted.

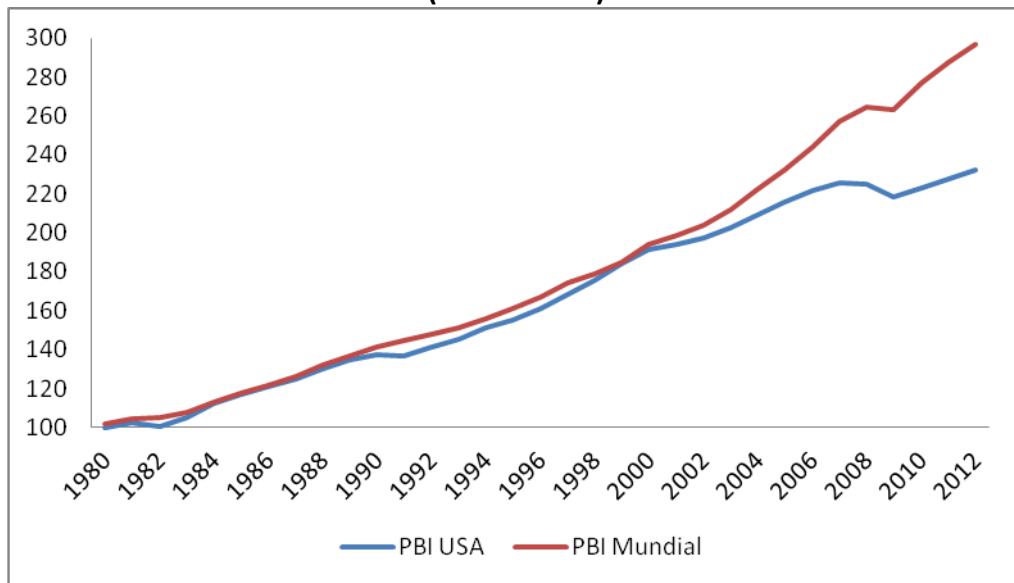
The expansion that followed the Asian and Russian crisis endured until 2001, when the decrease in the American economy's growth rate prompted a fall in the worldwide figure. In the USA in March, 2000, the NASDAQ-100 Tech peaked at 5,048 points due to the emergence of a speculative bubble in the tech stock market. Nonetheless, by the end of that year, the index barely reached 2,000 points. The effects of the bubble bursting were reflected in a number of technology companies going bust, and the slowed growth of the

American economy in 2001, which fell to 1.1% from rates in excess of 4% two years previously. Moreover, the growth rate of the world GDP in 2001 was 2.3%, testifying to a slowdown from the previous year's growth of 4.8%. At this juncture, the Federal Reserve reduced the interest rate from 6.2% per annum in 2000 to 3.8% and 1.7% in 2001 and 2002, respectively.

The succeeding years saw the highest and most prolonged worldwide growth rate in contemporary history, cut short by the US crisis that led to an economic crisis on a global scale: the most severe since 1929. The direct cause of the crisis was the price shock in the US real estate market, in which house prices fell by 13% between 2007 and 2008, and by 30% between 2007 and 2009. Unlike traditional financial and banking crises, this one occurred in *Shadow Banking*, the part of the financial system made up of investment banks, mutual funds and *mortgage* brokers. This sector is unregulated, and hence does not form part of the prudential regulation scheme to which traditional banks are subject. From 2007 there was widespread panic and a run on numerous short-term instruments, previously considered secure, when it became clear that they were not duly collateralized (REPOs, CDOs, ABS, etc.).

The fall in house prices gave rise to a liquidity problem for a number of banks, prompting financial contagion to other world regions. The macroeconomic effects were unforeseen: The US GDP growth in 2008 and 2009 was -0.3% and -3.1% respectively, while that of the worldwide GDP was 2.8% and -0.6%, respectively, The federal reserve lowered its interest rates to the lowest-ever historical levels, going from 5% in 2007 to 1.9% in 2008, and 0.16% in 2009.

Graph 1
World GDP and US GDP
(1979 = 100)



Source: IMF Compiled by the author.

How did the world economic performance affect LAC?

In LAC, more than 50% of exports are traditional or primary products, mainly mining or agriculture. The supply of these products is quite inelastic, at least in the short term, so changes in the worldwide economic level have a short-term effect mainly on prices, and not volumes, of exports to LAC.

In these conditions, international prices of traditional exports to LAC or the terms of trade (prices of traditional exports/prices of imports) constitute the key transmission channels between LAC economies and the rest of the world. In general, the world economic boom goes hand in hand with higher export prices and terms of trade, which constitute favorable external shocks for LAC. Symmetrically, the worldwide economic slowdown means lower export prices and poorer terms of trade, negative external shocks, and recession for the LAC countries.

In the period of analysis, the terms of trade for LAC have displayed the behavior illustrated in Graph 1. In the eighties, the terms of trade deteriorated severely, as a consequence of

the reduced American GDP, and the sharp downturn in world growth. No such prolonged or intense deterioration of the terms of trade had previously been recorded.

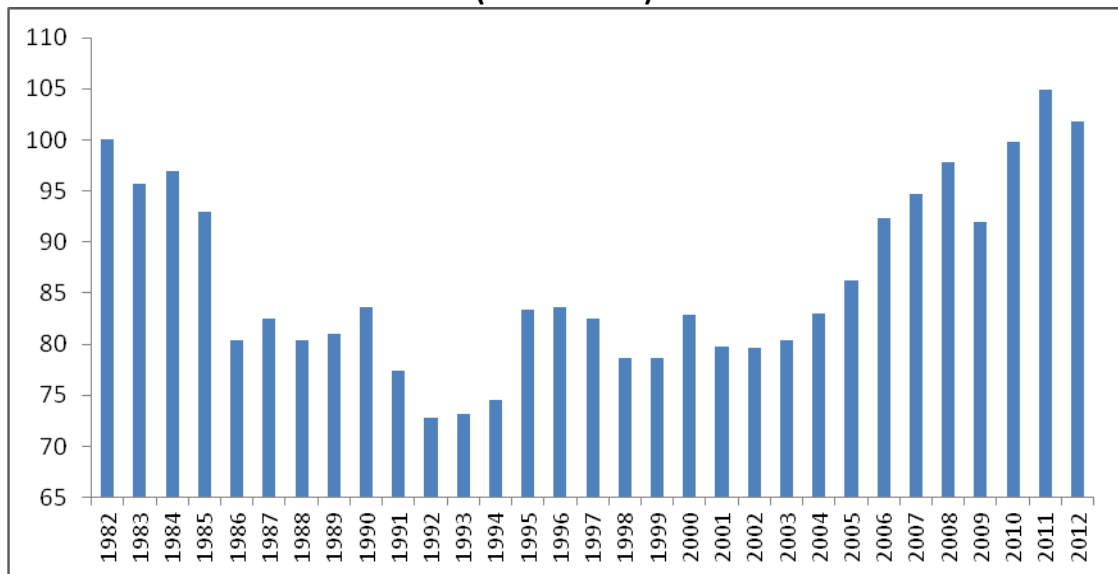
The recovery of the terms of trade started toward the end of the eighties, but was interrupted almost immediately by the 1991 recession in the United States. In the years that followed, in keeping with the significant growth in the world economy, the terms of trade started to rise before being cut short by the crisis in Asia and Russia, which reversed the world growth rate in 1998. In subsequent years, world economic growth propped up the terms of trade again. This came to a halt in 2001, when the emphatic world economic slowdown pushed the LAC terms of trade back down.

From 2002 onward, buoyed by the notable world economic upturn, the LAC terms of trade enjoyed one of the longest and most intense periods of growth in recent history, as can be appreciated on Graph 2. In 2007, the terms of trade were 19% higher than their 2002 level. The boom came to an abrupt halt with the international crisis of 2008-2009. In 2009, the terms of trade decreased by 8%.

In 2010 and 2011, once the worst of the American-centered crisis was over, the terms of trade started to climb again. Nonetheless, in 2012, largely on account of the Eurozone crisis —which slowed world economic growth— the terms of trade fell again, though less markedly so than in 2009. This is shown in Graph 2.

In summary, in terms of the course of the trade balance: the external context for LAC was bad in the eighties, relatively good in the nineties, and good in the first few years of this century, despite the crises of 2009 and 2012.

Graph 2
Latin America and the Caribbean: Terms of Trade
(1982 = 100)



Source: IMF Compiled by the author.

On the other front —that of the balance of capital— the external context faced by LAC over the period 1980-2011 has been, in general terms, similar to that recorded on the trading front: very bad in the eighties, better in the nineties, and very good over the last ten years.

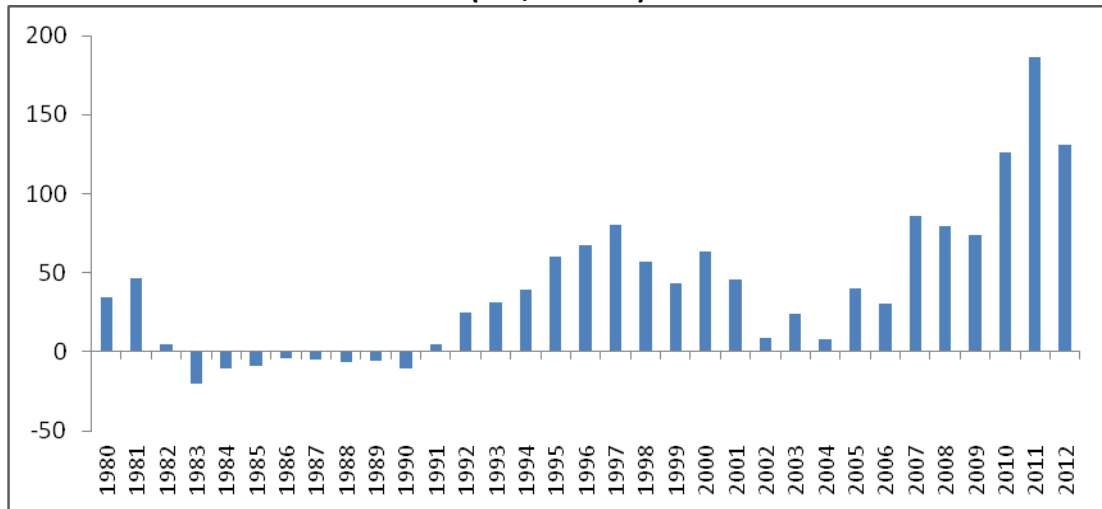
As can be seen in Graph 3, LAC posted virulent private capital outflows in the eighties. According to IMF data, between 1983 and 1990, US\$ 69.735 billion left LAC. The outflow is explained by two factors. Firstly, as we have seen, in 1979 the FED embarked upon a phase of steep interest rate increases in an attempt to reduce inflation, which had risen above 11% per year. This is shown in Graph 4. These elevated interest rates prompted a capital flight from LAC, and from other developing countries, to settle in the United States. Secondly, largely on account of these increased interest rates, many Latin American countries unilaterally declared moratoriums on external debt, triggering currency, financial and banking crises: factors in capital expulsion from the region. The debt moratorium was started by Mexico in August 1982, followed by Brazil, Argentina and Peru, among others.

In the nineties, LAC became a hugely significant recipient of capital inflows from the rest of the world. Between 1991 and 1999, more than US\$ 409.539 billion flowed into LAC. The interest rate reduction by the FED, from an average of 9.4% in the eighties (1981-1990) to 5% in the nineties (1981-1990) and the commencement of an aggressive program of privatization, structural reforms and macroeconomic policies that reduced inflation and the fiscal deficit, turned LAC into an attractive financial center for large-scale investors.

In the first decade of this century, the strong increase in capital held firm, notwithstanding the brief interruption due to the 2008-2009 international crisis. In that decade, international interest rates remained very low due to attempts by the developed economies to reactivate their economies. LAC was strengthened by fiscal consolidation, sustained growth and the availability of enormous volumes of foreign-exchange reserves, resulting in a secure center for investors.

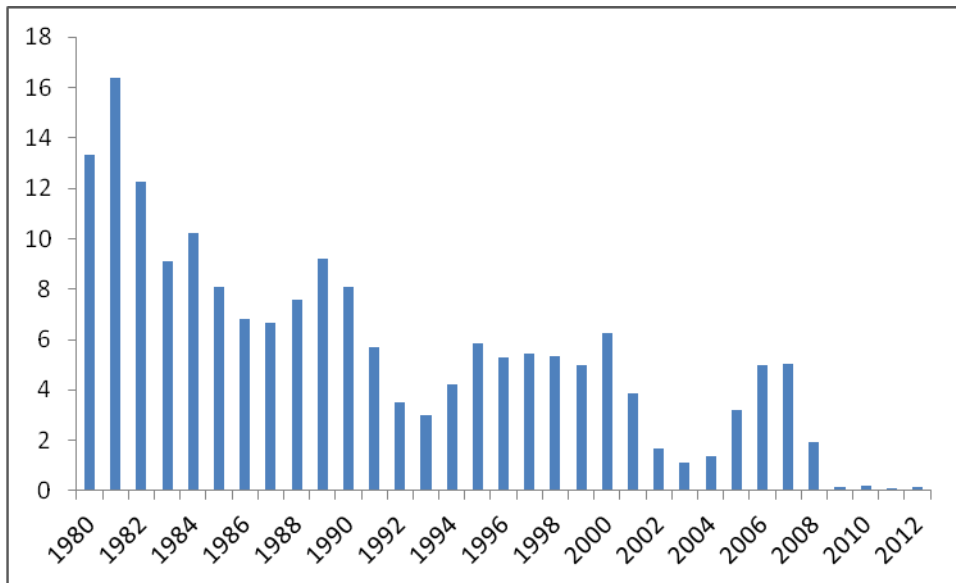
Over the last three years (2012-2012) average private capital inflows to LAC were US\$ 147.881 billion, the highest figure in contemporary economic history and well above the average of US\$ 45.493 billion achieved in the period 1991-2000. Of course, this marks a trend diametrically opposed to that observed between 1981 and 1990, when capital flowed out of LAC at an annual rate of US\$ 1.845 billion.

Graph 3
Latin America and the Caribbean: Net private capital inflow
(US\$ billion)



Source: IMF Compiled by the author.

Graph 4
Effective US federal funds rate



Source: Federal Reserve Bank. Compiled by the author.

1.2 International economic transmission channels on LAC economies

The best terms of trade increase the profitability of primary export sectors, while attracting investment contributing to their takeoff. Moreover, good primary export prices lift government tax revenues, enabling higher public expenditure.

The growth in the world economy increases export demand, which particularly influences the export volume of non-traditional goods.

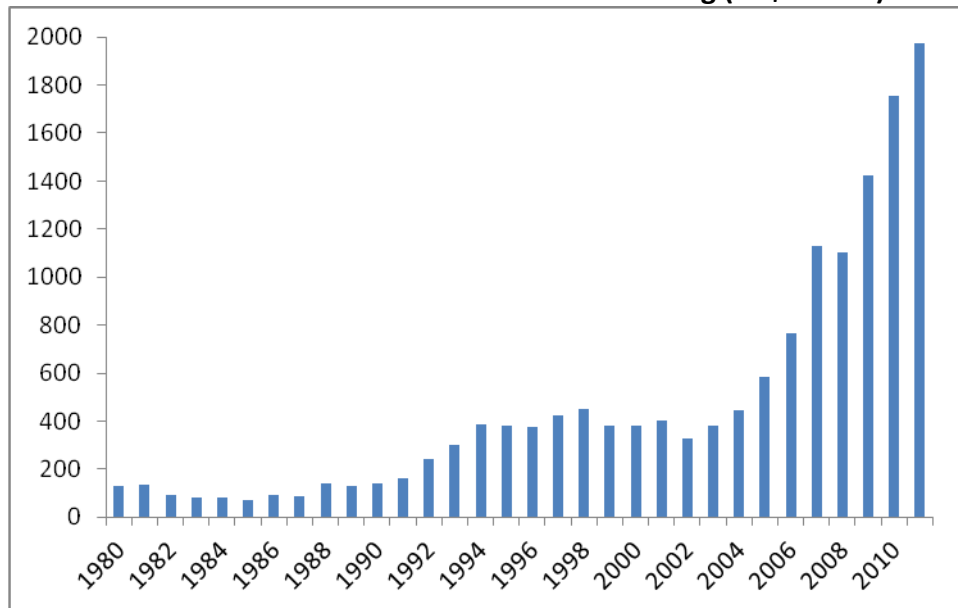
Finally and most importantly, lower international interest rates and capital inflow affects a country in different ways.

Firstly, in semi-dollarized economies this capital can take the form of external loans accepted by local banking, directly fueling foreign currency loans at lower interest rates. In countries with fixed exchange rates, capital inflow faces exchange rate interventions (dollar purchasing to prevent exchange rate decreases), which fuels the monetary base and thus bank lending. In countries with flexible exchange rates and administered interest rates, economic booms that lead to capital inflows encourage central banks to raise the monetary base, and to increase lending.

Graph 5 shows the close connection between capital inflows and bank lending behavior. In the eighties, without capital inflows, bank lending stood at a standstill; in the nineties, with superior capital inflows, lending started to recover, while over the last ten years, mass capital inflows have engendered a lending boom in the region.

Bank lending is a potent stimulant of economic activity.

Graph 5
Latin America and the Caribbean: Bank lending (US\$ billion)

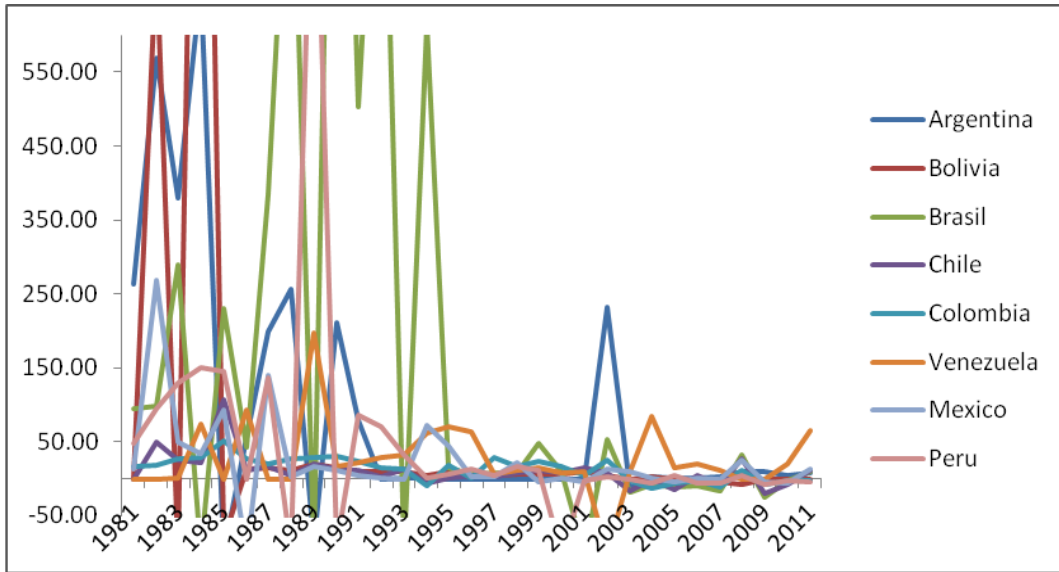


Source: IMF Compiled by the author.

Secondly, capital inflows also induce a drop in the nominal exchange rate, which, given that the transfer effect on prices is neither total nor immediate, makes the real exchange rate fall. A reduction in the nominal exchange rate contributes to local price decreases and lower real exchange rates; if there is a significant balance sheet effect that exceeds the competitiveness effect, a public spending increase, and thus upturned economic efficiency, may come about.

Graph 6 shows how the eighties stood as a period of high and volatile devaluation; the nineties, one of lower and less volatile devaluation; while the last ten years, other than cited examples of Argentina and Venezuela, were marked by very low and non-volatile devaluation. Devaluation evidently affects inflation rates, as will be seen in the upcoming section.

Graph 6
Latin America and the Caribbean: devaluation



Source: IMF Compiled by the author.

Finally, capital inflows also induce financial asset price increases (bonds, shares), leading to improved profitability at local stock markets. Higher financial asset prices also generate a wealth effect on consumption, thus contributing to the economic upswing.

1.3 The macroeconomic performance of LAC

The long-term macroeconomic performance of a small open economy, as most LAC economies are, can be determined by three factors: Firstly, performance may be determined by fluctuations in the international economy. From this standpoint, the low economic growth and high inflation rates witnessed in LAC in the eighties would be due to adverse external shocks, the fall in terms of trade, and the rise in international exchange rates, which gave way to capital outflows from the region. Likewise, the improved economic performance of the succeeding decades would be determined by capital inflows, inspired by low international interest rates and better international terms of trade.

Secondly, macroeconomic performance may be affected by short-term macroeconomic policies and the manner in which unfavorable external situation is faced, which could later determine growth and inflation.

In this section, we will describe the LAC macroeconomic performance on the assumption that the main determinants are the international context and domestic macroeconomic policy responses, based on IMF findings (2012b).

We will qualify LAC performance by assessing the two most important variables in valuing population wellbeing: GDP per capita and inflation, as well as a number of variables relating to macroeconomic quality and management, such as public debt levels and the availability of foreign-exchange reserves. These latter two variables are especially important, as they measure the response capacity of countries to adverse international circumstances.

As can be seen in Graph 7: the GDP per capita in LAC corresponds very closely to the development of the two most important channels of transmission that connect us to the international economy: terms of trade, and capital inflows.

Let us consider the eighties, the so-called "lost decade" in LAC. In that decade, as we saw in the previous section, the external context faced by the LAC countries was the worst possible: drastic reduction in the terms of trade and considerable capital flight.

The sharp downfall in the terms of trade constituted an adverse external shock for the LAC economies. Lower terms of trade affect primary production in LA directly, and indirectly, through lower income tax on mining that prompted a reduction in public spending. Meanwhile, capital outflows render domestic financing scarce and expensive, leading to private spending downturns and creating a recessionary force on LAC economies. Finally, the high external interest rates elevated interest payments on external debt, obligating various countries to cut basic public spending in an attempt to service the national debt, thereby creating an additional recessionary force.

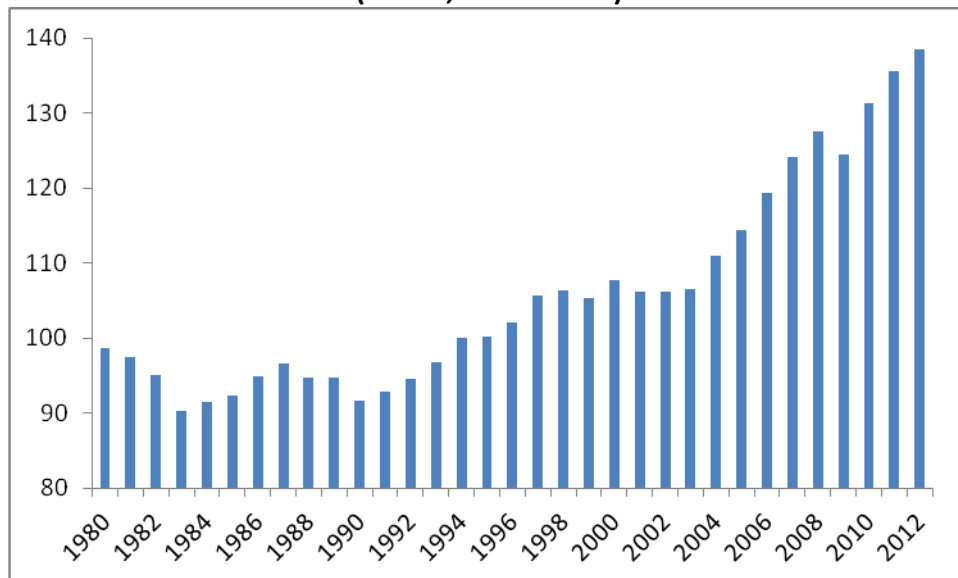
These distinct recessionary forces, and the concurrent nonexistence of countercyclical macroeconomic policies, explain LAC's incredible impoverishment in that decade. LAC's GDP per capita in 1990 was 93% of its level in 1980. This average figure hides several more dramatic figures. For example, the per capita income of Venezuela, Argentina and Peru fell by 19%, 24% and 28% respectively between 1980 and 1990.

The exceptions were Chile and Colombia, whose per capita income, at the height of LAC's lost decade, grew by 16%, respectively. In the case of Chile, the tremendous American assistance received in that decade, in support of Pinochet —who ousted the socialist president Salvador Allende in 1973— meant positive capital inflows throughout the decade, thus explaining the result. As for Colombia, the explanation is linked to the quality of public administration. In the sixties, during the maelstrom of cheap borrowing, Colombia, by provisions of its fiscal policy, borrowed very little, so the elevated international interest rate did little to affect it. Strictly speaking, Colombia and Chile did not suffer a debt crisis, or a lost decade.

Over the next decade, the external scene changed. The terms of trade recovered, and financial capital started to return en masse. This favorable external shock, and surely the better macroeconomic management of finance ministers and central banks, as well as the introduction of a set of reforms that improved the competitiveness of LAC economies, explain the significant increase in GDP per capita over the period. In 2000, the GDP per capita in LAC was 17% higher than its 1990 level.

Over the last ten years, in the midst of a much improved context —with the exception of 2008 and 2009, and, to a lesser extent, 2012, due to the Eurozone crisis— marked by high international prices and mass capital inflows, the growth of GDP per capita was notable. According to IMF figures, the GDP per capita of LAC in 2012 was 31% higher than its 2002 level, and 51% above that of 1990. Three of the most noteworthy cases are Argentina, Chile and Peru, whose GDPs per capita grew by 78%, 43% and 60% respectively between 2002 and 2012.

Graph 7
Latin America and the Caribbean: real GDP per capita
(Index, 1994=100)



Source: IMF Compiled by the author.⁴

Inflation, in the small and open economies, i.e. most of those in LAC, proceeds at the rate of devaluation. Moreover, when inflation rates are very high, the link between output gap and inflation is almost imperceptible.

In the eighties, the capital outflows brought about tremendous devaluatory forces, leading to interest rate spikes, which in countries such as Bolivia, Argentina and Peru reached hyperinflationary proportions.

As can be seen in Graph 8, the inflation rate rose steeply, from 54% per annum in 1980 to 133% in the middle of the decade, and 477% in 1990. The inflation rate in Argentina increased from 88% in 1980 to 1,344% in 1990; in Bolivia, from 24% in 1980 to 8,171% in 1985; and in Peru, from 61% in 1980 to 7,650% in 1990. At the peak of inflation, for example in Bolivia in 1985, devaluation climbed to 8,482% per annum, while in Peru in 1990, devaluation soared to 4,545%. Fighting inflation against an adverse external

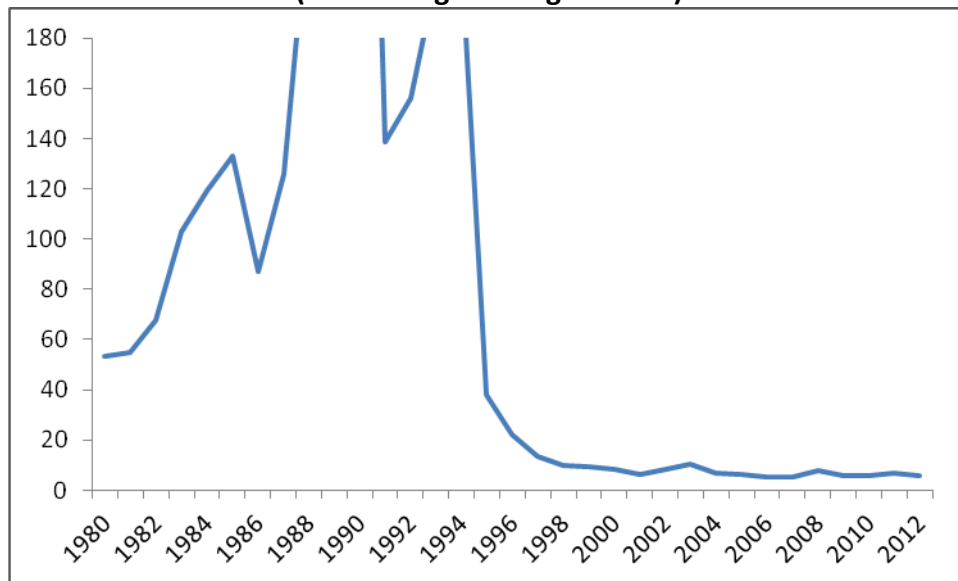
⁴ Not including Costa Rica, Dominica, Nicaragua, Suriname, and Trinidad and Tobago.

backdrop of currency outflows, with the price of the dollar increasing steadily, is no easy task.

In the following decade, when capital started to flow into LAC and foreign currency prices stopped going up, inflation also began falling rapidly. This outcome was also influenced by the fact that many central banks acquired the autonomy that allowed them to stop issuing to finance government spending. The annual inflation rate fell by 477% in 1990 to 37% in the middle of that decade, and to just 8% in 2000. In that same year, devaluation in Argentina, Bolivia and Peru dropped to 0% (due to a fixed exchange rate against the American dollar), 6.9% and 3.1% respectively.

Over the last ten years, the stabilization of the exchange rate and the institutional changes that have granted considerable autonomy to most central banks in LAC, while generally marking out their responsibilities, has enabled the construction of a climate in which inflation is no longer an issue. The notable exceptions are Argentina and Venezuela, where inflation rates are still higher than 40% per annum, partly due to the lack of independence of their central banks. In the last three years (2010-2012), the average inflation rate in LAC was around 6% per annum: the lowest in three decades.

Graph 8
Latin America and the Caribbean: Inflation
(Percentage change of CPI)

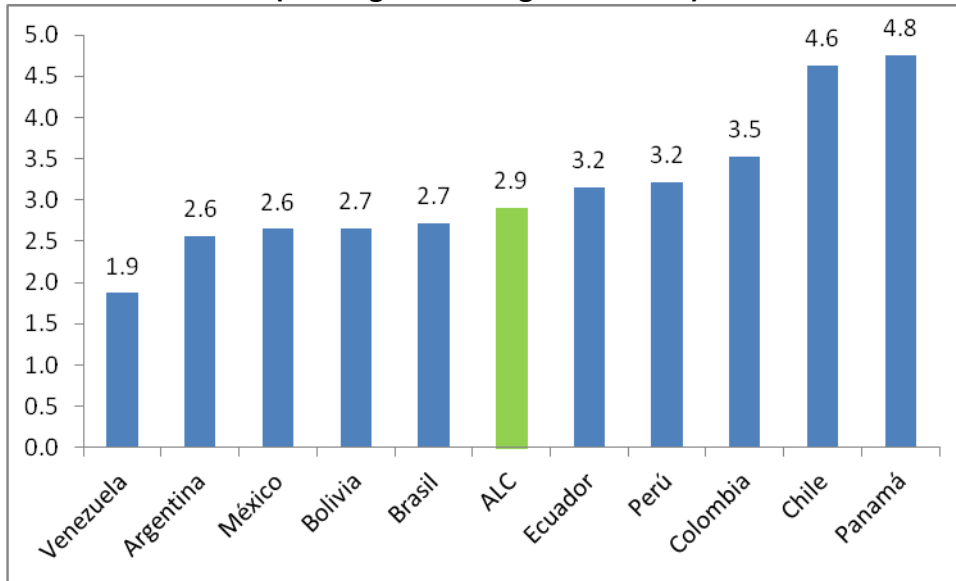


Source: IMF Compiled by the author.

In comparative terms, by judging macroeconomic performance on the basis of GDP growth and inflation, the Panamanian economy had the best performance over the period 1980-2012, as shown in Graphs 9 and 10. The growth rate of the Panamanian economy was 4.8%, the highest in LAC, while its inflation of 2% was the lowest in the region.

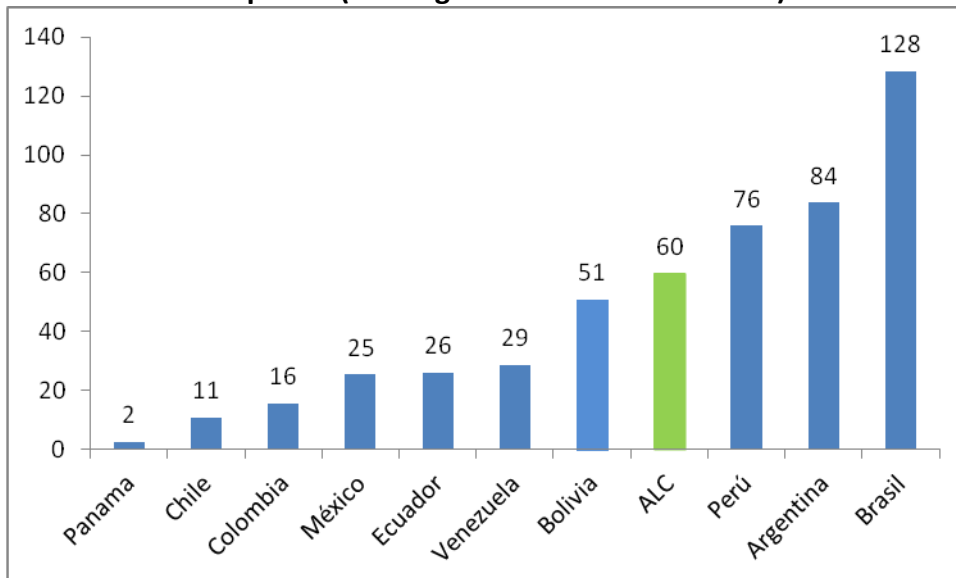
Meanwhile, in terms of economic growth, Venezuela performed the worst, and in terms of inflation, Brazil had the region's highest rate for the period 1980-2012.

Graph 9
Latin America and the Caribbean, 1980-2012: Macroeconomic performance compared
(Average annual growth rate)



Source: IMF Compiled by the author.

Graph 10
Latin America and the Caribbean, 1980-2012: Macroeconomic performance compared
(Average annual inflation rate)



Source: IMF Compiled by the author.

1.4 Macroeconomic management

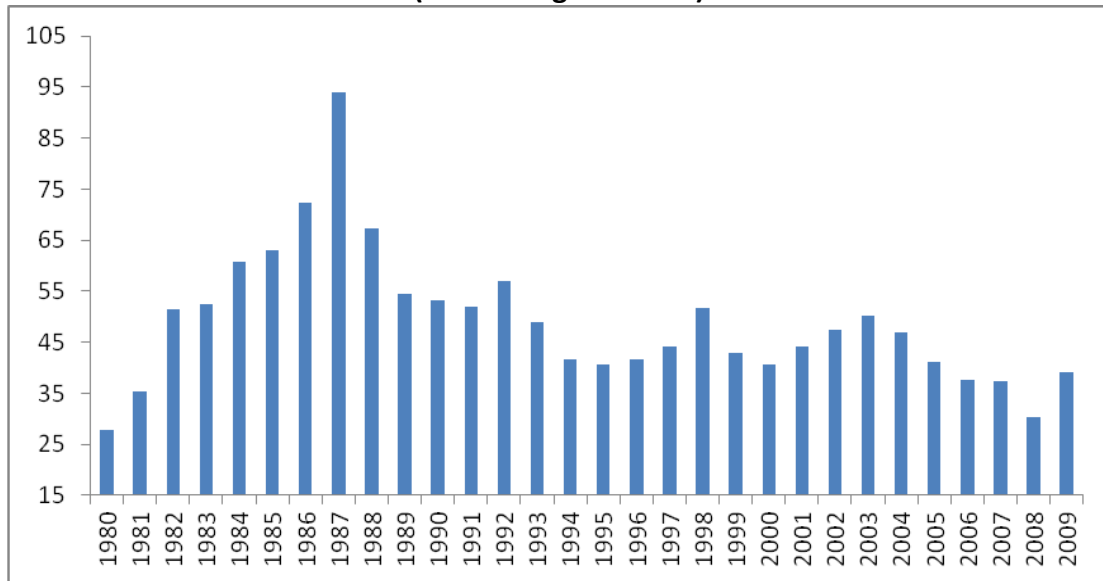
Kaminsky, Reinhart and Végh (2004) have comprehensively assessed the character of worldwide macroeconomic policy, for a sample of 120 countries over the period 1960-2003.

These authors find that: 1) net capital inflow is procyclical in most OECD and developing countries; ii) the OECD countries have, in general, countercyclical or acyclical fiscal policies; iii) as regards monetary policy, those of most OECD countries are countercyclical, while those of developing countries are procyclical, and iv) in developing countries, the capital flow cycle and the macroeconomic policy cycle reinforce one another. This means that macroeconomic policy is expansive when there is an inflow of capital, and contractionary when there is an outflow.

In the sphere of macroeconomic management, we will set out the state of public finances and the availability of foreign-exchange reserves as indicators of the capacity of different LAC governments to react appropriately to adverse external events, which are frequent in LAC. The international crisis of 2008-2009 has shown that the LAC countries with fiscal resources and significant volumes of foreign-exchange reserves can implement expansive countercyclical macroeconomic policies to tackle adverse external shocks.

In the case of public finances, Graph 11 shows the evolution of the public debt-to-GDP ratio. This ratio rose from a reasonable 25% of GDP in 1980, peaking at 90% in 1987; this is not necessarily explained so much by expansive fiscal policy implementation in the region, as fundamentally by the rise in interest on national debt due to international interest rate increases and GDP stagnation. Subsequently, there is a sustained reduction in the level of public borrowing in LAC, interrupted briefly by the Russian crisis of 1998 and the international crisis of 2008-2009.

Graph 11
Latin America and the Caribbean: Public debt
(Percentage of GDP)



Source: Reinhart and Rogoff, FMI. Compiled by the author.⁵

During the international crisis of 2008-2009, the fiscal policy in LAC, for the first time, differed from that described by Kaminsky, Reinhart and Végh (2004). In almost all of LAC, public spending increased or did not decrease, and in several countries some taxes were lowered⁶. With the public debt standing at around 30% of GDP, the countries in the region were able to implement an expansive fiscal policy, at the height of the crisis: something which was not previously achievable.

With respect to the responsibility of central banks to administer their countries' foreign-exchange reserves appropriately, this commitment has been largely restricted by current international conditions. We must not forget that the change to foreign-exchange reserves is the same as the result of the balance of payment, which is the sum of the capital account and the current account.

⁵ Not including Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Granada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago, as per the International Monetary Fund's classification of Latin America and the Caribbean.

⁶ See, for example, CEPAL (2011).

The administration of foreign-exchange reserves is simpler than the periods in which there are inflows of capital from abroad or good terms of trade. In such periods, in the face of threatened drops in the price of the dollar, the central banks buy dollars and stockpile their foreign-exchange reserves. In phases of capital outflows or decreased terms of trade, the monetary authorities sell dollars to avoid strong devaluations, though this response is limited by the availability of foreign-exchange reserves. Buying dollars is infinitely simpler than selling dollars.

In recent years, the countercyclical use of foreign-exchange reserves has become widespread. These are accumulated in periods of capital inflow and good terms of trade, and are used when capitals flow out or terms of trade fall to attenuate the effects on lending, and on the exchange rate from the reduced supply of dollars.

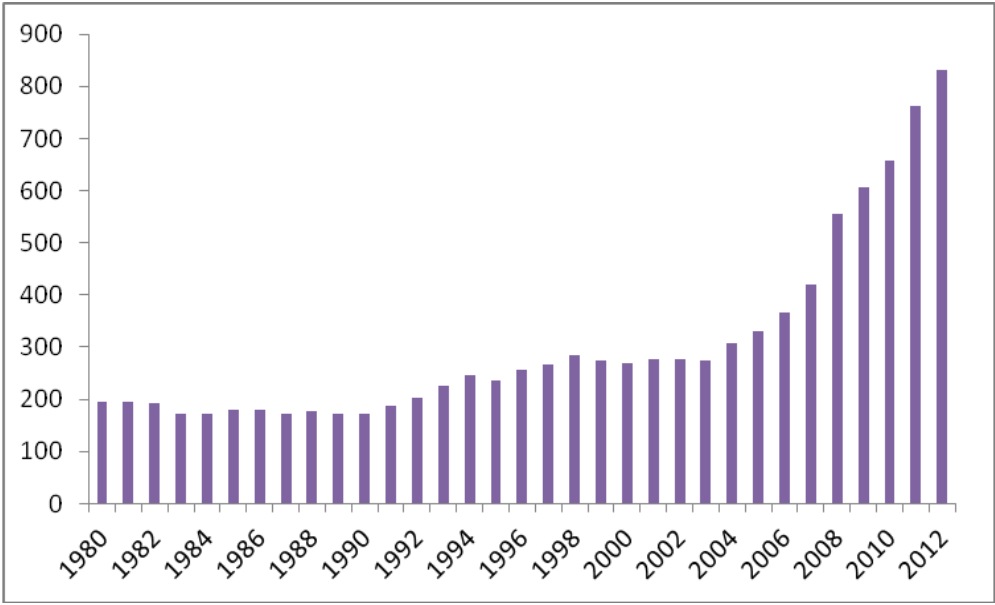
The behavior of foreign-exchange reserves in 1980-2012 is shown in Graph 12. During the eighties when, as we have seen above, capital flowed out of LAC and the terms of trade deteriorated, the impacts on the balance of payments meant a formidable reduction in foreign-exchange reserves. The foreign-exchange reserves, which stood at US\$ 195.197 billion in 1980, had fallen for US\$ 171.085 billion by 1989.

In the nineties, with a change in international conditions, better terms of trade and significant capital inflows, LAC accumulated a considerable volume of foreign-exchange reserves up to 1998, when they reached the figure of US\$ 283.527 billion (68% of imports). The Russian crisis, unleashed toward the end of 1998, put an end to this sustained growth in reserves. The foreign-exchange reserves of LAC fell to US\$ 274.162 billion in 1999, and US\$ 268.894 in 2000.

In the years that followed, from 2002 to 2012, the accumulation of foreign-exchange reserves was substantial, interrupted only briefly in 2009, when the central banks sold reserves to face off the international crisis. In 2012, LAC's foreign-exchange reserves reached the record figure of US\$ 831.557 billion, which represents 77% of imports of goods.

These currency capabilities constitute a significant parachute for reacting to adverse international events. The Russian crisis of 1998 and the international crisis of 2008-2009 have put the importance of possessing bulk foreign-exchange reserves to the test. In 1997, when reserves represented only 62% of imports, the central banks could do little to diminish the effects of virulent capital outflows. The financial, banking and currency crises and their effects on the LAC economies' manufacturing sector were severe and prolonged. On the other hand, in 2008-2009, the central banks had more reserves to finance the balance of trade deficits. There was no banking or currency crisis, and LAC was able to come out of the 2009 recession quickly.

Graph 12
Latin America and the Caribbean: Net Foreign-Exchange Reserves (NFER)
(In US\$ billions)



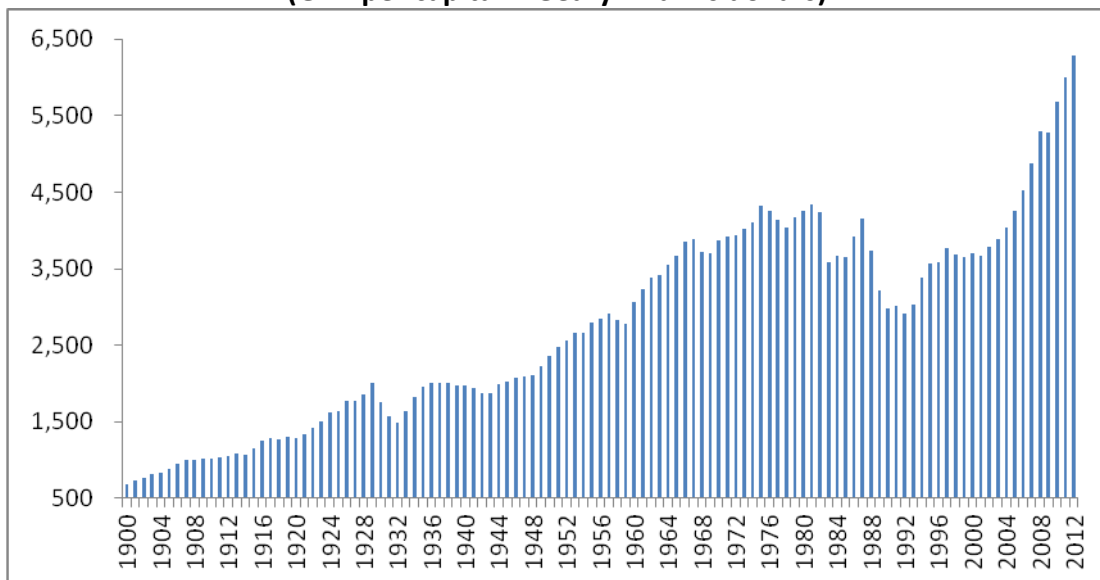
Source: IMF and ECLAC Compiled by the author.

2. PERUVIAN MIRACLE: GOOD LUCK OR GOOD POLICIES?

The most remarkable aspect of what has come to be known as the Peruvian miracle is the spectacular growth in GDP per capita over the last ten years.

As can be seen in Graph 13, on the long period from 1900 and 2012, the accumulated GDP growth per capita from 2002-2012 is the highest in Peru's contemporary history.

Graph 13
Peru: the Peruvian miracle
(GDP per capita in Geary-Khamis dollars)



Source: Seminario and Alva (2012). Compiled by the author.

What are the determinants of the Peruvian miracle? Given that Peru's economic model has gone unchanged since 1990, have good macroeconomic policies been employed over the period? Or has the country enjoyed good luck, due to an extraordinarily favorable international environment, interrupted only briefly by the crisis of 2008-2009?

The following sections attempt to answer these questions.

2.1 The good (bad) luck effect: the international context for Peru

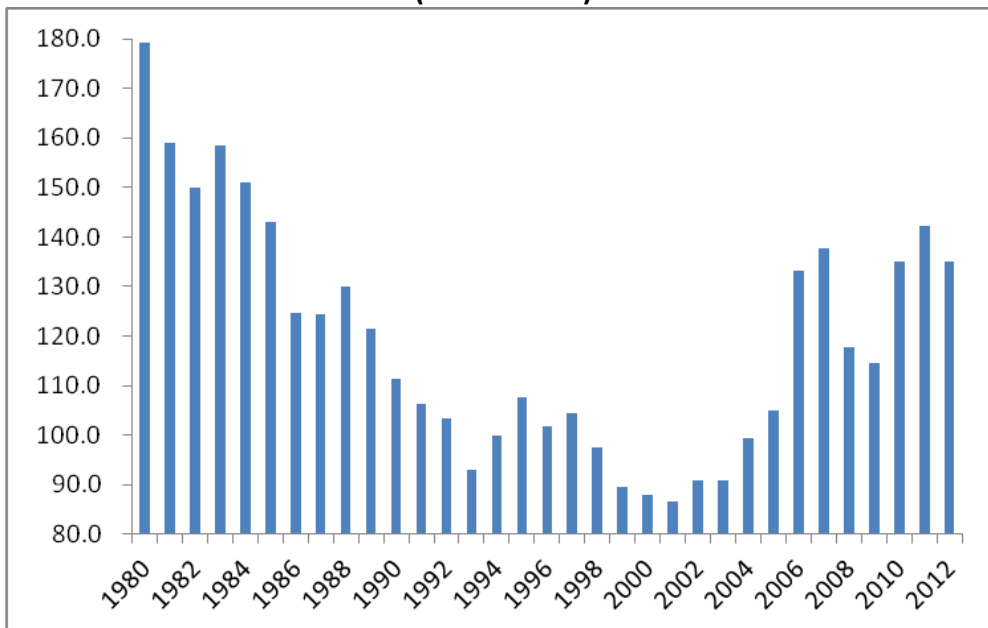
In Peru in 2012, 75% of exports were traditional products, while 57% were minerals. One such mineral, copper, accounts for more than 40% of all mineral exports. On the other hand, more than 80% of imports are made up of inputs and capital goods. Consequentially, in this economic structure with undiversified exports and imports largely comprising complementary goods, the movements in the terms of trade constitute external shocks that can alter the course of the economy.

In the period 1980-2012, the evolution in the terms of trade had two marked phases, as can be appreciated in Graph 14. In the first phase, between 1980 and 2001, there was a sharp deterioration in the Peruvian terms of trade. The 1990 terms of trade were 38% below their 1980 level, while those for 2001 had fallen by 22% on the 1990 level.

Nonetheless, 2002 marked the start of a sustained, unprecedented climb in the terms of trade, interrupted briefly by the international crisis of 2008-2009. In 2012, the terms of trade were 50% higher than their 2002 level.

In summary, on the trading front, Peru faced an adverse external context throughout the eighties and nineties, and an extremely favorable external context in the last ten years.

Graph 14
Peru: terms of trade
(1994 = 100)



Source: BCRP. Compiled by the author.

On the other front —that of the balance of capital— the external context faced by Peru has been, in general terms, similar to that recorded by the other LAC countries: very bad in the eighties, better in the nineties, and very good over the last ten years.

As can be seen in Graph 15, Peru posted private capital outflows in the eighties. According to data from Peru's central bank, the *Banco Central de Reserva del Peru* (BCRP), between 1980 and 1990 there was a net private capital outflow of US\$4.38 million. The reasons for these capital outflows are the same as those for LAC. high international interest rates and financial crises in much of LAC. Arguably, Peru's idiosyncratic factor was the irruption of violence from Shining Path (*Sendero Luminoso*) in 1981 and its continuance through to 1992.

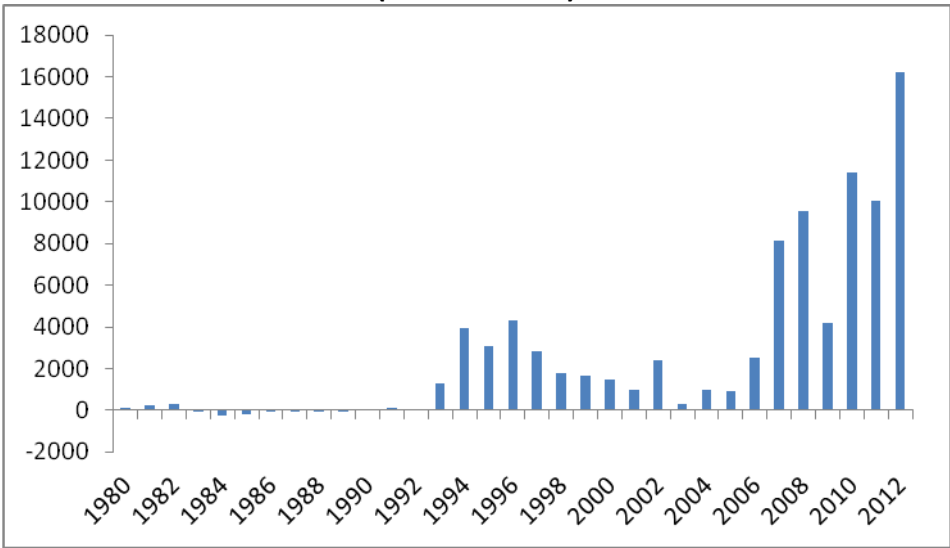
In the nineties, Peru, as with all of LAC, became a significant recipient of private capital from the rest of the world. Between 1991 and 1997, more than US\$ 15.644 billion flowed into Peru. These results are strongly influenced by the dynamic privatization process. In this period, direct investment from privatizations was US\$ 4.795 billion.

In 1998, as a consequence of the Russian crisis, a strong reduction in Peruvian capital inflows occurred. Capital inflows, as Graph 15 shows, fell from US\$ 2.833 billion in 1997 to just US\$ 1.805 billion in 1998 and US\$ 983 million in 2001.

The short-term swing in capital movement was much more pronounced. Whereas in 1997 US\$ 2.471 billion entered the country in short-term capital, the following three years saw outflows of US\$ 72 million in 1998, US\$ 1.476 in 1999 and US\$ 735 million in 2000.

From 2000, as can be seen in Graph 15, the gathering pace of economic expansion in Peru was accompanied by returning capital inflows that greatly outstripped those of the nineties, interrupted briefly by the international crisis of 2009. Between 2002 and 2012 US\$ 66.652 billion in private capital entered the country: a figure unheard of in Peru.

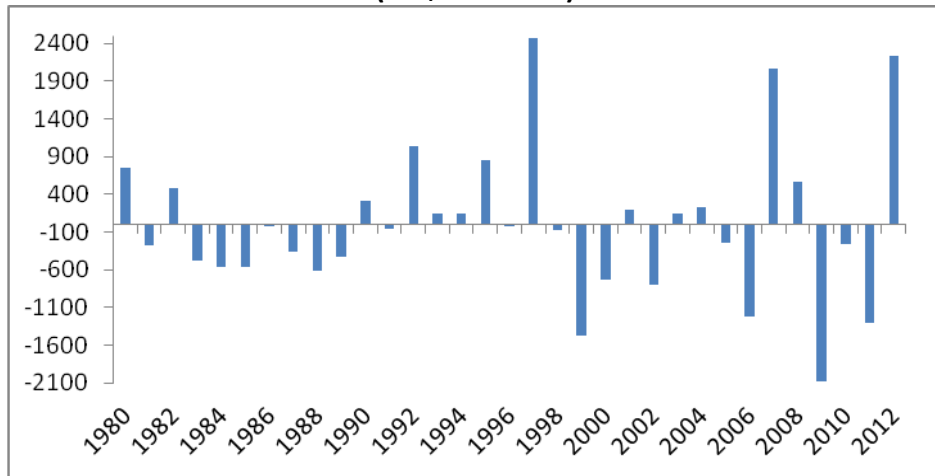
Graph 15
Peru: net private capital inflows
(US\$ millions)



Source: BCRP. Compiled by the author.

Short-term capital behavior has plotted a single course, though fluctuations have been more virulent, as shown in Graph 16.

Graph 16
Peru: short-term net private capital inflows
(US\$ millions)

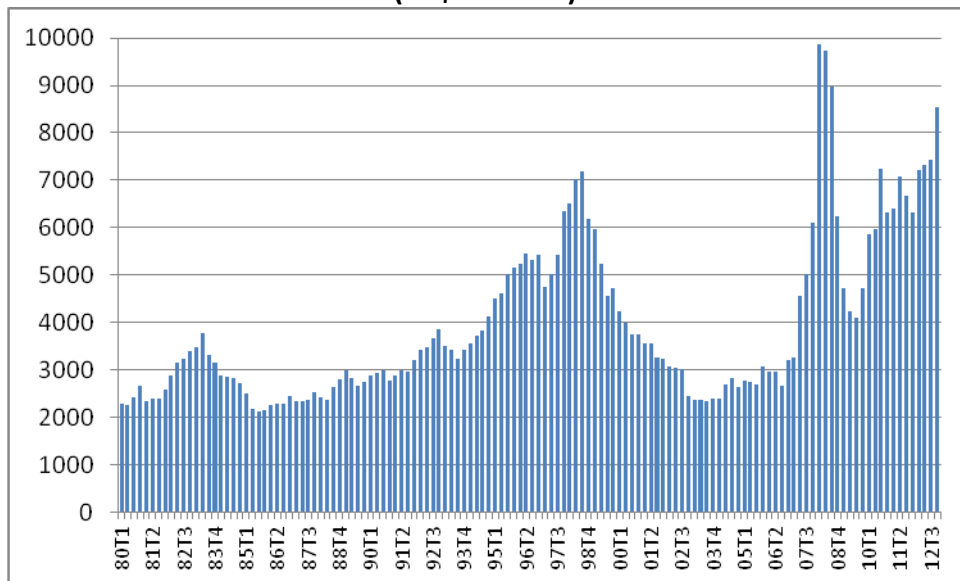


Source: BCRP. Compiled by the author.

Graph 17 illustrates the evolution of Peru's short-term external obligations, which reveal a growing trend since 2004, standing as evidence that Peruvian external financing capacity has improved. It can be seen that this level of borrowing rose extraordinarily in the first three quarters of 2008, before being stalled by the international crisis.

In relative terms, Peru's short-term debt represented 120% of foreign-exchange reserves in the final quarter of 1980, 53% at the close of 1999, and 13% by the end of 2012. This shows that the Peruvian economy's capacity to respond to a possible abrupt reduction in external financing has strengthened notably.

Graph 17
Peru: short-term external debt
(US\$ millions)



Source: BCRP. Compiled by the author.

In summary, the external context faced by the Peruvian economy in the eighties was the worst possible: no private capital inflows, short-term capital outflows and deteriorated terms of trade. In the nineties up to 1997, the external context was fair, with significant capital inflows and only a slight exacerbation in the terms of trade. The external context became negative again in the period 1998-2002, accentuated by dwindling terms of trade and interrupted capital inflows. Finally, the external context from the period 2002-2012, except for 2009, was the best possible: average terms of trade for 2011-2012 were the highest for the last 25 years, international interest rates were the lowest in international history, and foreign capital inflows had never been so high.

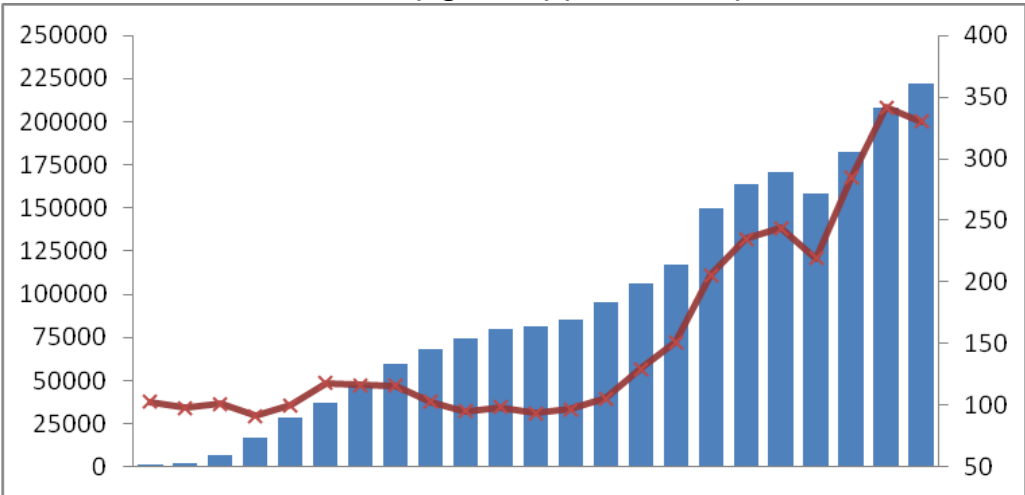
2.2 International economic transmission channels to the Peruvian economy

One of the main channels along which good or bad luck can affect the Peruvian economy is that of the prices of the country's traditional exports. These prices, as well as impacting the profitability and production of traditional products, have pronounced effects on tax

revenues, primarily through the effect on income tax paid by the traditional sectors, such as mining and hydrocarbons.

Graph 18 shows a clear relationship between the traditional exports price index and central government tax revenues. The notable hike in Peruvian export prices in the period of the Peruvian miracle can be seen, along with the concurrent rise in tax revenues to the central government. The increased revenues accrued by the Peruvian government enable higher spending, principally on infrastructure (as most income tax on mining and petroleum is bound for the *canon minero*, which is almost entirely used for public investment projects), which also contributes to macroeconomic reactivation.

Graph 18
Peru: traditional exports price index (left axis) (1994=100) and central government tax revenues (right axis) (US\$ millions)

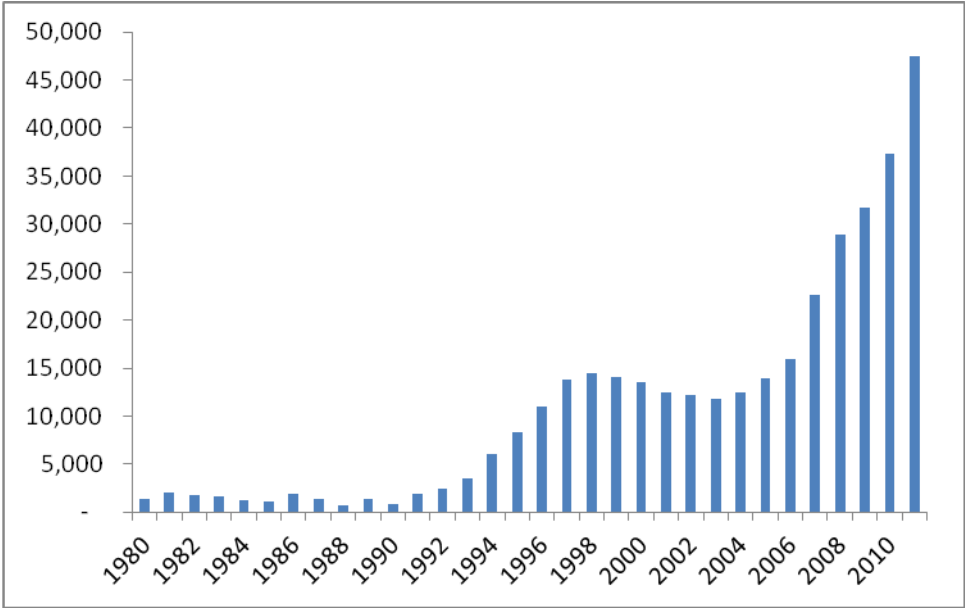


Source: BCRP. Compiled by the author.

As described above, in the case of LAC the other channel is capital inflows. Capital inflows have a significant influence on domestic bank lending, the stock market, and the exchange rate. Capital inflows fuel increased bank lending and elevate the price of local financial assets, leading to enhanced stock market profitability and encouraging nominal exchange rate reductions.

The connection between capital inflows and bank lending is very tight in a partly-dollarized economy such as that of Peru⁷, as can be seen in Graph 19. Local banks are fueled by long and short term external lending. It can be seen, for example, that in periods of capital outflows, such as during the 1998-1999 Russian crisis, or the 2008-2009 international crisis, the growth in bank lending is cut short.

Graph 19
Peru: bank lending (US\$ billions)



Source: IMF Compiled by the author.

The local currency lending rate has dropped from 186% per annum at the start of 1992, to 23% in 2002, and 19% midway through 2013. Over those same years, the dollar lending rate fell by 21% in 1992, 20% in 2012 and 8.2% in 2013.

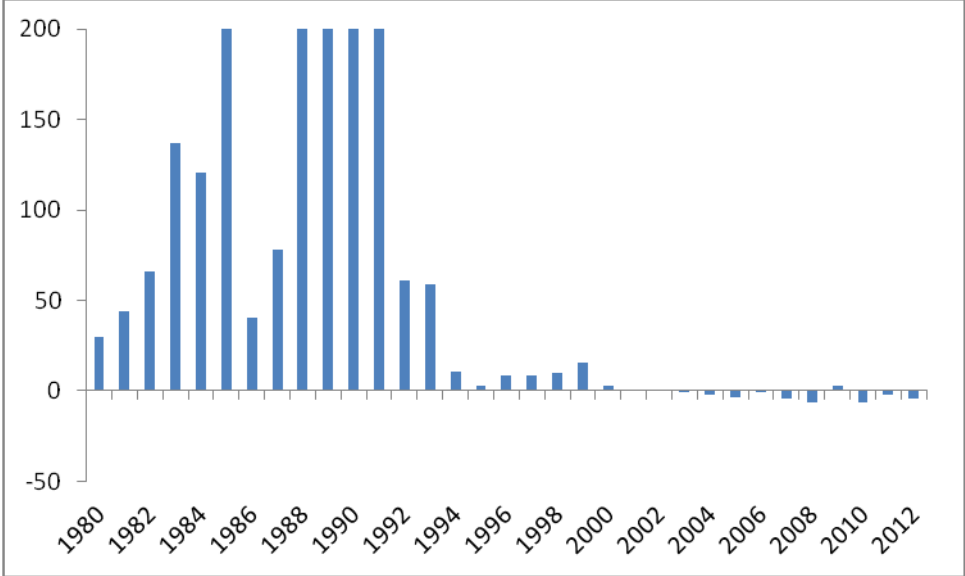
Abundant and low cost lending is a powerful stimulant for any economy.

The other channel is the exchange rate, both nominal and real. The behavior of the nominal exchange rate has a decisive influence on the rate of inflation, above all when this is at a high level. Graph 20 clearly illustrates that devaluation was very high and volatile in

⁷ As of mid 2013, 43% of bank loans to the private sector are in dollars.

the eighties, lower and less volatile in the nineties, and much lower and less volatile over the past ten years. These devaluation rates undoubtedly have an immediate correlation with the interest rates in those disparate periods.

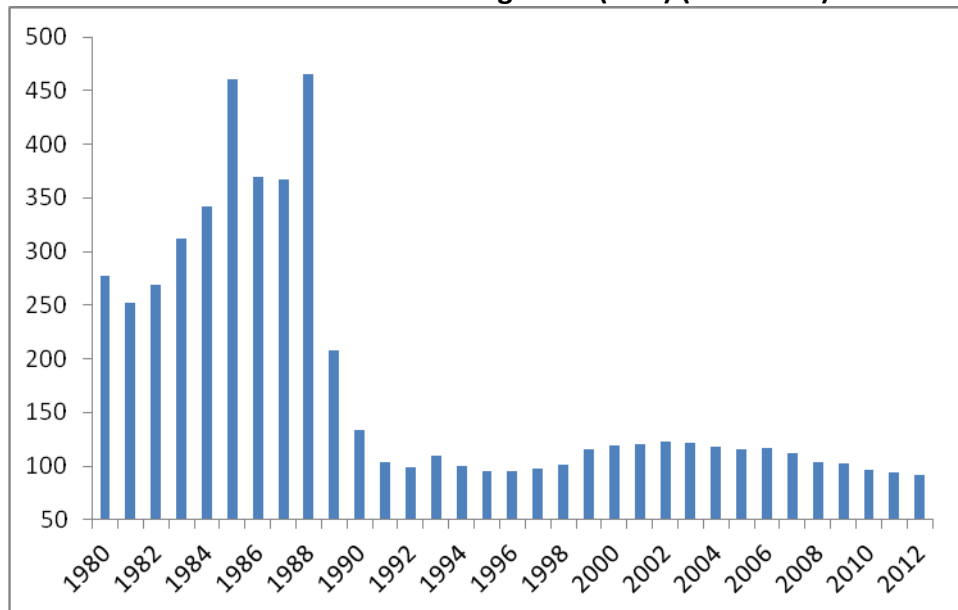
Graph 20
Peru: devaluation



Source: BCRP. Compiled by the author.

Capital inflows have an effect on the real exchange rate, given that the transfer effect on prices is not 100%. Graph 21 shows that, in general, periods of strong capital inflows are also periods of falls in the real exchange rate, and when capital flows out, as in 1998 or 2008, or in 1992, following the coup d'état of Alberto Fujimori, the exchange rate goes up.

Graph 21
Peru: bilateral real exchange rate (USA) (1994=100)



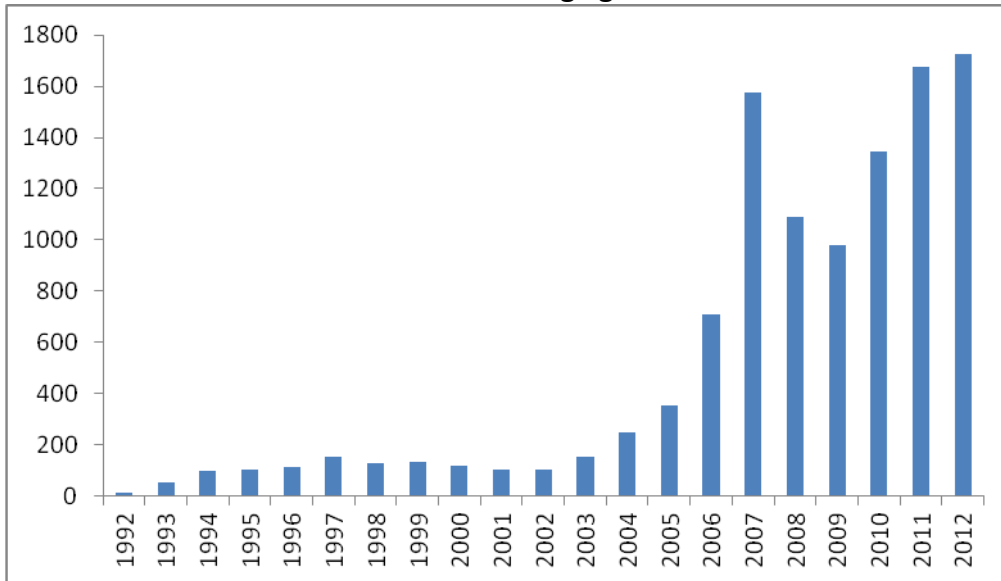
Source: BCRP. Compiled by the author. * RER based on NERI*CPI USA/CPI Peru

On the other hand, in an economy where almost half of the public debt is in dollars and more than 43% of lending to the private sector is also in dollars, there is a powerful balance sheet effect. If incomes (from the private or public sector) are dominated in local currency, but expenditures or obligations are denominated in dollars, an increase in the real exchange rate can affect the balances of companies, families and the government, generating recessionary trends on the economy. If this balance effect is stronger than the competitiveness or Marshall-Lerner effect, a rise in the real exchange rate can have recessionary effects on the economy.

A significant reduction in the real exchange rate over these ten years of the Peruvian miracle would constitute an additional stimulatory force, even when, in prospect, it can be a threat to the manufacturing export sector, for which the competitiveness effect can be decisive.

Finally, capital inflows also induce financial asset price increases (bonds, shares), leading to improved profitability at local stock markets. Higher financial asset prices also generate a wealth effect on consumption, thus contributing to the economic upswing.

Graph 22
Peru: Lima Stock Exchange general index



Source: BCRP. Compiled by the author.

2.3 The Peruvian macroeconomic performance

The historical experience shows that recessions in Peru can be preceded or accompanied by changes to the international environment, which translate into adverse shocks on international prices of export products, or into shocks that trigger abrupt capital outflows. That is, most recessions that occur in the country are associated with real or external financial shocks, with the latter more significant in the periods in which the Peruvian economy allows free international movement of capital (Dancourt and Mendoza, 2009).

An export basket highly concentrated on raw materials and the inherently high instability to which these goods are subject explains, at least in part, why international price fluctuations have a significant impact on small and open economic cycles such as Peru's. The free movement of capital and the partial dollarization of the banking system directly connect the Peruvian economy with the vagaries of international financial markets. When the bond markets' perception of default or sovereign risk is elevated, capital inflows can suddenly give way to virulent outflows.

As we did with LAC, we are going to assess the performance of the Peruvian economy, based on the behavior of the two most important macroeconomic variables in evaluation population wellbeing: GDP per capita and inflation.

a. GDP per capita

As can be appreciated in Graph 23, in general terms the behavior of Peruvian GDP per capita has followed the trend of LAC GDP per capita, which impacts on our hypothesis of the extreme importance of international macroeconomic performance on the LAC economies. It should be recalled that this context was very bad in the eighties, better between 1990 and 1997, bad between 1998 and 2002, and very good in the succeeding years, except 2009.

In correspondence with the highly adverse international context of the eighties, GDP per capita endured the worst recorded downturn in Peruvian economic history. GDP per capita in 1990 fell to just 72% of its 1980 level. GDP per capita in 1990 was very similar to that of 1960: Peru appeared to have remained at a standstill for thirty years. Never before in the 20th century had the Peruvian economy been subject to such a rapid process of impoverishment. The decade of the eighties in particular was the worst of the 20th century for Peru and LAC, giving rise to the "lost decade" label.

The lost decade distanced Peru from several countries that were similar in the seventies, and which are now at a much more advanced stage of development. This is the case with Chile and South Korea. The GDP per capita of those countries toward the start of the fifties, measured in Purchasing Power Parity (PPP), was very similar to that of Peru. Peru's GDP per capita in 1950 (US\$ 3,157) was very close to that of Chile (US\$3,250), while both were considerably higher than that of South Korea (US \$1,800): a country that had just emerged from a costly civil war.

Later history was different. In the mid-sixties, South Korea embarked upon a period of high and sustained growth, which it has maintained up to present day. Peru suffered throughout the eighties. Chile endured a sharper crisis from the end of the seventies to

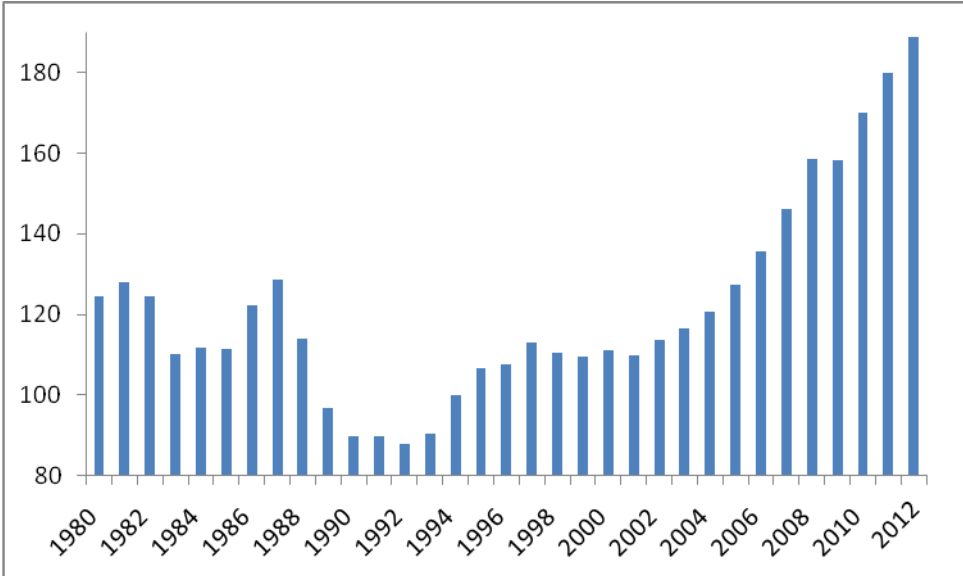
the early eighties, but later, from 1983 onward, posted the highest growth rates in Latin America.

Currently, Peru's GEP per capita is approximately 60% that of Chile's, and 28% of the South Korean figure. Such is the weight of history.

In the nineties, with a much more favorable external context, the Peruvian economy started a full-blown recovery, only to be interrupted by the Russian crisis in 1998. In 1997, GDP per capita had placed itself 26% above the figure for 1990. The years that followed, 1998-2002, were ones of recession, brought on by the Russian crisis and its consequences. In 2002, the GDP per capita was similar to that of 1997.

Over the next few years, as of 2003, the Peruvian economy enjoyed its steepest statistically-recorded progression in terms of GDP per capita although it only exceeded 1975's historically high GDP per capita in 2006. Notwithstanding the setback of 2009, the GDP per capita of 2012 is the highest in history in real terms, and is double the 1990 level.

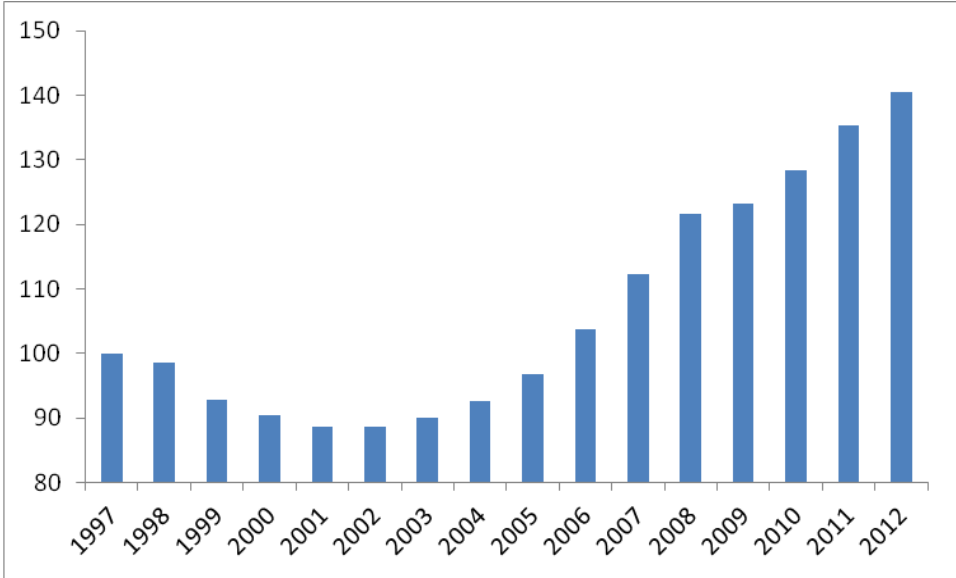
Graph 23
Peru: real GDP per capita
(1994 = 100)



Source: INEI and BCRP. Compiled by the author.

The behavior of employment is a near-perfect reflection of the input-output relationship between the level of economic activity and employment, as shown in Graph 24. During boom, employment grows; during bust, employment falls.

Graph 24
Peru: Urban employment rate in companies with more than 10 workers (1997=100)



Source: BCRP. Compiled by the author.

b. Inflation, devaluation and issue

As regards inflation, in a small and open economy such as Peru's, the exchange rate has a decisive influence on all instances of double- or triple-figure inflation rates, such as those of Peru throughout the eighties and the start of the nineties.

As can be seen in Graph 25, movement in inflation goes hand in hand with devaluation. In the eighties, capital flight applied constant pressure for the exchange rate to increase. Devaluation increased from 30% per annum in 1980 to 243% in 1985 and 1,388% in 1989. Concurrently, the inflation rate shot up from 58% in 1980 to 163% in 1985, and 3,399% in 1989.

In 1990 a stabilization program was enacted which entailed the liberalization of the exchange rate, which rose from 4.544% in that year, accompanied by a fuel price

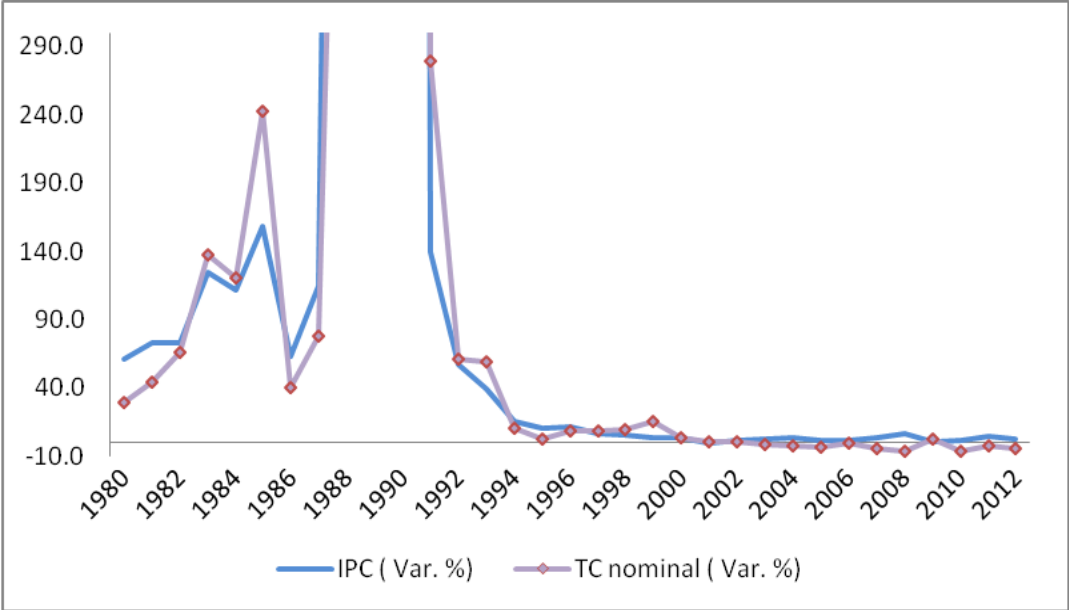
adjustment. This resulted in the inflation rate reaching a record-breaking 7,481% per annum in that year.

In the years that followed, due to the change in international conditions, the onset of mass capital inflows to Peru, and the control of monetary aggregates by an BCRP empowered by constitutional autonomy, devaluation dropped swiftly: from 4,544% in 1990 to 2.7% in 1995. Concurrently, inflation dropped to 11% in 1995.

In 1998 and 1999, as a result of the Russian crisis, devaluation started to accelerate, this time without affecting inflation, due to the sharp drop in economic activity recorded in those years. In situations of low inflation rates and devaluation, the output gap's effect on inflation again takes on renewed importance.

From 2002, Peru entered into an Inflation Targeting Scheme (ITS) that helped consolidate inflation control, as will be seen in the next section. Between 2012 and 2012, the accumulated inflation rate was 25%, while average annual inflation stood at 2.75%.

Graph 25
Peru: inflation and devaluation
(Percentage change of CPI and exchange rate)



Source: BCRP. Compiled by the author.

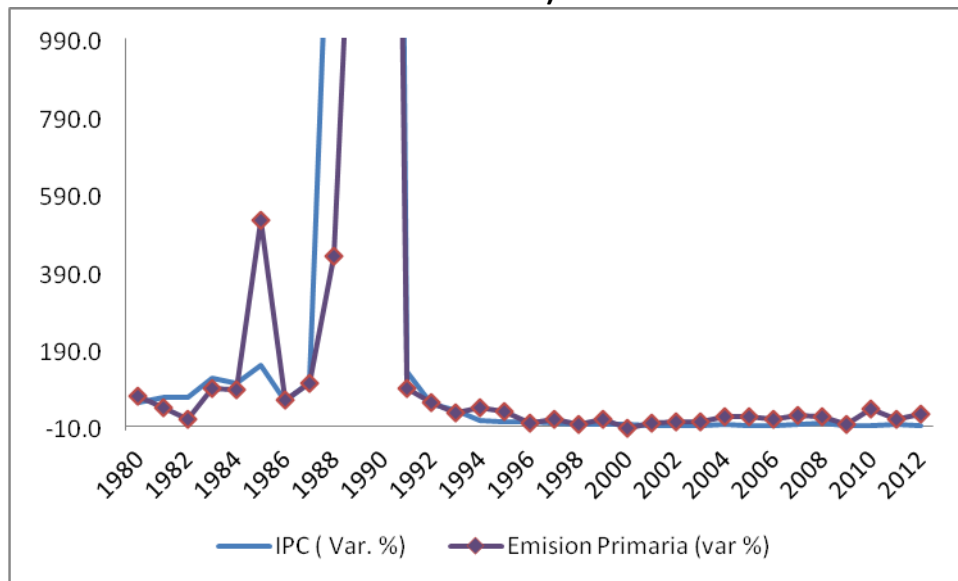
On the other hand, in the long run, no matter the prevailing monetary scheme, there is a tight relationship between primary issuance and inflation, predicated on the quantitative theory of money. In some monetary schemes, money is an exogenous variable; for example, when monetary policy is based on control of a monetary aggregate. In other schemes, such as when control falls on the interest rate, money constitutes an endogenous variable.

In the context of an open economy, the argument is much more complex. If the exchange rate is fixed, the monetary authority has to intervene in the exchange market, buying or selling dollars, such that the primary issuance is clearly an endogenous variable. If the regime is flexible or floating, money could return to being an exogenous variable. But if the regime is similar to that which currently exists in Peru, where floating exchange coexists with administration of the interbank interest rate, the rate of exchange may be free, but primary issuance is endogenous, as it is used to stabilize the interbank interest rate.

In any case, Graph 26 shows the connection between inflation and the primary issuance growth rate. The graph illustrates how the periods of accelerated growth in the price level coincide with periods where the quantities of money in the economy increase rapidly.

In a system in which issuance is clearly an endogenous variable —like the current ITS, to be explained in detail in the next chapter— where BCRP uses the benchmark interest rate for interbank markets as an instrument and has an exchange rate system with administered flotation, primary issuance is clearly an endogenous variable. In this context, in the short-term, the connection between inflation and issuance is much more fragile, as can be seen for the period 2002-2012, in Graph 26.

Graph 26
Peru: inflation and primary issuance (Percentage change of CPI and primary issuance)



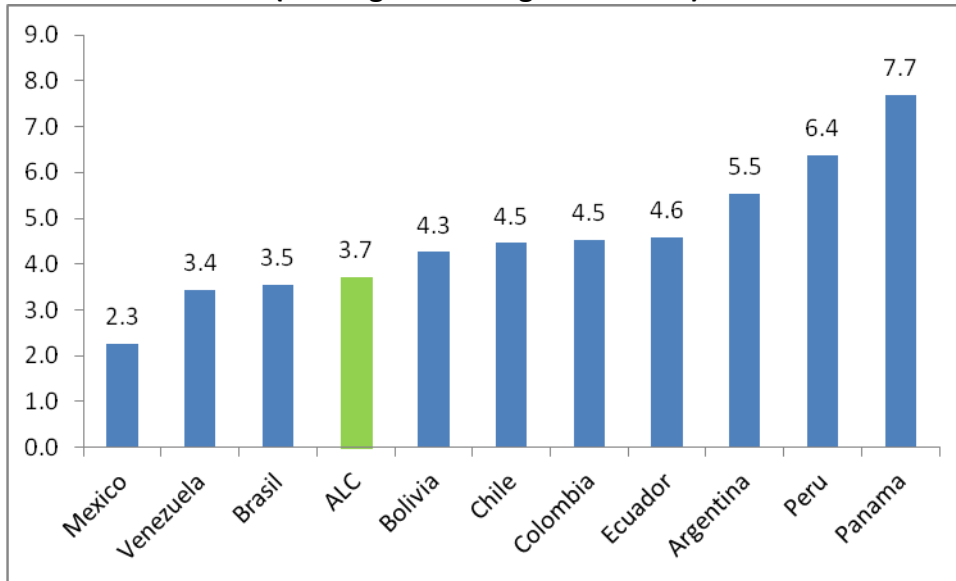
Source: BCRP. Compiled by the author.

3. THE MIRACLE OF MACROECONOMIC POLICIES

As we saw in the foregoing section, the Peruvian economy's performance in recent years was extraordinary. According to Bruno Seminario's figures, the period 2002-2012 was by far the best since 1900.

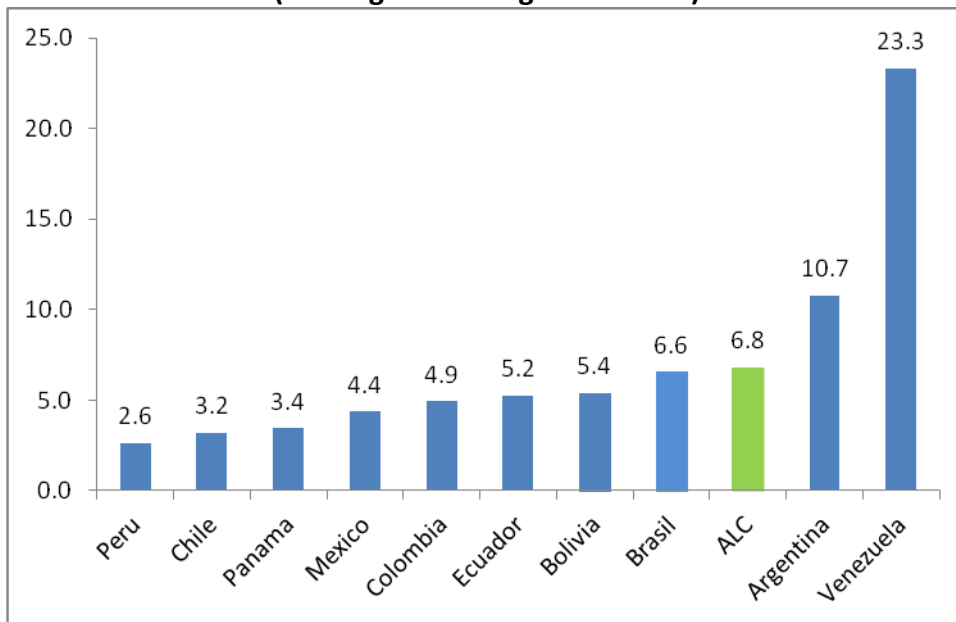
But this is not only the case for Peruvian history. This fact may be explained by the excellent international context that prevailed over this period, apart from 2008-2009. They have also been the best ten years in the context of Latin America and the Caribbean. Indeed, as Graphs 27 and 28 show, in the period 2002-2012 the Peruvian annual growth average was the second highest in the region, while average annual inflation was the second-lowest. The good luck effect may explain the good historical performance of LAC, but it does not account for the very good relative performance, without precedent in Latin American history.

Graph 27
Latin America and the Caribbean, 2002-2012: Comparative macroeconomic performance
(Average annual growth rate)



Source: IMF Compiled by the author.

Graph 28
Latin America and the Caribbean, 2002-2012: Comparative macroeconomic performance
(Average annual growth rate)



Source: IMF Compiled by the author.

What might explain why Peru's macroeconomic performance has been outstanding in the region over the last ten years?

Ruling out the international context, which is a common element for all countries, a particular, idiosyncratic element must be found. The natural candidate is economic policy. The *changes* in economic policy applied over this period would explain the Peruvian miracle.

Economic policies can be of two kinds. The first, structural reforms, are understood as policies that seek to modify the existing development model. The second, aimed at short-term macroeconomic administration, are fiscal and monetary policies that are either destabilizing (procyclical) or stabilizing (countercyclical). The former accentuate booms and aggravate recessions, while the latter restrict booms and recessions.

Between 2002 and 2012, there were no structural reforms that improved on or detracted from the development model ushered in by Alberto Fujimori at the start of the nineties, which is worth noting. Presidents Alejandro Toledo and Alan Garcia oversaw an economy that took Fujimori's "neoliberal" model as given, while President Ollanta Humala has, at the time of writing (late 2013), left the inherited development model intact. The Peruvian miracle therefore cannot be explained by this idiosyncratic element.

But, what has been going on the field of macroeconomic policy?

There, there have been a number of changes in recent years that have revolutionized the traditional means of making macroeconomic policy.

The most visible developments have occurred in the field of monetary policy. Prior to 2002, a textbook traditional approach was taken to monetary policy: the use of the money supply as an instrument of macroeconomic policy, and letting the interest and exchange rates float.⁸

⁸ It must be recognized that the institutional strengthening of Peru's central bank (Banco Central de Reserva del Perú - BCRP) occurred at the start of the nineties in the context of structural

In the context of the Peruvian economy, this monetary policy was procyclical-expansive during boom, and contractionary in recession. This was a destabilizing monetary policy.

For example, when the international crisis of 1998 took place, a virulent capital outflow was triggered that entailed an increase in the cost of external loans, the exchange rate, and the contraction of domestic lending, due to the dependence of local banking on short-term foreign loans. This external shock is clearly recessive. What was the policy response?

In the context of an economy where firms and families can borrow in dollars and nuevos soles⁹, when the dollar lending cost increases due to international crisis, the demand for local currency lending goes up. If the BCRP does nothing, as in this case, this leads to local currency interest rate rises. Moreover, if the BCRP does not accumulate dollars in the run-up to crisis, it cannot alleviate the interest rate rise, which spikes sharply. It also cannot provide the banks with dollar liquidity, so dollar lending collapse.

The upsurge in the exchange and interest rate and the collapse in dollar lending led to a number of banks going under during the period 1998-1999, the collapse in bank lending, and stagnation in the level of economic activity, which only recovered four years later.

Monetary policy in the face of international crises in the nineties was procyclical, destabilizing.

As regards fiscal policy, the policy was no better than the monetary: It was also destabilizing in the face of the international crises.

reforms, which allowed this institution to operate autonomously. Previously, the BCRP was not autonomous, and, in addition, operated under an absurd monetary scheme with a load of objectives but few instruments of monetary policy.

⁹ See the first model of an economy with a dollarized banking system for Peru in Dancourt and Mendoza (1999).

When the recessionary international shock of 1998-1999 occurred, the logical response that would have been expected was for the government to attempt to limit the effects of the international crisis with an expansive, countercyclical fiscal policy.

In the event, the reverse occurred. The fiscal policy was contractionary, recessionary, destabilizing. The reason was that, due to the fiscal scheme of the nineties it was *not* possible to implement an expansive fiscal policy.

Firstly, because during the boom period, no savings had been accumulated for spending during the crisis years. There was no fiscal stabilization fund to finance a temporary fiscal deficit.

Secondly, there were no alternative means of financing the deficit to the multilaterals, such as the World Bank (WB) or the Inter-American Development Bank (IDB). To finance the deficit, the multilaterals demanded that Peru have a Letter of Intent with the International Monetary Fund (IMF). Meanwhile, the IMF recipe book at times of crisis has only one menu: Increase the interest rate, reduce public spending, and put up taxes. Such are the contents of *all* letters of intent we sign with the IMF.

This so very primitive form of macroeconomic policy-making changed radically this century.

In the arena of monetary policy, in 2002, the antiquated monetary-aggregate control scheme gave way to the Inflation Targeting Scheme (ITS).¹⁰ Under this scheme the actions of the BCRP are oriented toward reaching an annual inflation target, establishing an explicit commitment to stability by way of this goal. It noteworthy that the BCRP is the first central bank in the world to have adopted the ITS in a context of dollarization (BCRP 2003).

¹⁰ See Mendoza (2013b)

The inflation goal between 2002 and 2006 was to achieve 2.5% annual inflation with a maximum deviation tolerance of one percentage point above and below; from 2007, the explicit goal was 2%, with the same tolerance margin. The announcement of the target aims to anchor public inflation expectations around it. The tolerance range of one percentage point either side of the target affords the monetary authority a measure of flexibility to not react to temporary price fluctuations, which generally come from local supply or international price shocks.

Under this scheme, the work of the BCRP consists of preventing inflationary or deflationary pressures that deviate from the stated target interest rate. In practice, it is desirable for the annualized interest rate to stand at 2% most of the time, with a tolerance range of around one percentage point. In other words, the average inflation rate over a suitable long period should be about 2% per annum.

In this way, if an attempt is made to locate the inflation rate above the goal, the BCRP should raise the benchmark interest rate; meanwhile, if it is hoped that the inflation fall below the stated target, the BCRP will reduce the benchmark interest rate.

To ensure that monetary policy actions are timely, the BCRP permanently monitors a large set of macroeconomic indicators that can anticipate inflationary or deflationary pressures. Given the lags that exist between monetary policy actions and the interest rate, BCRP policies must always be of a preventative character, with actions taken in anticipation.

To this end, the BCRP draws on a system of inflation projections that considers inflation expectations, probable developments in aggregate domestic supply and demand, as well as the progression of the world economy and of local financial markets.

With ITS, on the other hand, the monetary policy is totally transparent for the public: The inflation target, the measures to be taken to reach it, and the rationality of these measures are announced. The principle medium for communicating monetary policy in Peru is the *Inflation Report*, published by the BCRP in March, September, June and

December of each year, which analyzes the most likely future course of inflation, the risks that this would entail, and the measures to be taken in the event that inflation strays from the stated goal .

In parallel with the other central banks that follow the ITS, the changes in the BCRP's monetary position are effected through adjustments to the benchmark interest rate for the interbank markets. The interbank interest rate directly depends on the aggregate volume of funds available in the money market; consequentially, in order to induce divergence between the benchmark interest rate and the interbank interest rate, the BCRP intervenes by conducting Open Market Operations (OMA) that modify the supply on liquid funds in that market.

The BCRP's interventions in the economy do not have an immediate bearing on the target variables whose change is sought. The so-called *internal lag* of monetary policy is short-lived, in that the BCRP possesses the autonomy to announce changes in the benchmark interest rate, which are published immediately on their website. Nonetheless, the so-called *external lag* of monetary policy is broad and variable: The impact of an adjustment to the benchmark interest rate in the inflation rate occurs with a significant lag, and it is precisely because of this lag that the monetary policy is inherently preventative.

It should also be noted that if the BCRP's policy is credible, the modifications made to the benchmark rate will affect not only the interest rate at which the banks trade assets in the very short-term, but will also cause a displacement of the whole yield curve, because this rate constitutes the base on which the medium and long-term rates are formed. It is these very long-term interest rates that affect private spending, aggregate demand, production, and finally, prices. The effectiveness of the monetary policy then depends on how this interest structure for different debt instrument maturities responds to central bank interventions.

The other important instrument of monetary policy is the BCRP's interventions in the exchange market. In the context of an economy with partial dollarization, this scheme has certain peculiarities in Peru.

As almost 45% of the credits of the Peruvian banking system are dollarized, an abrupt exchange rate increase can generate a balance sheet effect on companies or families whose incomes are denominated in local currency and have foreign currency obligations, which can create problems of liquidity or insolvency.

In consequence, although the IMI in theory has the free floating exchange rate as one of its essential ingredients —which would enable independent monetary movement, even in the context of free movement of capital— in Peru this policy could generate unnecessary risks. While dollarization persists, the monetary policy of the BRP must seek to avoid abrupt exchange rate fluctuations.

To this end, the BCRP keeps high levels of Net Foreign-Exchange Reserves (NFER), and within these, high levels of reserve deposits from financial companies, accompanied by permanent interventions in the exchange market through sterilized purchases or sales. Thereby, the BCRP smoothes the course of the exchange rate, eliminating its abrupt fluctuations. In particular, the policy of preventative NFA accumulation has been very important, as its employment has been possible in events of negative shocks on currency and financial markets, such as the end of 2008, and has controlled the risk associated with financial dollarization, thus softening the impact of the external shock on the level of economic activity.

It should be stated that, within the ITS, the BCRP's exchange interventions are *necessarily* sterilized interventions. The BCRP performs exchange policy actions through the aforementioned open market operations. Nonetheless, this buying or selling of foreign currency has a direct impact on the monetary base, and would therefore affect the interbank interest rate. To isolate the effect of the exchange policy on the monetary base and domestic interest rate, the BCRP sterilizes this purchase (sale) of foreign currency by way

of the purchase (sale) of public debt securities in local currency. As shown above, the BCRP sterilizes its currency market interventions by buying and selling the so-called Certificates of Deposit from the BCRP. Clearly, sterilized interventions are very important under the ITS.

As regards fiscal policy, the following innovations have been produced:

Firstly, the Peruvian government no longer signs letters of intent with the IMF. It is not subject to the procyclical monetary and fiscal policies contained by the letters of intent.

Secondly, the increasingly lower fiscal deficits have led to such low debt-to-GDP ratios that local and external financing capacity is the lowest in contemporary history. In 2013, gross public debt as a percentage of GSP was just 18%, while net public debt stood at 3.4%.

Thirdly, in 1999 —the final year for which public debt statistics are available— the domestic financing capacity of the fiscal deficit was almost null, 80% of the public debt was in foreign currency, while the textbook form of debt, with sovereign bonds, was null. Peru does not participate in the issuance of debt instruments through the local stock market or in international markets.

Finally, in 2001, construction of a yield curve for Peru ¹¹ got underway, as will be detailed later.

3.1 Building strengths

In the sphere of macroeconomic management, we will describe the progression of the fiscal deficit, the debt-to-GDP ratio, and the availability of foreign-exchange reserves, as indicators of the reaction capacity of the Ministry of the Economy and Finance (MEF) and the BCRP to adverse external events, which are frequent in Peru.

¹¹ Sample of different bond interest rates for different maturities.

The difference between public sector income and expenditure is the fiscal deficit, and the amount accumulated from fiscal deficits is the public debt.

The Peruvian economy operated during the seventies and eighties with fiscal deficits in excess of 10% of GDP: figures comparable with those currently exhibited by certain hapless European countries, such as Greece and Portugal. The elevated fiscal deficits occasioned a dramatic upsurge in the debt-to-GDP ratio, to unsustainable levels.

As Graph 29 shows (where the Non-Financial Public Sector's (NFPS) economic balance figures represent a deficit if a negative result is given, and a surplus if a positive balance is given), at the start of the eighties, due to the afore-mentioned hike in international interest rates and the El Niño phenomenon of 1983, which was the strongest in recent decades, strongly affecting the production apparatus of the primary sector of the economy and reducing tax collection, the fiscal deficit rose from 4.5% of GDP in 1980 to 11.3% in 1983.

In the following years, the administration of President Belaunde, under the supervision of the IMF, applied a contractionary fiscal policy that reduced the fiscal deficit to 3.6% of GDP in 1985. In the middle of that year, an inept President Garcia enacted an expansive fiscal policy that raised the deficit to 11% of GDP in 1989. This result was also influenced by hyperinflation, which liquefied the Peruvian government's tax revenues by reducing the tax burden from 15% of the GDP in 1985 to just 8% in 1989. It should be noted that the institutional arrangement of that time allowed deficits to be financed through loans from the BCRP to the MEF; that is, via issuance.

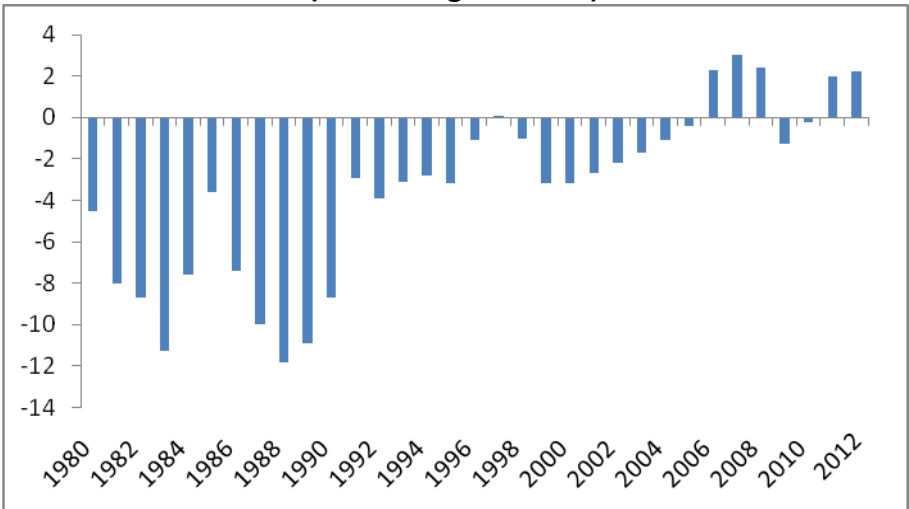
In the nineties, during the early years of Alberto Fujimori's government, a set of constitutional changes was implemented that separated monetary policy from fiscal policy. By Art. 84 of the 1993 Constitution, the BCRP is prohibited from granting loans to the MEF, meaning that this source of easy financing was liquidated. At the same time, a tax reform was implemented that enabled an increase in the tax burden from the 8% of GDP observed in 1989 to 14% in 1997.

In this way, the fiscal deficit fell sharply from the 11% of GDP posted in 1989, to reach a fiscal surplus of 0.1% of GDP in 1997. Near the end of that decade, an expansive fiscal policy set in motion by Fujimori in pursuit of his second re-election, and the creation of a set of tax exemptions to the same end, added to the impacts of the Russian crisis, sent the fiscal deficit up again, to more than 3% of GDP.

Over the last ten years, the fiscal deficit has fallen significantly. Between 2002 and 2007, the improvement was uninterrupted. The fiscal deficit dropped from 2.2% of GDP in 2002, to reach a surplus of 2.9% in 2007: the highest in contemporary history. Thereafter, the international crisis of 2009-2009 affected tax revenues, and the administration's countercyclical response involved a rise in public spending. As a result, a fiscal surplus of 2.4% of GDP in 2008 gave way to a 1.3% deficit in 2009.

Nonetheless, in the years that followed, the fiscal deficit reduction got back on track. In 2012 the fiscal deficit was 0.3% of GDP, while in 2011 and 2012 fiscal surpluses of 1.9% and 2.2% of GDP were recorded, respectively.

Graph 29
Peru: economic balance of the Non-Financial Public Sector (NFPS)
(Percentage of GDP)



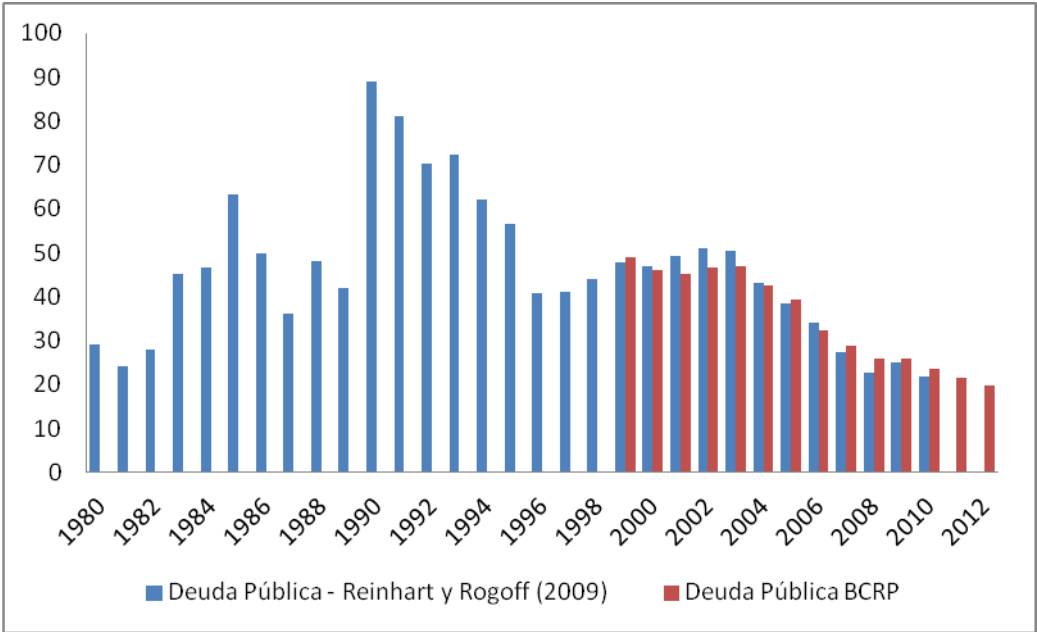
Source: BCRP. Compiled by the author.

Given that public debt is the result of the accumulation of fiscal deficits, the behavior of the debt-to-GDP ratio has generally followed the fiscal debt trend, as can be seen on Graph 30.

Public debt as a percentage of GDP rose from 29% of GDP in 1980 to 89% in 1990, according to the figures of Reinhart and Rogoff (2009). This was the peak of public debt in Peru. Subsequently, in accordance with the fiscal deficit and the renegotiation of the public debt based on the Brady Plan, the public debt ratio decreased markedly to reach the figure of 40.7% of GDP in 1996, as Graph 30 indicates.

In the years that followed, alongside the rise in the fiscal deficit, the debt-to-GDP ratio went on the up again, peaking at 51% of GDP in 2002, according to Rogoff and Reinhart's figures. The subsequent years brought a sustained reduction in the public debt ratio, with the sole exception of 2009 when, as a result of the international crisis, the fiscal deficit increased. In 2012 the debt-to-GDP ratio was only 19.3%, the lowest in contemporary Peruvian history.

Graph 30
Peru: gross public debt
(Percentage of GDP)



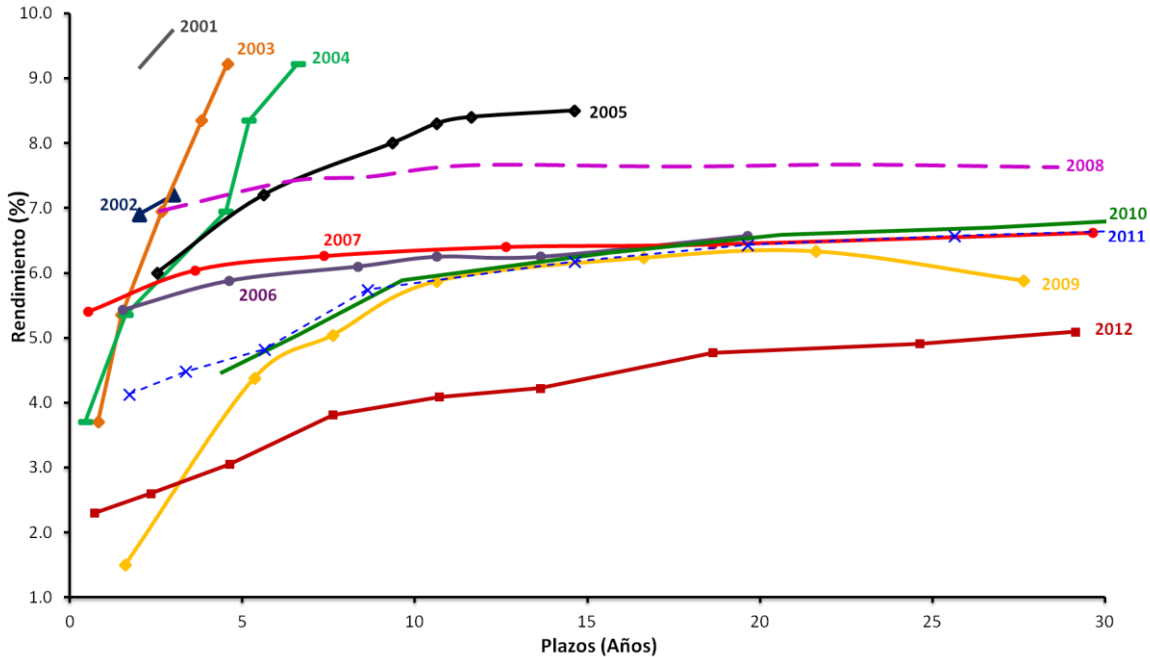
Source: BCRP, Reinhart and Rogoff (2009). Compiled by the author.

Finally, on the fiscal front, one of the most important but least acknowledged developments is Peru's initiation in 2001 of sovereign bond placement, first in foreign currency, and then in local currency. Before that year, Peru did not have a yield curve, or even so much as a "point" on the yield curve. At present, the local currency yield curve has terms lasting up to thirty years.

A yield curve is a valuable instrument in assessing a macroeconomic instrument, as the interest rates reflect the expectations of bond market participants regarding the future of the economy. The yield curve also contributes to the development of the domestic capital market, acts as a signal effect for other interest rates and raises the maturities of other debt instruments.

As can be discerned in Graph 31, in 2001 the first points appeared on the Peruvian sovereign bond yield curve; in the subsequent years the curve followed a downward trend, in line with the country's growing reputation, and by 2012 the curve was lower than all others, indicating that Peru can service its debts with relatively low interest rates.

Graph 31
Peru: sovereign bond yield curve



Source: MEF

On the BCRP front, the course of foreign-exchange reserves, the variable that we are taking as an indicator of the BCRP's readiness to fend off adverse external shocks, figures in Graph 32, for the period 1980-2012.

Throughout the eighties, as we saw above for LAC, capital flowed out of LAC and the terms of trade deteriorated, exacerbated in Peru by the destabilizing presence of Shining Path. The resultant impacts on the balance of payment meant a notable diminution of foreign-exchange reserve. Net foreign-exchange reserves, totaling US\$ 1.480 billion in 1980, dropped to the negative figure of -US\$ 352 million in 1998. Peru was in the depths of crisis.

Thereafter, in the nineties, with a change in international conditions and the significant capital inflows described above, Peru swiftly accumulated foreign-exchange reserves up to 1997. In that year, foreign-exchange reserves reached the figure of US\$ 10.169 billion, representing 119% of goods imports. Nonetheless, it should be clarified that the foreign-exchange position, that is, the foreign-exchange reserves that really belong to BCRP (the remainder are government deposits in dollars, and those dollar deposits that local banks hold in the BCRP) reached the sum of US\$ 2.301 billion, representing only 27% of imports of goods.

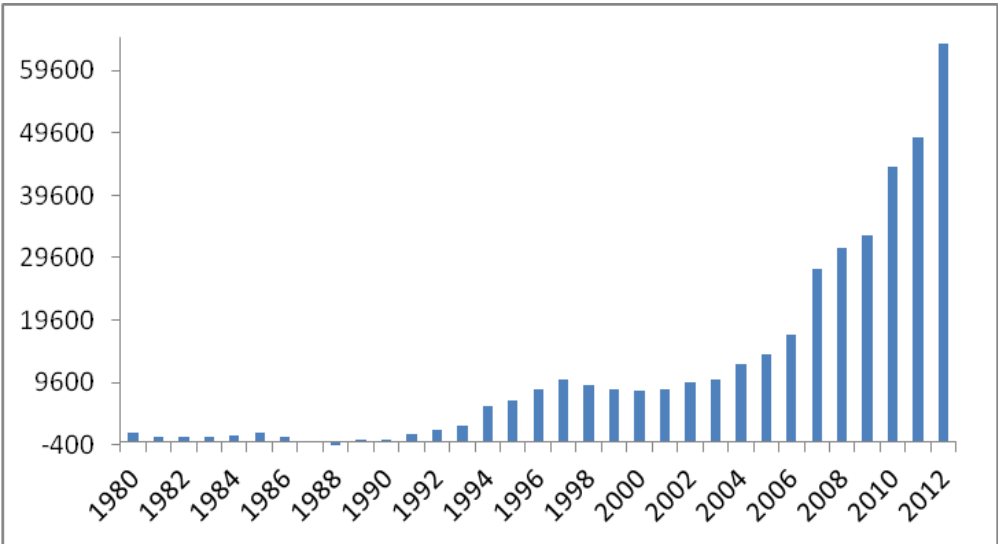
As with almost all of LAC, the Asian and Russian crises put an end to this phase of significant foreign-exchange accumulation. These crises, and the consequent capital outflows, systematically reduced foreign-exchange reserves from 1997, resulting in a figure of just US\$ 8.180 billion (111% of imports) in 2000. Likewise, the foreign-exchange position was US\$2.624 billion for that year, which accounted for 36% of imports of goods.

Over the last ten years, including the international crisis of 2008-2009 when the BCRP sold off dollars —but bought them back as soon as the effects of the external crisis had worn off— the accumulation of foreign-exchange reserves has been uninterrupted, as shown on Graph 32. In 2012, reserves achieved the record figure of US\$ 63.991 billion: 57% of imports.

This availability of reserves serves as a kind of insurance for confronting adverse international events. The Russian crisis of 1998 and the international crisis of 2008-2009 have put the importance of possessing bulk foreign-exchange reserves to the test. In 1997, foreign-exchange reserves stood at just US\$ 10.169 billion, and the foreign-exchange position at US\$ 2.301 billion. Foreign-exchange reserves and the foreign-exchange position as a proportion of the short-term external debt, which is a good indicator of an economy's external liquidity, reached the figures of 161% and 26%, respectively. Given these indicators of external liquidity, there was little or nothing that the BCRP could do.

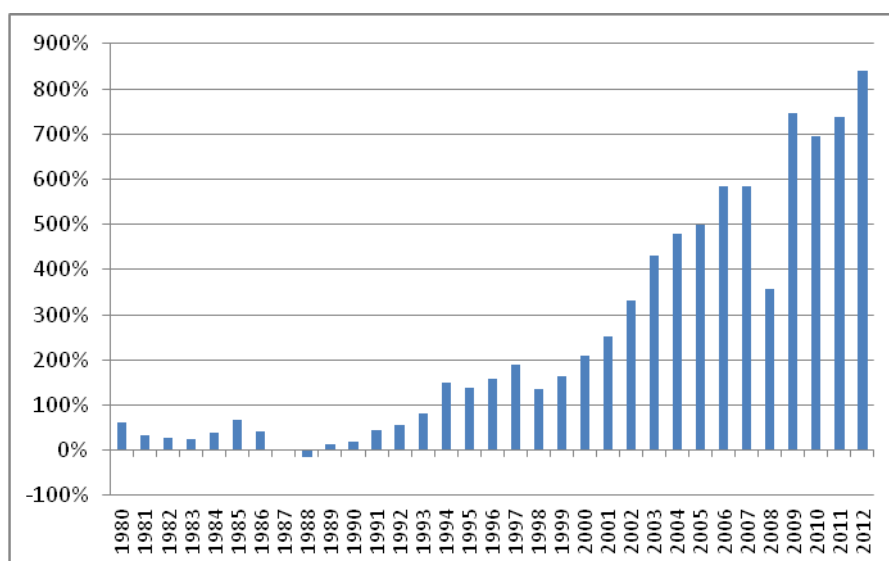
On the other hand, in 2007, the year before the international crisis of 2008-2009, foreign-exchange reserves and the foreign-exchange position were US\$ 27.689 and US\$ 19.622 billion respectively, while as a proportion of short term external debt, foreign-exchange reserves totaled 454% and the exchange position 332%, as Graphs 32 and 33 illustrate. There was no banking or currency crisis, and Peru came out of the 2009 recession quickly.

Graph 32
Peru: Net Foreign-Exchange Reserves (NFER)
(\$US millions)



Source: BCRP. Compiled by the author.

Graph 33
Peru: Net Foreign-Exchange Reserves (as a proportion of short-term external debt)



Source: BCRP. Compiled by the author.

3.2 The character of monetary policy and fiscal policy

The construction of these strengths, lower public debt and possession of a large volume of foreign-exchange reserves, have allowed the Peruvian economy to operate over the last ten years with stabilizing, countercyclical fiscal policies.

Peru operates under an ITS, albeit adapted to the conditions of a semi-dollarized economy.¹² Currently, 43% bank loans and deposits are still denominated in foreign currency. The array of instruments at the disposal of the BCRP, linked with the credit channel and the floating exchange regime, is ample. For a very good description of this array, in the context of a small and open economy, see Dancourt (2012).

In the ITS, the main instrument of monetary policy is the benchmark (or policy) interest rate for interbank markets. This interest rate moves in the same direction as the inflation gap (actual inflation less target inflation), thus contributing to a countercyclical monetary

¹² See an analytic review of Peruvian ITS in Dancourt (2012).

policy. In general, save for episodes of significant supply shocks, inflation reflects the excess of demand existing in an economy. If the excess of demand can approach a positive output gap, the interest must then move in the same direction as this gap. Thus, the monetary policy is stabilizing.

The other instrument is exchange intervention, which in the ITS must necessarily be stabilizing.¹³ The BCRP rule would appear to be to swim against the tide: that is, purchase dollars when their price falls to a certain unannounced level (floor), and sell dollars when their price rises above a certain, also unannounced, level (ceiling).

To be able to sell dollars, the BCRP must have accumulated them previously. In this context, the BCRP has operated a policy of preventative dollar accumulation since the start of the ITS.

When, for example, the international interest rate is increased, financial capital flows out and pressures emerge for the exchange rate to rise. In this recessionary context,¹⁴ the BCRP intervenes to prevent a severe spike in the notional exchange rate. Meanwhile, the existence of an explicit policy of foreign reserve accumulation allows movement of the interest rate by considering only the inflation gap (and thus, the output gap), and not capital outflows.

For example, in a period of sudden capital outflows when no foreign-exchange reserves are available, the habitual response of monetary policy consisted in raising the interest

¹³ If the BCRP were to purchase dollars without sterilizing, the monetary supply would increase and make the interest rate go down. As this concerns the interest rate being fixed, the BCRP has to sterilize this injection of nuevos soles, selling the BCRP's certificates of deposit in local currency.

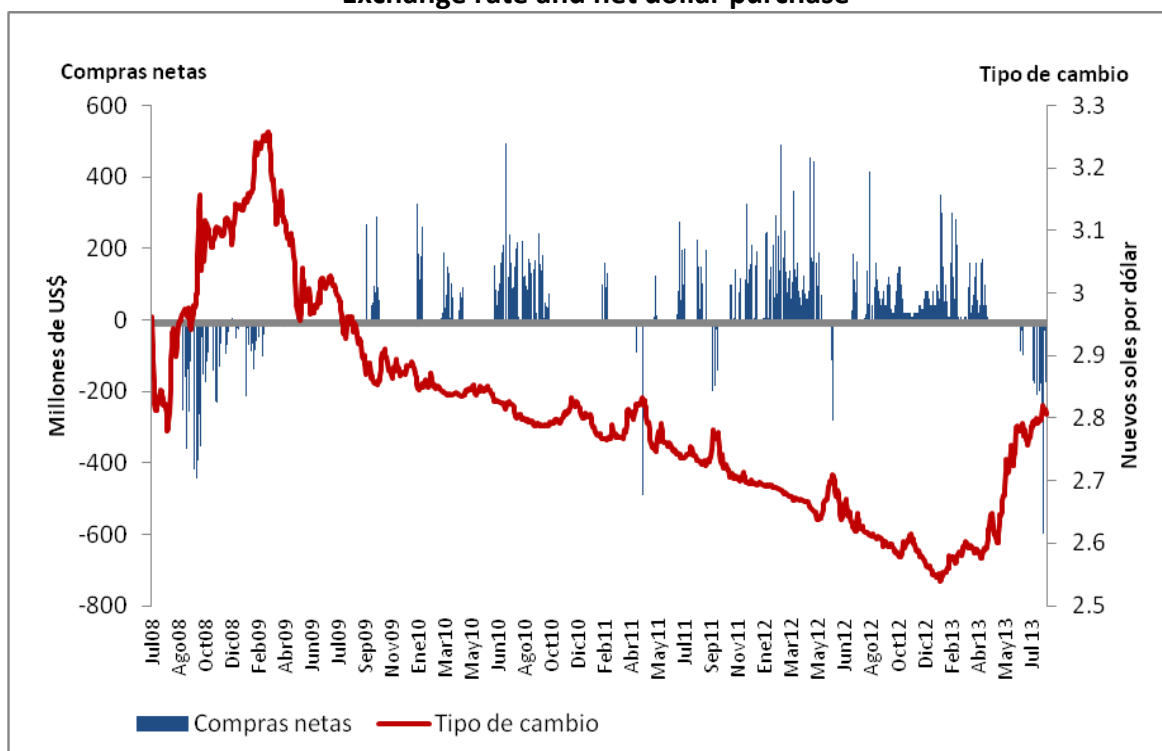
¹⁴ An international interest rate increase in a semi-dollarized economy is an unfavorable, recessionary external shock, as it directly increases both the foreign currency lending cost and the exchange rate, which also appears to be recessionary (the balance sheet effect on the competitiveness effect). In the traditional Mundell-Fleming model, an increase in the international interest rate with flexible interest rate is expansive, because it only considers the competitiveness effect and does not take into account the dollarization of economies.

rate to arrest these outflows, as occurred in 1998. This policy is clearly destabilizing, as it intensifies the recession that the external shock creates.

On the other hand, when foreign-exchange reserves are available, the interest rate can be lowered, even when this intensifies capital outflows and exchange rate increases, because dollars can be sold to counteract the effects.

The exchange intervention rule of swimming against the tide can be observed clearly in Graph 34. This intervention consists of buying and selling dollars with the aim of reducing exchange rate volatility (Rossini and others, 2013). When the exchange rate tends to rise sharply, as in the second half of 2008 and the start of 2009, the BCRP sells dollars, and when appreciatory trends emerge, such as those of the second part of 2009 and all of 2010, the BCRP buys dollars. In the third quarter of 2013, when the Federal Reserve of the United States insinuated that it might put an end to the expansive monetary policy, the long-term interest rates of the Treasury bonds started to rise, and in Peru upwards trends were seen on the exchange rate. The BCRP intervened again, by selling dollars.

Graph 34
Exchange rate and net dollar purchase



Source: BCRP. Compiled by the author.

In this way, the BCRP possesses two fundamental policy instruments: The benchmark, or policy, interest rate and sterilized intervention on the exchange market.

Figure 1 clearly indicates the difference between monetary policy over the last ten years, and that previously applied. The vertical axis features the Monetary Impulse Indicator (*MI*), referred to in the literature as the Monetary Conditions Index (ICM); the ICM is a weighted average of the variation of the internal interest rate and the percentage change to the exchange rate, in relation to its values in a base period. It can be calculated by utilizing the interest rate and the exchange rate in nominal or real terms.

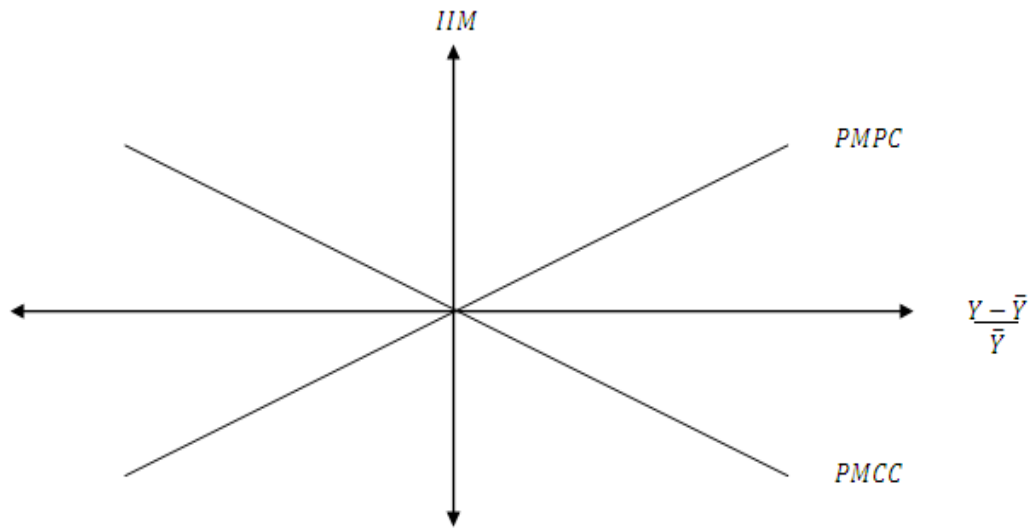
The fundamental idea behind this indicator is that monetary policy in an open economy affects aggregate demand, and hence, inflation, through the two variables closely associated with central bank actions: the interest rate and the exchange rate. The literature assumes that a surge in the real interest rate reactivates the economy.

Given that in the Peruvian economy it is not clear that devaluation is expansive, the preliminary construction of the IIM dispenses with the exchange rate. The IIM is approximated by the variation —preceded by the negative sign— in the interest rate between one period (year) and another, $IIM = [-(r)]_t - r_{t-1}$. If the *IIM* is positive, the monetary policy is expansive, and if it is negative, the monetary policy is contractionary.

If the monetary policy is stabilizing, countercyclical, the *IIM* should move in the opposite

direction from the output gap $\left(\frac{Y - \bar{Y}}{\bar{Y}}\right)$. The idea is that when the output gap is growing, inflationary pressures may be generated that must be avoided. In this case, lending costs, the interest rate, must increase ($IIM < 0$). Symmetrically, in the contractionary phase of the economic cycle, when the output gap is falling, the monetary policy should be expansive, and the interest rate should decrease ($IIM > 0$). If the monetary policy is countercyclical, stabilizing, the correlation between the *IIM* output gap should be negative, as shown in line *PMCC*. If the monetary policy is procyclical, the correlation should be positive, and is shown with line *PMPC*.

Figure 1
The character of monetary policy



To measure the *IIM* , it is necessary to have access to a long series of interbank interest rates. Unfortunately, information is only available from the start of 1995. However, it is possible to describe the "case studies" corresponding to the most critical quarters of the crises of 1998-1999 and 2008-2009.

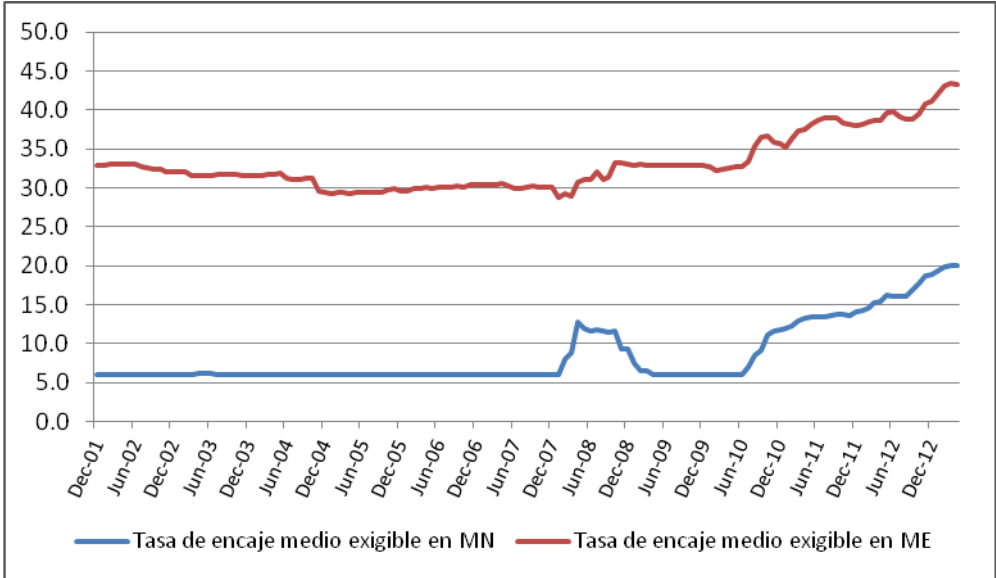
In the crisis of 1998-1999, the most critical moment for Peru was the last quarter of 1998. In the second quarter of that year, US\$ 406 million in short-term capital had flowed into Peru. This flow fell to US\$ 220 million in the third quarter, and in the final quarter an outflow of US\$ 850 million in short-term capital was posted, almost half the exchange position (the foreign-exchange reserves that really belong to the BCRP) of that period. At the half-way point of that year, the BCRP permitted an increase interbank interest, from 20% per annum in June to a peak of 39% in September of that year. This interest rate rise partly explains the recession experienced by the Peruvian economy between the end of 1998 and the beginning of 1999. The monetary policy was procyclical: it intensified the recession.

In 2008-2009, the figure was very different. When the crisis emerged with virulence, and short-term capitals outflowed between the third quarter of 2008 and the second of 2009,

as the economy started to cool, the BCRP initiated a systematic reduction in the benchmark exchange rate for interbank markets. The local currency interbank interest rate dropped from 6.5% at the end of 2008 to 5% in June, 2009. The monetary policy was countercyclical.

Finally, the BCRP possesses an instrument of reserve requirement, which falls during good spells and rises during good spells, as shown in Graph 35. The use of this instrument enables control of the credit cycle's procyclicality¹⁵.

Graph 35
Peru: average reserve requirements of banking companies



Source: BCRP. Compiled by the author.

Meanwhile, in the sphere of fiscal policy, in the event of an adverse, recessionary external shock, an expansive, stabilizing financial policy cannot be enacted if the increased public spending of lower taxes cannot be financed. Accumulated savings are required in the expansive phase of the economic cycle, or else the capacity to acquire quick financing at reasonable interest rates. The latter can be obtained when the debt-to-GDP ratio is low.

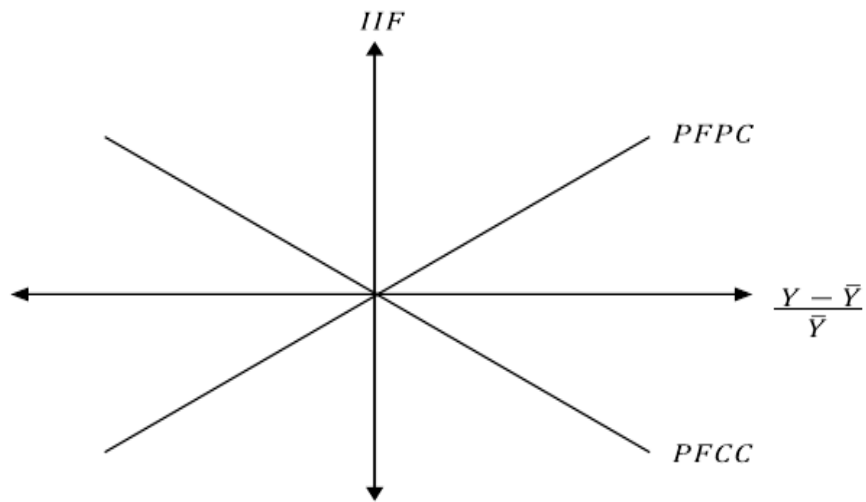
¹⁵ For more information on reserve requirements and other unconventional instruments of monetary policy, see Rossini, Quispe and Rodríguez (2013).

In 1998, when Peru's public debt was above 50% of GDP and the government did not have accumulated savings, expansive fiscal policy-making was not possible. The international crisis increased the cost of external financing, raising the interests of public debt, and pushing down the prices of Peruvian mineral exports, thus reducing tax revenues from the income tax on mining. The diminished tax revenues and higher public spending, in addition to the difficulty on obtaining a larger fiscal deficit, obligated a reduction in nonfinancial or primary expenditure, which served to hasten the recession. The fiscal policy was procyclical.

In 2008-2009, unlike 1998-1999, the economy enjoyed fiscal leeway. The public debt had already fallen to 26% of GDP, Peru had fiscal savings, and it was possible to make expansive fiscal policy.

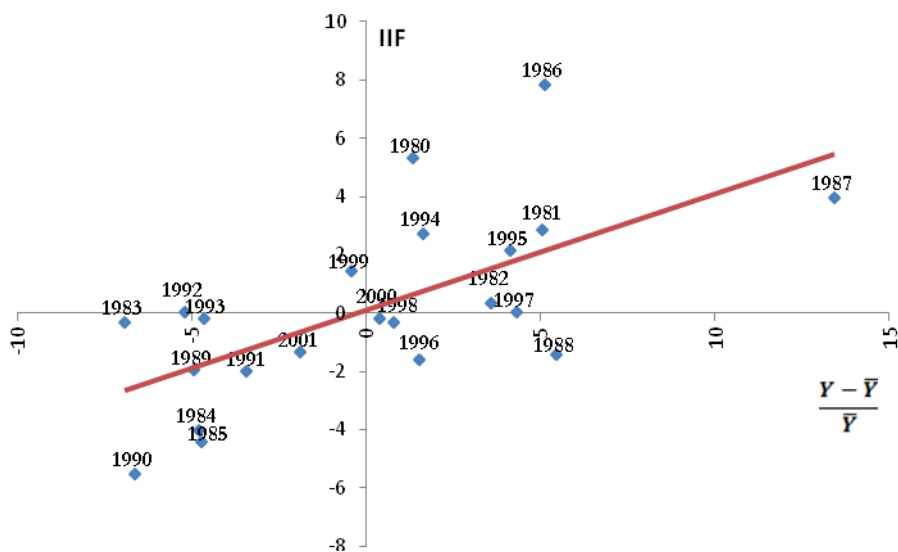
To measure the character of fiscal policy, the Tax Incentive Indicator is employed (*IIF*), which comes to be the change enacted on the structural primary surplus or in full employment. When *IIF* is positive, the fiscal policy is said to be expansive; and if it is negative, the fiscal policy is said to be contractionary. In the fiscal policy is countercyclical, stabilizing, the correlation between the output gap and the *IIF* is negative, as represented by the *PFCC* line in Figure 2. In the reverse case, if the fiscal policy is procyclical, the correlation between both variables is positive, recorded on the line *PFPC*.

Figure 2
The character of fiscal policy



With respect to the character of fiscal policy, we do have better accumulated statistical experience. Graph 1 presents the character of fiscal policy for the period 1980-2001. The figures show that during this period, on average, the fiscal policy was procyclical, destabilizing.

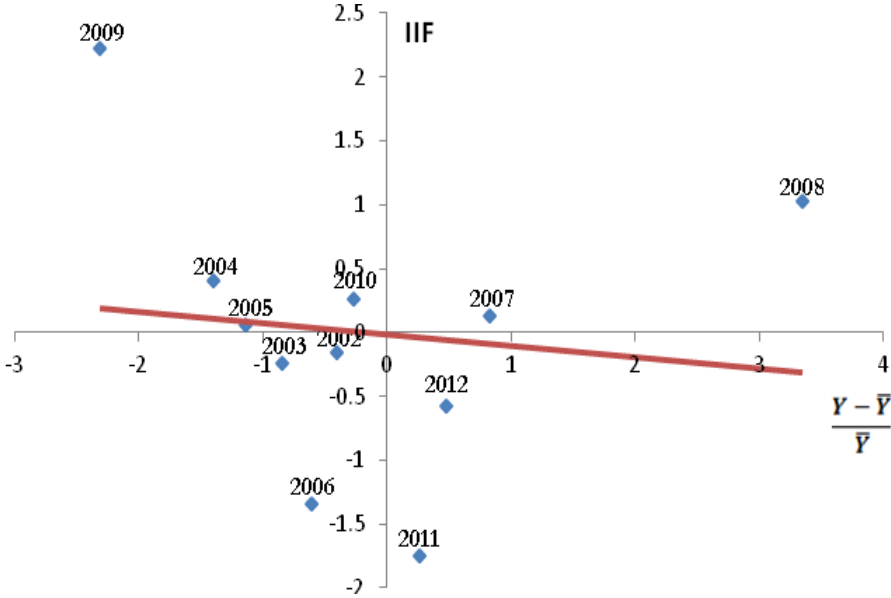
Graph 36
Peru: the character of fiscal policy, 1980-2001



Source: MEF y BCRP. Compiled by the author.

In the period 2002-2012, the figure changed substantially. In this period, fiscal policy, with the exception of 2008 and 2009, was countercyclical, stabilizing.

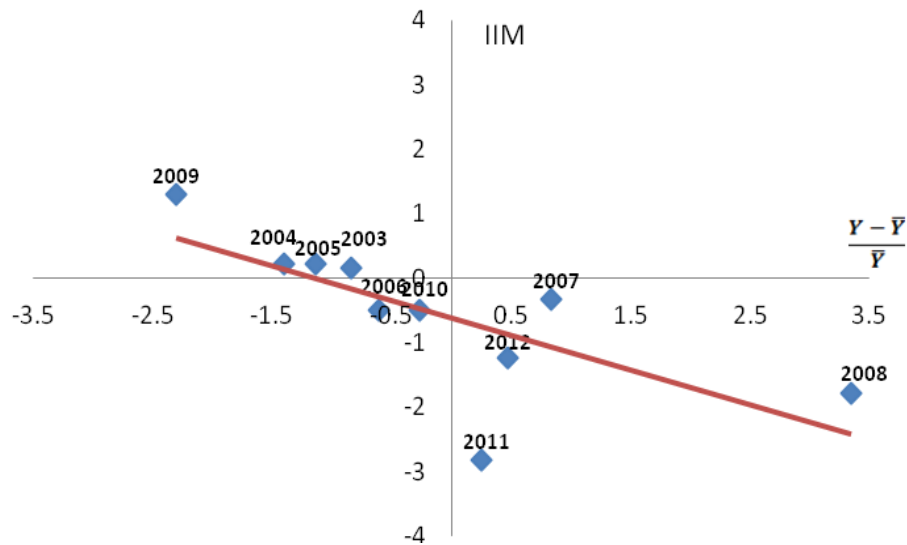
Graph 37
Peru: the character of fiscal policy, 2002-2012



Source: MEF and BCRP. Compiled by the author.

Meanwhile, in the period 2002-2012, based on the relationship observed between IIM and output gap, the monetary stimulus can be seen to have been countercyclical. That is, as with the fiscal policy for the same period, it has played a stabilizing role.

Graph 38
Peru: The character of fiscal policy, 2002-2012



Source: BCRP. Compiled by the author.

Therefore, Peruvian macroeconomic policy is currently countercyclical, stabilizing.

4. CONCLUSION

In a small, open economy such as Peru's, the microeconomic destination depends decisively on the evolution of the international context, and on the macroeconomic policy responses to the adverse external shocks that are so frequent in LAC. At boom times, we grow more than developed countries; but during contractions, we fall with far greater virulence. It seems that the secret lies in effective responses to adverse external shocks.

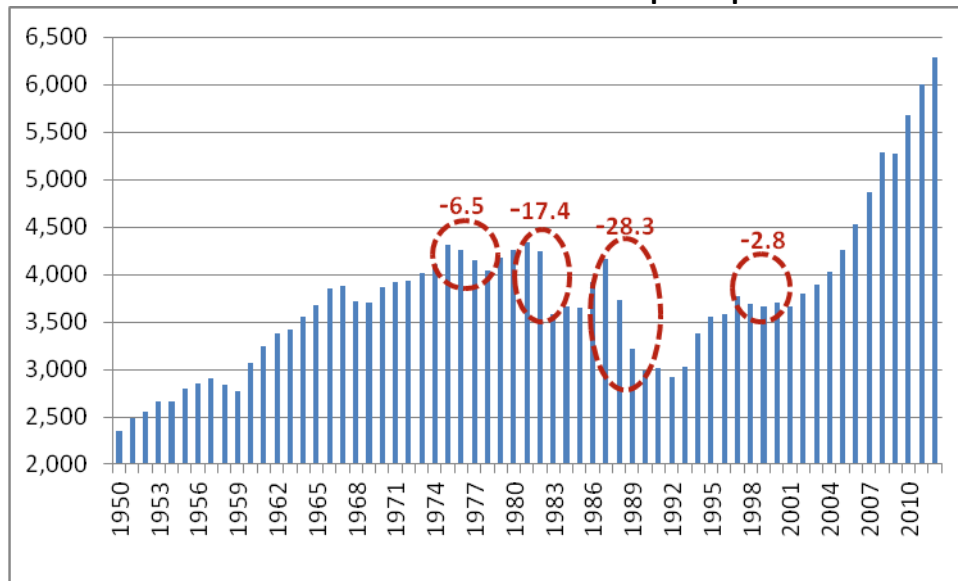
In this work, we have found that in the case of Peru, the appalling financial performance of the eighties, the fair showing in the nineties, and the excellent macroeconomic performance of the last ten years is associated with the extremely adverse external context of the eighties, a fair context in the nineties, and a much more favorable external context over the last ten years.

The macroeconomic reaction was not stabilizing, countercyclical in either the eighties or the nineties. On the contrary, during spells of external crisis, the habitual response was to reduce public spending, put up taxes, increase interest rates and allow considerable devaluation, thereby amplifying the recessionary effect from abroad. In reality, as neither foreign-exchange reserves nor fiscal funds had been accumulated over previous years, this was the only possible response. It can therefore be said that in those decades, Peruvian macroeconomic performance was marked by international conditions, by good or bad luck, and was amplified procyclically by domestic macroeconomic policy.

The crisis of 2008-2009 was the first time in the last few decades that a stabilizing, countercyclical policy was implemented. Public spending is increased, the interest is lowered, and an abrupt hike in the real exchange rate is impeded. Therefore, the Peruvian miracle, understood as an outstanding macroeconomic performance in the LAC context, has been associated with the new system of short-term macroeconomic policies unveiled this century. In recent years, the performance of the Peruvian economy has been associated with luck *and* good economic policies.

If in the past Peru had applied macroeconomic policies similar to those of 2008-2009, it could have attenuated the effects of adverse external shocks that led to irrecoverable and incredible economic recessions, such as those shown in Graph 39.

Graph 39
The cost of the crises: falls in GDP per capita



Source: BCRP. Compiled by the author.

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