



BANCO DE MÉXICO  
**Inflation Report**  
July – September 2012





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## **INFLATION REPORT**

This report analyzes the development of both inflation and the economy in Mexico, as well as different domestic economic indicators, in compliance with Article 51, last section, of Banco de México's Law.

## **FOREWARNING**

*This text is provided for reader's convenience only. Discrepancies may possibly arise between the original document and its translation to English. The original and unabridged Inflation Report in Spanish is the only official document.*

*Unless otherwise stated, this document has been prepared using data available as of November 5, 2012. Figures are preliminary and subject to changes.*

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## 1. Introduction

During the third quarter of 2012, economic activity in Mexico continued its expansion, although it started to show signs of deceleration given the intensified negative shock to external demand. This shock was partially mitigated by the reduction of uncertainty in international financial markets, that resulted from measures announced by financial authorities in main advanced economies, and led to a reduction in the risk premia. Additionally, various transitory supply-related shocks in Mexico brought about increases in some food prices, causing inflation to register an important rebound, exceeding the upper bound of the variability interval of plus/minus one percentage point around the 3 percent permanent inflation target for several months.

Indeed, the rate of global economic growth continued to lose dynamism during the third quarter of the year. In the Euro zone, economic activity contracted further, due to fiscal and credit adjustment processes, caused by persistent imbalances in different countries of the region. In turn, this contributed to a slow progress in correcting internal imbalances among the countries in the referred region. U.S. economic growth remained moderate, as a reflection of the weakening observed in various aggregate demand components. In turn, in emerging economies the growth rate continued decelerating, as a result of weak external, and, in some cases, also domestic demand. In this context, the growth prospects for this and next year have been further revised downwards for both advanced and emerging economies.

As mentioned before, during the reference quarter, the measures announced by central banks of the main advanced economies contributed to improving conditions in international financial markets, thereby reducing risk premia. Particularly, the European Central Bank announced a new program of sovereign bond purchases, conditional on the application for support by issuing governments to the European Stability Mechanism. However, uncertainty prevails regarding the implementation of these measures. In turn, given the slow recovery of economic activity, and particularly of employment, the U.S. Federal Reserve announced the expansion of its monetary stimulus program. In emerging economies, this improvement in financial markets mainly resulted in a moderate appreciation of their currencies against the USD, in part, due to the rebound of capital flows towards these markets.

Commodity prices increased during the third quarter, which in the case of oil, was due to supply-related problems both in the North Sea and the Middle East. Grain prices also grew during the quarter, triggered by drought problems in different producing regions. Nevertheless, in recent weeks commodity prices decreased as production prospects improved. Thus, in an environment, characterized by slow growth of world economic activity, with inflation in advanced economies remaining at very low levels, and with lower commodity prices, inflation is expected to reach moderate levels in most countries by the end of 2012 and in 2013. The above favored greater monetary policy easing in various advanced and emerging economies during the analyzed period, and, additionally, many economies from

both groups are expected to continue easing their monetary policy stances in the following months.

During the third quarter of 2012 economic activity in Mexico maintained an upward trend, causing the output gap to remain close to zero, as different labor market indicators continued their recovery. However, manufacturing exports and some of the domestic demand components, such as investment, became more noticeably affected by adverse world economic conditions. In this context, the forecast interval for economic growth in 2012 and 2013 remains unchanged as compared to the previous Inflation Report, although, given the availability of more information, the amplitude of the forecast interval for 2012 is reduced. Despite the abovesaid, it should be noted that downward risks to these forecasts have intensified, given deteriorated prospects for world economic growth.

During the reference period, average annual headline inflation increased and exceeded the upper bound of the variability interval around the established target. This evolution of inflation, to some extent foretold in the previous Inflation Report, is primarily accounted for by price increases in agricultural and livestock products. Keeping in mind the transitory nature of the shocks that affected inflation, the referred increase is presumed to be temporary, although these shocks' persistence did become a reason for concern.

The inflation forecast does not present a significant change as compared to the previous Inflation Report. Thus, the forecast considers annual headline inflation to have changed its trend last September. Nevertheless, this variable's most probable trajectory is still located very close to 4 percent at the end of the year. For 2013, headline inflation is expected to keep decreasing to locate within an interval of 3 to 4 percent. In turn, annual core inflation forecast does not register a change as compared to the previous Inflation Report either, expecting it to have presented its highest level in August and to drop in subsequent months, lying close to 3 percent by the end of 2012, and fluctuating around the referred level in 2013.

However, given the intensity of food price shocks, in the short run upward inflation risks have increased, particularly in an environment where the output gap has closed. Another reason for concern is that, although it was not a widespread phenomenon, some wage negotiations have registered greater increases as compared to the past, apart from the fact that renewed volatility in international financial markets cannot be ruled out. This has occurred despite the fact that in the medium term downward inflation risks have increased, as a result of the deteriorated risk balance for the world economy.

Given that the increase in inflation in the last months was mainly due to shocks that should prove to be temporary, and that, so far, there is no evidence of generalized price increases, the Board of Governors decided to maintain the Overnight Interbank Interest Rate unchanged during the period analyzed in this Inflation Report. However, if inflation shocks persist, even if presumed to be temporary, and if changes in the trend of headline and core inflation are not confirmed, the Board considers it appropriate to adjust the reference rate upwards shortly thereafter, in order to consolidate the anchoring of inflation expectations, to prevent the contamination of the rest of the price formation process in the Mexican economy and to avoid jeopardizing the convergence of inflation to the 3 percent permanent target.

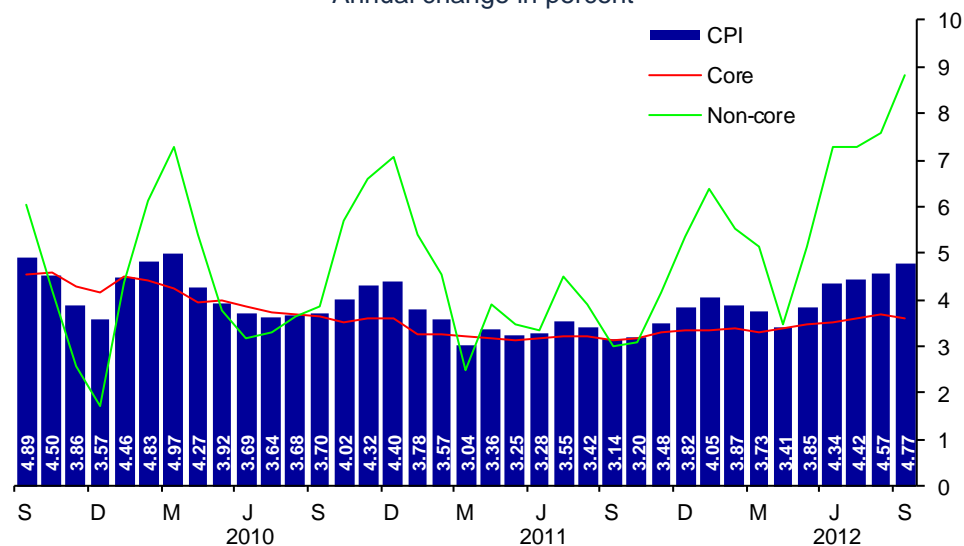
## 2. Recent Developments of Inflation

### 2.1. Inflation

During the third quarter of 2012, average annual headline inflation was 4.59 percent, above the level of 3.87 percent presented in the previous quarter, and exceeding the upper bound of the variability interval of plus/minus one percentage point around the 3 percent inflation target (Chart 1 and Table 1). This result, to a certain extent anticipated in the past Inflation Report, was mainly due to the higher incidence of some agricultural products. It stands out that the diverse shocks to headline inflation have, so far, not led to second round effects on the price formation process, which was especially reflected in the annual growth rate of services prices that remained at low levels, and continued a decreasing trend. Thus, considering the transitory nature of these shocks, inflation is expected to have reached its highest level this year in September, registering 4.77 percent.

Annual core inflation remained below annual headline inflation. During the quarter analyzed in this Inflation Report, its average level was 3.63 percent, while in the previous quarter it was 3.46 percent (Table 1 and Chart 2). It should be noted that annual core inflation seems to have reached its highest level this year in August 2012 with an observed level of 3.70 percent, since in September it declined to 3.61 percent. This reduction was due to the stabilization of the annual growth rate of the merchandise core subindex and the decrease in the annual change of the services core subindex (Chart 3a and Chart 3b).

**Chart 1**  
**Consumer Price Index**  
Annual change in percent

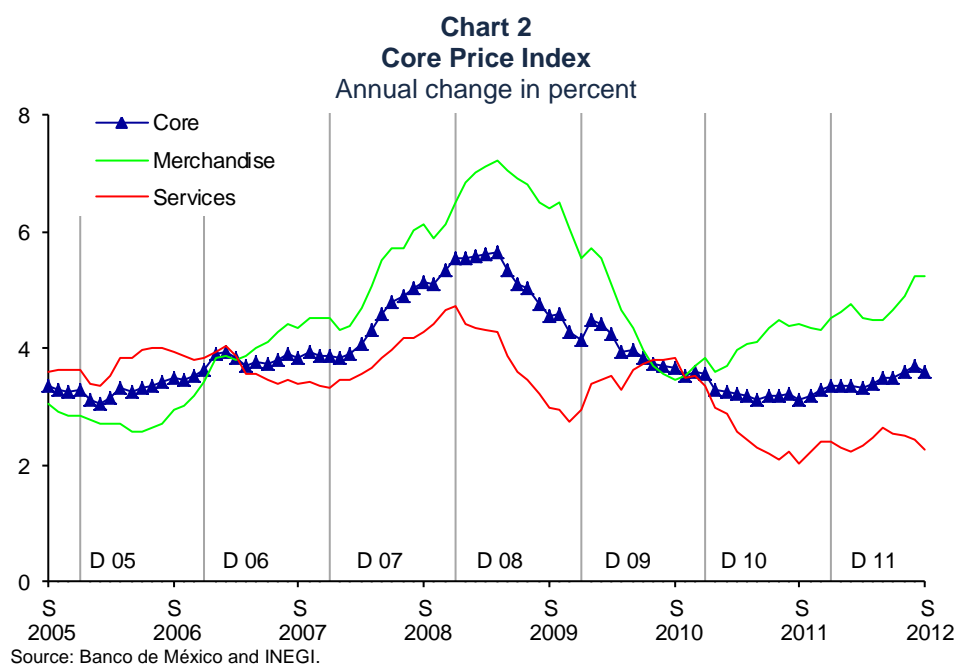


Source: Banco de México and INEGI.

**Table 1**  
**Consumer Price Index and Components**  
 Annual change in percent

	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	Average	
							Q II 2012	Q III 2012
<b>CPI</b>	<b>3.41</b>	<b>3.85</b>	<b>4.34</b>	<b>4.42</b>	<b>4.57</b>	<b>4.77</b>	<b>3.87</b>	<b>4.59</b>
<b>Core</b>	<b>3.39</b>	<b>3.48</b>	<b>3.50</b>	<b>3.59</b>	<b>3.70</b>	<b>3.61</b>	<b>3.46</b>	<b>3.63</b>
<b>Merchandise</b>	<b>4.48</b>	<b>4.50</b>	<b>4.66</b>	<b>4.91</b>	<b>5.23</b>	<b>5.24</b>	<b>4.55</b>	<b>5.13</b>
Food, beverages and tobacco	6.42	6.32	6.43	6.61	6.81	6.91	6.39	6.77
White bread	4.27	3.89	4.04	4.22	7.75	11.67	4.07	7.88
Other cooked food	6.00	5.42	6.35	6.53	7.39	7.55	5.93	7.16
Roasted chicken	6.80	7.14	7.70	8.97	10.13	9.66	7.21	9.59
Non-food merchandise	3.00	3.11	3.29	3.60	4.01	3.96	3.13	3.85
<b>Services</b>	<b>2.48</b>	<b>2.63</b>	<b>2.54</b>	<b>2.50</b>	<b>2.43</b>	<b>2.25</b>	<b>2.55</b>	<b>2.39</b>
Housing	1.90	1.86	1.85	1.91	1.95	1.98	1.87	1.95
Education (tuitions)	4.33	4.53	4.62	4.63	4.23	4.52	4.49	4.46
Other services	2.57	2.88	2.67	2.51	2.42	1.87	2.71	2.27
Mobile phone services	-8.26	-6.83	-11.87	-12.07	-12.19	-13.66	-8.99	-12.64
Local fixed-line phone services	-1.45	-1.45	-1.45	-1.45	-1.46	-8.01	-1.45	-3.64
<b>Non-core</b>	<b>3.49</b>	<b>5.15</b>	<b>7.26</b>	<b>7.30</b>	<b>7.58</b>	<b>8.81</b>	<b>5.27</b>	<b>7.90</b>
<b>Agricultural</b>	<b>0.86</b>	<b>5.60</b>	<b>11.29</b>	<b>11.27</b>	<b>11.76</b>	<b>16.02</b>	<b>5.80</b>	<b>13.01</b>
Fruit and vegetables	-13.50	-2.14	12.75	8.95	8.77	13.36	-1.69	10.34
Tomato	-62.46	-39.66	37.15	26.83	17.25	36.45	-34.91	26.90
Potatoes and other tubers	-22.90	-28.92	-20.26	0.74	1.95	-1.12	-24.15	0.52
Livestock	11.58	10.79	10.37	12.81	13.69	17.70	10.91	14.75
Egg	11.98	7.30	5.90	19.25	24.40	40.01	8.39	28.12
Chicken	9.04	8.63	6.91	8.43	8.38	13.99	8.19	10.26
<b>Energy and government approved fares</b>	<b>5.00</b>	<b>4.89</b>	<b>5.02</b>	<b>5.02</b>	<b>5.19</b>	<b>4.73</b>	<b>4.97</b>	<b>4.98</b>
Energy	7.52	7.65	7.87	8.01	8.33	7.49	7.68	7.95
Government approved fares	0.55	0.33	0.30	0.07	-0.03	0.10	0.39	0.05
<b>CPI excluding food (at home and away from home) and energy <sup>1/</sup></b>	<b>2.27</b>	<b>2.39</b>	<b>2.36</b>	<b>2.41</b>	<b>2.49</b>	<b>2.33</b>	<b>2.34</b>	<b>2.41</b>

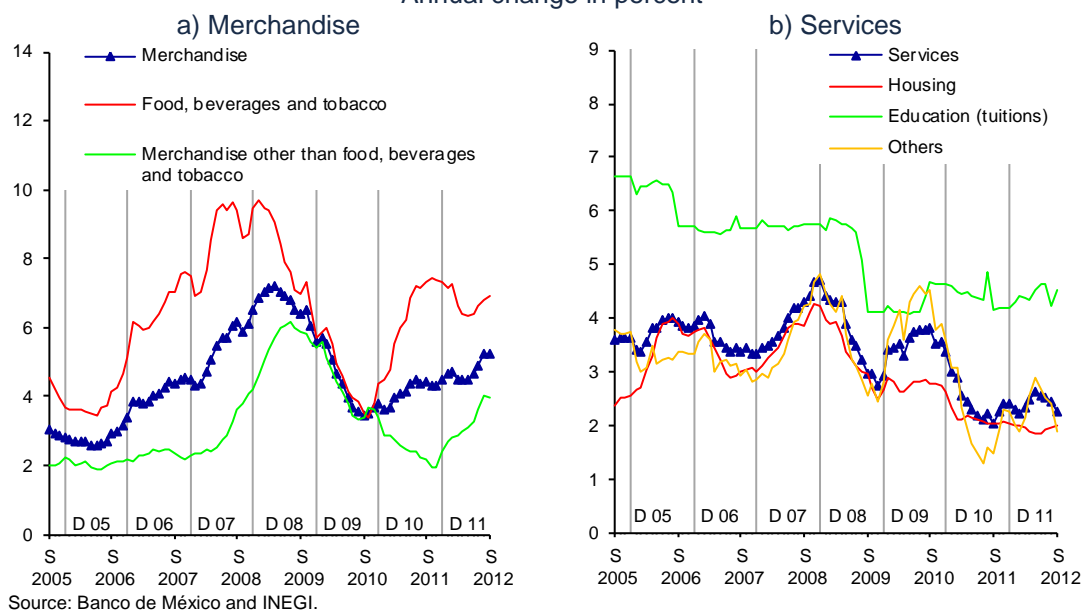
1/ Excludes food at home (processed food, non-alcoholic beverages and agricultural products), food away from home and energy.  
 Source: Banco de México and INEGI.



Although annual merchandise core inflation stabilized at the end of the third quarter, its average level of 5.13 percent during this time span was higher than 4.55 percent observed during the second quarter (Table 1 and Chart 3). This evolution was influenced by two factors:

- i. Price increases of some processed foods due to the performance of international grain prices. This is in line with the evidence presented in the previous Inflation Report in the Box “Considerations on the Impact of International Commodity Price Fluctuations on Consumer Prices in Mexico”, indicating that the increases in the referred international grain prices have a direct impact on the price growth rate of equivalent products in the CPI or grain-derived products, but that there are no considerable second round effects.
- ii. Relative price changes derived from the exchange rate depreciation during the second half of 2011, mainly in the core price subindex of non-food merchandise. Regarding this, Box 1 presents an update of the estimated exchange rate pass-through coefficient to prices, showing that this coefficient is very low. However, despite the low pass-through coefficient, given that the exchange rate adjustment was considerable, it had a transitory effect on inflation, in particular on non-food merchandise core inflation.

**Chart 3**  
**Core Price Index: Merchandise and Services**  
 Annual change in percent



## Box 1 Estimating the Effect of the Exchange Rate Adjustment on Inflation

### Introduction

The exchange rate in Mexico considerably depreciated in the second half of 2011, given the deteriorated world economic environment. Initially, economic analysts considered that the exchange rate adjustment would partly reverse in a relatively short time. Even though this reversal took place, until now it was lower than foreseen. Thus, so far, the exchange rate parity has registered more depreciated levels than anticipated.

At the end of 2011, the relative price of merchandise with respect to services started to increase as a consequence of the exchange rate adjustment, in line with Banco de México's forecast. However, the growth rate of merchandise prices was higher than anticipated.

In order to analyze this phenomenon, this Box carries out three exercises on the impact of the referred exchange rate fluctuations on prices in Mexico:

1. Estimation of pass-through coefficients of the exchange rate variations to different CPI components, using information up to August 2012.
2. Analysis of statistically significant changes in the pass-through coefficients in recent years.
3. Quantifying the impact of the referred exchange rate depreciation on headline inflation and subindices.

The statistical analysis of the pass-through of exchange rate movements to inflation is based on the document of Cortés (2012). This investigation uses a vector autoregressive model (VAR) similar to the one used in the Technical Chapter "Exchange Rate Pass-through" published in Banco de México's Inflation Report, January-March 2011. However, the exercise presented here is different in two dimensions:

- A. A model for 16 CPI components is estimated, while in the Technical Chapter the model only included the headline index and the subindices for merchandise, services, and energy and government approved fares.
- B. The effect on headline inflation is calculated with an aggregation method for the CPI, based on estimations of each subindex separately; and the results are compared with those obtained when directly estimating the effect of the exchange rate on headline inflation. This optimal aggregation method was proposed by Hyndman et al. (2007).

The qualitative study results are not modified with respect to those in the previously referred Technical Chapter. They reveal that the pass-through coefficient of exchange rate variations on the CPI is low and that there is no evidence of a statistically significant change of this

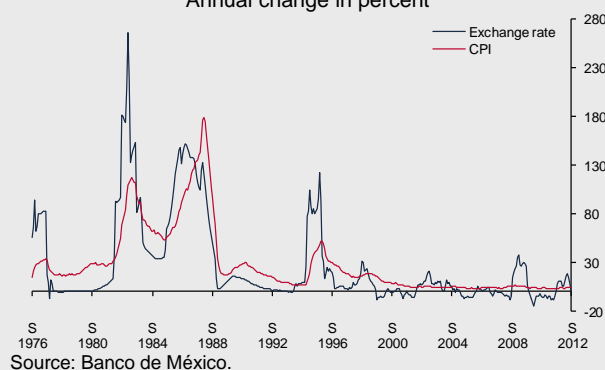
coefficient after the shock in 2011. Thus, the impact of the exchange rate depreciation in August 2011 on headline inflation is mainly the consequence of the magnitude of this depreciation, given that the pass-through coefficient is low.

### 1. Relation between Inflation and the Nominal Exchange Rate

The price formation process in the Mexican economy has significantly changed since 2001, when the inflation-targeting scheme was adopted. Since then, inflation can be characterized as a stationary process (Chiquiar, Noriega and Ramos-Francia, 2010). Besides, firms' price revision schemes changed from mainly being state-dependent to predominantly time-dependent (Gagnon, 2007 and Cortés, Murillo and Ramos-Francia, 2012).<sup>1</sup> In contrast to what is estimated for recent periods, before 2001 the coefficients of the exchange rate pass-through to inflation were high and were passed on along the whole distribution chain (Capistrán, Ibarra-Ramírez and Ramos-Francia, 2011).

Chart 1 shows the trajectory of annual headline inflation and the annual change of the nominal exchange rate for the period from 1976 to September 2012. As can be observed, from 1976 to 2000, both series are closely correlated (0.79). However, since 2001 the degree of correlation between inflation and depreciation declined (0.36). In this way, in Chart 1 it can be noted that in the environment of low and stable inflation, which has prevailed in Mexico during the last years, the exchange rate pass-through to inflation seems to have been low.

**Chart 1**  
**Consumer Price Index and Exchange Rate**  
Annual change in percent



<sup>1</sup> "Time-dependent" price revision strategies are defined as those where revisions in order to realize possible price changes are carried out by the firm in preestablished periods, while in "state-dependent" strategies, prices are not revised in preestablished schedules, but rather depend on the circumstances faced by the firm at the macroeconomic and microeconomic level.

In particular, it can be observed that the depreciation in 2008-2009 had no significant impact on inflation, as opposed to the devaluations in 1976-1977, 1982-1983, 1987-1988 and 1995, which were followed by important increases in inflation.

## 2. Model

In order to analyze the exchange rate pass-through to inflation, a VAR model was estimated, which is a widely used tool to study the interaction of a set of variables in the case of shocks to one of them. The included variables are those typically used to model price-taking economies, like the Mexican (i.e. small and open). The analysis period is from June 2001 to August 2012 (the end of the period is determined by the availability of the Global Economic Activity Indicator (IGAE, for its Spanish acronym). The selection of this period considers, as mentioned, that at the beginning of this time span inflation can be characterized as a stationary process.

The model includes a vector of endogenous variables: IGAE, 91-Cetes interest rate, MXN/USD exchange rate and the Consumer Price Index. Additionally, the following exogenous variables are included: U.S. industrial production index, 3-month T-bill rate, U.S. consumer price index and the International Commodity Price Index.

The assumption of exogeneity implies that external variables affect domestic variables, but not vice versa, given that the model represents Mexico as a price-taking economy at the global level.

As in the model of exchange rate pass-through, presented in the referred Technical Chapter, besides the Cetes and T-bill interest rates, which are defined in percentage points, the other variables are presented by their annual change expressed in percent.

The mechanism used to identify exchange rate shocks is recursive. The exchange rate is placed before prices, allowing shocks to the former to be immediately transmitted to the latter. In turn, the interest rate is placed before the exchange rate and prices, implying that the monetary authority observes shocks to these variables with a one-period lag. Additionally, IGAE is placed first, indicating that the real activity reacts with a lag to interest rate shocks, while the exchange rate responds immediately to IGAE and interest rate shocks.

## 3. Exchange Rate Pass-through to Inflation

Using the VAR model explained before, the pass-through of exchange rate movements to different price indices is estimated by means of impulse-response functions. This model is estimated for all aggregation levels of the CPI:

- Headline index
- Subindices: core and non-core
- Groups: merchandise, services, agricultural, energy and government approved fares

- Subgroups: food, beverages and tobacco, non-food merchandise, education, housing, rest of services, fruit and vegetables, livestock, energy and government approved fares

In particular, an independent VAR is estimated for each analyzed price index.

Once the models and the impulse-response functions for each of the mentioned price subindices are estimated, the results are used for the analysis of the effect of exchange rate fluctuations on the CPI, the core and non-core indices, the merchandise and services groups, and the food, beverages and tobacco, and non-food merchandise subgroups.

To analyze the impact of the exchange rate fluctuations on consumer prices, two methods are considered:

1. Direct Estimation: the model presented in the previous section is estimated for each of the 16 mentioned indices separately, considering the same technique as in the referred Technical Chapter.
2. Optimal Combination: with the results of each estimation, the optimal aggregation proposed by Hyndman et al. (2007) is used to obtain the pass-through to headline inflation based on its components. This method combines the information of the aggregated and basic indices, complying with the following statistical properties:
  - A. Hierarchy: superior aggregation groups equal the weighted sum of inferior groups.
  - B. Efficient integration of the information contained in the estimated pass-through coefficients of all price indices: more reliable estimates are obtained and, given uncertainty in a wider set, the estimates turn out to be more robust than those obtained with the direct estimation.

The estimation results are presented in Table 1. As reported by Banco de México in the Technical Chapter of the Inflation Report, January-March 2011, in the period from June 2001 to December 2010, the elasticity of the exchange rate pass-through to prices was 0.02 one year after the shock and 0.04 in the long run.<sup>2</sup> By updating this model with information up to August 2012, the pass-through elasticity is estimated to be 0.03 12 months after the shock and 0.07 in the long term. Finally, with the optimal aggregation method from Hyndman et al. (2007) the pass-through coefficient is estimated to be 0.04 one year after the shock and 0.06 in the long run. Thus, the obtained results are not statistically different from those

<sup>2</sup> Accumulated pass-through (PT) elasticity in period  $\tau$  is calculated as:

$$PT_{\tau} = \frac{\Delta\%P_{t,t+\tau}}{\Delta\%e_{t,t+\tau}}$$

where  $\Delta\%P_{t,t+\tau}$  is the percentage change of the price level  $\tau$  periods after the shock, and  $\Delta\%e_{t,t+\tau}$  is the percentage change of the exchange rate in the same period.

reported in the mentioned Technical Chapter.

**Table 1**  
**Elasticity of the Exchange Rate Pass-through to Inflation**  
Accumulated pass-through elasticity

	Months			
	12	24	36	48
June 2001 - December 2010	<b>0.021</b>	<b>0.032</b>	<b>0.037</b>	<b>0.038</b>
	(0.02)	(0.04)	(0.04)	(0.05)
June 2001 - August 2012 Direct estimation	<b>0.033</b>	<b>0.054</b>	<b>0.065</b>	<b>0.070</b>
	(0.02)	(0.04)	(0.06)	(0.07)
June 2001 - August 2012 Optimal combination	<b>0.039</b>	<b>0.056</b>	<b>0.062</b>	<b>0.063</b>
	(0.03)	(0.06)	(0.08)	(0.09)

Source: Banco de México.

The results for different price subindices for the period June 2001 - August 2012 are presented below. Given that the results of both methods are not statistically different and that the optimal combination method yields more robust estimates, only the latter are shown here.

In the case of the core and non-core price indices, pass-through elasticity is found to be 0.02 and 0.10 one year after the shock and 0.02 and 0.13 in the long term, respectively (Table 2). In turn, the elasticity of the exchange rate pass-through to the merchandise price subindex is 0.07 12 months after the shock and 0.17 in the long term. In the case of the services price subindex, the pass-through is practically zero in both considered time horizons. Additionally, regarding the food, beverages and tobacco and non-food merchandise price subindices, the elasticities of the exchange rate pass-through are approximately 0.05 and 0.09 after one year, and 0.13 and 0.19 in the long run, respectively.

It should be noted that the estimation results indicate that only in the case of non-food merchandise inflation, the exchange rate pass-through coefficient is statistically different from zero in the long term.

To detect whether the exchange rate elasticity went through a statistically significant change in the last years, the VAR was estimated, quantifying the impact on the CPI through the direct estimation method, with 6-year rolling windows. The first window is from January 1994 to January 2000. With this, the elasticity of the exchange rate pass-through to prices in Mexico is estimated, 12 months after the shock.

Chart 2 shows that the pass-through coefficient experienced a structural change in the early 2000s, going from a positive, statistically significant level to a level not different from zero.

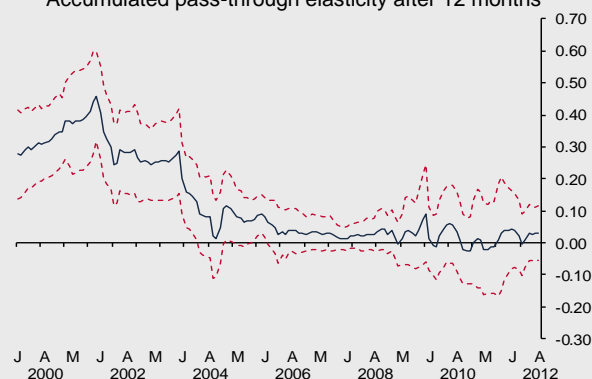
It can also be observed that, despite the depreciation in the second half of 2011, the pass-through coefficient remained not significant.

**Table 2**  
**Elasticity of the Exchange Rate Pass-through to Price Indices**

		Months			
		12	24	36	48
CPI	<b>Elasticity</b>	<b>0.039</b>	<b>0.056</b>	<b>0.062</b>	<b>0.063</b>
	Std. error	(0.03)	(0.06)	(0.08)	(0.09)
Core	<b>Elasticity</b>	<b>0.017</b>	<b>0.023</b>	<b>0.025</b>	<b>0.025</b>
	Std. error	(0.01)	(0.02)	(0.02)	(0.02)
Merchandise	<b>Elasticity</b>	<b>0.071</b>	<b>0.125</b>	<b>0.153</b>	<b>0.166</b>
	Std. error	(0.02)	(0.05)	(0.09)	(0.12)
Food	<b>Elasticity</b>	<b>0.051</b>	<b>0.103</b>	<b>0.128</b>	<b>0.134</b>
	Std. error	(0.03)	(0.07)	(0.12)	(0.16)
Non-food merchandise	<b>Elasticity</b>	<b>0.086</b>	<b>0.143</b>	<b>0.172</b>	<b>0.191</b>
	Std. error	(0.02)	(0.04)	(0.06)	(0.08)
Services	<b>Elasticity</b>	<b>0.002</b>	<b>0.000</b>	<b>-0.001</b>	<b>0.000</b>
	Std. error	(0.01)	(0.02)	(0.02)	(0.02)
Non-core	<b>Elasticity</b>	<b>0.095</b>	<b>0.122</b>	<b>0.130</b>	<b>0.131</b>
	Std. error	(0.09)	(0.12)	(0.15)	(0.16)

Source: Banco de México.

**Chart 2**  
**Exchange Rate Pass-through to Inflation in Mexico**  
Accumulated pass-through elasticity after 12 months



Source: Banco de México.

#### 4. Impact of the Depreciation on Inflation

In mid-2011, the Mexican economy was affected by an exchange rate shock, leading to a depreciation that exceeded 18 percent between July and December 2011. Consequently, the observed trajectory of the exchange rate, until now, was above that expected by analysts before the referred shock. The effect of the exchange rate, persisting above the foreseen levels on inflation, is estimated below.

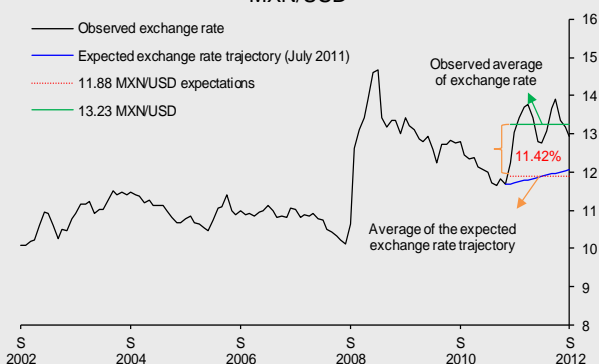
To define the magnitude of the exchange rate shock, Chart 3 presents the average exchange rate from August 2011 to September 2012 and the average trajectory expected in July 2011 (end 2011= 11.80 and end 2012= 12.15). As can be seen, the average exchange rate from August 2011 to September 2012 was 11.42 percent above the average level implied by economic analysts' expectations.



To determine the impact of this depreciation on headline inflation and its components, the point estimates of the models described before for the period June 2001 – July 2011 are used, thereby evaluating the total magnitude of the exchange rate shock occurred in August 2011.

The obtained results show that the exchange rate depreciation from the second half of 2011, as a reflection of the deterioration in the external economic environment, impacted annual headline inflation in September 2012 by 0.34 percentage points (Table 3). This means that 0.34 percentage points from the annual CPI change, which was 4.77 percent in September 2012, were due to the unexpected exchange rate adjustment.

**Chart 3**  
Nominal Exchange Rate Shock  
MXN/USD



Source: Banco de México.

Regarding annual core and non-core inflation, the impact in September 2012 is estimated at 0.16 and 0.74 percentage points, respectively. In the case of annual merchandise and services core inflation, the impact is estimated at 0.82 and zero points that month (Table 3).

Finally, the effect of the shock on food, beverages and tobacco, and non-food merchandise inflation was 0.86 and 0.80 percentage points (Table 3).

**Table 3**  
Impact of the Depreciation on Annual Inflation  
Percentage points

		Dec 2011	Mar 2012	Aug 2012	Sep 2012
<b>CPI</b>	<b>Observed inf</b>	3.82	3.73	4.57	4.77
	<b>Shock</b>	0.20	0.28	0.38	0.34
<b>Core</b>	<b>Observed inf</b>	3.35	3.31	3.70	3.61
	<b>Shock</b>	0.09	0.13	0.18	0.16
<b>Merchandise</b>	<b>Observed inf</b>	4.52	4.51	5.23	5.24
	<b>Shock</b>	0.32	0.53	0.86	0.82
<b>Food</b>	<b>Observed inf</b>	7.32	6.63	6.81	6.91
	<b>Shock</b>	0.22	0.43	0.88	0.86
<b>Non-food merchandise</b>	<b>Observed inf</b>	2.39	2.89	4.01	3.96
	<b>Shock</b>	0.40	0.61	0.84	0.80
<b>Services</b>	<b>Observed inf</b>	2.40	2.32	2.43	2.25
	<b>Shock</b>	0.05	0.04	0.00	-0.01
<b>Non-core</b>	<b>Observed inf</b>	5.34	5.12	7.58	8.81
	<b>Shock</b>	0.50	0.68	0.89	0.74

Source: Banco de México.

As for the period June 2001 - August 2012, the impact of the exchange rate depreciation is statistically significant for the merchandise price subindex, and in particular for non-food merchandise. The impact on services is not statistically different from zero.

### 5. Final Considerations

Based on the analysis developed in this Box, four main results can be obtained:

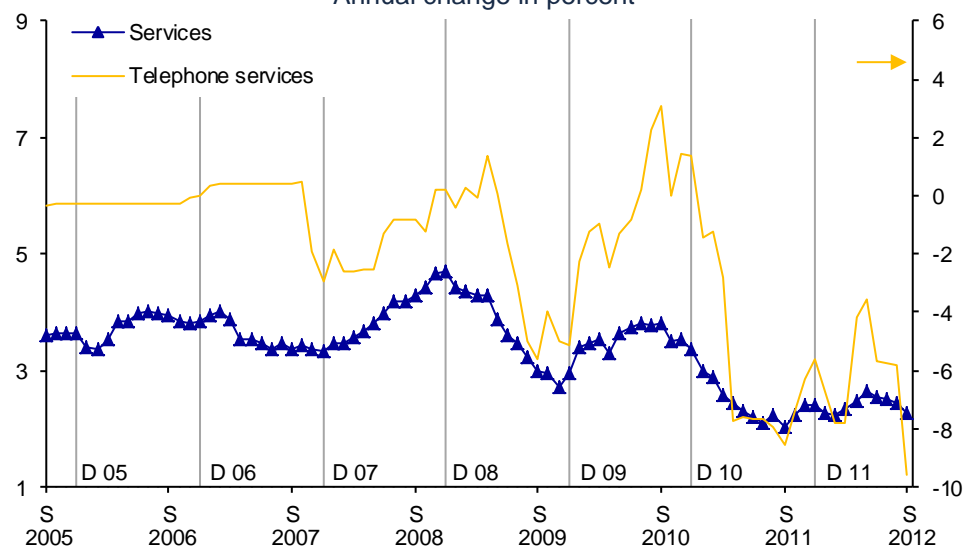
1. The coefficients of the exchange rate pass-through to the different analyzed price indices are low.
2. Updating the sample from December 2010 up to August 2012, the exchange rate pass-through does not present a significant change.
3. Only for non-food merchandise inflation, the pass-through coefficient is statistically different from zero in the long run.
4. The non-anticipated depreciation since August 2011 affected annual inflation in September 2012 (4.77 percent) by 34 basis points, resulting from the combination of a low pass-through coefficient and an important exchange rate depreciation.

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As regards annual services core inflation –indicator which better reflects domestic conditions that affect inflation– its average level reduced from 2.55 percent in the second quarter to 2.39 percent in the third one (Table 1). In fact, at the end of the reference period, this indicator registered a level close to 2 percent. The slow growth pace of this price indicator was mainly influenced by two elements: first, the growth rate of housing prices, determined by increased supply generated by government support programs for housing acquisition; and second, the effects of greater competition and technological innovation in the telecommunications industry. Thus, during the third quarter of 2012, the average annual change of the housing index was 1.95 percent (Table 1 and Chart 3), while that corresponding to phone services prices was -7.04 percent, reflecting important reductions in the prices of fixed-line telephone service packages (Chart 4).

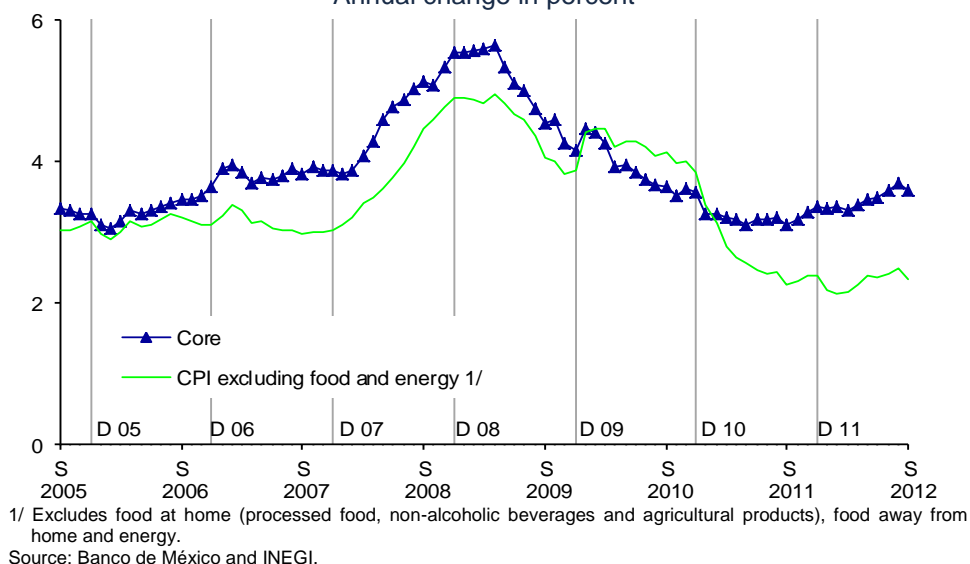
**Chart 4**  
**Core Price Index: Services**  
Annual change in percent



Source: Banco de México and INEGI.

The behavior of annual core inflation indicates that the rebound of annual headline inflation during the analyzed quarter has been the consequence of the adjustment of some products' relative prices, rather than generalized price increases in the economy. This is also reflected by the performance of an indicator of consumer inflation that excludes food and energy items from the general calculus. This index, coinciding with the definition of core inflation used in various countries, the U.S. among them, registered an average annual change of 2.34 percent during the third quarter of 2012 (in the previous quarter it was 2.16 percent, Table 1 and Chart 5). It stands out that, as in the case of core inflation, this indicator seems to have changed its trend in August 2012, showing a decline from 2.49 to 2.33 percent in September.

**Chart 5**  
**Core Price Index**  
 Annual change in percent



Annual non-core inflation registered an average of 7.90 percent in the third quarter of 2012, implying a significant increase as compared to 5.27 percent in the last quarter (Table 1 and Chart 6). This was the consequence of the performance of some agricultural products, among them eggs, chicken, beef and tomato, which was related to climatic and sanitary conditions that disrupted their production (Chart 7). Regarding this, the price of eggs presented an annual growth rate of 40.01 percent in September 2012, derived from the reduced supply caused by the outbreak of the avian influenza in Jalisco. This produced a significant effect on inflation during this period (Box 2 gives details about the recent evolution and outlook for the egg production and prices in Mexico and shows that this product's price increase contributed 0.27 percentage points to annual headline inflation during September 2012). In the case of chicken, the annual price change at the end of the quarter was 13.99 percent, associated with higher production costs due to the increase in international grain prices driven by the drought in the U.S. In the same period, the annual price change of beef was 16.55 percent, also caused by the drought in the U.S. and some states in Northern Mexico. Finally, the annual growth rate of tomato prices was 36.45 percent in the reference month, a phenomenon related to climatic conditions affecting its production. In sum, considering the transitory nature of the shocks that affected this group's prices, their effect on inflation is estimated to gradually fade during the next quarters.

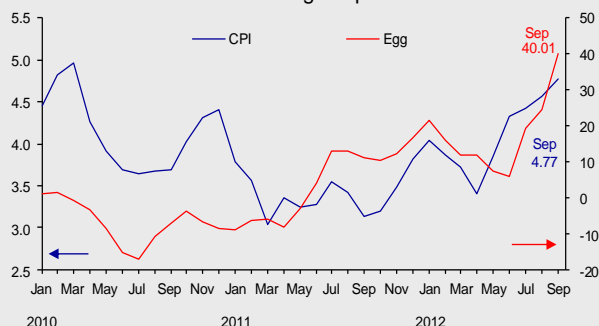
## Box 2 Impact of the Avian Influenza Outbreak on Egg Production and Prices

### Introduction

On June 13, 2012 an outbreak of AH7N3 avian influenza was detected in the municipalities of Acatic and Tepatitlán, in the region of Los Altos of Jalisco. On June 21, the National Health and Food Safety Service (SENASICA) informed the World Organization for Animal Health (OIE) about the virus, which severely disrupted the national egg production, given its high concentration in the referred region. Lower egg supply increased its price and significantly affected headline inflation in the third quarter (Chart 1).

This Box analyzes how this outbreak and the spread of the avian influenza virus affected egg production and prices in Mexico. It is organized in the following manner: first, the main characteristics of the egg industry and the impact of the avian influenza virus on production are presented; second, the measures taken by the authorities and producers in order to avoid the spread of the virus and to limit the damage to the egg production are detailed; third, the impact of the affected egg production on this product's prices and on headline inflation is estimated; and, fourth, some final considerations are given.

**Chart 1**  
Consumer Prices of Eggs and CPI  
Annual change in percent



Source: Banco de México and INEGI.

### 1. Egg Industry and the Avian Influenza Impact

The egg industry in Mexico is characterized by high geographical concentration. According to the Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA), in 2011 Jalisco contributed 50.9 percent to the national production, 44.8 percentage points of which correspond to the region of Los Altos (Table 1).

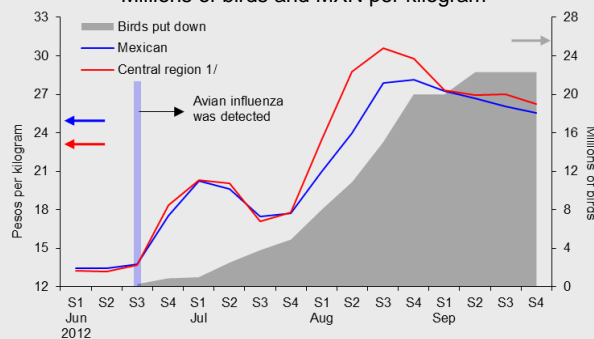
**Table 1**  
National Egg Production: 2011  
Thousands of tons

Region	Production	Participation %
<b>Mexican</b>	<b>2,459</b>	<b>100.00</b>
Jalisco	1,251	50.86
Los Altos	1,102	44.80
Other regions	149	6.06
Other states	1,208	49.14

Source: Food, Agriculture and Fisheries Information Service (SIAP-SAGARPA).

Therefore, after detecting the virus in the referred region, despite the sanitary measures taken to contain its spreading, egg supply was contracting. Particularly, the epidemic expanded from two to eight municipalities, which was reflected in the number of dead or put down birds because of the epidemic, increasing from 270 thousand on June 21 to 22.3 million on September 11 (the latter figure is equivalent to 15.3 percent of the national laying hens flock in 2011, Chart 2).<sup>1</sup> Additionally, egg flow and production was delayed, principally due to two factors: i) poultry farms within the sanitary barrier required a certificate (issued by SENASICA) to be able to send goods outside the area affected by the outbreak; and, ii) the vaccination process of laying hens.

**Chart 2**  
Dead or Put Down Birds and Wholesale Prices of White Egg at the National Level and in the Central Region  
Millions of birds and MXN per kilogram



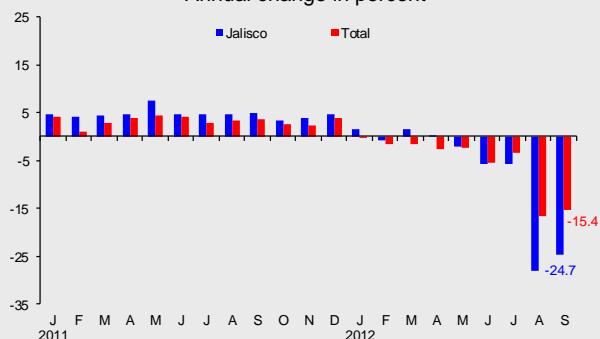
Source: National System of Information and Integration of Markets (SNIIM) of the Ministry of Economy and SENASICA-SAGARPA.

1/Central region is comprised of Distrito Federal, Estado de México, Guanajuato, Hidalgo, Morelos, Puebla, Querétaro and Tlaxcala.

<sup>1</sup> The National Association of Poultry Farmers (*Unión Nacional de Avicultores, UNA*) indicates that in 2011 the national laying hens flock was 145.7 million.

The avian influenza outbreak and its spread resulted in disrupted production of fresh table eggs in the state of Jalisco starting from June 2012. Thus, in September the production observed an annual change of -24.7 percent (Chart 3), shifting from 112.2 thousand tons produced in September 2011 to 84.5 thousand tons in the same period of 2012 (at the national level, the annual change was -15.4 percent).

**Chart 3**  
**Production of Fresh Table Eggs**  
Annual change in percent



Source: SIAP-SAGARPA.

## 2. Measures to Mitigate the Impact of the Avian Influenza

Different measures were taken by authorities and producers to contain the illness and to mitigate its impact. First, sanitary measures aimed at containing and eradicating the illness, among which the following stand out:

- i. Barrier around the affected perimeter to prevent the virus' expansion to other areas.
- ii. Putting down and eliminating infected poultry.
- iii. Sanitary cleaning of infected farms.
- iv. Development and application of vaccine against the disease.

Second, measures aimed at restoring the product supply and, hence, at containing the price increase, among which the following should be pointed out:

- i. The opening of duty free import quotas for 235.4 thousand tons, measure that was being adjusted as the situation developed, going so far as to grant the tariff exemption on egg imports.<sup>2</sup>

<sup>2</sup> On August 14, 2012, the Official Gazette of the Federation (*Diario Oficial de la Federación*) announced the opening of import quotas for

- ii. Customs facilitating conditions for the entrance of imported egg to the country.
- iii. As a temporary measure, the extension up to 125 weeks of the birds' reproductive cycle (as compared to the regular cycle of 110 weeks).<sup>3</sup>
- iv. Financial support to egg producers for poultry repopulation, food for poultry, birds' sheds remodeling, construction of new facilities and biosafety mechanisms (i.e. sanitary barrier, chicken wire, ventilators and floors, principally).

Additionally, some states implemented measures in their particular area:

- i. Animal barriers to restrict or prevent admission of the poultry products from Jalisco.
- ii. Subsidies on egg.

The sanitary measures managed to restrict the disease to the region of the outbreak and prevented its spread to other producing states, although it probably complicated egg distribution in some states of the country. As for the measures to mitigate the shortage of egg and price increases, they had a limited impact due to the nature of the industry.

As regards tariff measures, it should be noted that in 2011, in accordance with the National Association of Poultry Farmers, the total volume of egg exports of the main six exporting countries amounted to 271 thousand tons, representing 0.5 percent of the egg production by the ten main egg producing countries (Charts 4 and 5). This shows that the international trade of fresh egg is limited. Likewise, Mexico does not normally import eggs, reason for which it lacks the cooling infrastructure required to manage the imported good (Chart 6).

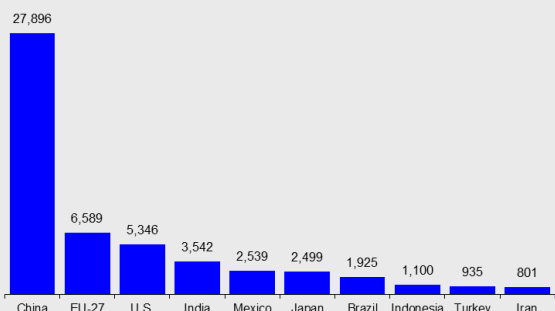
As to the steps aimed at recovering the levels of production before the outbreak, even though they were adequate, their effect will be gradual given the time necessary to repopulate the farms.<sup>4</sup>

211 thousand tons of egg for human consumption and 24.4 thousand tons for industrial use.

<sup>3</sup> A laying hen normally has two production cycles. The first one lasts approximately 68 to 70 weeks, and the second cycle can go as far as 110 production weeks. The decision regarding the extension of the bird's life to two cycles is made by poultry farmers, depending on such factors as the quality of birds, production costs and market conditions.

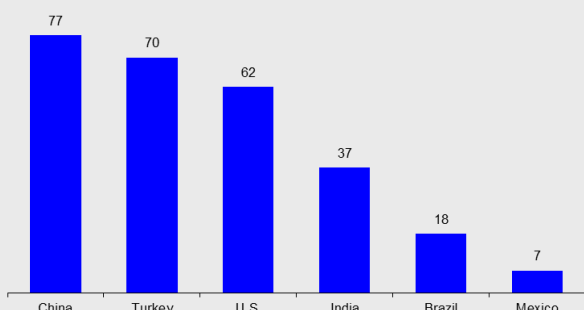
<sup>4</sup> The authorities indicated that this would happen at a rate of 4.5 to 5 million of birds per month. Thus, the replacement of dead or put down birds is expected to conclude in November 2012.

**Chart 4**  
**Main Egg Producing Countries: 2011**  
 Thousands of tons



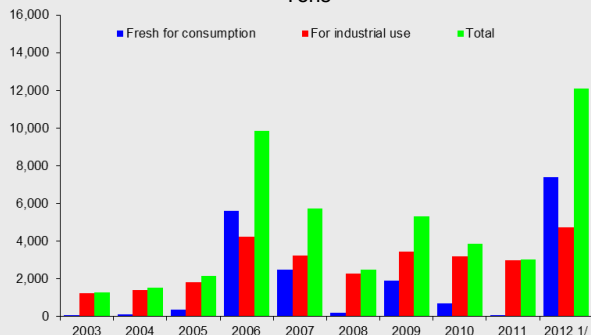
Source: Compendium of Economic Indicators of the Poultry Industry; 2012, UNA.

**Chart 5**  
**Main Egg Exporting Countries: 2011**  
 Thousands of tons



Source: Compendium of Economic Indicators of the Poultry Industry; 2012, UNA.

**Chart 6**  
**Egg Imports**  
 Tons



Source: SE and SAGARPA.  
 1/ January-September. Preliminary figures.

### 3. Impact on Inflation

From the moment of detecting the avian influenza virus in the second fortnight of June 2012, egg prices started

to rise (Charts 2 and 7), which increased the annual change of this good's consumer price from 5.90 percent in June 2012 to 40.01 percent in September of the current year.

Given that the egg's CPI weight is 0.623 percent, its incidence in annual headline inflation shifted from 0.04 to 0.27 percentage points between June and September 2012 (Table 2). The above implies that of the increase of 0.43 points of annual headline inflation in the referred period (since this indicator grew from 4.34 to 4.77 percent), more than half is accounted for by the impact produced by the egg price increase (0.23 points).

**Table 2**  
**Egg: Contribution to the CPI in 2012**  
 Annual change in percent

Item	June	July	August	September
CPI	4.34	4.42	4.57	4.77
Egg	5.90	19.25	24.40	40.01
CPI share	0.04	0.12	0.17	0.27

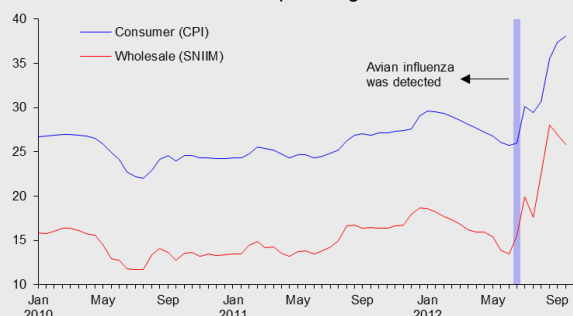
Source: Prepared by Banco de México with data from INEGI.

From the second fortnight of June, prices continuously increased in wholesale markets till the last week of August, period when the highest egg prices in the wholesale market were detected. At the regional level, the impact on prices was greater in the center of the country, which mainly receives egg from the state of Jalisco (Charts 2 and 7). Nevertheless, from September onwards reductions in wholesale prices of this product have been registered (Chart 7). Taking into account the abovesaid and given the positive correlation between wholesale prices and consumer prices, the latter are expected to stabilize shortly and to decrease in the following months.<sup>5</sup>

However, the magnitude of the price reductions will depend on various factors, among which the following stand out: i) the effectiveness of the vaccine (everything points to the fact that it was successful); ii) the speed of poultry repopulation (a new hen requires an average of 20 weeks to start laying eggs); iii) adjustment of the quantity demanded, given price increases; iv) the effectiveness of the measures taken by different government levels and producers; v) the availability of eggs from abroad; and, vi) the performance of international grain prices.

<sup>5</sup> Consumer prices of egg followed with a certain lag the performance of wholesale prices since the outbreak of avian influenza. Nevertheless, prices reported by the National System of Information and Integration of Markets (SNIIM), and those reflected in the CPI stem from different samples, reason for which they cannot be compared directly.

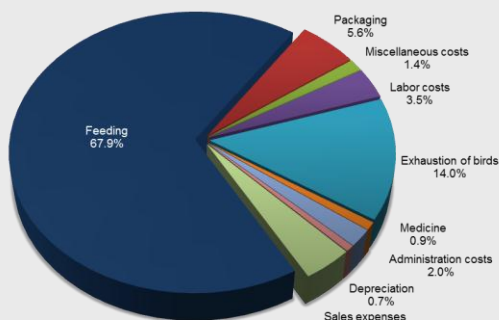
**Chart 7**  
**Egg Prices: Consumer and Wholesale**  
 MXN per kilogram



Source: Banco de México, INEGI and SNIIM-SE.

Regarding the importance of grain prices, it is relevant to emphasize that in line with 2011 data, 67.9 percent of the poultry industry production costs correspond to feeding (mainly composed of soybean meal, yellow corn and sorghum, Chart 8), which makes egg production and prices sensitive to adjustments in international grain prices.

**Chart 8**  
**Egg Production Costs in 2011**



Source: Compendium of Economic Indicators of the Poultry Industry; 2012, UNA.

**4. Final Considerations**

The avian influenza epidemic affected the supply of eggs in Mexico, and, as a consequence, their price and headline inflation. Tariff exemption contributes to limiting upward pressures on this product's prices. However, the referred effect could be limited due to two factors: i) availability of this good's required amount in the international market; and, ii) fulfilling the sanitary requirements to import egg.

In turn, financing to the poultry industry will contribute to reestablishing domestic production and to mitigating the price increase generated by the production disruption.

In sum, the shocks to egg supply due to the referred outbreak are anticipated to be temporary, which implies that a reduction in consumer prices of egg could be observed in the coming months. However, this drop is expected to be gradual, given the time required for farms to conclude the repopulation period.

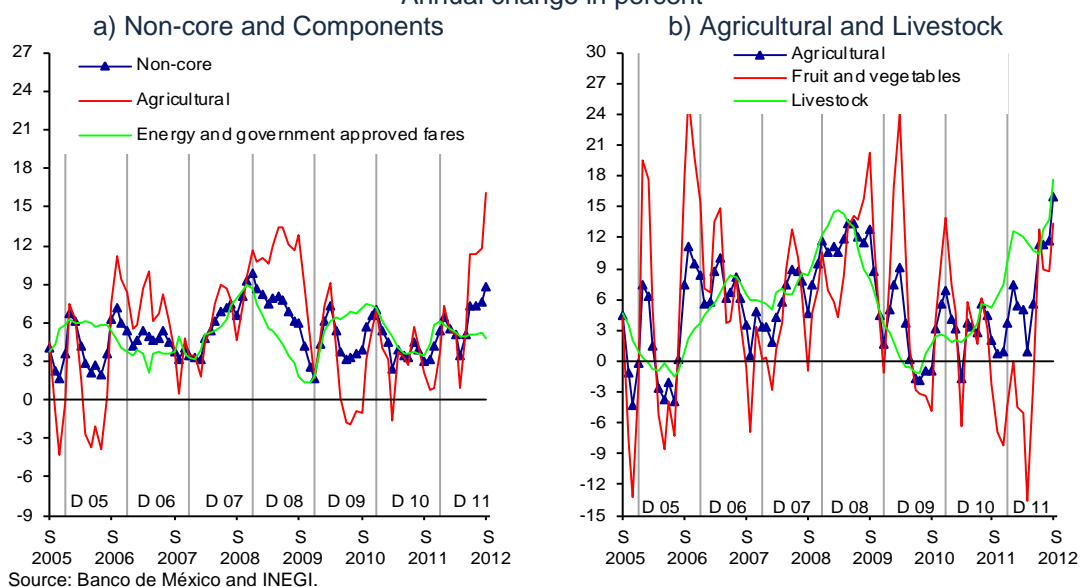
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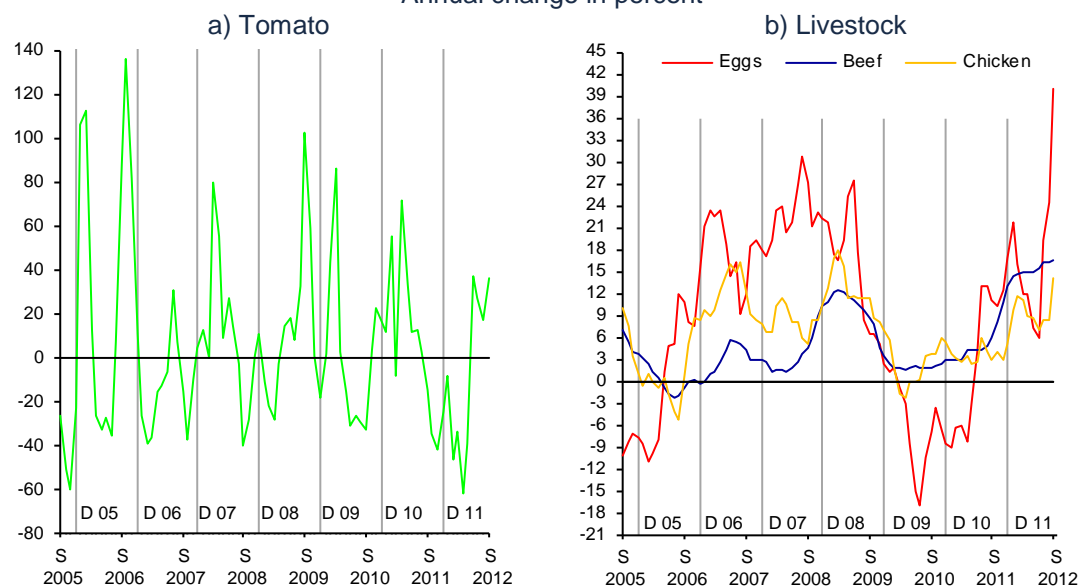
Official Gazette of the Federation: DECREE establishing a tariff-quota on egg imports (August 9, 2012); AGREEMENT notifying the import quota, with an established tariff-quota, of fresh egg for human consumption (August 14, 2012); NOTICE establishing the temporary suspension of NOM-051 (September 4, 2012); DECREE modifying the Tariff of the General Law of the Import and Export Taxes (September 13, 2012).

**Chart 6**  
**Non-core Price Index**  
 Annual change in percent



Source: Banco de México and INEGI.

**Chart 7**  
**Index of Selected Agricultural and Livestock Products**  
 Annual change in percent



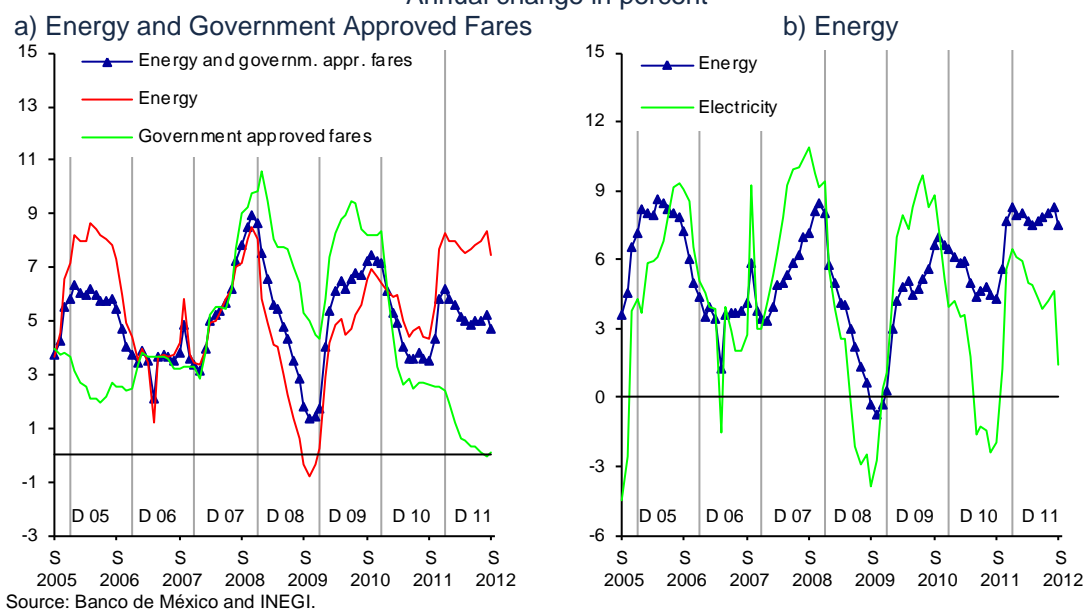
Source: Banco de México and INEGI.

With respect to the other non-core inflation components, the average annual variation of the energy and government approved fares index remained practically unchanged. In the third quarter it was 4.98 percent, while in the previous one it was 4.97 percent. However, at the end of the quarter an important reduction in this indicator's inflation was observed, associated with declines in ordinary electricity fares (Table 1, Chart 8a and Chart 8b). This led to an annual change in the electricity price index of 1.45 percent at the end of the third quarter (Chart 8b).



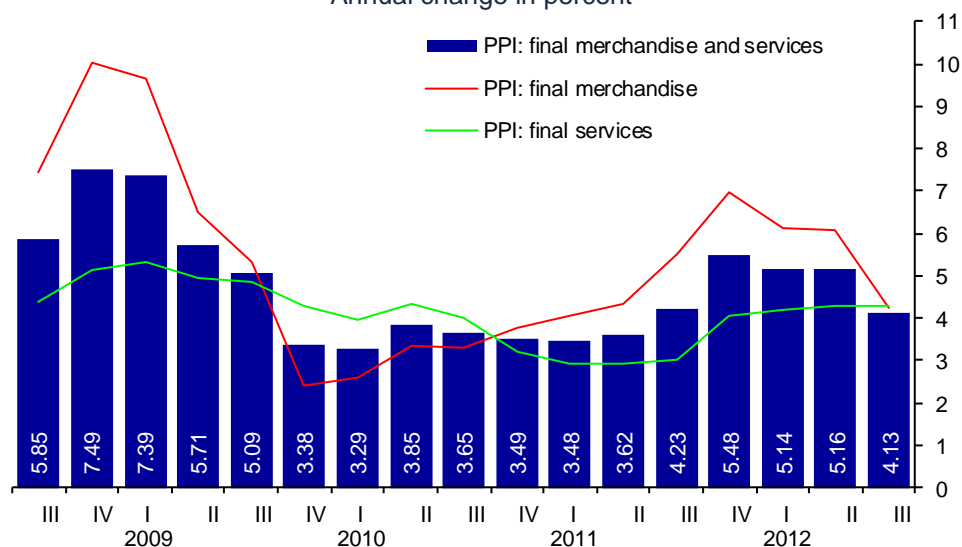
The Producer Price Index (PPI) of finished merchandise and services, excluding crude oil, registered an average annual change of 4.13 percent during the third quarter of 2012, implying a reduction with respect to last quarter's figure, which was 5.16 percent (Chart 9). This was due to the performance of merchandise producer prices, whose average annual change was 4.25 percent during the reference quarter, and 6.07 percent in the previous one. This evolution is mainly explained by the exchange rate appreciation during the analyzed quarter, which affected the export sector. On the other hand, the services producer prices observed a rate of 4.29 percent, similar to the 4.30 percent figure registered in the previous quarter.<sup>1</sup>

**Chart 8**  
**Energy and Government Approved Fares Index**  
 Annual change in percent



<sup>1</sup> The fact that during the reference quarter the average annual change of the headline PPI level, excluding oil, was lower than that of its components (merchandise and services) was the result of the changed weights assigned to them in June 2012. This included the update of the weighting structure of goods and services forming this index. A more detailed explanation of the necessary and sufficient conditions, under which the annual change of a headline index may be above (below) the annual changes of its components, was presented by Banco de México for the case of the CPI in the document “*Implicaciones del Cambio en la Estructura de Ponderación del INPC en el Cálculo por Componentes de su Variación Anual*”, available in Spanish at: <http://www.banxico.org.mx/politica-monetaria-e-inflacion/material-de-referencia/intermedio/inflacion/elaboracion-inpc/%7b548BD9DD-4CFC-84EA-36AD-B3D57ECCDA66%7d.pdf>

**Chart 9**  
**Producer Price Index**  
 Annual change in percent



Source: Banco de México and INEGI.

## 2.2. Wages

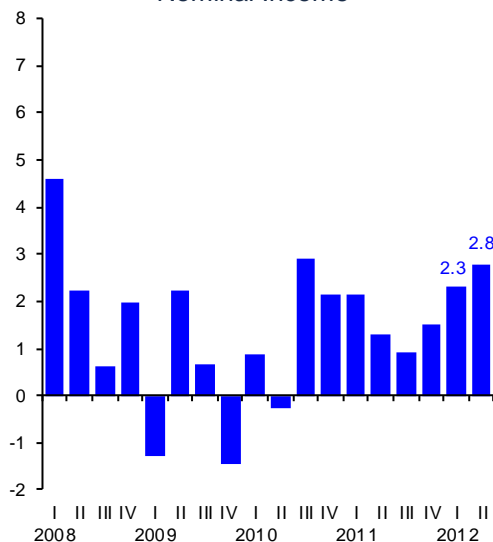
Wage increases generally remained moderate in the third quarter of the year. However, although it was not a generalized phenomenon, some wage negotiations achieved higher increases than those registered in the past. Thus, the annual change of the average nominal income of total workers increased from 2.3 percent in the first quarter of 2012 to 2.8 percent during the second one (Chart 10a). The reference wage of IMSS-insured workers increased by 4.5 percent during the third quarter of this year, while in the previous one it experienced a 4.2 percent increase (Chart 10b). It stands out that the increase in the IMSS reference wage in the manufacturing industry contributed most to this result, since in the reference period it rose by 4.55 percent, as compared to 4.09 percent in the previous quarter, while in the services sector this indicator remained around 4.2 percent (Chart 10c).

On the other hand, the contractual wage negotiated by firms under federal jurisdiction increased by 4.7 percent during the third quarter of 2012, while in the same period last year it rose by 4.8 percent (Chart 10d). However, during October 2012, some firms under federal jurisdiction granted higher wage increases to their workers in relation to the same month last year, with public sector firms standing out.

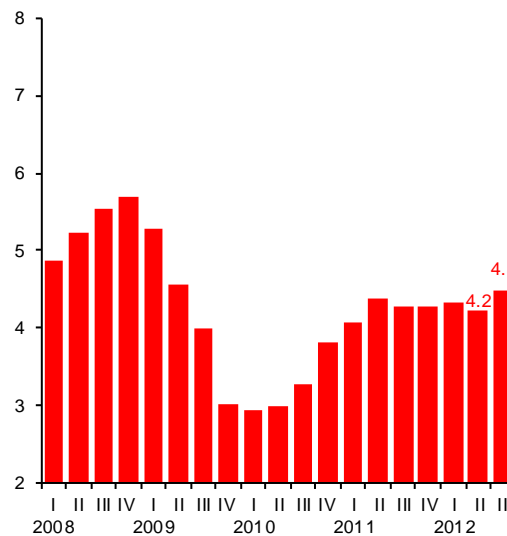
**Chart 10**  
**Wage Indicators**

Annual change in percent

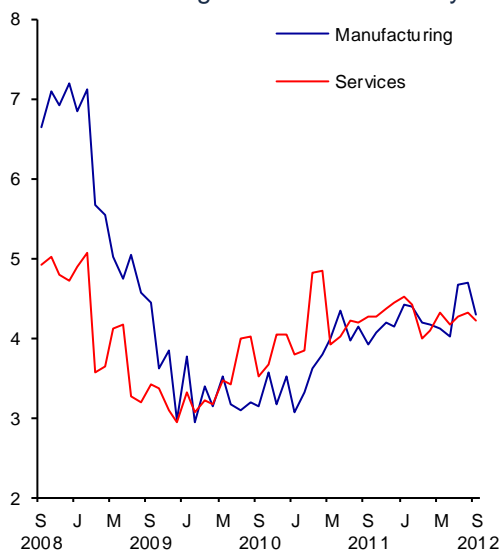
a) Total Economy's Average Nominal Income <sup>1/</sup>



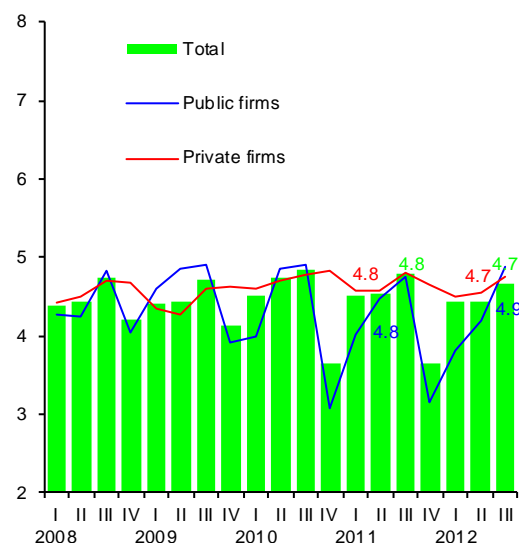
b) IMSS Reference Wage <sup>2/</sup>



c) IMSS Reference Wage: Manufacturing and Service Industry



d) Contractual Wage <sup>3/</sup>



Source: Calculated by Banco de México with data from INEGI, IMSS and STPS.

1/ The average monthly income is calculated based on the hourly wage and the number of hours worked in the given period. The data from 2011 are preliminary and are based on INEGI demographic projections.

2/ During the third quarter of 2012 an average of 15.9 million contributors were registered in the abovementioned institute.

3/ The number of workers in firms under federal jurisdiction that annually report their wage increases to the Secretary of Labor and Social Welfare (*Secretaría del Trabajo y Previsión Social* (STPS)) equals approximately 2 million.

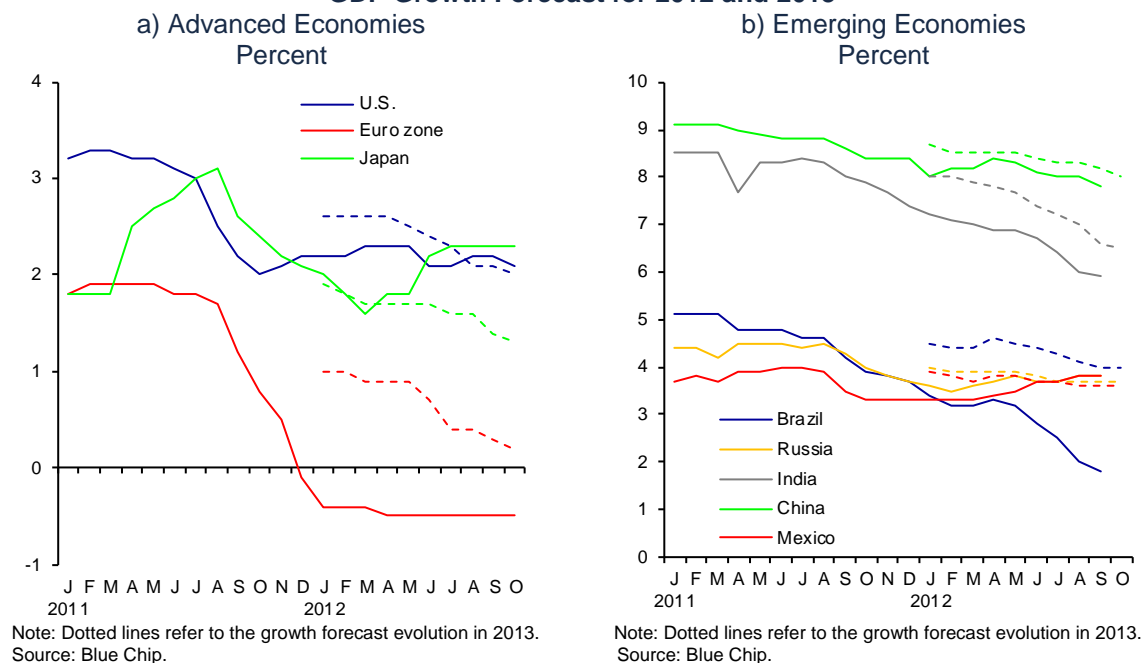
### 3. Economic and Financial Environment

#### 3.1. International Environment

##### 3.1.1. World Economic Activity

Weak performance of the world economic activity persisted during the third quarter of 2012. Besides, growth prospects for this and next year have been further revised downwards for both advanced and emerging economies (Chart 11). Measures taken by financial authorities in advanced economies during the reference quarter led to improved international financial conditions. However, the possibility of future episodes of volatility cannot be ruled out. In this context, downward risks to world economic activity have intensified, particularly derived from the fragile situation of the Euro zone and the uncertainty regarding the magnitude of the fiscal adjustment in the U.S. in 2013.

**Chart 11**  
**GDP Growth Forecast for 2012 and 2013**



In the U.S., economic growth remained moderate during the third quarter of 2012, with mixed signals in demand and supply indicators. GDP expanded 2.0 percent at an annualized quarterly rate during the period, after having increased 1.3 percent in the second quarter and 2.0 percent in the first one.<sup>2</sup> The growth pace of industrial production and, in particular, of manufacturing, remained weak, reflecting the lower impulse stemming from both external and domestic demand (Chart 12a). On the other hand, although employment growth showed signs of recovery, it could not consolidate. An average of 173 thousand jobs was created per month during the period July - October, surpassing the 67 thousand jobs registered in the second quarter, but still well below the 226 thousand jobs created

<sup>2</sup> According to the Advance Report of Bureau of Economic Analysis (BEA).

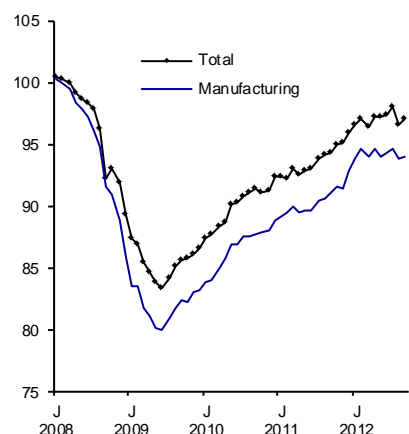
during the first quarter. Thus, the employment to population ratio continued close to historical minimum levels reached since late 2009. The unemployment rate decreased from 8.3 percent in July to 7.9 percent in October (Chart 12b).

Aggregate demand components showed a differentiated behavior. On the one hand, the growth of expenditure on private consumption recovered from an annual quarterly rate of 1.5 percent in the second quarter of the year to 2.0 percent in the third one, fundamentally due to a reduction in the savings rate, which dropped from 4.0 percent of personal disposable income to 3.7 percent in the same period (Chart 12c). However, the rebound of household spending does not seem to be sustainable, given the persistent weakness of personal disposable income, the ongoing deleveraging process of households and still low confidence levels. Greater dynamism in home sales and housing starts also allowed an increase in the expansion rate of residential construction from 8.5 percent at an annualized quarterly rate to 14.4 percent in the reference period, although it still persists at low levels as compared to other recovery periods. Additionally, public spending rose for the first time since the second quarter of 2010, shifting from a drop of 0.7 percent at an annualized quarterly rate in the second quarter to a positive rate of 3.7 percent in the third one, explaining 0.7 percentage points of the GDP growth in this period.

**Chart 12**  
**U.S. Economic Activity**  
b) Unemployment Rate and Employment to Population Ratio Percent, s. a.

a) Industrial and Manufacturing Production Index 2007=100, s. a.

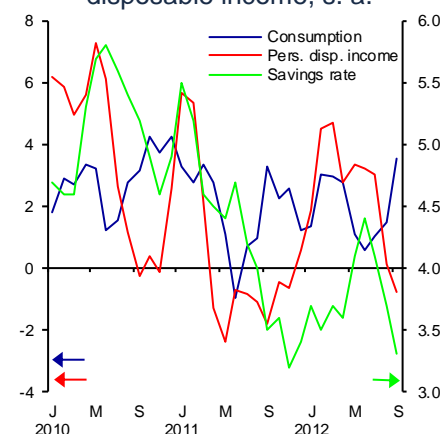
c) Private Consumption Spending, Real Personal Disposable Income and Savings Rate  
Annualized change over 3 months in percent and in percent of personal disposable income, s. a.



s. a. / Seasonally adjusted figures.  
Source: U.S. Federal Reserve.



s. a. / Seasonally adjusted figures.  
Source: BLS.



s. a. / Seasonally adjusted figures.  
Source: BEA.

Non-residential investment contracted during the third quarter. Non-residential structures declined 4.4 percent, after having grown 0.6 percent in the second quarter, while investment in equipment and software stagnated, after having increased 4.8 percent in the previous quarter. This happened despite firms' solid financial position and generally favorable credit conditions. Net exports also contributed negatively to GDP growth by 0.2 percentage points, compared to a positive contribution of 0.2 percentage points in the second quarter of the year, reflecting less growth of global demand.

Although the announcement of further monetary stimulus measures by the U.S. Federal Reserve contributed to an improvement in financial markets' confidence regarding U.S. growth prospects, the economy's recovery will largely depend on the magnitude of the fiscal adjustment, which will take place next year, and on the evolution of the crisis in Europe. Regarding the referred fiscal adjustment, by maintaining the present legislation, the degree of the deficit contraction would lead to a severe reduction in economic activity and employment creation. Additionally, uncertainty prevails about the discussion regarding the expansion of the government debt ceiling and the measures to maintain fiscal sustainability in the medium term.

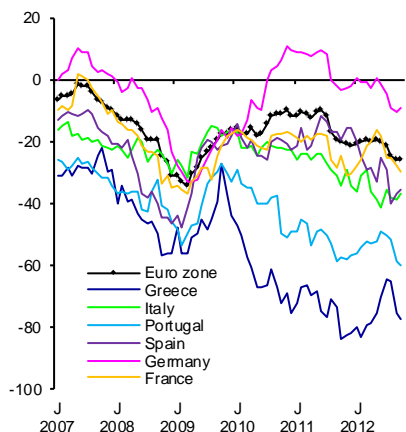
In the Euro zone, available indicators suggest that economic activity contracted further during the third quarter of 2012, due to the processes of fiscal and credit adjustment resulting from the imbalances existing in various countries of the region. In this context, consumer confidence further declined (Chart 13a). The contraction of activity contributed, in turn, to a slow progress in correcting the internal imbalances. Prospective indicators in general continue to point towards further economic contraction in the fourth quarter of the year (Chart 13b).

Bank credit to the private sector in the Euro zone maintained a weak performance, affected by both demand and supply factors. On the demand side, lower dynamism of credit reflects the persistence of uncertainty regarding the growth outlook, greater risk aversion in face of sovereign debt problems in some countries of the region and households' and firms' deleveraging process. On the supply side, banks' limited access conditions to capital markets in some economies in the Euro zone contributed to worsening the downward trend of credit (Chart 13c).

In emerging economies, in general, growth slowed down during the third quarter, as a result of weak demand from advanced economies and, in some cases, also of weak domestic demand. Thus, the industrial production growth rate in most economies continued moderating in the reference period (Chart 14a). The weakness of economic activity also translated into less dynamic retail sales in some emerging economies (Chart 14b).

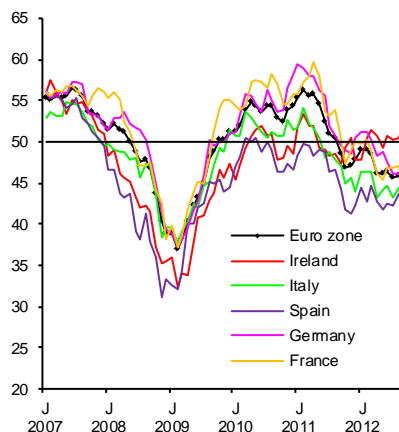
**Chart 13**  
**Euro Zone Economic Indicators**

a) Consumer Confidence  
Diffusion index, s. a.



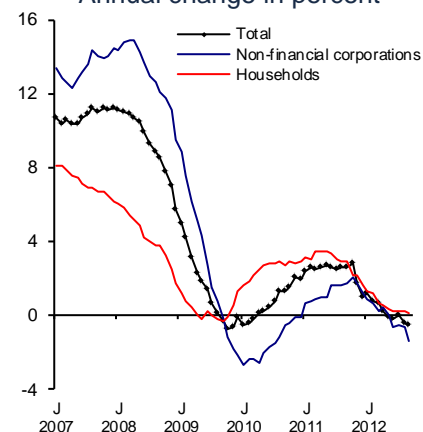
s. a. / Seasonally adjusted figures.  
Source: European Commission.

b) Purchasing Managers' Index  
Diffusion index, s. a.



Note: Refers to the total indicators of activity.  
s. a. / Seasonally adjusted figures.  
Source: Markit.

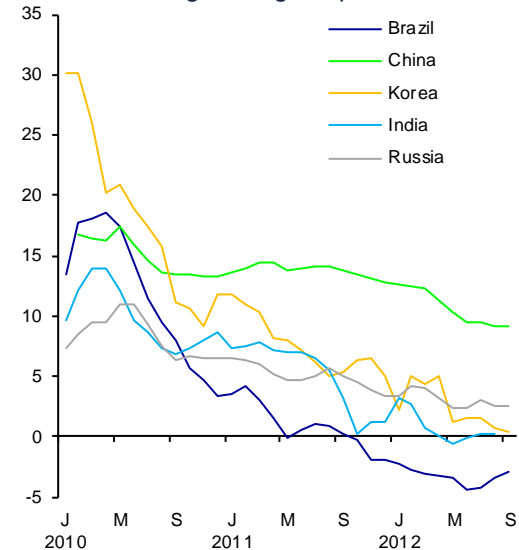
c) Financial Institutions' Credit to the  
Non-financial Private Sector  
Annual change in percent



Source: ECB.

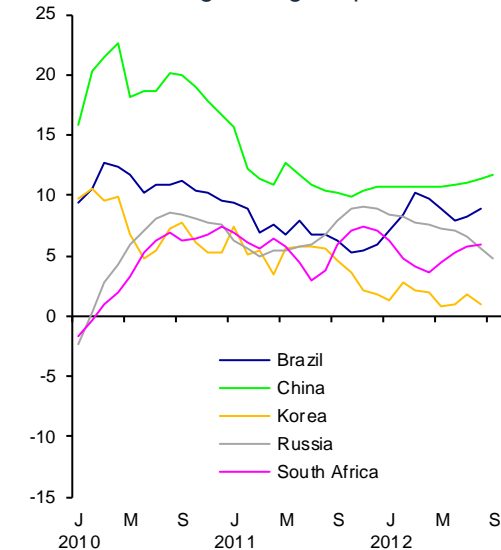
**Chart 14**  
**Emerging Economies Economic Activity**

a) Industrial Production  
Annual change of the 3-month  
moving average in percent



Source: Haver Analytics.

b) Retail Sales Volume  
Annual change of the 3-month  
moving average in percent



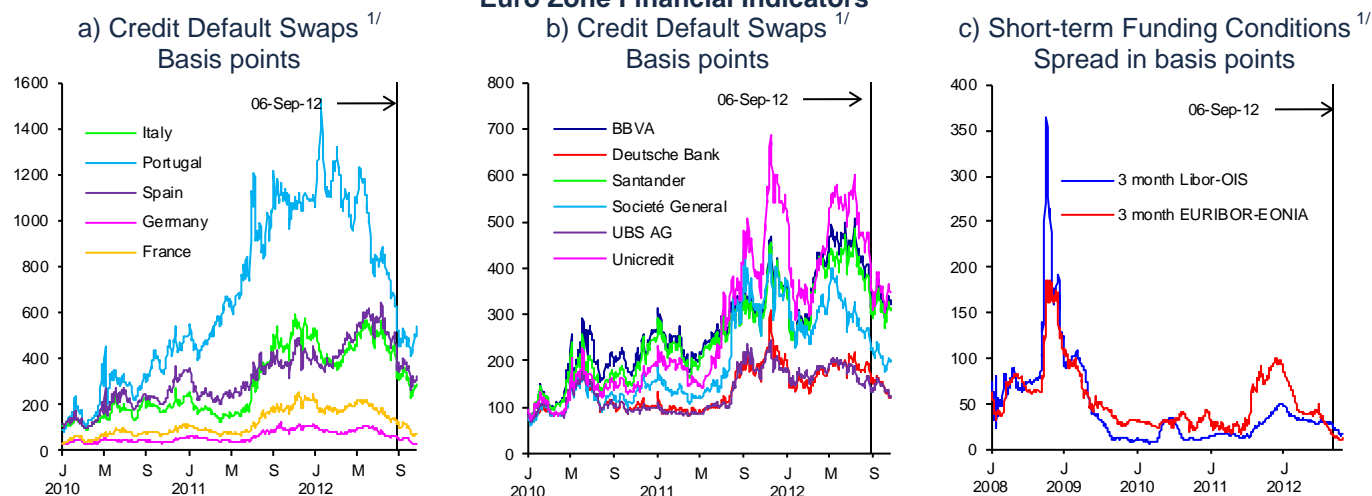
Source: Haver Analytics.

### 3.1.2. International Financial Markets

International financial markets improved during the third quarter, after the announcement of a new program of sovereign bond purchases by the European Central Bank (ECB). The program aims at reestablishing the functioning of the monetary policy transmission mechanism, which has been affected by severe

distortions in the sovereign debt and interbank credit markets, given investors' doubts regarding the sustainability of the Euro zone and the soundness of different banking institutions. The measures taken by the ECB, together with those announced from June onwards by other European authorities, aimed at strengthening financial and fiscal integration and the effectiveness of regional financial mechanisms, have contributed to reducing the difficulties of refinancing the sovereign and bank debt in some countries of the Euro zone, while short-term funding conditions generally improved (Chart 15).

**Chart 15**  
**Euro Zone Financial Indicators**



1/ Refers to 5-year CDS of sovereign bonds. On September 6, 2012, the ECB announced its new sovereign bond purchase program.  
Source: Bloomberg.

1/ Refers to 5 year CDS of bank bonds. On September 6, 2012, the ECB announced its new sovereign bond purchase program.  
Source: Bloomberg.

1/ On September 6, 2012, the ECB announced its new sovereign bond purchase program.  
Source: Bloomberg.

The ECB reported on the characteristics of its new program of sovereign bond purchases in the secondary market (Outright Monetary Transactions, OMTs). The program contemplates the discretionary purchase of between one to three year sovereign bonds in the secondary market and there are no ex-ante limits regarding the magnitude of these operations. The intervention can only be carried out, once financial assistance by the European Stability Mechanism (ESM) is applied for and approved, and the applying country accepts to be subject to an economic adjustment program.<sup>3</sup> The ECB is committed to receiving the same treatment as other investors for bonds acquired by this program.<sup>4</sup>

These and other actions adopted by the ECB were aimed at eliminating the negative feedback loop between banks' vulnerability and the problems of sustainability of sovereign debt, and advancing towards a better financial and fiscal integration in the Euro zone. Among the measures stand out the following:

- i. Some Euro zone economies advanced with their fiscal consolidation and the capitalization of their banking systems. In particular, the Spanish government ratified its fiscal deficit targets of 6.3 percent of GDP for 2012,

<sup>3</sup> The ESM came into force on October 8, 2012 with resources of EUR 700 billion, after the ratification by the 17 Euro zone member countries.

<sup>4</sup> The ECB also adopted additional measures aimed at ensuring the availability of collateral in order to carry out Eurosystem refinancing operations.



4.5 percent of GDP for 2013 and 2.8 percent of GDP for 2014, and announced new austerity measures amounting to EUR 40 billion (around 4 percent of GDP).<sup>5,6</sup>

- ii. Further, in late September, the results of the diagnostic exercise regarding possible capital needs of Spanish financial institutions by means of individual stress tests were published. This was in line with the Memorandum of Understanding among Spanish and European authorities approved on July 20.<sup>7</sup> This exercise represents an extension of that realized by independent consulting agents, whose results were published in late June.<sup>8</sup>
- iii. On the other hand, the European Banking Authority (EBA) published in early October the final report on the recapitalization exercise of European banks, derived from the recommendation of this institution at the end of last year in order to increase capitalization levels.<sup>9</sup>
- iv. The European Commission announced in mid-September its proposal of the Single Supervisory Mechanism (SSM) under the authority of the ECB, derived from the agreements in late June by European authorities. The European Commission also intends the approval of a single resolution and rescue mechanism and the harmonization of national deposit guarantee systems. These proposals will be extensively discussed in the next months.<sup>10</sup>

The measures taken by the ECB and other European authorities have been important to reduce pressures in financial markets. In particular, the establishment of a significant financial backup for the Euro zone governments reduced the probability of a catastrophic event. However, the effectiveness of the OMTs will depend on the governments applying for ESM support and the fulfillment of the

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<sup>5</sup> Among the announced austerity measures are a reduction in the spending of public ministries and the freezing of public sector salaries for the third consecutive year. The authorities also decided to impel new structural reforms, among which stands out the creation of an independent fiscal authority in order to ensure the control and transparency of public spending and income.

<sup>6</sup> On the other hand, in mid-October the International Monetary Fund (IMF), the ECB and European authorities highlighted the progress made to achieve a new agreement about the adjustment program in Greece.

<sup>7</sup> The results of this individual evaluation of 14 Spanish bank groups estimated the recapitalization needs of the banking system at EUR 24 billion under a basis scenario. This scenario considers the accomplishment of a Tier 1 capital ratio of 9 percent and an accumulated drop in real GDP of 1.7 percent until 2014. On the other hand, in a scenario of increased stress, where a Tier 1 capital ratio of 6 percent and an accumulated GDP drop of 6.5 percent until 2014 is assumed, the recapitalization needs exceed EUR 57 billion.

<sup>8</sup> Despite these measures, the rating agency Standard & Poor's (S&P) cut Spain's long-term sovereign credit rating from BBB+ to BBB- and the rating for short-term bonds from A-2 to A-3. The long-term rating outlook is negative. Apart from this measure, the credit rating of main Spanish banks was also reduced.

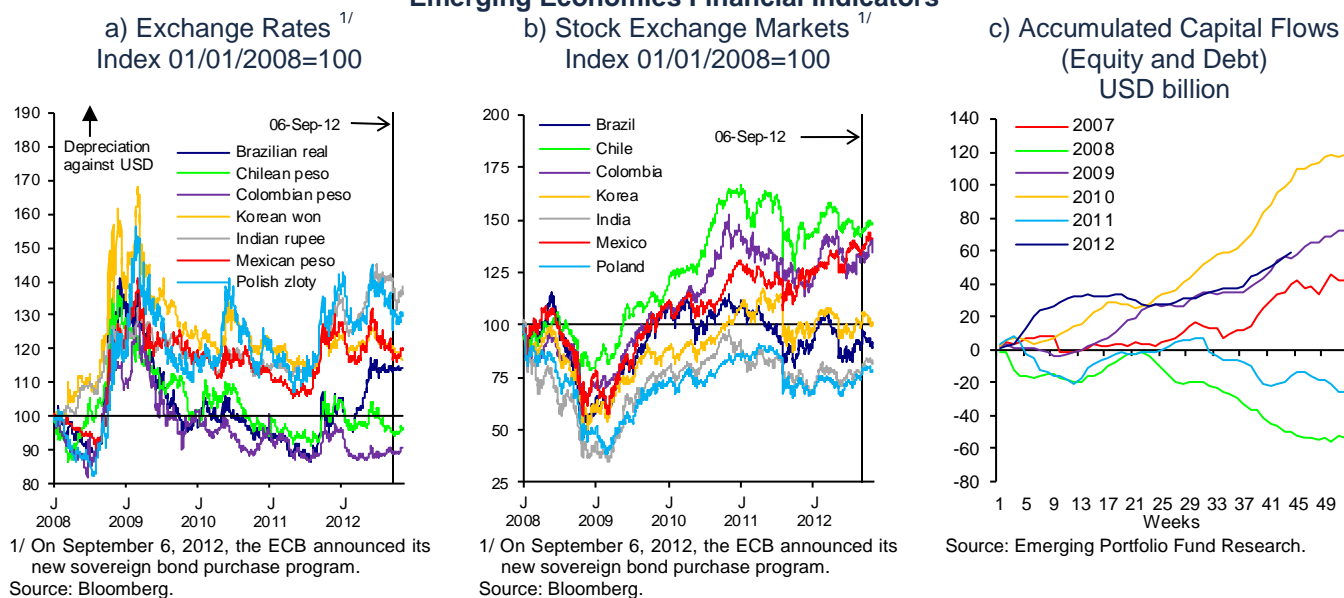
<sup>9</sup> The EBA report shows that the exercise led to a significant strengthening of banks' capital positions by more than EUR 200 billion. In particular, 27 banks, identified in the stress tests in 2011, with an insufficient Tier 1 capital ratio, strengthened their capital by around EUR 116 billion. Thus, most European banks increased their Tier 1 capital ratio above 9 percent.

<sup>10</sup> The European Council in its meeting on October 18 and 19 established as a target to reach an agreement about the legislative SSM framework until January 1, 2013. It was also determined to discuss a scheduled working plan regarding the other aspects of the financial integration strategy in this year's December meeting.

agreed conditions. These measures should be complemented by specific advances towards a financial union and better fiscal integration in the region.<sup>11</sup>

The improvement in international financial markets, after the implementation of diverse stimulus measures in some advanced countries, was also perceived in emerging economies. This translated into a moderate appreciation of most of their currencies (Chart 16a), as well as an improvement in these countries' stock markets (Chart 16b), driven by the rebound of capital flows towards these emerging markets, although at a slower pace than that observed at the beginning of the year (Chart 16c).

**Chart 16**  
**Emerging Economies Financial Indicators**



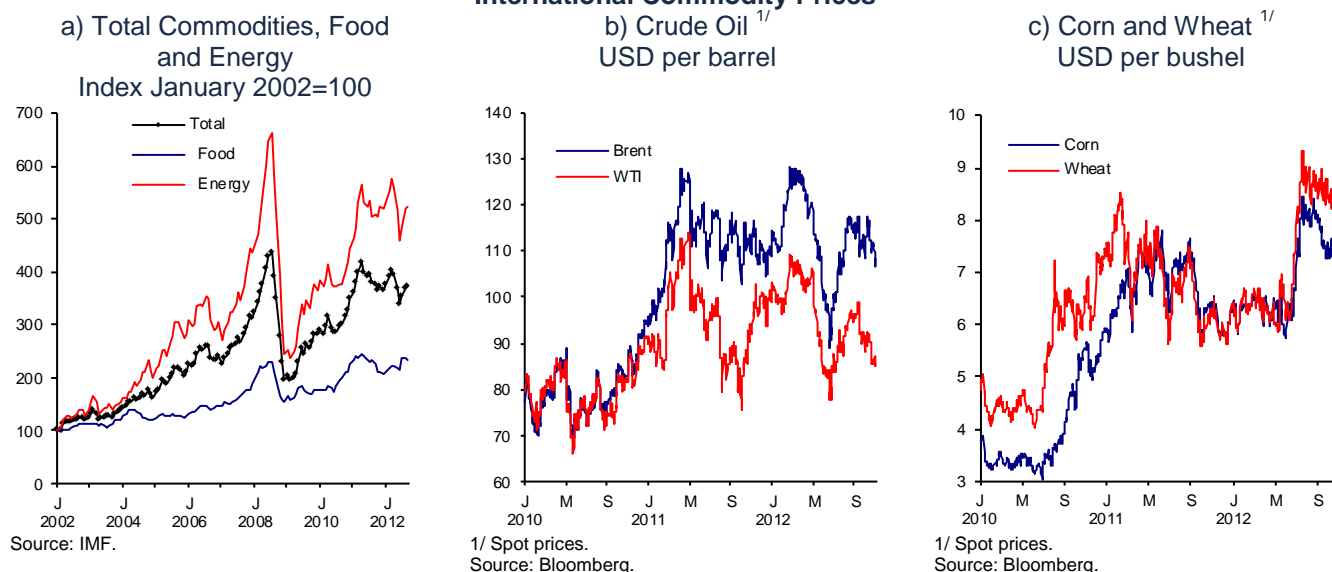
### 3.1.3. Commodity Prices

International commodity prices increased during the third quarter of the year, mainly due to supply factors. However, these factors have started vanishing, which, together with the deterioration of global growth prospects, points to lower commodity price levels in the future, without prejudice of the volatility characterizing these series in the short run (Chart 17a). Oil prices registered an increase, mainly due to the decline in the supply of crude oil from the North Sea and the reductions in exports from Iran. The price of Brent crude oil rose from USD 97.6 per barrel at the end of second quarter to USD 117.6 per barrel in mid-September, falling again to USD 113.3 per barrel at the end of the third quarter. It should be noted that during the last weeks crude oil prices experienced volatility, in a context where their futures point to slightly lower levels in the next year (Chart 17b).

<sup>11</sup> On October 12, the president of the European Council expressed the need to explore additional measures to strengthen the economic governance through the gradual development of a budget capacity of the European Union and the emission of some short-term sovereign financing instruments with limited and conditional character.

Grain prices increased during the third quarter of 2012, particularly corn and wheat, due to drought problems that affected diverse producer regions. The price of wheat rose from USD 7.42 per bushel at the end of the second quarter to USD 9.32 per bushel in the third week of July, and decreased to USD 8.78 per bushel at the end of the third quarter. In the case of corn, its price grew from USD 6.66 per bushel at the end of the second quarter to USD 8.44 per bushel in the third week of July, later falling to USD 7.28 per bushel at the end of the third quarter. In this context, futures suggest lower levels for international grain prices in the next quarters, partly due to the good progress in the U.S. harvests (Chart 17c).

**Chart 17**  
**International Commodity Prices**



### 3.1.4. World Inflation Trends

World inflation rose during the third quarter of 2012 in response to transitory supply shocks. However, weak growth of world economic activity and the prospect of more stable commodity prices led to persistently stable inflation expectations for 2013 in most countries, anticipating inflation to be lower than in 2011 and 2012. This favored an additional monetary policy easing in several advanced and emerging economies during the quarter. Besides, many economies from both groups are anticipated to further ease their policy stances in the next months.

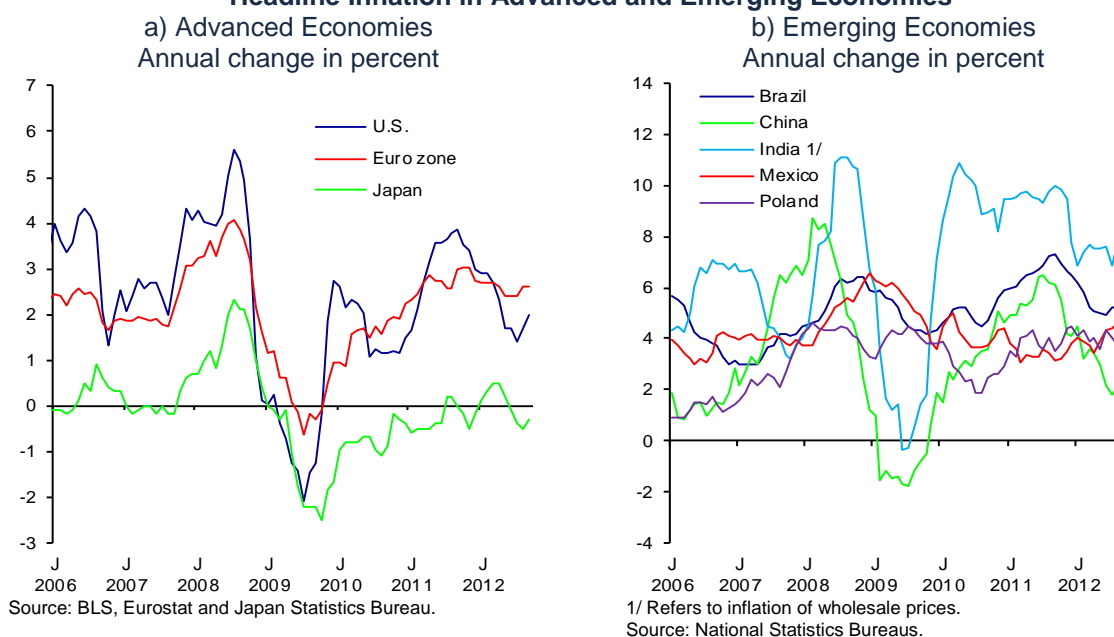
In the U.S., annual headline inflation grew from 1.7 percent in June to 2.0 percent in September, fundamentally due to the increase in energy prices (Chart 18a). In turn, core inflation declined from 2.2 percent in June to 2.0 percent in September, affected by the slack utilization of productive factors prevailing in that economy. In this environment, the U.S. Federal Reserve decided in its monetary policy meeting in September to maintain unchanged its target range for its federal fund rate of 0 to 0.25 percent during the quarter and to extend at least until mid-2015 the period of maintaining the policy rate at exceptionally low levels, emphasizing that, even when the economy's recovery strengthens, it expects the accommodative monetary policy stance to prevail for a considerable time period. It also announced its intention to expand the monetary policy stimulus through a monthly purchase of mortgage-backed securities of USD 40 billion. The U.S. Federal Reserve also informed that, if labor market prospects did not improve

substantially, it would continue buying mortgage-backed securities and additional assets and employing other policies insofar as it is considered appropriate until reaching its target. These measures were ratified during its October meeting.

In the Euro zone, headline inflation increased from 2.4 percent in June to 2.6 percent in September, reflecting the effects of increased taxes and energy prices.<sup>12</sup> The slowdown of the region's activity contributed to core inflation slightly decreasing from 1.6 percent in June to 1.5 percent in September, its lowest level since the beginning of the year. In this context, in its October meeting, the ECB maintained its policy rates unchanged for the second consecutive time, after having them reduced by 25 basis points in July, and, as mentioned, announced additional stimulus measures.

In the case of most emerging economies, inflation rose during the third quarter, reflecting higher energy and food prices. However, in light of the weakening economic activity outlook and the expectation that inflation would resume a downward trajectory in the next months, some of these economies relaxed their monetary stances, which, as mentioned, could even intensify in the next months. Thus, annual inflation in Brazil increased from 4.9 percent in June to 5.3 percent in September (Chart 18b). Nonetheless, and given the slowdown of economic activity, the Central Bank of Brazil reduced its reference rate by 50 basis points in July and August and 25 basis points in October, placing it at 7.25 percent. In the case of China, annual consumer inflation fell from 2.2 percent in June to 1.9 percent in September. In this context, China's Central Bank reduced its lending rate in July by 31 basis points, placing it at 6.0 percent, and maintaining this level during the rest of the quarter.

**Chart 18**  
**Headline Inflation in Advanced and Emerging Economies**



<sup>12</sup> In particular, the increase in the Value Added Tax that came into force in Spain in September 2012 (in general, from 18 to 21 percent) and the increase in the same tax in Italy in September 2011 (from 20 to 21 percent).

### 3.2. Development of the Mexican Economy

#### 3.2.1. Economic Activity

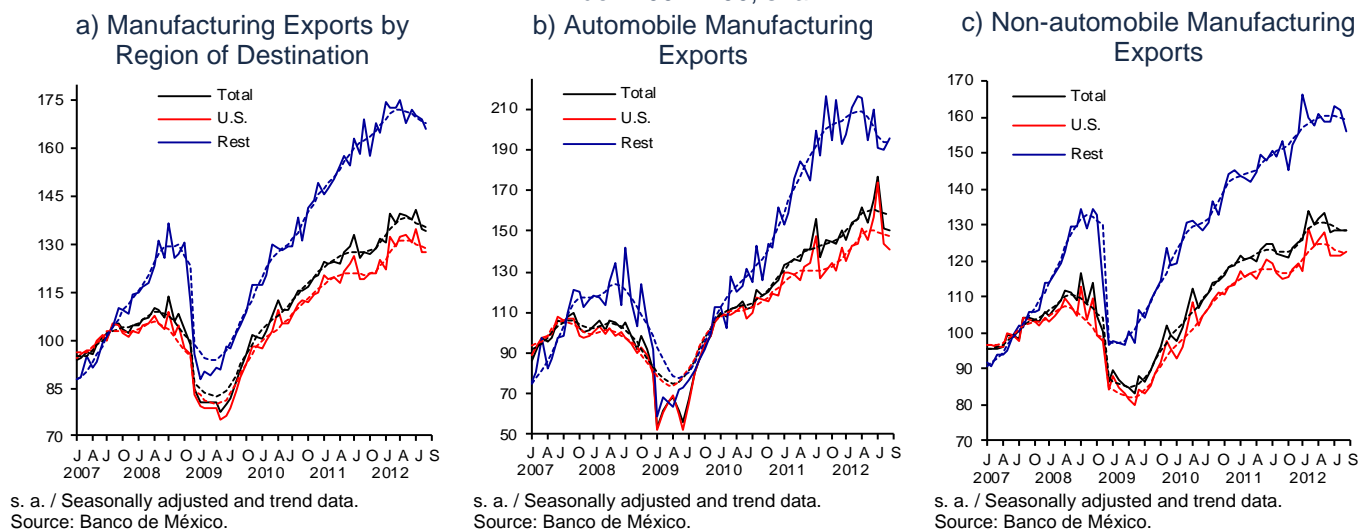
During the third quarter of 2012, productive activity maintained a positive trend, although the slower growth of the world economy started to affect external demand as well as certain components and determinants of domestic demand in a more evident way, which led to the economy's deceleration as compared to the expansion observed in previous quarters.

Particularly, manufacturing exports diminished their growth pace, due to a slowdown of non-automobile sales to the U.S. and to reduced sales of automobile products to countries other than the U.S. (Chart 19). Analyzing more in depth the lower U.S. demand, it should be pointed out that, although U.S. non-oil imports from Mexico have not registered a downward trend in recent months, this is mainly because they were affected by the dynamism in Mexican automobile exports to the U.S. (Chart 20a and Chart 20b). Indeed, if automobile goods are excluded, it is evident that both total non-oil non-automobile U.S. imports and those from Mexico have been registering a negative trend since the end of the first quarter of 2012 (Chart 20c).

Regarding domestic spending, recent indicators suggest that it maintained its positive trend, even though some of the determinants of consumption, as well as investment, seemed to have reduced their expansion rate. In particular:

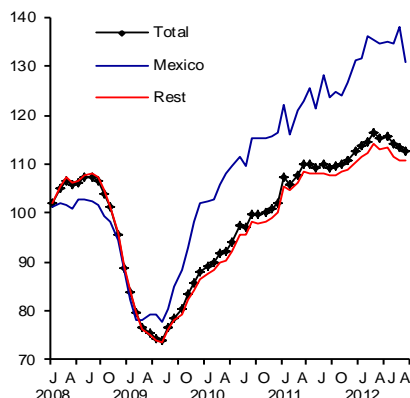
- i. Recent data indicate that private consumption exhibited a growing trend. Indeed, both ANTAD sales and commercial establishments' retail sales increased, while, after a contraction at the beginning of the year, a rebound in wholesale sales was observed (Chart 21).

**Chart 19**  
**Indicators of Manufacturing Exports**  
 Index 2007=100, s. a.



**Chart 20**  
**U.S. Imports: Total, from Mexico and the Rest of the World <sup>1/</sup>**  
 Index 2007=100, s. a.

a) Non-oil Imports

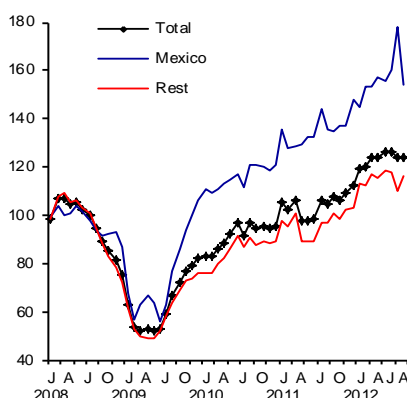


1/ 2-month moving average except from July 2010 onwards.

s. a. / Seasonally adjusted data.

Source: Prepared by Banco de México with data from the U.S. Department of Commerce.

b) Automobile Imports

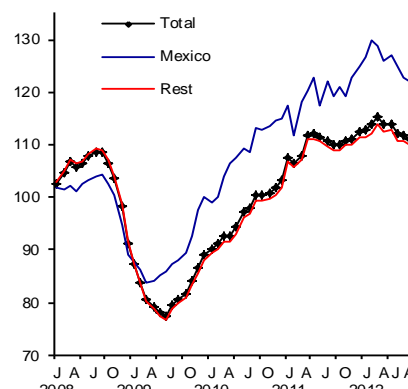


1/ 2-month moving average except from July 2010 onwards.

s. a. / Seasonally adjusted data.

Source: Prepared by Banco de México with data from the U.S. Department of Commerce.

c) Non-oil and Non-automobile Imports



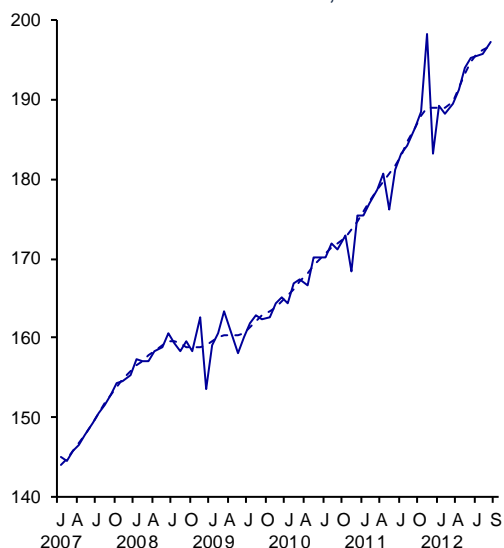
1/ 2-month moving average except from July 2010 onwards.

s. a. / Seasonally adjusted data.

Source: Prepared by Banco de México with data from the U.S. Department of Commerce.

**Chart 21**  
**Consumption Indicators**

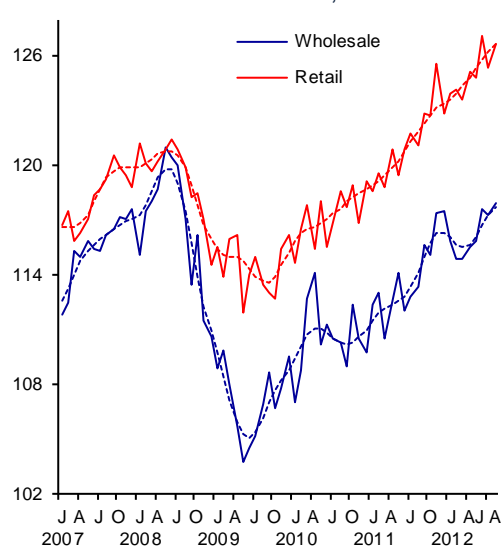
a) Total ANTAD Sales  
 Index 2003=100, s. a.



s. a. / Seasonally adjusted and trend data.

Source: Prepared by Banco de México with ANTAD data.

b) Commercial Establishments' Sales  
 Index 2003=100, s. a.



s. a. / Seasonally adjusted and trend data.

Source: Monthly Survey of Commercial Establishments (*Encuesta Mensual sobre Establecimientos Comerciales*), INEGI.

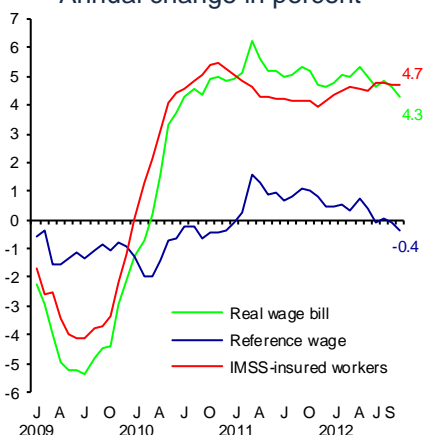
ii. In this context, the expansion of consumption was a result of the favorable performance of its most important determinants, as is the case of the wage bill (Chart 22a) and consumer credit. The latter, although it continued growing at high rates, registered a slowdown in some of its components, as detailed below (see Section 3.2.2). However, other determinants, such as workers' remittances and the consumer

confidence index, performed less favorably during the analyzed quarter (Chart 22b and Chart 22c).

- iii. Gross fixed investment grew less in the analyzed period, as compared to the previous quarters. Particularly, lower dynamism of investment in imported machinery and equipment stood out (Chart 23a and Chart 23b), which could partially reflect relatively low levels of the producer confidence index in relation to those at the beginning of 2011 (Chart 23c).

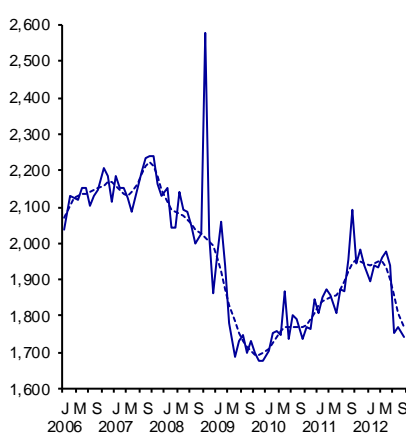
**Chart 22**  
**Consumption Determinants**

a) Real Wage Bill of IMSS-insured Workers  
Annual change in percent



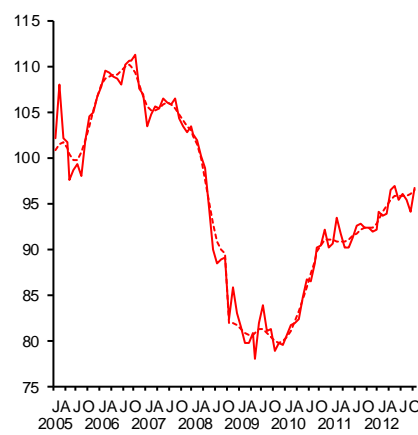
Source: Prepared by Banco de México with data from IMSS.

b) Workers' Remittances  
USD million, s. a.



s. a. / Seasonally adjusted and trend data.  
Source: Banco de México.

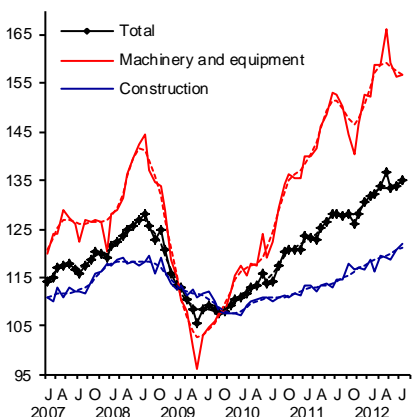
c) Consumer Confidence Index (CCI)  
Index Jan 2003=100, s. a.



s. a. / Seasonally adjusted and trend data.  
Source: National Consumer Confidence Survey (Encuesta Nacional sobre la Confianza del Consumidor), INEGI and Banco de México.

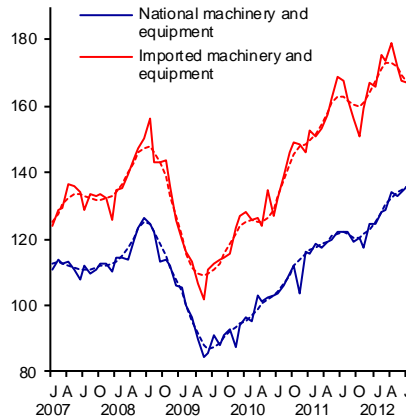
**Chart 23**  
**Indicators of Investment and Producer Confidence**

a) Investment and its Components  
Index 2005=100, s. a.



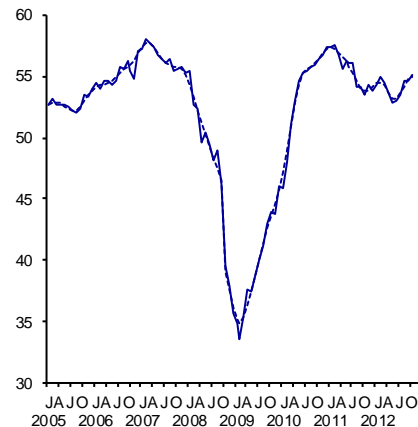
s. a. / Seasonally adjusted and trend data.  
Source: Prepared by Banco de México with data from Mexico's System of National Accounts, INEGI.

b) National and Imported Machinery and Equipment  
Index 2005=100, s. a.



s. a. / Seasonally adjusted and trend data.  
Source: Prepared by Banco de México with data from Mexico's System of National Accounts, INEGI.

c) Producer Confidence Index (PCI)  
50 point reference, s. a.



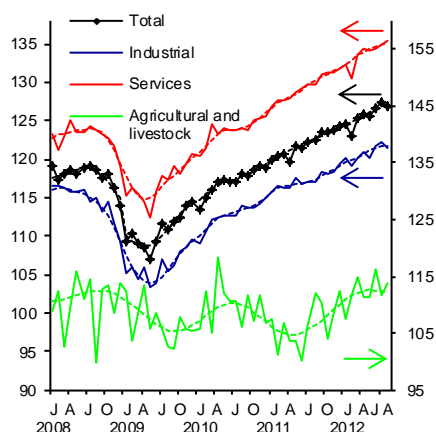
s. a. / Seasonally adjusted and trend data.  
Source: Monthly Survey on Business Opinion (Encuesta Mensual de Opinión Empresarial), INEGI.

The described performance of external and domestic demand translated into a growing trend of economic activity, although with an expansion slightly lower than that of the previous quarter (Chart 24a). Particularly, manufacturing industry kept presenting a positive evolution in the analyzed quarter, despite an incipient loss of dynamism registered in the automobile sector (Chart 24b and Chart 24c). However, reduced dynamism is most clearly perceived in the rest of manufacturing areas.

The lower growth rate of industrial activity, due to its close link to external demand, could be spreading to the services sector. Indeed, in line with lower export dynamism, in the third quarter of 2012 those services more related to external demand, such as commerce and transport, mail and warehousing services, are expected to have presented a slowdown in their expansion. In turn, those services more associated with domestic demand are anticipated to have decelerated less than services more related to external demand.

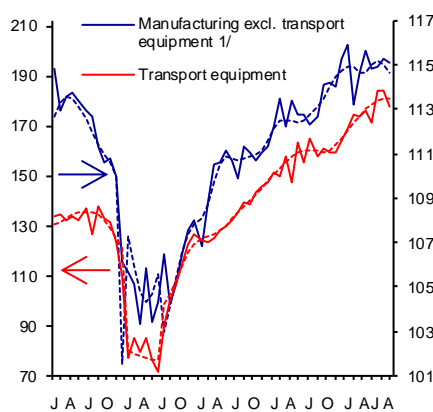
**Chart 24**  
**Economic Activity Indicators**

a) Global Economic Activity Indicator  
Index 2003=100, s. a.



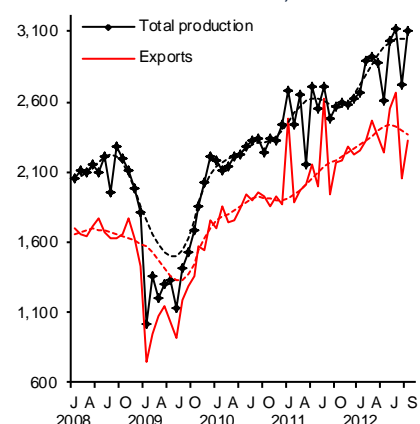
s. a. / Seasonally adjusted and trend data.  
Source: Mexico's System of National Accounts, INEGI.

b) Manufacturing Production  
Index 2003=100, s. a.



1/ Prepared by Banco de México with data from INEGI.  
s. a. / Seasonally adjusted and trend data.  
Source: Industrial Activity Indicators, SCNM, INEGI.

c) Production and Exports  
of Light Vehicles  
Thousands of units,  
annualized, s. a.



s. a. / Seasonally adjusted and trend data.  
Source: Prepared by Banco de México with data from the Mexican Automotive Industry Association (AMIA).

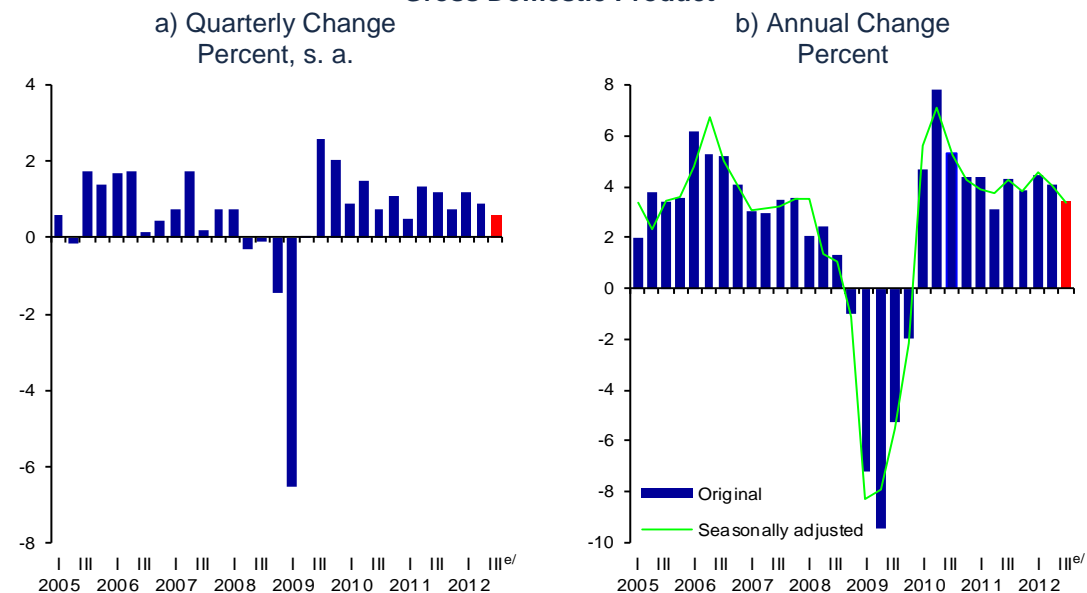
As a consequence of the abovesaid, economic activity is expected to have presented a lower growth rate with respect to the one registered in the previous quarter. Specifically, for the third quarter of 2012, GDP is estimated to have shown a quarterly seasonally adjusted growth of 0.6 percent (1.2 and 0.9 percent in the first two quarters of 2012). In annual terms with original data, GDP is forecast to have presented a 3.4 percent growth, as compared to 4.5 and 4.1 percent in the first and second quarters of the year, respectively (Chart 25).

In accordance with the above, some leading indicators, such as Mexico's leading indicator, suggest a possible moderation in the economy's growth in the coming months (Chart 26).



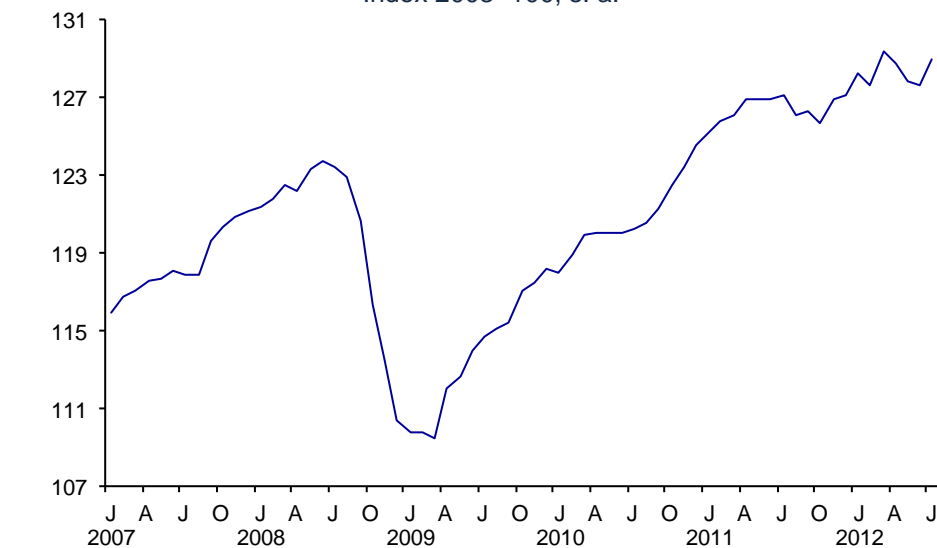
Finally, the current account deficit is estimated to have reached moderate levels in the reference quarter (Chart 27). Likewise, the country kept receiving resources that allowed easy financing of the referred deficit. Thus, during the third quarter, international reserves increased by USD 4,545 million, reaching a total of USD 161,882 million on September 28, 2012.

**Chart 25**  
**Gross Domestic Product**



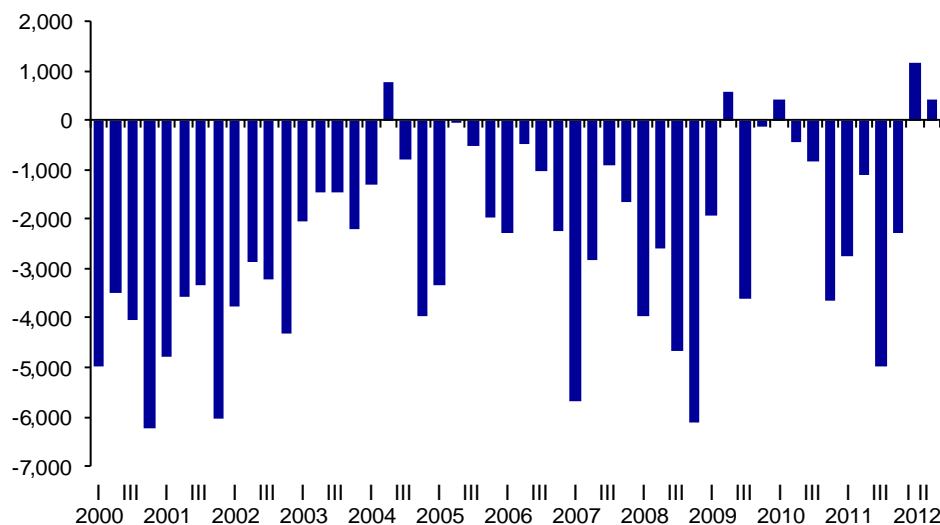
e/ Estimated by Banco de México.  
s. a. / Seasonally adjusted figures.  
Source: Mexico's System of National Accounts, INEGI. Seasonal adjustment up to the third quarter of 2012 by Banco de México.

**Chart 26**  
**Mexico's Leading Indicator**  
Index 2003=100, s. a.



s. a. / Seasonally adjusted data.  
Source: INEGI.

**Chart 27**  
**Current Account**  
 USD million



Source: Banco de México.

### 3.2.2. Financial Saving and Financing in Mexico

In the third quarter of 2012, both the sources of financial resources and financing to the non-financial private sector expanded further, which kept supporting Mexico's economic performance. However, in line with the most recent evolution of productive activity, some components of financing to the private sector grew at a slightly slower pace at the margin.

Regarding the economy's sources of financial resources, their annual flow was 11 percent of GDP during the second quarter of 2012, thus exceeding 9 percent of GDP for the eighth consecutive quarter (Table 2).<sup>13</sup> Since the fourth quarter of 2011 domestic sources of financing have increasingly contributed to the available financial resources, thus reducing the amount of resources required from abroad to cover the financial needs of the economy. Despite the uncertainty prevailing in international financial markets during the year, foreign sources kept registering high annual flows.

The information available through the third quarter of 2012 indicates that the sources of financial resources kept rising. In the period July-September 2012, the real stock of financial savings in the economy, defined as the monetary aggregate M4 minus the stock of banknotes and coins held by the public, maintained its upward trend (Chart 28a). In this regard, the increased stock of financial saving reflected the inflow of non-resident external resources and a deceleration of the expansion rate of residents' financial savings.

<sup>13</sup> The information on annual flows of sources and uses of financial resources is available up to the second quarter of 2012.

**Table 2**  
**Total Funding for the Mexican Economy (Sources and Uses)**  
 Percentage of GDP

	Annual flows						Stock 2012 II	
	2011 I	2011 II	2011 III	2011 IV	2012 I	2012 II	% GDP	Est. %
<b>Total sources</b>	<b>9.5</b>	<b>10.0</b>	<b>9.6</b>	<b>9.8</b>	<b>10.6</b>	<b>11.0</b>	<b>85.2</b>	<b>100.0</b>
Domestic sources <sup>1/</sup>	4.1	4.1	4.5	5.8	6.4	6.5	56.5	66.3
Foreign sources <sup>2/</sup>	5.5	5.9	5.1	4.0	4.3	4.5	28.7	33.7
<b>Total uses</b>	<b>9.5</b>	<b>10.0</b>	<b>9.6</b>	<b>9.8</b>	<b>10.6</b>	<b>11.0</b>	<b>85.2</b>	<b>100.0</b>
Public sector	3.6	3.4	3.2	3.0	3.4	3.4	40.4	47.3
Public sector (PSBR) <sup>3/</sup>	3.3	3.3	3.1	2.7	3.1	2.9	37.7	44.3
States and municipalities	0.3	0.1	0.2	0.3	0.3	0.5	2.6	3.1
International reserves <sup>4/</sup>	2.5	2.5	2.6	2.5	2.4	2.4	14.1	16.5
Private sector	3.2	3.5	3.4	3.2	3.2	3.2	32.9	38.6
Households	1.1	1.3	1.5	1.5	1.6	1.4	14.1	16.5
Consumption	0.3	0.4	0.6	0.7	0.7	0.7	4.3	5.0
Housing <sup>5/</sup>	0.8	0.9	0.9	0.8	0.8	0.7	9.8	11.5
Firms	2.1	2.1	1.9	1.7	1.7	1.8	18.9	22.1
Domestic <sup>6/</sup>	1.2	1.3	1.3	1.3	1.3	1.4	11.3	13.2
Foreign	0.8	0.8	0.6	0.4	0.4	0.4	7.6	8.9
Commercial banks' foreign assets <sup>7/</sup>	0.3	0.4	-0.1	-0.5	-0.3	-0.6	1.2	1.5
Other <sup>8/</sup>	-0.1	0.2	0.5	1.6	1.9	2.6	-3.4	-4.0

Source: Banco de México.

Note: Figures may not add up due to rounding. Preliminary figures expressed as a percentage of average GDP of the last four quarters. The information on (revalued) flows is stripped from the effect of exchange rate fluctuations.

1/ It includes the monetary aggregate M4 held by residents. Annual revalued flows of domestic sources exclude the effect of the reform to the ISSSTE Law on the monetary aggregate M4. Information on the stock of domestic sources includes the effect of this reform.

2/ It includes the monetary aggregate M4 held by non-residents, foreign financing for the federal government, public institutions and entities, and foreign financed investment projects (PIDIREGAS), commercial banks' foreign liabilities and financing to the non-financial private sector.

3/ Public Sector Borrowing Requirements (*Requerimientos Financieros del Sector Público*, RFSP or PSBR, for its acronym in English) and historical stock of Public Sector Borrowing Requirements (HSPSBR or SHRFSP, for its acronym in Spanish) as reported by the Ministry of Finance (SHCP). Figures of revalued flows exclude the impact of the reform to the ISSSTE Law on PSBR. Information on HSPSBR does include the effect of this reform on the public debt.

4/ As defined by Banco de México's Law.

5/ Total portfolio of financial intermediaries and of the National Housing Fund (*Instituto del Fondo Nacional de la Vivienda para los Trabajadores*, Infonavit), and of the ISSSTE Housing Fund (*Fondo de la Vivienda del ISSSTE*, Fovissste). It includes debt-restructuring programs.

6/ Total portfolio of financial intermediaries. It includes debt-restructuring programs.

7/ It includes assets from abroad and foreign financing.

8/ It includes capital accounts and results and other assets and liabilities of commercial and development banks, Banco de México, non-bank financial intermediaries and INFONAVIT, as well as non-monetary liabilities from IPAB, among others.

Increased non-resident financial savings can be accounted for, among other factors, by foreign investors' search for yield in an environment of monetary lassitude in advanced economies (Chart 28b). Additionally, the strength of the Mexican macroeconomic framework with respect to other economies was another factor that encouraged capital inflows from abroad for the purpose of acquiring domestic financial instruments, particularly short- and medium-term government debt securities.

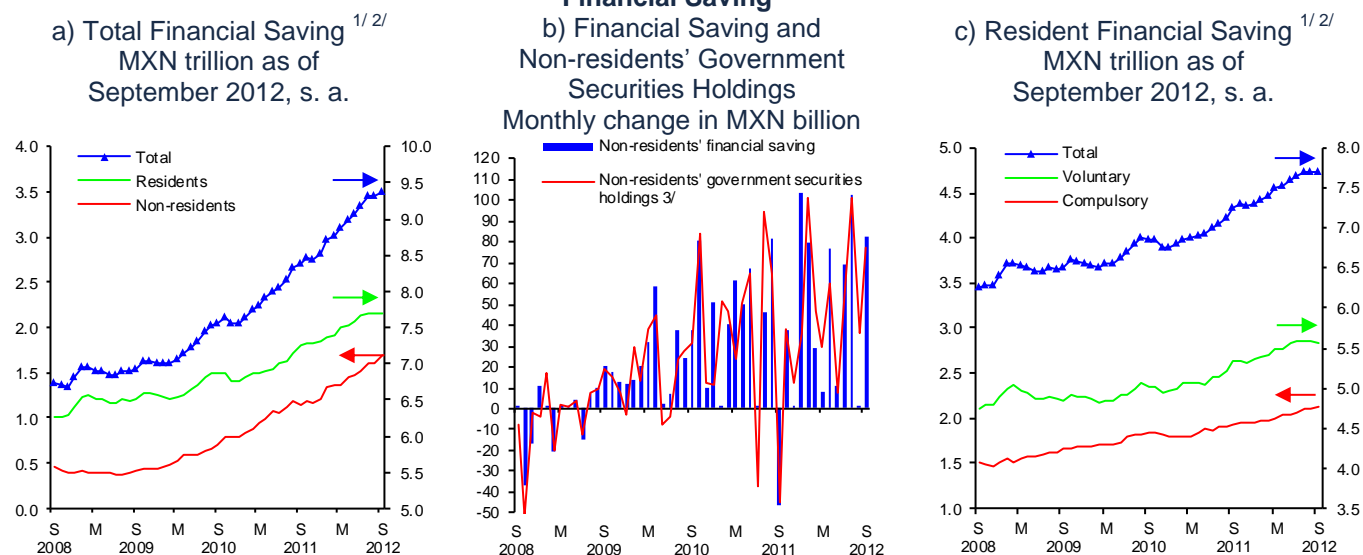
In the period July-September 2012, the stock of resident financial saving kept expanding, albeit at a lower rate compared to the preceding months (Chart 28c). Compulsory financial savings maintained an upward trend, supported by higher formal sector employment, among other factors. Voluntary financial savings decreased slightly with respect to the end of the second quarter of 2012.

Regarding the use of financial funds, in the second quarter of 2012, annual financing flows to different sectors of the economy did not change significantly in relation to the previous period (Table 2).<sup>14</sup> International reserves accumulation

<sup>14</sup> The information of annual flows of sources and uses of financial resources is available up to the second quarter of 2012.

was 2.4 percent of GDP in the quarter, similar to that of the previous ones. The annual flow of funds received by the public sector, in line with the average of the previous five quarters, lied at 3.4 percent of GDP. Finally, the annual flow of funds to the private sector was 3.2 percent of GDP, similar to the previous quarter's figure.

**Chart 28**  
**Financial Saving**



Source: Banco de México.

s. a. / Seasonally adjusted figures.

1/ Defined as monetary aggregate M4 minus the stock of banknotes and coins held by the public.

2/ Figures are adjusted to exclude the impact of the reform to the ISSSTE Law.

3/ Holdings of government securities expressed in nominal value.

The information up to the third quarter of 2012 regarding the economy's use of financial funds indicates that international reserves accumulation persisted, which meant that the position of the Mexican economy continued strengthening. Additionally, the flow of financing to the private sector maintained a positive trend.

Total credit to non-financial private firms kept expanding in the period, as a result of greater domestic and external financing, thereby supporting the productive activity of the country.<sup>15</sup> Indeed, domestic financing to non-financial private firms kept growing in the third quarter, although at a slightly lower rate as compared to that of the second one (Chart 29a). Particularly, credit granted to non-financial private firms increased, despite a slowdown in the growth rate of commercial banks' credit (Chart 29b). It is noteworthy that this lower growth rate does not seem to be a result of tighter supply conditions, as interest rates and delinquency rates continue at low levels and without registering any significant changes (Chart 30a and Chart 30b).

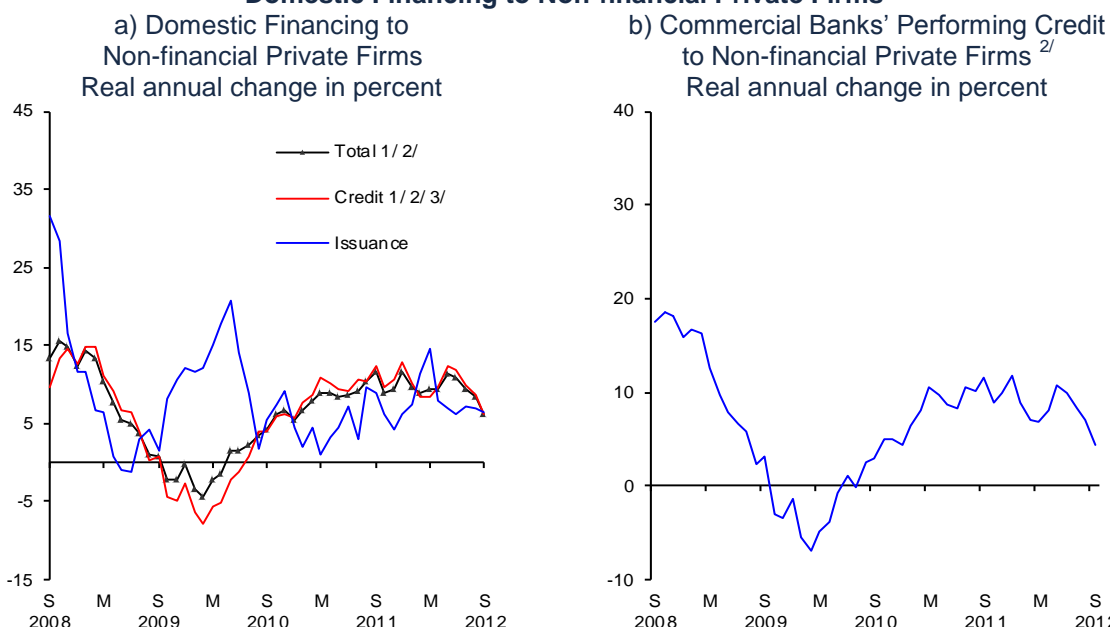
The national debt market kept operating normally, in an environment characterized by improved conditions in international financial markets. Net debt issuance of non-financial private firms recovered with respect to the previous quarter and firms did not face refinancing problems. Particularly, in the period July-September 2012 the net placement of medium-term securities was MXN 8.8

<sup>15</sup> Given that the statistics of direct financing from abroad are obtained with a lag, some aspects of domestic and foreign financing by means of securities' issuance are highlighted below.

billion, while in the previous quarter it was negative by an amount of MXN 2.4 billion (Chart 31a).<sup>16</sup> It is important to point out that placements of non-financial private firms' debt were carried out under favorable conditions regarding the term and interest rates. Medium-term debt issuances were placed at terms exceeding 10 years. The average interest rate of medium-term securities was lower than in the second quarter, while interest rates of short-term securities remained practically unchanged (Chart 31b). As for foreign financing, favorable access conditions were observed for Mexican firms, which kept issuing securities in international markets. In particular, in the third quarter of 2012 the stock of debt issued by means of foreign securities increased by USD 6,685 million, which corresponds to the highest quarterly change in more than 4 years.

**Chart 29**

**Domestic Financing to Non-financial Private Firms**



Source: Banco de México.

1/ These figures are affected by the disappearance of some non-banking financial intermediaries and their conversion to non-regulated Sofom.

2/ From February 2009 onwards, figures are affected by the reclassification of credit granted to small- and medium-size firms (PyMES, for its acronym in Spanish) from consumer credit to credit granted to non-financial firms.

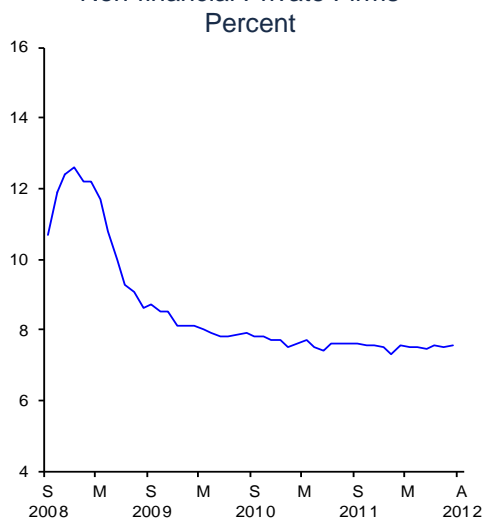
3/ It refers to the performing and non-performing portfolio, and includes credit from commercial and development banks, as well as non-bank financial intermediaries.

<sup>16</sup> When excluding anticipated debt amortizations, in the second quarter of 2012 the net placement of private securities was positive by MXN 3.1 billion.

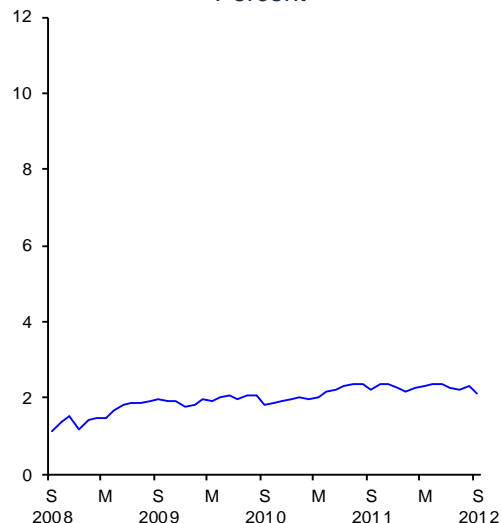
**Chart 30**

**Interest Rate and Delinquency Rate of Commercial Banks' Credit to Non-financial Private Firms**

a) Interest Rate of New Credits Granted by Commercial Banks to Non-financial Private Firms <sup>1/</sup>



b) Delinquency Rate of Commercial Banks' Credit to Non-financial Private Firms <sup>2/3/</sup>



Source: Banco de México.

1/It refers to the interest rates of new credits granted by commercial banks to non-financial private firms, weighted by the associated stock of performing credit and for all credit terms requested.

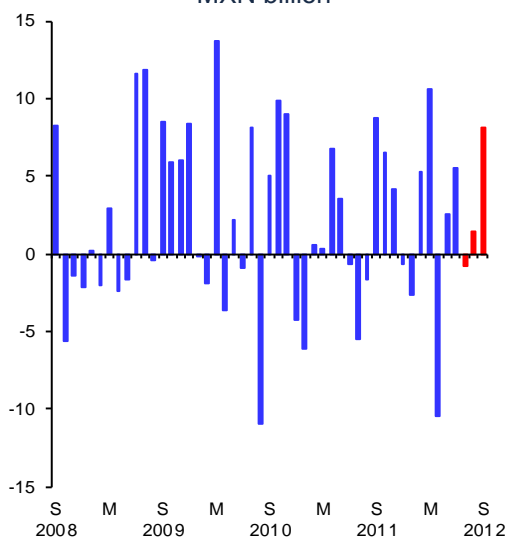
2/From February 2009 onwards, figures are affected by the reclassification of credit granted to small- and medium-size firms (PyMES, for its acronym in Spanish) from consumer credit to credit granted to non-financial firms.

3/The delinquency rate (*Índice de Morosidad*, IMOR) is defined as non-performing portfolio divided by total loan portfolio.

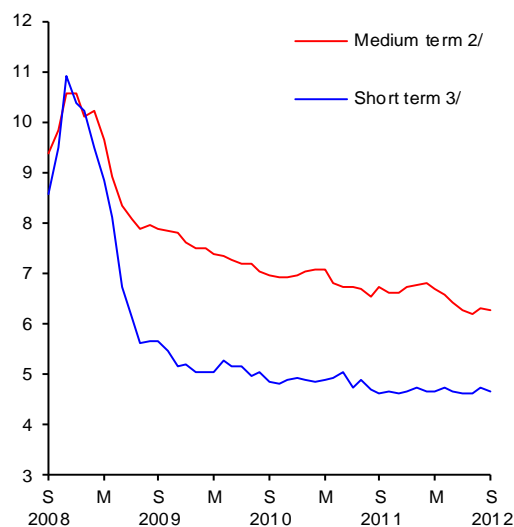
**Chart 31**

**Non-financial Private Firms' Securities**

a) Non-financial Private Firms' Net Placement of Medium-term Securities <sup>1/</sup>



b) Securities Rates of Non-financial Private Firms Annual percent



Source: Banco de México, with data from Valmer and Indeval.

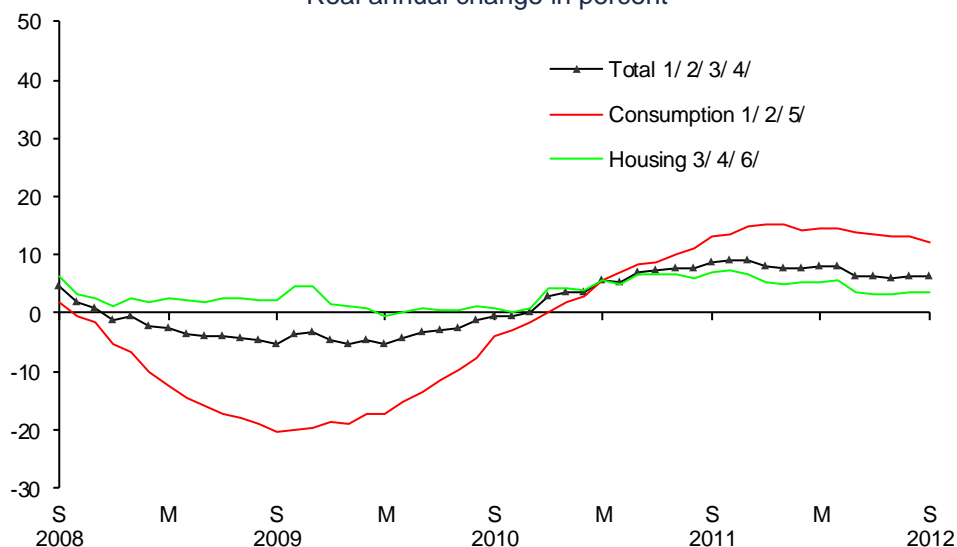
1/ Placements less amortizations in each month (securities and prepayments).

2/ Placements of more than one year.

3/ Placements of up to one year.

Household credit maintained elevated growth rates during the third quarter of the year, as a result of the expansion of consumer credit and mortgage loans. Consumer credit registered an average real annual growth rate of 6.2 percent in the period of July-September, while consumption and housing components increased at a rate of 13.0 and 3.5 percent, respectively (Chart 32). It should be pointed out that changes in these credit portfolios were slightly below those registered in the previous quarter. By the end of the second quarter of 2012, the real annual growth rate of credit to households was 6.9 percent. The corresponding variations in the consumption and housing segments were 14.0 and 4.2 percent, respectively.

**Chart 32**  
**Credit to Households**  
Real annual change in percent



Source: Banco de México.

1/ From February 2009 onwards, figures are affected by the reclassification of credit granted to small- and medium-size firms (PyMES, for its acronym in Spanish) from consumer credit to credit granted to non-financial firms.

2/ Figures as of March 2008 include total consumer credit portfolio of commercial banks' subsidiaries Sofom E.R.

3/ Between January and December 2007, figures are adjusted in order to avoid distortions due to the reclassification of credit granted to business sector for housing construction.

4/ Figures are adjusted in order to avoid distortions due to the inclusion of ISSSTE Housing Fund (*Fondo de la Vivienda del ISSSTE, Fovissste*) statistics in December 2007.

5/ It refers to the performing and non-performing portfolio, and includes credit from commercial and development banks, as well as non-bank financial intermediaries.

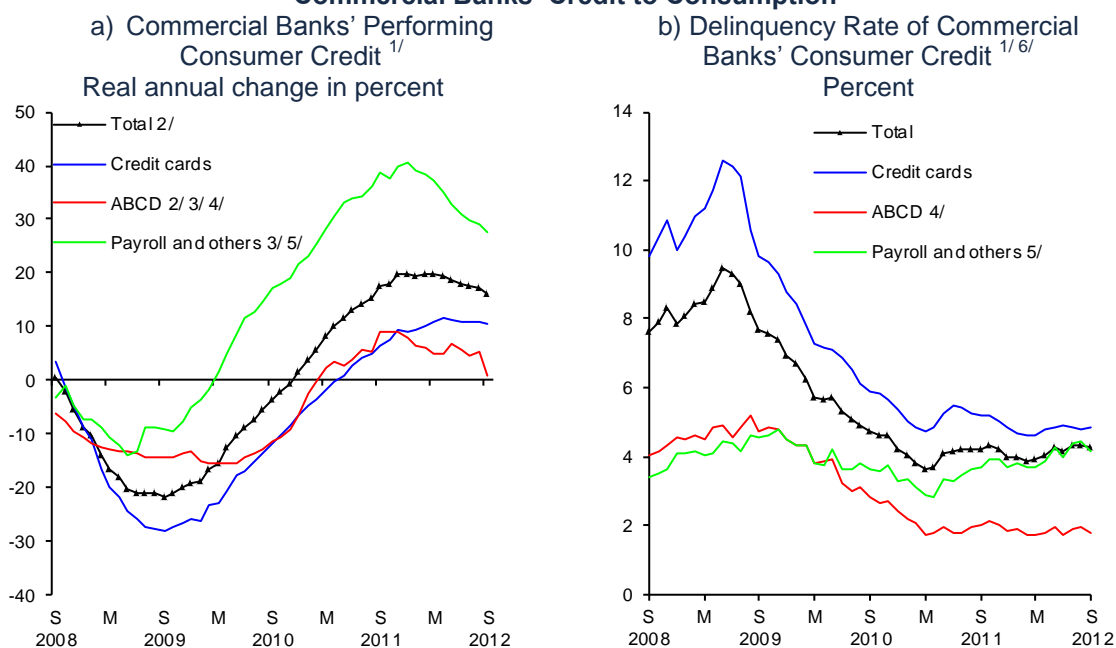
6/ It refers to the performing and non-performing portfolio, and includes credit from commercial and development banks, National Housing Fund (*Instituto del Fondo Nacional de la Vivienda para los Trabajadores, Infonavit*), ISSSTE Housing Fund (*Fondo de la Vivienda del ISSSTE, Fovissste*) and other non-bank financial intermediaries.

Consumer credit continued growing at high rates, mainly, due to the strong dynamism of payroll, personal and other credits.<sup>17</sup> Despite its vigorous expansion, it has slowed down in recent months, partly due to the growth moderation of the payroll credit (Chart 33a). In this context, the deceleration of payroll, personal and other credits is not derived from overheating, as long as interest rates remain stable and the corresponding delinquency rate low, although with a slight upward trend (Chart 33b). The credit card component kept growing at rates similar to those registered last year, while the quality of this portfolio remained without showing any signs of deterioration.

<sup>17</sup> "Others" refers to credit for payable leasing operations and other consumption credits.

Credit for housing acquisition kept expanding in an orderly manner, mainly as a result of increased credits granted by the National Housing Fund (*Instituto del Fondo Nacional de la Vivienda para los Trabajadores*, Infonavit) and commercial banks. Indeed, the National Housing Fund expanded its performing portfolio at an average rate of 5.5 percent in real annual terms during the third quarter of the year, at the same time as commercial banks increased their credits by 6.3 percent during the same period (Chart 34a). These changes are similar to those of the previous quarter, when the mortgage portfolio of the National Housing Fund and of commercial banks grew at the rates of 6.3 and 6.6 percent, respectively. It should be emphasized that the sustained growth of this credit portfolio occurred in an environment of stable interest rates and low delinquency rates, without presenting signs of deterioration (Chart 34b and Chart 34c).

**Chart 33**  
**Commercial Banks' Credit to Consumption**



Source: Banco de México.

1/ It includes credit portfolio of credit-card regulated SOFOM: Tarjetas BANAMEX, Santander Consumo, Ixe Tarjetas and Sociedad Financiera Inbursa. From February 2009 onwards, figures are affected by the reclassification of credit granted to small- and medium-size firms (PyMES) from consumer credit to credit granted to non-financial firms.

2/ Between June 2010 and May 2011, figures are adjusted in order to avoid distortions due to the purchase of one banking institution's automobile loan portfolio.

3/ From July 2011 onwards, figures are adjusted in order to avoid distortions due to the reclassification from durable goods (ABCD) to other consumption credits by one banking institution.

4/ It includes credit for property acquisition and automobile credit.

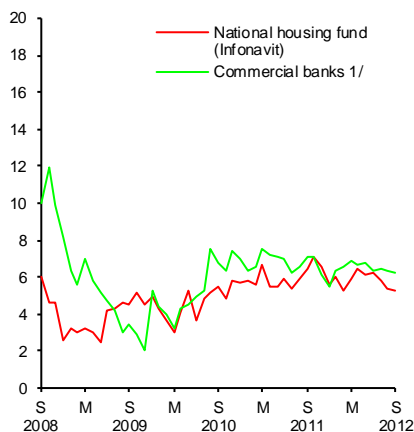
5/ "Others" refers to credit for payable leasing operations and other consumption credits.

6/ The delinquency rate (*Índice de Morosidad*, IMOR) is defined as non-performing portfolio divided by total loan portfolio.

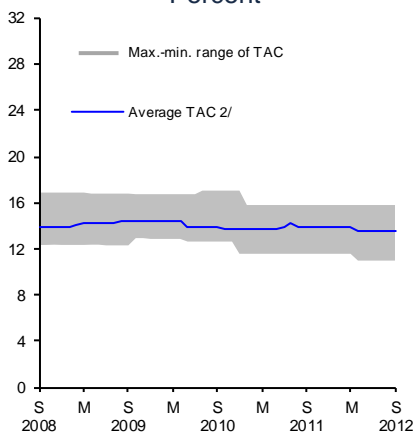


**Chart 34  
Housing Credit**

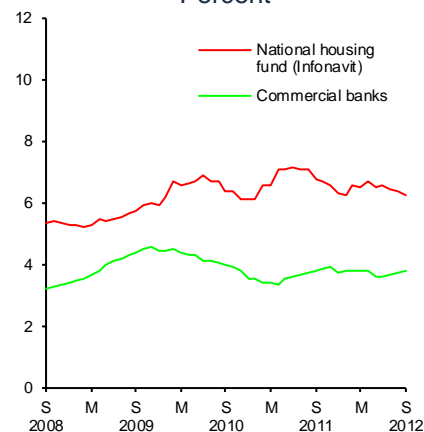
a) Performing Housing Credit  
Real annual change in percent



b) Commercial Banks' Costs of  
Housing Credit  
Percent



c) Delinquency Rate of  
Housing Credit<sup>3/</sup>  
Percent



Source: Banco de México.

1/ Figures are adjusted in order to avoid distortions by the pass-through effect of UDIS trust portfolio to the balance sheet of commercial banks and by the reclassification of credit in direct portfolio to ADES.

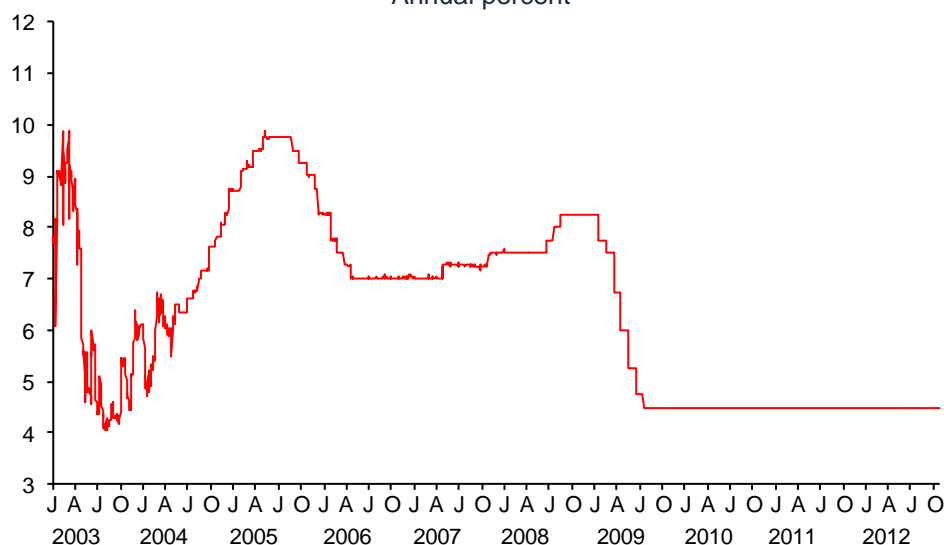
2/ Indicator's simple average resuming the total annual cost (TAC) for a standard mortgage product.

3/ The delinquency rate (*Índice de Morosidad*, IMOR) is defined as non-performing portfolio divided by total loan portfolio.

## 4. Monetary Policy and Inflation Determinants

In recent months, the monetary policy faced a complicated juncture. On the one hand, the weakening of external demand due to the lower growth rate of the global economy started to affect economic activity. On the other hand, a series of supply-related shocks led to an inflation rebound, which although expected to be transitory, has been of considerable magnitude. When balancing these risks, during the period covered by this Inflation Report, Banco de México's Board of Governors decided to maintain the target for the Overnight Interbank Interest Rate unchanged at 4.5 percent (Chart 35).

**Chart 35**  
**Overnight Interbank Interest Rate <sup>1/</sup>**  
Annual percent



<sup>1/</sup> The target for the Overnight Interbank Interest Rate is shown since January 21, 2008.

Source: Banco de México.

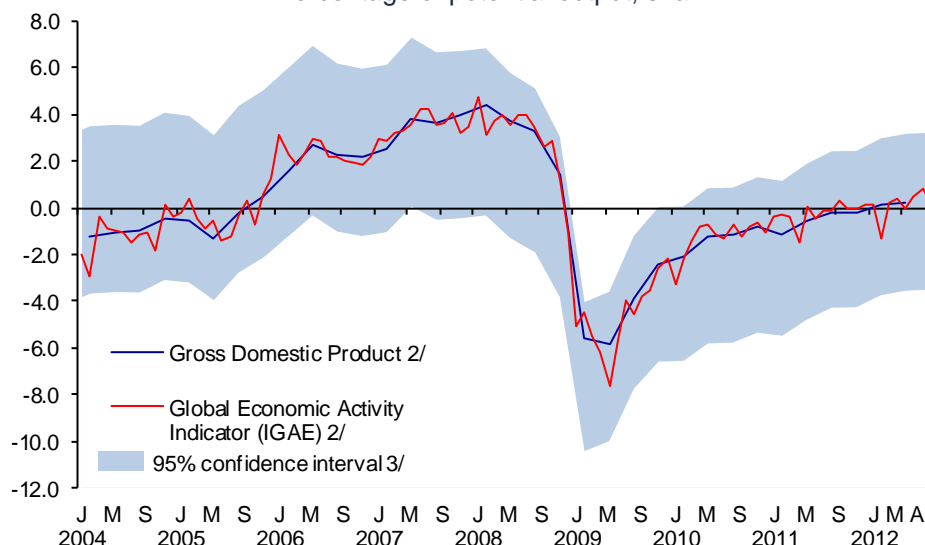
As shown below, so far the evolution of different inflation determinants suggests the following: i) that the above referred supply shocks, even when successive, have thus far not contaminated the price formation process of the economy, and, ii) that there is no evidence implying aggregate demand-related pressures on inflation. However, in a context of inflation having remained at elevated levels for various months and with the recent evolution of economic activity having led to the output gap persisting around zero (Chart 36), the risk of contamination of the price formation process in the economy cannot be ruled out. Thus, the Board of Governors announced in its October Monetary Policy Meeting that it could be appropriate to realize in the near future a preemptive upward adjustment of the reference interest rate, in case inflation shocks persist, even if they are of a transitory nature, and in case the changes in trend of headline and core inflation are not confirmed. A preemptive adjustment of the reference rate would be aimed at:

- I. Consolidating the anchoring of inflation expectations, as, although so far medium- and long-term expectations have remained stable, they could be

affected if inflation maintains above the upper bound of the variability interval around the 3 percent target.

- II. Preventing the contamination of the price formation processes in the economy, e.g. of wage negotiations.
- III. Avoiding the jeopardizing the convergence of inflation to the 3 percent permanent target.

**Chart 36**  
**Output Gap Estimation <sup>1/</sup>**  
Percentage of potential output, s. a.



<sup>1/</sup> Estimated using the Hodrick-Prescott (HP) filter with tail corrections; see Banco de México (2009), "Inflation Report, April-June 2009", p.69.

<sup>2/</sup> GDP figures up to the second quarter of 2012, IGAE figures up to August 2012.

<sup>3/</sup> Confidence interval for the output gap calculated with an unobserved components method.

s. a. / Prepared with seasonally adjusted figures.

Source: Prepared by Banco de México with data from INEGI.

Analyzing more in depth the recent evolution of inflation determinants, the following stands out:

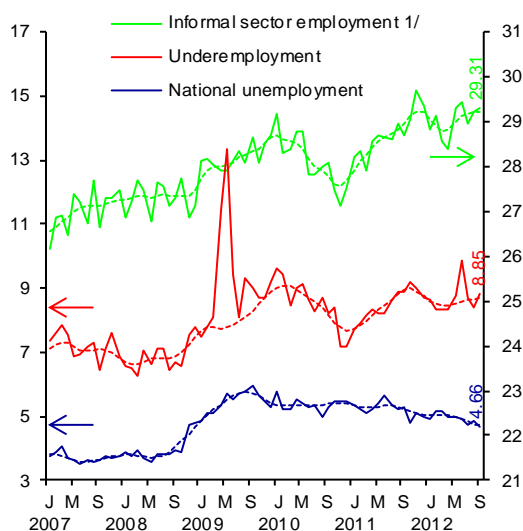
- a) In the labor market, unemployment, informal sector employment and underemployment rates remain at higher than pre-crisis levels, although the former ones have been gradually diminishing (Chart 37a). This reflects the significant dynamism presented by the number of IMSS-insured workers (Chart 37b).
- b) In general terms, wage increases remained modest in the third quarter of the year. This, together with a positive trend exhibited so far by average labor productivity in the manufacturing industry, caused unit labor costs to continue at low levels. In this way, no labor cost-related inflationary pressures have been registered (Chart 38). However, as mentioned before, the fact that recently some indicators of wage increases have exhibited increments higher than those in the past is an element of concern (see Section 2.2).
- c) The evolution of financing to the non-financial private sector suggests the absence of signs of overheating, which could give rise to pressures

on interest rates in this market. The growth rates of certain components of this financing have even started to moderate.

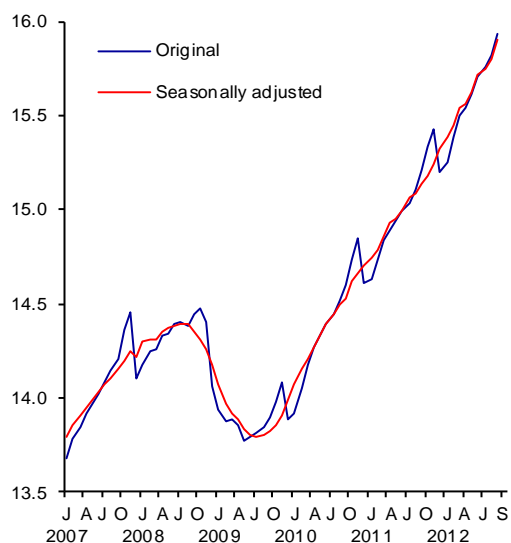
- d) Finally, as mentioned above, in the third quarter the current account is expected to have presented a moderate deficit, fully financed by the flow of resources to the financial account. Thus, no demand-related pressures on the country's external accounts were observed in the period of July - September 2012.

**Chart 37**  
**Labor Market Indicators**

a) Unemployment and Underemployment Rates and Informal Sector's Employment Rate  
Percent, s. a.



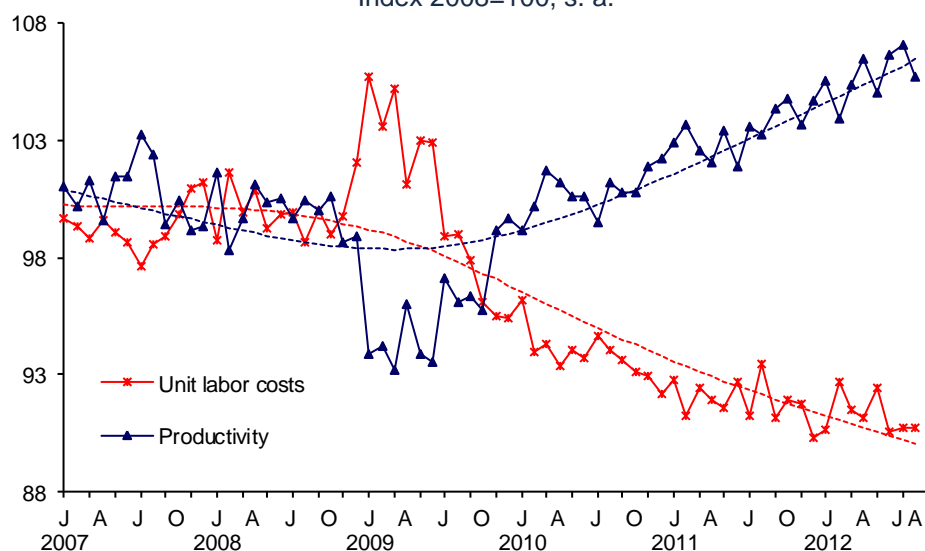
b) IMSS-insured Workers  
Millions of persons



1/ Seasonal adjustment by Banco de México.  
s. a. / Seasonally adjusted and trend data.  
Source: National Employment Survey (*Encuesta Nacional de Ocupación y Empleo*), INEGI.

1/ Permanent and temporary workers in urban areas.  
Source: IMSS. Seasonal adjustment by Banco de México.

**Chart 38**  
**Productivity and Unit Labor Costs in the Manufacturing Sector**  
 Index 2008=100, s. a.



s. a. / Seasonally adjusted and trend data.

Source: Prepared by Banco de México with seasonally adjusted data from the Monthly Manufacturing Business Survey (*Encuesta Mensual de la Industria Manufacturera*) and the Indicators of Industrial Activity of Mexico's System of National Accounts, INEGI.

Regarding inflation expectations, these presented a differentiated behavior. Thus, although those corresponding to short-term horizons rebounded during the analyzed period, medium- and long-term expectations remained stable. According to Banco de México's survey, the average expectations for headline inflation for the end of 2012 presented a significant increase, locating at 4.16 percent in the October survey, after having registered a level of 3.81 percent in the June survey (Chart 39a).<sup>18</sup> This rebound was mainly due to the higher implicit expectation for the non-core component, which reached 4.7 percent in June and 5.95 percent in the October survey, given that the average expectations of the core component have not presented major changes, shifting from 3.54 to 3.61 percent in the same period. In turn, average expectations for headline inflation for the end of 2013 grew from 3.69 to 3.76 percent during the reference period, given the higher implicit expectation for the non-core component, which lied at 4.44 percent in June and at 4.59 percent in October (Chart 39b).<sup>19</sup> Nonetheless, the average of the core component persisted close to 3.5 percent during the referred period.

As to medium- and long-term inflation expectations, they remained practically unchanged during the analyzed period. Particularly, those corresponding to the end of 2014 remained close to 3.6 percent. In the case of the average inflation

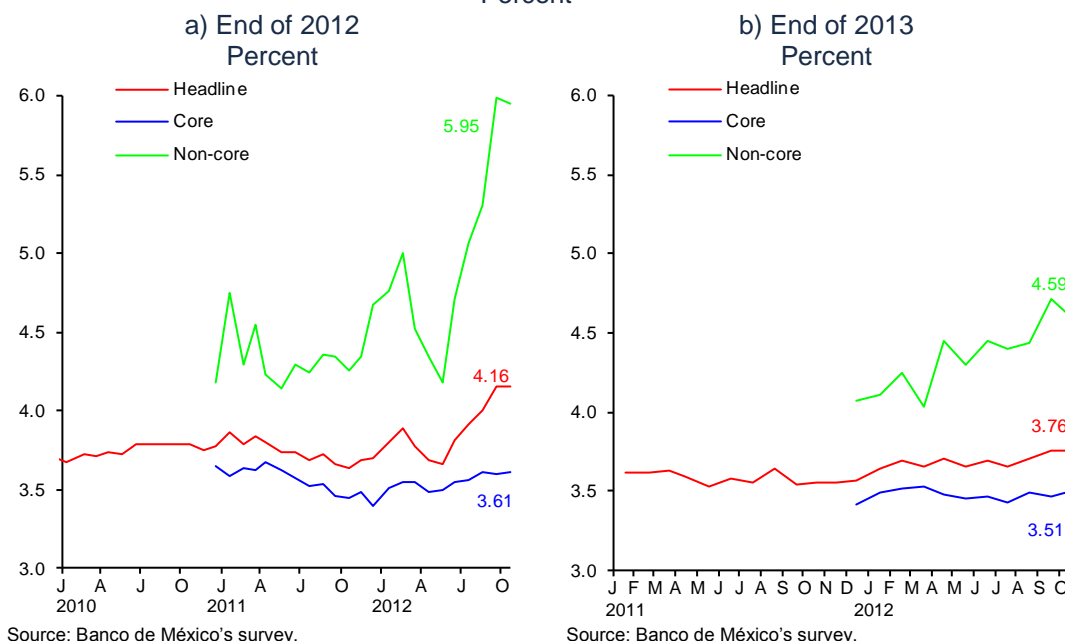
<sup>18</sup> According to the Banamex Survey of Financial Market Analysts' Expectations, average expectations for headline inflation for the end of 2012 shifted from 3.76 percent in the survey of June 19, 2012 to 4.11 percent in the survey of November 5, 2012. Implicit average expectations for the non-core inflation increased from 4.42 to 5.86 percent in the same period. Core inflation average expectations located at 3.56 percent in the survey of June 19 and at 3.58 percent in the one of November 5, 2012.

<sup>19</sup> According to the Banamex Survey of Financial Market Analysts' Expectations, average headline inflation expectations for 2013 were 3.64 percent in the survey of June 19, 2012 and 3.7 percent in the survey of November 5, 2012. Average non-core inflation expectations shifted from 4.2 to 4.49 percent during the same period, while average core inflation expectations located at 3.47 percent in the survey of June, 19 and at 3.46 percent in the one of November 5, 2012.

expectations for the next 4 years, they persisted around 3.6 percent, while the average expectations for the next 5 to 8 years were adjusted downwards; shifting from levels close to 3.5 percent during the first two quarters of 2012 to levels around 3.4 percent in the surveys of September and October (Chart 40a).

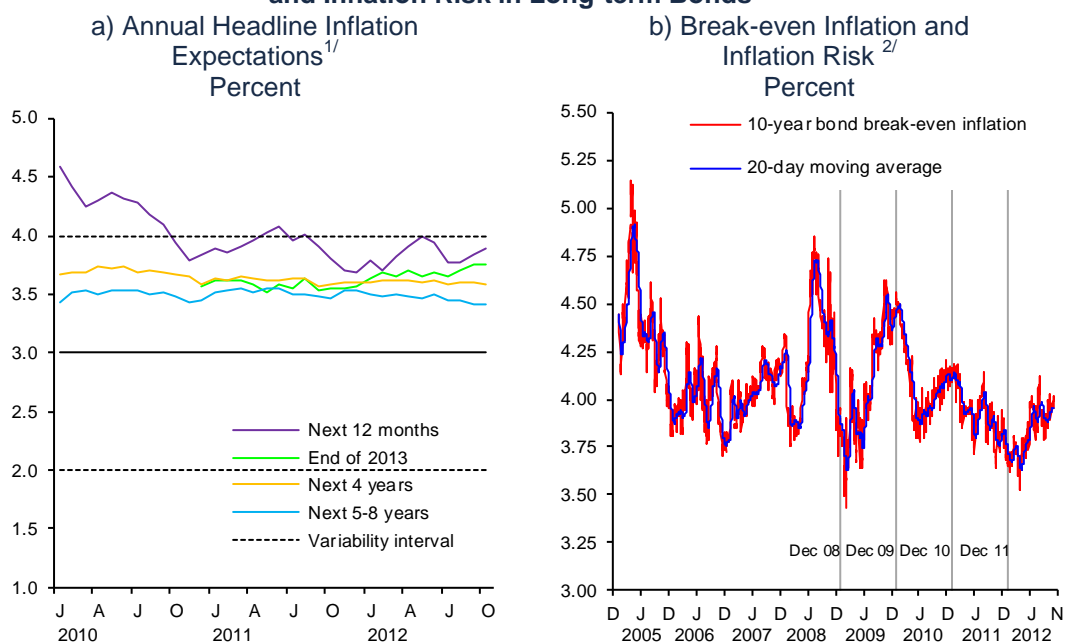
To complement the above, the evolution of long-term interest rates allows calculating the break-even inflation and inflation risk (difference between the 10-year bond nominal yield and the real yield associated to inflation-indexed debt instruments of the same term), which recently registered around 4 percent, although with certain volatility. Considering the positive value of the inflation risk premium, inflation expectations implicit in long-term interest rates are below that level (Chart 40b).

**Chart 39**  
**Headline, Core and Non-core Inflation Expectations**  
Percent



Even though international financial markets were characterized by an environment of deterioration and uncertainty in the second quarter of 2012, there was improvement in the third one, mainly as a result of the monetary stimulus measures announced by central banks of the main advanced economies, in particular, the European Central Bank and the U.S. Federal Reserve, which contributed to easing global financial conditions. However, as progress in solving the problems in some Euro zone countries has been limited, a new episode of turbulence in international financial markets cannot be ruled out. In this context, in the case of Mexico it should be noted that during the period analyzed in this Inflation Report government securities' holdings by foreign investors continued increasing (Chart 41), which confirms their confidence in the Mexican economy and, hence, in its financial assets.

**Chart 40**  
**Annual Headline Inflation Expectations and Break-even Inflation and Inflation Risk in Long-term Bonds**

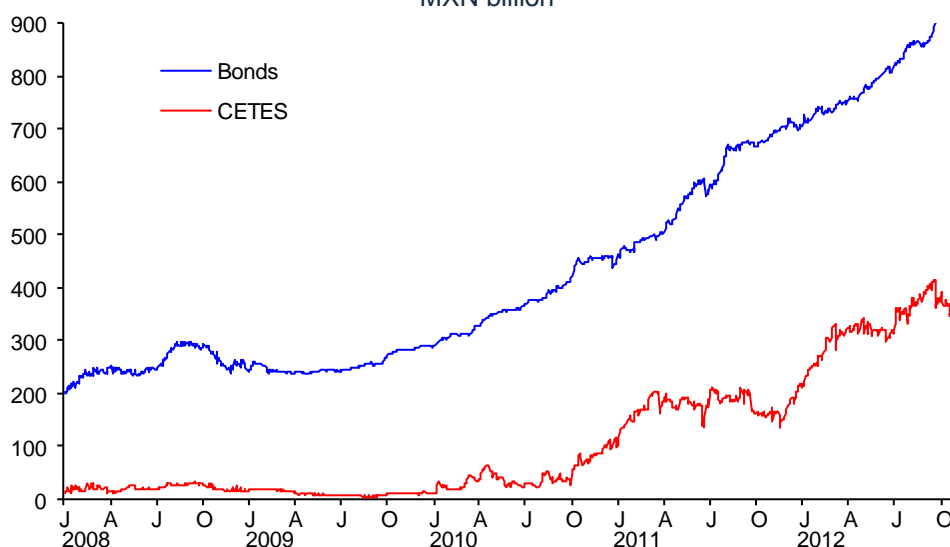


1/ Latest available data: October 2012.  
 Source: Banco de México's survey.

2/ The break-even inflation and inflation risk implicit in 10-year bonds is calculated based on nominal and real interest rates of the secondary market.  
 Source: Banco de México estimate with data from Valmer.

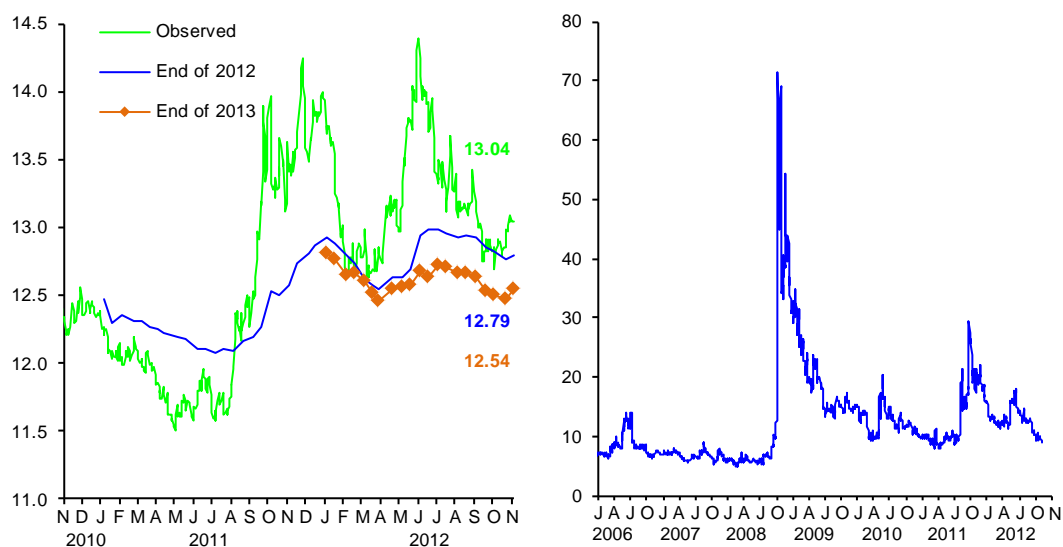
The strength of the economic fundamentals in Mexico has generated an environment of confidence in national financial markets, which, combined with the reduced uncertainty in their international counterparts, contributed to the fact that the MXN continued registering an appreciation trend in the reference period. Thus, although characterized by certain volatility, the MXN was one of the most appreciated currencies during the third quarter of 2012, which allowed the parity against the USD to revert part of the depreciation registered at the beginning of the second quarter of 2012. Likewise, private sector analysts anticipate the exchange rate to appreciate further in the rest of this year and during 2013 (Chart 42).

**Chart 41**  
**Government Securities' Holdings by Foreign Investors**  
 MXN billion



Source: Banco de México.

**Chart 42**  
**Exchange Rate and Implied Volatility of Exchange Rate Options**  
 a) Exchange Rate and its Expectations for the End of 2012 and 2013 <sup>1/</sup>  
 MXN/USD  
 b) Implied Volatility of Exchange Rate Options <sup>2/</sup>  
 Percent



<sup>1/</sup> The observed exchange rate is the monthly average of the FIX exchange rate. The latest data of the observed exchange rate correspond to November 5, 2012. For its expectations, the latest data are as of November 5, 2012.

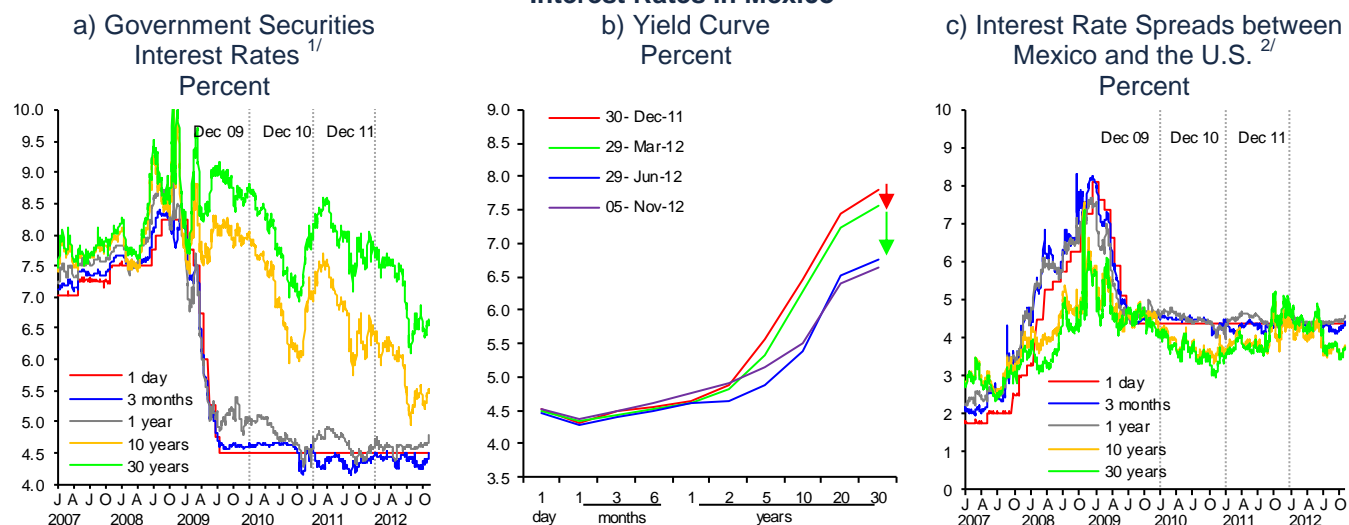
Source: Banco de México and Banamex expectations survey (*Encuesta de Expectativas Banamex*).

<sup>2/</sup> Refers to one-month options.  
 Source: Bloomberg.



In this context and as a result of still anchored longer-term inflation expectations, domestic interest rates continued their stable performance. On the one hand, in line with the target for the Overnight Interbank Interest Rate, short-term interest rates remained unchanged, slightly below 4.5 percent. On the other hand, longer-term interest rates, particularly 10-year government bond rates in Mexico, reached 5.5 percent, a level similar to that at the end of the second quarter, although with certain volatility (Chart 43a). It is noteworthy that during the referred period these rates exhibited a positive and high correlation with U.S. long-term interest rates. Thus, the yield curve maintained practically unchanged in the reference quarter (Chart 43b). Finally, it should be highlighted that in a context of extraordinary lassitude of the monetary policy stances in most advanced economies, and in particular in the U.S., the interest rate spreads between Mexico and this country continue at higher levels in relation to the pre-crisis ones (Chart 43c).

**Chart 43**  
**Interest Rates in Mexico**



1/ Since January 21, 2008, the one-day (overnight) interest rate corresponds to the target for the Overnight Interbank Interest Rate.  
Source: *Proveedor Integral de Precios (PiP)*.

Source: *Proveedor Integral de Precios (PiP)*.

2/ For the U.S. target rate, the average of the interval considered by the U.S. Federal Reserve is used.  
Source: *Proveedor Integral de Precios (PiP)* and U.S. Treasury Department.

Based on the analysis of inflation determinants, it can be inferred that so far no signs have been observed regarding the contamination of the price formation process, derived from shocks that caused a considerable increase in inflation.

## 5. Inflation Forecasts and Balance of Risks

In the prevailing environment of uncertainty regarding the world economy, U.S. growth expectations were revised downwards with respect to the previous Inflation Report. In this context, the perception that U.S. growth will be moderate in the next years persists.<sup>20</sup>

- a) U.S. GDP is expected to increase at a rate of 2.1 percent in 2012 and 2.0 percent in 2013, figures below 2.2 and 2.1 percent presented in the Inflation Report, April-June 2012, respectively.
- b) The forecast for the growth rate of 2012 U.S. industrial production was revised downwards from 4.1 percent in the last Inflation Report to 3.9 percent in the current one. Likewise, the 2013 forecast was modified from 2.8 to 2.5 percent.

**Growth of the Mexican Economy:** Even though the deterioration of U.S. growth expectations could translate into a lower dynamism of external demand for Mexico, given the still relatively moderate magnitude of these expectations' adjustment, as well as the positive evolution of the national economic indicators, the forecast interval for Mexico's growth rate remains unchanged with respect to that detailed in the previous Inflation Report.

However, given the availability of more information, the interval of the expected annual GDP growth rate of Mexico for 2012 is revised from between 3.25 to 4.25 percent in the last Inflation Report to an interval of 3.5 to 4.0 percent in the current one. For 2013, as in the previous Inflation Report, Mexican economic growth is anticipated to lie between 3.0 to 4.0 percent (Chart 44a). However, as explained below, the downward revision of the world economic prospects, particularly of the U.S., emphasizes the perception that downward risks have increased, as compared to the referred scenario.

**Employment:** Considering the dynamism recently exhibited by the number of IMSS-insured workers, this indicator is expected to rise by between 600 and 700 thousand insured workers in 2012 (between 540 and 640 thousand in the previous Inflation Report). In turn, for 2013 the forecast of an increase of between 500 and 600 thousand workers in this indicator, specified in the last Inflation Report, is maintained.

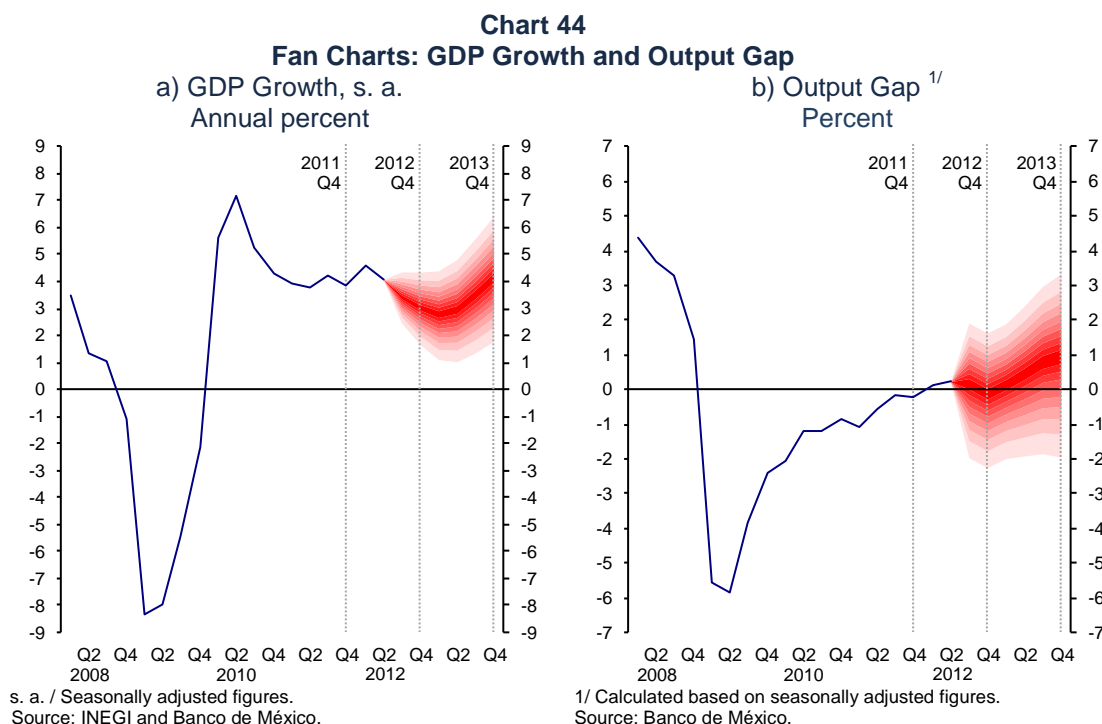
**Current Account:** Regarding external accounts, for 2012 the trade balance is expected to be close to zero and the current account deficit to be of USD 4.6 billion (0.4 percent of GDP); while for 2013, deficits of USD 7.9 and 20.7 billion are anticipated for the trade balance and the current account, respectively (0.6 and 1.6 percent of GDP). Thus, the moderate current account deficits expected for 2012 and 2013, as well as the measures taken by the Mexican government to finance its external debt liabilities, suggest that financing these deficits will not

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<sup>20</sup> Expectations for the U.S. economy are based on the consensus of analysts surveyed by Blue Chip in October 2012.

pose a problem in the forecast horizon and that there will be no pressures on the exchange rate arising from this source.

Derived from these forecasts, the output gap is anticipated to present a slight upward trend, although remaining at levels close to zero (Chart 44b). Thus, no aggregate demand-related pressures on prices are expected during the forecast horizon.



Although the Mexican economy has been relatively resilient to the adverse global economic conditions thus far, downward risks regarding the growth scenario for the Mexican economy have increased. In particular, among the prevailing factors that could induce a more unfavorable environment for the national economy, the following stand out:

- i. A more pronounced weakening of the U.S. economy. This situation could result from a fiscal consolidation greater than expected by analysts for 2013. With respect to this, uncertainty regarding the magnitude of this fiscal adjustment and the approval of a higher debt ceiling by the U.S. government could affect consumption and investment decisions in that country, which could reduce growth rates, not only in the short run, but possibly also in the medium run.
- ii. Additionally, there is the risk of an environment of greater volatility and uncertainty in international financial markets if no progress is attained in solving the fiscal and banking problems in the Euro zone. This situation could affect the U.S. economy by means of contagion of its financial system, through an adverse effect on its foreign demand, or by discouraging investment. Further, an uncertain international

environment could boost investors' search for safe haven assets, reducing capital flows to other economies, such as Mexico's.

- iii. In this context, the slowdown of emerging economies, like China and India, which until early 2012 partly supported world economic growth, could intensify, affecting global demand even more.
- iv. Finally, the absence of structural changes and the problems of public insecurity, besides the problems of the global economy and international financial instability, are still factors that, according to the economic specialists surveyed by Banco de México, could hamper Mexican growth.

It is worth pointing out that, as opposed to the risks mentioned above, Mexico's growth scenario could be favorably affected by the implementation of structural reforms that strengthen domestic sources of growth, particularly from a microeconomic viewpoint. Thus, together with the environment of macroeconomic stability achieved by Mexico, and that is a necessary condition for its economic development, the progress in the economy's structural change could boost Mexico's economic growth, especially in the medium and long run. These reforms would also favor maintaining a low and stable inflation environment. Indeed, greater productivity would allow reaching higher growth rates of aggregate demand without generating pressures on prices.

In this context, the importance of a labor reform, like the one currently being discussed in the Congress, is noteworthy. Such a reform could increase this market's flexibility, inducing a better resource allocation towards their most productive uses and, in particular, a higher number of formal employments. Thereby, the country's comparative advantages could be better used as well. The adoption of better technologies, resulting from this reform, together with an increase in productivity and competitiveness, could have positive effects on the country's growth, population's income and the society's welfare. The approval of the reform to the General Public Accounting Act (*Ley General de Contabilidad Gubernamental*), recently discussed in the Congress, would also be beneficial, since it would lead to greater transparency and accountability in the spending patterns of the three government levels.

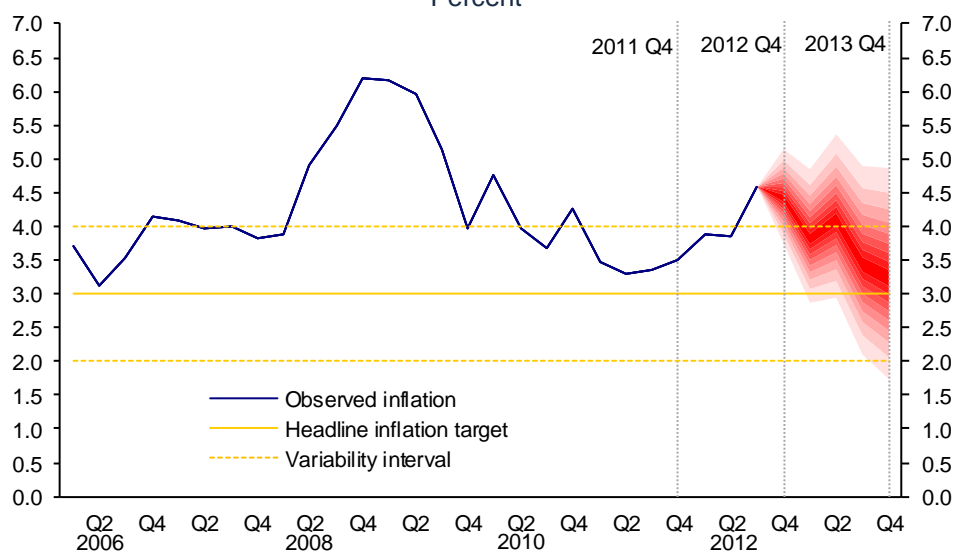
**Inflation:** The inflation forecast does not show a significant change with respect to that in the previous Inflation Report. Annual headline inflation is expected to have changed its trend during the third quarter of 2012. Thus, it is very likely that it will locate close to 4 percent by the end of 2012 and will continue falling in 2013, lying within the interval of 3 and 4 percent (Chart 45).

The core inflation forecast does not present important changes as compared to that of the last Inflation Report either. Thus, annual core inflation is expected to decrease further in the following months, locating close to 3 percent at the end of 2012, and to fluctuate around this level in 2013 (Chart 46).

Besides the monetary policy stance, the downward trajectory of inflation is anticipated to be determined by the following elements:

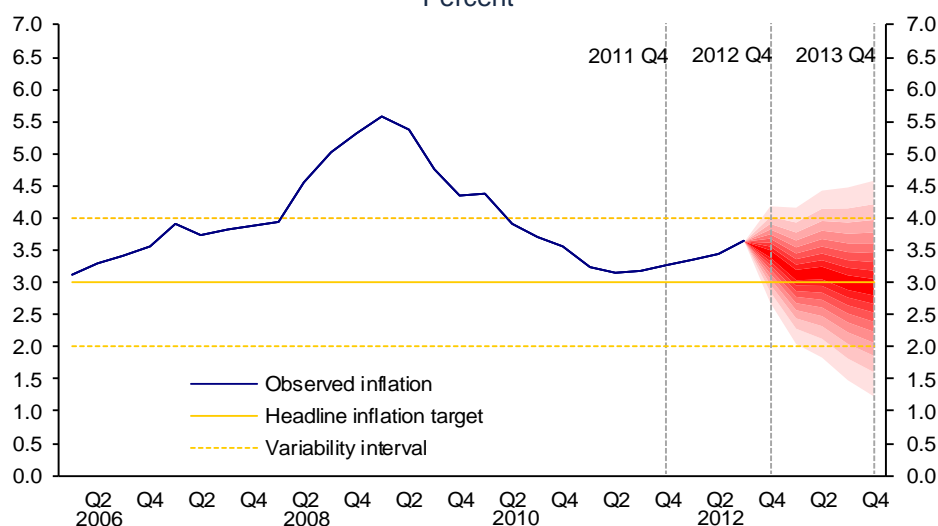
1. A global environment of weak growth.
2. Absence of considerable demand pressures on the Mexican economy, even if the degree of slackness in the labor market has decreased.
3. Intensified competition in some sectors, especially telecommunication and aviation industries.
4. Fading of the effect that some food price shocks had on inflation during 2012.
5. The MXN appreciation after the announcement of a further round of monetary easing (QE3) in the U.S.

**Chart 45**  
**Fan Chart: Annual Headline Inflation <sup>1/</sup>**  
 Percent



<sup>1/</sup> Quarterly average of annual headline inflation.  
 Source: INEGI and Banco de México.

**Chart 46**  
**Fan Chart: Annual Core Inflation** <sup>1/</sup>  
 Percent



<sup>1/</sup> Quarterly average of annual core inflation.  
 Source: INEGI and Banco de México.

Even though inflation is estimated to have presented a change in trend in the third quarter of 2012, upward risks have markedly increased in the short run, particularly in an environment where the output gap has closed:

- A. The situation that prevails in the national production of eggs due to the outbreak of the avian influenza.
- B. Unfavorable climatic conditions in North America that affected international grain prices and, thus, meat product prices.
- C. The possibility that agricultural and livestock product prices increase further due to production disruptions.
- D. The possibility that prices and/or fares of public goods and services increase more than has been foreseen.
- E. The return of volatility in international financial markets that cannot be ruled out.
- F. Derived from the fact that inflation has remained at high levels during various months, the risk of observing a widespread contamination of the wage setting process in the economy. The main concern is that the elevation of inflation above the upper bound of the variability interval is a topic that received more public attention.

In this context, Banco de México's Board of Governors considers that the increase in inflation during the third quarter of 2012 was mainly due to shocks that should prove to be transitory, and that there is so far no evidence of a process of generalized price increases. Thus, the Board decided to maintain its monetary policy stance unchanged during the period analyzed in this Inflation Report.

However, if shocks to inflation persist, even if presumed to be transitory, and if the changes in the trend of headline and core inflation are not confirmed, the Board estimates that it would be appropriate to adjust the reference rate upwards shortly thereafter, in order to consolidate the anchoring of inflation expectations, to prevent the contamination of the rest of the price formation process in the national economy and to avoid jeopardizing the convergence of inflation to the 3 percent permanent target.

## Annex

### Calendar of Monetary Policy Decision Announcements, Minutes of the Board of Governors' Meetings regarding Monetary Policy Decisions and Inflation Reports in 2013

Table 1 of this annex presents the calendar for the year 2013 of the monetary policy announcements, as well as the publication of the Minutes of the Board of Governors' meetings regarding the monetary policy decisions and the quarterly inflation reports.

**Table 1**  
**Calendar for 2013**

Month	Announcements of Monetary Policy Decisions	Minutes of the Board of Governors' Meetings regarding Monetary Policy Decisions	Inflation Reports <sup>1/</sup>
January	18		
February		1	13
March	8	22	
April	26		
May		10	8
June	7	21	
July	12	26	
August			7
September	6	20	
October	25		
November		8	6
December	6	20	

<sup>1/</sup> The Inflation Report that will be published on February 13, 2013 corresponds to the fourth quarter of 2012, the one to be released on May 8, to the first quarter of 2013, the one of August 7, to the second quarter of 2013, and, finally, the one to be presented on November 6, to the third quarter of 2013.

The calendar considers 8 dates for the announcement of monetary policy decisions in 2013. Two weeks after each announcement the corresponding Minutes will be published. Nevertheless, as in previous years, Banco de México reserves the right to announce changes in the monetary policy stance at dates different from those previously scheduled, in the case of extraordinary events that require the Central Bank's intervention.





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