# II.

# Inflation and exchange rate

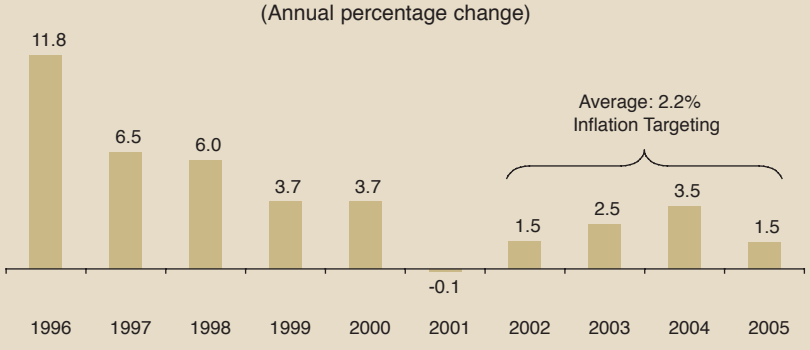
*Inflation decreased from 3.5 percent in 2004 to 1.5 percent in 2005, posting for the fourth consecutive year a rate within the target range. This evolution was mainly due to the reversal of supply shocks caused by adverse climatic conditions, which had increased inflation during 2004. The rise in the international price of oil was offset by compensatory fiscal measures.*

*The nuevo sol depreciated 4.4 percent with respect to the dollar and closed 2005 at an exchange rate of S/. 3.43 per dollar, although exhibiting a varied conduct throughout the year. Between January and August, it followed a similar downward trend to the one it had had in the previous two years due to the better position of the balance of payments. In the rest of the year, the exchange rate showed an upward tendency, which was associated with an increased demand for forward contracts in dollars and with portfolio movements towards this foreign currency. In real terms, the nuevo sol depreciated 3.8 percent.*

## 1. Inflation

Inflation during 2005, measured as the changes in the consumer price index for Metropolitan Lima over the last 12 months, reached 1.5 percent and was for the fourth consecutive year within the range of the monetary policy target announced by the Central Bank (2.5 percent, plus or minus 1 percentage point). Between 2002 and 2005, in a context of sustained growth and price stability, annual average inflation was 2.2 percent. It is worth noting that the combination of these levels of inflation together with a sustained growth of per capita GDP had been unheard of in the country since the 1960s.

GRAPH 5
**INFLATION**
(Annual percentage change)




Source: INEI.

TABLE 16
**INFLATION**
(Annual change)

| | Weighting | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **I. CORE INFLATION** | **60.6** | **0.73** | **1.23** | **1.23** |
| 1. Foodstuffs | 10.7 | 0.14 | 3.24 | 0.98 |
| 2. Non-foodstuff products | 49.9 | 0.85 | 0.80 | 1.28 |
| a. Goods | 23.3 | 0.08 | -0.29 | 0.71 |
| b. Services | 26.6 | 1.53 | 1.75 | 1.77 |
| **II. NON CORE INFLATION** | **39.4** | **5.16** | **6.75** | **1.87** |
| 1. Foodstuffs | 22.5 | 3.73 | 5.82 | 1.62 |
| 2. Non-foodstuff products | 16.9 | 7.00 | 7.90 | 2.17 |
| a. Fuel | 3.9 | 8.94 | 17.77 | 6.89 |
| b. Transportation | 8.4 | 10.99 | 3.49 | 1.29 |
| c. Utilities | 4.6 | -1.98 | 6.19 | -1.72 |
| **III. Total** | **100.0** | **2.48** | **3.48** | **1.49** |

Source: INEI.

In 2005, there was a gradual reversal of the negative supply shocks of 2004 which were associated with a lower supply of food products and with a rise in the international prices of wheat and fuels. As weather conditions returned to normal, the prices of certain food products fell this was the case of rice, sugar, and wheat.

## The price of foodstuffs

The price of **rice**, which had risen 19 percent in 2004, decreased 6 percent in 2005 due to a larger production of this crop, which resulted from the greater availability of water in the northern coastal areas of the country. The number of hectares sown with rice during the August 2004-July 2005 campaign grew to 351 thousand.

Likewise, the price of **sugar**, which had increased 23.3 percent in 2004, fell 1.2 percent in 2005 due to an increase of imports of this product.

The lower international quotation of wheat, which recorded an average fall of 3.5 percent, had a positive impact on the price of wheat flour that resulted in a slight decrease in the local price of **bread**. The price of this product had risen 13 percent during 2004.

Other foodstuffs, such as onion, papaya, and potato recorded price increases. The price of onion increased 77 percent due to lower sown areas in Arequipa, the main supplier of this product for the capital city, while the price of papaya rose 80 percent as a result of phytosanitary problems in the area of Huánuco. The 26 percent increase in the price of potato, on the other hand, was explained by a lower output in both Huánuco and Lima, two of the major potato producing areas.

## The price of fuels

The price of **fuels** was affected by a considerable increase in the international price of oil, which rose from US$ 43 to

US$ 59 per barrel between December 2004 and December 2005. This evolution was associated with the increased world demand for this product given China's significant economic growth, security problems in the Middle East and Nigeria, and the damages produced by hurricane Katrina in the U.S. oil infrastructure located in the Gulf of Mexico.

In order to counterbalance the effects of these events and mitigate the impact of the increase of international prices on the domestic price of fuels, the government developed a price stabilization scheme comprising the reduction of the Excise Tax (ISC) and the elimination of tariffs in the case of liquefied petroleum gas (LPG). Moreover, other compensatory fiscal measures adopted the previous year, such as the establishment of a Fuel Price Stabilization Fund (FPSF).

The FPSF is based on a price band scheme that includes both an upper and a lower band of target prices for each kind of fuel. Through this mechanism, the government provides producers and importers with compensation each week when the reference price is above the upper band of target prices; and conversely, when the reference price is below the lower band of target prices, producers and importers contribute specified sums of money to the FPSF.

The fiscal measures implemented and the appreciation of the local currency between January and August contributed to offset the impact of the 37.2 percent increase in the international quotation of crude on the domestic prices of gasoline and kerosene, which rose 9.2 percent and 21.0 percent respectively. In addition, the elimination of the Excise Tax on liquefied petroleum gas contributed to reduce its domestic price by 10.9 percent. The fiscal cost of this set of measures amounted to approximately S/. 350 million.

TABLE 17
**FUEL PRICES**
(Annual change)

| | 2003 | 2004 | 2005 |
|---|---|---|---|
| **Fuels** | **8.9** | **17.8** | **6.9** |
| Gasoline | 9.7 | 17.7 | 9.2 |
| Gas | 4.2 | 15.3 | -10.9 |
| Kerosene | 13.0 | 20.3 | 21.0 |
| Petroleum (WTI) | 8.9 | 34.9 | 37.2 |

Source: INEI and Bloomberg.

## Rates of public utilities

**Public utility** rates dropped 1.7 percent on average. **Electricity** rates decreased 2.5 percent due to a conversion process by which natural gas replaced liquid fuels in the plants of Ventanilla TG3 and TG4 in 2004; to the onset of operations at the hydroelectric station of Yuncán; and to the reconversion of the power plant of Ventanilla TG4 to a combined cycle, which was scheduled to take place in 2006.

TABLE 18
**PRICE OF PUBLIC UTILITIES**
(Annual change)

| | 2003 | 2004 | 2005 |
|---|---|---|---|
| **Public utilities** | **-2.0** | **6.2** | **-1.7** |
| Electricity | -4.6 | 12.0 | -2.5 |
| Telephone | 0.3 | -2.0 | -7.0 |
| Water | 0.9 | 3.0 | 5.2 |

Source: INEI.

Finally, **telephone** rates fell 7.0 percent due to Osiptel's implementation of productivity-increasing factors, which represented an 8.5 percent reduction in local calls and a 6.3 percent reduction in long-distance calls.

### Core inflation

The excessive variability of some goods included in the consumer basket may affect the measure of inflation through the Consumer Price Index (CPI), either because these goods face supply shocks and/or because the prices of these goods are controlled. The measure of inflation resulting from excluding the most volatile items is known as "core" inflation.

Since variations in this index are mainly caused by demand pressures, this is an indicator that provides greater information on the state of the output gap and its effect on the level of future prices. Core inflation in 2005 was 0.7 percent, a level that resulted mainly from the price rise recorded in terms of services (1.8 percent) given that there was almost no price variation in terms of goods.

## 2. Exchange rate

In nominal terms, the nuevo sol increased from S/. 3.28 per dollar in December 2004 to S/. 3.43 per dollar in December 2005, which represented a depreciation of 4.4 percent. It is worth mentioning here that the local currency had appreciated 5.5 percent against the dollar in 2004.

The evolution of the nuevo sol, in nominal terms, exhibited two clearly different

BOX 2

**CORE INFLATION**

The Consumer Price Index (CPI) is commonly used to measure inflation, a variable comprising both permanent and transitory components. For monetary purposes, an indicator considering only the permanent component of inflation is required: core inflation. Otherwise, greater volatility might be generated if the monetary policy adopted were to assume that transitory ups or downs in the CPI are permanent.

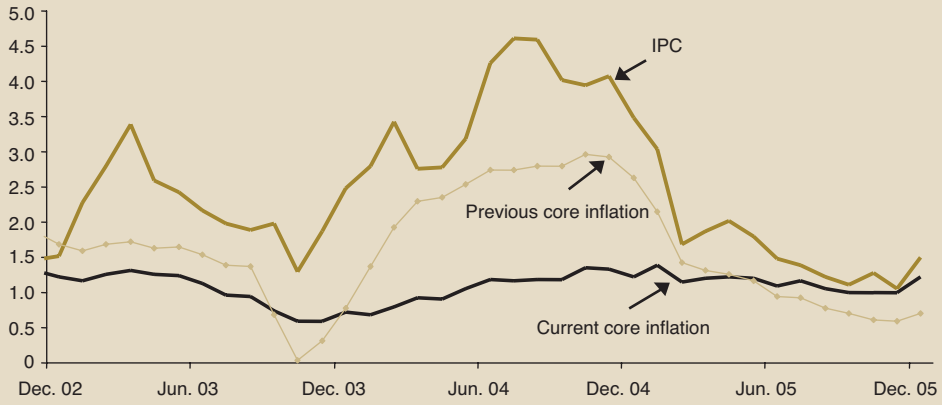
The indicator of core inflation used until 2004 excluded from IPC calculation those items that exhibited the highest variability in terms of monthly price percentage variation in the period January 1995 – December 2005, although fuels –gasolines and kerosene–, public utilities, public urban and inter-urban transport fares were always excluded, regardless of their degree of variability.

The prices of fuels were excluded because they are mainly determined by the evolution of the international prices of oil, independently of the monetary policy implemented. Likewise, the prices of public utilities were also excluded because they are subject to price control. Finally, transport fares were also excluded given that, although rarely, they are significantly readjusted, and thus generate distortions in the measure of inflation's trend.

However, there are other products whose prices did not show a strong variability in the January 1995-December 2005, but depend significantly on the evolution of international quotations or are influenced by supply shocks, and should therefore be excluded from the calculation of core inflation. This is the case of bread, noodles, and edible oils –whose prices depend on the international quotations of wheat and soy oil– and of rice, whose price greatly depends on climatic conditions. Thus, the international prices of wheat and soy increased strongly in the second half of 2003 and in the beginning of 2004, while the price of rice was affected by a drought in the northern coast of Peru during 2004.

In this way, the previously used measure of core inflation has been replaced by a new measure that also excludes the prices of bread, rice, noodles, and edible oils. This new measure isolates better the effects of the supply shocks that were observed during 2004.

**ALTERNATIVE MEASURES OF INFLATION**
(Variation last 12 months)




Source: INEI.

**ALTERNATIVE MEASURES OF INFLATION**
(Percentage changes)

| Year/ variable and CPI % | CPI 100.0% | Previous core inflation 68.3% | Current core inflation 60.6% |
|---|---|---|---|
| 1995 | 10.23 | 11.52 | 10.50 |
| 1996 | 11.84 | 9.57 | 9.56 |
| 1997 | 6.46 | 7.22 | 7.86 |
| 1998 | 6.01 | 7.44 | 7.17 |
| 1999 | 3.73 | 3.94 | 4.95 |
| 2000 | 3.73 | 3.11 | 3.45 |
| 2001 | -0.13 | 1.06 | 1.30 |
| 2002 | 1.52 | 1.69 | 1.23 |
| 2003 | 2.48 | 0.77 | 0.73 |
| 2004 | 3.48 | 2.63 | 1.23 |
| 2005 | 1.49 | 0.70 | 1.23 |
| Accumulated percentage change: Jan. 95 - Dec. 05 | 63.4 | 61.4 | 60.8 |
| Standard deviation: 1995-2005 | 0.45 | 0.35 | 0.32 |

Source: INEI.

conducts during 2005. Between January and August, it showed an appreciatory tendency that followed the trend initiated in 2003 as a result of sound economic fundamentals, a favorable international context, and expectations of stability in the domestic context during the first seven months of the year.

Since August, however, the evolution of the local currency began to detach from its economic fundamentals, basically due to the currency portfolio restructuring of different economic agents and to the political uncertainty that arose in connection with the proximity of the 2006 electoral process.

The evolution of the exchange market was influenced by the behavior of the bank's balance of net forward sales of foreign currency. During the first three quarters, this balance showed a decreasing trend, which was mainly explained by increased forward sales of foreign currency by the public given lower expectations of depreciation of the local currency. In the forward market, some 90-day contracts even generated appreciatory expectations.

Conversely, the balance of net forward sales increased in the last quarter of the year from US$ 294 to US$ 1,027 million –a level that had not been reached since September 2002–, and grew, in December alone, by US$ 581 million.

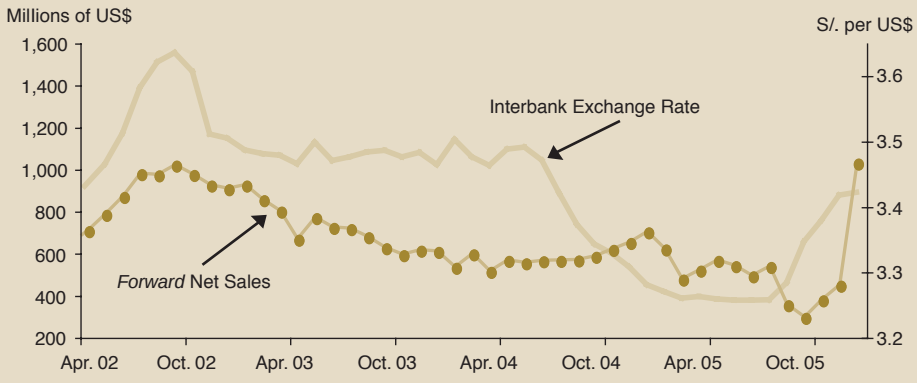
On the other hand, banks' exchange position decreased from US$ 340 to US$ 327 million between December 2004 and September 2005. In the following months, exchange expectations in connection to the aforementioned factors led banks to increase their foreign exchange position by approximately US$ 150 million.

The Central Bank interventions in the exchange market were aimed at reducing the volatility of the exchange rate, at accumulating international reserves, and to attend public debt service payments.

Between January and August, a period marked by appreciatory pressures, the Central Bank bought US$ 3,130 million in the exchange market and sold US$ 1,485 million to the public sector. The purchase of dollars by the Public Treasury concentrated mostly in July, when US$ 375 million were bought for an early repayment of the debt with the Paris Club.

Depreciatory pressures were recorded between August and December. These pressures were originated mainly by a greater demand for foreign currency for forward operations (US$ 737 million) and by purchases on the spot market by institutional investors (US$ 498 million). The Central Bank intervened in the exchange market to

GRAPH 6
**NET FORWARD SALES AND INTERBANK EXCHANGE RATE**




Source: BCRP.

soften these pressures and made operations for a total of US$ 780 million, including US$ 431 million sold on the spot market and US$ 350 million placed as BCRP Readjustable Certificate of Deposits (RCDs), which are foreign exchange-indexed securities as investors' exchange risk hedge.

## Real exchange rate

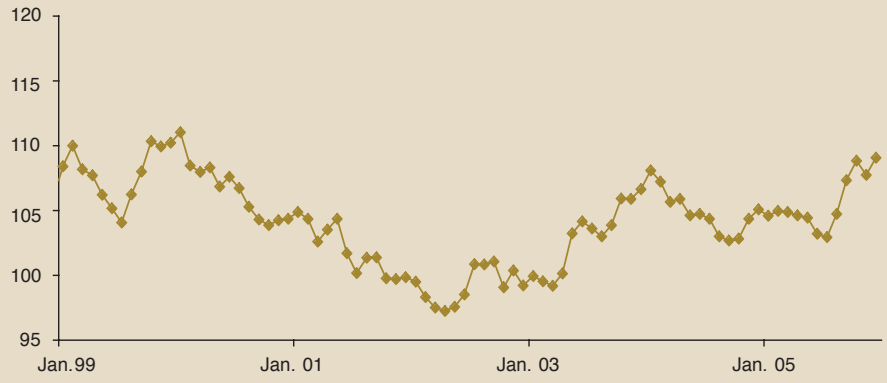
The real exchange rate uses one same currency to compare the price of a country's currency with that of another country's currency (bilateral real exchange rate), or with that of a group of countries (multilateral real exchange rate). In Peru, the real bilateral exchange rate with the U.S. dollar increased 6.3 percent, while in terms of our main commercial partners increased 3.8 percent.

The evolution of the real exchange rate was influenced by the appreciation of the dollar against most of the strong currencies,[1] which reflected both the sound economic growth of the United States of America and the higher differential between interest rates that favored the dollar. The latter was influenced by the cycle of interest rate rises implemented by the U.S. Federal Reserve (FED). As a result of the FED's raising its interest rate from 2.25 to 4.25 percent, holding portfolios in dollars became more attractive for investors.

## Country risk

During 2005, the country risk indicator for Peru, measured by the EMBI+Peru spread –the index elaborated by the investment bank J.P. Morgan on the basis of a sovereign Peruvian bond and a U.S. Treasury bond with a similar maturity– dropped significantly in comparison with other economies in the region. In December 2004, the country risk was 220 basis points, but decreased throughout 2005 to reach its historical minimum of 134 basis points in the month of October.

GRAPH 7
**REAL EXCHANGE RATE INDEX**
**(1994=100)**




Source: BCRP.

1/ By the end of the period, the euro had depreciated 13 percent, while the yen and the pound had depreciated 14 percent and 11 percent respectively.

TABLE 19
**NEW SOL VARIATIONS DURING 2005**
Against the currencies of our main commercial partners

| | Nominal | Real |
|---|---|---|
| United State | 4.4% | 6.3% |
| Euro zone | -7.5% | -6.7% |
| Japan | -8.4% | -9.8% |
| Brazil | 24.1% | 29.3% |
| United Kingdom | -5.6% | -4.9% |
| Chile | 17.0% | 19.6% |
| China | 7.0% | 7.6% |
| Colombia | 10.7% | 14.3% |
| Mexico | 10.1% | 12.1% |
| Argentina | 2.0% | 12.9% |
| Korea | 7.3% | 8.5% |
| Taiwan | 1.0% | 1.7% |
| Venezuela | -6.8% | 5.0% |
| Canada | 9.3% | 10.0% |
| Bolivia | 5.4% | 9.1% |
| **Basket** | **1.9%** | **3.8%** |

Source: BCRP.

Among other factors, this evolution was influenced by the economy's strong macroeconomic indicators, by a positive trade balance, by Standard and Poor's upgrading of the country's economic outlook from "stable" to "positive", and by the good reaction that the early repayment of Peru's external debt to the members of the Paris Club generated among investors.

In the last quarter of 2005, the country risk indicator increased and logged 206 basis points at the close of the year, influenced by the uncertainty brought about by the closeness of the elections that were to take place in April 2006.

GRAPH 8
**COUNTRY RISK**
(Basis points)


Source: BCRP.