Challenges of financial globalisation and dollarisation for monetary policy: the case of Peru

Julio Velarde

During the last decade, the financial system of Peru has become more integrated with the global financial system, as reflected in growth in dollar deposits. Over the same period, following an episode of hyperinflation (1988-90) and confiscation of dollar deposits (1985), the level of financial intermediation in the Peruvian banking system recovered and reached its highest recorded level (25% of GDP) in 2002. This paper reviews Peru's monetary policy experience in such an environment. In particular, the gradual reduction of financial dollarisation in the context of the recent adoption of an inflation targeting regime and the development of capital markets in local currency are discussed.

Evolution of the Peruvian financial system

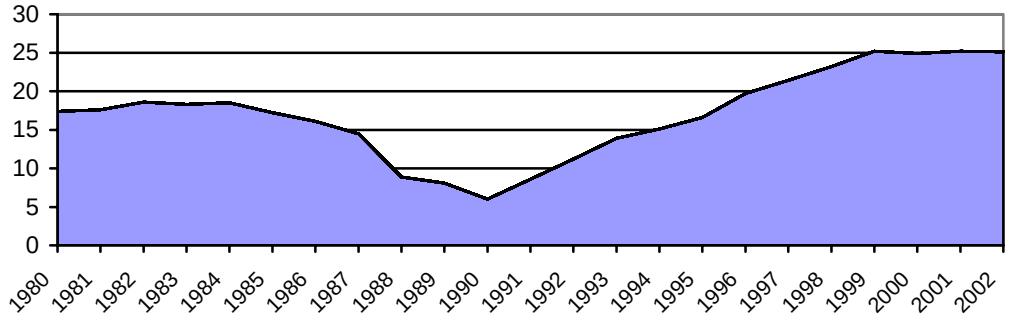
Recovery of financial intermediation

Ensuring the financial system's ability to provide financial intermediation services has posed an important challenge for Peru. As a result of hyperinflation in 1988-90 and confiscation of dollar deposits in 1985, broad money had fallen to only 6% of GDP by 1990. The financial system recovered gradually, so that by 2002 the ratio of broad money to GDP had reached 25%, its highest recorded level (Graph 1). However, this indicator of financial intermediation is still lower than for most countries in the Latin American region.

Graph 1

Broad money

As a percentage of GDP



The recovery in financial intermediation was driven mainly by an increase in dollar deposits, resulting from the repatriation of Peruvian residents' deposits held abroad and the bank multiplier effect. A stabilisation programme, the restructuring of debts with foreign creditors and economic reforms improved confidence in the local financial system. Reforms included the liberalisation of the capital account (which included lifting restrictions on international capital flows and on holding foreign currency), the elimination of financial repression via the liberalisation of interest rates, the elimination of financial subsidies directed to specific sectors, the creation of a private pension system and the privatisation of state-owned banks.

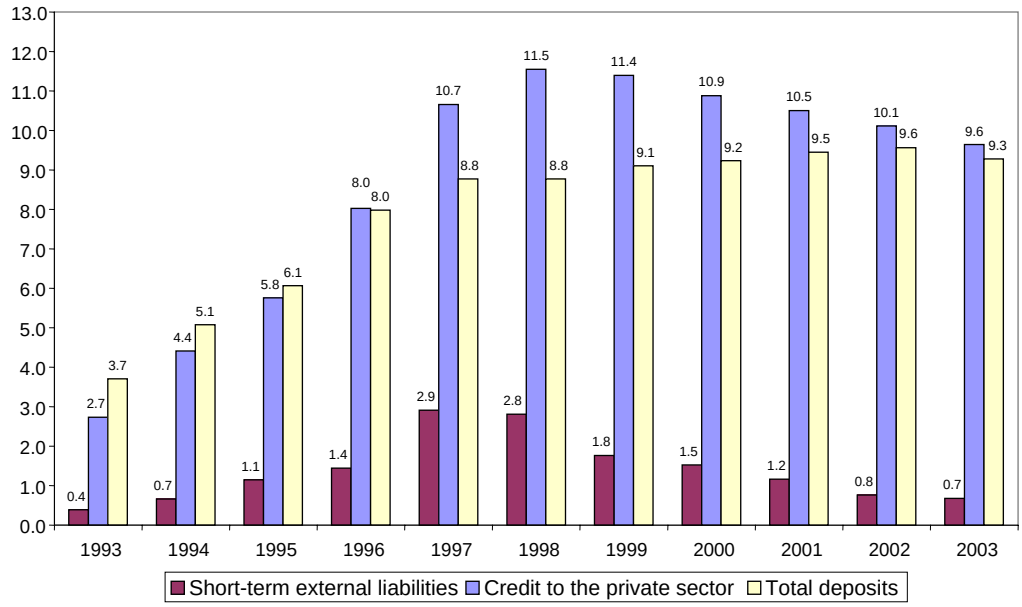
As a result, Peru achieved a higher integration with international financial markets, which in turn has led to increased foreign investment in the local banking system. The share of foreign capital in the banking system was nearly nil in the early 1990s, but now foreign investors control 62% of Peruvian banks (as of September 2003). Moreover, the make-up of the banking sector also changed: from mostly state-owned banks to more private commercial banks.

Banks have also regained access to international markets. Thus, the short-term external liabilities of commercial banks grew from USD 387 million in 1993 to almost USD 3 billion in 1997. As a result, dollar-denominated credit to the private sector has grown, and has exceeded total foreign currency deposits since 1996 (Graph 2).

Graph 2

Evolution of monetary aggregates of commercial banks in foreign currency: 1993-2002

In billions of US dollars



Financial integration has also led to the creation of derivatives markets, which, as in other emerging market economies, mainly involves the forward exchange market. Hedging with financial derivatives can help economic agents manage currency mismatches on their balance sheets. However, at the aggregate level the underlying exposure is not eliminated but transferred among residents. In this market, banks are the main suppliers because of their infrastructure and their participation in money and credit markets.

Compared to those of other emerging market economies (eg Chile), the Peruvian forward exchange market is very small. However, relative to other domestic financial markets, it is significant. In the forward market, daily transactions average about USD 25 million. This mainly involves operations with clients (USD 20 million) and short (sell) forward contracts (USD 18 million). The daily average amount of interbank operations is about USD 5 million and responds to banks' partial hedging of their short positions with clients. Regarding the term structure, purchases are concentrated in the short term, while sales are distributed in terms up to one year. Liquidity for long-term operations (more than a year) is very thin. As at October 2003, the stock of banks' sales to the public in the forward market is USD 949 million, while the stock of banks' purchases is USD 358 million.

The demand for forward cover exceeds supply largely because exporters, the potential sellers of short forwards, do not participate in the forward market since they are naturally hedged (their liabilities are dollarised, as discussed below). On the demand side, the main participants are corporate clients (utilities and commerce sector) and foreign clients with domestic investments.

Impact of capital outflows on the financial sector

Peru, like other countries, has faced external financial restrictions coming mainly from international crises. From 1997, capital inflows to emerging and transition markets diminished due to international crises in July 1997 (Asia), August 1998 (Russia) and 1999 (Brazil). Peru, which was seriously hit by

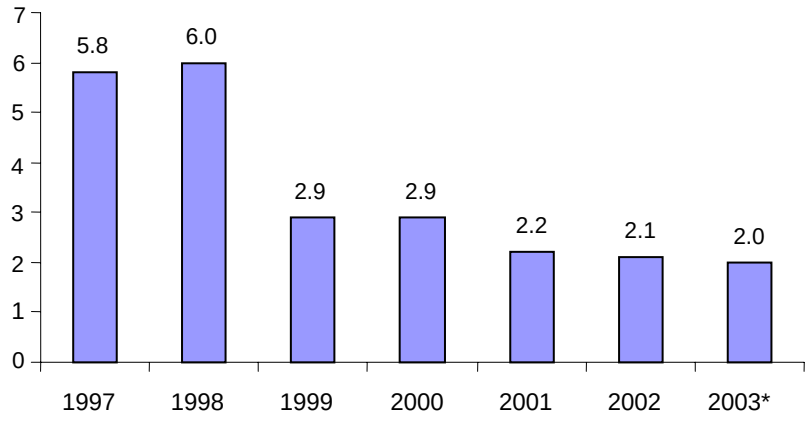
these shocks, was also affected by political crisis due to the presidential and congressional elections in 2000 and 2001. Short-term capital flows moved from an inflow of USD 3,583 million in 1993-97, to an outflow of USD 2,283 million in 1998-2000.

As a result of capital outflows, the current account deficit dropped drastically from 6% to 3% of GDP between 1998 and 1999, while output growth turned negative in this period (Graphs 3 and 4).

Graph 3

Current account deficit

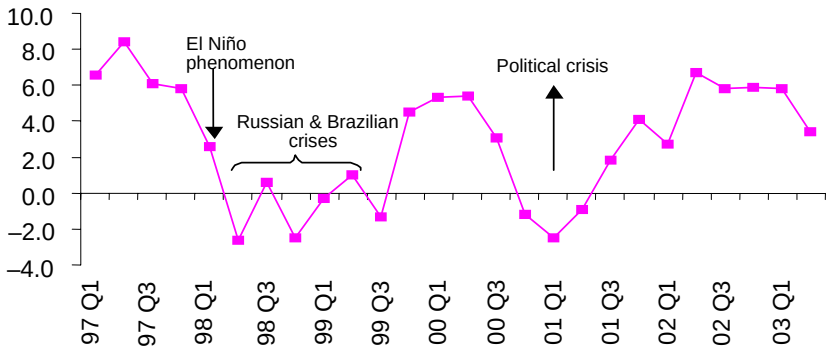
As a percentage of GDP



Graph 4

Real GDP growth

Year over year change, in per cent



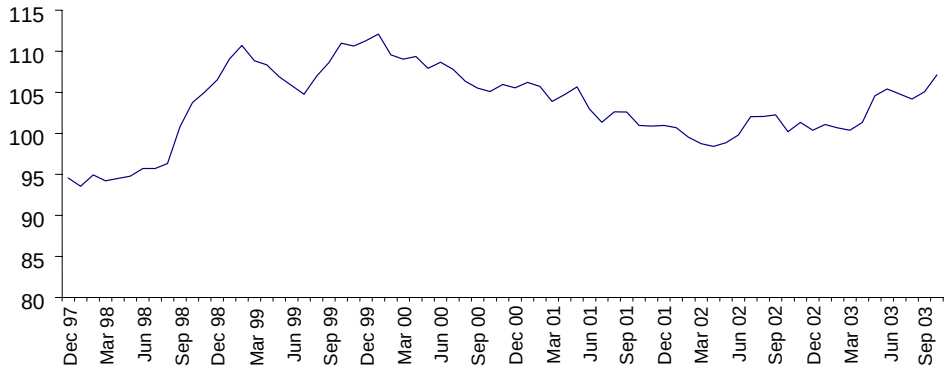
The depreciation of the real exchange rate following the external crises in 1998 (Graph 5), in a context of high dollarisation of assets and liabilities of households and firms, had a contractionary impact on the real sector of the economy through balance sheet effects.[1]

[1] A devaluation would increase the dollar-denominated liabilities of borrowers. If these borrowers earn income or hold assets denominated in local currency, their net worth will decline and this can lead to bankruptcy if the effect is sufficiently large. The fall in net worth weakens the financial position of lenders, and reduces credit extended in the economy and investment spending.

Graph 5

Multilateral real exchange rate index

1994 = 100



Note: An increase indicates a depreciation.

The negative effects of international and political crises were counteracted by Peruvian macroeconomic stability, the proper management of the exchange rate and a high level of international reserves. After the Russian crisis, Peru adopted a number of measures in response to slower capital inflows, such as reducing reserve requirements on foreign currency (which led to a decrease in international reserves of USD 1 billion between August and December 1998). However, the outflow of capital in the fourth quarter of 1998 and the resulting liquidity shortage resulted in a credit crunch: banks were reluctant to provide credit to the private sector, resulting in excess monetary reserves in the banking system.

Preventive measures

A dollarised financial system involves two risks that need to be addressed with prudential measures, including an adequate level of net international reserves:

Currency mismatch risk. This requires the central bank to have the ability to reduce exchange rate volatility through its monetary and exchange rate operations.

Risk of a bank run in dollar deposits. This requires that the central bank ensure that financial institutions have sufficient foreign currency funds available to maintain the confidence of depositors. This can be achieved by way of high reserve requirements on dollar-denominated deposits.

In Peru, the central bank's foreign reserves had increased prior to the international crises of the late 1990s because privatisation proceeds were deposited with the central bank by the public sector. Net international reserves have grown in recent years, such that they now exceed the peak level reached before the external crisis of 1998 (Table 1).

Table 1

Net international reserves

In millions of US dollars

	1991	**1994**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**[1]
Net international reserves	**1,302**	**5,718**	**10,169**	**9,183**	**8,404**	**8,180**	**8,613**	**9,598**	**10,496**
Net international position	–55	1,179	2,301	2,151	2,538	2,624	2,914	3,341	4,327
Financial system deposits	863	2,259	3,713	3,064	2,965	2,952	3,196	3,381	3,257
Public sector deposits	560	2,258	4,118	3,997	2,963	2,694	2,536	2,900	2,943

[1] As of 25 November.

Apart from accumulating reserves, the central bank has set high reserve requirements on dollar deposits (about 30%). The country's banking and insurance supervision institution (SBS) has also established a liquidity requirement on short-term dollar liabilities (20% of total short-term liabilities). The high reserve and liquidity requirements reduce the need for the central bank to act as a lender of last resort, which would be particularly challenging in a setting of high financial dollarisation.

The availability of foreign reserves has permitted intervention in the foreign exchange market, which, along with high reserve requirements on dollar-denominated deposits, has attenuated the effects of external shocks on the economy.

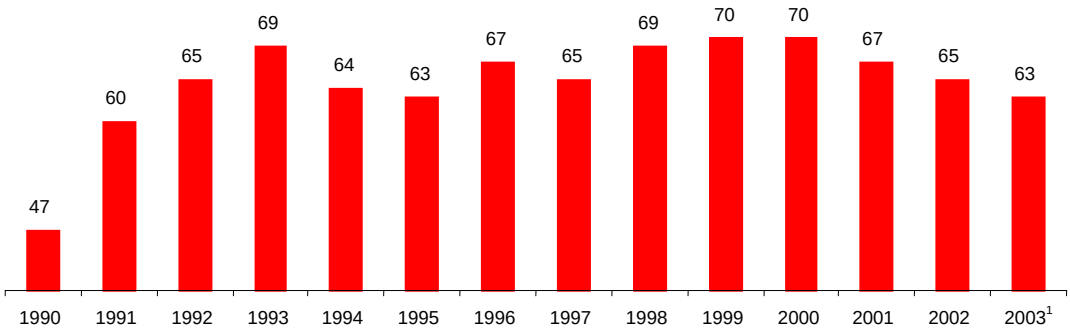
Monetary policy in a dollarised economy

One of the most important issues associated with financial integration and monetary policy is a high degree of financial dollarisation (Graph 6). In Peru, dollarisation was caused by the high inflation experienced between 1975 and 1990, which prompted residents to turn to dollar-denominated assets as a store of value.

Graph 6

Banking system's broad money dollarisation

As a percentage of total broad money, end of period



[1] As of 30 September.

There are no capital controls or financial market restrictions in Peru. These types of controls are a sensitive issue for the Peruvian public, in part because the economy is dollarised, and also because of the poor experience with deposit confiscations in the 1960s and mid-1980s.

The high financial dollarisation in Peru has a bearing on the effectiveness of monetary policy and the choice of exchange rate regime. One view is that a floating exchange rate is preferable to a peg or to full (de jure) dollarisation, because - in spite of high dollarisation - the type of dollarisation in Peru does not involve major currency substitution[2] and because real dollarisation in the Peruvian economy is low (eg the pass-through from exchange rate changes to inflation is low). An exchange rate freely determined by the market would insulate the economy from external shocks and allow for an independent monetary policy aimed at anchoring expected inflation. Moreover, some authors have argued that the way to achieve a permanent reduction in the degree of dollarisation is precisely to anchor expected inflation at low and stable levels.

[2] Currency substitution involves the use of foreign currency as a means of payment or unit of account. Asset substitution involves the use of foreign currency denominated instruments for investment purposes.

However, the balance sheet effect resulting from financial dollarisation is an important challenge to the independence of monetary policy. Large and abrupt exchange rate movements may destabilise financial markets, with adverse effects on real economic activity. Another important feature of dollarised economies is the lack of financial instruments denominated in domestic currency, especially at long maturities.

The Central Reserve Bank of Peru has responded to these issues by adopting an explicit inflation targeting framework that combines an independent monetary policy with a floating exchange rate. The floating exchange rate regime reduces the possibility of a sharp depreciation associated with the collapse of a fixed exchange rate regime.

The central bank intervenes in the foreign exchange market to smooth fluctuations or reduce volatility, but it avoids fixing the exchange rate at any specific level. It could be argued that intervention is not necessary as a bubble in the foreign exchange market would not be sustainable, and markets would correct any deviations from equilibrium. However, the transition period could unnecessarily endanger financial markets in a dollarised economy.

That is the reason why the monetary policy regime in Peru has an “escape clause” to be applied in cases of extreme exchange rate volatility. This clause allows for a transitory increase in interbank interest rates in order to dampen speculation or calm markets. The escape clause was invoked in September 2002, when international uncertainty regarding presidential elections in Brazil induced volatility in the Peruvian foreign exchange market.

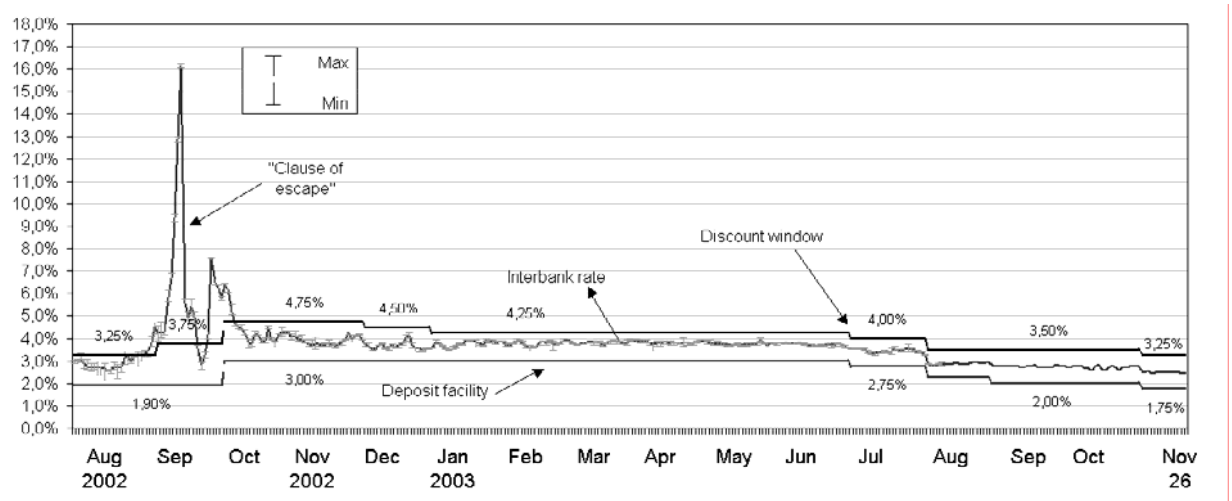
Operating procedures

In order to enhance the transparency of monetary policy, the central bank has changed its operating target from the money base to the level of the interbank interest rate (centre of a reference corridor), except in periods of financial stress when the “escape clause” is applied (Graphs 7 and 8). This approach has reduced the volatility of interbank rates (Table 2). The greater predictability of short-term interest rates in domestic currency (the new sol) has allowed the central bank to influence the evolution of the term structure of interest rates at longer maturities.

Graph 7

Interest rates in domestic currency

August 2002-November 2003



Graph 8

Interbank interest rate and nominal exchange rate

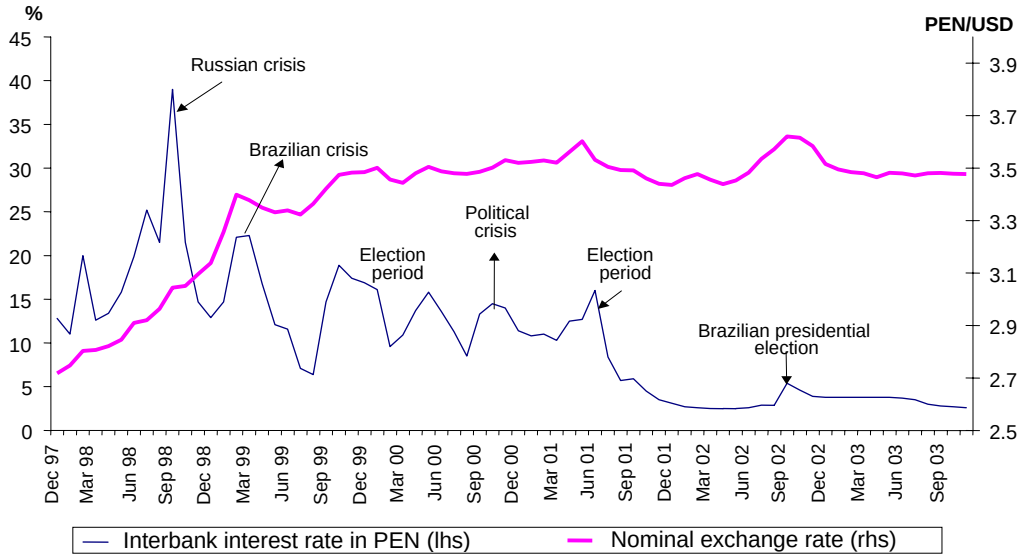


Table 2

Interbank interest rate

In percentage points

Year	Average	Standard deviation
1998	19.0	6.6
1999	14.9	4.8
2000	12.7	2.5
2001	8.6	0.9
2002	3.2	0.5
2003[1]	3.5	0.1

[1] January-October.

The central bank sells (buys) its own certificates of deposit (CDBCRPs) to withdraw (inject) liquidity into the system. Along with the CDBCRPs, liquidity is managed through short-term repurchase agreements and operations with treasury bills. At the end of the day, financial entities can make use of the following operations:

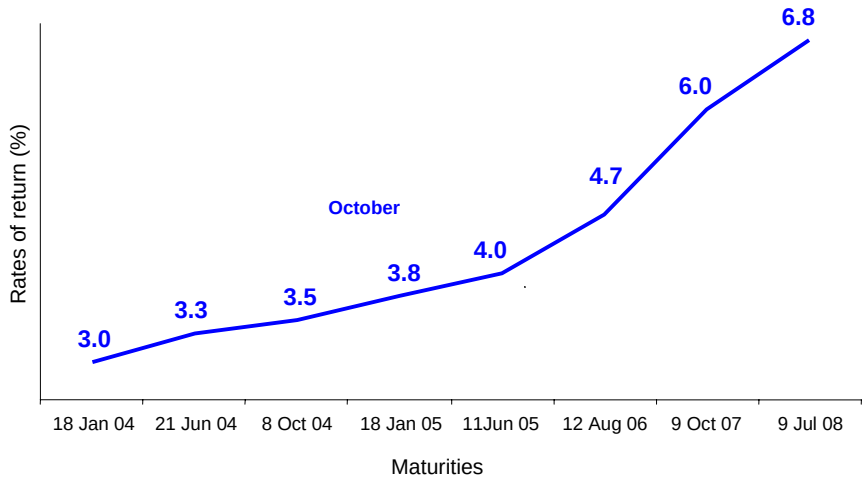
- **Monetary regulation credits ("discount window").** These credits are designed to cover transitory liquidity shortages in financial entities. The discount rate is high enough to discourage the use of central bank funds and promote the interbank loan market.
- **Transitory foreign currency purchases ("swaps").** The central bank purchases foreign currency from financial institutions with the commitment to buy it back the following day. The financial cost of this instrument is the highest between the domestic currency depreciation over the period in which the operation takes place and a commission established by the central bank.
- **Overnight deposits (deposit facilities).** Overnight deposits in both domestic and foreign currency at the central bank (one-day remunerated) contribute to monetary regulation by automatically absorbing liquidity surpluses and reducing the variability of commercial banks' total current accounts held at the central bank.

Development of local capital markets

The expansion of monetary operations with CDBCRPs has allowed the interest rate of these securities to become a benchmark (up to three years) in the domestic financial market. In 2003, the increased issuance of CDBCRPs did not crowd out private issuance due to the still large demand for sol-denominated securities, mainly from institutional investors. That benchmark has been complemented by the recent development of an active public debt market in domestic currency (for instance, a primary dealer programme was established at the beginning of 2003). The Treasury has placed domestic currency bonds in nominal terms (BTPs) with maturities up to five years (Graph 9).

Graph 9

Yield curve of domestic government bonds

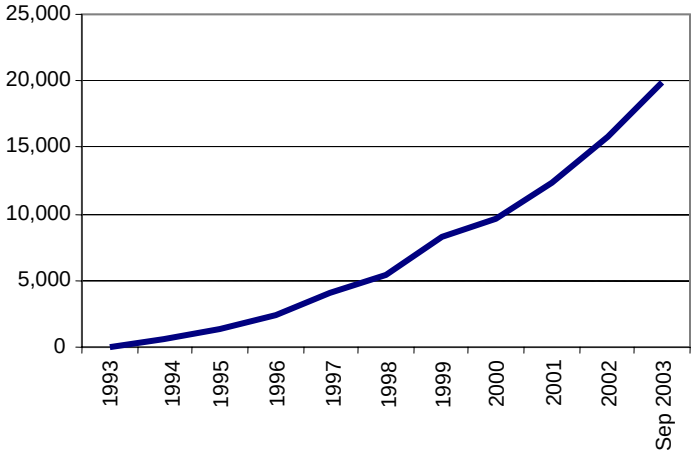


Institutional investors (banks and pension funds) are the most active participants in both the primary and secondary government debt markets. In particular, private pension funds (AFPs) have grown significantly since their creation in the early 1990s, becoming the main source of demand for securities in debt markets (Graph 10).

Graph 10

Evolution of private pension funds

In millions of new soles



Following the issuance of treasury bonds and CDBCRPs with longer maturities, the private sector started to place corporate bonds in domestic currency at nominal interest rates for the first time; this is a better financial alternative because it allows companies to match their incomes and expenditures in terms of currencies. In 2000, 23% of securities were issued in new soles; this figure grew to around 45% in 2002 (Table 3).

Table 3

Composition of private securities, in per cent[1]

Year	Sales	Index (VAC)	Dollars
2000	1.6	20.5	77.9
2001	10.9	17.9	71.3
2002	13.0	17.2	69.8
2003[2]	15.6	17.7	66.8

[1] Includes public offers of bonds and short-term securities. [2] As of November.

Table 4

Fixed income securities in domestic currency

Outstanding balances in millions of new soles

	December 2002	11 November 2003
Private issues	**2,777**	**3,559**
% change		**28%**
Commercial paper	604	734
Bonds	2,173	2,825

Table 5

Fixed income securities in foreign currency

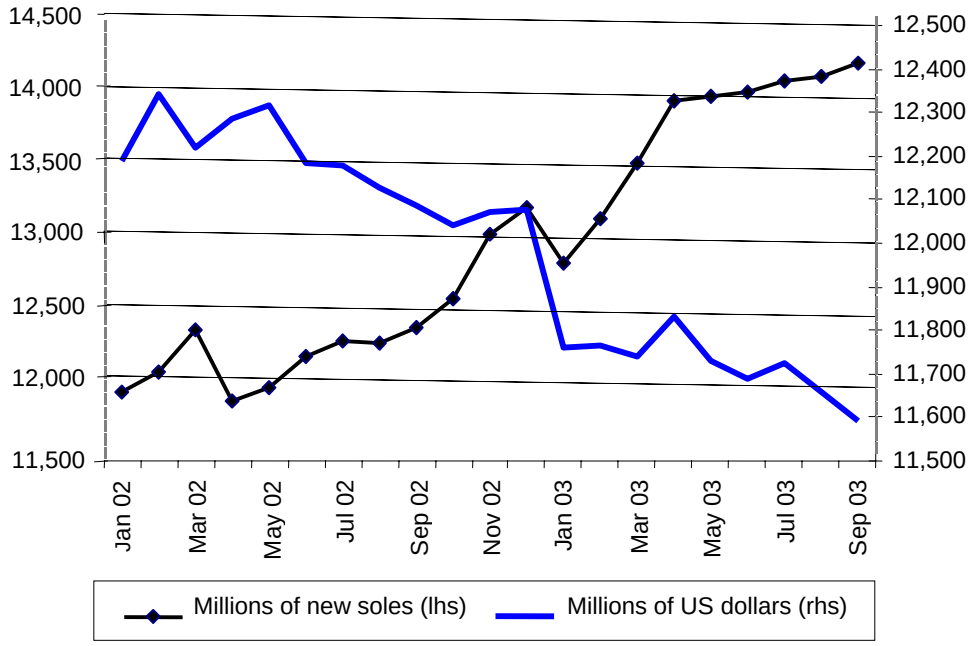
Outstanding balances in millions of US dollars

	December 2002	11 November 2003
Private issues	**1,829**	**1,973**
% change		**8%**
Commercial paper	83	65
Bonds	1,746	1,908

Financial dollarisation has tended to fall in the last two years, with a clear increasing path for credits in domestic currency and a decreasing path for dollar credits (Graph 11).

Graph 11

Financial system credit to the private sector



Payment system

Another step in the development of domestic financial markets is improving the efficiency of the payment system. In 2000, the Central Reserve Bank of Peru introduced a real-time gross settlement (RTGS) system. This system allows transfer of funds among financial system institutions by charging to their current accounts at the central bank. These operations are set and executed electronically, and settled on a one by one basis through a debit or credit to the current account of the involved financial institutions at the central bank. The RTGS system helps to eliminate the possibility of financial institutions overdrawing from the central bank within the day, and improves the speed and timing of settlements of interbank transactions in the payment system. In the near future, it is expected that the implementation of a delivery versus payment (DVP) system for clearing and settlement of transactions will minimise default risk, thus enhancing liquidity in domestic financial markets.

Returning to international capital markets

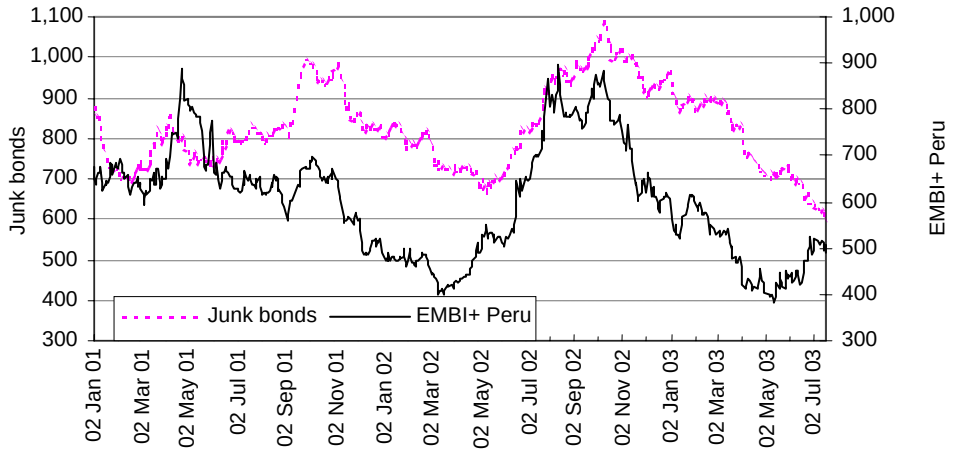
The central government has started to participate in international capital markets through the issuance of global bonds that diversify the sources for financing the fiscal deficit. After 70 years in which no international bonds were issued, in 2002 there were two issues totalling USD 1.9 billion (USD 1.4 billion in February and USD 0.5 billion in December), of which USD 0.9 billion was used for a Brady bond swap.

In 2003, conditions for issuing bonds in the international market improved in terms of interest rates and maturities. In November 2003, the Peruvian Government placed a USD 0.5 billion bond issue with a 30-year maturity and 8.8% yield. Although in principle this bond provides a benchmark for private issues in international markets, in practice Peruvian issuers have preferred the local market as a source of funding. This is explained by the excess liquidity accumulated by the banking system in previous years and the presence of institutional investors with an increasing demand for securities in the local market.

Emerging market economy bonds like Peru's are considered high-risk assets. This implies, as some recent research has shown, a high and positive correlation between the EMBI+ yield of Peru and the yield on so-called "junk bonds" (American corporate bonds that are rated below investment grade). Research has also found a positive relationship between the EMBI+ spread of Peru and that of Brazil, which reflects the importance of regional effects (Graphs 12 and 13).

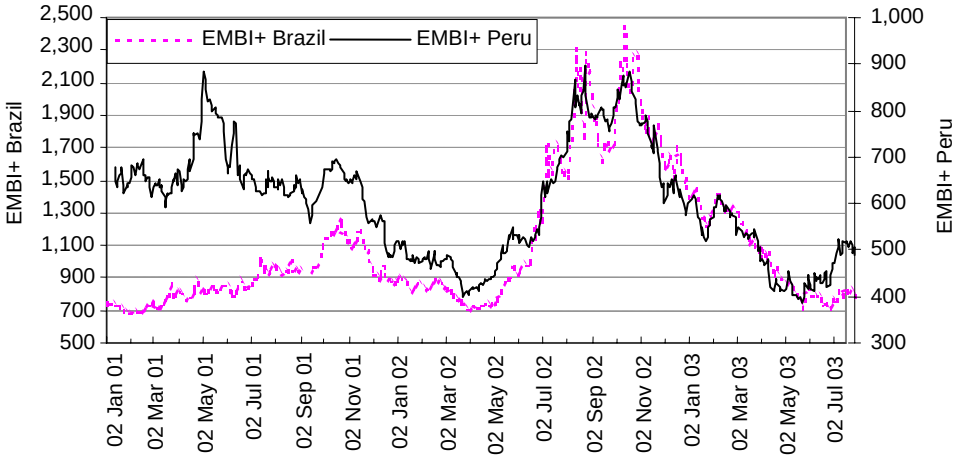
Graph 12

EMBI+ Peru and junk bonds



Graph 13

EMBI+ Peru and EMBI+ Brazil



Concluding remarks

In 2002, the Central Reserve Bank of Peru adopted an explicit inflation targeting framework. In spite of high financial dollarisation, a low degree of real dollarisation in the country allows an independent monetary policy aimed at anchoring expected inflation. The regime combines an independent monetary policy with a floating exchange rate. The floating exchange rate regime reduces the chances of a sharp depreciation that might otherwise be associated with the collapse of a fixed exchange rate regime.

However, the risks associated with a sudden and sharp depreciation of the currency are not negligible in a dollarised economy. With the aim of avoiding these risks, monetary policy operating procedures in Peru, which typically keep the interest rate within a predetermined band, contain an “escape clause” to be applied in circumstances of extreme exchange rate volatility. This clause allows a transitory increase in the policy interest rate (interbank interest rates) in order to dissuade destabilising speculation and calm the markets.

In order to enhance resilience in the face of shocks, the central bank has sought to maintain adequate foreign exchange reserve holdings, and set high reserve requirements on dollar deposits. The country’s banking and insurance supervision institution (SBS) has also established a liquidity requirement on short-term dollar liabilities.

The central bank conducts open market operations using its own certificates of deposit (CDBCRPs). Along with the CDBCRPs, liquidity is managed through short-term repurchase agreements and operations with treasury bills. The expansion of monetary operations with CDBCRPs allowed the interest rate of these securities to become a benchmark (up to three years) in the domestic financial market. That benchmark has been complemented by the recent development of an active public debt market in domestic currency.