

---

## V. MONEY AND CREDIT

For the second consecutive year the Central Bank published its Monetary Program, in which an inflation target range of 2,5 to 3,5 percent was announced for the year 2001. In order to attain this target, the monetary base growth ceiling was set at a range of 3 to 5 percent. Furthermore, the Bank's started to publish at the beginning of each month the operational target, that is, banking system's liquidity, and the interest rates of Central Bank's monetary operations. Thus, communicating the main issues of monetary policy design and implementation has contributed to enhance its understanding and to the alignment of public inflation expectations to the announced inflation target.

Monetary policy implementation showed two marked periods. In the first half of the year, the monetary policy stance was very cautious because of financial markets uncertainty due to the political elections process and to the risks of contagion from external financial turmoil. The spread between the yield of Peruvian Brady bonds and the US Treasury bills interest rate (a proxy for country risk) initially rose from 636 basis points in March to 761 basis points in May, and then it went down to 641 basis points in July. At the same time, the exchange rate (soles per US dollar) moved up from S/. 3,52 to S/. 3,60 and then down to S/. 3,50. Lowering the operational target in the second quarter

of the year revealed this cautious stance of monetary policy.

Since the second half of the year, once the electoral process had ended, the Central Bank eased monetary policy by gradually raising the operational target and reducing interest rates for its monetary operations. However, the inflation rate went on declining due to the lagged effect of monetary policy tightening during the first half of the year. Consequently, the inflation rate was negative in 0,13 percent, below its target range and core inflation was also below the announced range (1,1 percent).

### 1. Intermediate Target: Monetary base

The announced range for the intermediate target (growth of the daily-average stock of monetary base) was 3 to 5 percent, considering a 2,5 percent growth of real GDP (nominal GDP growth of 6,1 percent), a 0,5 percent fall in the velocity of circulation, and a 2,5 percent increase in the money multiplier. Actual real GDP growth was 0,2 percent (1,5 percent in nominal terms), against the 2,5 percent growth considered in the Program. This lower GDP growth was partially offset by a larger fall in the velocity of circulation (5,0 percent), reflecting a higher domestic currency preference. In this way, the monetary base growth rate (3,2 percent) ended within the announced range.



CENTRAL RESERVE BANK OF PERU

TABLE 30  
Monetary base growth determinants in the year 2001 <sup>1/</sup>

	FACTORS	PERCENTAGE CHANGE		COMMENTS
		Program	Actual	
A	Nominal GDP	6,1	1,5	Lower economic activity.
B	Velocity of circulation	-0,5	-5,0	Greater confidence in the sol due to the reduction of inflation and depreciation expectations.
C	Banking multiplier	2,5	3,5	Greater dynamism in domestic-currency deposits in the banking system, thus increasing financial intermediation capacity.
D	Monetary Base	4,0	3,2	Due to the evolution of its determinants, monetary base growth rate ended within the announced range (3 to 5 percent).

$$1/ \quad D = \frac{\left(1 + \frac{A}{100}\right)}{\left(1 + \frac{B}{100}\right) \cdot \left(1 + \frac{C}{100}\right)} - 1$$

On the other hand, the end-of-year monetary base stock reached S/. 6 087 million, higher by S/. 445 million (7,9

percent) than the stock of December 2000.

TABLE 31  
MONETARY BASE ANNUAL RATE OF GROWTH

	Average stock <sup>1/</sup>	End-of-year stock <sup>2/</sup>
1999	6,7	17,0
2000	6,0	-4,0
2001	3,2	7,9

1/ Compares the annual rate of growth of the daily average monetary base stock with respect to the same stock in the previous year.

2/ Compares the annual rate of growth of the end-of-year monetary base stock with respect to the same stock in the previous year.

Among the sources of monetary base variation, foreign exchange operations account for S/. 450 million or US\$ 135 million. These operations correspond to net purchases of foreign currency to

commercial banks (S/. 487 million or US\$ 145 million), in particular purchases in the fourth quarter of the year (S/. 698 million or US\$ 203 million). These purchases offset the sales

of foreign currency in the second quarter (S/. 211 million or US\$ 59 million). In both cases, the Central Bank's interventions in the foreign exchange market were aimed at reducing the higher volatility of the exchange rate, due to the political election process in the second quarter and the severe reversal of sol-depreciation expectations in the fourth quarter.

Net purchases of foreign currency from commercial banks were offset by net sales to the public sector of foreign currency (S/. 35 million or US\$ 9 million).

Central Bank's monetary operations resulted in a S/. 5 million decrease in the monetary base, mainly explained by the net issuance of CDBCRPs (S/. 480 million), partially offset by Central Bank's net financial and non-financial expenditures (S/. 357 million) and a decrease of public sector deposits at the Central Bank (S/. 125 million). In the case of the issuance of CDBCRP, the stock of these securities rose from S/. 1 360 million (24 percent of monetary base) at the end of 2000 to S/. 1 840 million (30 percent of monetary base) at the end of 2001.

TABLE 32  
SOURCES OF MONETARY BASE VARIATION  
(Millions of nuevos soles)

	1999	2000	2001
<b>I. FOREIGN CURRENCY MARKET PURCHASES</b>	<b>830</b>	<b>217</b>	<b>450</b>
<i>(Millions of US dollars)</i>	253	63	135
1. Over-the-counter net purchases	641	10	487
2. Public sector	155	186	- 35
- External debt	- 532	- 140	- 107
3. Other net purchases	34	21	- 2
<b>II. MONETARY OPERATIONS</b>	<b>24</b>	<b>- 450</b>	<b>- 5</b>
1. Non-financial public sector and Banco de la Nación	- 153	59	125
2. Financial system	- 42	0	0
3. Central Bank certificates (CDBCRP)	- 119	- 961	- 480
4. Other monetary operations	338	484	357
<b>III. MONETARY BASE TOTAL CHANGE</b>	<b>854</b>	<b>- 233</b>	<b>445</b>
% end-of-period variation	17,0	-4,0	7,9
% average variation	6,7	6,0	3,2
<b>Note:</b>			
<b>END-OF-PERIOD STOCKS</b>			
Central Bank certificates (CDBCRP)	399	1 360	1 840
Short-term credit	0	0	0
Public sector deposits	378	319	194
Monetary base	5 876	5 642	6 087



## 2. Operational target: Commercial banks' deposits at the Central Bank

In 2001, the transparency and communication of monetary policy were improved. In this way, since February, the Central Bank publishes monetary policy decisions the first Thursday of every month.

The Central Bank announces decisions on the operational target (daily average deposits of commercial banks held at the Central Bank) and on the interest rates of its monetary operations (monetary regulation credits and overnight deposits), which are references for interbank market operations.

A higher (lower) operational target is an indicator for economic agents of a looser (tighter) monetary policy stance, since higher (lower) liquidity induces the reduction (increase) of the interbank interest rate. Modifications to Central Bank's monetary operations and reference interest rates complement the monetary policy stance signal given to the markets by the operational target.

The higher certainty about liquidity conditions allows monetary policy stance changes to have a greater impact not only on interest rates, but also on other variables such as inflation expectations and the exchange rate, which in turn affect economic agents' goods and services expenditure decisions (aggregate demand), in particular of those goods and services whose price movements are used to measure the inflation rate.

A second effect of this increase in transparency is greater interbank interest rate stability (the standard deviation decreased from 2,5 to 0,9 percent from 2000 to 2001). In fact, the Central Bank has now a more precise influence over the evolution of the interbank interest rate since the announcement of the operational target reduces the uncertainty about disposable funds in the interbank market. This greater stability of short term interest rates, in turn, allows monetary policy measures to have a greater impact on other interest rates.

TABLE 33  
INTERBANK INTEREST RATE  
(In percentage points)

Year	Mean	Standard deviation <sup>1/</sup>
1999	14,9	4,8
2000	12,8	2,5
2001	8,3	0,9

<sup>1/</sup> The standard deviation for each year is calculated as the average of the monthly standard deviations of the year.

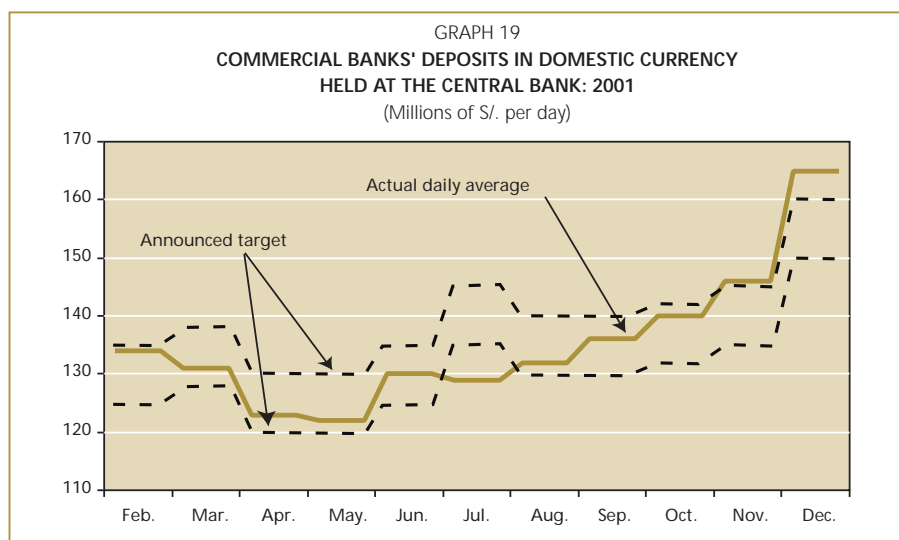
Once the operational target is known, financial markets correctly understand open market operations (by means of auctions) carried out by the Central Bank using its own certificates of deposits (CDBCRP) or Public Treasury Bonds (BTP) in the sense that these operations aim at injecting or withdrawing liquidity to reach the target.

As to monetary instruments, the development of a domestic market for public debt has broadened the availability of securities used by the Central Bank for its monetary operations. Operations in the secondary market of sol-denominated BTP –with a maximum net purchase allowed by law of 5 percent of the monetary base stock

at the end of the previous year- help to deepen the secondary market for these securities.

In October, a mechanism for direct overnight purchases of securities (not by means of auctions) was established; since then, commercial banks have an additional window facility in order to obtain funds from the Central Bank.

The Annual Monetary Program considered a range for the daily average commercial banks' deposits held at the Central Bank from S/. 130 million to S/. 145 million. The actual daily average ended within this range (S/. 135 million).



This commercial banks' liquidity level has contributed to reduce the interbank interest rate from 11 percent in December 2000 to 8 percent in July

2001, and to 3 percent as of December. This reduction and its effect on the other market interest rates has had an impact on cash demand, which



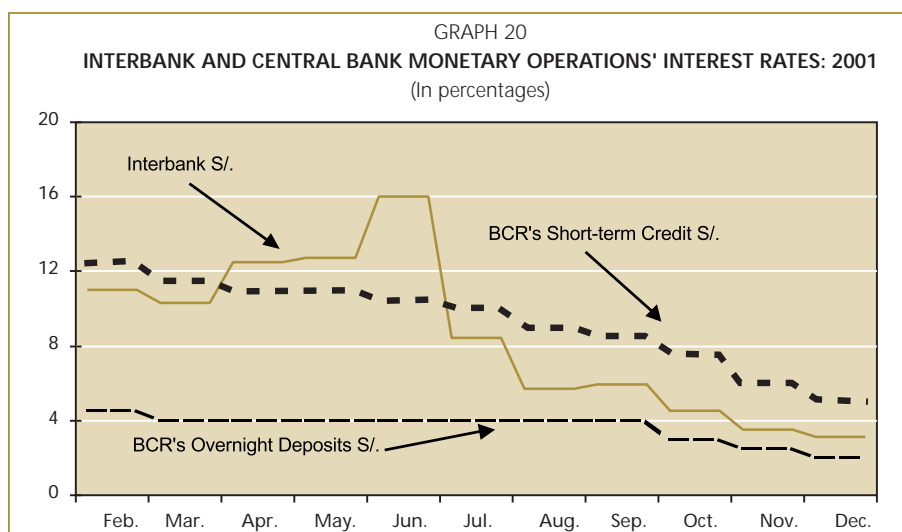
increased during the fourth quarter. The latter also caused an expansion of the monetary base of 6 percent in this period with respect to the fourth quarter of 2000, the highest rate of growth of the year.

### 3. Interest rates

In 2001, interest rates in domestic and foreign currency had a marked declining trend, related to the fall of foreign

interest rates, lower country-risk, and the eased of the monetary policy stance.

As mentioned above, the gradual increasing of the operational target and the reduction of Central Bank monetary operations' interest rates since July contributed to the decline of the sol-interbank interest rate from 11 percent in December 2000 to 3 percent in December 2001.



### 4. Net international reserves

In 2001, Central Bank net international reserves (NIR) increased US\$ 433 million, after three years of consecutive fall. Thus, NIR balance at the end of the year was US\$ 8 613 million, equivalent to more than 14 months of imports of goods, 5 times the

monetary base and 60 percent of the overall liquidity of the banking system.

This increase is mainly due to higher financial system deposits at the Central Bank (US\$ 245 million), which shows a liquidity surplus in the financial system, and to foreign exchange operations (US\$ 135 million).

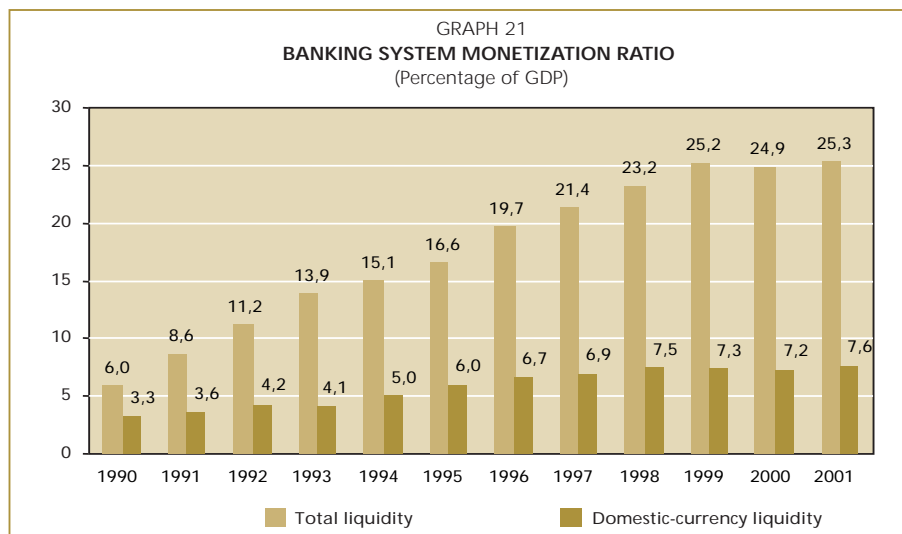
**TABLE 34**  
**NET INTERNATIONAL RESERVES SOURCES OF VARIATION**  
(Millions of US dollars)

	1999	2000	2001
<b>I. Foreign exchange operations</b>	<b>253</b>	<b>63</b>	<b>135</b>
1. Over-the-counter net purchases	196	3	145
- Purchases	316	3	203
- Sales	- 120	0	-59
2. Public sector	46	54	- 9
- Purchases	277	102	21
- Sales	- 231	- 47	-30
3. Other foreign exchange operations	11	6	- 1
<b>II. Financial system and private sector deposits</b>	<b>- 99</b>	<b>- 12</b>	<b>245</b>
1. Commercial banks	- 13	- 158	183
2. Banco de la Nación	- 82	145	50
3. Other financial institutions	- 4	1	11
<b>III. Public sector</b>	<b>-1 034</b>	<b>- 269</b>	<b>- 158</b>
<b>IV. Net interest</b>	<b>132</b>	<b>135</b>	<b>216</b>
<b>V. Other NIR sources of variation</b>	<b>- 32</b>	<b>- 141</b>	<b>- 3</b>
<b>VI. TOTAL NIR CHANGE</b>	<b>- 780</b>	<b>- 224</b>	<b>433</b>

### 5. Banking system liquidity

The average stock of the banking system's total liquidity (which includes notes and coins, deposits, and other banking system liabilities) increased from 24,9 percent of GDP in 2000 to

25,3 percent of GDP in 2001. Liquidity in domestic currency increased from 7,2 percent to 7,6 percent in the same period. As a consequence, the financial dollarization degree of the Peruvian economy decreased in 2001.





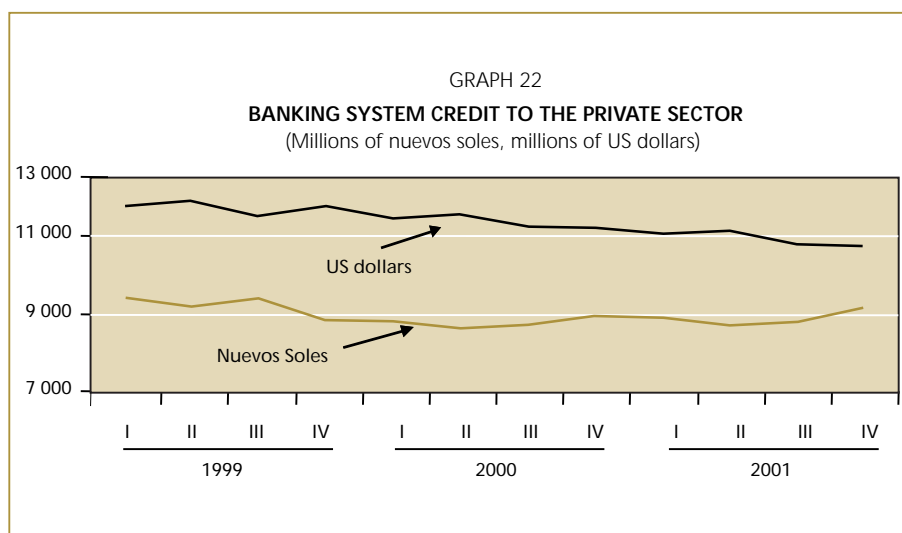
The reduction of the rate of dollarization of banking system liabilities owes to the higher preference for domestic currency liquidity, which corresponds to lower sol-depreciation expectations in the second half of the year, following the end of the political election process.

### 6. Credit to the private sector

In 2001, financial system's credit to the private sector decreased 4 percent, mainly because of the reduction of banking system credits (5 percent), partially offset by the expansion of non-banking credit (1 percent).

Along the year, commercial banks maintained a cautious behaviour when granting loans in foreign currency. Credit to the private sector in domestic currency grew again this year, and it was particularly strong in the second half of 2001.

In nominal terms, banking system's total credit to the private sector decreased 5 percent in 2001. However, part of this reduction obeys to a valuation effect, since the US dollar depreciated 2,4 percent. In foreign currency, credit to the private sector fell 4 percent, whereas credit in domestic currency grew 3 percent.



### 7. Financial savings and capital markets

In 2001 financial savings, which include total financial system liabilities with the private sector, excluding money

and short-term liabilities, increased from 25,4 to 26,5 percent of GDP. Financial savings in domestic currency also increased from 7,9 to 9,1 percent of GDP.



TABLE 35  
**FINANCIAL SAVINGS RATIOS**  
 (As percentage of GDP)

	Domestic Currency	Total
1992	2,6	9,9
1993	2,0	11,9
1994	2,5	12,6
1995	3,3	13,9
1996	4,6	17,8
1997	5,2	19,9
1998	6,3	22,2
1999	7,1	24,8
2000	7,9	25,4
2001	9,1	26,5

As in the previous year, only savings in domestic currency increased (23,5 percent), of which private pension fund deposits expanded S/. 2 767 million or 28,8 percent. Thus, private pensions funds deposits reached 23,9 percent of total financial savings. Mutual fund savings had the highest rate of growth (150 percent), both in soles and US dollars, whereas in 2000 they fell 10 percent. Local government savings and financial enterprises savings also recorded an important growth (52 and 39 percent, respectively).

## 8. Primary market

In 2001, the average balance of public-offered bonds grew 17 percent in real terms, increasing from 4,0 percent of GDP in 2000 to 4,3 percent of GDP in 2001. Public sector bonds had the greatest percentage increase (400 percent), whereas securitization bonds grew 51 percent.



CENTRAL RESERVE BANK OF PERU

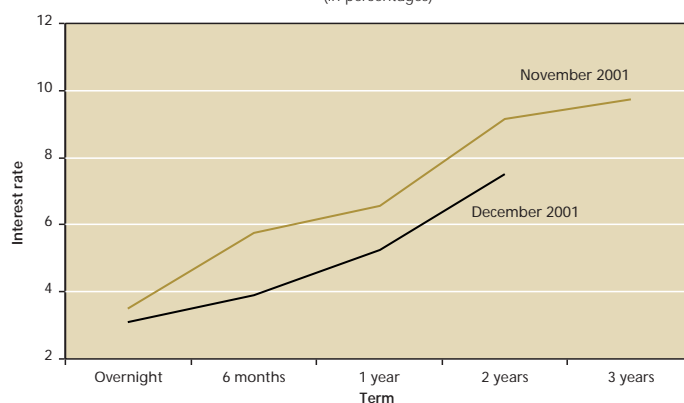
TABLE 36  
BOND MARKET <sup>1/</sup>

	Year-end balances in millions of nuevos soles of December 2001			Percent changes	
	1999	2000	2001	2000	2001
<b>By type</b>	<b>7 024</b>	<b>8 381</b>	<b>9 811</b>	<b>19,3</b>	<b>17,1</b>
Public sector <sup>2/</sup>	166	320	1 601	93,1	399,5
Financial Leasing	2 754	2 906	2 796	5,5	-3,8
Subordinated	1 006	962	887	-4,4	-7,8
Mortgage-backed	--	--	86	--	--
Securitization	142	563	849	298,0	50,7
Corporate	2 958	3 630	3 593	22,7	-1,0
<b>By term</b>	<b>7 024</b>	<b>8 381</b>	<b>9 811</b>	<b>19,3</b>	<b>17,1</b>
Up to 3 years	1 789	1 795	2 947	0,4	64,2
More than 3, up to 5 years	4 081	3 884	3 355	-4,8	-13,6
More than 5 years	1 155	2 702	3 510	134,0	29,9
<b>Percent share by currency</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>		
In foreign currency	72,7	74,7	63,2		
In domestic currency	27,3	25,3	36,9		
- Nominal	0,9	1,9	17,4		
- Indexed	26,4	23,5	19,5		
<b>Note:</b>					
Bonds outstanding as percentage of GDP	3,6	4,0	4,3		

<sup>1/</sup> Includes only public auctions registered with the Comisión Nacional de Supervisión de Empresas y Valores (CONASEV).

<sup>2/</sup> Bonds placed by COFIDE.

GRAPH 23  
NUEVOS SOLES YIELD CURVE <sup>1/</sup>  
(In percentages)



<sup>1/</sup> For the 1 year term CD BCRP rate is used, for 2 and 3 years terms, the BTP rate is used.

---

In 2001, the Government started to develop the domestic market for public debt by issuing soles-denominated bonds amounting to S/. 1 200 million (with 2 and 3 year maturities), through public auctions. In 2000, COFIDE issued nominal soles-denominated bonds with a 2 year maturity.

These issues have reduced the exchange rate risk of public debt and allowed the formation of a yield curve, which can be used as a benchmark for the issuing of sol-denominated private bonds and as an instrument for efficient asset-valuation. It is worth mentioning that, as any other debt-issue, the Government needs prudent financial management, as well as transparency, to improve financial conditions.

The main bond-holders were pension funds (54 percent of the total primary public debt issuing) and commercial banks (33 percent of the total primary public debt issuing).

As a consequence, by the end of the year, markets had a reference or minimum-risk sol-interest rate for operations with less than a year maturity (1-day interbank interest rates and CDBCRP interest rates with maturities from 1 week to 1 year). There were also

reference interest rates for liabilities with maturities from 1 to 3 years (sovereign bonds in domestic currency). For example, in December 2001, the interbank interest rate was 3 percent, while the 1-year CDBCRP rate reached 5 percent and interest rates for sovereign bonds with maturities of 2 and 3 years were 9,2 and 9,8 percent, respectively.

Interest rates declined continuously along the year, especially in the second half, following the trend of money market interest rates. The sovereign bond interest rate with a 2 year maturity went from 12 percent in March (first issuance) to 9 percent in November, whereas the sovereign bond interest rate with a 3 year maturity went from 13 percent in June to 10 percent in November.

The decrease of sol-denominated sovereign bond interest rates encouraged an important expansion of private sector nominal sol-denominated liabilities. Issues of bonds and other short-term liabilities increased from S/. 223 million to S/. 1 172 million between 2000 and 2001 (32 percent of new issues). The main sol-denominated bond issuers were Edegel, Edelnor, Luz del Sur, Telefónica del Perú and Unión de Cervecerías Peruanas Backus & Johnston.



---

CENTRAL RESERVE BANK OF PERU

TABLE 37  
SOL DENOMINATED BONDS PLACED IN 2001

Issuer	Date	Amount (S/. millions)	Yield to Maturity (percent)
UCP Backus & Johnston	January	53	14,26
Telefónica del Perú	February	50	13,09
Luz del Sur	May	54	13,96
Telefónica del Perú	June	66	13,02
Edegel	August	35	11,83
Telefónica del Perú	December	55	7,64
<b>TOTAL</b>		<b>313</b>	

The interest rate of dollar-denominated issues also decreased, partly because of lower international interest rates and country-risk reduction.