

# Inflation Experiences in Latin America, 2007-2008

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#### Introduction

From April 2007 to July 2008, there was a surge in non-core (food and energy) prices worldwide. These prices have since dropped considerably. Monetary and exchange rate policy that does not take into account that the food and energy price shocks might be temporary may have therefore unnecessarily slowed growth.

Looking forward, deflationary pressures add to the rationale for pursuing a strong fiscal stimulus, as well as other expansionary macroeconomic policies in most countries, especially those with adequate foreign exchange reserves. Inflation does not appear to be a threat in the immediate future, in most countries. The International Monetary Fund, for example, called for a worldwide fiscal stimulus of two percent of GDP in November 2008, and they have since lowered their forecast for global economic growth from 2.2 percent to 0.5 percent.

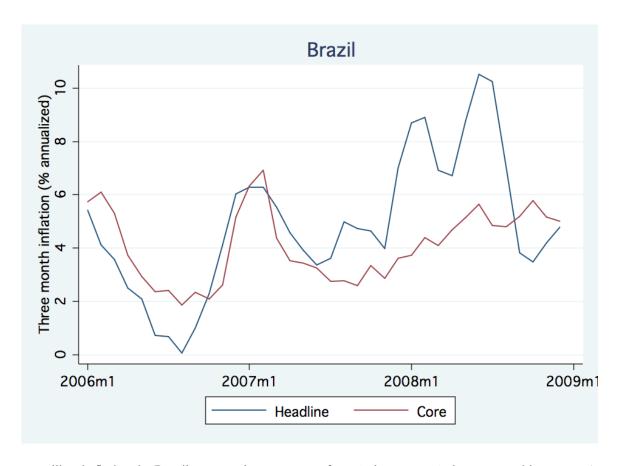
This paper looks briefly at the recent inflation experiences of ten Latin American countries. We construct a core inflation index (excluding food and energy), and look at three-month changes in both headline and core inflation.<sup>3</sup> Non-core items in these countries often constitute much—even a majority of—consumer spending. As such, headline inflation more accurately reflects the short-run experiences of consumers. However, if food and energy price shocks are temporary, core inflation will better reflect inflation in the overall economy. Because there are sometimes large seasonal variations, our comparisons focus on analogous three-month periods in different years. The trends are discussed below. The methodology is discussed in the appendix.

<sup>&</sup>lt;sup>1</sup> IMF Survey Online. "IMF Urges Stimulus as Global Growth Marked Down Sharply." International Monetary Fund: Washington, D.C. November 6, 2008. Accessed on February 11, 2009. [http://www.imf.org/external/pubs/ft/survey/so/2008/NEW110608A.htm].

<sup>&</sup>lt;sup>2</sup> International Monetary Fund. "World Economic Outlook Update: Global Economic Slump Challenges Policies." Washington, D.C.: International Monetary Fund. January 28, 2009. Accessed on February 11, 2009. [http://www.imf.org/external/pubs/ft/weo/2009/update/01/index.htm]

<sup>&</sup>lt;sup>3</sup> See Appendix for further discussion of the calculations

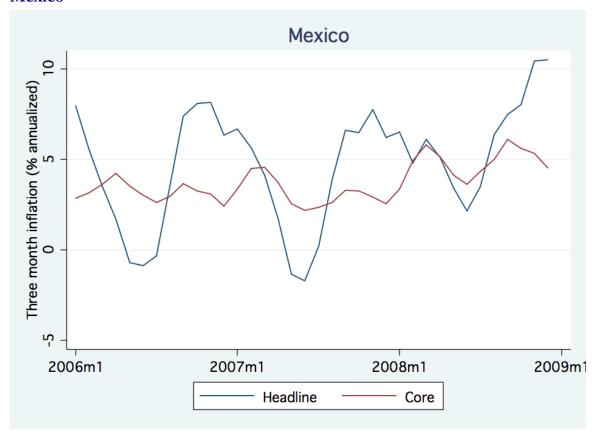
#### Brazil 4



Headline inflation in Brazil averaged 7.6 percent from July 2007 to July 2008 peaking at 10.5 percent in the three months ending in June before falling down to 4.8 percent in the three months from September to December. By comparison, over the twelve months from July 2006 to July 2007, inflation ran only 4.2 percent. However, core (non-food, non-energy) inflation was largely in check during this inflationary period. From July 2007 to July 2008, core inflation ran only 4.2 percent—little more than the 3.7 percent rate during the twelve-month period ending in July 2007. Core inflation in Brazil has risen modestly over the last year. At 5.0 percent over the last three months, core inflation is not terribly high. For the same quarter of 2005 and 2006, core inflation ran 5.3 and 5.2 percent, respectively.

<sup>&</sup>lt;sup>4</sup> Brazil. Instituto Brasileiro de Geografica e Estatística. <u>Índice Nacional de Preços ao Consumidor</u>. Accessed on February 4, 2009. [http://www.sidra.ibge.gov.br/snipc/tabelaINPC.asp].

#### Mexico 5

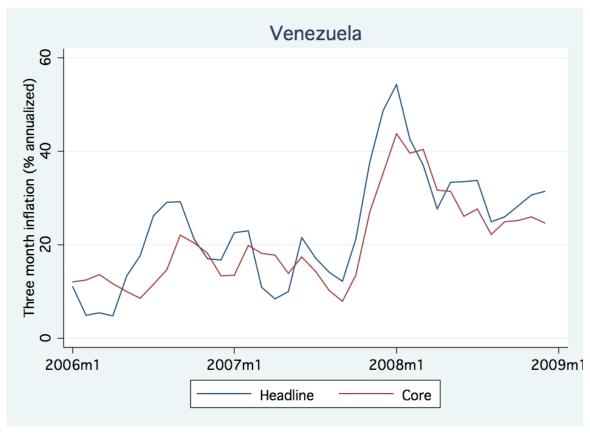


Headline inflation in Mexico averaged 5.6 percent for the twelve months ending August 2008—up from the 4.0 percent seen for the year ending August 2007. As recently as February, the twelve-month average inflation in Mexico was only 3.7 percent, but this rate of inflation is historically very low. Since January 1974, twelve-month average inflation had never been below 4.0 percent until the year ending August 2005. In the shorter run, however, three-month inflation ending in December 2008 stood at 10.5 percent. There is some evidence of acceleration of headline inflation in Mexico, as headline inflation from August to November broke 10 percent for the first time since the three months ending January 2001. Core inflation has remained steadily below headline inflation over the last two years and from December 2007 to December 2008 stands at 4.9 percent. While still relatively low, core inflation slowly accelerated in 2008—a trend that has stopped in recent months. While the average core rate of inflation for the three months ending in September was 6.1 percent—compared to 3.3 percent the year prior-- the three-month average ending in December was 4.5 percent, compared to 2.6 percent over the same period in 2007.

[http://www.banxico.org.mx/polmoneinflacion/estadisticas/indicesPrecios/indicesPreciosConsumidor.htm]

<sup>&</sup>lt;sup>5</sup> Mexico. Banco de México. Índices de Precios al Consumidor y UDIS. Accessed on February 4, 2009.

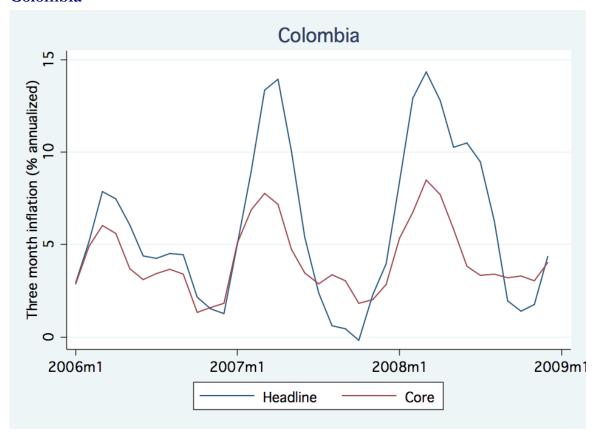
#### Venezuela<sup>6</sup>



Headline inflation in Venezuela during the year ending July 2008 has averaged 33.7 percent with core inflation averaging 28.7 percent over the same period. Both figures are significantly higher than they were in the two previous years —17.2 and 16.5 percent respectively. However, recent inflation has been concentrated in the first half of 2008 and abated considerably in the second half. The three-month average headline inflation peaked in January at 54.3 percent and for the three months ending in December ran only 31.4 percent. Core inflation also peaked at 43.8 percent in the three months ending in January, but now stands at only 24.7 percent. While this rate of inflation is still much higher than the previous couple of years (although still low by Venezuela's historical standards) the considerable deceleration of inflation during 2008 does not appear to be cyclical, but rather the passing of temporary price shocks.

<sup>&</sup>lt;sup>6</sup> Venezuela. Banco Central de Venezuela. Accessed on February 4, 2009. [http://www.bcv.org.ve/EnglishVersion/c2/].

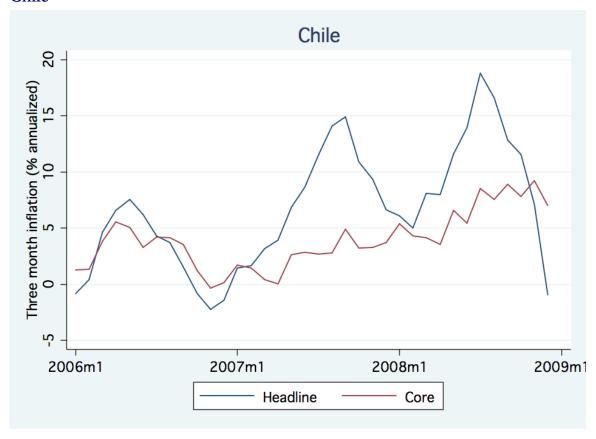
#### Colombia<sup>7</sup>



In Colombia, headline inflation has risen in the last two years, while the core has been held largely in check. For the twelve months ending in July, headline inflation ran 7.5 percent compared to 5.8 percent the year before. However, this burst of inflation was short-lived. For the three-month period ending December 2008, headline inflation was only 4.4 percent—a little faster than the 3.5 percent average for similar months in 1999-2007. Colombia has seen no real movement in core inflation. The most significant sign of any acceleration in the rate of core inflation is that the twelve-month average ending in December was 4.9 percent, compared to 4.3 percent the year before. However, core inflation in Colombia ran over 4.9 percent the entire period from 1999 through 2004.

<sup>&</sup>lt;sup>7</sup>Colombia. Departamento Administrativo Nacional de Estadística. Accessed on February 4, 2009. [http://www.dane.gov.co/index.php?option=com\_content&task=category&sectionid=32&id=28&Itemid=14 0].

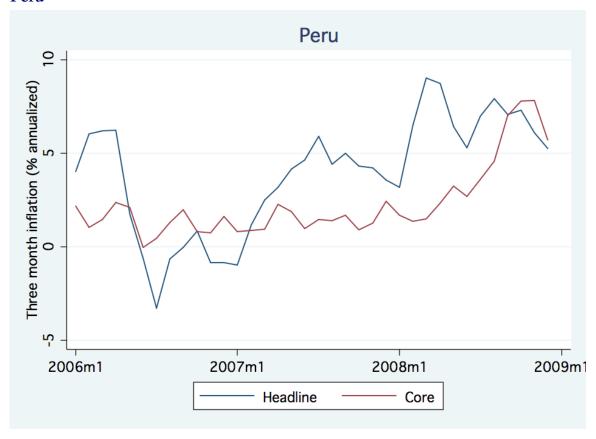
#### Chile<sup>8</sup>



Like Venezuela, Chile has seen significant acceleration in headline inflation since 2007. However, November brought the first evidence that that inflation is abating. From 1999 to the middle of 2007, twelve-month average inflation never broke 5 percent in Chile. Since the three-month period ending April 2007, inflation had not run below 5 percent and after peaking in July at 18.8 percent, as of November ran at 7.1 percent—some 3.5 percentage points above average for the those months. In the most recent three months, however, inflation has plummeted and now stands at -1.0 percent. Less encouraging, the twelve-month average rate of core inflation has more than doubled to 6.4 percent in December from the rate of 3.0 percent just one year before. From 1999 through 2007, core inflation had been as low as 0.1 percent and as high as 4.5 percent. The three-month rate of core inflation is running at 7.0 percent compared to 3.7 percent one year ago and an average of 1.8 percent over the same periods since 2000. While this represents significant acceleration in inflation, it is starting from a relatively low rate. By itself, the current core rate of inflation should not pose a threat to the Chilean economy.

Robile. Instituto Nacional de Estadísticas. Accessed on February 4, 2009.
[http://www.ine.cl/canales/chile\_estadístico/estadísticas\_precios/ipc/microindice/microindice.php].
In Chile, deflation is not uncommon for the final quarter of the year. In 2001, 2003, 2004, 2005, and 2006, prices fell at an average rate of 1.1 percent in those months.

#### Peru<sup>10</sup>



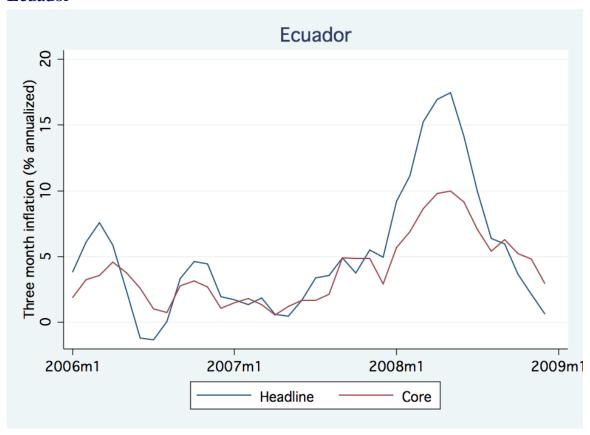
As in Chile, inflation in Peru has been very low in recent years. For much of 2001 and into 2002, Peru experienced deflation, and again through the second half of 2006. For the twelve months ending April 2007, Peru's headline inflation ran at -0.1 percent. By March of 2008, inflation over the previous twelve months broke 5.5 percent and now stands at 6.7 percent—the highest rate since 1998. Also as with Chile, the primary concern is not the rate of inflation, but the rapid acceleration. After the deflation of 2001, inflation hit 3.4 percent in 2003 and ran as high as 4.6 percent for the twelve months ending July 2004 before falling again back to zero. Though the core rate of inflation has been remarkably steady through much of the time since 2002—rarely rising above 1.6 percent or falling below 1.0 percent—core inflation has accelerated past 5.0 percent in the second half of 2008 all the way to 7.8 percent for the three months ending in November before falling to 5.7 percent for the three months ending in December. This acceleration is in part due to a one-month jump in transportation services, which rose 3.2 percent (46 percent annualized rate) from August to September<sup>11</sup> and household water, which jumped 6.6 percent from October to November (a 155 percent annualized rate.) Taking a broad measure of core inflation (which excludes all

<sup>10</sup> Peru. Instituto Nacional de Estadística e Informática. Accessed on February 3, 2009. [http://www1.inei.gob.pe/inicio.htm].

<sup>&</sup>lt;sup>11</sup> Peru's sudden and very brief burst of core inflation in early 2003 was entirely attributable to a single-month's jump in transportation services. In March, the price index in that category rose 8.9 percent (a 78 percent annualized rate), and transportation services account for nearly one-fifth of the core inflation index.

transportation as well as water<sup>12</sup>) core inflation ran at 4.1 percent in the last three months—up from 2.2 percent in 2007 and 1.4 percent in 2006. Water prices in Peru have been rising quickly in recent years. From December 2004 to December 2008, water prices have risen 40 percent, while the broad measure of core inflation rose only 8.3 percent.

#### Ecuador<sup>13</sup>

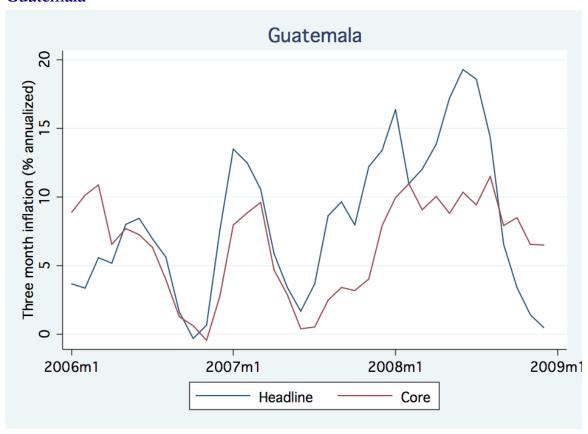


Twelve-month headline inflation in Ecuador reached 10.0 percent for the year ending in August. However, inflation has decelerated considerably in the second half of 2008 and now stands at only 0.6 percent for the three months ending in December—compared to 3.3 percent, 1.9 percent, and 4.9 percent over the same months of 2005-2007. Core inflation tells a similar, but less extreme story and now stands at 3.0 percent, compared to 0.9, 1.1, and 2.9 percent over the same months of 2005-2007. There is no sign based on current data that inflation is any threat to the economy of Ecuador.

<sup>&</sup>lt;sup>12</sup> Water is included in housing expenses. Housing costs are not included in the broad measure of core inflation because they include electricity and gas to the home.

<sup>&</sup>lt;sup>13</sup> Ecuador. Instituto Nacional de Estadística y Censos. Accessed on February 4, 2009. [http://www.inec.gov.ec/web/guest/ecu\_est/est\_eco/ind\_eco/ipc/inf\_act\_ind/ser\_his].

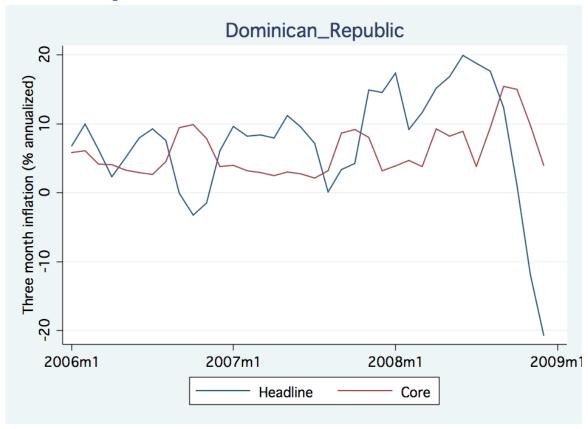
#### Guatemala<sup>14</sup>



For the twelve months ending July 2008, headline inflation in Guatemala reached 14.1 percent, up from 7.0 percent a year prior. While inflation has run unusually high through most of 2008, peaking at 19.3 percent for the three months ending in June, the rate has come down even more rapidly. For the three months ending December 2008, headline inflation ran only 0.5 percent. On the other hand, core inflation ran 6.5 percent compared an average of 4.9 percent for the same months in 2001-2007.

<sup>&</sup>lt;sup>14</sup>Guatemala. Instituto Nacional de Estadística. <u>Indice de Precios al Consumidor Segun Gastos Basicos</u>. Accessed on February 3, 2009. [http://www.ine.gob.gt/index.php/produccionestadistica/58-estadisticasdeprecios/145-ipcgastobasico].

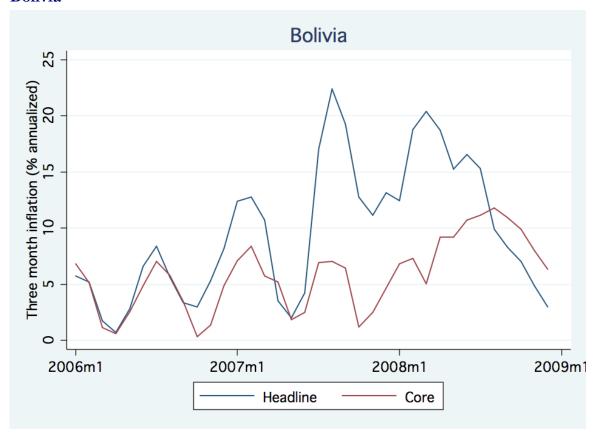
### Dominican Republic<sup>15</sup>



Headline inflation in the Dominican Republic for the twelve months ending August reached 14.6 percent, the highest rate of inflation since 2004, when the rate climbed as high as 65.3 percent. In the second half of 2008, headline inflation has slowed immensely. Prices have been *falling* at a 20.7 percent annual rate since September. Core inflation in the Dominican Republic has not run as high over this period, but had been rising steadily through 2008. At 15.0 percent for the three months ending October, core inflation was high yet well below the 35 percent average for the same periods in 2003 and 2004. By December, the core three-month rate has fallen to a more typical 4.0 percent.

<sup>&</sup>lt;sup>15</sup> Dominican Republic. Central Bank of the Dominican Republic. Accessed on February 3, 2009. [http://www.bancentral.gov.do/estadisticas.asp?a=Precios].

#### Bolivia<sup>16</sup>



In Bolivia, headline inflation for the twelve months ending December ran 11.8 percent, down from the June peak of 17.3 percent. This bout of inflation marked the first yearlong period Bolivia has experienced double-digit growth in prices since 1996, but the continued deceleration in the second half of the month indicates that the high rate of inflation has run its course. For the three months ending December, inflation has run only 3.0 percent—the lowest rate for these three months since the deflation of 2001. In contrast, twelve-month core inflation has not exceeded ten percent since 1998. While there has been a sharp rise in core inflation, this is only relative to the low inflation of the first half of the decade. As of August, three-month core inflation ran 11.8 percent—breaking 10 percent for the first time since 2005. By December of 2008, three-month inflation had fallen to 6.3 percent—still relatively high for those three months in comparison to years past. However, core inflation from September to December has frequently exceeded five percent—most recently in 1992, 1995, and 1999. Whether or not inflation continues to abate in Bolivia, the current rate of inflation is not far above Bolivia's historically low rates.

<sup>16</sup> Bolivia. Instituto Nacional de Estadística. Accessed on 3 February 2009. [http://www.ine.gov.bo/indice/indice.aspx?d1=0202&d2=6].

#### Appendix: Methodology

For each country in the paper, headline inflation and its components were obtained from the best available source—typically a national statistics institute or central bank. Where easily available, reported component weights were employed directly, but in some cases, the weights were inferred from the headline and component index data. In a few cases, the country has recently changed base years and the weights are not easily available. Inference may not be possible, so the previous base year's weights were employed.

Two core indices were computed. Where possible, we computed a detailed measure of core inflation which excludes specifically all food and energy. In some cases, where detailed components were not available, a broad measure was employed. The broad measure<sup>17</sup> excludes all food, housing, and transportation (in which the food and energy subcomponents lie). Unless otherwise specified, the detailed measure was employed where available.

For all inflation measures, both a twelve-month and three-month annualized rate was computed. That is, the twelve-month rate of inflation for the period ending in July 2008 would be calculated as

$$12MonthRate = \frac{CPI_{7/08}}{CPI_{7/07}} - 1$$

while the three-month rate would be

$$3MonthRate = \left(\frac{CPI_{7/08}}{CPI_{4/08}}\right)^4 - 1$$

<sup>&</sup>lt;sup>17</sup> The terminology here may be confusing. Here "broad" refers to a calculation based on broad categories of spending, as opposed to "detailed." "Detailed" core inflation looks at the smallest categories of spending possible and therefore constitutes the broadest measure of core inflation in terms of capturing the most spending outside of food and energy.