

INFLATION

REPORT

May 2008

Recent trends and macroeconomic forecasts



CENTRAL RESERVE BANK OF PERU

INFLATION REPORT:

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CENTRAL RESERVE BANK OF PERU

CONTENT

FOR	EWORD	5
SUN	IMARY	7
I.	International environment	13
II.	Economic activity	26
III.	Balance of payments	38
IV.	Public finances	50
V.	Monetary policy	55
VI.	Financial markets	63
VII.	Inflation	76
VIII.	Balance of risks	91

<u>Boxes</u>

•	Are oil shocks in this decade different from the ones observed	
	in the seventies?	22
•	Inflationary pressures in emerging markets	23
•	Saving generated by the use of natural gas	34
•	Competitiveness and growth	35
•	Raising competitiveness in Peruvian ports	48
•	Reserve requirements as a monetary policy tool	60
•	Indicators of the credit boom	74
•	Recent developments in the rice market	86
•	Measuring of uncertainty in forecasts	94

This *Inflation Report* was drawn up using preliminary data on gross domestic product, balance of payments, operations of the non-financial public sector, and monetary accounts as of March 2008; and data on inflation, exchange rate, and financial markets as of May 2008.

Foreword

- According to the Peruvian Constitution, the Central Reserve Bank of Peru (BCRP) is a public autonomous entity whose role is to preserve monetary stability.
- Monetary stability is one of the basic conditions required to achieve high and sustained economic growth as it favors the appropriate environment for saving, for investment, and for every economic decision in general.
- In order to consolidate this goal, since 2002 the Bank's monetary policy has been based on an inflation targeting scheme, with an inflation target of 2.0 percent, plus or minus one percentage point (between 1.0 percent and 3.0 percent). The Central Bank's target is aimed at anchoring inflation expectations at the level of inflation in developed countries and reflects the BCRP's permanent commitment with monetary stability, regardless of temporary shifts caused by factors beyond the control of monetary policy.
- Compliance with the inflation target is permanently evaluated; that is, the Central Bank considers the accumulated rate of inflation in each month and not only at year's end. In the event of any deviation of inflation from the target, the Central Bank implements the necessary measures to return inflation to the target considering the lags with which monetary policy operates.
- At the beginning of each month, and according to a previously announced schedule, the Board of the BCRP approves a reference rate for the interbank lending market. This interest rate affects the entire array of domestic economic variables and inflation through several channels in different timeframes and, therefore, this rate has to be determined on the basis of macroeconomic forecasts and simulations.
- The economic studies based on which monetary policy decisions are made are disseminated to generate the public's understanding of the consistency of the decisions

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adopted and to ensure that economic agents' expectations take these forecasts and simulations into account. With this aim, the Central Bank publishes its Inflation Report every four months. The following Inflation Report will be published on October 10, 2008.

 This Inflation Report analyzes the evolution of the main economic developments observed in the first months of 2008. The forecast scenario included herein is consistent with monetary lags during the 2008-2010 macroeconomic horizon.

Summary

- i. As forecast in our Inflation Report of January, inflation remained above the upper band of the monetary target range (3 percent) in the first five months of the year, increasing from 3.9 percent in December 2007 to 5.4 percent in May. This result was mainly due to an 9.2 percent increase in the prices of food, while the prices of the rest of goods and services showed an average increase of 1.9 percent, a rate similar to the Central Bank's inflation target (2 percent).
- ii. This increase in the prices of food continued to be associated with the rises observed in the international prices of basis inputs used to elaborate products such as bread, pasta, and edible oil. The higher international prices of other foodstuffs, such as milk and rice (not directly related to domestic price formation), affected the domestic prices of these products. These five products accounted for 32 percent of the accumulated increase seen in the Consumer Price Index (CPI) between January and May (2.7 percent).

Moreover, the domestic supply of goods and services was also affected by climatic problems early in the year. Excessive rainfall altered not only the yield of crops such as onion, tomato and vegetables, but also generated landslides that affected roads and caused the prices of fruits, such as papaya, to rise. These constraints of domestic supply account for 40 percent of accumulated inflation as of May.

iii. This higher inflation has translated into increased inflation expectations, which in the case of economic analysts have increased from 3.0 to 4.0 percent for this year; from 2.5 to 3.0 percent for 2009, and from 2.1 to 2.5 percent for 2010. Although inflation would show a downward trend in the following years, it is expected to fall above the upper band of the BCRP inflation target in 2008 and 2009.

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However, the possibility that expectations of higher inflation should imply firms' decisions of raising prices has not been significantly manifested. Thus, a slightly higher proportion (35 percent) of the firms participating in the macroeconomic surveys carried out by the BCRP expressed their intention of raising their prices in the next three months (32 percent in January).

iv. Data on economic activity in the first quarter of the year reveals an important dynamism in GDP and domestic demand, with growth rates of 9.3 and 10.8 percent respectively. Therefore, the forecasts on the growth of GDP and domestic demand for 2008 are revised upwards from 7 to 8 percent and from 8.2 to 9.8 percent respectively in this Inflation Report. Likewise, the forecasts for 2009 have also been adjusted upwards: from 6.3 to 6.5 percent in the case of GDP and from 7.2 to 8.0 percent in the case of domestic demand.

The main adjustments in terms of the growth of domestic demand during this year are associated with private consumption (adjusted from 5.8 to 6.6 percent) and with public sector's expenditure in investment (adjusted from 33.0 to 42.9 percent), while private investment remains at an annual growth rate of 20.4 percent.

This economic dynamism, higher than originally considered, implies that the forecast gap between GDP and the potential output would be around two percent in 2008, since the potential output is estimated to be growing at a rate of 7.2 percent due to the growth of investment and productivity in our country.

- v. Because of the risks that could lead inflation expectations to spread onto most of the items of the consumer basket, the Central Bank has adopted a clearly anti inflationary stance in order to steer inflation and inflationary expectations to gradually return to a level within the monetary target range.
- vi. The adjustment of monetary policy has implied first of all adjusting the reference interest rate by 100 basis points, raising it from 4.5 percent in June 2007 to 5.5 percent in April 2008. Additionally, this decision was complemented by raising the rates of reserve requirements in both domestic and foreign currencies. These actions have favored a faster adjustment of financial conditions in a context marked by an unprecedented inflow of significant external capitals oriented to the acquisition of short-term assets in domestic currency.

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Between December 2007 and May 2008, prime interest rates on loans increased from 5.6 to 6.2 percent in the case of operations in domestic currency and from 6.4 to 10.1 percent in the case of loans in foreign currency.

- vii. The BCRP's annual flow of accumulated net international reserves as of end May amounted to US\$ 7,170 million, a result explained mainly by the Central Bank's interventions in the exchange market (US\$ 8,728 million), in a context of high downward volatility of exchange associated with the significant inflow of short term capitals observed in this period. Following the Central Bank's implementation of reserve requirement measures and constraints to holdings of BCRP Certificates of Deposit, this inflow of capitals has been offset. Thus, the Central Bank did not intervene in the exchange market between April 18 and June 11 (36 working days). This was one of the longest episodes of non-intervention in the exchange market since the Inflation Targeting scheme was first adopted in 2002.
- viii. The inflation forecast included herein considers a forecast horizon up to 2010. In this period, inflation would show a downward trend, returning to levels within the target range by mid-2009. In this evolution inflation is forecast to still fall above the upper band of the target range at the end of this year, after having recorded a maximum rate of 5.55 percent in March.

The graph on the inflation forecast density shows a probability of 42 percent that inflation will still not converge to the target range (between 1 and 3 percent) in 2009, and a probability of 26 percent that inflation will not converge to the target range in 2010.

- ix. The main risks that could deviate our inflation forecasts from the sequence considered herein would indicate an upside bias and include the following:
 - Higher prices of fuels. The central forecast considers a gradual reversal of the recent rises seen in the international prices of fuels and the maintenance of a sustainable scheme in the Fuel Stabilization Fund. Should the international market of oil show higher rises that cannot be offset by fiscal measures, the price of fuels would increase above the levels considered in the forecast scenario.

In this situation, the monetary policy stance would remain unaltered as long as inflation expectations do not increase and as long as their impact on inflation is only temporary.



INFLATION FORECAST DENSITY



Note: The graph shows the inflation prediction bands along the forecast horizon. The darkest band around the central forecast represent a 10 percent probability of ocurrence, while all the other bands represent a 90 percent probability of ocurrence.

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Higher prices of food products. The central scenario considers that the supply-demand imbalances of food commodities will decline throughout the forecast horizon, and that the growth of agricultural production will be lower this year due to climatic conditions and to the higher costs of fertilizers -although the latter situation should be overcome in the next 2 years. However, the risk remains that higher prices may persist over time or even increase if international or domestic supply conditions should deteriorate or if the demand for biofuels should continue to grow, in which case the domestic prices of food would tend to increase.

In this context, the monetary policy stance would remain unchanged as long as inflation expectations do not increase and their impact on inflation is only transitory.

• Increased domestic demand pressures. The central scenario considers that aggregate demand will follow a growth path showing levels compatible with the estimated growth of the potential output in the forecast horizon (between 7 and 7.5 percent). A higher growth of aggregate demand -due to higher public or private expenditure- that is not coupled by a higher potential output of the economy would generate demand inflationary pressures.

In this situation, the Central Bank would adopt a more restrictive monetary stance to maintain a pace of longterm sustained economic growth and to lead inflation back to the target range.

• A greater slowdown in the world economy. The international environment is characterized by a gradual reversion of terms of trade (mainly due to the higher prices of imports), a transitory slowdown of the economy in 2008 and 2009, and a slight recovery of our main trade partners in 2010. A situation of economic recession in the United States -with a severe correction in the prices of export raw materials- could generate volatility in the flow of external capitals to emerging economies and cause an additional "contractive impulse" on the dynamism of demand.

For this reason, the BCRP maintains a high level of international reserves and could intervene in the exchange market to reduce excessive volatility. If necessary, the Bank would loosen its monetary policy stance to offset downward demand pressures on inflation in the forecast horizon.

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x. The Central Reserve Bank reiterates its commitment to act on a timely basis to ensure inflation's convergence to the 2 percent target, taking into account in every case the existence of temporary factors that could transitorily deviate inflation from acceptable margins. Inflation Report. May 2008

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International environment

I.

The slowdown of the US economy accentuated significantly in the first months of 2008. The high prices of oil, an unfavorable evolution of employment, and continuous adjustments in the real estate market added onto the impact of the subprime crisis on credit conditions. Our economy is affected by the international environment through trade and financial channels. In this period, however, our economy has remained relatively isolated from these events.

Other developed economies -particularly the Eurozone, Canada and the United Kingdom- have been affected by the financial crisis. The effectiveness of monetary policy responses to this slowdown has been partially constrained by inflationary pressures associated in part with the high prices of oil and most commodities.

In this context, the forecast on global growth for the following years has been revised downward. It is estimated that our main trade partners will grow 3.3 and 3.2 percent in 2008 and 2009, respectively, and 3.7 percent in 2010.

This less favorable international environment would induce a moderate slowdown in economic growth in the next 2 years due to the lower dynamism observed in external markets -which is expected to continue in the forecast horizon- and to the lower terms of trade associated with it.

Growth, inflation and interest rates

1. A greater slowdown was observed in the US economy in the first months of the year mainly as a result of financial turbulence, which also affected other developed economies, especially the Eurozona, Canada and England. So far, the impact of this on emerging economies has been moderate, in part due to high prices of commodities¹.

¹ See Box 1 for a discussion on differences with the decade of the seventies in the case of petroleum.

Table 1

FORECAST ON GDP GROWTH IN OUR MAIN TRADING PARTNERS^{1/} (In percentage)

	Weighted trade			2	2008	2	009	2010
	2006	2006	2007	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08
<u>Trade partners ^{2/}</u>	<u>100</u>	<u>4.6</u>	<u>4.5</u>	<u>3.6</u>	<u>3.3</u>	<u>3.8</u>	<u>3.2</u>	<u>3.7</u>
North America USA Canada	29% 24% 5%	2.9 2.9 2.8	2.3 2.2 2.7	1.6 1.5 2.1	0.9 0.8 1.3	2.5 2.5 2.5	1.1 0.9 2.2	2.7 2.7 2.7
Europe Germany Spain United Kingdom	20% 4% 3% 1%	3.0 2.9 3.9 2.9	2.9 2.5 3.1 3.1	2.0 1.8 2.6 1.8	1.6 1.5 2.1 1.5	2.0 1.9 2.4 2.0	1.5 1.5 1.7 1.6	1.8 1.8 2.0 2.0
Asia China Korea Japan	21% 11% 3% 5%	7.7 11.1 5.1 2.4	7.8 11.4 4.5 2.1	7.0 10.4 4.9 1.5	6.6 9.9 4.5 1.3	6.8 9.8 5.0 2.0	6.4 9.3 4.8 1.6	6.2 9.0 4.5 1.7
Latin America Argentina Brazil Chile Colombia Mexico Venezuela	30% 2% 7% 4% 3% 3%	5.3 8.5 3.8 4.0 6.8 4.8 10.3	5.4 8.7 5.4 5.0 7.0 3.3 8.4	4.5 6.5 4.7 4.7 5.5 2.9 4.7	4.4 6.8 4.8 4.1 5.3 2.6 5.6	4.2 4.5 4.5 4.9 5.0 3.7 3.3	4.1 4.5 4.2 4.7 4.9 3.1 3.6	4.1 4.4 4.2 4.7 4.9 3.8 3.4
Note: India Russia Peru World economy: a) ^{3/}		9.7 7.4 7.6 4 0	9.2 8.1 9.0 3.8	8.2 6.9 6.9 3.2	7.7 7.2 7.5 2 8	7.0 6.5 6.5 3.3	7.0 6.7 6.6 3.0	7.0 7.0 6.5 3.6
b) ^{4/}		5.0	4.9	4.1	3.7	4.3	3.8	4.8

RI: Inflation Report.
1/ Executed data of WEO and Consensus Forecast data as of the corresponding month, IMF, and BCRP.
2/ Weighted according to the 2006 trade.
3/ Using nominal exchange rate (Source: Consensus Forecast).

4/

- Using exchange rates of purchase power parity (Source: WEO).
- 2. The outlook on growth in the **United States** has been revised significantly downwards given recent developments.

In the first quarter, GDP in the United States grew 0.9 percent. This result was influenced by: (i) the deterioration of credit conditions in a context of strong turmoil in financial markets, (ii) corrections in the real estate market, continuing with the trend observed in 2007, (iii) the evolution of employment

Table 2

MAIN INDICATORS ON USA AND CANADA 1/

			20	08*	20	2010*	
	2006	2007	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08
GDP (percentage change)							
UŜĂ	2.9	2.2	1.5	0.8	2.5	0.9	2.7
Canada	2.8	2.7	2.1	1.3	2.5	2.2	2.7
Inflation (average)							
USA	3.2	2.8	2.8	3.8	2.1	2.4	2.2
Canada	2.0	2.1	1.6	1.7	2.0	2.0	2.0
Current account (percentag	e of GDP)						
USA	-6.2	-5.3	-5.0	-4.3	-4.5	-4.2	-4.1
Canada	1.6	0.9	0.2	-0.9	-0.5	-1.2	-0.8
Fiscal deficit of the governr	nent						
(percentage of GDP)							
USA	-2.6	-2.5	-2.9	-4.5	-2.9	-4.2	-
Canada	1.0	1.0	0.3	0.1	0.3	0.0	-

1/ Source: Consensus Forecast, IMF, Investment banks and BCRP.

Forecast.

(with losses of jobs in the January-April period), and (iv) the strong increase seen in the prices of petroleum and other commodities.

In this context of economic slowdown, the FED's policy rate was reduced by 225 points to 2 percent, thus accumulating a reduction of 325 points since September 2007. These measures were complemented by strong injections of liquidity and by the enhancement of collateral instruments by the FED in coordination with other central banks in order to counterbalance liquidity pressures in money markets. The government also adopted a series of measures, including tax incentives for individuals and firms with an estimated cost of US\$ 150 billion in the year.

Additionally, specific measures were implemented to face the mortgage crisis, including the greater intervention of government-sponsored agencies in the mortgage market and providing federal guarantees to a greater number of mortgage borrowers.

On the other hand, the US economy is also being affected by inflationary pressures. Annual inflation by April was 3.9 percent, although core inflation measured by the personal consumption expenditures price index (the indicator used by the FED) was 2.1 percent, slightly above the tolerance margin accepted by the Federal Reserve (between 1 and 2 percent).

Considering these developments, the forecast on growth in the United States for 2008 and 2009 has been revised downwards to 0.8 and 0.9 percent respectively, increasing to 2.7 percent in 2010. This is based on the assumption that the slowdown observed in the fourth quarter of 2007 will continue.

This forecast is consistent with corrections in the real estate market and with a slowing of consumption, which would be affected by a reduction of wealth (associated with the lower prices of houses), the evolution of employement, and increases in the prices of fuels and food. Moreover, lower corporate gains and the adjustment of credit conditions would affect the future evolution of non residential investment. The impact of these factors would be partially compensated by a reduction in the FED's interest rates, by fiscal measures and by some dynamism in the export sector due to the depreciation of the dollar.

3. Our main trade partners in **Europe** are forecast to grow 1.6 percent in 2008 and 1.5 percent in 2009, showing thereafter a recovery since 2010 when they would grow 1.8 percent. This implies a slowdown compared to the growth rate observed in 2007 (2,9 percent).

Graph 1 REFERENCE INTEREST RATE JUNE 2008 ^{1/}



1/ To June 12, 2008. Source: Central Banks and Bloomberg.

Graph 2

FED MONETARY POLICY INTEREST RATE

(In percentage)



The deceleration in the **Eurozone** in the next years would be explained by the evolution of industrial activity and by the effect of the appreciation of the euro on the export sector. Like in the United States, investment would be affected by lower corporate gains and by the adjusment of credit conditions.

Table 3

MAIN INDICATORS ON EUROPE 1/

			2008*		20	2010*	
	2006	2007	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08
GDP (percentage change)							
Germany	2.9	2.5	1.8	1.5	1.9	1.5	1.8
Spain	3.9	3.1	2.6	2.1	2.4	1.7	2.0
United Kingdom	2.9	3.1	1.8	1.5	2.0	1.6	2.0
Inflation (average)							
Germany	1.7	2.1	2.1	2.5	1.7	1.9	1.8
Spain	3.5	3.0	3.3	3.9	2.6	2.6	2.5
United Kingdom	2.3	2.3	2.3	2.7	2.0	2.2	2.2

1/ Source: Consensus Forecast and BCRP.

Forecast

The economic evolution of the Eurozone has been coupled by higher inflationary pressures, explained in part by the price rises seen in energy and food. In this context, the European Central Bank (ECB) maintained the interest rate at 4.0 percent. Given the recent evolution of inflation (which reached 3.3 percent in April) and the statements of the ECB, no reduction is expected in the ECB interest rate in the short run.

4. Outside the Eurozone, the economy of the **United Kingdom** continued to slow down in the first quarter of 2008 due to corrections in its real estate market and to lower activity in the service sector (especially financial services). Growth in the UK in the next three years is estimated to range between 1.5 and 2.0 percent due also to the effects of credit conditions adjustments on consumption and investment.

Furthermore, monetary policy actions to face the risks of economic slowdown would be constrained by higher inflation (inflation reached an annual rate of 3 percent in April), which should converge to levels of around 2 percent by the end of the decade.

5. After growing 2.1 percent in 2007, **Japan** would grow 1.3 percent in 2008 and 1.6 percent in 2009. Recent indicators of activity would be showing a weakening of investment, as reflected in the drop of business confidence. Likewise, after the adjustment observed in the second half of 2007, residential investment showed a lower dynamism than









expected. In addition to this, the appreciation of the yen would also impact the return of export firms.

6. Although they continue to show significantly higher growth than developed economies, a moderate slowdown is expected in **emerging economies** in the next years. After growing 11.4 percent in 2007, **China** would grow at a rate of 9.9 percent in 2008, reflecting some contraction in the export sector in a context of lower global economic activity.

Given that this pace of growth has been taking place in a context of inflationary pressures, an annual average inflation rate of 6.4 percent is expected for 2008. Although the price of food accounts for an important part of inflation, demand pressures would also be affecting some activities.

In this scenario, the Central Bank continued raising the rate of reserve requirements in the first months of the year. Raised on four occasions and accumulating an increase of 150 bps, the rate of reserve requirements was set at 16.5 percent. In addition to this, the government implemented additional measures such as freezing the prices of energy and public utility rates.

Table 4

MAIN INDICATORS ON ASIA 1/

			20	08*	20	09*	2010*	
	2006	2007	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08	
GDP (percentage change)								
China	11.1	11.4	10.4	9.9	9.8	9.3	9.0	
South Korea	5.1	4.5	4.9	4.5	5.0	4.8	4.5	
Japan	2.4	2.1	1.5	1.3	2.0	1.6	1.7	
India	9.7	9.2	8.2	7.7	7.0	7.0	7.0	
Inflation (average)								
China	1.5	4.8	4.3	6.4	3.5	3.8	3.0	
South Korea	2.2	2.5	3.0	3.7	2.8	3.2	2.5	
Japan	0.2	0.1	0.4	0.7	0.5	0.5	1.2	
India	6.7	6.0	5.4	6.1	5.4	5.5	4.2	

1/ Source: Consensus Forecast and BCRP.

* Forecast.

7. Favored by the persistence of high commodity prices and by an important drive of domestic demand, **Latin America** would grow 4.4 percent on average this year, showing a lower growth rate than in 2007 (5.4 percent). This lower growth in 2008 would be explained in part by the slowdown of growth in developed economies and by the withdrawal of monetary stimulus in some economies due to the presence of inflationary pressures.

In some cases -Chile and Colombia, for example-, inflation has remained above the central banks' targets. In Brazil,

Graph 5 CHINA: ECONOMIC ACTIVITY (3-months moving average)



Jan.00 Oct.00 Jul.01 Apr.02 Jan.03 Oct.03 Jul.04 Apr.05 Jan.06 Oct.06 Jul.07 Apr.08
Industrial production
Investment in urban areas

Source: National Bureau of Statistics

inflation is still within the target range (4.5+/-2 percent), but core inflation has shown an upward trend. Because of this, central bank have raised their interest rates during 2008 and as a result of these measures, inflation is expected to gradually converge to the respective target ranges in the following three years (See Box 2 on inflationary pressures in the world).

Table 5

MAIN INDICATORS ON LATIN AMERICA 1/

			20	08*	20	2010*	
	2006	2007	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08
GDP (percentage change)							
Argentina	8.5	8.7	6.5	6.8	4.5	4.5	4.4
Brazil	3.8	5.4	4.7	4.8	4.5	4.2	4.2
Chile	4.0	5.0	4.7	4.1	4.9	4.7	4.7
Colombia	6.8	7.0	5.5	5.3	5.0	4.9	4.9
Mexico	4.8	3.3	2.9	2.6	3.7	3.1	3.8
Venezuela	10.3	8.4	4.7	5.6	3.3	3.6	3.4
Inflation (accumulated)							
Argentina	9.8	8.5	10.8	9.5	10.5	10.2	9.3
Brazil	3.1	4.4	4.4	5.1	4.2	4.4	4.4
Chile	2.6	7.8	4.3	4.7	3.3	3.5	3.2
Colombia	4.5	5.7	4.5	5.0	4.1	4.5	4.1
Mexico	4.1	3.8	3.9	4.2	3.5	3.5	3.4
Venezuela	17.0	22.5	21.1	27.0	20.5	27.6	26.1

1/ Source: Consensus Forecast and BCRP.

Forecast.

Evolution of financial markets

- 8. High volatility was observed in financial markets since the last months of 2007 due to the deterioration of liquidity conditions in developed interbank markets (as a result of the crisis of the subprime mortgage market and the risk that its impacts could spread onto other sectors in USA and other economies). Investors showed higher risk aversion, which translated into the fall of stock markets, a rise in the price of gold, a decline in the yield on US Treasury and other developed economies' bonds (flight-to-quality), as well as into an increase in the spread of emerging economies' bonds and in a reversal of carry trade operations².
- 9. The high exposure of banks in developed economies to financial securities associated with the US subprime mortgage market generated significant losses and liquidity problems in interbank markets, forcing central banks in developed economies to adopt a series of measures:

18

² Carry Trade is a strategy in which an investor sells a certain currency with a relatively low interest rate and uses the funds to purchase a different currency yielding a higher interest rate.

Graph 6 US DOLLAR AGAINST MAIN COMMERCIAL PARTNERS CURRENCY BASKET*



janus * Index of nominal exchange rate against main commercial partners (Jan.97=100). Source: Federal Reserve Board.

Graph 7 ACCUMULATED EVOLUTION OF EXCHANGE RATE AGAINST US DOLLAR: May 2008/May 2007



The **FED** reduced its interest rate and the spread between the rate charged at the discount window and the monetary policy rate, and allowed credit for US\$ 30 billion to Bear Stearns to prevent the collapse of this investment bank. A series of mechanisms were also established to inject additional liquidity into the financial system, including longer injections, greater diversity of accepted collaterals, and increasing the number of elegible institutions.

In the **Eurozone**, the CEB started injecting larger amounts of liquidity than the ones required in normal conditions through its open market operations since August 9 of 2007. Subsequently, an additional mechanism (Long Term Repo Operations) was established to inject greater liquidity through three-month and six-month funds.

In the **United Kingdom**, the Bank of England initially tried to avoid responding to liquidity problems arguing that measures to provide additional liquidity into the banking system would generate problems of moral risks. However, given the run on the Northern Rock Bank in September 2007, funds were provided to prevent the collapse of this bank.

Additionally, the Bank of England reduced its interest rates on 3 occasions (75 bps.) to face risks of economic slowdown. The amounts and collaterals of their long-term repo operations (3-month and 6-month funds) were increased and a new mechanism (Special Liquidity Scheme) was implemented in April to exchange treasury bonds for a wider number of accepted collaterals (initially for \$ 50 billion).

These measures contributed to relatively calm interbank markets, as reflected in the evolution of the spread of three-month rates between the libor and the yield on the treasury bond, which after having remained at high levels since August 2007, started to reduce as of April this year, although without reaching the levels observed prior to the liquidity crisis.

10. Significant falls in **stock markets**, affecting especially developed economies, were observed between November 2007 and March 2008. Although these falls stopped since April, stock markets still show some volatility.

The **dollar** kept depreciating in international markets. The US dollar index, global indicator that measures the US dollar against other currencies, dropped 3 percent between January and May 2008, accumulating a 24 percent decline since December 2002.

11. The depreciation of the dollar against the **euro** is in part explained by the differentiated conduct of monetary interest rates. While the ECB maintained its rate, the FED cut it four times in 2008, as a result of which the spread moved from favoring the United States by 25 basis points at end 2007 to favoring the Eurozone by 200 basis points since end April of 2008.

The evolution of the dollar in the next months would be influenced, among other factors, by the monetary policy responses adopted by the FED and the ECB in the current context, marked simultaneously by a slowing of economic activity and greater inflationary pressures.

The **yen** has also strengthened so far this year. Investors' increased perception of risk led to a reversal of carry trade operations, which was one of the causes of the depreciation of the yen over the past few years.

Year to date, most Latin American currencies continue showing an appreciatory trend as a result of the generalized depreciation of the dollar, better fundamentals in the region, and carry trade operations (particularly due to the cycle of rate rises associated with greater inflationary pressures in the region).

The appreciation of some currencies has led central banks to adopt several types of measures. In some cases, central banks have implemented measures affecting external capitals (as in Brazil and Colombia), while in others, they have increased exchange interventions (as in Chile whose central bank began to intervene in the exchange market after a long period of non intervention).

12. The yield on the **US Treasury bonds** showed a stronger decline in the first quarter of 2008 since investors sought less risky assets (flight to quality) given turbulence in financial markets and greater risks of a global economic slowdown.

The yield on the 2-year bond and the 10-year bond reached 1.34 percent and 3.31 percent respectively in mid-March, showing levels that had not been observed since mid-2003. However, as from April, this evolution has reverted due to relative calm in the financial markets and to lower risks of a severe recession in the United States.

As regards the debt of emerging economies, in the first months of 2008 the spreads of the sovereign debt, measured

Graph 8 YIELDS ON THE US TREASURY BOND (In percentage)



by the EMBI+, showed moreate rises associated with the crisis of the US subprime mortgage market. However, the spreads have remained stable since April.

Table 6

SPREADS OF EMERGING MARKETS*

(In basis points)

	2003	2004	2005	2006	2007	2008 May	Variation 2008 - 2007
EMBI+	418	356	245	169	239	243	3
Latin America	<u>521</u>	<u>420</u>	<u>283</u>	<u>186</u>	<u>268</u>	<u>258</u>	<u>-10</u>
Brazil	463	382	311	192	221	181	-40
Colombia	431	332	238	161	195	156	-39
Mexico	199	166	126	98	149	136	-13
Argentina	5,632	4,703	504	216	410	535	125
Peru	312	220	206	118	178	150	-28
CDS (Credit Default Swap)	5 years						
Brazil	404	305	225	100	103	85	-18
Colombia	441	341	167	114	130	115	-15
Mexico	122	80	63	41	69	76	7
Argentina	n.a.	n.a.	367	203	462	576	114
Peru	292	204	221	91	116	82	-33

* Data at the End-of-Period.

Source: Bloomberg and Reuters.

Most countries in the region were favored by their better fundamentals (higher international assets, the reprofiling and reduction of their debts, better fiscal stances, among other aspects), which in turn was reflected by the better ratings they were assigned by the main risk rating agencies.

Thus, for example, Standard and Poor's upgraded the rating assigned to Brazil's debt by one level, thus allowing Brazil to reach an investment grade (BBB-). With this, Brazil has joined Chile, Colombia and México as the Latin American countries that have been assigned an investment grade by S&P.

Moreover, Fitch assigned an investment grade (BBB-) to Peru's sovereign debt and also said that the outlook on this rating was "stable".

BOX 1

ARE OIL PRICE SHOCKS IN THIS DECADE DIFFERENT FROM THOSE OF THE SEVENTIES?

In the last 50 years there have been four events in which the price of petroleum rose over 50 percent for over three quarters. The first one, in 1973-1974, was associated with the embargo to Arab countries' oil following the Arab-Israeli war. The second one, in 1979-1980, was generated by the reduction of oil production due to the Iranian revolution. The next episode took place in 1999-2000 and was associated with the reduction of production quotas in oil producing countries. Finally, the last oil shock, which started in 2002-2003 with the strike of Venezuela's oil company (PDVSA) and the Iraq war, is still ongoing and is fueled by the growth of demand in countries like China and India.

These four events have been similar in magnitude, but have had different durations. In all of them, the price of oil almost doubled, although the last oil shock stands out both in terms of magnitude (the price of petroleum has increased over 150 percent so far) and duration (26 quarters as of June 2008). However, evidence exists that the impacts of these shocks on inflation and GDP have been different in the 2000s and in the 1970s. The first two shocks were coupled by significant increases in inflation and considerable declines in production, a phenomenon called stagflation. However, oil shocks in the 2000s have neither generated the higher inflation nor the production drops observed in the seventies.

Four reasons would explain these differences. The first one is that the first three oil shocks were caused by a lower supply of oil, while the last has mainly been generated by increased global aggregate demand, which has increased the prices of oil and other commodities. In countries like Peru, the higher demand for our exports and the maintenance of a Fuel Stabilization Fund scheme have compensated the negative effect of the oil shock on the product. Additionally, since the growth of exports generates a currency appreciation, the drop of exchange also counterbalances the impact of the international price of oil.

The second reason is that the use of petroleum in the economy has become less important. For example, in Peru the use of oil derivatives as sources of energy for production purposes has declined from 91 percent in 1970 to 78 percent in 2006³. Moreover, the share of transport services and fuels such as gasoline and kerosene in the consumer price index fell from 8.8 and 3.6 percent in the 1970 consumer basket to 5.6 and 2.6 percent respectively in the 2001 consumer basket⁴.

The third reason is that the fiscal and monetary policies are conducted in a completely different manner today compared to the 1970s. Fiscal policy in Peru was quite expansionary in the 1970s, with higher spending associated with investment and subsidies on the price of fuel and food. In contrast, fiscal policy during the 2000s has been relatively contractive, and associated with higher revenues due to better terms of trade and with a control of public spending as a result of the Fiscal Responsibility and Transparency law.

On the other hand, monetary policy in the 1970s was based on a fixed-exchange regime -with several episodes of devaluations- and the growth of money supply was associated with the growth of credit through development banking, while in the 2000s monetary policy is implemented independently of the public sector's financing needs. Moreover, the central bank's role of controlling inflation has been made explicit and is emphasized in the BCRP communications. A less procyclical fiscal policy, together with monetary policy's independence and the control of expectations, has contributed to control inflation in the 2000s.

The fourth reason is that the fundamentals of the Peruvian economy are much sounder in the 2000s, which has reduced its vulnerability to balance of payments crises. The accumulation of international reserves in the 2000s is equivalent to a year's imports, while in the 1970s they only covered around 2 or 3 months' imports. Furthermore, the burden of the external debt is much lower than it was in the 1970s, which also reduces the economy's vulnerability. In addition, a flexible exchange regime in the 2000s allows absorbing the effects of oil shocks with a lower cost than the fixed exchange regime of the 1970s.

³ Source: Ministry of Energy and Mining, Balance Nacional de Energía 2006.

⁴ Source: National Institute of Statistics (INEI).

It is only since 2007 that the effects of the last oil shock are reflected on inflation in Peru and in the world, as these effects are associated with a global increase in the prices of food. Higher global demand stemming from China's growth has also led food prices to increase. Moreover, the magnitude and the duration of the last oil shock have also implied a faster pace in efforts to find substitutes of energy sources based on natural renewable resources (biofuels), which has also contributed to increase the prices of food. Emerging economies like Peru are more heavily affected by the higher prices of food de China due to the higher weigh of foodstuffs in the consumer basket of these economies.



* The shadowed area represents a period of two years after the oil shock started.

BOX 2

INFLATIONARY PRESSURES IN EMERGING COUNTRIES

Higher prices of food and energy

Increased demand, a moderate increase of supply in a context of geopolitical tensions, and low world inventories have determined a historical record price for oil, which reached US\$ 138.5 per barrel on June 6.

Additionally, environmental and energy security concerns have generated a growing demand for biofuels, increasing the prices of their inputs (maize, soybean and other grains) and of the products associated with their production chain (dairy, meat, etc). Additional factors contributing to this include China and India's higher consumption, climatic alterations in the main producing areas, the depreciation of the dollar, and a context of low inventories of crude.

Moreover, trade constraints in the main exporting economies and funds' increased speculative positions have exacerbated price volatility. Thus, the prices of wheat, soy bean, soybean oil, maize, and rice have increased by 63 percent, 128 percent, 135 percent, 153 percent, and 233 percent respectively over the past two years.



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Inflationary pressures: a generalized phenomenon

The higher prices of energy and food have been generating inflationary pressures worldwide. This generalized phenomenon has affected emerging countries with sound macroeconomic policies (Chile), countries with a strong demand of grains (China), advanced economies with highly prestigious central banks (England) and even countries with a history of deflation (Japan).

These pressures have also been growing, as reflected in the faster pace of growth of the Consumer Price Index (CPI) and the prices of food in most countries, both developed and emerging countries.

In emerging countries, food inflation has been higher than overall inflation, except in Argentina.

	2006	6 (Dec.)	200	7 (Dec.)	2008	(May)
	Total	Food	Total	Food	Total	Food
Venezuela	17.0	26.1	22.5	30.9	31.4	47.3
Turkey	9.7	11.2	8.4	12.0	10.7	16.2
Ecuador	2.9	4.5	3.3	5.7	9.3	20.1
Argentina	9.8	10.5	8.5	8.6	9.1	7.8
Chile	2.6	1.3	7.8	15.2	8.9	19.4
China	2.8	6.3	6.5	16.7	7.7	19.9
Thailand	3.5	6.0	3.2	2.8	7.6	11.8
Singapore	0.8	1.8	4.4	5.5	7.5*	8.6*
Uruguay	6.4	9.1	8.5	18.1	7.2	14.4
Colombia	4.5	5.7	5.7	8.5	6.4	9.7
India	6.9	9.2	5.1	6.2	6.0**	7.8**
Brazil	3.1	1.2	4.5	10.8	5.6	14.6
Peru	1.1	1.7	3.9	6.1	5.4	9.2
Mexico	4.1	6.3	3.8	6.0	5.0	8.7

TOTAL INFLATION AND FOOD INFLATION BY COUNTRIES (Annual percentage change)

Data as of April.

** Data as of March (information is not available due to methodological changes). Source: Bloomberg.

Country	Foodstuffs CPI weighted (%)	Country	Foodstuffs CPI weighted (%)
Philippines	48.9	Uruguay	28.5
Peru	47.5	Chile	27.2
India	46.2	Hong Kong	26.9
Russia	42.7	Taiwan	26.1
Kazakhstan	41.7	Ecuador	25.1
Romania	40.7	Singapore	23.4
Pakistan	40.3	South Africa	23.0
Indonesia	38.0	Mexico	22.7
Thailand	36.1	Argentina	22.0
China	33.6	Brazil	21.0
Argentina	31.3	Czech Republic	19.8
Venezuela	29.6	Hungary	18.8
Colombia	29.5	Slovakia	17.3
Brazil	29.3	Israel	17.3
Turkey	28.6	South Korea	14.0

Source: Deutsche Bank.

Inflation targeting and monetary policy decisions

DEVIATIONS FROM THE INFLATION TARGET (%) AND MONETARY POLICY 1/

Evaluating inflation's performance in countries with inflation targeting regimes (16 countries) is another way of assessing this phenomenon. The evolution of CPI in the last 24 months (until April 2008) -the period where the highest pressures on food prices were observed- is compared with the previous 24 months (until mid-2006), which showed no significant price changes.

This comparison shows that **between May 2004 and April 2006** inflation diverted from the target in 49 percent of the cases, with upward deviations showing a slightly higher result (33 percent) than downward deviations (16 percent). The number of countries with upward deviations of inflation (9 countries) was also slightly higher than the number of countries with downward deviations (6 countries). Inflation in Peru was below the target range in 29 percent of the time and above the target range in 25 percent of this period.

In the May 2006 - April 2008 period, with higher oil and food price pressures, inflation's deviations above the target increased from 33 to 45 percent and inflation's deviations below the target declined from 16 to 12 percent. Moreover, 10 of the 16 countries with inflation targeting regimes showed a deviation of inflation above the target (versus 9 in the previous period), and a lower number of countries showed deviations below the target (2 versus 6 in the previous period).

It should be pointed out that countries that had not recorded inflation levels above the target (South Africa and the Czech Republic) have seen several of these episodes recently. Likewise, in this period Peru shows a higher percentage of months with inflation above the target range than below the target range (29 versus 25 percent), although this percentage is lower than in the case of most emerging economies with inflation targeting (see table below).

DEVIATIONS FROM THE INFLATION TARGET (%) AND MONETARY POLICY 1/

	(2004/05-20	06/04)			(2006/05-2008/04)						
	Target = CPI	Upward	Downward	Total	Pbs. chg. policy rate		Target = CPI	Upward	Downward	Total	Pbs. chg. policy rate	
South Africa	Total	0	0	0	-100	Brazil	Total	0	0	0	-400	
Czech Republic	Total	0	33	33	0	Czech Republic	: Total	25	25	50	175	
Colombia	Total	8	0	8	-50	Poland	Total	25	25	50	175	
Israel	Total	13	54	67	115	Peru	Total	29	25	54	100	
Chile	Total	17	25	42	325	Israel	Total	29	42	71	-200	
Brazil	Total	25	0	25	-25	Chile	Total	38	0	38	125	
Perú	Total	25	29	54	175	Indonesia	Total	38	13	50	-475	
Slovak Republic ²	[/] Total	25	50	75	50	Philippines	Total	38	50	88	-250	
Hungary	Total	33	8	42	-600	Mexico	Total	42	0	42	50	
Poland	Total	38	33	71	-125	Romania	Total	50	0	50	50	
Iceland	Total	46	0	46	504	South Africa	Total	54	0	54	450	
México ^{2/}	Total	63	0	63	-250	Colombia	Total	67	4	71	350	
Romania	Total	78	0	78	-1,275	Czech Republic	: Total	71	n.a.	71	75	
Indonesia ^{2/}	Total	80	0	80	0	Hungrary	Total	83	0	83	225	
Philippines	Total	96	0	96	75	Iceland	Total	92	0	92	530	
Average		33	16	49		Average		45	12	58		
Turkey	Total	38	63	100	-875	Turkey	Total	100	0	100	200	

Note: The average does not include Turkey (target spot).

1/ The first period of data available for those countries which implemented inflation targeting after April 2004 has been considered.

2/ Rate changes considered since year of available data.

Given the higher growth of prices, a greater number of countries have decided to withdraw monetary stimulus by either making a pause in the reduction of their rates or raising them in order to anchor expectations of inflation. Some countries have also established complementary measures: raising reserve requirements, trade measures (tariff reductions, limits on exports to encourage higher domestic supply), as well as fiscal measures (stabilization funds and tax reductions). Furthemore, currency appreciation in many countries has also contributed to reduce inflationary pressures.

Central banks expect these inflationary pressures to be temporary and, in most cases, forecast that inflation will still not converge to the target in 2008. Most countries consider that inflation would converge to the target range in 2009.

II. Economic activity

In the first quarter of 2008 economic activity grew 9.3 percent driven by a significant dynamism of the domestic demand, especially private consumption and public and private investment, showing continued positive indicators of consumer and business confidence and formal employment.

Given this increased economic dynamism, the growth forecast for 2008 has been raised from 7.0 to 8.0 percent. This forecast still considers a slowing of activity in the following quarters considering a lower pace of global growth (mainly in the United States) and the adjustment of monetary conditions as a result of the measures adopted by the Central Bank in order to moderate the expansion of domestic demand.

Lower growth (6.5 percent) is expected in 2009, in line with anticipated lower terms of trade and more moderate economic activity. The rate of growth should slightly increase to 7.0 percent in 2010, as economic activity would be fueled with the start of exports of Camisea's gas liquids.

These forecasts are compatible with an adequate balance in the growth of supply and aggregate demand that would allow a gradual return of inflation to the target range and to maintain sustainable growth rates over time. Should potential GDP grow higher than estimated in this base scenario (due to higher investment or to improvements in productivity or competitiveness), the economy would reach higher growth rates without still showing inflationary pressures.

13. The higher expansion of gross domestic product anticipated for this year is consistent with a growth of domestic demand of 9.8 percent -a rate higher than the one expected in the Inflation Report of January (8.2 percent), but lower than the one observed in the previous year (11.6 percent). This reflects the evolution of private consumption, whose growth has been revised upwards considering its dynamism (8.3 percent in 2007 and 8.4 percent in the first quarter of 2008).





Graph 10 DOMESTIC DEMAND GROWTH RATE (Real percentage change)



Table 7

DOMESTIC DEMAND AND GDP

(Real percentage change)

		2	007		2008*		20	09*	2010*
	-	Q I.	Year	Q I.	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08
1.	Domestic demand	11.4	11.6	10.8	8.2	9.8	7.2	8.0	6.6
	a. Private consumption	8.3	8.3	8.4	5.8	6.6	5.3	5.5	5.5
	b. Public consumption	3.7	4.8	6.4	5.0	4.7	5.4	2.6	3.2
	c. Private investment	19.2	23.2	18.6	20.0	20.4	12.1	14.5	11.5
	d. Public investment	-3.1	19.7	76.4	33.0	42.9	16.6	23.9	17.6
2.	Exports	2.5	5.4	13.0	8.2	6.2	8.5	8.4	11.4
3.	Imports	15.6	18.8	20.0	13.5	15.4	12.4	14.8	9.2
4.	GDP	8.8	9.0	9.3	7.0	8.0	6.3	6.5	7.0

IR: Inflation Report.

Forecast.

14. After having grown 10 percent in 2007, the national disposable income would grow at lower rates in the next years due to lower terms of trade. The national disposable income -a better indicator than GDP in terms of transactions generating income for the country- influences the growth of private and public expenditure.

Domestic saving in 2008 would continue to show a similar rate than in 2007 (24 percent of GDP), increasing gradually thereafter since the national disposable income would grow higher than private consumption.

Table 8

NATIONAL DISPOSABLE INCOME

(Real percentage change)

	20	07	2008*			2009*		2010*
	Q I.	Year	Q I.	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08
1. GDP	8.8	9.0	9.3	7.0	8.0	6.3	6.5	7.0
2. Gross national product	9.9	9.5	8.4	8.4	9.4	7.6	7.9	7.2
3. Gross national income	13.0	10.1	8.0	5.7	7.2	7.0	7.0	6.8
4. National disposable								
income ^{1/}	13.0	10.0	7.9	5.4	6.9	7.0	6.9	6.8
Memo:								
5. Absorption ^{2/}	15.8	12.6	9.4	6.6	8.8	7.9	8.3	6.4

IR: Inflation Report.

* Forecast.

1/ Includes factor income, net gains and losses due to changes in terms of trade and net transfers from non-residents.

2/ Measures the purchasing power of Peruvian residents. Result obtained by deducting exports and adding imports to national disposable income.



Graph 12

INDICCA CONSUMER CONFIDENCE INDEX



Source: Apoyo

Graph 13

URBAN EMPLOYMENT IN COMPANIES WITH 10 OR MORE WORKERS: Jan.-Mar.2008/Jan.-Mar.2007 (Percentage change)



Graph 14

CONSUMER LOANS IN THE FINANCIAL SYSTEM (Last 12-month percentage change)



15. **Private consumption**, which showed a faster pace of growth in 2007 (8.3 percent), maintains an important dynamism so far this year with a growth rate of 8.4 percent. Factors explaining this include the growth of national disposable income and employment, households' high levels of confidence, and increased access to consumer credit in the financial system.

Employment continues to grow at high rates in several cities of the country -Paita, Chincha, Pucallpa, Tarapoto, Ica, and Arequipa- and has shown a faster pace of growth in Lima in the last months. Moreover, high consumers' confidence and credit availability favor the acquisition of consumer durable goods, as reflected in the growth of imports of durable goods (42 percent in the first quarter) and sales of new vehicles (75 percent in the same period).

16. Real **exports** of goods and services in 2008 would grow at a higher rate than in 2007 due to larger volumes of exports of mining products and to higher non traditional exports. The forecast considers growing rates of exports in 2009 and 2010 as a result of the access to new foreign markets associated with trade agreements, which would favor exports of non traditional products since 2009, and of the onset of mining and hydrocarbon projects, which would favor traditional exports since 2010.

On the other hand, real imports of goods and services would maintain rates of around 15 percent in 2008 and 2009, driven by domestic demand -both in terms of consumption and investment, which would generate higher imports of consumer goods and capital goods respectively. A slowing of imports is expected in 2010 due to a lower pace of growth in imports after the completion of some construction projects and to a higher domestic supply of fuels.

The growth of investment -representing increased imports of capital goods in the period of construction of projects and increased exports once the projects start operatingwould be favored by the increase observed in the national disposable income in recent years.

17. **Private investment** keeps showing a similar drive to the one observed in previous years due to macroeconomic stability and to the optimistic outlook of firms in all sectors, and would show an increase of over 20 percent for the third consecutive year, as a result of which the economy's productive capacity would continue expanding.

Graph 15 IMPORTS OF DURABLE CONSUMER GOODS (Millions of US\$)



Graph 16 SALES OF NEW FAMILY VEHICLES (Units)



Graph 17 GROWTH OF EXPORTS OF GOODS AND SERVICES





Graph 18

GROWTH OF IMPORTS OF GOOD AND SERVICES (Real percentage change)



The growth of investment is reflected both in greater construction of houses, buildings and industrial plants and in the growth of imports of capital goods at rates of over 30 percent since 2006. This pace of growth has increased not only the economy's assets but also productivity, thus generating an increase in the potential output for the following years. Projects currently being implemented include Peru LNG's project to export natural gas, Yanacocha's gold mill, Cerro Corona, as well as various projects in the manufacturing, commerce and energy sectors. In the communication sector, investments concentrated in enhancing fixed and mobile telephone grids, while investments in sugar cane were noteworthy in agriculture.

According to the results of the BCRP Survey on Macroeconomic Expectations carried out in February 2008, firms' productivity increased 4 percent on average in 2007 compared to 2006, with a noticeable increase of productivity in sectors such as manufacturing and construction. Surveyed firms explain this higher productivity mainly as a result of training, the renewal of machinery, logistic development, and optimization of plant facilities, among other reasons. The relation between improvements in competitiveness and growth are analyzed in Box 4.

Optimistic business expectations (41 percent of entrepreneurs expect the economy to improve in the following 3 months) are reflected in a growing number of investment announcements. Announced important projects and infrastructure investment commitments to be implemented in 2007-2010 amount to over US\$ 34 billion.

Table 9

GROWTH OF PRODUCTIVITY IN NON-FINANCIAL BUSINESS 2007/2006*

(Percentage points)

	% Chg.
Agriculture and livestock	3.4
Fishing	2.0
Mining and fuel	1.7
Manufacture	4.6
Electricity. water and gas	3.7
Construction	4.6
Commerce	4.2
Services	4.0
Total	4.0

Number of business surveyed: 253.

Source: Survey on Macroeconomic Expectations, BCRP, February 2008.



Source: Proinversión and investment announcements

Graph 22 GDP GROWTH EXPECTATIONS FOR 2008



Graph 23 GDP GROWTH EXPECTATIONS FOR 2009



Graph 24 GDP GROWTH EXPECTATIONS FOR 2010



Graph 25 GROWTH OF PUBLIC INVESTMENT

(Real percentage change)



1999 2000 2001 2002 2003 2004 2005 2006 2007 2008* 2009* 2010* * Forecast. The sustained growth of private investment and previsions for the following years would show a ratio of private investment to GDP of over 23 percent in 2010 -the highest ratio recorded since the late 1950s.

This growth of private investment is taking place in a context of higher expectations of growth as a result of the recent evolution of economic indicators and the country's prospects of implementing trade agreements. Non financial firms expect GDP to grow 8.0 percent in 2008, while financial institutions anticipate a growth of 7.8 percent. Forecast of growth range between 6.6 and 7.0 percent for 2009 and between 6.5 and 7.0 percent for 2010.

- 18. Considering the higher pace of spending observed in the first months of this year, especially in some local and regional governments and some public enterprises, the forecast on the growth of public investment has been revised upwards. As long as resources are efficiently allocated to appropriate projects, public investment will contribute to expand capital in the economy, complementing the growth of productivity in the private sector. Public investment in 2010 is expected to represent 5.5 percent of GDP. In addition to this, the program of Public-Private Association would represent around 0.1 percent of GDP.
- 19. **Potential GDP** would continue to grow in the next years mainly due to capital increase resulting from anticipated investments and, to a lesser extent, from higher total factor productivity. The implementation of trade agreements and the renovation of the techonologies used in the productive process would favor the latter. Thus, the output gap -defined as the relative difference between GDP and potential GDP- would gradually decline during the forecast horizon.

The growth of the potential GDP also accounts for a great deal of the economic growth observed and forecast. Thus, the potential GDP should maintain a growth rate between 7.0 and 7.5 percent in the next years due to increased anticipated investments (investment is expected to grow 18 percent on average in the following years) that would translate into an average capital contribution of 3.4 percentage points to the growth of the potential GDP. Another factor contributing to potential growth is the higher total factor productivity, which should contribute 2.6 percentage points on average in the next years due to increased technological transfer associated with the implementation of trade agreements and investment in new technologies, especially in information Graph 26

GDP GAP

(Percentage of potential GDP) 4.0 4.0 IR May.08 2.0 20 Percentage Percentage 0.0 0.0 IR Ian 08 2.0 -2.0 -4.0 L4.0 2006 2008 1997 000 2003 2004 2005 2007 8 2001

and telecommunications. In line with the 3.4 percent growth of productivity expected according to the BCRP survey on macroeconomic expectations carried out in May, productivity should grow 3.3 percent in 2008.

Different methods used to estimate the output gap this year coincide in showing a positive result that will gradually decline due to the monetary policy actions that have been adopted and to a more neutral fiscal policy in the next years. This gradual reduction of the gap is consistent with sustained economic growth e igual al potencial and with the offset of latent inflationary pressures stemming from an expansionary economic cycle.

Sector production

Note: The shadowed area represents uncertainty about the calculation and forecast of the GDP gap plus/minus one standard deviation.

Graph 27 NON-PRIMARY SECTORS GROWTH RATE (Real percentage change)



Graph 28 NON-PRIMARY MANUFACTURE GROWTH RATE (Real percentage change)



1999 2000 2001 2002 2003 2004 2005 2006 2007 2008* 2009* 2010* * Forecast.

20. Non primary sectors reflected the important drive observed in domestic demand in the first quarter of 2008. The evolution of construction stands out in this group, given that the higher levels of income associated with higher employment at the national level and the evolution of mortgage credit encouraged the construction of houses and higher investment in industrial and commercial enterprises. Non primary manufacturing was also propelled by increased spending in food and beverages and by the demand for construction inputs, such as cement, bricks, plastic accessories and electric parts.

A slowing is projected for non primary sectors as from 2008 given that a more moderate growth of domestic demand and a less favorable international environment are expected. However, the impact of these factors would be offset by the implementation of the Peru-US Trade Agreement and by the prospects of signing other trade agreements with other countries, which would boost our non traditional exports.

Construction would continue to be the sector showing the highest growth, considering expected investment in technology and the increase of installed capacity in local cement plants. This would also allow meeting the demand for the construction of malls, hotels and commited housing and energy projects to be carried out in Lima, Trujillo, Huancayo, Ica and Arequipa by 2011. This dynamism would be coupled by that of the commerce sector, given the prospects of greater access and the opening of new commercial facilities in the main cities of the country.

GRAPH 29 **GROWTH OF THE CONSTRUCTION SECTOR** (Real percentage change)



As regards non primary manufacturing, the dynamism observed in food and beverages was associated with a higher production of conserves. The growth of chemical products and non metal minerals, such as glass and cement, and of other construction materials was also noteworthy.

Table 11

GROSS DOMESTIC PRODUCT

(Real percentage change)

	20	007	2008*			2009*		2010*	
	IQ.	Year	IQ.	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08	
Agriculture and livestock	8.3	3.1	2.2	3.9	2.8	3.8	4.5	4.5	
Agrículture	7.2	2.1	2.2	4.0	2.4	4.0	5.0	5.0	
Livestock	9.9	4.7	2.3	3.9	3.5	3.6	3.6	3.6	
Fishing	16.7	6.9	0.0	3.5	1.5	5.0	5.0	5.0	
Mining and fuel	-1.6	2.1	6.2	5.2	5.2	4.2	5.1	12.1	
Metallic mining	-2.7	1.7	6.6	5.1	5.1	4.1	4.8	3.5	
Hidrocarbons	10.6	6.5	2.0	6.3	6.0	5.5	8.2	94.5	
Manufacture Based on	9.2	10.6	10.1	8.5	9.7	7.4	7.8	7.6	
raw materials	-1.1	-0.5	12.3	4.1	6.8	4.7	4.8	4.7	
Non-primary industries	11.2	12.9	9.7	9.5	10.4	8.0	8.5	8.2	
Electricity and water	8.1	8.4	9.2	7.0	7.4	5.5	5.6	6.0	
Construction	8.9	16.5	18.7	13.0	18.0	11.0	11.0	10.0	
Commerce	13.0	10.5	10.6	7.4	8.2	6.6	6.8	6.8	
Other services	9.0	9.3	9.0	6.6	7.5	6.1	6.1	6.3	
GDP	<u>8.8</u>	<u>9.0</u>	<u>9.3</u>	<u>7.0</u>	<u>8.0</u>	<u>6.3</u>	<u>6.5</u>	<u>7.0</u>	
Primary	3.3	2.3	5.2	4.4	4.3	4.2	4.8	7.1	
Non-primary	10.2	10.8	10.1	7.8	8.9	6.9	7.1	7.0	

IR: Inflation Report.

Forecast

21. In the first quarter of 2008 primary sectors grew 5.2 percent due to the higher dynamism of mining resulting mainly from the onset of operations at the enhanced project of Cerro Verde copper mine. Other factors contributing to this result included a higher extraction of zinc at Cerro Lindo and Antamina and increased production of gold at Yanacocha.

These results were offset by a slowdown in agriculture, where growth was mainly associated with products oriented to industry and exports. In the fishing sector, the lower number of effective days for anchovy catch -offset by higher production for human consumption- implied similar levels of production in the first quarter of 2008 to those observed in the first quarter of 2007 in this activity.





A scenario with normal climatic conditions and with the onset of production in mining and hydrocarbon projects is expected for the next years. In agriculture, production would normalize after falling slightly in the first months of the 2007-2008 crop year, showing higher yields due to the investments carried out in the last years. Moreover, agricultural production oriented to exports would also increase due to the continuous adoption of modern technologies in new cultivation areas.

Since no significant climatic alterations are expected to affect growth in the fishing sector and given the conservation policy established by the Ministry of Production to prevent overfishing of anchovy, growth in this sector would be based on fish extraction for the production of canned and frozen products and should also improve considering the effect of increased efficiency derived from mergers and acquisitions carried out in this sector in 2006 and 2007, as well as new investments for fish processing activities. In mining, full capacity operations in Cerro Verde's enhanced copper plant, the participation of Cerro Corona in gold extraction in 2008, and a steady level of gold production -including Yanacocha's oxide projects- are considered.

Other projects expected to initiate operations by 2010 include Tía María copper mine (with an annual production of 120 thousand tons) and the expansion of Toquepala and Cuajone (150 thousand tons per year) by Southern and Candente Resources' Cañariaco, as well as Camisea II project of exporting natural gas liquids from Lot 56 (Pagoreni) -which will imply 625 MMcf daily-, and commercial operations of crude in Perenco's Lot 6.

BOX 3 SAVING GENERATED BY THE USE OF NATURAL GAS

The purpose of changing the energy matrix is to reduce oil dependence and increase the use of natural gas in the primary supply of energy to a third of overall supply. In this way, the energy matrix will be not only more diversified and reliable, but also cheaper and less contaminating. The higher level of existing reserves of natural



gas, the prospects of finding new ones and the evolution of oil prices account for this goal.

Since the onset of Camisea's operations in June 2004, the primary supply of energy associated with natural gas and natural gas liquids has grown significantly, increasing from 5.9 percent in 2003 to 21.2 percent in 2006.

In 2007, the consumption of natural gas amounted to 94,485 MMcf, with clients in the sectors of electricity (60 percent) and industry (29 percent) being the main consumers. In the absence of natural gas, consumers would have had to use other energy sources, especially petroleum derivatives, whose cost -even without taxes- is substantially higher.

In this sense, saving resulting from the consumption of natural gas in 2007 is estimated at US\$ 933 million (equivalent to 0.9 percent of GDP). In line with recorded consumption, the main beneficiaries of this saving were electricity generating companies and industrial firms, whose share represented 52 and 37 percent of overall saving respectively. This saving, which represents lower costs for domestic producers (lower fuel costs, as well as lower electricity rates and transport costs), contributes to improve competitiveness in our economy.

	Gas consumption (MM cubic feet)	Gas consumption (mill. US\$) A	Alternative fuel consumption (mill. US\$) B	Saving (mill. US\$) (B - A)
Lima	<u>69,508</u>	220	<u>951</u>	<u>731</u>
Electric generators	40,680	90	442	352
Industrial consumer	26,922	110	449	339
Vehicle of natural gas	1,850	19	58	39
Households	56	0	1	1
<u>Others</u>	24,977	<u>72</u>	274	<u>201</u>
Electric generators	15,801	35	172	137
Petroleum operations	6,847	28	75	47
Refining	1,992	8	22	14
Domestic use	2	0	0	0
Industrial	334	1	5	4
<u>Total</u>	<u>94,485</u>	<u>292</u>	<u>1,225</u>	<u>933</u>

SAVINGS DUE TO THE USE OF NATURAL GAS 2007

Source: Ministry of Energy and Mining.

Furthermore, in 2007 the State's revenues for royalties on natural gas amounted to US\$ 349 million (0.3 percent of GDP), of which 95 percent came from Camisea. As regards their destination, 50 percent of these royalties are transferred to regional and local governments (25 percent each), 19 percent to the Defense Fund, 14 percent to Camisea's Development Fund (FOCAM), 3 percent to Perupetro, Osinergmin and the Ministry of Energy and Mining, and the rest is transferred to the public treasury.

This increase in the use of natural gas as an energy source is coupled by a reduction -both in absolute and relative terms- in the use of water energy sources.

In order to achieve a significant additional impact on private and social production costs as a result of changing the energy matrix, it is necessary to encourage hydro energy generation because: i) this would provide more stability to electricity rates in the long run, and ii) hydro energy generation is environmentally more advantageous.

BOX 4 COMPETITIVENESS AND GROWTH

From the technological point of view and considering an efficient use of resources, economic growth is determined by the accumulation of production factors, by productivity gains, or by a combination of both. Evidence shows that growth episodes explained by an accumulation of factors are relatively short (due to decreasing yields, imperfect factor mobility, constraints to the allowance of resources) and that, in the long run, nations grow on the basis of productivity gains.

According to Young (1994),⁵ the growth pattern based on factor accumulation is typical of developing countries, while long-term growth in developed countries is based on productivity gains.

5 Global Competitiveness Report 2007-08, World Economic Forum (2007).

In this sense, the growth pattern based on factor accumulation generates two potential risks:

i) Growth is highly exposed to cyclical fluctuations and is, therefore, more volatile than the growth associated with productivity gains.

ii) Leads to lower factor yields and, therefore, to lower rates of growth in the long run.

Because of these risks, prospects of sustainable growth in a long-term horizon depend on the growth of productivity in an economy. Hence the question: Which factors determine productivity? The World Economic Forum (WEF) has associated productivity with countries' competitiveness, the latter defined as a collection of factors, policies and institutions which determine the level of productivity of a country and that, therefore, determine the level of prosperity that can be attained by an economy⁶.





In this sense, the more competitive a country is, the greater its capacity to grow in the long term. Since the level of competitiveness of a country is an indirect indicator of its productivity relative to other countries, more competitive countries can maintain higher rates of productivity in the long term and, therefore, reach higher income levels. According to the most important international measurements of competitiveness (the WEF's Global Competitiveness Index -GCI- and the World Bank's Doing Business ranking), Peru falls behind leading economies in the region, such as Puerto Rico, Chile and Mexico. However, the world competitiveness ranking of the Swiss school of business IMD7 rates Peru as a regional leader, preceded only by Chile.

COMPETITIVENESS RANKING

Global		Doing	World	
Competitiveness		Business	Competitiveness index	
Institution	World Economic Forum	World Bank	IMD	
Year	2007/2008	2008	2008	
Peru: Global position	86 of 131 countries	58 of 178 countries	35 of 55 countries	
Peru: Regional position*	13 of 20 countries	7 of 31 countries	2 of 7 countries	

* Latin America and the Caribbean.

According to these three indices, determinants of competitiveness in Peru show, in general, mixed results. The country's strengths are its macroeconomic fundamentals, while its weaknesses refer mainly to institutions and infrastructure.

As regards our strengths, the relevance of economic growth and macroeconomic stability are highlighted as necessary conditions for private investment and the growth of productivity. For example, Peru ranks 14th in the IMD⁷ ranking in terms of economic performance, mainly due to: i) its rate of economic growth, ii) the conduction of monetary policy, and iii) the management of public finances.

⁶ Global Competitiveness Report 2007-08, World Economic Forum (2007).

⁷ According to Forbes magazine (2007), the IMD is the leading business school in Europe. In 2008, when Peru was first included in the IMD's global competitiveness ranking, Peru ranked 35th among 55 countries and was rated as the second economy in the region in terms of competitiveness (after Chile).
STRENGTH	WEAKNESS
- Inflation control. - Fiscal surplus	- Labor regulation: high costs of employment
- Financial regulation.	- Education: guality of education system, public
- Access to credit.	investment in education and capacitation.
 Protection for investors. 	- Health: incidence of diseases (HIV, malaria
 Property register. 	tuberculosis), infantial mortality and life expectancy.
	 Infraestructure: ports, roads and airports.
	 Quality of the judicial system.
	 Public expending efficency.
	 Innovation and adoption of new technologies.
	 Bureacracy: openness of companies,
	licensing and payment of taxes.
	 Establishment and protection of property rights.

COMPETITIVENESS BALANCE: PERU

Source: Global competitiveness report 2007-2008 (WEF) and Doing Business in 2008 (World Bank). Elaboration: BCRP.

Note: Strengths (weaknesses) consider aspects where Peru's position is in the global upper (lower) third.

Moreover, as regards pending agenda, the balance of our weaknesses suggests that the main constraints for the country's competitiveness and for long-term growth are⁸:

- The low institutional quality, associated with excessive and inefficient regulations (e.g. labor regulation, administration of justice, bureaucratic paperwork) that define property rights imperfectly, increase transaction costs, and constrain access to the market and to production factors.
- ii) The poor quality of health and education, which constrains the potential of future labor force to complement growth and to adopt, implement, and generate technological innovation.
- iii) The low quality and extension of public infrastructure (e.g. highways, ports, railways), which reduces the return of private investment and constrains the expansion of trade.

Considering these aspects, the internal agenda of reforms oriented to improving the quality of institutions, human capital, and infrastructure, should include the following aspects:

- A labor reform that will establish a balance between the principles of efficiency and equality in order that the labor market becomes more flexible and can generate incentives for the formalization and training of the labor force, without neglecting the protection of workers' health rights or risks of unemployment.
- ii) A legal and judicial reform oriented to establishing a fair and predictable system in the administration of justice so that it can contribute to resolve conflicts of economic nature.
- iii) Continue implementing the process of administrative simplification in all government levels (general, regional and local governments) so that public administration will facilitate commercial activities and the establishment, operation and termination of enterprises.
- iv) A reform of public education, based on specific policies oriented to improving equality, human resources, education resources and infrastructure.
- v) Higher and more efficient public investment in preventive health and health care.
- vi) Promote active and effective public investment processes in infrastructure by increasing the efficiency of public spending in investment and attracting private investment. Public-private associations are the idoneous mechanisms for financing infrastructure projects provided that an appropriate balance exists between the public and the private sector in terms of the risks involved.

⁸ A detailed explanation of each index and the analysis of results for Peru may be found in Nota de Estudios 01-2008, BCRP.

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III. Balance of payments

Commodity markets continued showing tight supply-demand balances in the first months of the year due both to supply constraints (as in the case of copper) and to strong demand pressures associated mainly with steady growth in Asian countries. Moreover, uncertainty in financial markets and the weakening of the dollar in international markets generated additional pressures on prices worldwide.

As a result of this, terms of trade would show a better evolution than the one considered in our Inflation Report of January. Therefore, the current account deficit forecast for 2008 has been revised downwards.

Deficits in the current account of the balance of payments (2.7 percent of GDP each year) are expected for 2009 and 2010 as a result of a less favorable international environment due to the lower growth of our main trade partners and to lower terms of trade, which would fall 3,8 and 2,8 percent in 2009 and 2010, repectively.

On the other hand, significant inflows of short term capitals used to purchase financial assets in domestic currency were observed between the last months of 2007 and the first months of this year. These inflows moderated as a result of the measures implemented by the Central Bank.

Current account

22. In the **first quarter of 2008** the current account of the balance of payments recorded a deficit of 2.2 percent of GDP. This lower result was associated with the boost of domestic demand (10.8 percent) on imports and with the reduction of terms of trade (2.0 percent).

Table 12

BALANCE OF PAYMENTS

(Millions of US\$)

		2	007		2008*		20	009*	2010*	
		Q I.	Year	Q I.	IR Jan. 08	IR May 08	IR Jan. 08	IR May 08	IR May 08	
I.	CURRENT ACCOUNT BALANCE	94	1,516	-655	-2,485	-1,549	-3,570	-4,024	-4,299	
	As percentage of GDP	0.4	1.4	-2.2	-1.9	-1.1	-2.4	-2.7	-2.7	
	1. Trade balance	1,539	8,356	1,473	5,230	6,352	3,441	3,120	3,027	
	a. Exports	5,747	27,956	7,734	30,174	33,407	31,725	35,205	38,677	
	b. Imports	-4,208	-19,599	-6,261	-24,944	-27,055	-28,283	-32,085	-35,651	
	2. Services	-231	-928	-312	-1,370	-1,668	-1,414	-1,737	-1,805	
	3. Investment income	-1,771	-8,408	-2,464	-9,087	-9,030	-8,653	-8,424	-8,805	
	4. Current transfers	557	2,495	647	2,742	2,797	3,055	3,018	3,284	
	Remittances	476	2,131	561	2,320	2,374	2,622	2,585	2,840	
١١.	FINANCIAL ACCOUNT	1,058	8,898	6,543	7,485	9,549	4,570	5,924	5,299	
	Of which:									
	1. Private sector	1,818	9,002	4,485	8,265	9,628	4,992	6,883	6,814	
	2. Public sector	-470	-2,473	-1,474	-1,270	-2,985	36	-252	-552	
	3. Short term capitals	-197	2,030	2,337	-273	1,558	-528	-989	-1,122	
III	NIR FLOWS (=I+II)	1,152	10,414	5,888	5,000	8,000	1,000	1,900	1,000	
M	emo:									
Ini	ternational reserves balances	18,427	27,689	33,577	23,427	35,689	24,427	37,589	38,589	
NI	R/GDP (%)	19%	25%	29%	18%	26%	17%	25%	24%	
Pr	ivate foreign debt/GDP	3.5%	6.1%	6.1%	4.1%	5.3%	4.1%	5.5%	5.5%	

IR: Inflation Report.

Forecast.

Since the prices of exports (mainly copper and gold) in **2008** have been revised upwards, terms of trade should show a lower decline (6.3 percent) than forecast in our January Inflation Report (10.7 percent). Moreover, the supply constraints that have boosted the prices of food and fuels on the upside are expected to continue, and a higher demand for imported goods is also anticipated given the dynamism expected in domestic demand. Therefore, a lower deficit in the current account is expected for this year (1.1 percent of GDP instead of the 1.9 of GDP forecast in our previous report), given that the trade balance should increase from US\$ 5.2 to US\$ 6.4 billion.

Because less favorable terms of trade and a higher growth of domestic demand are expected for **2009**, the deficit in the current account has been revised upwards from 2.4 to 2.7 percent of GDP for that year. In **2010**, the deficit would remain at 2.7 percent of GDP, as a result of the onset of operations in mining and hydrocarbon projects.



Graph 32 CURRENT ACCOUNT (Percentage of GDP)



Graph 33 TERMS OF TRADE



Graph 34 EXPORT AND IMPORT PRICE INDICES AND TERMS OF TRADE





23. In order to measure the effect that a significant reversal in the prices of commodities could have, the trade balance and the balance of the current account were estimated at 2003 prices -2003 being the year prior to the period of price rises in metals. The result of these calculations shows that the current account would maintain steady levels in the next years. The trade balance would be lower by approximately US\$ 4.2 billion on average between 2008 and 2010. On the other hand, the deficit in the adjusted current account would be equivalent to 2.5 and 3.1 percent of GDP in 2008 and 2009 respectively. The deficit in 2010 would be 2.9 percent of GDP.

Terms of trade

24. Terms of trade declined 2 percent between the first quarter of 2007 and the same period in 2008 given that the increase observed in the price index of imports (23.3 percent), mainly oil and food, was higher than the increase seen in the price index of exports (20.8 percent).

Between **2008** and **2010** terms of trade would show an average level of 126, higher than the average level of this decade (112) and than the average level of the nineties (99).

The higher prices of exports reflect the tight balances of supply and demand in the copper and gold markets. Moreover, temporary supply constraints, such as strikes and stoppages, would be contributing to the upward trend observed in the prices of these minerals.

The prices of imports also showed a strong upward trend, especially in the cases of oil (44.1 percent) and food (15.4 percent).

25. A 6.3 percent drop of terms of trade is forecast for **2008** due to higher prices of imports (particularly oil and food) and to a moderate correction in the prices of some metals in the second half of this year.

The price of oil is expected to decline towards the second half of the year, although maintaining higher levels than in 2007 and than those forecast in our January Report. The prices of food remain high, although stabilizing as of the second half of the year due to higher than expected production of some food products (wheat, soy bean, and rice). The average price of foodstuffs this year would by higher than their average price in 2007.

Graph 35 FORECAST OF INTERNATIONAL PRICES (Real prices, 2004 = 100)



Terms of trade would drop 3.8 and 2.8 percent in **2009** and **2010** respectively due to lower prices for our exports, particularly copper. A correction is expected in the price of oil once the current period of volatility is over, with the price of oil declining to around US\$ 112 per barrel by end 2010. Likewise, the prices of foodstuffs would also show a downward trend after some of current supply constraints are solved. In this sense, the World Bank projects that the prices of foodstuffs would decline in 2015 to similar leves to those observed in 2007. Thus, the price of wheat would show a similar level to that of 2007, while the price of soybean oil would be lower.

Table 13

TERMS OF TRADE

(Annual percentage change)

		20	008*	20	09*	2010*
	2007	IR Jan. 08	IR May 08	IR Jan. 08	IR May 08	IR May 08
Terms of trade	3.6	-10.7	-6.3	-2.6	-3.8	-2.8
1. Export price index Of which: Annual average price	14.0	-0.2	12.9	-2.9	-1.7	-2.1
Copper (cUS\$ per pound)	323	280	363	255	336	313
Zinc (cents per pound)	147	106	106	106	106	105
Gold (US\$ per ounce)	697	820	888	849	885	911
Fish meal (US\$ per MT)	1,075	924	977	843	891	847
2. Import price index Of which: Annual average price	10.0	11.7	20.5	-0.3	2.2	0.8
Petroleum (US\$ per barrel)	72	89	114	84	116	113
Wheat (US\$ per MT)	231	333	329	308	322	320
Maize(US\$ per MT)	138	193	224	198	249	239
Soy bean (US\$ per MT)	307	458	482	437	486	476
Soy oil (US\$ per MT)	768	1,150	1,301	1,165	1,380	1,358
Rice (US\$ per MT	337	388	791	372	838	764

IR: Inflation Report.

Forecast.

Graph 36 TRADE BALANCE (Millions of US\$)



1999 2000 2001 2002 2003 2004 2005 2006 2007 2008* 2009* 2010* * Forecast.

Trade balance

26. Between **2008** and **2010** the trade balance would continue to show surpluses ranging between US\$ 6.4 billion and US\$ 3.0 billion. The results for 2008 and 2009 have been revised upwards relative to our January Inflation Report considering new available information on the future evolution of the prices of commodities and a higher demand for imports than previously estimated.

Table 14

TRADE BALANCE

(Millions of US\$)

	2	007	2008*		2009*		2010*	
	IQ.	Year	IQ.	IR Jan. 08	IR May 08	IR Jan. 08	IR May 08	IR May 08
EXPORTS	5 747	27,956	7,734	30,174	33,407	31,725	35,205	38,677
Of which:								
Traditional products	4,353	21,493	5,917	22,524	25,750	22,805	26,276	28,285
Non-traditional products	1,361	6,288	1,774	7,467	7,467	8,731	8,731	10,185
IMPORTS	4,208	19,599	6,261	24,944	27,055	28,283	32,085	35,651
Of which:								
Consumption goods	686	3,191	979	3,778	4,126	4,304	4,926	5,831
Raw materials	2,202	10,416	3,435	12,900	14,659	14,198	16,921	17,635
Capital goods	1,299	5,885	1,822	8,155	8,154	9,668	10,121	12,064
TRADE BALANCE	1,539	8,356	1,473	5,230	6,352	3,441	3,120	3,027
Note: % Change								
Exports	23.9	17.5	34.6	7.9	19.5	5.1	5.4	9.9
Imports	24.4	31.8	48.8	27.3	38.0	13.4	18.6	11.1
Export volume index	2.5	3.1	11.4	8.2	5.8	8.3	7.2	12.2
Import volume index	17.3	19.8	20.7	15.5	14.6	13.7	16.1	10.3

IR: Inflation Report.

* Forecast.

Exports

27. Continuing the trend observed over the last quarters, exports grew 35 percent in the **first quarter of 2008**. This result was associated with both the positive evolution of prices and with the greater diversification of products and the access to new markets that has fueled the growth of non traditional exports. Thus, while the average price of traditional exports increased 23 percent, their volumes increased 10 percent.

Likewise, the prices of non traditional exports increased 13 percent and their volume increased 17 percent.

28. Exports in **2008** would amount to US\$ 33.4 billion, showing a growth rate of 20 percent -a rate 12 percentage points higher than the one estimated in our previous report. This upward revision is based on the data observed in the first quarter, as well as the higher prices of metals (mainly gold and copper) expected for the rest of the year.

In **2009** and **2010** total exports would grow 5 and 10 percent in nominal terms respectively, mainly due to higher sales of non traditional products (17 percent each year), especially





Graph 38 VOLUME INDEX: TRADITIONAL AND NON-TRADITIONAL EXPORTS



COPPER PRICE AND INVENTORIES



Graph 40



Graph 41 ZINC PRICE: FORECAST



agricultural and fishing products. Traditional exports would grow 2 percent in 2009 and 8 percent in 2010 due to the onset of operations at Camisea II and to the implementation of several mining projects (Tía María, the expansion of Southern and Cañariaco, among other projects).

Copper

29. So far this year, the price of copper has risen 27 percent relative to December 2007, reaching US\$ 3.81 per pound at end May. This price evolution was marked by expectations of increased demand in China, by temporary supply constraints in producing countries -Chile and Zambia-, and by a low level of inventories in stock markets.

Expectations of greater demand from China -given the elimination of the 2 percent tariff on imports of refined copper- and data showing a growth of 8 percent in China's imports in the fourth quarter of 2007 propelled the price of copper to US\$ 4.03 per pound in March. This was followed by a period of high volatility until April, marked by signals of lower demand due to indicators of recession in the United States and to temporary supply constraints in Rio Tinto and BHP Billiton mines, as well as by the drop of inventories at the London Metal Exchange and by strikes and stoppages in three Codelco units in Chile.

Price corrections in this upward trend were then observed since May, following the solution of temporary supply constraints (end of Codelco's strikes). However, since inventories have remained low -declining to even 180 thousand MT (amount equivalent to 3.6 days of consumption)-, any short-term problem in this market could immediately translate into price pressures.

The price of copper is expected to show a moderate downward trend in **2009** and **2010**, in line with the slowing of economic activity in the United States, China, and Europe. A higher supply is also expected due to the onset of new projects in Chile, Zambia, United States, and Congo.

Zinc

30. So far this year, the price of zinc has declined 7 percent compared to December 2007, reaching its year-to-date lowest level in May (US\$ 0.99 per pound).

This trend reflects the supply-demand balance of refined zinc, which would show a surplus in 2008 as a result of the

LONDON METAL EXCHANGE

ZINC PRICE AND INVENTORIES AT THE

Graph 42



onset of new mining projects in Bolivia, Portugal, and Peru, among other countries. China continues to be a net exporter of this basic metal, although with lower levels than the ones
 observed in 2007. On the other hand, demand has also increased -although less than supply-, especially in India, Japan, and Korea and, to a lesser extent, in Europe due to the construction of highways, energy generation plants and transmission lines.

The price of zinc is expected to correct its downward trend in 2008, stabilizing at its current levels. As long as the slowdown of economic activity in the United States and China is moderate, the demand for zinc should remain high. An additional factor that would limit the drop of the price of zinc in the short term is the reconstruction of the areas that were affected by an earthquake in China.

Gold

31. So far this year, the price of gold has increased 10 percent compared to December 2007, reaching US\$ 891 per troy ounce in May.

In the first months of the year, the price of gold showed a steady upward trend, reaching a maximum high of US\$ 1,011 per ounce on March 17. This rise is explained by increased risk aversion, the depreciation of the dollar, inflationary pressures, and the high prices of oil, as well as by some supply constraints (especially in South Africa).

The increase in risk aversion is associated with the crisis of the subprime mortgage market and its repercussions on the financial systems, which increased the demand for low-risk assets, such as gold and the US Treasury bonds.

The depreciation of the dollar also favored the rise in the price of gold in international markets. The dollar weakened steadily during the first months of 2008, which contributed to increase the demand for gold as a hedge asset. Moreover, existing inflationary pressures and the higher price of oil also favored the demand for gold.

However, since April the price of gold has shown a slight downward correction as several investment funds shifted to alternative assets in a context of lower tensions in the US financial markets and of lower weakness of the dollar. Other factors that would also have contributed to this evolution included the IMF's announcement that it would sell a part of its gold reserves and a lower seasonal demand in India and Turkey.



The forecasts for 2008-2010 consider that the price of gold will remain high. Although some of the factors that contributed recently to increase the price of gold (mainly risk aversion and the depreciation of the dollar) could show a partial reversal, the price of gold is expected to remain at high levels due to inflationary pressures and to the high prices of oil. Other factors adding to this would include some supply constraints in the medium term, associated with increasing production costs.

Table 15

BALANCE OF WORLD'S SUPPLY AND DEMAND OF MAIN METALS

(Thousand of MT)

	2004	2005	2006	2007	2008*	2009*	2010*
Coper							
- Supply	11,689	16,657	17,529	18,101	18,858	19,905	20,800
- Demand	12,537	16,750	17,418	18,134	18,904	19,807	20,588
Gap (Supply-Demand)	<u>-848</u>	<u>-93</u>	<u>111</u>	<u>-33</u>	<u>-46</u>	<u>98</u>	<u>212</u>
Inventories	488	425	536	503	457	555	767
Consumption weeks	2.1	1.3	1.6	1.4	1.3	1.5	1.9
Zinc							
- Supply	7,296	7,015	7,150	7,280	7,708	8,010	8,315
- Demand	7,548	7,316	7,463	7,345	7,644	7,970	8,205
Gap (Supply-Demand)	<u>-252</u>	<u>-301</u>	<u>-313</u>	<u>-65</u>	<u>64</u>	<u>40</u>	<u>110</u>
Inventories	1,039	828	548	549	613	653	763
Consumption weeks	7.3	6.1	3.9	4.0	4.3	4.4	5.0
Gold							
- Supply	3,361	4,025	3,557	3,450	593	n.d.	n.d.
- Demand	3,497	3,731	3,386	3,547	701	n.d.	n.d.
Gap (Supply-Demand)	<u>-136</u>	<u>294</u>	<u>171</u>	<u>-97</u>	<u>-108</u>	<u>n.d.</u>	<u>n.d.</u>

* Forecast. In the case of gold, the information corresponds to first quarter 2008. Source: World Gold Council, Metal Bulletin Reserch (Base Metals Monthly, May 2008).

Fishmeal

32. After the strong price correction observed since August 2007, the price of fishmeal has increased 13 percent (from US\$ 986 per MT in December 2007 to US\$ 1,118 per MT in May 2008).

This positive price evolution is explained in part by a technical correction associated with the low prices observed over the last months, and by China's demand (the main consumer of this product) for this product due to its pork and acquafarming industries (seasonal activity in the latter begins in June).

However, no additional recovery would be expected in the price of fishmeal due to high levels of inventories. Moreover, the price of soy flour, the main competitor product, shows more competitive levels despite the recent prices rises observed. In 2008-2010 the prices of fishmeal are expected to show a reduction.



Dec.07

Dec.08

Dec.09

Dec.10

Dec.04

IR: Inflation Report.

Dec.05

Dec.06



33. Imports in the **first quarter of 2008** grew 49 percent compared to the same period last year. Driven by private investment and the dynamism of economic activity, imports of industrial inputs increased 52 percent and imports of capital goods increased 40 percent.

This growth of imports during **2008** would be mainly explained by the evolution of private investment, which would grow over 20 percent this year. Given the relationship between imports and the dynamism of private investment, this translates into higher levels of capital and productivity that favor the growth of the potential output in the medium term.

In terms of economic sectors, the growth of imports of capital goods in industry (31 percent), the transport sector (46 percent), and the mining and hydrocarbon sector was noteworthy.

In **2009** and **2010**, imports are expected to grow 19 and 11 percent respectively, due to the onset of the pre-operation stage of several investment projects in various sectors, including Camisea II (in the south of the country), Toromocho (Junín), Río Blanco (Piura), Minas Conga (Cajamarca), Lot 67 (Amazonas), and Bayovar's Phosphate Plant, among other projects.

Financial account

34. During the **first quarter of 2008**, the financial account of the balance of payments showed a strong increase in the flow of external resources resulting from direct investment and long-term disbursements from the private sector, in line with the dynamism of economic activity. The financial account in the first quarter also shows institutional investors' greater preference for maintaining a lower share of their portfolio in financial assets abroad, as well as a significant increase of deposits of non residents in the bank system.

In **2008** the financial account would show a positive flow of US\$ 9.6 billion, explained by a flow of foreign direct investment of US\$ 8.3 billion encouraged by favorable expectations on the future evolution of economic activity. Moreover, the inflow of capitals oriented to financial assets in soles, such as BCRPCDs, bank deposits, and, to a lower extent, Public Treasury bonds, should also be pointed out.



Investments of around US\$ 7.6 billion each year are estimated for **2009** and **2010** based on the favorable expectations on the evolution of economic activity which, although with a more moderate expansion, would show a pace of growth closer to that of the potential output. The higher flow of direct foreign investment would be mainly oriented to the mining and hydrocarbon sector -where important projects are being developed-, as well as to the sectors of telecommunications, electricity, road infrastructure, agroindustry, and petrochemistry.

In line with the dynamism of economic activity, higher long term disbursments from the private sector would add onto increased flows of direct investment. Local institutional investors' process of portfolio diversification towards financial assets abroad is also expected to continue.

Additionally, a partial reversal of inflows of short-term capitals is also expected in the forecast horizon.

Table 16

PRIVATE FINANCIAL ACCOUNT AND SHORT-TERM CAPITALS (Millions of US\$)

	2006	2007	I Q. 08	2008*	2009*	2010*
DIRECT INVESTMENT AND LONG-TERM LOANS	3,671	8,679	3,234	9,293	8,171	8,267
A. Direct investments	3,467	5,343	2,920	8,305	7,568	7,564
B. Long-term loans	204	3,336	314	988	603	703
PORTFOLIO INVESTMENT	-1,730	324	1,250	335	-1,288	-1,453
A. Bonds and capital participation	-72	130	28	28	0	0
B. Other external assets and liabilities	-1,658	194	1,222	307	-1,288	-1,453
a. Assets (foreign investment) 1/	-1,885	-987	359	-1,029	-1,538	-1,703
b. Liabilities (investment from non-residents) $^{\mbox{\tiny 2'}}$	227	1,181	863	1,335	250	250
SHORT-TERM CAPITAL	-563	2,030	2,337	1,558	-989	-1,122
A. Banks	-348	1,552	899	1,001	-600	-1,167
B. Others	-215	478	1,438	558	-389	45

* Forecast.

1/ Include AFP, Mutual Funds, Insurance companies, banks and others. Positive sign (negative) means capital inflows (outflows) to the economy, it means sales (purchase) of foreign assets by local institutional investors.

2/ Includes sovereign bonds purchased by non-residents and CRPAO's. Positive sign (negative) means capital inflows (outflows) to the economy, it means sales (purchase) of domestic assets by non-residents.

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BOX 5

TOWARDS HIGHER COMPETITIVENESS IN PERUVIAN PORTS

The impact of the costs and time involved in export processes -and of international shipping costs- on international trade is similar to the impact of tariffs and other para-tariff barriers. Hence, a reduction of these costs fosters exports by making them more competitive and, therefore, increases the economy's potential GDP.

In Peru, the **costs of services** associated with exports show little competitiveness, mainly due to a deficit of infrastructure. According to World Bank estimates published in Doing Bussiness 2008, 24 days are required on average to export a product from Peruvian ports (which places Peru in position 100 among 181 nations evaluated). In contrast, only 5-6 days are required in the world's most efficient ports (Singapore, Denmark, Hong Kong, the Netherlands). Based on the calculations of Djankov, Freund and Pham (2006)⁹, if the port reform reduced by two days the time required for exporting a product (thus equalling the average time required in Latin American ports), Peruvian exports would increase approximately 2 percent.

Operations at the port of Callao are expected to take less time since 2009, when the two port cranes and the two yard cranes purchased by Enapu will start operating. Moreover, Dubai Port World's new terminal for containers at Callao (Muelle Sur) should also initiate operations in 2010. Finally, the process of concession of the new wharf for minerals should be speeded up to concentrate the traffic of containers in dock N° 5, as specified in the National Port Development Plan.

Management problems at the port of Callao include ship congestion (ships await 2-5 days to get a dock) and a slow pace of operations (around ten containers are unloaded each hour), which would be causing some maritime companies to avoid passing through this port. An excess of containers waiting for tranship is also observed (in detriment of containers of local exporters and importers), as well as burdening procedures that reduce the port's competitiveness. In this sense, Enapu should step up the pace in implementing the measures it has announced to improve the port' management, which include the following:

- · Planning of ship arrivals.
- · Implement electronic system for outgoing shipments of imported merchandise.
- · Increase transhipment rates and reduce the free storage period from 30 to 10 days.
- Stop leasing some port areas to storage companies in order that these areas may be used to stockpile containers prior to their embarkment.
- · Operate with mobile cranes in the north quay until the port and yard cranes arrive.
- · Eliminate unnecessary weighing procedures.
- Facilitate the access to the terminal by implementing a new entrance.
- Pave adjacent streets.
- · Reduce port rates.
- Improve facilities at port General San Martín in Pisco.

Additionally, logistic costs in Peru -as percentage of exported value- are high (32 percent) compared to Mexico (20 percent), Chile (18 percent), United States (9.5 percent), the OECD (9 percent), or Singapore (8.5 percent)¹⁰. One of the factors determining these high costs is that merchandises have to be transported to El Callao, even though most of the exportable supply originates outside Lima.

For this reason, processes for the concession of other ports in the country should be speeded up. Investments required to implement these ports are estimated at US\$ 405 million. In this sense, in April Proinversión and the Autoridad Portuaria Nacional (APN) called for bids for the modernization, rehabilitation and equipment of the ports of Paita (the second major port in the country in terms of traffic of containers) and San Martín (Pisco), which will imply immediate investments of approximately US\$ 128 million and US\$ 80 million respectively. In order to contribute to improve the efficiency of trade activities in Peru, the tender should be awarded in October 2008, according to the schedule established by Proinversión.

⁹ S. Djankov, C. Freund and C.Pham (2006). Trading on Time, IMF and World Bank.

¹⁰ J. Guasch and J. Bogan (2005). Inventories and Logistic Costs in Developing Countries: Levels and Determinants, a Red Flag on Competitiveness and Growth, INDECOPI.

The main improvements to be implemented in the ports of Paita and San Martín include: develop a new container terminal, the expansion of the current dock and building a new breakwater pier (Paita), the installation of automated systems to load/unload solid and liquid cargoes (including storage deposits), develop an area for logistics activities, and deepening/dredging to 15 metres (San Martín).

Port	Investment required (US\$ MM)
Paita	128
San Martín (Pisco)	80
llo	100
Salaverry	40
Yurimaguas	20
Pucallpa	19
Iquitos	18
Total	405

PORTS IN PROCESS OF CONCESSION

Source: Ministry of Transport and Communications.

IV. Public finances

In line with the upward revision of the prices of minerals, a higher fiscal surplus than the one estimated in the Inflation Report of January is considered throughout the forecast horizon in the fiscal scenario. However, a greater fiscal impulse is estimated in terms of the structural result, mainly due to the acceleration of growth of public expenditure. Moreover, a fiscal neutral position in terms of the economic cycle is expected for the next years.

Maintaining a fiscal surplus of at least 1.8 percent of GDP on average in the forecast horizon will reduce the risks that demand inflationary pressures might appear.

Overall balance

35. In a context of strong dynamism of public investment, the overall balance of the Non Financial Public Sector showed a surplus of 4.5 percent of GDP -0.4 percent lower than in the first quarter of 2007- in the **first quarter of 2008**. This surplus resulted mainly from central government operations (4.9 percent of GDP), since entities in the rest of the general government and state enterprises recorded deficits of 0.1 percent and 0.3 percent of GDP respectively.

The forecast on the economic result for **2008** has been revised upwards from 1.8 percent of GDP to 2.2 percent of GDP. This higher result is mainly explained by higher expected revenues, given the greater dynamism of economic activity, better international prices for our exports, and the higher growth of imports relative to estimates in our Inflation Report of January.

The non-financial expenditure of the general government have also been revised upwards and should grow by a real 12.1 percent (versus 11.3 percent estimated in the January Inflation Report), due to the higher expenditure execution of local and regional governments, especially in terms of capital expenditure.





1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 * Forecast.

A lower **economic surplus**, equivalent to 1.7 and 1.5 percent of GDP is estimated for **2009** and **2010** respectively. These lower results consider a faster pace of spending in subnational governments, as well as the effect that the allocation of higher resources to the Fuel Price Stabilization Fund in said years would have on the budget.

Table 17

NON-FINANCIAL PUBLIC SECTOR

(Percentage of GDP)

	20	07		2008*		20	09*	2010*	
	IQ	Year	IQ	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08	
1. General government									
current revenue	20.0	20.4	21.0	20.5	20.4	20.0	20.3	20.3	
Real percentage change	9.9	13.6	13.5	2.9	5.3	2.5	4.4	6.5	
2. General government									
non-financial expenditure	13.2	15.7	14.1	17.1	16.7	17.7	17.2	17.5	
Real percentage change	3.4	6.9	15.2	11.3	12.1	8.1	7.7	7.9	
Of which:									
a. Current	11.8	12.7	11.8	13.3	12.8	13.5	12.6	12.4	
Real percentage change	4.5	4.5	7.6	6.8	5.9	6.3	3.2	4.2	
b. Capital	1.4	2.8	2.3	3.7	3.7	4.1	4.4	4.9	
Real percentage change	-5.1	19.4	80.0	34.2	40.6	15.3	21.9	18.4	
3. Other	0.2	0.2	-0.2	0.1	0.1	0.1	0.0	0.0	
4. Primary balance (1-2+3)	7.0	4.8	6.7	3.4	3.7	2.4	3.1	2.8	
5. Interests	2.1	1.8	2.1	1.6	1.5	1.4	1.4	1.3	
6. <u>Overall balance</u>	<u>4.9</u>	<u>3.1</u>	<u>4.5</u>	<u>1.8</u>	<u>2.2</u>	<u>1.0</u>	<u>1.7</u>	<u>1.5</u>	
Central government current revenues	17.1	17.9	18.1	18.0	17.9	17.5	17.8	17.8	
Central goverment non-financial expenditure	12.2	14.6	11.4	15.1	14.8	15.3	14.9	15.1	

Forecast.

Structural economic result

- 36. The structural economic result -obtained by isolating the effects of the economic cycle and of the higher prices of mining and hydrocarbon exports on the fiscal result- is an indicator that reflects fiscal policy decisions. After showing a surplus in 2006 and a nil result in 2007, this indicator would record decreasing deficit levels since 2008.
- 37. In terms of fiscal impulse -indicator showing the net effect of fiscal policy on domestic demand-, the trend of the structural result would represent an expansion equivalent to 1.3 percent of GDP in **2008**. This suggests that, despite the fiscal surplus forecast, the fiscal position would be expansionary this year,

Graph 47 CONVENTIONAL AND STRUCTURAL DEFICIT OF THE NON-FINANCIAL PUBLIC SECTOR (Percentage of GDP)



^{*} Forecast.

Graph 48 FISCAL IMPULSE^{1/}

(Percentage of GDP)



^{1999 2000 2001 2002 2003 2004 2005 2006 2007 2008* 2009* 2010*} * Forecast.

 The fiscal impulse is determined as the difference between the structural primary balance from one year to another. Graph 49



Graph 52

REVENUE FROM IMPORT DUTIES (Percentage of GDP)



with public spending growing at 12.1 percent in real terms - showing a higher growth than economic activity (8.0 percent). In contrast, the fiscal impulse in **2009** and **2010** would be neutral as a result of lower dynamism in public spending, which would show more similar levels of growth to those observed in the economy.

Evolution of fiscal revenues

38. In the **first quarter of 2008** the current revenues of the general government amounted to 21.0 percent of GDP, which represented a growth of 13.5 percent in real terms, basically as a result of increased economic activity.

In **2008** the revenues of the general government should amount to 20.4 percent of GDP, which would represent a growth of 5.3 percent in real terms, reflecting the favorable economic context and the high international prices for our export products. This growth of fiscal revenues would occur despite lower regularization of income tax this year (given increased advanced payments carried out in 2007) and tax amendments implemented in March and June, which reduced tariff rates in June and the excise tax on fuels in both months. The annual cost of these measures is equivalent to approximately 0.4 percent of GDP. The reduction of tariffs has also reduced the tariff structure to three scales (0,9 and 17 percent), which has led to an effective tariff that is currently around 2 percent and to lower dispersal in the tariff structure.

The forecasts for **2009** and **2010** consider current revenues equivalent to 20.3 percent of GDP in both years, in line with projected increased activity and higher imports.

Evolution of fiscal expenditure

39. In the **first quarter of 2008**, the **non financial expenditure of general government** increased by a real 15.2 percent, due to increased general government investment (80 percent). This would be reflecting that subnational governments -especially local governments- are overcoming the management difficulties they faced to carry out investment projects. Current expenditure, on the other hand, grew 7.6 percent.

In **2008** expenditure should grow 12.1 percent, mainly due to the evolution of capital expenditure which should increase

Graph 53 GENERAL GOVERNMENT NON-FINANCIAL EXPENDITURE

(Percentage of GDP)



Graph 54

GENERAL GOVERNMENT NON-FINANCIAL EXPENDITURE (Real percentage change)



1999 2000 2001 2002 2003 2004 2005 2006 2007 2008* 2009* 2010* * Forecast. 40.6 percent. Moreover, a real growth of 7.7 and 7.9 percent is expected in the non-financial expenditure of the general government for **2009** and **2010** respectively. Higher public investment, which would be around 5 percent of GDP in 2010, would account mainly for this growth.

It should be pointed out that these estimates consider that part of pending obligations with the Fuel Price Stabilization Fund, as well as new obligations generated with this fund -given the evolution of the international price of oil-, will be cancelled between 2008 and 2010. So far this year, the government has allocated S/. 1,000 million of the budget to the Fund, and has also authorized the payment of S/. 400 million to refineries and importers for obligations generated in previous fiscal years. No important rises in the final prices of fuels have been observed so far this year due to the combination of the Fund and the excise tax. Accumulated liabilities with refineries as of end May are estimated at S/. 1,900 million.

40. Forecasts on the growth of expenditure between 2008 and 2010 are in line with the limits set forth in the Fiscal Responsibility and Transparency Law, which establishes that that the annual increase of the central government' expenditure in consumption shall not be higher than 4 percent in real terms, including total spending in salaries, pensions, goods and services.

Financing requirements



42. This debt management strategy has allowed to reduce financing risks due to longer average maturities, as well as reducing exchange risks -since the debt in foreign currency has been replaced by debt in soles- and interest rate risks -since preference is given to fixed-rate debt. In the rest of 2008, the forecast considers one debt prepayment operation to multilateral organizations.





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Table 18

FINANCIAL REQUIREMENT OF THE **NON-FINANCIAL PUBLIC SECTOR 1/** (Millions of US\$)

		20	007		2008*		20	2009*	
		IQ	Year	IQ	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08
I.	Uses	-724	-1,745	-498	-291	-929	-181	-966	-744
	1. Amortization	458	1,505	876	1,992	1,968	1,259	1,541	1,734
	a. External	355	1,171	751	1,413	1,335	923	756	907
	 b. Internal Of which: 	103	333	124	580	633	336	785	827
	Pension bonds	31	134	20	180	131	192	137	144
	2. Overall balance (negative sign indicates surplu	-1,182 Js)	-3,250	-1,374	-2,283	-2,898	-1,440	-2,507	-2,478
II.	Sources	-724	-1,745	-498	-291	-929	-181	-966	-744
	1. External	110	974	185	1,158	1,158	1,089	656	479
	2. Bonds 2/	116	840	108	1,046	1,042	1,053	500	500
	3. Internal ^{3/}	-950	-3,559	-792	-2,496	-3,129	-2,324	-2,121	-1,723
M	emo:								
Ba	alance of gross public debt								
	Millions of US\$	29,853	31,870	31,351	31,465	32,447	32,771	32,024	31,481
	In percentage of GDP	30.8	29.2	27.2	24.2	24.0	22.5	21.7	19.6
Ba	alance of net public debt 4/								
	Millions of US\$	21,682	19,061	18,276	15,582	16,318	14,244	13,122	10,126
		00.4	47 5	45 0	10.0	40.4	0.0	0.0	6.2

IR: Inflation Report.

Forecast.

The effect of exchanging treasury bonds by longer-maturity bonds, as well as the effect of placements made for the prepayment of both internal and external operations has been isolated in 1/ the case of amortization and disbursements. 2/

Includes domestic and external bonds.

Positive sign indicates overdraft and negative sign indicates greater deposits.
 Defined as the difference between gross public debt and NFPS deposits.
 Source: BCRP and MEF.

43. The net debt, indicator of public sector's net liabilities and of public sector's solvency, would decrease to a rate of 6.3 percent of GDP in 2010, mainly as a result of expected fiscal surpluses -and the consequent accumulation of deposits- and the above-mentioned debt-management operations.

V. Monetary policy

The monetary policy implemented by the Central Bank over the last months has been oriented to controlling inflation expectations, which have increased in a context of higher prices and the strong dynamism observed in economic activity and macroeconomic expenditure.

Monetary adjustment in this period has been achieved by combining rises in the monetary reference interest rate and increases in reserve requirements on domestic and foreign currency obligations. The use of reserve requirements as an adjustment instrument is explained by the need of effectively and timely neutralizing a significant volume of external shortterm capitals that threatened to expand liquidity in the financial system in an undesired way.

44. The BCRP is continuously monitoring the evolution of inflation in order to adopt the necessary preventive measures required so that inflation falls within the target range, considering the lags with which monetary policy affects the economy and prices.

The instrument used by the Central Bank for this purpose is the reference interest rate. However, the Central Bank may occasionally resort to other instruments of monetary control, such as reserve requirements, to influence its monetary stance. This mechanism has been used this year to reinforce monetary control given the strong inflows of short-term capitals observed.

45. The Board's Communiqués on the Monetary Program have repeatedly emphasized that the evolution of accumulated inflation in the last 12 months has been mainly influenced by higher international prices, especially food prices, in a context of high dynamism of domestic demand stemming from business and consumers' optimistic expectations, as well as from the faster pace of growth of credit.

Since October 2007 inflation has fallen above the 3 percent tolerance margin and above the central forecast included

in the Inflation Report of September 2007, altough within expected levels in the scenario of higher prices of imported food considered in the balance of risks.

The risks of increased inflation associated with higher international prices continued to materialize between January and May 2008.

In this context, since July 2007 the Board of the Central Bank has been taking actions to prevent that inflation expectations will systematically divert form the inflation target and to steer inflation to gradually converge to the target range (between 3 and 1 percent), in a context characterized by the high growth of domestic demand and by latent risks of higher imported inflation.

Thus, after having increased the reference interest rate by 25 basis points in July and September 2007 and in January 2008, the Board decided to raise the reference interest rate from 5.25 to 5.50 percent in order to offset the pace of growth of credit and domestic demand, and thus prevent that the price rises originated by supply shocks would translate in a permanent way into inflation expectations.

In May 2008, the Board made a pause in adjusting monetary policy, but reiterated that it would continue to oversee the impact of the measures implemented on the evolution of economic activity and prices. In June the Board approved to raise the reference interest rate to 5.75 percent.

46. The Central Bank has also been adopting measures in terms of reserve requirements for entities operating in the Peruvian financial system.

In September 2007, in a scenario marked by uncertainty in international financial markets, associated with the deteriorarion of the high-risk (subprime) mortgage segment in the United States, the BCRP excluded external credits from international financial organizations for 2 or more years from the obligation of reserve requirements in order to reduce the vulnerability to external shocks of the local financial system's financing structure.

An unprecedented inflow of external short-term capitals towards assets in domestic currency was observed in January. In this context, the BCRP increased its interventions in the exchange market, buying US\$ 3,270 million to prevent the risks entailed by excessive volatility of exchange in a dollarized economy.

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Between January and March 2008, holdings of BCRPCDs by non residents showed an upward trend and increased to US\$ 2,627 million. However, this trend started to revert since April, as a result of which the balance has declined to US\$ 2,207 million as of May.

Table 19

SHARE OF NON-RESIDENTS' HOLDINGS OF FIXED INCOME ASSETS IN DOMESTIC CURRENCY (Millions of US\$)

	Dec. 06	Dec. 07	Jan. 08	Feb. 08	Mar. 08	Apr. 08	May. 08
1. CDBCRP	0	895	2,403	2,371	2,627	2,514	2,207
2. Fixed return	1,147	1,851	1,989	2,516	2,726	2,771	2,887
3. Bank deposits	60	76	81	344	770	1,015	388
Total	1,207	2,822	4,473	5,231	6,123	6,300	5,482

Moreover, the Board approved to raise reserve requirements in domestic and foreign currency in order to support sterilization mechanisms and to reduce the high dynamism of credit to the private sector. Thus, reserve requirements in domestic and foreign currency were raised in January, March and April (effective in February, April and May respectively).

Table 20

SUMMARY OF THE MONETARY POLICY MEASURES (Interest rates in percentage)

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Monetary policy measures	Dec. 07	Jan. 08	Feb. 08	Mar. 08	Apr. 08	May. 08
Reference rate	5.00	5.25	5.25	5.25	5.50	5.50
Reserve requirements in S/. and US\$	6.0	6.0	7.0	7.0	8.0	8.5
Minimun requirement in CC in S/. and US\$ $^{\mbox{\tiny 1/}}$	1.0	1.0	2.0	2.0	2.0	2.0
Marginal reserve requirement in S/. 2/	6.0	6.0	15.0	15.0	20.0	25.0
Marginal reserve requirement in S/. (non-residents)	6.0	6.0	15.0	15.0	40.0	120.0
Return of marginal reserve requirement S/. $^{\mbox{\tiny 3'}}$	n.a.	n.a.	3.50	3.50	3.75	3.75
Marginal reserve requirement in US\$	30.0	30.0	40.0	40.0	40.0	45.0
Marginal reserve requirement in US\$ (non-residents)	30.0	30.0	40.0	40.0	40.0	45.0
Return of marginal reserve requirement US\$ 4/	3.5	3.5	L - 7/8	L - 7/8	L - 7/8	L - 7/8
Base period for marginal reserve requirement in US\$	Sep. 04	Sep. 04	Dec.07	Dec.07	Dec.07	Apr. 08
Foreign investment limit of AFP's 5/	15.0	17.0	17.0	20.0	20.0	20.0

CC = Current account in the Central Bank. Since February, the marginal reserve requirement 1/ should be kept in this current account.

2/ Up to January 2008 includes the minimun reserve requirement.

3/

BCRP overnight interest rate minus 100 basis points. L = London Interbank Offered Rate (LIBOR) in US\$ (1-month term). 4/

5/ In January 2008 the limit was increased initially from 15 to 16 percent and later from 16 to 17 percent.

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This rises in reserve requirement rates have contributed to reduce liquidity in the interbank market. The impact of these measures on economic activity and prices is estimated to be equivalent to increasing the reference interest rate by 143 basis points.

Complementing these measures, the Board decided to restrain the negotiability of BCRP CDs and to replace them by BCRP term deposits and BCRP CDs with Restricted Negotiation (CDBCRP-NR), limiting initially local financial entities from acquiring these certificates considering that they should operate as an instrument of monetary regulation and not as an investment instrument.

47. In addition to the above measures, in April the Board also decided to raise the rate of reserve requirements on obligations in domestic currency with non-resident financial entities from 40 to 120 percent in order to discourage the inflow of external short-term capitals.

With the purpose of increasing liquidity in CDBCRP-NR, the Board decided to increase the number of agents authorized to participate in primary auctions and to allow the negotiation of these instruments only among auction participants.

Finally, continuing with its decision to gradually increase the maximum allowed to Private Administrators of Pension Funds for investments abroad, the Board increased this limit to 20 percent -the maximum allowed by law as of April- to contribute to the better management of the portfolio's risk through greater diversification.

SUMMARY OF THE BCRP COMMUNIQUÉS ON THE MONETARY PROGRAM: February 2008 - June 2008

February: The Board of the Central Bank approved to maintain the monetary policy reference interest rate at 5.25 percent. This decision was made considering that the Board approved in January to raise reserve requirements in domestic currency as of February. The impact of this measure is estimated to be equivalent to raising the reference rate by 25 and 50 basis points in the shortand long-term respectively. The Board also approved to raise the required reserve ratio in foreign currency and to launch Certificate of Deposits with Restricted Negotiation in order to neutralize the massive inflow of short-term capitals observed in the first half of January.

The Board continues to oversee the evolution of inflation and its determinants, both domestic and external, and stands ready to take any necessary measure required to ensure that inflation converges to the target range. With the measures implemented and with the gradual normalization of international financial turbulence, inflations should converge to the target range in the second half of 2008.

March: The Board of the Central bank approved to raise legal reserve requirements from 7 to 8 percent and to increase marginal reserve requirements from 15 to 20 percent as of April 2008. The Board also approved to increase the rate of marginal reserve requirements for non-resident financial entities' short-term deposits and liabilities in any currency to 40 percent.

The Board decided to maintain the monetary policy reference interest rate at 5.25 percent considering that the impact of the increase of the rate of reserve requirements, effective as of April, would be equivalent to raising said rate by 50 basis points.

All these measures imply an additional adjustment in monetary policy to prevent that the rises seen in international prices translate into inflation expectations in a context of strong growth of domestic demand.

April: The Board of the Central Reserve Bank of Peru approved to raise the monetary policy reference interest rate from 5.25 to 5.50 percent. Moreover, the Board also approved to raise the requirements of reserves for financial entities in both domestic and foreign currencies as of May. These measures are in line with the increases of reserve requirements approved in January and March, as well as with having raised the reference interest rate from 4.5 to 5.25 percent between July 2007 and January 2008.

This increase in the rates of reserve requirements is estimated to be equivalent to raising the reference rate by 50 basis points. These monetary measures are adopted in order to offset the pace of growth of credit and thus prevent that the price rises originated by food supply shocks translate in a lasting manner into inflation expectations.

May: The Board of the Central Reserve Bank of Peru (BCRP) approved to maintain the monetary policy reference rate at 5.50 percent.

The Board continues to oversee the effects of both the previous increases of the reference rate and the reserve requirement measures approved in January, March, and April on the evolution of inflation. The Board reiterates that the necessary adjustments will be implemented to ensure inflation's gradual convergence to the target range in a context in which price rises are mainly explained by food supply shocks.

June: The Board of the Central Reserve Bank of Peru approved to raise the monetary policy reference interest rate from 5.5 to 5.75 percent. Together with the series of monetary adjustments implemented so far this year, this increase in the reference interest rate is aimed at preventing that the rises observed in the international prices of food and fuels will translate into higher inflation expectations in a context of a high pace of growth of both public and private expenditure.

In this way, inflation is expected to gradually return to the target range in a context of high and sustained economic growth.

The Board will continue to oversee the evolution of inflation and its determinants, particularly in terms of indicators of pressures on demand and inflation expectations.

BOX 6 RESERVE REQUIREMENTS AS A MONETARY POLICY INSTRUMENT

Reserve requirements are the funds banks must hold as reserves to satisfy unexpected withdrawals of deposits. These funds are held as vault cash or as deposits in the central bank. In some countries, banks are required to hold reserves, while in others (Mexico and the United Kingdom, for example) this is voluntary¹¹.

The global trend is to maintain increasingly lower operational reserves and to use open market operations to regulate liquidity. However, as shown in the graph below, there is still a broad range of the minimum legal reserves required in different countries. Likewise, obligations subject to reserve requirements vary according to the types and maturities of deposits.



MINIMUN LEGAL RESERVE REQUIREMENTS (In percentage)

1/ Corresponds to deposits up to 360 days.

2/ 0% beetween \$ 0 and \$ 9,3 millions, 3% over \$ 9,3 and \$ 43,9 millions and 10% over \$ 43,9 millions.

3/ 1,2% over 2,5 billion of yen, 0,9% between 1,2 y 2,5 billion, 0,05% between 50 millions y 1,2 billion.

Source: Central banks, IMF and FELABAN.

However, dollarized economies are exposed to additional risks of illiquidity since the role of the central bank as lender of last resort in currencies other than the local currency is limited. Therefore, the common practice in these economies is to require additional reserve requirements for banks' obligations in foreign currency with the public.

¹¹ Heller, D. and Lengwiler, Y. "Payment obligations, reserve requirements, and the demand for central bank balances", Journal of Monetary Economics 50 (2003) 419-432.

DOLLARIZED COUNTRIES	REQUIRED	ADDITIONAL			
	DOMESTIC CURRENCY	FOREIGN CURRENCY	DOMESTIC CURRENCY	FOREIGN CURRENCY	
Bolivia	12% (2% in cash)	14% (2% in cash)		7,5%	
Bulgaria	12%	12%			
Costa Rica	15%	15%			
Croatia	17%	17%	40% and 15%	40% and 15%	
Hungary	5%	5%			
Israel	6% up to 6 days	6% up to 6 days			
	3% between 1 week and 1 year	3% between 1 week and 1 year			
	0% higher than 1 year	0% higher than 1 year			
Mozambique	11,5%	11,5%			
Paraguay	15% demand deposits	26,5% demand deposits			
	15% between 2 and 360 days	26,5% between 2 and 360 days			
	7% between 361 and 540 days	16,5% between 361 and 540 days			
	0% higher than 540 days	6,5% between 541 and 1080 days			
		1,5% higher a 1080 days			
Peru	8,5%	8,5%	25%	45%	
Sao Tome and Príncipe	22%	22%			
Uruguay	17% lower than 30 days	25% lower than 180 days	8%	10%	
	9% between 30 and 90 days	19% higher than 180 days			
	6% between 91 and 180 days 4% between 181 and 365 days	30% for deposits from non residents			
Zambia	12,5%	12,5%			

Source: Central banks and FELABAN.

This higher required reserve ratio in foreign currency allows improving the economy's international liquidity position to face eventual scenarios of shortages of these funds, for example, in the context of an international financial crisis.

The operational instrument indicating the monetary policy position in countries with an inflation targeting regime -inflation targeting is implemented today in 25 countries, including Peru since 2002- is usually the reference interest rate for the interbank market. However, reserve requirements can also be used as a monetary policy instrument in a scenario of excess of liquidity caused by inflows of external capitals. The graph below shows the channel through which this affects credit conditions.



Reserve requirements indirectly affect interest rates by increasing the cost of financial intermediation and inducing a higher spread between active and passive rates. Banks will therefore choose a higher active rate, a lower passive rate, lower financial margins or any combination of these options to face this higher required reserve ratio.

MF=(1-reserve requirement ratio)* i_{active} +(reserve requirement ratio - TML)* $i_{reserve rem}$ - $i_{passive}$

Thus, we can measure the equivalence of reserve requirements in terms of the interest rate, considering that banks will seek to re-establish their financial margin -which has decreased due to higher reserve requirementsby increasing the active rate by the basis points required to re-establish said margin.

Another mechanism through which higher ratios of required reserves affect lendable funds is the impact of the money multiplier. This mechanism shows the banking system's capacity to expand liquidity -which comprises currency (banknotes and coins held by the public) and bank deposits- based on the monetary base -which comprises currency and banks' reserve requirements.

$M^{s} = M^{s} BM$

This process of expansion originates in the first deposit that banks receive and that, after reserve requirements are deducted, are placed as loans to the private sector. After making transactions and after deciding how much cash it will hold, the private sector will deposit this money again in the bank. This process goes on until liquidity reaches a maximum level consistent with the development of the financial system. In this way, it may be clearly inferred that the money multiplier is determined by the ratio of required reserves and by the public's preference for currency (banknotes and coins). Increases in the required reserve ratio reduce the multiplier, reducing through this channel the money supply.

$$m = \frac{1}{(c + r_i(1 - c))}$$

where:

- FM = Financial margin
- MLR = Minimum legal required reserves ratio
- M^s = Money supply
- MB = Monetary base
- = Multiplier m
- = C/M Public's preference for currency С
- = R/D Effective required reserves ratio r_j C
- = Currency held by individuals
- Μ = Liquidity in domestic currency in the bank system
- R = Banks' reserve requirements
- D = Private sector's deposits in banks

The mechanism of reserve requirements affects relatively more the segment of banks' placements, whereas the reference rate affects relatively more the interest rates on operations with shorter maturities and with lower credit risk, including active and passive rates and the market of capitals.

In conclusion, the operational target of monetary policy is the reference interest rate due to the advantages that this mechanism has, in general, over other instruments of monetary regulation. However, in exceptional situations of significant inflows of external capitals oriented to purchasing financial assets in soles, higher ratios of required reserves may complementarily be used to reinforce monetary control in an economy still showing high ratios of dollarization.

VI. Financial markets

Rates in the monetary and bank markets have mainly reflected the rises of the reference interest rate and the effects of reserve requirements measures implemented since February 2008. On the other hand, long-term interest rates in the market of capitals remain at similar levels to those of January 2008, while a reduction is being observed in shorter-term rates of the yield curve (up to 10 years) due to increased demand for sovereign bonds in a scenario of recomposition of investors' portfolio after significant inflows of short-term capitals were observed in the first months of 2008.

On the other hand, monetary and credit aggregates have moderated the dynamism they showed recently, in line with the monetary measures implemented so far this year, in a scenario marked by the high growth of economic activity, the recomposition of agents' portfolio of assets, and important inflows of short-term capitals. The policy measures implemented should continue to moderate the dynamism of liquidity and credit in the next months and contribute to consolidate high sustained economic growth without generating inflationary pressures.

48. The monetary operations carried out by the Central Bank are aimed at regulating liquidity in the money market in order to influence the interbank interest rate to converge towards the monetary policy reference rate. The interbank interest rate serves as a benchmark for other rates in nuevos soles, affecting especially operations with lower risks and shorter maturities, given that these type of operations depend less on other factors, such as credit risks or long-term inflation expectations.

The 3-month corporate prime rate increased from 5.6 to 6.2 percent between January and May 2008, given that the reference interest rate was raised to 5.25 percent in January and to 5.50 percent in April and that reserve requirement measures were implemented since February 2008. With

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this, the spread between the interbank interest rate and the corporate prime rate in soles was around 67 basis points in May -similar to the average spread observed in the last years.

Table 21

INTEREST RATES IN NUEVOS SOLES

(In percentage)

Date	Corporate	Interbank	Commercial	Microbusiness	Consumer
Dec 06	5 23	4 51	9.46	39.05	34 79
Dec. 07	5.60	4.99	8.99	35.60	33.54
Jan. 08	5.56	4.44	8.97	35.47	33.83
Feb. 08	5.54	5.02	8.97	35.29	35.10
Mar. 08	5.59	5.21	9.20	35.44	34.10
Apr. 08	6.05	5.37	9.46	35.43	33.65
May. 08	6.20	5.53	9.64	35.34	32.82

49. The rest of interest rates on banks' active operations showed a mixed conduct between January and May. The rates on commercial loans increased from 9.0 to 9.6 percent, while the rates on consumer loans and on loans for micro enterprises declined from 33.8 to 32.8 percent and from 35.5 to 35.3 percent respectively in the same period. This would be reflecting a better situation of individuals as credit subjects, which has allowed better results in terms of credit performance.

The reduction of rates on credit to micro enterprises was associated with good economic performance and to their better financial situation in a context of competition between banks and financial entities for this segment. As a result of this, the average active rate on credit operations (TAMN) carried out in this period, which includes operations with different risk levels, rose from 23.3 percent in January to 23.6 percent in May 2008.

- 50. The rates of mortgage loans in soles remained stable at 9.8 percent), while these rates in dollar declined from 9.8 to 9.6 percent, with increased competition in this segment accounting for this result.
- 51. Rates on passive operations in nuevos soles declined compared to January, particularly those with longer maturities. Thus, the rate on 180-day deposits and 360-day deposits declined from 5.3 to 5.0 percent and from 5.7 to 5.5 percent respectively. These results are associated with banks' reaction to compensate the drop in the financial margin due to the effect of reserve requirement measures. However, the 30-day rate increased from 4.5 to 4.8 percent between January and May.

Graph 56 RATIO OF NON PERFORMING LOANS/CURRENT DIRECT CREDITS LENT BY BANKS TO MICROBUSINESSES



May.06 Jul.06 Sep.06 Nov.06 Jan.07 Mar.07 May.07 Jul.07 Sep.07 Nov.07 Jan.08 Mar.08 Apr.08

Table 22

INTEREST RATES IN NUEVOS SOLES AND US DOLLARS (In percentage)

		(A) N	luevo	s Sole	s		(B) US Dollars			Difference (A) - (B)					
	May. 2007	Sep. 2007	Dec. 2007	Jan. 2008	May. 2008	May. 2007	Sep. 2007	Dec. 2007	Jan. 2008	May. 2008	May. 2007	Sep. 2007	Dec. 2007	Jan. 2008	May. 2008
1. Reference interes	t rate	5.0	5.0	5.2	5.5	5.2	10	12	2.0	2.0	0.0	0.2	0.0	2.2	2.5
	le 4.5	5.0	5.0	0.0	5.5	5.5	4.0	4.3	3.0	2.0	-0.0	0.5	0.0	2.3	3.0
up to 30 days	4.5	4.9	4.8	4.5	4.8	4.6	4.6	4.9	4.8	6.3	-0.1	0.2	-0.1	-0.3	-1.5
3. Term deposits bet 31 to 180 days	ween 4.8	5.0	5.3	5.3	5.0	3.6	3.8	3.8	3.9	4.4	1.1	1.2	1.5	1.5	0.6
4. Term deposits bet 181 to 360 days	ween 5.5	5.5	5.6	5.7	5.5	3.7	3.8	3.9	3.8	3.8	1.8	1.6	1.8	1.8	1.7
5. Corporate prime	5.2	5.5	5.6	5.6	6.2	6.1	6.2	6.4	6.0	10.0	-0.9	-0.7	-0.8	-0.4	-3.8
6. Average lending up to 360 days	13.3	12.8	13.2	13.3	13.6	9.9	9.9	9.7	9.6	10.5	3.4	3.0	3.6	3.7	3.1
7. Average lending constant estructur	e 16.5	16.1	16.3	16.3	16.6	10.5	10.3	10.0	9.9	10.3	6.1	5.8	6.3	6.4	6.3

- 52. In May 2008, the rates on deposits in dollars for most maturity terms increased compared to the levels observed in January. Hence, the spread between passive rates declined, especially for deposits maturing between 31 and 180 days. The spreads between active rates in dollars and soles also declined, except in the case of the corporate prime rate.
- 53. Between January and May, the spread between the average rate on 30-day deposits in dollars and in soles increased from 30 basis points (4.5 percent in soles versus 4.8 percent in dollars) to 150 basis points (4.8 percent in soles versus 6.3 percent in dollars) due to banks' greater need of financing sources in foreign currency as a result of higher reserve requirement rates.

Monetary operations

54. The evolution of interest rates, particularly the interbank rate, has been influenced by the BCRP monetary operations which, between January and May 2008, were mainly oriented to sterilizing the inflow of short-term capitals.

Table 23

OPERATIONS OF THE BCRP

(Millions of nuevos soles)

		2003	2004	2005	2006	2007	2008*
I.	INTERNATIONAL POSITION	4.315	6.917	2.518	11.696	26.464	22.825
	(Millions of US\$)	1.242	2.056	811	3.636	8.536	7.920
	1. Foreign exchange operations	998	1.854	767	2.861	7.070	7.244
	A. Over the counter	1,050	2,340	2,699	3,944	10,306	8,728
	B. Public sector purchases	-51	-487	-1,935	-1,084	-3,275	-1,522
	C. Others	-1	2	3	1	39	38
	2. Other operations	244	202	44	775	1,466	676
II.	DOMESTIC ASSET NET (III-I)	-3,560	-5,254	-464	-10,044	-23,294	-22,218
	1. Public Sector Deposits (Net)	-921	-721	-2,821	-5,434	-6,751	-3,780
	2. Temporary purchase of securities	-170	0	2,850	-2,850	0	0
:	 BCRP Certificates of Deposit BCRP indexed 	-2,462	-4,158	578	-389	-13,393	5,529
	Certificates of Deposits (CDR) 5 BCRP Certificates of Deposits	319	0	-1,202	1,202	0	0
	with Restricted Negotiation	0	0	0	0	0	-19.894
	6. Term deposits	0	0	0	0	0	-283
	7. Overnight deposits	65	-52	-8	-188	227	-909
	8. Reserve deposits in domestic currer	ncy 7	-223	-343	-488	-746	-2,276
	9. Rest	-398	-101	481	-1,897	-2,631	-605
III.	MONETARY BASE	755	1,663	2,054	1,652	3,170	608
Mer	no 1: Balances associated at Net						
Inte	rnational Assets components						
	 Public sector deposits 	1,196	1,918	4,738	10,172	16,922	20,703
	2. Temporary purchases of securities	0	0	2,850	0	0	0
	3. CDBCRP	4,097	8,255	7,676	8,066	21,458	15,929
	4. CDRBCRP	0	0	1,202	0	0	0
1	5. CDBCRP-NR	0	0	0	0	0	19,894
	6. Term deposits	0	0	0	0	0	283
	7. Overnight deposits	0	52	60	247	20	929
	8. Reserve deposits in domestic currer	1Cy1,123	1,345	1,688	2,176	2,922	5,198
Mer	no 2: Balance at the end of period						
	+ Monetary base	6,319	7,982	10,036	11,687	14,857	15,465
	+ Total balance sterilized	5,355	10,321	13,788	18,598	38,712	58,201

Source: BCRP.

* As of May.

- 55. As a result of these operations, the Central Bank's net internal credit decreased by S/. 22,208 million between May and January, which allowed sterilizing the increase seen in the BCRP foreign exchange position (US\$ 7,920 million or S/. 22,825 million) and meeting the demand for money (S/. 608 million).
- 56. As a result of the Central Bank's lower internal credit, the balance of sterilized funds increased from S/. 38,712 million at end 2007 to S/ 58, 201 million in May 2008. This result is mainly explained by net placements of BCRP Certificates of Deposit with Restricted Negotiation (S/. 19,894 million), higher public sector deposits (S/. 3,780 million), and higher

Graph 57 EVOLUTION OF THE MONETARY BASE BY COMPONENTS (Average balance of the period)



amounts of reserve requirements in domestic currency (S/. 2,276 million), partially compensated by net maturities of BCRP Certificates of Deposit (S/. 5,529 million). On the other hand, the increase in the BCRP foreign exchange position (US\$ 7,920 million) is mainly explained by exchange operations (US\$ 7,244 million), consisting of net purchases of dollars at the Central Bank's front desk (US\$ 8,728 million) and sales of dollars to the public treasury (US\$ 1,522 million).

Moreover, the average flow of the monetary base was S/. 5,746 million, with higher reserve requirements accounting for 61.3 percent of this flow. Reserve requirement funds have been mainly maintained in banks' current accounts at the BCRP, considering that marginal reserve requirements in domestic currency and reserve requirements included in the special regime for obligations in domestic currency with non-residents should be kept in this account. In this way, a greater sterilization of funds has been achieved in the interbank market through higher reserve requirements.

57. The important flow of short-term capitals observed in this period increased the volatility of banks' funds in domestic currency which, together with increased exchange variability, translated into banks' preference for short-term liquidity, affecting monetary control. In the particular case of January, the Central Bank exceptionally stopped placing BCRPCDs for a few days to discourage a massive inflow of short-term capitals. Consequently, between January and May the interbank reference rate has occasionally diverted from its reference level, as illustrated in the graph below. Since the second week of February, and as a result of reserve requirement and the introduction of placements of BCRPCDs-NR, the interbank interest rate has stabilized around the reference rate.

Table 24 INTERBANK INTEREST RATE

	2004	2005	2006	2007			2008		
	2004	2005	2005 2006		Jan.	Jan. Feb. Mar		Apr.	May.
Average	2.63	3.02	4.32	4.70	4.44	5.02	5.21	5.37	5.53
Standard deviation	0.067	0.056	0.079	0.037	1.476	0.371	0.174	0.129	0.064
Variation coef. (%) (a)	2.554	1.866	1.816	0.785	33.236	7.387	3.335	2.403	1.152

INTERBANK ASK EXCHANGE RATE

	2004	2005	2006	2007			008		
	2004	2005	2006	2007	Jan.	Feb.	Mar.	Apr.	May.
Average	3.413	3.296	3.28	3.129	2.95	2.91	2.81	2.75	2.80
Standard deviation	0.011	0.008	0.015	0.254	0.017	0.013	0.044	0.052	0.041
Variation coef. (%) (b)	0.319	0.236	0.451	8.112	0.566	0.431	1.551	1.875	1.454
Ratio (a)/(b)	8.01	7.91	4.03	0.10	58.67	17.14	2.15	1.28	0.79

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Graph 59

LIQUIDITY OF THE PRIVATE SECTOR (Last 12-month percentage change)



Graph 60 CREDIT TO THE PRIVATE SECTOR (Last 12-month percentage change, constant exchange rate)



58. Moreover, banks' increased preference for maintaining high liquidity levels -and rentabilizar their short-term fundsgenerated a progressive reduction of the average sterilization term, which declined from 200 days in January 2008 to 169 days in May.

Liquidity and credit

- 59. The evolución of liquidity and credit during the first four months of the year has also been associated with the evolution of interest rates in the financial market and with the BCRP's monetary policy. Available data as of April 2008 shows that liquidity in the private sector grew 26.6 percent in the last 12 months, maintaining the dynamism observed since December 2007 when it showed a growth rate of 22.2 percent relative to end 2006.
- 60. As regards liquidity components by currencies, the expansion of liquidity in the private sector was led by liquidity in domestic currency, which grew 55.1 percent in the last 12 months (as of April) due to economic agents' relative greater preference for nuevo soles as store of value.

This high dynamism of liquidity in soles is associated with a process of recomposition of the portfolio of deposits in soles and deposits in dollars. As of April, term deposits in soles had increased 115.7 percent in the last 12 months (the deposits of individuals grew 78.4 percent and the deposits of legal entities grew 232.3 percent), while liquidity in foreign currency showed a slower pace of growth, increasing 10.7 percent in the last 12 months. This evolution is more evident in the case of legal entities' saving deposits, which declined 20.7 percent in the same period.

- 61. Credit to the private sector showed a slightly lower dynamism between January and April 2008. Considering a constant exchange rate, as of April credit in the last 12 months grew 33.5 percent -showing a lower rate than the one observed in January 2008 (35.3 percent). This lower dynamism was more noticeable in the case of credit in foreign currency, whose rate of growth declined by 2.4 percentage points -from 32.1 to 29.7 percent between January and April-, while the rate of growth of credit in domestic currency only declined 1 percent -from 39.7 to 38.6 percent¹².
- 62. The recent rise of reserve requirements, for both domestic and foreign currency, would account in part for this lower

¹² Statistical indicators on lending boom are offered in Box 7.

Graph 61 ANNUAL FLOW OF CREDIT TO THE PRIVATE SECTOR (Percentage of GDP)



* To April.

Graph 62

GROWTH OF CREDIT IN THE FINANCIAL SYSTEM (Last 12-month percentage change)



Graph 63 NOMINAL EXCHANGE RATE (S/. per Monetary Unit)



dynamism of credit. Between December 2007 and May 2008, the rates of legal reserve requirements were raised from 6 to 8.5 percent, while the rates of marginal reserve requirements in soles and dollars were raised from 6 to 25 percent and from 30 to 45 percent respectively.

- 63. This dynamism of credit has also been reflected in a lower share of the flow of credit in GDP, which in April represented 5.7 percent of GDP 0.5 points below the level observed at end 2007 (6.2 percent of GDP).
- 64. However, this reduction in the pace of growth of credit has not been homogeneous by types of credit. Thus, a greater slowing was observed in the pace of growth of mortgage loans, which declined from 15.7 percent at end 2007 to 13.1 percent in April 2008. Consumer loans, commercial loans and credit to microenterprises showed a lower reduction in their pace of growth. Consumer credit grew 32.1 percent in April 2008 (versus 37.4 percent in December 2007), while the rate of growth of commercial credit and credit to microenterprises in the last 12 months declined from 32.3 to 30.5 percent in the same period.
- 65. The dynamism of consumer credit is explained by both a higher number of new borrowers and by a greater level of indebtedness per borrower. The average debt level per individual has increased from S/. 3,384 in December 2007 to S/. 3,977 in April 2008.

Exchange rate

- 66. So far this year the nuevo sol has appreciated 5.9 percent in nominal terms against the dollar, moving from an average of S/. 2.982 in December 2007 to S/. 2.805 per dollar in May 2008. The strengthening of the nuevo sol observed since 2004 reflects the economy's better macroeconomic fundamentals, which have been complemented by a favorable evolution of external accounts and increased confidence in the local currency, as reflected in a greater dedollarization of deposits (relative to the pace of dollarization of credit) in a context of a persistent weakening of the dollar in the international market.
- 67. During the first quarter of 2008 the nuevo sol was affected by additional appreciatory pressures due to the significant inflow of short-term capitals observed (reaching an annual accumulated appreciation of 10.1 percent on April 4). However, as a result of the reserve requirement measures implemented in April, exchange showed volatility in both directions and not only towards the appreciation of the sol. This has favored a greater volume of transactions in the exchange market.

Graph 64 REAL EXCHANGE RATE (Index Dec.01 = 100)



68. As regards the currency basket of our 20 main trade partners, the nuevo sol moved from S/. 0.556 at end 2007 to S/. 0.539 in May, reflecting the strengthening of the nuevo sol -2.9 percent on average- against the currencies of our main trade partners, which implies that the nuevo sol shows a real appreciation of 3.2 percent against the currency basket. Domestic inflation (2.7 percent) was similar to the increase recorde in the index of external prices (2.4 percent).

Table 25

BREAKDOWN BY COMPONENTS OF THE MULTILATERAL EXCHANGE RATE

(Percentage change)

	Real multilateral exchange rate	Nominal exchange rate with currency basket	Domestic inflation	Trading partners inflation
1996	3.4	6.7	11.8	8.4
1997	-4.1	-3.0	6.5	5.2
1998	14.1	15.4	6.0	4.9
1999	6.4	4.9	3.7	5.3
2000	-2.3	-4.8	3.7	6.4
2001	-2.6	-5.7	-0.1	3.1
2002	-0.8	-3.9	1.5	4.8
2003	5.9	4.9	2.5	3.4
2004	-2.4	-2.4	3.5	3.5
2005	6.1	4.0	1.5	3.5
2006	-2.3	-4.0	1.1	3.0
2007	-1.7	-2.5	3.9	4.8
2008 1/	-3.2	-2.9	2.7	2.4

1/ Accumulated change May 08 - December 07.

Table 26

BILATERAL EXCHANGE RATES (S/. Per M.U.)

(Percentage change)

		R	eal	Nom	inal
	Weighted *	Var. Dec.07/ Dec.06	Var. May.08/ Dec.07	Var. Dec.07/ Dec.06	Var. May.08/ Dec.07
USA	29.2%	-7.0	-5.9	-7.0	-5.9
Eurozone	12.3%	2.4	0.5	1.2	-0.6
Japan	4.0%	-3.1	1.3	-6.5	-1.2
Brazil	5.5%	11.8	1.3	12.1	1.1
United Kingdom	1.3%	-4.6	1.2	-6.4	0.0
Chile	6.7%	-1.6	-0.5	1.7	-1.1
China	11.4%	-1.3	-0.5	2.2	-2.8
Colombia	4.2%	4.6	-0.5	5.9	1.1
Mexico	2.9%	-6.9	-2.1	-6.9	-3.4
Argentina	2.6%	-10.5	-2.1	-6.5	-0.8
Korea	2.2%	-7.7	-9.1	-8.0	-9.4
Taiwan	1.9%	-6.7	-0.2	-7.5	-2.0
Venezuela	3.1%	-7.0	-0.2	9.6	8.0
Canada	4.8%	7.0	-5.9	5.8	-7.0
Ecuador	4.6%	-7.0	-5.9	-8.1	-3.6
Switzerland	3.4%	-1.4	2.7	-3.5	1.1
Basket	100.0%	-1.7	-3.2	-2.5	-2.9

* Weighted relative to 2005 trade results.

69. Moreover, because of the significant inflow of short-term capitals, the BCRP intervened in the exchange market in order to reduce exchange volatility and implemented additional measures aimed at offsetting the impact of said inflow of short-term capitals on monetary management.

This inflow of capitals increased non-residents' holdings of domestic assets in local currency to a maximum level of S/. 27, 773 million in March 2008 and to a balance of S/. 27,220 in April, which represented an increase of S/. 8,766 million relative to December 2007. This flow concentrated mainly in higher investments in BCRPCDs (S/. 4,245 million), higher deposits in banks (S/. 2,563 million), and higher investments in Public Treasury bonds (S/. 2,070 million).

One of the first measures adopted by the BCRP in January because of the inflow of capitals was to suspend placements of CDBCRP and to replace them by new certificates restricted to entities in the local financial system. Another measure adopted was the establishment of a commission of 0.10 percent on the value of the transfer, except in the case of transfers carried out between institutions associated with local financial activity.

Non-resident investors kept on buying BCRPCDs in the secondary market, increasing their bank deposits from S/. 238 million on January 31, 2008 to S/. 4,057 million on April 14, 2008. In this context, in April the BCRP raised the commission on sales of CDBCRP and CDR-BCRP by resident financial institutions to 4 percent and increased marginal reserve requirements on obligations in domestic currency for non-resident financial entities from 40 to 120 percent.

- 70. Appreciatory pressures between January and May have originated mainly in the spot market and, to a lesser extent, in operations carried out in the forward market. Thus, a decline was observed in the net flow of forward operations, which decreased from US\$ 374 million in December de 2007 to a flow of US\$ 93 million in April and to US\$ 63 million in May.
- 71. As a result of its intervention in the exchange market between January and May, the BCRP was able to accumulate net international reserves for US\$ 7,170 million, reaching a balance of US\$ 34,859 million at end May.
- 72. The higher amounts of purchases of foreign currency were recorded in January and March (US\$ 3,270 million and US\$ 2,266 million respectively). Since the second week of





Graph 66

Graph 65



April, after the BCRP announced the rise of the rate of reserve requirements on obligations with non-residents, the BCRP stopped intervening in the exchange market.

Table 27

NET INTERNATIONAL RESERVES FLOWS (Millions of US\$)

		2004	2005	2006	2007	1Q 08	Apr. 08	May. 08
I.	FOREING EXCHANGE OPERATIONS	1,854	767	2,861	7,070	6,493	1,089	-340
	1. Over the counter	2,340	2,699	3,944	10,306	7,409	1,319	0
	a. Purchases	2,340	3,130	4,299	10,306	7,409	1,319	0
	b. Sales	0	-431	-355	0	0	0	0
	2. Operations with the public sector	-487	-1,935	-1,084	-3,275	-952	-230	-340
	3. Other net purchases	2	3	1	39	36	1	0
١١.	FINANCIAL SYSTEM DEPOSITS	23	1,251	-684	1,154	-604	1,162	-562
III	PUBLIC SECTOR DEPOSITS	359	-587	245	630	-921	27	187
IV	OTHER	201	35	756	1,560	920	-230	-52
V.	TOTAL	2,437	1,466	3,178	10,414	5,888	2,049	-766

Fixed-income market

- 73. Interest rates for different maturity terms react differently to monetary policy actions. The transmission of rates is greater in the case of short-term rates which respond more to the conditions of the overnight market where the Central Bank' operations with entities in the financial system concentrate, whereas longer-term rates are also affected by risk factors associated with liquidity, credit, and inflation. Monetary policy actions will have a greater impact on the temporary structure of interest rates as long as a mechanism of arbitration operates among the different rates.
- 74. Between January and May, the monetary policy reference rate was raised on two occasions (from 5.0 to 5.50 percent). This increase has been reflected in the higher yield curve of the BCRP certificates of deposit with restricted negotiation (CDBCRP-NR) compared with the one observed for negotiable BCRPCDs in January. The CDBCRP-NR have replaced BCRPCDs, which are no longer issued given that they had become a short-term hedge for speculative capitals.




- 75. However, boosted by expectations of appreciation of the sol, non-resident investors' growing demand for BCRPCDs in the secondary market generated downward pressures on the interest rates de negociación of longer-term certificates, especially in April Thus, in this month the rates of BCRPCDs with shorter maturities showed higher levels than in January. In May, the rates on these instruments in the secondary market increased even further as a result of the increase of the commission for transfers of BCRPCDs and of lower appreciatory expectations for the nuevo sol. Thus, while in April the rate on 7-month BCRPCDs in the secondary market was 111 basis points lower than in January, this spread disappeared in May.
- 76. A similar effect was observed in the secondary market of treasury sovereign bonds (BTP). Since February, the shortest bracket of the yield curve for sovereign bonds (up to 10 years) has been falling as the participation of non-residents increases, while longer-term brackets show interest rates similar to the ones observed in January.
- 77. The participation of non-resident investors in the market of sovereign bonds has increased from 29.6 percent in December 2007 to 40.0 percent in March. This increased participation is oriented to instruments maturing in 10 years or less, with holdings having increased from S/. 631 million in December 2007 to S/. 3,779 million in April 2008.

Table 28

TREASURY BONDS NEGOTIATED IN THE SECONDARY MARKET AND NON-RESIDENTS' HOLDINGS OF TREASURY BONDS AT FIXED RATE (Millions of Nuevos Soles)

	TRADING VOLUME 17	BALANCE OF TREASURY BONDS HELD BY NON-RESIDENTS	NON-RESIDENTS' HOLDINGS Of treasury bonds Maturing < 10 years ²¹
Dec. 07	324	29.6%	631
Jan. 08	1,996	31.4%	2,310
Feb. 08	2,909	39.8%	3,536
Mar. 08	777	40.3%	3,633
Apr. 08	1,152	40.0%	3,779
May. 08	1,708	n.d	n.d

1/ Excludes primary transfers from the issuers in the secondary market.

2/ Excludes BTP at VAC rate and includes BTP up to 2017.

Source: DATATEC and MEF.



SECONDARY MARKET OF PUBLIC TREASURY

Graph 68

^{0 2 4 0 8 10 12 14 10 18} Maturity (years)

^{1/} Average of the yields negotiated on that period.

BOX 7

INDICATORS OF A LENDING BOOM

According to the results of the survey on macroeconomic expectations of February 2008, 94 percent of surveyed entrepreneurs have favorable conditions to access credit. Moreover, the average annual growth rate of lending to the private sector has increased from 26 percent in the fourth quarter of 2007 to 30 percent in the first quarter of 2008.

Some risk could be involved in the growth of credit to the private sector observed recently, given the dependence of the quality of the portfolio in the economic cycle and the relationship between episodes of lending boom and bank and balance of payments crises.

The monetary policy measures adopted recently (higher required reserves and a higher reference rate) are aimed at offsetting the pace of growth of credit to firms and households with the additional purpose of preventing that the higher international prices of food will spread onto expectations of inflation.

But is this growth of credit to the private sector observed over the past few years sustainable or not? Let us first discuss what we understand by an unsustainable growth of credit or an unsustainable lending boom. Gourinchas et al. (2001) argue that boom episodes occur when credit to the private sector to GDP ratio is 1.24 times higher than its long-term trend (boom threshold). Moreover, the duration of boom episodes is defined as the number of years when the lending-to-GDP ratio is 1.05 times higher than its long-term trend (threshold limit).

The following graph shows the results of calculations following the methodology proposed by Gourinchas et.al (2001)¹³, with annual data since 1970. We can see that the lending-to-GDP ratio has recently fallen above the threshold limit, although it is still below the boom threshold.





According to the International Monetary Fund (2004), there is a lending boom when credit (in real terms) exceeds its long-term trend beyond a threshold equivalent to 1.75 times the standard deviation of the cyclical component of lending. The IMF also suggests that not all episodes with a high growth of lending are credit booms, arguing that credit can grow "rapidly and sustainedly" in an economy if its average growth rate is over 17 percent in a period of three years, without exceeding the above-mentioned threshold.

¹³ For further details on this methodology, see: Gourinchas, Pierre-Olivier, Rodrigo Valdés and Oscar Landerretche (2001). "Lending Booms: Latin America and the World", NBER Working Paper N° 8249.

The following graph shows the results of the same exercise using the IMF methodology (2004)¹⁴, also with annual data since 1970. As in the previous case, we can see that lending has progressively grown in the last years, although it is still below the threshold. Moreover, a period of "rapid growth of lending" -similar to the one observed between 2006 and 2008- is observed from 1993 to 1998.



BANKING CREDIT TO THE PRIVATE SECTOR

In conclusion, although credit to the private sector has shown a favorable evolution in the last years, in a context of business and consumer optimism, there would still be no indications of a lending boom. In this sense, the nature of the measures recently implemented by the Central Bank is preventive, since they are aimed at offsetting the dynamism of lending before it starts showing a dangerous path that could negatively affect the financial system and the economy in general.

¹⁴ For further details on this methodology, see: IMF (2004). "World Economic Outlook: Advancing Structural Reforms", International Monetary Fund.

VII. Inflation

The factors affecting the prices of fuels and main basic foodstuffs in world markets continued pressuring the international prices of these products on the upside during the first months of the year, causing a rise in the domestic prices of some imported foodstuffs and food inputs. Thus, imported inflation is the main component explaining the faster pace of growth of overall inflation. The evolution of inflation was also affected by the conduct of the prices of some agricultural products, associated with seasonal problems -which temporarily affected the supply of some products- as well as with the impact of the higher cost of fertilizers on agricultural prices.

Thus, last 12-month inflation as of May showed a rate of 5.39 percent, with the imported component of inflation -which increased 11.2 percent- accounting mostly for this result. Excluding food and beverages, the rise in the rest of prices of the basket was 1.92 percent, which shows the significant impact of the evolution of food prices on the consumer basket.

Although the international prices of food are not expected to revert to prevailing levels prior to this episode, these prices should show a gradual correction as of this year.

In this sense, the base forecast scenario considers a slowing of last 12-month inflation since April, which implies the normalization of the problems that transitorily affected the supply of farm products, as well as a lower pressure from imported foodstuffs. As regards the evolution of fuel prices, the forecast scenario considers that the government's policy aimed at offsetting the impact of the higher international prices of fuels on domestic prices will continue without affecting fiscal sustainability.

Inflation

78. As a result of the food supply shocks that started in March 2007 and continued between January and March 2008, the consumer price index (CPI) accumulated an increase of 2.7 percent and last 12-month inflation showed a rate of 5.55 percent in March -level unobserved since December 1998.

Food and beverages accounted for 2.5 percentage points of this increase in the January-May CPI, equivalent to 93 percent of inflation. Annual inflation in May was 5.39 percent, with the food component showing an average annual increase of 4.2 percent.

Table 29

WEIGHTED CONTRIBUTION TO INFLATION: January - May 2008 (Percentage points)

Items	Weight	% Chg.	Positive contribution	Items	Weight	% Chg.	Negative contribution
Eating out	12.0	3.9	0.45	Electricity	2.2	-7.1	-0.15
Onion	0.4	107.8	0.41	Citrics	0.7	-21.3	-0.14
Rice	2.3	17.1	0.40	Fresh and frozen fish	1.1	-10.2	-0.12
Cooking oil	0.8	26.8	0.24	Sugar	1.4	-5.5	-0.07
Other vegetables	0.6	30.9	0.20	Grape	0.1	-29.1	-0.05
Tomato	0.3	61.2	0.17				
Total			1.87				-0.53

79. Showing a similar evolution to the one observed since mid-2007, the CPI excluding food and beverages has exhibited a lower dynamism than overall CPI. In May, last 12-month CPI without food and beverages declined to 1.9 percent -the lowest rate observed so far this year- and accounted for 0.2 percentage points of accumulated inflation between January and May.

The same result was observed in the case of CPI excluding food and beverages, as well as fuels. This component showed a pace of growth even lower, recording a last 12-month rate of 1.6 percent in May -similar to the one observed in the last three months.

Moreover, the CPI excluding food and beverages, as well as fuel and electricity showed a last 12-month rate of 1.8 percent in May.



- CPI - CPI non food and beverages - Food and beverages

Graph 70 FOOD AND NON-FOOD CORE INFLATION (Last 12-month percentage change)



Table 30

INFLATION

(Accumulated percentage change)

	Weighted	2002	2003	2004	2005	2006	2007	20	08	Annual
								JanMay.	12 months	average 2002-2008
CPI	100.0	1.52	2.48	3.48	1.49	1.14	3.93	2.72	5.39	2.61
Food and beverage	47.5	0.50	1.89	4.00	1.13	1.76	6.02	5.25	9.20	3.19
Energy*	6.2	12.81	4.23	15.93	4.01	-3.16	5.21	-1.68	2.47	5.62
Others	46.3	1.05	2.83	1.08	1.44	1.25	1.53	0.74	1.85	1.54
Goods	21.0	1.44	0.58	-0.36	1.03	0.56	1.79	0.81	1.86	0.91
Public services	2.4	-3.62	0.81	0.46	-0.83	1.22	-1.44	0.44	2.31	-0.47
Transport	8.4	0.11	10.99	3.49	1.29	1.12	0.82	-0.45	1.12	2.64
Other services	14.5	1.81	1.76	1.72	2.47	2.28	2.03	1.40	2.21	2.10
Memo:										
Core inflation	60.6	1.23	0.73	1.23	1.23	1.37	3.11	2.04	4.27	1.70
Core inflation excluding food	35.5	1.60	1.11	0.49	1.53	1.33	1.85	1.10	1.98	1.40
Non-core inflation	39.4	1.96	5.16	6.75	1.87	0.83	5.07	3.64	6.94	3.92
Non-core inflation										
excluding food		2.44	3.04	3.03	1.75	0.61	2.02	0.41	1.92	2.07

Graph 71 INFLATION AND NON-CORE INFLATION



Included fuel and electricity.

Graph 72

FINAL INVENTORIES OF SOY BEAN OIL



Graph 73 INTERNATIONAL PRICE OF SOYBEAN OIL



The evolution of the main items of the non-core component of inflation is described below:

- **Onion**: The rise in the price of onion (107.8 percent) was associated with lower sown areas -which declined approximately 41 percent in the August-March farming season relative to the previous one- in Arequipa, the main supplier area, due to the diversification of farming products and the introduction of other products oriented to exports. Other factors contributing to this price rise were adverse weather conditions and the higher prices of fertilizers: the prices of urea and tricalcium phosphate in Arequipa increased 24 percent and 69 percent respectively between March 2007 and March 2008.
- Rice: The higher price of rice (17.1 percent) was associated with higher import costs, which increased by approximately 17 percent between December 2007 and May (see Box).
- **Edible oils**: The rise in the price of oil (26.8 percent relative to December and 54.8 percent in the last 12

months) reflects the higher cost of imported soybean oil, its main component. The cost in soles of importing this input, with zero tariff, increased 24 percent compared to December and 55 percent in the last 12 months.

Continuing with the trend observed since end 2006, the international price of soybean oil has increased 29 percent year to date. Demand factors explaining this evolution include increased consumption in Asian countries and increased global demand for the production of biofuels.

- **Other vegetables**: Prices increased 31 percent on average, with the higher prices of lettuce (78 percent) and leek (53 percent) contributing heavily to this evolution. The prices of these products was also affected by adverse weather conditions.
- **Tomato**: The price rose 61 percent due to lower supply, which declined approximately 14 percent in January-May 2008 compared to the same period last year. Moreover, sown areas in Lima, the main producing area, declined 15 percent compared to the previous farming campaign, due to lower availability of water. Other factors contributing to this rise included increased external demand for tomato paste and exports of fresh tomato to Bolivia.
- **Fuels**: the domestic price of fuels increased 0.3 percent on average between January and May, despite the upward trend observed in the international prices of fuels. This has been achieved by increasing the weekly compensations provided through the Fuel Price Stabilization Fund, which increased from S/. 44 million at end 2007 to over S/. 110 million at the close of May.

Additionally, given the Fund's higher obligations, part of the fiscal cost has been transferred to reductions in the excise tax on fuels.

On March 7, the Fund's price bands were raised (with increases ranging between S/. 0.40 and S/. 0.79 per gallon), which generated savings in compensations amounting approximately to S/. 12 million per week. The excise tax was also reduced between S/. 0.40 and S/. 0.85 per gallon, with a weekly cost of S/. 13 million.





The combined impact of these measures allowed refineries to raise their net prices and to improve their cash flows with prices that are closer to those seen in international markets, without increasing consumer prices.

The bands of high octane gasolines (95 and 97 octanes) were raised on May 14 and 20 (by S/. 0.40 per gallon each time), eliminating the compensations to these products. This measure has not implied an increase in consumer prices.

On June 2, Relapasa and PetroPerú readjusted the explant prices of fuels. Considering the days these prices have been in force, ex plant prices would show a variation of 3.1 percent -a remaining 0.1 percent adjustment to be implemented in July. Relapasa has increased the price of fuels between 3.7 and 4.9 percent, while adjustments in the case of Petroperú range between 3.6 and 5.0 percent. The price of gas has not been raised.

Table 31

FUEL PRICES

(Annual percentage change)

	2002	2003	2004	2005	2006	2007	2008	
							Janmay.	12 months
Fuels	15.6	8.9	17.8	6.9	-1.5	6.4	0.3	4.3
Gasoline	15.7	9.7	17.7	9.2	-6.2	10.7	0.1	7.5
Gas	11.3	4.2	15.3	-10.9	0.3	1.3	0.7	0.7
Kerosene	20.4	13.0	20.3	21.0	2.2	5.8	0.2	3.6
Price of WTI oil (end period)								
US Dollars	29.4	32.1	43.3	59.4	61.9	91.7	125.9	
Nuevos soles	103.5	111.3	142.0	203.3	198.6	273.4	353.3	

Source: INEI and Bloomberg.

The international price of petroleum has increased 37 percent between December 2007 and May 2008, reaching US\$ 126 per barrel on average in May. This period has been characterized by steady rises in the price of this commodity, which reached a record high of US\$ 133 per barrel on May 21. Both factors associated with the fundamentals of the oil market and by short-term and speculative developments explain this evolution and the future trend in the price of oil.

However, it is mainly structural problems that underlie the upward trend exhibited by this commodity, particularly

the tight balance of oil supply and demand in a context of low inventories.

On the **supply** side, the main problem is the lack of investments that prevent production from growing.

- According to the International Monetary Fund¹⁵ estimates, there is a lag of 3 years -higher than previous estimates- between investment and a higher production capacity. Factors of technical risks and policy variables affecting this sector in each country account for this result. Moreover, the size and complexity of projects, as well as fiscal policies (import duties, taxes on production and/or royalties) influence the costs of projects.
- Additional factors that would be increasing the costs of investment in this sector include the geological factor (lower production rates and the lower extension of exploitation fields) and the global shortage of exploration teams and qualified professionals (engineers and project managers). Goldman Sachs (2007) estimates that exploration and project implementation costs have increased by approximately 100 percent between 2000 and 2007.
- Furthermore, country members of the OPEC have reduced the pace of growth of their production quotas. This growth declined from 4 percent in 2005 to 3.2 percent in 2006 and to 0.4 percent in 2007. The OPEC has officially announced that production quotas will not be increased until its next meeting of September¹⁶.
- Non-OPEC countries also face a series of technological, geological and sector policy constraints that cannot be overcome in the short term and prevent them from increasing investments rapidly. Thus, for example, despite the high prices of oil, the Tupi and Carioca projects have not been started in Brazil.
- On the **demand** side, consumption continues to show a high pace of growth in emerging countries.
- The higher consumption of fuels is led by Brazil, Russia, India, and China, and particularly by China and India, which have been growing at annual rates of 11 and 9 percent on average in 2005-2007 and, to a lesser extent, by Russia, which has been growing at a annual rate of 7 percent in the same period. According to

¹⁵ IMF, World Economic Outlook, April 2008 (Box 1.5).

¹⁶ Saudi Arabia increased its production of crude by 300 thousand b/d in May 2008.

projections of the US Department of Energy, these countries and Eastern European countries will lead most of the growth of oil consumption in 2008.

- United States and Europe have been moderating their oil consumption due to the slowing of economic activity and to the replacement of energy sources being carried out in these countries.

Table 32

OIL DEMAND AND SUPPLY BALANCE

(Millions of daily barrels)

	2003	2004	2005	2006	2007	2008*	2009*
Supply	79.6	83.0	84.5	84.6	84.6	86.6	88.1
OPEC	31.9	32.9	34.2	35.3	35.4	36.9	37.0
USA	8.8	8.7	8.3	8.3	8.5	8.6	8.9
Former Soviet Union	10.4	11.3	11.7	12.2	12.6	12.9	13.4
Other countries	28.5	30.1	30.3	28.8	28.1	28.3	28.8
Demand	79.6	82.5	84.0	84.7	85.4	86.6	88.0
USA	20.0	21.1	20.8	20.7	20.7	20.5	20.7
Europe	16.3	16.3	15.5	15.6	15.3	15.4	15.4
China	5.6	6.5	6.9	7.3	7.6	8.0	8.4
Japan	5.4	5.4	5.4	5.2	5.0	5.0	4.8
Other countries	32.3	33.2	35.4	36.0	36.9	37.7	38.6
Gap (Supply - Demand)	<u>0.01</u>	<u>0.50</u>	<u>0.50</u>	<u>-0.06</u>	<u>-0.80</u>	<u>-0.01</u>	<u>0.12</u>

Source: USA Department of Energy (EIA), Short-Term Energy Outlook. (*) Forecast EIA May 2008.

Lack of investment, which hinders increasing oil supply, and the growing demand of emerging countries have generated a tight level of inventories. OECD inventories at end 2007 amounted to only 40 days -the historical average being 50 days. The US Department of Energy projects that inventories would show similar levels at end 2008 and 2009.

Table 33

OIL INVENTORIES: END OF PERIOD

(Millions of barrels)

	2007	2008*	2009*
OECD	2,574	2,560	2,587
USA	965	966	985

* Forecast.

Source: USA Department of Energy. May 2008.

Expectations that oil prices will remain at high levels in the short run are based on a combination of factors, including a high demand for petroleum (China and India), the low level of inventories (OECD), the slow growth of supply in Non-OPEC



Dec.04 |un.05 Dec.05 |un.06 Dec.06 |un.07 Dec.07 |un.08 Dec.08 |un.09 Dec.09 |un.10 Dec.10

countries (Russia and Mexico), and especially constraints to increasing the production and refining capacities. Temporary events, such as strikes, adverse weather, and attacks, would only be exacerbating this.

• **Electricity**: Electricity rates declined 7 percent between January and March, reflecting mainly the reduction of rates established by Osinerg as of May 1.

Both the cost of generating electricity (lower band rates) and the price of energy contracted by distributors were adjusted considering the appreciation of exchange. Another factor involved was the higher consumption of thermal power stations of natural gas and the subsequent greater utilization of the gas pipeline, which allowed reducing the cost charged as guarantee for the main grid.

• **Public utility rates**: Between January and May, telephone rates declined 4.0 percent, while water rates increased 3.8 percent.

Table 34

PUBLIC UTILITIES RATES

(Percentage change)

	2002	2003	2004	2005	2006	2007	2008	
							JanMay.	12 months
Public utilities	-3.6	0.8	0.5	-0.8	1.2	-1.4	0.4	2.3
Telephone	-8.3	0.3	-2.0	-7.0	-6.2	-7.2	-4.0	-4.0
Water	2.3	0.9	3.0	5.2	8.5	3.2	3.8	7.2

Source: INEI.

Telephone rates for calls from public phones to mobile phones were reduced since February 23, as established by OSIPTEL (Resolution No. 008-2008-PD/OSIPTEL). On the other hand, water rates were adjusted on March 21.

Graph 76 INFLATION, DOMESTIC AND IMPORTED CPI (Last 12-month percentage change)



Imported inflation

80. Imported inflation showed an annual variation of 11.2 percent, higher than the 10.5 percent recorded at end 2007. This faster pace of growth of imported inflation is basically explained by the evolution of the component of imported food, whose annual rate increased from 18.8 to 23.3 percent in this period due to the impact of the international prices of basic food products used as food inputs on domestic prices.

Table 35

INFLATION DOMESTIC AND IMPORTED

(Accumulated percentage change)

		Weight	2002	2003	2004	2005	2006	2007	2	008
									Janmay.	12 months
Ι.	IMPORTED CPI	12.1	10.3	3.0	11.3	2.2	0.3	10.5	2.2	11.2
	Food	5.4	10.0	-0.1	10.9	-1.5	2.1	18.8	5.2	23.3
	Fuels	3.9	15.6	8.9	17.8	6.9	-1.5	6.4	0.3	4.3
	Domestic appliances	1.0	3.4	-1.9	-2.8	-1.2	-1.3	-1.5	-0.6	-1.8
	Other	1.8	3.4	1.4	3.2	2.3	0.6	0.5	-2.1	-2.3
II.	DOMESTIC CPI	87.9	0.3	2.4	2.3	1.4	1.3	2.8	2.8	4.4
III.	. CPI	100.0	1.5	2.5	3.5	1.5	1.1	3.9	2.7	5.4
E	change rate		2.3	-1.2	-5.5	4.4	-6.4	-7.0	-5.9	-11.4

81. The rise seen in the international prices of main basic products (food and fuels) and the persistent weakness of the dollar have generated price increases in some inputs required, for example, for industrial and agriculatural activity. This was the case of inputs such as iron and steel, chemicals, plastics, and fertilizers, which grew 15 percent on average in the last 12 meses -twice as much as in 2007 and higher than the accumulated increase observed in the last 2 years.

Table 36

PRICES OF INDUSTRIAL INPUTS ^{1/}

(Percentage change compared with the same period last year)

				2	008
	2005	2006	2007	Last 12 months	January-April
Inputs ^{2/}	11.2	3.8	8.3	15.0	12.5
Of which:					
Plastic	21.0	4.2	7.6	16.1	15.2
Iron and steel	26.2	8.2	9.8	24.3	19.5
Textiles	-1.2	-7.5	2.6	1.7	2.2
Papers	9.4	3.1	5.8	3.2	2.8
Chemical products	28.7	-1.8	5.3	20.4	3.4
Organic chemicals	21.0	4.6	8.0	12.4	11.9
Fertilizers	22.8	21.2	20.0	9.4	9.3

 Calculated based on the unit value (obtained from the total value of the category divided by the total volume).

2/ Does not include food or fuels.

Graph 77 INFLATION EXPECTATIONS 2008



Graph 78 INFLATION EXPECTATIONS 2009



Graph 79 INFLATION EXPECTATIONS 2010



Graph 80 INFLATION EXPECTATIONS*



Inflation expectations

- 82. Economic agents' perception of future inflation has been mainly influenced by the recent evolution of the prices of food and fuels in international markets and by uncertainty about their persistence and their impact on domestic prices. This is reflected in the results of the BCRP Survey on Macroeconomic Expectations, which show that inflation expectations for the forecast horizon have been revised upwards due to the evolution of inflation in the first months of the year. Therefore, as long as external factors normalize, inflation expectations should converge again around the announced inflation target.
- 83. The survey results show that financial institutions anticipate a higher inflation in 2008 (4.5 percent instead of the 3.6 percent forecast in the January survey), while economic analysts and non-financial entities have raised their projections from 3.0 and 3.1 percent to 4.0 percent. In 2009, inflation is expected to range between 3.0 and 3.9 percent (versus 2.5 and 3.2 percent according to the results of the previous survey), while inflation projections for 2010 tend to decline to between 2.5 and 3.6 percent.

Input prices

84. The BCRP Survey on Macroeconomic Expectations also shows that a higher percentage of firms anticipates increases in the prices of the inputs they use in the next months. However, the group of firms expecting to raise the prices of their products increases at a lower proportion, reflecting the current market conditions.

In general, the survey results show an increase in the number of firms that have experienced rises in the prices of inputs and in sale prices, as well as in expected prices for the next months. The number of firms that experienced a rise in the prices of inputs in April (43 percent) was higher than in December last year (36 percent). Likewise, a higher number of firms (46 percent in April versus 31 percent in December) expects the prices of their inputs to increase.

As regards sale prices, both in terms of last month prices and in terms of expected prices for the following 3 or 4 months, the number of firms that has experienced or that expects a price rise has increased from 21 to 23 percent in the first case and from 32 to 35 percent in the second case.

Table 37

PRICES OF INPUTS AND SALE PRICES

(% of surveyed firms)

	[ecember 20	07	April 2008		
	Increased	No change	Decreased	Increased	No change	Decreased
Price of inputs (month of survey / previous month)	36	61	3	43	56	1
Sale price (month of survey / previous month)	21	74	5	23	74	3
Price of inputs (next 3 to 4 months / month of survey)	31	66	3	46	52	2
Sale price (next 3 to 4 months / month of survey)	32	63	5	35	62	3

Source: Survey on Macroeconomic Expectations, BCRP.

BOX 8

RECENT EVOLUTION IN THE RICE MARKET

The international market of rice

The price of this cereal in the international market has been growing since the end of 2007. The price of Thai rice increased from US\$/MT 380 on December 31 to a maximum high of US\$/MT 1,100 on May 1, 2008 (189 percent). This recent rise is mainly explained by specific measures constraining exports.

Several countries have established export quotas in order to either meet their domestic demand or reduce inflationary pressures, with constraints on exports having even caused the elimination of the supply of rice from some countries to international markets. Since 2007, several countries such as Vietnam, India, China and Egypt, have announced export constraints. It is worth pointing out that Vietnam, India and China are the second, third and fifth major exporters of rice respectively.

Moreover, Indonesia (in April) and Cambodia (in March) added to the countries that prohibited exports of rice. Despite being the third producer in the world, with a share of 27 percent in terms of overall production, Indonesia has been a net importer of this product in the last 10 years (except in 2004/05, when it exported 50 thousand MT).

Rice production has been growing at a lower pace than consumption in the last years, due to the presence of plagues in Vietnam and droughts in Australia and China. Additionally, although afterwards denied, rumors circulated in April that Thailand -the world's major exporter of rice- would constrain its exports.

Rice exports represent 7 percent of global consumption, since the main producing countries are also the major consumers of rice. This explains why the establishment of export quotas in these countries has had such a strong impact on the global exportable supply. Another important factor has been the depreciation of the dollar against the baht -the currency used for the trade of this grain. Between December 2006 and April 2008, the baht appreciated 12 percent against the dollar.

	Production	n	Consumption				Exports	
1	China	130	1	China	127	1	Thailand	9
2	India	96	2	India	92	2	Vietnam	4
3	Indonesia	36	3	Indonesia	36	3	India	3
4	Vietnam	24	4	Vietnam	20	4	Pakistan	3
5	Thailand	19	5	Philippines	12	5	China	1
6	Burma	11	6	Burma	10	6	Egypt	1
7	Philippines	11	7	Thailand	10			

RICE: FARMING SEASON 2007/08 (forecast*) (Millions of MT)

* US Department of Agriculture.



PRODUCTION, CONSUMPTION AND EXPORT OF RICE: FARMING SEASON 2007 - 2008 (Millions of MT)

Trade restrictions and the appreciation of the baht have accentuated a medium-term trend associated with the higher demand of a series of **emerging economies, such as China and India** -the major consumers of rice-which have grown at average rates of 9 and 7 percent respectively during the last 10 years. African countries have also increased their demand, as consumption of rice has increased at an annual rate of nearly 6 percent since 1973.

Another important factor has been **little investment in research**, which has hampered improving yields, in contrast with what happened in the 1970s when a price boom was reverted due to productivity improvements and higher yields. Furthermore, another factor contributing to this price rise has been increased production costs, due to the higher prices of fertilizers, lower availability of land and higher price of water. In contrast, inventories -in terms of global consumption- have declined to levels unobserved since the early 1980s.

The rice market in Peru

Rice production in **Peru** is concentrated in the departments of San Martín, Piura, Lambayeque, La Libertad, Amazonas, Cajamarca, Arequipa and Loreto, which together accounted for 92.3 percent of total domestic production of rice in 2007. Encouraged by higher farm prices and greater availability of water in the main reservoirs of northern departments, rice cultivated areas increased 6.3 percent -from 284 thousand to 301 thousand hectares- between August 2007 and April 2008, which represented an annual increase of 7 percent in the national production of rice.



According to the Ministry of Agriculture, Peru is self-sufficient in terms of rice production. Imports, which represent approximately 5 percent of the available supply, come mainly from Uruguay and more recently from Thailand -the latter being oriented to a more select consumption.

BALANCE OF RICE SUPPLY AND DEMAND
(Thousand of tons)

	Initial stock	Production	Imports	Available supply	Demand	Final stock
2006	51	1,525	19	1,544	1,553	42
2007	42	1,579	80	1,659	1,590	112
2008*	112	1,690	95	1,785	1,626	271

* Forecast.

Source: Minag.

Except for the trend observed in the last months, rice imports have been clearly declining since the late 1990s, although a rebound was observed in November 2004 - June 2005 due to the drought that affected Lambayeque and Piura (rice production dropped 13.5 percent in 2004).



Rice imports in 2007 amounted to US\$ 30.6 million and represented only 2.5 percent of total food imports de alimentos (wheat and soy bean accounting mainly for the rest). In the first quarter of this year, these imports amounted to US\$ 24.5 million, representing 6.3 percent of total food imports. It is worth mentioning that this amount is 346.3 percent higher than the one recorded in the same period in 2007, with volumes and prices accounting respectively for 224 points and 38 points of this increase.

Peru's per capita consumption is similar to that of Japan and India and much lower than in South East Asian countries (traditional consumers of rice), although higher than in other western countries, such as United States and Brazil.

On the other hand, exports in the last years amounted to 37 tons in 2006 -mainly to Mozambique- and 145 tons in 2007, of which 140 tons were exported to Colombia. The reasons why Peru does not export more rice are basically two; because local rice is still not a standardized product that can be negotiated as a *commodity* in international markets, and because of the sanitary regions existing in most countries in the region.

Inflation forecasts

- 85. The baseline scenario of this Inflation Report is characterized by the materialization of the main risks anticipated in our previous report. Inflation between January and May 2008 was higher than expected in our January Report, mainly due to increased inflation in foodstuffs, which reflected higher international prices. Moreover, the growth of domestic demand in the first quarter of the year (10.8 percent) was also higher than forecast in our previous report (8.0 percent). This was also the case of expectations of inflation for 2008.
- 86. Therefore, the central forecast scenario in this report considers a higher last 12-month inflation rate than the one considered in our January Report. Thus, inflation is expected to continue above the target range in the next months, but should gradually converge around the 2 percent inflation target in the forecast horizon and return again to the target range by mid- 2009.
- 87. This gradual convergence of inflation to the target in the forecast horizon will take place in a context marked by the slowing of economic activity but with high sustainable growth rates, by a rate of imported inflation that will gradually normalize, and by long term inflation expectations converging around the target. Although the international economy is expected to remain fragile during 2008 and part of 2009, the impacts on the domestic economy should be weak.
- 88. Domestic economic activity grew 9.3 percent in the first quarter of 2008, with domestic demand and credit growing 10.8 percent and 34 percent respectively. These results are consistent with upward adjustments in the output gap (indicator of demand inflationary pressures) for 2008 relative to the levels considered in our previous Report. This initial higher dynamism of demand has implied that a more restrictive monetary policy be implemented in order to steer inflation back towards the target.
- 89. In this sense, the output gap should gradually decline in the forecast horizon due to the counter cyclical monetary policy being implemented by the BCRP, since the normalization of economic growth rates considers that the BCRP has been withdrawing monetary stimulus since the second half of 2007, raising the reference interest rate by 100 basis points, from 4.50 to 5.50 percent. Additionally, the BCRP has been raising the rates of reserve requirements in soles and in dollars since this year. The economy's convergence towards its potential GDP is consistent with inflation's gradual convergence towards the inflation target in the forecast horizon.

Graph 81 OUTPUT GAP (Percentage of potential GDP)



Note: The shaded area represents uncentainty in the calculation and forecast on the output gap (plus or minus one standard deviation).

- 90. The high economic growth observed and forecast is mainly explained by the growth of the economy's potential GDP, which should be between 7.0 and 7.5 percent during the next year. This growth is driven by increased investment, both private and public, which will contribute to the growth of the potential GDP increasing the economy's physical assets. Another factor driving the economy's potential growth is total factor productivity, which should also contribute to potential growth in the next years.
- 91. On the other hand, the recessive impact of the deterioration of the global economy should be moderate. Although the deterioration of economic activity in the United States could have global recessive impacts and generate the drop of terms of trade, the impact on the domestic economy and inflation should be light due to the strengths of the Peruvian economy.
- 92. Inflation expectations is an important factor in terms of inflation's convergence towards the target. Because of the strong increase seen in imported inflation, inflation's pass-through to non-tradable goods could accelerate due to expectations of higher inflation. Therefore, the BCRP has been withdrawing monetary stimulus since the second half of 2007 and has also been raising reserve requirement rates. These measures will contribute to maintain long-term inflation expectations anchored around the inflation target in the forecast horizon so that any diversion of expectations will only be temporary.
- 93. Imported inflation comprises the determinants of inflation that are most sensitive to the evolution of international prices, particularly petroleum and some basic food products. In this sense, the average international price of of WTI crude is expected to be around US\$ 114 and US\$ 116 per barrel in 2008 and 2009 respectively. However, its impact on domestic prices would be offset by the Fuel Price Stabilization Fund, which should count on appropriate funds during 2008 and 2009.

Moreover, like in our previous Inflation Report, the rises in the international prices of commodities (particularly foodstuffs, like wheat, soybean, and maize) are expected to have a transitory impact, dissipating thereafter in the medium term of the forecast horizon.

VIII. Balance of risks



- 95. The graph below shows that recently observed inflation is in the upper end of density forecasts of inflation included in our January Report, which indicates that the risks discussed in said report have been the ones contributing most heavily to the evolution of inflation in this short period.
- 96. Although the same risks are considered in this Inflation Report, their weight has varied given recent developments in the economy.

The main risks that could deviate the inflation forecasts away from the central scenario in the next quarters include the following:

Higher prices of fuels. The central forecast considers a gradual reversal of the recent rises seen in the international prices of fuels and the maintenance of a sustainable scheme in the Fuel Stabilization Fund. Should the international market of oil show higher rises that cannot be offset by fiscal measures, the price of fuels would increase above the levels considered in the forecast scenario.

In this situation, the monetary policy stance would remain unaltered as long as inflation expectations do not increase and as long as their impact on inflation is only temporary.

• **Higher prices of food products**. The central scenario considers that the supply-demand imbalances of food



Graph 82



commodities will decline along the forecast horizon, and that the growth of agricultural production will be lower this year due to climatic conditions and to the higher costs of fertilizers -although the latter situation should be overcome in the next 2 years. However, the risk remains that higher prices may persist over time or even increase if international or domestic supply conditions should deteriorate or if the demand for biofuels should continue to grow, in which case the domestic prices of food would tend to increase.

In this context, the monetary policy stance would remain unchanged as long as inflation expectations do not increase and their impact on inflation is only transitory.

• Increased domestic demand pressures. The central scenario considers that aggregate demand will follow a growth path showing levels compatible with the estimated growth of the potential output in the forecast horizon (between 7 and 7.5 percent). A higher growth of aggregate demand -due to higher public or private expenditure- that is not coupled by a higher potential output of the economy would generate demand inflationary pressures.

In this situation, the Central Bank would adopt a more restrictive monetary stance to maintain a pace of longterm sustained economic growth and to lead inflation back to the target range.

• A greater slowdown in the world economy. The international environment is characterized by a gradual reversion of terms of trade (mainly due to the higher prices of imports), a transitory slowdown of the economy in 2008 and 2009, and a slight recovery of our main trade partners in 2010. A situation of economic recession in the United States -with a severe correction in the prices of export raw materials- could generate volatility in the flow of external capitals to emerging economies and cause an additional "contractive impulse" on the dynamism of demand.

For this reason, the BCRP maintains a high level of international reserves and could intervene in the exchange market to reduce excessive volatility. If necessary, the Bank would loosen its monetary policy stance to offset downward demand pressures on inflation in the forecast horizon.

Graph 83 INFLATION FORECAST: BALANCE OF RISK ^{1/}

(2 year-ahead inflation deviations in percentage points)



1/ This graph shows changes in risk perception compared with the January 2008 Inflation Report. The size and sign of bars show the asymmetry of each risk factor in the inflation forecast distribution. In contrast with the previous report, overall asymmetry is positive by 0.3.

Graph 84 INFLATION DENSITY FORECAST

(Annual percentage change)



Note: The graph shows the inflation forecast bands along the forecast horizon. The darkest band around the central forecast has a 10 percent probability of occurrence, while the bands together have a 90 percent probability of occurrence.

Graph 85 GDP GROWTH DENSITY FORECAST

(Annual percentage change in each quarter)



⁹⁰ percent probability interval (including the previous interval)

Note: The graph shows the inflation forecast bands along the forecast horizon. The darkest band around the central forecast has a 30 percent probability of occurrence, while the bands together have a 90 percent probability of occurrence.

Table 38

BALANCE OF RISKS COMPARED TO IR JAN. 08

Risk	IR	IR May.08	
	Balance	Ex-post	Balance
Price of fuels	Upside	Realized	Upside
Price of food commodities	Upside	Realized	Upside
Demand pressures due to higher domestic expenditure	Neutral	Realized	Upside
Fundamentals of the Nuevo Sol	Appreciation	Realized	Neutral
External financial volatility	Upside	Slightly realized	Upside

- 97. Weighing the various risks both upwards and downwards against the baseline scenario shows an upward balance in the inflation forecast. This is illustrated in graph 83, which shows that upward factors outweigh downward factors compared to the balance of risks of our Inflation Report of January 2008.
- 98. This implies a density forecast of inflation with an upward asymmetry in the short-term, but subsiding in the forecast horizon. As shown in the graph, inflation's central forecast scenario converges to the 2 percent target in the forecast horizon.

Table 39

PROBABILITIES IN THE INFLATION FORECAST 2008-2010

	In the target range	Below the bottom of the range	Above the top of the range	
Dec-08	6	0	94	
Dec-09	49	9	42	
Dec-10	55	19	26	

99. The balance of risks shows a balance on the upside in terms of GDP growth.

CONCLUSION

100. Inflation is expected to revert and start converging to the target range in the first half of 2009, gradually converging thereafter to the 2 percent inflation target. This evolution should take place in a context of monetary policy contractive adjustment favoring a sustained growth of GDP at rates similar to potential GDP.

The different risk factors point to a risk balance on the upside both in terms of inflation and GDP growth.

Central forecast

BOX 9

MEASURING UNCERTAINTY IN FORECASTS

The BCRP forecasts are elaborated on the basis of a risk management approach that focuses on events with low probability of occurrence, but which may have strong impacts on the economy. This is important because monetary policy decisions are based not only on the central scenario, but also on a more comprehensive outlook on the future evolution of the economy.

Under this approach, the baseline forecast scenario is the most likely future scenario which is estimated considering all relevant information gathered at the BCRP. Thus, the baseline forecast scenario consists of i) assumptions on the past and future evolution of a series of important variables, ii) specific estimates of elasticities that link macroeconomic variables, and iii) a theoretical basis that connects the conduct of key economic variables.

For example, the inflation forecast depends in part on how the international price of oil evolves. In turn, the baseline scenario of the oil price depends on assumptions regarding the factors that affect supply and demand in international markets. These factors have become quite volatile recently and said volatility has increased uncertainty in this market. Furthermore, the more uncertainty in the market, the higher uncertainty on future prices and, hence, the lower uncertainty on their impacts on the domestic economy.

When uncertainty increases, the various forecasts on a specific variable differ broadly. For example, some analysts argue that the price of petroleum could reach even US\$ 200 at end year, but others also say that the possibility that a speculative bubble has led the price of oil to rise as much as it has risen cannot be ruled out and that this bubble could burst in the future. If this happened, the price of oil could drop even to its price prior to the price escalade (US\$ 50).

A simple way of quantifying uncertainty in the future international price of fuel is considering the differential between these two extreme values, which in this case is US\$ 150. Under normal conditions, this difference in opinions should not represent more than a few dollars. The baseline forecast scenario in this Inflation Report considers a price of US\$ 117 dollars per barrel for the end of this year given the possibility that oil will post values close to US\$ 200 or higher or close to US\$ 50 or lower. These are extreme values because the probability that the price of oil will actually be over US\$ 200 is relatively low, and so is the probability that the price of oil will be lower than US\$ 50. However, if any of these two extreme events should happen, their impact on the economy could have important consequences.

As in the case of the international price of petroleum, a great number of variables affect uncertainty in the BCRP forecasts. Particularly, the most relevant factors in terms of the inflation forecast are considered in the Balance of Risks. In the case of oil, PU is the probability that the price of petroleum will be higher than the price in the baseline scenario and PD is the probability that it will be lower. Then, if PU is higher than PD, the distribution of the price forecast is assymetric on the upside. This is also known as a balance of risks on the upside in the forecast of this variable.

In **Graph 1**, which shows the factors affecting the inflation forecast, the assymmetry of factors -such as the drive of demand, the price of oil, the price of food, and the international environment- stands out. The higher probability of occurrences above the base scenario than of occurrences below it is considered in all the cases in terms of their effect on inflation. The rest of shocks affecting the inflation forecast show a symmetric distribution. These assymmetries are translated into the distribution of the forecast on the variable inflation through a quantitative model that weighs the relative importance of each risk factor. In the example illustrated in Graph 1, an upward assymmetry prevails in the final forecast.



In this Inflation Report, the density function of the inflation forecast has been estimated to be asymmetric on the upside. This asymmetry may be illustrated for any specific month of the forecast, for example, December 2008. In **Graph 2**, points with higher probability of occurrence in this density are identified with dark colors. The shade becomes lighter as the probability that inflation will fall around these points declines.

The least probable points -which together show a probability of occurrence of only 10 percent- are located in both ends of the inflation density. As shown in the graph, a characteristic of the upward asymmetry of the inflation forecast is that the uncolored area on the right side is larger than the one on the left.



A Fan Chart is usually used to graphically illustrate each density function of the inflation forecast throughout the forecast horizon.

Appendix

INFLATION REPORT FORECAST

	2007	2008 1/		2009 ^{1/}		2010 ^{1/}
	IR May. 08	IR Jan. 08	IR May. 08	IR Jan. 08	IR May. 08	IR May. 08
Real % change						
GDP GDP Domestic demand a. Private consumption b. Public consumption c. Private fixed investment d. Public investment 3. Exports (goods and services) 4. Imports (goods and services) 5. Main trade partner's economic growth	9.0 11.6 8.3 4.8 23.2 19.7 5.4 18.8 4.5	7.0 8.2 5.8 5.0 20.0 33.0 8.2 13.5 3.6	8.0 9.8 6.6 4.7 20.4 42.9 6.2 15.4 3.3	6.3 7.2 5.3 5.4 12.1 16.6 8.5 12.4 3.8	6.5 8.0 5.5 2.6 14.5 23.9 8.4 14.8 3.2	7.0 6.6 5.5 3.2 11.5 17.6 11.4 9.2 3.7
Note: Product gap (%) ^{2/}	1.22	1.5 - 2.0	2.0-2.5	0.7-1.2	1.0-1.5	0.5-1.0
% change						
 Forecast inflation Average price of petroleum Average price of wheat Nominal exchange rate ^{3/} Multilateral exchange rate ^{3/} Terms of trade Export price index Import price index 	3.9 9.6 36.7 -6.3 -2.8 3.6 14.0 10.0	2.5-3.0 23.5 44.0 -3.2 0.0 -10.7 -0.2 11.7	4.0-4.5 57.5 42.1 -5.5 0.4 -6.3 12.9 20.5	1.5-3.0 -5.6 -7.4 0.0 -0.9 -2.6 -2.9 -0.3	2.5-3.0 1.8 -2.0 2.5 1.1 -3.8 -1.7 2.2	1.5-2.5 -2.4 -0.7 2.6 1.1 -2.8 -2.1 0.8
12. Average Monetary Base 13. Credit to the Private Sector	28.2 26.3	17.0 17.9	42.0 17.0	14.0 16.9	14.7 16.0	14.0 16.5
% of GDP						
 Domestic saving rate Domestic investment rate Current account of the balance of payments Trade balance Gross external financing to the private sector ^{4/1} Current revenue of the general government Non-financial expenditure of the general government Overall balance of the non-financial public sector 	24.4 23.0 1.4 7.7 8.5 20.4 15.7 3.1	23.0 24.9 -1.9 4.0 6.3 20.5 17.1 1.8	24.5 25.7 -1.1 4.7 7.5 20.4 16.7 2.2	23.8 26.3 -2.4 2.4 5.6 20.0 17.7 1.0	25.4 28.1 -2.7 2.1 6.3 20.3 17.2 1.7	26.2 28.8 -2.7 1.9 6.0 20.3 17.5 1.5
23. External public debt balance		14.4	13.0	13.1	11.8	10.7

IR: Inflation Report.
1/ Forecast.
2/ Differential between GDP and potential GDP (percentage).
3/ Expectations regarding the exchange rate according to the survey on macroeconomic expectations.
4/ Includes foreign direct investments and private sector's long run disbursements.