Peru Watch

Economic Research Department

Second Semester 2008

Index

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This report was written by:

Hugo Perea Flores	hperea@grupobbva.com.pe
Francisco Grippa Zárate	fgrippa@grupobbva.com.pe
Jasmina Bjeletic Saavedra	jbjeletic@grupobbva.com.pe
María Cecilia Deza Delgado	mdeza@grupobbva.com.pe
Javier Dorich Doig	jdorich@grupobbva.com.pe
Rosario Sánchez Hidalgo	rdpsanchez@grupobbva.com.pe
Johanna Tejada Villavicencio	jtejadav@afphorizonte.com.pe

Editorial
Peru: capacity to respond to the crisis

As the financial crisis deepens, global economic activity is being increasingly impacted, especially in more developed economies. Emerging economies have been able to weather the storm fairly well up to now, but they too are starting to be affected by the downturn.

How is the crisis affecting us? On the financial side, greater global risk aversion has widened the spreads on Peruvian sovereign bonds and credit lines granted to local banks from abroad, which has triggered a jump in domestic interest rates, which will weaken GDP growth rates. Furthermore, to the degree that international financing markets remain seized up and liquidity tension persists, direct foreign investment inflows are expected to fall off. Lastly, the perception of increased risk has led investors to liquidate assets denominated in the local currency, which has driven up the exchange rate. This has led the Central Bank to sell dollars in currency markets to buoy the weakened sol.

In terms of trade, the lower price for commodities that Peru exports, such as copper, has led several mining companies to announce that various projects will be postponed. In addition, these companies' lower profit margins imply a drop in tax receipts. Meanwhile, weak external demand is impacting sectors that manufacture high value added products for export, such as textiles and apparel, sectors which are labour intensive.

Against this backdrop, forward indicators for October and November for manufacturing production, employment and energy generation suggest that growth rates will slow in the latter part of the year, from 9.5% to about 7.0%.

What is Peru's capacity to respond to this crisis, and what does it depend on? This question is contingent on two key factors: (i) the starting point, or initial conditions, and (ii) the duration of the crisis. In regard to the first point, indicators of external vulnerability show no short-term pressure or liquidity problems in foreign currencies, due in large part to the high level of international reserves accumulated by the Central Bank in recent years. In addition, its propitious fiscal position gives the government leeway to implement policies to boost growth rates if necessary and, on the monetary side, to create a range of instruments to guarantee normal liquidity levels. Finally, the solidity of the Peruvian banking sector, thanks to its adequate capitalization and provisioning levels and low NPL ratios, lowers the risk that real impacts will end up being amplified through the financial channel.

In regard to the second factor, if the crisis is short term, say four quarters, the government could implement policies to maintain growth at rates that could even exceed 6%. However, if the crisis lingers, fiscal tools and international reserves should be deployed prudently in order to cover this longer period. Some factors, such as the degearing in developed countries' banking sectors, the need for greater capital injections due to the liquidity crunch exacerbated by increased risk aversion, and the still incipient adjustment in the real estate sector, suggest that the crisis is far from over.

One important lesson from this crisis is that during booms it is crucial to prepare for the downturn that usually follows. The abundance of liquidity in the first part of this decade inflated the prices of real estate and financial assets, but also jacked up commodity prices. On this occasion, unlike in others, surplus revenues were used to bolster the government's finances and accumulate reserves, giving it more manoeuvring room in the current crisis.

Although the current climate of uncertainty and the low visibility regarding the magnitude of the downturn demands a certain degree of prudence, it also calls for appropriate actions. We expect economic authorities to recognise the importance of taking contingency measures early enough for them to have the desired effect.

Executive summary

Since the bankruptcy of Lehman Brothers in the United States in the middle of last September, risk aversion has gone up across the globe. Against this backdrop, investors are gravitating towards liquid assets, which has intensified liquidity tensions in markets.

As liquidity has tightened, real estate asset prices continue to plummet. Both factors have exacerbated the banking crisis, affecting in particular banks with more exposure to these types of assets and causing the meltdown to spread from the United States to Europe. Banks in both economic areas have been posting bigger and bigger losses which, combined with the liquidity crunch, has resulted in stricter credit conditions. As a result, real economic activity has been negatively affected: both the United States and Europe have entered into recession.

Governments and central banks of major economies have implemented a battery of measures as they try to mitigate the effects of the crisis. These measures include pumping massive quantities of cash into financial markets in order to ease liquidity pressures, the announcement of programmes based on guarantees and capital injections, an increase in some cases in the amount of bank deposits insured by the government, and aggressive cuts to official interest rates. However, while these measures have reduced the sharp deterioration in market conditions somewhat, the problems remain.

The main developed economies are expected to contract in 2009. In the case of the United States, stricter lending conditions and deteriorating consumer and business confidence will reduce consumption and investment, causing increased unemployment and eroding household income, thereby lowering demand. In terms of external factors, the dollar will appreciate on the back of investor preference for assets deemed to be lower risk and the Fed's limited scope for economic stimuli based on monetary policy, with the result that US exports will decline.

Emerging economies have not been immune from these developments. Slowing global economic growth and the liquidation of speculative positions have pushed down raw material prices, in some cases by over 60% from the highs registered in the middle of 2008. In addition, rising risk aversion has resulted in a liquidation of positions in these economies, triggering falls in equity markets, increases in local bond yields and higher exchange rates. Eastern European economies have been the most affected by this situation.

However, the Peruvian economy remained relatively sound until the third quarter, growing by close to 10% in this period. This is primarily due to the dynamism of the non-tradable sector, especially Construction, Retail, Services and Manufacturing, which is associated with high confidence levels in the business community and among consumers, as well as better access to financing, which has boosted investment, job generation, household income, in addition to consumption levels.

Although the panorama has been fairly rosy up to now, it is unlikely that Peru will be able to maintain this rate of growth amid the fallout from this international financial crisis. The negative effects are already being felt, and include the increase in country risk, the liquidation of positions and assets in the local currency (bonds and equity) and the depreciation of the sol, as well as increasingly challenging conditions for accessing external financing. We are also seeing spikes in interest rates, which would tend to inhibit consumption and investment. Conditions in capital markets are increasingly dire, and securities issuance has practically stopped altogether, due to a lack of demand.

In the coming months the local impacts of the international crisis could intensify. Meanwhile, the reduction of terms of trade and the lower external demand are slowing exports, deteriorating external accounts and employment in tradable sectors. We may also see delays in investment projects, on top of those that have already been announced (especially in the mining sector, given the sharp drop in metals prices and increasingly expensive conditions for external financing).

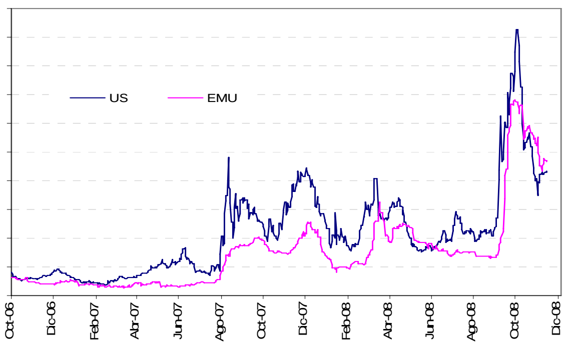
Furthermore, to the degree that impacts from the global crisis start to be felt locally, we could see the high levels of business and consumer optimism diminish. In better times, easier access to credit facilities combined with these factors to help drive the expansion of the non-tradable goods sectors. Their deterioration in the current scenario will have a negative impact on the economy.

Given this grim outlook, it is important to ascertain how much manoeuvring room economic authorities will have to implement measures to mitigate the negative effects of the global crisis. On the fiscal side, the Ministry of Economy and Finance have indicated their intention to implement measures to jump start economic activity in 2009 and avoid a sharp slowdown. This increased spending will mainly be aimed at infrastructure investments (which will help offset the slowdown in the Construction sector), without overlooking social problems. In order to carry out these measures, the government can use the monies accumulated in the Fiscal Stabilisation Fund (about 2.7% of GDP at the close of 2008) or other funds deposited in the banking system (in the latter case, it could use the contingent lines of credit granted by multilateral organisations such as the IMF and the World Bank, among others).

On the monetary side, since September the Central Bank has instituted more flexible reserve requirements and widened the range of monetary instruments at its disposal, seeking to provide the liquidity required and to assure that banks function normally and can continue to meet credit demand. Despite the fact that the inflation rate has jumped in recent months, the BCR has left benchmark interest rates unchanged (the drop in raw material prices should start to reflect in goods' final sales prices in the coming weeks). This gives more freedom for economic authorities to act should the local impacts of the international crisis intensify. Lastly, the government has been using its international reserves to counteract upward pressure on the exchange rate. Its reserve levels should allow it to bolster the weakened sol in the coming months if pressures ratchet up again.

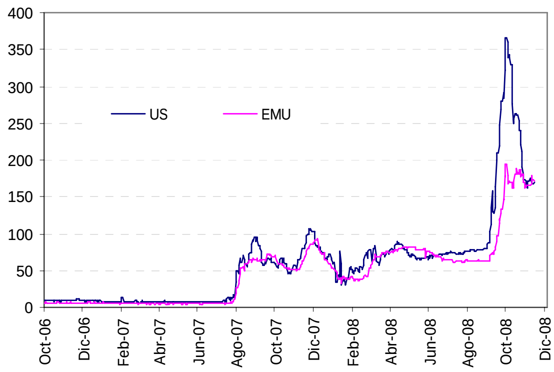
Against this background, economic activity is expected to slow down to 5% in 2009 (8.9% in 2008), still a fairly robust growth rate given the poor global economic outlook. Our estimate assumes that the government will implement an expansive fiscal policy this year. However, despite higher public spending, the fiscal result will not enter the red (although it will undergo a significant decline from the 2.5% GDP in 2008), allowing it to set aside resources which it could deploy in 2010, if the crisis drags on. In a parallel move, the Central Bank is expected to intensify the monetary stimulus by slashing benchmark interest rates and implementing more flexible reserve requirements. In addition, the BCR will continue to use its international reserves to bolster the weakened sol and help smooth out the ongoing adjustment to exchange rates.

USA vs. EMU: Liquidity tension indicator
(3 month Treasury bill – Euribor spread, in bp)



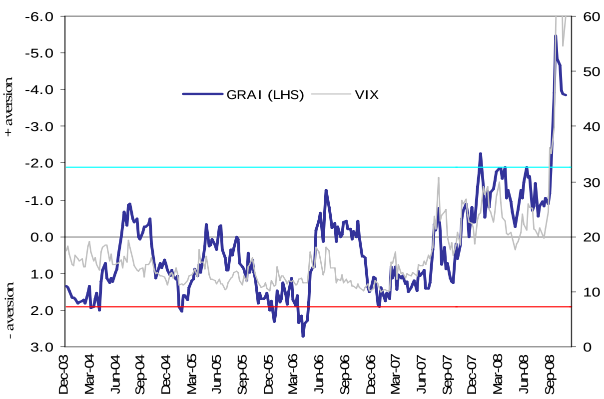
Source: BBVA and Bloomberg
Prepared by: BBVA Banco Continental Economic Research Department

USA vs. EMU: Interbank liquidity tension indicator (Oct.2006-Dic.2008)
(3 month Libor – OIS, in bp)



Source: BBVA and Bloomberg
Prepared by: BBVA Banco Continental Economic Research Department

USA vs. EMU: Global risk aversion index BBVA - IARG
64 assets: emergings (US$) and developed (local currency)



Source: BBVA
Prepared by: BBVA Banco Continental Economic Research Department

I. International environment

The extreme volatility across the markets is a reflection of the ongoing liquidity crunch and prevailing global financial and economic uncertainty.

Just a few months ago, to talk of the international financial crisis was tantamount to enumerating the sequence of events unfolding in the US. However, 12 September - the day Lehman Brothers went under - marked an inflexion point worldwide. Investor uncertainty and strong risk aversion rippled across the globe, primarily buffeting Europe but also affecting emerging markets.

Following the bankruptcy of Lehman Brothers and the bailout of AIG Group by the US Treasury, the US administration approved the Troubled Asset Relief Program (TARP), better known as the Paulson Plan. The aim was to address the problems posed by the toxic assets on the banks' balance sheets and resolve the liquidity and solvency issues of many of the country's financial institutions. Unlike the events at Bear Stearns, AIG or the US government mortgage agencies, the Lehman bankruptcy triggered sizeable losses for bondholders which shook the markets to their core. Sharp credit spread widening drove liquidity costs to unprecedented and unsustainable levels. The spread between 3-month Treasury bills and interbank rates (the TED spread) in the US and EMU currently stands at 216bp and 233bp, respectively. However, its US high (464bp) easily tops the high of 300 bp reached on 20 October 1987. In addition, the spread between the 3-month LIBOR rate and the overnight index swap (OIS) –a proxy for the availability of market funds– currently stands at 170bp in the US (vs. a high of 366bp), compared to 171bp in Europe (vs. a high of 194bp). And just as financial tensions were heightening, the banking crisis escalated, not only in the US but also across Europe.

Equity markets globally have notched up historic losses, with the main developed markets down by around 40% thus far in 2008. In emerging nations, the range of corrections is broader, going from 17% in Chile to 76% in Russia. Meanwhile, risk aversion is at an extreme. This risk aversion, together with expectations for additional rate cuts, explains the average reduction in October in 2Y bond yields of 60bp in the US and 100bp in the EMU relative to pre-Lehman bankruptcy levels.

The initial wave of unilateral rescue packages has since given way to unified criteria across the developed economies devised to address the global crisis.

The central banks have injected vast sums of liquidity into the market with a view to alleviating the financial standstill, although these measures have yet to have a decisive impact. The Federal Reserve has virtually doubled the amounts auctioned off via its TAF program to 300 billion US$, having also increased the dollar swap lines in place for other central banks by over 500 billion US$. The European Central Bank has also taken extraordinary measures in terms of the scale, currencies and maturities of its auctions. The most recent ECB initiative has been to launch full allotment auctions with the goal of alleviating short-term financing requirements.
The various economic and monetary authorities are faced with an unprecedented financial crisis, which is being amplified by the risk aversion phenomenon. Initially, the various governments passed different measures aimed at restoring citizens' confidence in their financial institutions by guaranteeing deposits and at stimulating business as usual in the financial markets, but with limited effect. The main reason for the reduced impact was the market's perception of a total lack of coordination among administrations and the reading that measures being taken were being implemented in an ad hoc manner to prop up distressed entities.

At the beginning of October, however, more coordinated action was taken. Firstly, the Fed, the ECB, the Bank of England and the central banks of Switzerland, Sweden and Canada cut their benchmark rates simultaneously by 50bp, accompanying the move with a joint press release. Shortly after, the European governments struck a timely agreement to jointly address the crisis in a coordinated manner, announcing a raft of potential measures fashioned around guarantees and capital injections. Although the immediate impact was limited, the joint efforts probably averted an even more serious financial crisis.

These efforts culminated in the G-20 Summit in Washington D.C.. The main thing to come from the summit and the agreements reached is the international community's firm desire to tackle the unfolding economic and financial crisis in a coordinated fashion, combining multilateral initiatives and measures with national policies previously ratified and vetted by all summit participants. This is significant, as it should mean preventing certain past mistakes - where unilateral national responses, on occasion purely protectionist in nature, only served to accelerate the recession - from recurring. It is also worth highlighting the fact that the announced list of measures is ambitious and stems from an accurate diagnosis of what caused the current crisis and why it subsequently spread and gathered pace so rapidly.

Low growth, inflation and interest rates and a stronger dollar.

Based on the consideration that the distortions in the financial markets are not like to remit over the short term, and given that the international financial crisis is likely to translate into reduced borrowing ability on the part of households and corporates, our growth estimates for the US and EMU point to acceleration in the economic slowdown. We believe that US consumption and residential and non-residential investment will continue to fall, thereby continuing to erode economic growth in that country. Meanwhile, in terms of the trade balance, imports look set to continue to fall, driven by the weak economy. Exports should continue to grow, albeit at a far slower pace due to a stronger dollar and global economic weakness. This means that on a net basis, trade will not prove a very solid crutch for growth. In sum, we expect US GDP to contract by 0.8% next year. In the EMU, we expect GDP to decline 0.9%. Despite the existence of a few somewhat favourable factors, such as substantially lower benchmark interest rates and a weaker euro relative to the dollar, the effectiveness of the rescue packages designed by the various governments will be key to preventing a sharper recession.

Against this backdrop, the commodity markets have reacted viscerally, with oil and copper prices tumbling by close to 60% and grains, such as corn, wheat and soybeans, plunging by around 40% from their mid-year peaks. In all these instances, our forecasts point to stabilisation and subsequent recovery, due to supply side restrictions in the medium and long term and ongoing rapid growth in consumption of energy, food and raw materials for manufacturing processes in China, India and other emerging markets. Nonetheless, the fall in prices to date will translate into a very sharp reduction in disposable income in developing nations, some of which are highly dependent on commodities for exports and tax receipts. Unlike earlier global slowdowns, however, this one will stand out for the fact that most Latin American nations have saved a significant portion of the windfall profits reaped during boom times, better positioning them to cope with the current price correction.

Meanwhile, we expect inflation to continue to trend significantly lower. For 2009, we are forecasting average headline inflation in the US of 0.8%.In the EMU, inflation is expected to be about 1.9% on average. These realigned expectations are underpinned by the sharp correction in oil and other commodity prices, combined with the outlook for slower global growth.

Stock markets: 2008

		2008
US	S&P500	-46%
Spain	IBEX35	-47%
UK	FTSE100	-38%
France	CAC40	-47%
Germany	DAX30	-48%
EMU	STOXX	-50%
Japan	NIKKEI 225	-50%
China	Shanghai SE 180	-64%
Hong Kong	HANG SENG	-56%
Brazil	BOVESPA	-48%
Mexico	MXSE IPC Gral.	-38%
Argentina	MERVAL 25	-59%
Chile	SASE Gral Index	-17%
Russia	IRTS	-76%

Source: Bloomberg
Prepared by: BBVA Banco Continental Economic Research Department

In addition, tame inflation will enable the central banks to continue cutting rates in a bid to reactivate economic growth.

The ECB and the Fed have already cut rates by half a point to 3.25% and 1.0%, respectively. Our forecast for official interest rates are as follows: we think the Fed will cut benchmark rates to 0.5% in 2009, while the ECB will cut its official rate to 1.5% early next year. This underpins our forecast for a stable dollar, trading at around US$1.25/€ through the end of 2008. In 2009, we expect the dollar to further strengthen towards the US$1.15/€ mark, although, if anything, the risk is biased towards stronger appreciation.

Taking our base case scenario for Central Bank rates, we are forecasting a stable yield on 10-year US Treasury bonds of 3.80% by the end of 4Q08. Looking to 2009, we expect yields to start the year at around 3.70%, falling throughout the year to end at closer to 3.40%. In the EMU, we expect 10-year sovereign bond yields to end the year at 3.80%. We are forecasting yields of 3.50% in 1Q09, falling gradually throughout the year to end the fourth quarter at 3.10%.

Turning to the emerging markets, we have revised our forecasts downward to factor in the impact of the recessionary outlook for the developed world. While the pace of growth looks set to ease, we are still talking about healthy growth rates in 2009. Emerging Asia looks set grow by 6% compared to 7.5% in 2008, with China continuing to grow at around 8%, driven in large part by the government's stimulus package. Other nations in the region will grow at far lower rates, especially the smaller and more open economies, which are accordingly far more dependent on foreign demand.

Looking to the months ahead, the direction taken by and effectiveness of government policies designed to restore financial stability and jump-start the markets will be crucial to injecting confidence, breaking the vicious liquidity-solvency circle and bringing the markets back to business as usual.

II. Macroeconomic environment

The economy remains relatively sound, despite the global slowdown

In the first nine months of the year, the economy expanded 10.1%, driven mainly by the Construction, Retail, Services and Manufacturing sectors. The solid performance of the Peruvian economy occurred in a context of high confidence levels among consumers and the business community, as well as easier access to financing, which has translated into more investment, more employment (and of better quality), higher household income, and as a result, higher consumption levels.

The economy will slow in coming quarters

However, given the current global crisis and our outlook for the coming quarters, GDP growth should drop in what remains of 2008 and in 2009. In general terms, this will be due to:

i) The deepening of the international financial crisis and the magnitude and speed of its real world impact. This suggests a steeper decline in the exchange rate, a drop in external demand, and lower inflows of direct foreign investment with respect to previous years

ii) Slower growth rates for bank lending to the private sector. When external financing sources become scarce, their cost goes up, which is passed on to borrowers

iii) A tempering of the high levels of optimism in economic agents, especially in the business community

However, we expect the economy to grow by about 9% in 2008, given its robust performance up to now. The impacts of the crisis will be felt more in 2009, when we expect the growth rate to slow to about 5%.

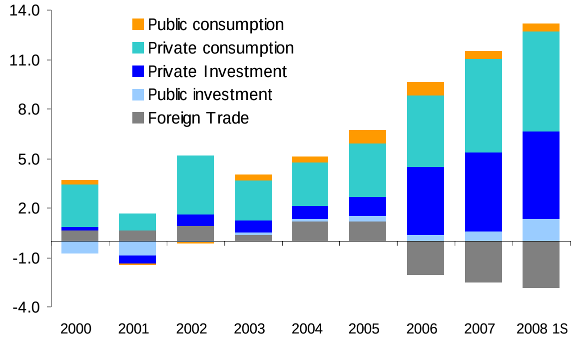
Construction: The main driver of the economy

The lower growth in the economy will be mainly due to the productive sectors, which depend on external demand to a greater degree. Therefore, in 2009, as in 2008, we expect the main drivers of the economy to be sectors which are more linked to domestic demand, such as Construction. Although this sector could register a sharp slowdown in 2009, we expect countercyclical fiscal policies to help offset this decline, through major infrastructure investments and housing projects for lower income households. And while interest rates for mortgages may remain high, this may be partially offset by lower costs for construction material, which should have a moderating effect on rising housing prices.

Investment should remain the main economic driver

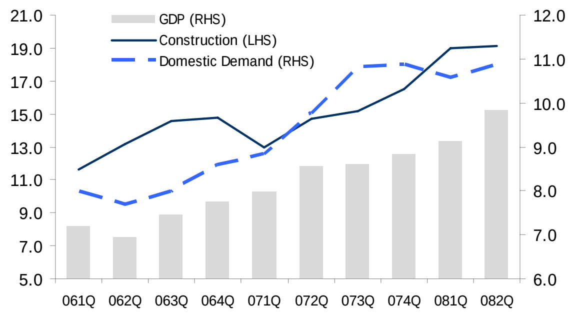
On the demand side, in 2009 private consumption should decline relative to the dynamism of previous quarters, growing at a lower rate than the economy's productive capacity (estimated at 7% - 7.5%). This is linked to (i) lower employment growth, (ii) stricter credit conditions, and (iii) a decline in household optimism.

Contribution to growth: aggregate demand (percentage points)



Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

Construction, domestic demand and GDP (% chg. yoy – 4 quarters MA)

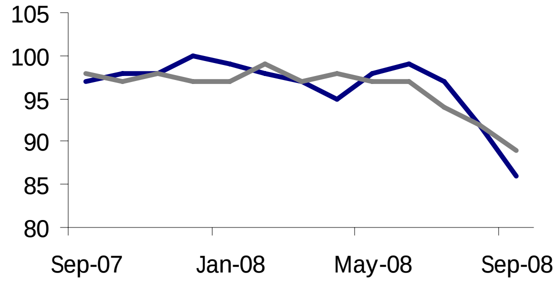


Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

Real Aggregate Demand: latest quarterly figures

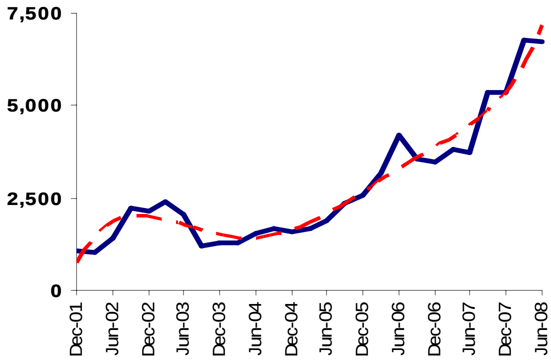
(% chg. yoy)	III-07	IV-07	I-08	II-08
Total consumption	7.4	8.6	8.2	8.6
Private	8.0	9.0	8.3	9.0
Public	3.1	6.3	7.1	5.5
Gross fixed capital formation	27.9	23.1	22.9	35.8
Private	29.5	20.9	19.0	32.6
Public	18.3	31.7	67.1	59.9
Domestic Demand	**13.4**	**11.7**	**11.2**	**13.8**
Export of Goods and Services	10.0	6.1	13.0	11.5
Import of Goods and Services	33.0	14.9	20.0	26.8
GDP	**8.9**	**9.8**	**9.7**	**10.9**

Business expectations for the coming months
(% businessmen who expect the situation to be the same or better)



Source: BCRP.
Prepared by: BBVA Banco Continental Economic Research Department

Direct Foreign Investment *(12 month – Moving sum - US$ mn)*



Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

In 2008, private investment showed strong growth and we expect it to close the year 23% higher. For 2009 we expect lower growth than what has been seen in recent years. The global crisis will undermine optimism in the business community and credit conditions will become less favourable. Direct Foreign Investment, which represents about 25% of private investment, will probably decline in 2009, due to the perception of risk in emerging economies and the fear that their financing sources will dry up. However, this drop might have a less of an impact, given that 80% of Direct Foreign investment is financed domestically through the reinvestment of profits.

A case in point would be the private investment associated with mining and hydrocarbon projects that are already up and running and which have low production costs, making them profitable despite the sharp drop in international commodity prices. We expect to see investments in exploration and preparations for the extraction phase in mining projects such as Toromocho, Antappacay, Río Blanco, Tía María, among others and hydrocarbon projects such as Camisea II, Block 67 and Block Z1.

We would highlight that this sector has made some announcements regarding delays in the execution of projects. However, these delays mainly concern projects in their incipient phase, which are scheduled to enter into operation in three or four years. Therefore, we should not see significant negative impacts on projected production levels in the short term or on investments. That notwithstanding, we may see some investments become unprofitable to the degree that financing gets more difficult to access or commodity prices undergo even more dramatic declines. Therefore, we may see projects delayed or halted, especially those of junior companies or other companies that might choose to wait out the storm for visibility to get better.

In other sectors, we expect to see major investments in infrastructure projects, especially in telecommunications and energy. In the latter case, we would highlight the power generation projects, which would increase Peru's effective capacity by over 10%. Investment will continue to flow into the retail sector as well, as retailers seek to increase market penetration which remains scant. In the real estate sector, we expect to see residential projects, offices, and shopping centres being built, attractive investments given the latent unsatisfied demand. These projects should be completed in the next two years. We would highlight that this sector has made no further announcements regarding delays in investments.

Against this backdrop, private investment should register a growth rate of about 6% at the close of 2009.

Real aggregate demand: annual figures

(% chg. yoy)	2006	2007	2008(e)	2009(e)
Total consumption	6.5	7.9	7.7	4.8
Private	6.2	8.3	8.1	5.0
Public	8.7	4.8	4.5	3.5
Gross fixed capital formation	18.9	22.7	25.5	8.2
Private	20.1	23.2	23.0	5.9
Public	12.7	19.7	40.0	20.0
Domestic Demand	***10.0***	***11.6***	***11.7***	***7.0***
Exports of Goods and Services	*1.2*	*5.4*	*11.4*	*2.0*
Imports of Goods and Services	12.6	18.8	25.0	11.0

Fiscal policies will be expansive, in order to buoy economic growth rates, but no deficit would be incurred.

At the close of 2008 we expect the annual economic result of the non-financial public sector to be positive (about 2.5% of GDP) which would be in line with the trend started in 2006. We expect the 2009 fiscal balance to show a decline, to 0.1% of GDP.

We expect the 2009 result to be affected by several factors: (i) a decline in fiscal revenues due to lower prices for raw material exports and less dynamic domestic demand; and (ii) increased public spending by the government, especially on infrastructure and social programmes, in order to bolster the economy, as the global crisis continues to unfold.

Given that we expect a positive 2009 fiscal result and that the government has guaranteed financing sources, there is the possibility that the government could service its public debt without tapping into the funds it has set aside during the recent boom. Therefore, the expansive fiscal policy that would be implemented in 2009 would not require monies from the Fiscal Stabilisation Fund (*Fondo de Estabilización Fiscal* or *FEF)*, which stood at about US$3 bn at the close of 2008, equivalent to 2.7% of GDP). Therefore, the government would still have funds at its disposal should 2010 also prove to be a challenging year.

Deterioration in the external accounts

In recent quarters, external accounts have reversed the positive trend of the last several years as imports fuelled by greater domestic demand outstripped export growth. For 2008 we expect the current account of the balance of payments to be negative, which we view as sustainable to the degree that it has been financed by private capital inflows directed mainly towards long term investment projects.

For 2009, as the global slump starts to be felt, we expect to see a fall off in external demand and a weaker exchange rate, as well as further deterioration in the current account deteriorate.

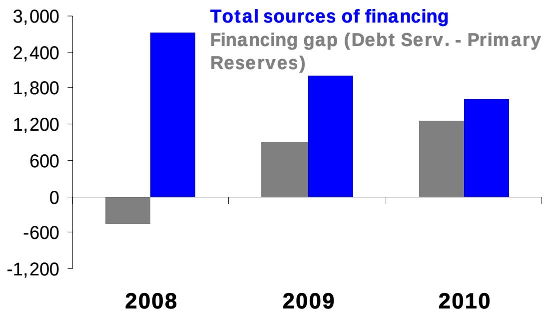
Risks to economic activity

The main risk facing the economy in the coming quarters is that the international financial crisis worsens and spreads to economic zones as yet largely unaffected, such as South America. If the crisis were to deepen, external demand would fall steeply, as would the prices for raw materials exported by Peru, and financing facilities would be increasingly difficult to access. Moreover, investment and employment levels would drop even further, as would private consumption.

To lessen the negative impacts on the economy under this scenario, the government could implement an even more expansive fiscal policy using, as a last resort, part of the funds it has deposited in its banking system, which include the Fiscal Stabilisation Fund resources and amount to about US$15 bn. It could also tap into the contingency funds that multilateral organisations such as the IMF, the World Bank and CAF have put at its disposal.

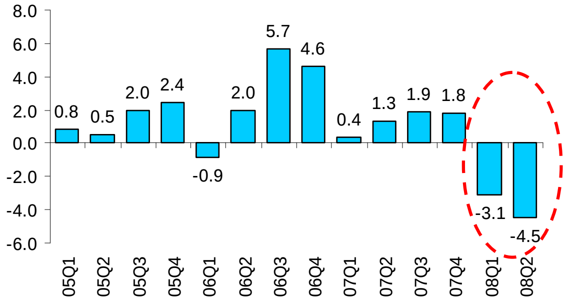
A second risk is that the effects of the international crisis linger, which might make it advisable to spend less on fiscal stimulus in 2009 in order to still have some manoeuvring room to apply similar measures in 2010.

Financing gap* and internal and external financing sources: 2008/10 (US$ millions)



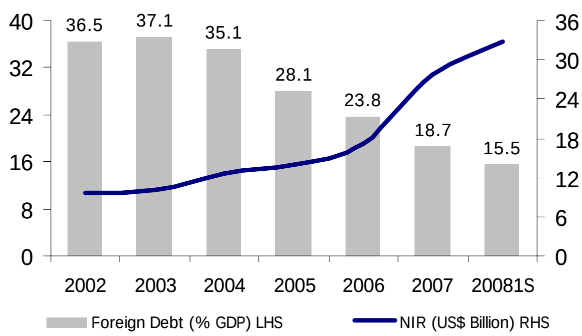
(*) A negative sign indicates an accumulation of resources
Source: MEF and BBVA Banco Continental Economic Research Department estimates
Prepared by: BBVA Banco Continental Economic Research Department

Current account (% of GDP)



Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

NIR and external public debt



Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

Box: Towards reducing poverty

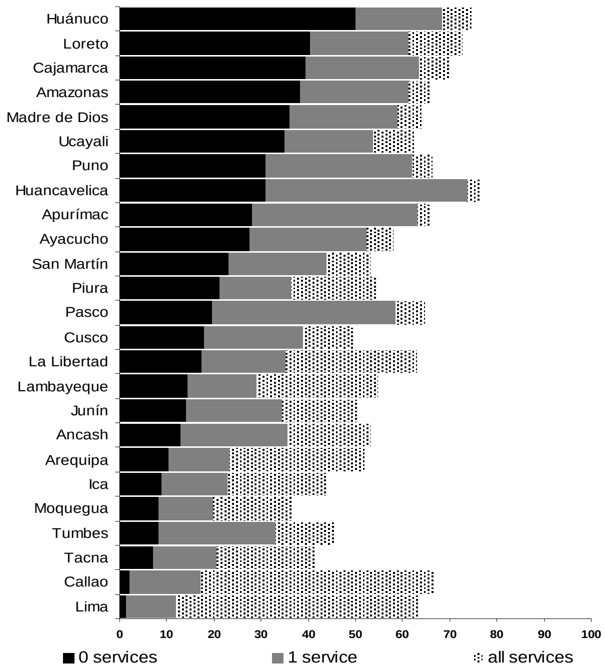
According to the INEI, Peru's structural poverty decreased significantly in recent years[1]. Between 2004 and 2007, the percentage of people living in poverty fell from 48.6% of the population to 39.3%. This is consistent with the economic growth of the country in recent years, which has fostered the increase of formal employment and public sector transfer payments, lifting household income levels and standards of living in the process.

However, despite the strong performance in aggregate terms, the current trend of falling poverty rates is constrained by several factors, among which we would highlight: i) the structural limitations to reducing poverty, measured in terms of access to infrastructure; ii) geographically skewed progress in poverty reduction, and iii) the deficiencies that continue to afflict social programmes aimed at fighting poverty.

In the first place, it should be emphasised that poverty should not only be measured in terms of benchmark income levels or specific consumption levels. Among other criteria, access to quality basic services and a population's opportunities should also be taken into account.

Therefore, the construction of a road through a rural area does not only imply access to new markets and better prices for the area, but also access to basic services such as healthcare, education, energy and telecommunications. This improves the standard of living of the population and increases their opportunities for personal development, which tends to reduce poverty.

Access to water, sewer, electricity and telephone services
(2007, %)

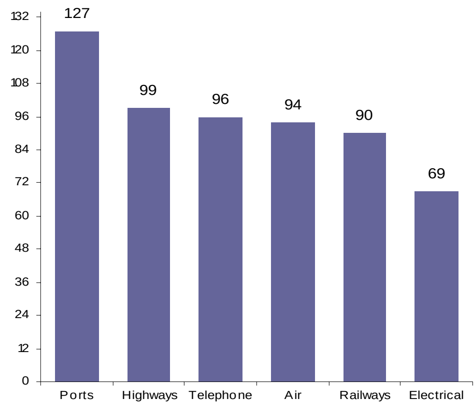


Source: INEI – ENAHO 2007

In this vein, in Peru, access to basic services remains limited. According to National Household Survey data (ENAHO), on a regional level the lack of these services is substantial. For example, in Huánuco 50% of the population does not have access to any of these services; in Huancavelica only 43% have access to certain services, and in Moquegua and Tacna only 64% and 59%, respectively, have access to two or more basic services; while outside of Lima (51%) and Callao (49%) less than a third of the population has access to all of these services.

It is clear that the country's infrastructure is far from ideal. According to World Economic Forum (WEF) statistics, Peru remains at the bottom of the rankings for infrastructure quality on a global level in almost all categories (although its electricity infrastructure is somewhat better positioned than the other categories).

Infrastructure quality
(ranking among 134 countries)



Source: World Economic Forum, The Global Competitiveness Report 2008-2009

According to WEF indicators, Peru has the second worst infrastructure in Latin America, out of 12 countries. Bolivia has the worst, while Chile's is the best. However, it should also be noted Peru is considered the fourth most attractive destination in the region to invest in infrastructures (after Chile, Brazil and Colombia), which represents an opportunity to reduce its infrastructure gap and with it, the poverty levels and inequality in the country[2]

Secondly, poverty reduction has not occurred at the same pace across the country. The bulk of the reduction has occurred in urban areas as well as in coastal regions, for which reason poverty in the rural "Sierra y Selva" (mountain and forest) areas remains quite high (73% and 55%, respectively). Similarly, while on the coast 2% of the population lives in extreme poverty, in the forest region this figure increases to 18% while in the mountain region it jumps to 29%. This situation may be related to the fact that the economic activities that have grown most in recent years and are the most labour intensive are located on the coast (agroindustry, for example), generating more employment and increasing household income.

Poverty rates according to geographic region
(percentage of total population)

		2004	2007	Reduction
	Total	48.6	39.3	**9.3**
Area	Urban	37.1	25.7	**11.4**
	Rural	**69.8**	**64.6**	5.2
Natural region	Coast	35.1	22.6	**12.5**
	Mountain	**64.7**	**60.1**	4.6
	Forest	**57.7**	48.4	9.3
Geographical domain	Urban coast	37.1	25.1	12
	Rural coast	**51.2**	38.1	**13.1**
	Urban mountain	44.8	36.3	8.5
	Rural mountain	**75.8**	**73.3**	**2.5**
	Urban forest	**50.4**	40.3	10.1
	Rural forest	**63.8**	**55.3**	8.5
	Metropolitan Lima	30.9	18.5	12.4

Source: INEI - ENAHO: 2004, 2007

Thirdly, part of the poverty reduction has been due to the redistributive effects of social programmes. Nevertheless, the amount spent on fighting poverty is negligible, given the magnitude of the problem.

The expenditure on social programmes represents about 8.5% of GDP and is distributed in the following manner: education (3.0% of GDP), health (1.5%) and social assistance programmes (4.0%). This last item comprises social security and poverty alleviation programmes. Given that 85% of it is earmarked for pension payments, less than 1% of GDP[3] is used to fight poverty.

Furthermore, part of these funds are lost due to a lack of focus, poor coordination and inadequate monitoring and evaluation processes. For example, according to ENAHO, 45% of the people who take advantage of government-run soup kitchens are not even poor, while 98% of the target population does not benefit from this programme.

Johanna Tejada
jtejadav@afphorizonte.com.pe

Errors in the focus of social programmes
(on a national level)

Use by non-eligible segments (%)	
Comprehensive health insurance	29.4
Glass of milk	41.6
Public dining halls	45.1
School breakfasts and lunches	31.3
Undercoverage of the poor (%)	
Comprehensive health insurance	66.3
Glass of milk	73.8
Public dining halls	97.7
School breakfasts and lunches	54.9

Source: INEI – ENAHO 2007

Therefore it is important to improve these programmes, both in terms of funding and efficiency. To this end, for 2011, the government aims to improve the coordination among social programmes, design an adequate decentralisation process and close the gaps in coverage in health, education and nutrition. To reach this goal, several initiatives already exist, among which we would highlight the organisation of a social policy scheme based on three pillars: (i) the development of human potential (education, health, nutrition, healthcare and identity), ii) the creation of economic opportunities (employment, basic infrastructure) and iii) social welfare. Similarly, the government is also making an effort to improve tracking and evaluation systems, which include the Household Targeting Database (SISFOH), Budget by Results and initiatives to create a Single Beneficiary Registry for social programmes.

In short, clear progress has been made in recent years in reducing poverty. If the economy were to maintain the growth rates of recent years, poverty levels could fall significantly. Estimates carried out with 2007 figures indicate that if in the coming years the economy grew at a rate of about 7.5% annually, by 2011 only 30% of the population would be living below the poverty line, which would meet the government's target. However, the current global crisis has created new challenges for reaching this goal. To achieve the target it will be key to correct the inefficiencies and reinforce the social programmes so as to lock in the progress made thus far in reducing poverty and to extend these gains also to the populations in the mountain and forest regions of the country.

[1] Poverty is defined as a household's standard of living that is below what is considered socially acceptable. This could be defined in terms of the satisfaction of basic needs (structural poverty), purchasing power (monetary capacity) or even self- perception (subjective poverty).

[2] This apparent contradiction between having a serious lack of infrastructure and ranking as a top destination for investment is related to the progress the country has made in other fields and which favours private investment.

[3] The social programme initiatives can be categorised as follows: i) food assistance, ii) social funds, iii) temporary employment, and iv) conditional cash transfers.

General CPI

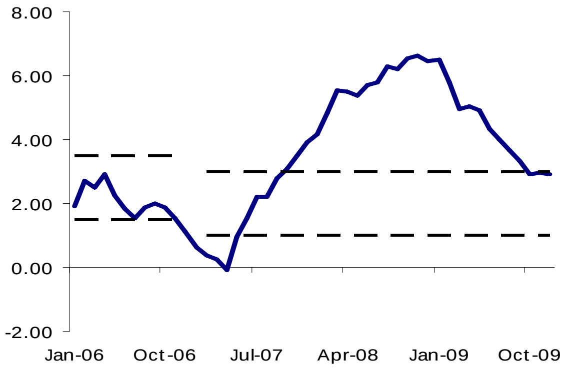
(12 month % chg.)

Consumption categories	Weighting	Oct. 08	12 months
1. Food and Beverage	47.5	0.52	9.45
In the home	*35.5*	*0.46*	*9.84*
Outside the home	*12.0*	*0.71*	*8.25*
2. Clothing and Footwear	7.5	0.31	3.29
3. Rent, Fuel and Electricity	8.8	2.06	2.95
Fuel (domestic use)	*2.5*	*0.97*	*5.40*
4. Furniture and fittings	4.9	0.76	3.50
5. Health Maintenance	2.9	0.49	2.81
6. Transport and Communication	12.4	0.53	5.99
Fuel (vehicles)	*1.5*	*0.04*	*6.54*
7. Education and Culture	8.8	0.05	2.98
8. Other Goods and Services	7.0	0.40	3.31
GENERAL INDEX	**100.0**	**0.61**	**6.54**
Memo: Fuel	*3.9*	*0.62*	*5.83*

Source: INEI
Prepared by: BBVA Banco Continental Economic Research Department

Inflation forecast: 2008/9

(% chg. yoy)



Source: INEI
Prepared by: BBVA Banco Continental Economic Research Department

Inflation

Inflation has picked up in recent months

At the close of October, the yoy inflation rate stood at around 6.5%, higher than the inflation target set by the Central Bank (2%, +/- 1pp). Inflation has picked up in recent months, after a period of relative stability in April and June.

The inflation dynamic has been driven mainly by the rise in the price of goods in the Food and Beverage segment (9.5% yoy), whose total impact on inflation is 70% (4.5 pp.). Among the food items that have registered the sharpest increase in price we would underscore:

- Food products made with imported ingredients, and those which have been affected by higher international prices for grains (wheat, corn and soy). This group includes bread and pasta (made with wheat), oil and margarine (made with soy), chicken, beef and pork (animals which are fed with corn and soy). Products made with imported ingredients comprise 18% of the CPI and their prices increased 12% yoy.
- Agricultural products in general (fruits, vegetables and tubers), whose prices increased due to the higher costs of fertiliser and transport (due to skyrocketing international oil prices). In addition, there have been reductions in the production of certain kinds of agricultural goods (such as lemons) as farmers shift towards more profitable crops, especially products for export (asparagus, artichokes, paprika and mangoes, among others). Agricultural goods make up 8% of the CPI and their prices rose 9% yoy.

Given this situation, inflation expectations in the short and medium term are diverging from the target range.

Outlook for 2008 and 2009: convergence towards the inflation target.

Inflation projections for 2008 stand at 6.5% and there should be a gradual convergence towards the inflation target in 2009. This scenario assumes the following:

- The inflationary effect from rising prices for imported food ingredients (wheat, corn and soy) and fuel (affected by international crude prices) should peter out or even partially reverse, due to the recent fall in these products' prices. On average, prices for these products, which represent 16% of the consumer basket, should fall by 2%. Meanwhile, we expect the rest of the basket (including the underlying component) to increase 3.8% as inflation expectations tend to adjust downward very slowly. In addition, given the relatively high inflation in 2008, we think there could be some pressure to renegotiate salaries in 2009.
- We expect economic activity to slow in 2009, making potential inflationary pressure from the demand side less likely.

Finally, we would point out that the inflation outlook for 2009 has a distinct downward bias, owing to the deterioration of the financial system and economic activity on a global scale. This could negatively impact terms of trade and external demand and, eventually, consumption and investment (domestic demand). Given this situation, inflation expectations should converge more quickly towards the Central Bank's target range.

Prices: latest monthly data

(% chg. yoy)	Jul-08	Aug-08	Sep-08	Oct-08
Consumer price index CPI	5,79	6,27	6,22	6,54
Tradable goods index	6,02	6,02	5,95	5,94
Non-tradable goods index	5,61	6,45	6,41	6,95
Underlying index	4,84	5,10	5,27	5,50
Consumer price index – Imported*	9,04	8,52	5,24	n.d.
Wholesale price index -WPI	9,17	9,98	10,65	10,87
Machines and equipment index	-3,1	-2,8	-0,51	3,79
Construction materials price index	18,2	16,5	16,70	14,43

* Imported inflation includes those goods whose prices are associated with imported commodities (wheat, corn, soy, oil). It comprises mainly food and fuels.

III. Monetary and exchange rate policy

The Central Bank is facing a more uncertain environment, which should lead it to adopt a more cautious stance

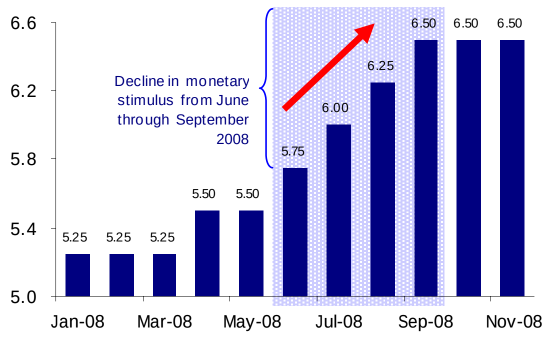
Over the course of the year, the Central Bank has gradually put the brakes on its monetary stimulus, both through hikes in benchmark interest rates and increases in sol and dollar reserve requirements. These measures were implemented as yoy inflation rates were climbing, mainly due to relentlessly rising food prices, which in the year to date pushed these rates above the target range (2%, +/- 1pp). Given the mainly imported or supply side nature of the rise in inflation, the BCR measures could be seen as precautionary, as the Central Bank sought to prevent the increasingly strong inflationary trend from affecting expectations. In addition, it wanted to make sure that rising food prices did not have second-round effects on the rest of the economy.

Despite these measures, the constant increases in inflation pushed inflation expectations higher, even in the medium term (2010), and they are now over the BCR target. Furthermore, prices for goods in non-food categories also rose: the prices for five out of the eight goods categories that comprise the CPI (about 80% of the index) increased by over 3.0% yoy to October. Meanwhile, real interest rates have not registered major upticks, and private consumption and domestic demand have shown sustained growth in the year to date. Given this scenario, the Central Bank has leeway to continue reducing the monetary stimulus.

The Central Bank, however, has kept its official interest rate at 6.50% from September up to the writing of this report, and has made reserve requirements more flexible. It appears to have realised that the main driver for inflation in 2008 is no longer as important: international food and oil prices have fallen and in light of the dismal economic outlook, are not expected to undergo major increases in 2009. This decline in international prices for raw materials should start to feed through to the final sales prices of goods in the coming weeks. As this occurs, inflation expectations should start to abate, mitigating the general increase in prices. However, there is the risk of the international scenario deteriorating further, with even more severe impacts on local markets and economic activity. This prospect suggests adopting a more prudent stance.

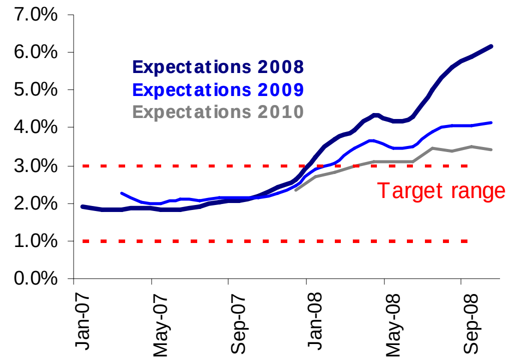
The latest meetings of the BCR have been considering both the outlook for higher inflation and the increasing likelihood that the international economic crisis could be even worse than expected. A restrictive monetary policy could leave the Central Bank in a less advantageous position to deal with a major economic downturn in 2009. Therefore, and to the degree that inflation cools down, the Central Bank will likely opt for a more flexible monetary policy in 2009, in line with what was suggested in the November Monetary Programme - Information Note. This flexibilisation could be carried out through a cut to benchmark interest rates or lower reserve requirements.

Central Bank benchmark interest rate: 2008 (in %)



Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

Short and Medium term inflation expectations (% chg. 12 months)



Source: BCRP
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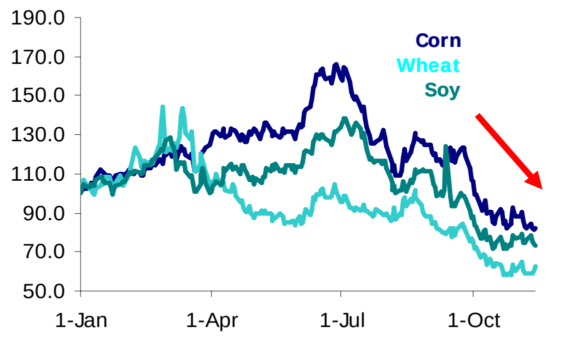
Money and bank lending: latest monthly data

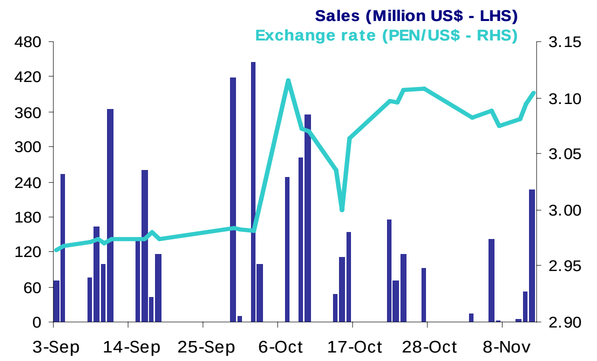
(% chg. yoy)	Jul.08	Ago.08	Set.08	Oct.08
Exchange rate, (average, nuevos soles per US$)	2.850	2.896	2.968	3.082
Monetary base (end of period)	42.9	39.3	37.8	36.8
Total liquidity	28.6	32.3	32.1	-
Foreign currency Liquidity / Total liquidity (%)	38.4	38.8	42.8	-
Net international reserves (US$ million)	34.843	34.917	34.701	31.933
Interbank interest rates in domestic currency (%)	5.9	6.2	6.4	6.6
Interbank interest rate in foreign currency (%)	2.5	4.9	2.6	3.2
Lending to private sector in domestic currency	41.1	44.3	39.7	-
Lending to private sector in foreign currency	30.1	30.4	27.9	-
NPL rate (%)	1.22	1.21	1.19	-

International agricultural commodity prices (Index 01/01/08=100)



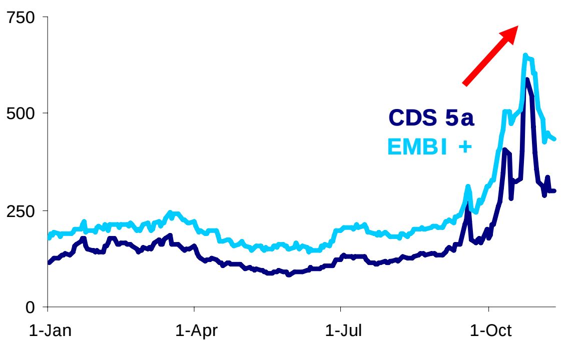
Source: Bloomberg
Prepared by: BBVA Banco Continental Economic Research Department

Daily exchange rate and Central Bank foreign exchange interventions: Sept. /Nov. 08



Source: BCRP and Bloomberg
Prepared by: BBVA Banco Continental Economic Research Department

Peru: EMBI+ and 5y CDS – 2008 (basis points)



Source: Bloomberg
Prepared by: BBVA Banco Continental Economic Research Department

The sol will be under pressure in the coming months

The exchange rate has been rising since April. In the beginning, this trend demonstrated that the measures which the Central Bank took in the first part of 2008 to stem short term capital inflows and encourage their exit had started to take effect; later it mainly reflected investors' greater risk aversion.

The greater risk aversion in international markets is associated with the worsening of the financial crisis in the United States and its spreading into the real economy and to other economic areas around the world. This has triggered, on the one hand, an increased appetite for assets perceived to be less risky and with greater liquidity, and on the other, the perception that emerging economies are higher risk. The resultant decrease in demand for assets denominated in soles has caused upward pressure on the exchange rate which, in the forward market for dollars, has led to an increase in net forward sales (from banks perspective), as well as an increase in settlements of net purchases of non-delivery forwards.

As the crisis has unfolded, the Central Bank has intervened in the currency markets in an attempt to smooth out its volatility. Since September there has been a significant increase in country risk and upward pressure on the exchange rate, for which reason the BCR sold US$5.3 bn (between the end of June and the beginning of July it sold US$0.3 bn, having bought US$8.7 bn between January and April).

Given the uncertainty in the wake of the global economic crisis, it is quite likely that in the short term the exchange rate will remain volatile, and that the BCR will have to continue to intervene in order to smooth out the more violent fluctuations. We expect the exchange rate to close 2008 at 3.10 new soles per dollar, close to the sol's current level. In 2009, on the back of i) an intensifying and spreading financial crisis (in which emerging countries will continue to be perceived as high risk) and ii) the decline in the current account associated with the deterioration in the terms of trade and ebbing external demand, we expect a depreciation in the sol similar to what was registered in the September-November period of 2008 (5%, approximately). We also expect the BCR to continue intervening in markets to mitigate sharp spikes in the exchange rate. Therefore, we expect the exchange rate at the close of 2009 to stand at around 3.25 new soles per dollar.

Monetary policy should be able to meet the challenge

The deepening and spreading of the international financial crisis could affect Peru in several ways, including:

(i) Increased liquidation of fixed income and equity positions in soles, which would put upward pressure on the exchange rate

(ii) A jump in the cost of short term external lines of credit (banks hold US$2.4 bn in this type of debt) or the possible reduction of some credit lines, which would result in fewer dollars being available and would negatively affect financing conditions for lending

(iii) A worsening of the terms of trade and a decrease in external demand, which would have a negative impact on investment, employment and tax revenues.

A sudden and major depreciation in the sol could hurt the balance sheets of economic agents, since the financial dollarisation of the economy, although less prevalent than in prior periods, remains significant. However, the BCR has sufficient reserves (US$31 bn or 120% of total private sector deposits in deposit institutions) to lessen the impact of these exchange rate fluctuations. Furthermore, it could issue certificates of deposit adjustable to the exchange rate as it has done before. In addition, the Central Bank could provide liquidity to the banking sector through the purchase of securities the BCR itself has issued (banks hold the equivalent of over US$3 bn), carry out repo transactions with these same securities but with longer maturities (it has extended them to one year), or reduce reserve requirements (banks have deposits of over US$5 bn in the BCR). In respect to this last item, in recent weeks the Central Bank has made announcements regarding the lifting of reserve requirements for holders of long term debt and the flexibilisation of reserve requirements for soles and dollars. With these measures it seeks to ensure that the banking sector, which has taken a more cautious stance in the current crisis, will have sufficient funds to provide loans as it would under normal circumstances. Lastly, in the face of a sharp downturn in economic activity, it could also reduce the benchmark interest rate (we also expect the Fed to cut official interest rates, so there should not be any exchange rate effects via this channel) or the reserve rate in soles and dollars.

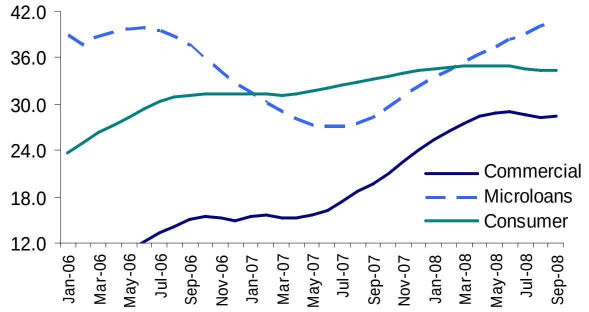
IV. Financial environment

Liquidity tension has levelled off in money markets

The bankruptcy of Lehman Brothers in the middle of September heightened uncertainty and caused banks, at the beginning of October, to try and meet their reserve requirements early as they entered the new reserve period. This provoked a liquidity squeeze which was reflected in higher than usual interbank interest rates in soles and dollars. For example, the spread between the interbank interest rate in soles and the BCR benchmark rate widened to 56 bp in the middle of October, and there were several days when the spread between the interbank interest rate in dollars and the overnight Libor widened to 77 bp. These tensions were also reflected in short term interest rates (90 days) for preferential clients.

However, in the second half of the month, when reserve requirements were met, the tension dissipated. This manifested itself in the decline in the interbank interest rates and later in the corporates, both in local and foreign currencies. In the case of foreign currencies, banks had sufficient liquidity, which was reflected in the increase in their voluntary deposits in the BCR (a daily average of US$0.7 bn in September and US$ 2bn in October). The sale of dollars by the BCR in September and October for a total of US$4.7 bn have had an influence on this. In the case of the local currency, tensions lasted somewhat longer even as the banking sector in aggregate was liquid, because specific banks that found themselves in long positions in dollar assets and short positions in sol-denominated assets got caught in the squeeze (as did banks without sufficient securities to access BCR's repo facility). In this context, the Central Bank created a new instrument, the foreign currency repo, which has helped ease tensions in the money market. Another measure that helped reduce tension was the extension of maturities to one year for repos (before September, the maximum maturity was three months). Right now the interbank interest rate in soles stands at the benchmark rate (6.5%), while in dollars it stands at about 0.9%.

Growth in commercial lending* to small businesses and consumers: 2007/8 (% yoy chg. 12 month MA)



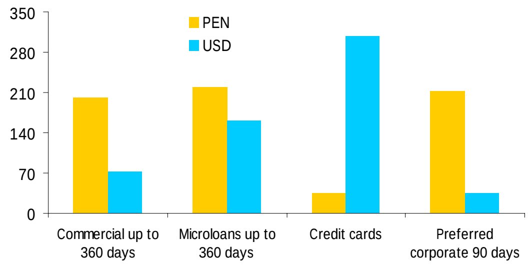
* Includes bank and financial company lending
Source: SBS
Prepared by: BBVA Banco Continental Economic Research Department

Credit growth in the private sector set to ease over the coming months.

Credit in the private sector has been growing significantly, especially in local currency, which should lead to continued de-dollarisation. Direct lending by the banking system registered a yoy increase of 30% at September 2008 (41% in soles and 29% in dollars), driven by the so far favourable economic conditions (higher employment rates, revenues, consumption and investment), both on the household and firm level. This robust growth in credit was registered in all its forms, although the highest-yield lending (microcredit and consumption) showed the greatest gains (48 percent and 35 percent, respectively), despite the interest rate hikes seen in certain segments following the Central Bank's withdrawal of monetary stimulus over the course of the year.

However, in the current context, credit growth in the coming quarters is hardly sustainable at the pace seen in recent years. We expect to see somewhat slower growth. On the demand side, this is in line with the slowdown in private consumption growth and domestic demand in general; on the supply side, lending is reined in by the higher funding costs for banks, associated with the greater perception of risk in emerging countries, (due to the international crisis), and the fact that banks will be more cautious carrying out placements, especially for sectors more exposed to the international crisis.

Increase in lending interest rates: 2008 (in basis points, change from Dec. 07 – Aug 08)



Source: BCRP
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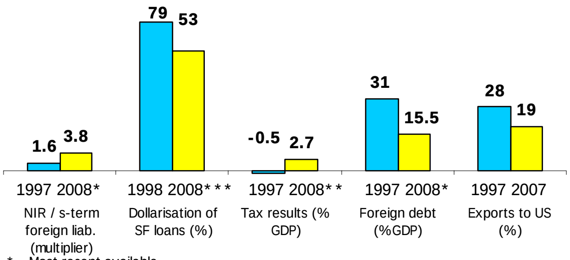
Markets: latest monthly data

	Jul-08	Aug-08	Sep-08	Oct-08
BVL General Index (% chg.)	-15.5	-3.5	-15.3	-37.3
BVL Selective Index(% chg.)	-16.7	0.5	-15.9	-39.7
Market capitalisation (millones de US$)	107,123	83,331	73,937	50,501
Private sector bonds (US$ millions)	6,117	5,908	5,957	-
Private sector bonds (placement US$ millions)	114	74	101	-
Private sector bonds (redemption US$ millions)	33	140	25	-
Public sector bonds (millions of soles)	22,627	22,652	22,652	-
Private Pension System - value of fund (US$ millions)	20,373	19,433	17,760	14,422
Private Pension System -number of affiliates (millions of people)	4.23	4.24	4.26	4.28

Francisco Grippa
fgrippa@grupobbva.com.pe

Rosario Sánchez
rdpsanchez@grupobbva.com.pe

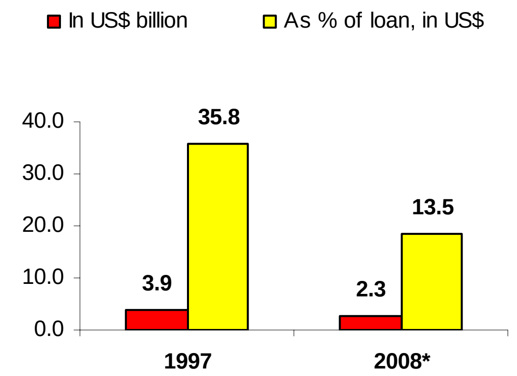
Vulnerability indicators for the Peruvian economy



* Most recent available
** Average of last four quarters
*** October

Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

Foreign short term liabilities in the banking system



* October

Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

Box. Possible contagion channels from the international financial crisis

The international environment has suffered a sharp downturn in the wake of the deepening financial crisis in the United States and a more pronounced slowdown in economic activity in Europe. In this context, major impacts on emerging economies are becoming increasingly likely. In Peru, signs of possible contagion may take the following forms:

(i) greater pessimism regarding the strength of emerging economies, reflected in greater country risk. Against this backdrop, capital inflows may fall due to more restricted access to foreign lines of credit, as well more liquidations of sol-denominated assets (in fixed income and equity) by institutional investors. Therefore, we could see greater upward pressure on the exchange rate. Furthermore the perception of higher risk could decrease flows of direct foreign investment.

(ii) a significant drop in the international prices of the minerals Peru exports would amplify the negative effect on mining companies' financial and cash positions as well as their profitability. In such a situation, companies could postpone the execution of new projects and private investment could take a hit. On the public sector side, we expect to see less tax revenue.

(iii) the real effects of the international crisis would erode external demand. This would affect the companies whose goods are destined towards markets more exposed to the crisis, such as the textile industry, where 45% of exports go to the United States. The negative impact on employment, as well as on income and private consumption, will depend on the degree to which the crisis depresses external demand.

(iv) drop in consumer and business confidence. In a less favourable economic climate, economic agents might become less optimistic, which would result in a decline in consumption, investment and employment.

The Peruvian economy is now less vulnerable to external crises.

Peru is in a stronger position to deal with the current economic turmoil than in previous crises. Several factors in its favour are:

(i) a comfortable level of net international reserves, which cover 120% of the total deposits in deposit institutions and over three times the short term foreign liabilities of the economy (public and private sectors). These reserves can be used to smooth out sudden fluctuations in the exchange rate which otherwise would accentuate the negative impacts of financial dollarisation;

(ii) Liquid assets held by the banking sector which more than cover their short term foreign liabilities (which include short term foreign lines of credit). In addition to being liquid, the banking sector is also profitable and solvent, with a manageable gearing ratio and low NPL levels.

(iii) Monetary policy instruments that allow the BCR to provide the liquidity required by banks, and which include the temporary or definitive purchase of bank assets (Central Bank Certificates of Deposit, foreign currencies). In addition, the Central Bank can ease reserve requirements (it holds approximately US$5 bn in dollar reserves).

(iv) A solid fiscal position. The public sector balance has been positive in recent years and is expected to remain so. This has allowed for a reduction in the public debt (as a % of GDP) which now comprises more sol-denominated debt and fixed rate debt. In addition the government has the Fiscal Stabilisation Fund and a significant amount of deposits in the banking system to boost the economy should the situation worsen.

(v) Exports that are destined for a wider range of countries and so depend less and less on the regions hardest hit by the downturn (the United States and Europe). This lowers the downside risk derived from external demand.

In short, while Peru could suffer some of the fallout from the global economic crisis, it is in a strong position to counter possible negative effects. To do so, it will be important that the main economic agents send out credible messages while avoiding an overly pessimistic tone.

V. Article. Optimal level for net international reserves: The case of Peru

In the current financial turmoil, one of the most critical factors for containing the impact and spread of an external financial shock is a country's international liquidity: its net international reserves (NIR). This also serves to ensure the stability of the national currency and avoid sharp depreciations in the exchange rate, which is particularly pertinent in Peru due to the high degree of dollarisation in its economy. Ultimately, such depreciations are an indicator for rating agencies of international risk when they rate a country's sovereign debt (Illanes, 2004).

However, in addition to the obvious benefits of having international reserves, maintaining them also involves an opportunity cost, since the accumulation of NIR could require the sterilisation of the funds that enter these reserves (issuance of Certificates of Deposit - CDBCRP), a transaction that entails a financial cost. An alternative is to use the spread between the interest rate of the foreign debt and the yield of the international reserves.

Given that maintaining international reserves has both costs and benefits, there should be an optimal level for these reserves which maximises the net profits of holding them. This article seeks to calculate this optimal level for Peru's international reserves, applying different methodologies, as well as to propose alternative uses for possible surpluses.

History

Peru has rapidly accumulated international reserves in recent years, due mainly to the improvement in terms of trade after the rally in metals prices between 2002 and 2007. In the last three years, international reserves tripled, reaching US$35 bn in June 2008. Since then, as the global financial crisis has gathered steam, NIR levels have fallen by 13% and stood at US$31 bn in November 2008 (see Chart 1), a level similar to January of the same year.

Methodology and results

To obtain the optimal level of international reserves, we have applied two methodologies. The first is the traditional reserve demand model developed by Ramachandran (2003) and by Silva and Domingos (2004) which assesses the importance of reserves in counteracting a balance of payments crisis. By way of contrast, we have also used the model developed by Goncalves (2007) which is based specifically on the importance of reserves in mitigating the effects of stalled external credit (a "sudden stop"). This model incorporates dollarisation as a relevant variable for estimating the adequate level of reserves. The estimation carried out corresponds to the period between January 1999 and April 2008.

Traditional reserve demand model

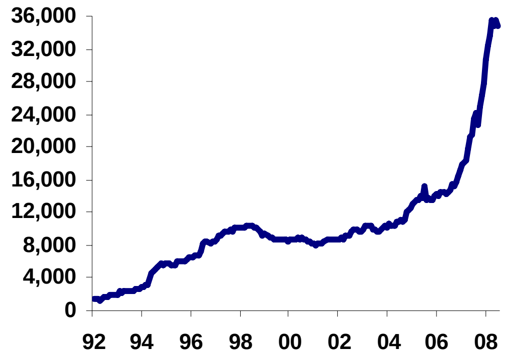
The first model we will use is the traditional time series demand model. This model is based on the basic demand equation developed by Frenkel and Jovanovic which is as follows:

$$LnR_t = b_0 + b_1 \ln \sigma + b_2 \ln r$$

According to this model, the optimal level is positively correlated with the fluctuation in external transactions. This is because reserves serve as shock absorbers which smooth out these fluctuations, and therefore, the optimal level depends on their characteristics. In addition, reserves are expected to be inversely related to the opportunity cost of maintaining them (r). The volatility metric is based on the official statistics of purchase and sales of foreign currencies by the Central Bank. In line with the work of Ramachandran and de Silva and Domingos, we use a GARCH specification to model the series variance.

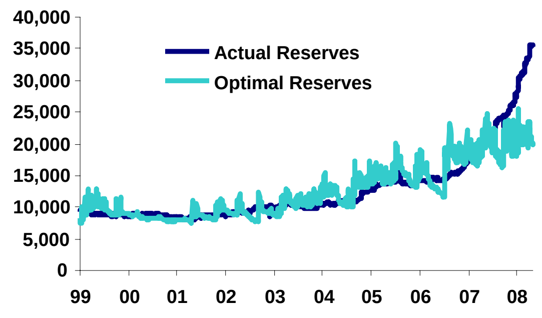
As a variable for the cost of maintaining reserves we use the spread between the sovereign debt and North American treasury bonds as measured in the EMBI Peru index. This variable is used because reserves are invested in very low risk assets, while the country pays high interest on its debts, which is expensive.

Chart 1: Net International Reserves (NIR -US$ millions)



Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

Chart 2: real NIR vs. optimal NIR (US$ million – conventional model)



Source: BCRP
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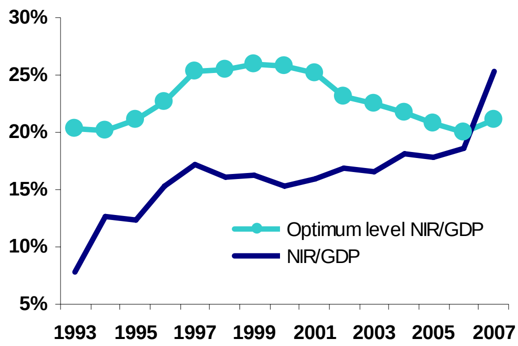
Box 1: Variables and parameters used in the sudden stop model

Variable Parameters	Symbol	Effect on reserves
Public sector short-term foreign currency debt/ GDP	λ_G	+
Private sector short-term foreign currency debt/ GDP	λ_P	+
Total foreign currency deposits /GDP	λ_D	+
Banks' liquid foreign assets as a share of foreign currency deposits	α^c	-
Coverage of foreign currency deposits	c	+
Fixed Parameters	**Symbol**	**Effect on reserves**
Accumulated output loss	γ	+
Probability of sudden stop	π	+
Term premium		-
Risk-free rate	r	+
Risk aversion	σ	-
Real exchange rate depreciation	Δq	+
Long-run GDP growth rate	g	-

Chart 3: Real NIR vs. optimal NIR (% of GDP – *sudden stop model*)



Source: BCRP
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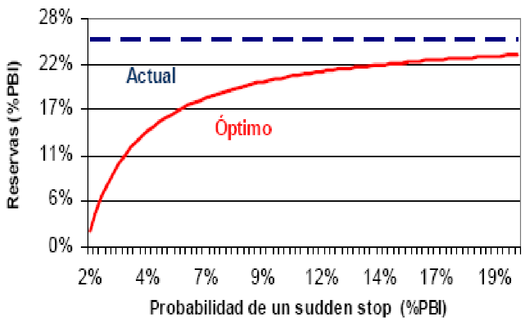
Chart 4: Sensitivity of reserves to changes in probability of sudden stop



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After obtaining the variables, following the Frenkel and Jovanovic model, we estimate the demand equation, with the following results:

$$LnR_t = 9.94_{(162.26)} + 0.4Ln\sigma_{(41.64)} - 0.15\ln r_{(-17.35)}$$

$$R^2 = 0.81 \; F = 5289.81$$

As can be observed, the results are in line with what one might expect, and both variables end up being significant. Therefore, the model is confirmed in that volatility does in fact have a stronger effect, while the effect of cost, although smaller, is also significant. According to the results, from June 2007 to April 2008, the level of reserves exceeded the optimal level (see Chart 2).

Sudden stop model for dollarised economies.

This model is focused on the role of reserves as a safeguard in times of banking and balance of payments crises. According to Goncalves (2007), the formula obtains the optimal reserves level by balancing the benefits of decreased consumption levels with the cost of maintaining reserves. The optimal level is positively correlated with the amount of deposit withdrawals, short term debt denominated in foreign currencies (both private and public), the cost of the drop in GDP and the probability that a crisis will occur. Therefore, higher reserves are required when consumption levels fall, when the probability of this happening increases, and when the currency depreciates. Lastly, the optimal level is inversely related to the cost of maintaining reserves. A summary of the variables, as well as the parameters used to obtain the optimal level of reserves, are shown in Box 1.

The parameters were calibrated using certain standard assumptions from the specialised literature. In the first place, the cumulative drop in GDP in a crisis period is set at 15%, based on calculations by Jeanne and Ranciere (2006) for an emerging economy and the figure set by Rodríguez (2007) in a Peruvian Central Bank research paper. The likelihood of a sudden stop occurring is set at 10%, based on the results obtained from a probit model developed by Jeanne and Ranciere for a typical emerging country. The premium for maintaining reserves of 1.3% and the risk-free rate of 3.8% were calculated using the methodology applied by Goncalves (2007). Therefore, the premium is the average difference between the 10-year treasury bond yield and the rate of the Federal Reserve in the last 20 years. The risk-free rate is the average 3-month T-bill yield of the last 10 years. The risk aversion variable is set at 2, following the consensus of the specialist literature. The depreciation of 24% in the real exchange rate is calculated based on the depreciation that occurred in the crisis that hit the Peruvian economy between 1997 and 1999. The variables were calculated using Central Bank statistics.

According to the model, the level of international reserves was below its optimal level up until 2006. From mid-2007 to April 2008 reserves were above the optimal level (see Chart 3).

It is important to bear in mind that the optimal NIR estimates derived from both these models assume an average scenario. However, right now we are facing an atypical scenario, where we are seeing events that are unprecedented in recent years (increases in risk aversion and volatility, among others). In terms of the model, this would imply that the probability of a sudden stop could be greater, which would increase the optimal international reserve level (see Chart 4).

This suggests that the optimal reserve level should actually be closer to the level of international reserves BCR currently holds.

Adequate-reserves ratio

In addition to the above models, we have also calculated conventional reserve ratios both for Peru and for several other Latin American countries, for comparative purposes. According to these indicators, Peru's is above the regional average.

International reserves over imports: Every year since 1996, reserves have covered more than one year of imports, reaching a high of 17 months in 2007. Since then, this indicator has deteriorated somewhat, due both to the sharp increase in imports and the drop in international reserves. According to data obtained in October, reserves cover 14 months of imports, which remains a comfortable figure.

These figures indicate that the Peruvian economy easily surpasses the threshold set by the rule which dictates that reserves should cover at least 3 months of imports. A comparative analysis of similar countries (Brazil, Mexico, Chile and Colombia) shows that Peru's ratio of international reserves over imports has been consistently higher than the average for these countries since 1995 (see Chart 5).

International reserves over M2: The ratio of reserves as a portion of M2 indicates the level of coverage international reserves have over domestic current liabilities (see Chart 6). In addition, this ratio shows the potential impact of a loss of confidence on the local currency (dollarisation of portfolios) as well as the risk of capital flight by domestic economic agents (Soto, Naudón, López and Aguirre, 2003). This indicator shows Peru at a much higher level than the regional average.

International reserves over short term debt: By way of reference, these results contrast with Guidotti and Greenspan's rule which establishes that reserves should cover 100% of the financial system's short term debt in foreign currencies. Chart 7 shows that Peru has registered much higher levels than those proposed by this rule. At September 2008, international reserves were 12 times greater (1,200%) than the financial system's short term debt.

Alternative ways of managing foreign reserves

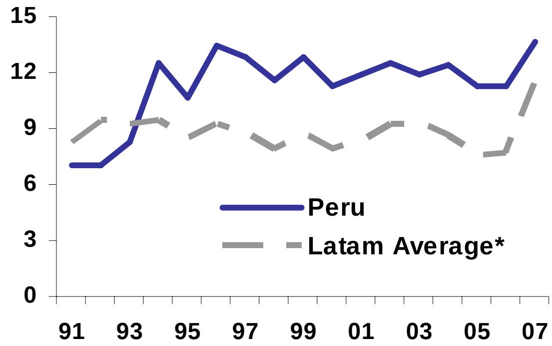
Until the middle of 2008, several economies registered a rapid increase in their foreign reserves, mainly due to soaring prices for raw materials that these countries exported (for example, oil in Middle Eastern countries and Venezuela, and copper in Chile and Peru). In light of this development, sovereign wealth funds are a clear alternative. These entities are state owned investment companies, mainly in emerging countries, whose aim is to achieve better returns on their money than can be obtained in their foreign currency reserves originating from national savings. These resources are generated by exporting natural resources (trade surplus), which creates budget surpluses for the government, and from monies originating from reserves accumulated by the central banks. The biggest state investment fund is the Abu Dhabi Investment Authority (1976) with assets estimated at between US$500 bn and US$800 bn.

Conclusions

The results obtained from both the Frenkel and Jovanovic and the Goncalves models suggest that the optimal international reserves level was below the level seen between mid-2007 and April 2008. However, these results correspond to an average scenario, while we are currently in the middle of an atypical situation where events have occurred which are without precedent in recent years (increase in risk aversion, upward pressure on exchange rates and liquidity tensions). In terms of the model, this would imply that the probability of a sudden stop could be higher, which would increase the optimal international reserve level.

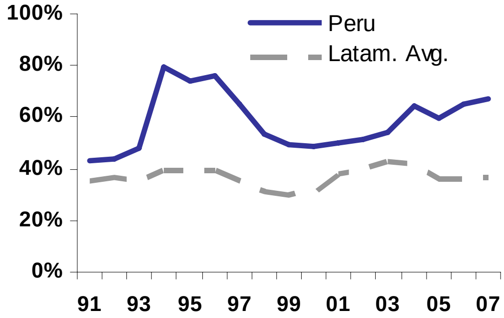
The evidence suggests that at present, international reserves are near their optimal level, especially in the context of the current economic turmoil where the benefits of having international reserves (which can be used to bolster the Peruvian economy and counteract the effects of the crisis) clearly outweigh the costs of maintaining them.

Chart 5: NIR over imports (number of months)



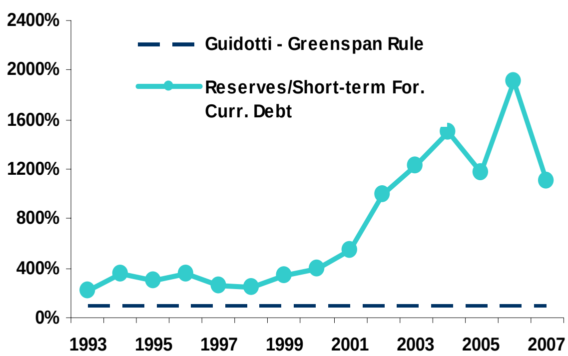
* Average of Brazil, Mexico, Colombia and Chile
Source: IMF
Prepared by: BBVA Banco Continental Economic Research Department

Chart 6: NIR over M2 (%)



* Average of Brazil, Mexico, Colombia and Chile
Source: IMF
Prepared by: BBVA Banco Continental Economic Research Department

Chart 7: NIR vs. short term foreign debt (%)



Source: BCRP
Prepared by: BBVA Banco Continental Economic Research Department

Peru Watch
Economic Research Department forecast

Basic economic indicators	2006	2007	2008(e)	2009(f)
Economic activity, average				
Nominal GDP (S/ US$ billion)	305.1	341.2	384.0	418.7
Nominal GDP (US$ billion)	93.3	109.2	131.5	135.4
Real GDP (% change)	7.6	9.0	8.9	5.0
Prices, year-end				
CPI (% chg. last 12 months)	1.1	3.9	6.5	2.9
Public Sector				
Tax Surplus/Deficit (% of GDP)	2.1	3.1	2.5	0.1
Total public debt (% of GDP)	32.7	29.2	23.1	21.8
Foreign debt (% of GDP)	23.6	18.4	13.8	12.7
Foreign Trade				
Exports (US$ billion)	23.8	28.0	32.8	33.5
Imports (US$ billion)	14.9	19.6	29.5	33.5
Trade balance (US$ billion)	8.9	8.4	3.3	0.0
Current account balance (% of GDP)	3.0	1.4	-2.1	-3.0
Nominal exchange rate (S/ US$, year-end)	3.20	3.00	3.10	3.25
Multilateral real exchange rate (annual % chg) 1/	-2.3	-1.7	-	-
External debt (% of GDP)	30.3	28.7	25.7	26.2
International Reserves (US$ billion)	17.3	27.7	31.1	28.1
Financial Sector				
Policy rate (monetary policy)	4.50	5.00	6.50	6.00
Loans growth, banking system (nominal)	6.2	32.8	24.0	16.0
Total deposit growth, banking system (nominal)	8.2	24.2	20.9	17.4

1/ Based on indices of the top twenty trading partners

International Context

Raw Materials (Average)	2007	2008	2009		2007	2008	2009
Brent (USD/barrel)	72.8	101.0	54.5	**Gold (USD/troy oz.)**	697.7	879	775.0
Copper (USD/t)	7108.0	6994.0	3569.0	**Soy (USD/ton)**	317	458	342

	Real GDP (%)				Inflation (%, year-end)			
	2006	**2007**	**2008**	**2009**	**2006**	**2007**	**2008**	**2009**
USA	2.9	2.2	1.4	-0.8	3.2	4.1	2.2	1.2
EMU	3.0	2.7	1.0	-0.9	2.2	2.1	3.3	1.5
Japan	2.4	2.0	0.7	-0.3	0.3	0.5	1.0	0.3
China	11.6	11.9	9.5	8.1	2.8	6.5	4.5	3.0
Latin America								
Argentina	8.5	8.7	6.9	1.9	9.9	8.5	8.0	13.0
Brazil	3.7	5.4	5.2	2.5	3.1	4.5	6.3	4.8
Chile	4.3	5.1	4.3	2.3	2.6	7.8	8.9	4.8
Colombia	6.8	7.7	3.7	3.0	4.5	5.7	7.2	4.5
Mexico	4.9	3.2	1.8	0.0	4.1	3.8	5.7	3.7
Peru	7.7	8.9	8.9	5.0	1.1	3.9	6.5	2.9
Venezuela	10.3	8.4	6.0	2.6	17.0	22.5	30.7	32.5
LATAM 1	5.4	5.6	4.4	1.8	5.0	6.0	8.1	7.0
LATAM Ex-Mexico	5.7	6.6	5.5	2.6	5.4	7.1	9.0	8.4

	Public Sector Balance (% of GDP)				Current Account Balance (% of GDP)			
	2006	**2007**	**2008**	**2009**	**2006**	**2007**	**2008**	**2009**
USA	-1.9	-1.2	-4.2	-3.7	-6.0	-5.2	-4.8	-4.2
EMU	-1.6	-0.7	-1.2	-2.4	0.1	0.4	-0.3	-0.1
Japan	-6.4	-6.2	-5.8	-5.1	3.9	4.8	3.3	2.8
China	-0.8	0.7	-1.4	-0.9	9.4	10.1	6.8	6.1
Latin America								
Argentina 2	1.8	1.1	1.9	0.5	3.8	2.8	2.0	-0.3
Brazil	-3.0	-2.2	-1.9	-2.0	1.6	0.6	-1.8	-1.5
Chile 2	7.8	8.8	5.8	2.9	4.9	4.5	-1.7	-1.9
Colombia	-0.8	-0.8	-1.0	-1.3	-2.2	-3.4	-2.0	-1.9
Mexico*	-0.1	0.0	0.0	-1.8	-0.2	-0.6	-1.3	-3.1
Peru	2.1	3.1	2.5	0.1	3.0	1.4	-2.1	-3.0
Venezuela 2	2.1	4.5	0.0	-3.0	14.7	8.7	14.5	4.7
LATAM 1	-0.5	0.0	-0.2	-1.4	2.1	1.0	-0.2	-1.6
LATAM Ex-Mexico	-0.3	0.3	-0.1	-1.1	3.0	1.6	0.2	-0.9

* The methodology changed in 2009 (PEMEX financial requirements were eliminated).

1 Average of the 7 countries mentioned; 2 Central government

	Exchange rate (compared to $, year-end)				Official rate (%,year-end)			
	2006	**2007**	**2008**	**2009**	**2006**	**2007**	**2008**	**2009**
USA					5.25	4.25	0.50	0.50
EMU ($/€)	1.32	1.46	1.30	1.15	3.50	4.00	2.50	1.50
Japan (yen/$)	116.4	113.1	100.7	95.6	0.24	0.06	1.20	0.30
China (cny/$)	6.12	7.47	6.93	5.31	1.70	4.80	6.40	3.40
Latin America								
Argentina	3.06	3.14	3.30	3.90	9.80	13.52	22.00	20.00
Brazil	2.15	1.78	2.30	2.10	13.25	11.25	13.75	12.75
Chile	530	499	634	603	5.25	6.00	8.25	5.25
Colombia	2261	2014	2329	2443	7.50	9.50	9.50	8.00
Mexico	10.88	10.86	12.58	13.00	7.00	7.50	7.75	5.50
Peru	3.20	3.00	3.10	3.25	4.50	5.00	6.50	6.00
Venezuela	2.15	2.15	2.15	4.10	10.26	11.70	19.00	22.00

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