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The turmoil in financial markets gains momentum

Latin America bolsters its defences against the crisis

Latin American export diversification: lower trade dependence from the US.

Index

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Editorial

The prospects for Latin American economies continue to be reasonably optimistic despite the problems in international financial markets and the US downturn.

Obviously, in a globalized world, no open economy can remain immune to fluctuations in the global economy. Latin America countries, therefore, will somehow be affected by the increased risk aversion, higher borrowing costs in international markets and weaker foreign demand that result from the slowdown in the world's leading economies. This is evident from a number of financial indicators such as the widening of the sovereign risk premium and the slowdown in portfolio inflows. However, the situation in Latin America has been favourable so far, both from a historical point of view as well as in comparison with other regions. Is this regional outlook sustainable? We are relatively optimistic as to how the region can maintain a rather moderate impact of the global slowdown. However, if such situation were to further deteriorate and prolong over time, the answer would be different.

In this edition we pinpoint a number of factors that support our positive outlook. One of these factors is the very favourable cyclical situation of a large number of countries in the region. With high growth rates, between 5% and 9%, the countries in the region are clearly in the expansive phase of the economic cycle and are, therefore, in a good position to bear a global slowdown. Another factor is the currently high investment levels, which is one of the main drivers of the strong growth in the region. In some countries, investment levels are displaying record highs not observed in the past few decades. Additionally, its favourable composition will likely generate very positive externalities both in the short and medium term (to be checked). Therefore, the prospects for growth are more positive than they have been in previous phases of expansion. Still another factor is the increasing geographical diversification of exports towards new markets where growth is strong (refer to our article "Anatomy of Trade in Latin America" in this edition), this has reduced the dependency of the countries in the region on fluctuations in the US economy.

The external scenario, however, poses some risks to Latin American economies. Firstly, there is a risk –albeit not likely- of a sharp rise in the international risk aversion and a notable increase in borrowing costs (as seen during previous crisis periods). In any event the impact should be moderate. The improvement in the solvency conditions of the countries in the region have improved dramatically, in some cases their foreign debt ratios are practically half of what they were in the past few years. The second risk to look out for is commodities. Although progress in diversifying the range of export products is being noted in some cases, this still cannot be classified as a generalised qualitative change. In fact, the dependence on commodity exports remains a constant feature of practically all countries in the region. That said, the current boom in commodity prices, from which practically all of the countries in the region are benefiting, is unlikely to deteriorate in the short term, at least not in a sharp way. Tight stock levels in some of the markets along with supply problems should largely offset the demand slowdown over the course of next year.

In addition to the downward bias in output growth derived from the international situation, a likely tighter monetary policy during 2008 could also tilt growth downwards. The pick-up in inflation in the region is an additional source of concern. Considering that food and energy costs are pushing up prices, taking into account the greater weight that food has in the consumer basket in the countries in the region, and, in some cases, the economy's indexation, controlling inflationary expectations appears like an important challenge.

In short, although the region will clearly display lower growth in 2008 compared with 2007, prospects remain favourable, given the current international situation.

1. International environment

The financial shock spreads

The global economy is still suffering the effects of the financial shock that started last summer, which has turned out to be more persistent than initially expected, and which has spread to new agents, instruments and markets. Firstly, the tensions in the interbank markets haven't vanished. This reflects the liquidity shortage in the financial system. In particular, interbank rates continue to trade well above expected official rates, particularly at the longest end of the yield curve. The persistence of this abnormal situation led the main central banks in the world to adopt measures to facilitate the distribution of liquidity. The Federal Reserve has been the most active player in this scenario. Through various programmes (TAF, TSLF, and Repos), it has expanded the liquidity amount directly injected into the financial system. Moreover, it has increased the number of entities allowed to access funding without intermediaries (previously the Fed worked with a limited number of primary dealers that subsequently distributed the liquidity to other banks and brokers). The ECB, on the other hand, carried out two dollar-denominated loan programmes ($20 and $30 billion, respectively). Apart from these operations, however, the ECB did not introduce any significant changes in its policy of injecting liquidity.

As the turbulence has prolonged, the number of agents, instruments and markets affected has increased. The situation was initially limited to the interbank and subprime securitized instrument markets in the United States. Subsequently, however, it had a more general impact on the credit risk premiums borne by the banks (particularly Credit Default Swaps, where costs have risen to record highs). Likewise, monolines had their status as top-grade credit ratings (AAA) companies put under threat by the guarantees they had extended to structured products. Without this status their business would be unsustainable. There was also collateral damage from the monoline crisis in the form of a lack of confidence in municipal bonds, which are mainly insured by monolines. Meanwhile, demand for structured products, even those unrelated to the housing market, froze. For this reason, banks are having problems placing leveraged loans (LBOs) and securitized mortgage instrument orders made before the crisis broke. In this complex situation, international banks have made write-downs in their asset portfolios worth a total of approximately $200 billion since the beginning of the crisis.

The turbulence has extended to agents outside the financial sector. The share prices of non-financial companies, which had previously not been affected by the crisis, experienced bouts of sharp falls at the end of January, from which they have been barely able to recover. Likewise, the financing costs of non-financial companies have increased substantially due to the increase in risk premiums. Lastly, consumer confidence indexes have shown a clearly negative trend in the US, and more recently in the Euro Area, which could point to greater caution on the part of households when it comes to making spending decisions.

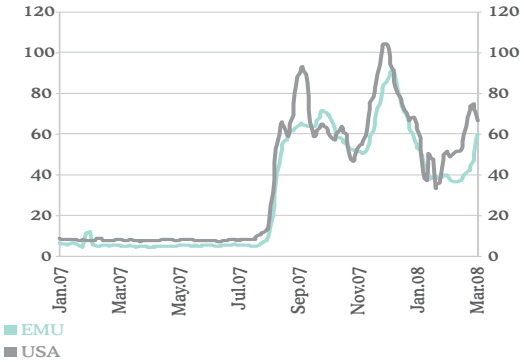
Impact on the real economy

The size and scope of the financial shock points to a more marked impact on the global economy. It is, however, too soon to put a figure on its extension. This impact is unlikely to be either homogeneous or simultaneous in different regions.

The US has already borne the effects of the financial situation. Its GDP growth was 0.1% in the fourth quarter of 2007 and the indicators available for the first quarter of 2008 (ISM, retail sales, etc) point to a further weakening of activity. The duration of this situation is now the focus of concern. The evolution of the housing market – where there is

3-month interbank liquidity tension indicator

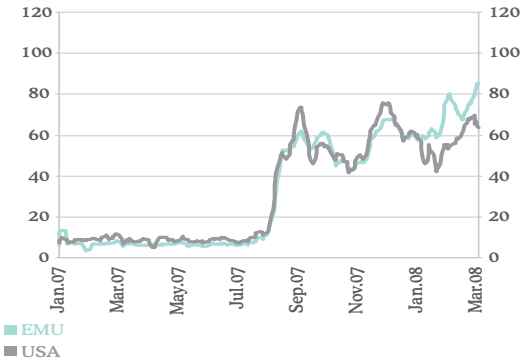
Spread (3MLIBOR-3Mmonetary policy expectations)



Source: Bloomberg. LIBOR3 M - OIS3 M (Overnight Index Swap).
5 days moving average.

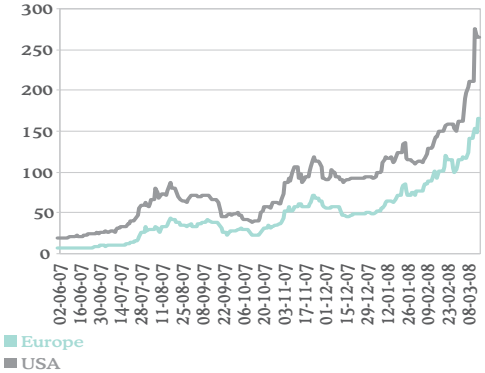
12-month interbank liquidity tension indicator

Spread (12MLIBOR-12Mmonetary policy expectations)



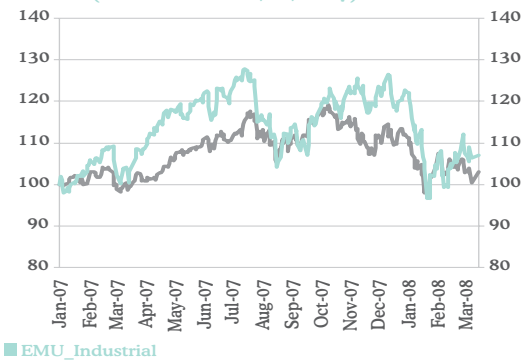
Source: Bloomberg. LIBOR12 M - OIS12M (Overnight Index Swap).
5 days moving average.

Bank credit risk premiums: 5-year senior CDS



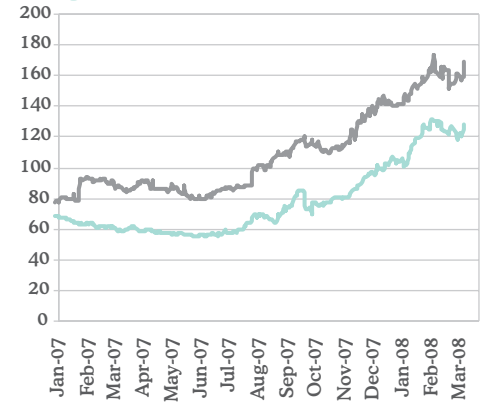
Source: Bloomberg.
5 days moving average.

MSCI: US and Euro Zone industrial sector (Index 100 = 01/01/2007)



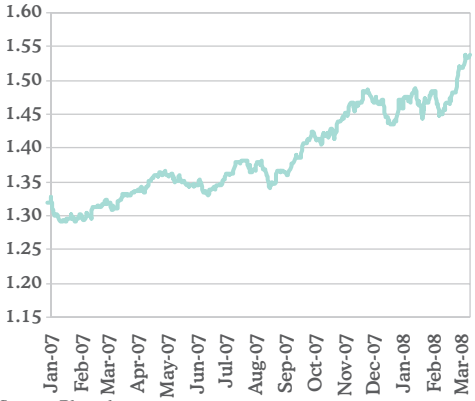
Source: Bloomberg.
5 days moving average.

Credit spreads of industrial sector A in Europe and the United States



Source: Bloomberg.
5 days moving average.

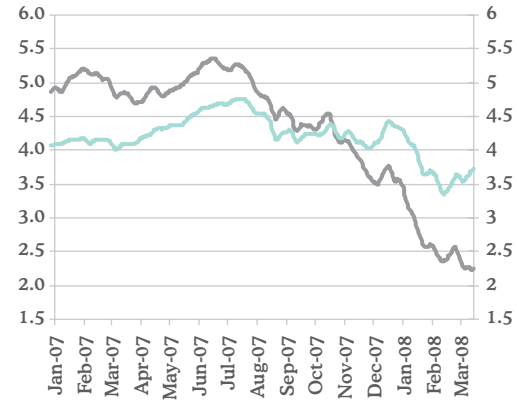
Dollar - Euro



Source: Bloomberg.
5 days moving average.

Monetary policy expectations from one-year interest rate futures

(1 week moving average)



Source: Bloomberg.
5 days moving average.

Financial forecasts (end-year)

	2007	2008	2009
Official rates			
USA	4.25	2	2.75
EMU	4	3	3.5
10-year rates			
USA		3.75	4.2
EMU		3.75	4.05
Dollar-Euro		1.45	1.395

Source: BBVA

still no sign of a levelling off and where volumes and prices continue to fall – along with the deterioration in the labour market – in January and February employment in the US economy shrank – make a rapid turnaround unlikely. The FED has reacted by cutting official interest rates very aggressively: the FED funds rate has been lowered from 4.5%, the rate in place when the last edition of Latinwatch was published, to 2.25%, and further cuts to 1.5% are likely. The government also announced a large fiscal stimulus plan for an amount equivalent to 1% of GDP. However, in the current context of falling bank capitalization and economic uncertainty, these two measures may be of limited effectiveness. As a result, we expect the US economy to grow at around 1.1% in 2008, down from the 2.2% figure recorded in 2007.

On the other hand, growth in Euro Area has shown no sign of further weakening. It has rather remained on the gradual downtrend that was already apparent before last summer. However, it seems likely that the effects of the financial situation will also make themselves felt in Euro Area in the second half of the year. The impact is expected to be less pronounced than in the US since the European economy enjoys a number of strong supports. The use of consumer credit is more limited than in the United States. To a large extent this will shield household decision-making from the impact of tighter bank lending. Moreover, most of the economies in the area have not experienced such marked property market booms as in the United States, which means that household financial burdens are not so high. From a more structural perspective, both a lower inequality level in the income distribution and efforts to raise the long-term growth potential rate, through the implementation of reforms, provide additional protection from the international financial context. GDP growth in 2008 is therefore expected to come in at around 1.4%, compared with 2.6% in 2007. The European economy nonetheless still faces significant risks. In the short term, the asymmetric nature of recent economic trends in the United States and EMU has driven an appreciation of the euro to above 1.59 euros to the dollar, with resulting risks for the foreign sector.

Inflation in the leading industrial economies, meanwhile, has increased at the start of 2008 as a consequence of the continuous rise in commodity and processed food prices. The oil price, in particular, broke through the barrier of 100 dollar a barrel as a result of strong speculative flows, among other factors. The risks of an inflationary pass-through to other prices were highlighted by high wage demands made in bargaining processes in Germany. As a result of these trends, the ECB, which had held official interest rates steady at 4%, hardened its stance and partly quashed the expectations of rate lowerings that had existed at the end of February. However, the factors that have recently been driving up inflation are temporary in nature. Moreover, as the impact of the financial situation on activity in Euro Area becomes clearer, the ECB could opt to reduce rates early in the summer, in a lowering cycle that could take official interest rates down to 3%.

The macroeconomic environment outlined above suggests several trends for the evolution of the main financial variables. On one side, it seems reasonable to expect that central banks will, in general, hold interest rates low and that the turbulence will give rise to a significant safe-haven effect in fixed-income securities. Under these conditions, long-term yields both in the United States and in EMU will remain at historically low levels, although the behaviour of the US public deficit and an upturn in long-term low inflation expectations would tend to place a floor under yields in the medium term. The exchange rate of the dollar against the euro, on the other hand, could remain weak in the immediate future. In the medium term, however, the dollar is expected to trend upwards, given that current levels are below those indicated by a position of balance in the US current account in the medium term and by purchasing power parity.

II. Situation and prospects in Latin America

The strong growth registered in 2007 provides the region with a good springboard for 2008

Latin America in 2007 enjoyed its fourth consecutive year of growth as the pace of economic activity remained strong. With the main economies in the region sharing this trend, we expect GDP growth in Latin America to have ended the year at 5.5%, 0.1 points above the level achieved in 2006. Within the region, the weakness seen in Mexico and the majority of the Central American countries contrasts with the strong growth experienced in South America where we expect a growth rate of 6.3% in 2007. Argentina, Colombia, Peru and Venezuela achieved GDP growth of between 7% and el 9%. Brazil and Chile achieved somewhat lower growth, but both cases stand above 5%. In short, the sub-continent is enjoying a wave of economic expansion not seen after the decade of the seventies.

In broad terms, the recent growth in the region has the following characteristics. Firstly, the contribution of foreign demand to output has fallen. While exports continue to show positive growth, the pace of imports has been clearly superior. Venezuela stands out on this regard, since imports in real terms have grown 39.9%, while growth for exports has merely been 6.1%. Argentina has shown a similar trend, with growth rates for imports largely surpassing those of exports (30% to 19%). The end result has been a narrowing current account surplus for the region, which transits from 2.3% of GDP in 2006 to 1% in 2007.

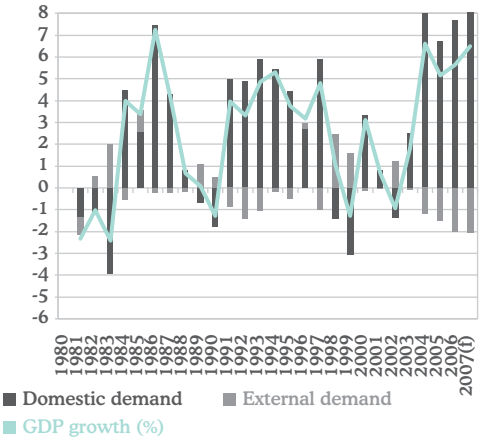
With foreign demand remaining as negative as it was in 2006, albeit within reasonable limits, domestic demand remains the main driver of growth. Private consumption has been sustained by an improvement in the labour market, with the majority of countries lowering their unemployment rates accompanied by an increase in household disposable income. The second main driver of private consumption has been domestic credit, which grows in most countries at fairly intense rates.

The investment drive in the region continues to gather pace with greater diversity

In parallel with the trend in domestic consumption, favourable business expectations have given a push to investment in South America, where it grew 8% in 2007. As a result, investment as a percentage of GDP stood at levels above those seen in the 1990s after undergoing an uninterrupted upward trend in the current period of expansion. The exception to this trend has been Brazil where the recent investment drive has been unable to keep pace with the dynamism seen in the rest of the countries In South America. Investment as a percentage of GDP in Brazil in 2007 stood at 17.5%, compared with over 22% in the rest of the economies in the region. Although the methodological changes introduced by Brazil in the first few months of 2007 reduced investment as a percentage of GDP, there are also a number of institutional bottlenecks which put a drag on growth in investment, both public and private. Looking ahead, the tax reforms proposed by the government in February, or the emphasis that Growth Acceleration

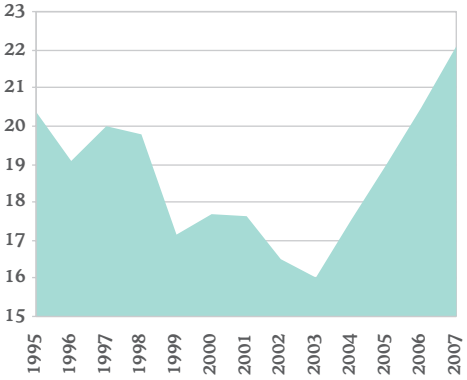
South America: GDP and contribution to growth*

(p.p)



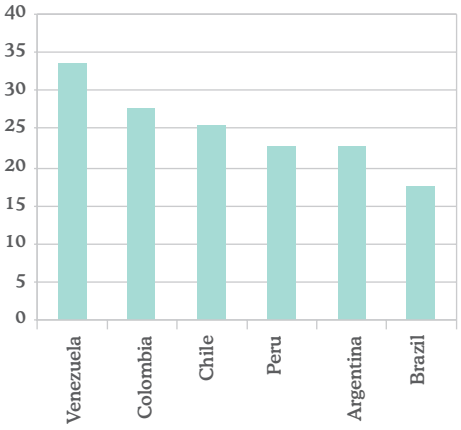
* Countries including: Argentina, Brazil, Chile, Colombia, Peru and Venezuela.
Source: BBVA, IIF

South America: Investment (%GDP)



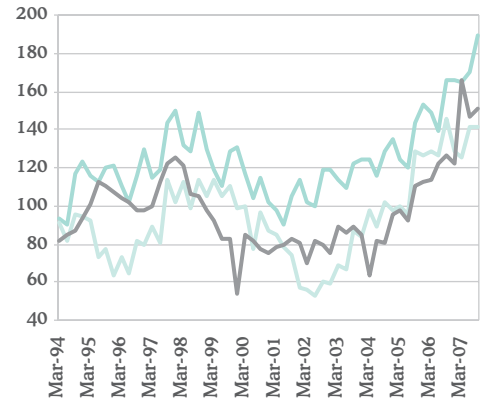
Source: BBVA

Investment as % of GDP



Source: BBVA

Infrastructure Investment Index



Source: BBVA

Program (PAC) places on infrastructure, are the type of policies that can which seek to help remedy the weak pace of investment in Brazil.

Growth in investment last year was underpinned in some cases (Brazil, Chile, Colombia, Peru) by a recovery in foreign direct investment (FDI). Foreign sources of funding have been particularly directed at industries connected to natural resources as a result of expectations for growth in demand for commodities[1].

Given the importance of the primary sector in the Latin America economies, an important question that comes to mind is the extent to which the strong pace of investment is linked to commodities, and therefore susceptible to intense variations in response to falls in commodity prices. Alongside investment in the export sector, which is one of the most characteristic aspects of the investment model in the region – at least in the current period of a global slowdown – we find the growing importance of productive investment in projects not related to this. Although there is a great diversity in the figures among countries, the general conclusion is that current growth is also being underpinned by activities which are less related to the economic cycle. As the adjoining graph shows, there has been a notable increase in investment in infrastructure in Argentina and Colombia. This pattern is also shared by Venezuela, where investment not related to either oil or construction sectors has systematically accounted for 70% of gross capital formation since 2004.

The investment plans of some of the countries in the region also point to an extension of this trend. In addition to the pump-priming investment in infrastructure in Brazil already mentioned, Chile plans several investment projects for energy supply which amount to 40% of total projected investment for the period 2007-2011. This is a percentage similar to the non-commodity-related investment expected in Peru over the same period. In the course of the next few years investment in industry, electricity and telecommunications (among other sectors) is estimated at $12 billion, equivalent to 11% of Peru's GDP in 2007. It is worth highlighting that growth in infrastructure investment in Peru during the past two years has accelerated to levels of over 15% against 6.6% in the period 2002-2005. This trend is partly explained by the push given by the government to public-private partnerships, as well as the high rates of return – estimated at between 15% and 20% in 2007 – afforded to leading companies.

In short, while there continues to be significant investment undertakings in the extraction and agricultural sectors, this is being complemented by alternative forms of investment, in particular infrastructure projects. This trend reduces the exposure of the countries in the region to fluctuations in the export sector while helping improve business productivity.

In any case, we cannot underestimate the importance that export-related investment has for the region, insofar as it helps to improve the current account balance – which for many years has been in deficit for the region as a whole – .

[1] In the case of Venezuela, the existence of currency controls and a policy rather hostile to foreign investments has led FDI in this country to be less relevant. In fact, its net balance in 2007 was negative as a result of the nationalization of Compañía Anónima Teléfonos de Venezuela (CANTV) and Electricidad de Caracas.

Growth in 2008 will remain strong, although it is expected to slow because of a less favourable external environment and late-cycle factors in a number of economies in the region

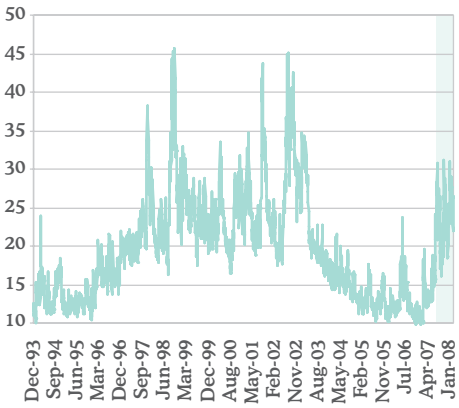
As is the case for other economic areas, the international environment will be much less positive for Latin America in 2008. First of all, the current crisis is clearly more far-reaching than a simple bout of financial volatility, and it has resulted in sharp increases in risk aversion, after a long period at historical lows. In addition, there has been a sharp deterioration in growth expectations in the United States and to a lesser extent in the rest of the industrial countries.

This combination of slow growth in the industrial countries and higher global risk aversion could hit external financing conditions and weaken inflows of foreign capital. At any rate, the effect has so far been moderate and we foresee no significant weakening in our central growth scenario. The main reason for this is that growth in the other emerging regions (Asia, with China to the fore) will hold up demand and therefore commodity prices, which is an important support factor for the vast majority of countries in the region.

On the other hand, after very high growth rates in 2007, domestic demand in a number of countries is showing signs of weakening. For different reasons, Colombia is one of the countries where a fall-off in domestic demand is expected as the hikes in benchmark interest rates that the central bank has implemented since 2006 make themselves felt. In other cases, it is supply problems which will put a brake on domestic demand. In Chile, the rising energy bill (as a result of the price of oil, gas import restrictions, etc) weakened the prospects for growth in domestic demand during the second half of 2007[2]. A further constraint to be taken into account on the supply side is the increase in capacity utilization rates, a situation that has only partially been alleviated by a rise in investment. In Colombia, for instance, despite the high levels of investment in machinery and equipment over the past few quarters, capacity utilization is running at 80%. For its part, Argentina has witnessed a very significant recovery in capacity utilization rates from the very low levels of 2002, to reach an average rate of 74% in 2007[3]. Peru is the most notable exception to this picture of weaker domestic demand. Strong business expectations have brought about a very buoyant situation in private investment, both domestic and foreign. In fact, foreign direct investment (FDI) rose by 54% in 2007 with respect to the previous year, to stand at an all-time high of 5.3 billion dollars. Similarly, private consumption played an important role in the strong domestic demand performance, registering a rate of growth over 8% in 2007 thanks in particular to strong expansion in urban employment.

All things considered, we forecast growth in the region to slow to 5.4% in 2008.

VIX Risk Aversion Index

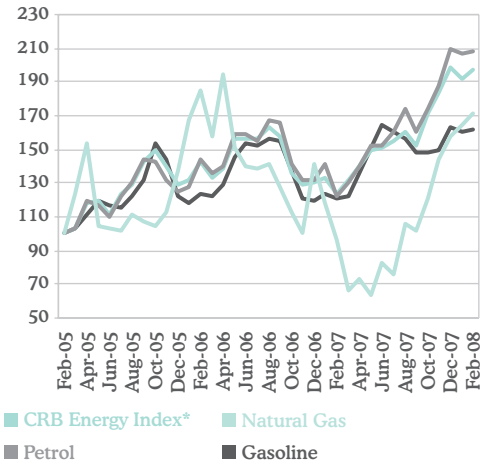


Source: BBVA - Capital Flows and Datastream

[2] In addition to the energy problems, the slowdown in domestic demand in Chile is also the result of monetary policy, rising domestic prices and supply factors in specific sectors (a salmon epidemic, mining strikes and the drought affecting agriculture and hydroelectric power production).

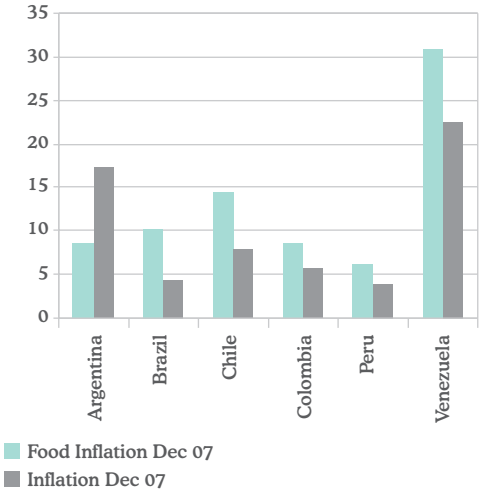
[3] In the cases of Argentina, Venezuela and Chile, estimates of potential GDP and the output gap (see article on this subject in this edition) indicate that GDP is rising above potential, with particular intensity in the first two cases.

Energy Prices
(Jan05=100)



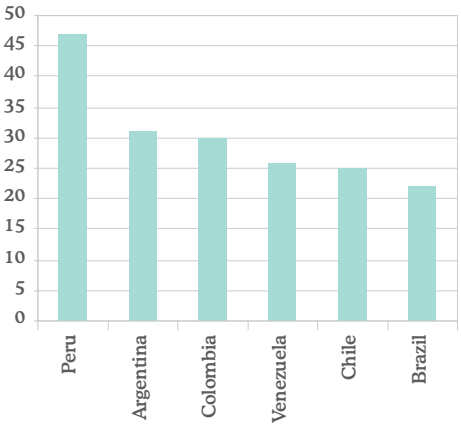
*aggregate of 17 energy products
Source: Bloomberg

South America: overall and food inflation in 2007
(%yoy)



Source: National Statistics Offices

South America: Share of food in CPI (%)



Source: BBVA

The region's inflation mirrors the rise in inflation worldwide

An upturn in inflation is one of the common features of all the countries in Latin America. Together with the fact that the prices of the most important energy commodities hit new highs in the second half of 2007 (see adjoining graph), the main focus of inflationary tensions stems from the rise in agricultural prices. After the second half of 2007, in particular, inflation in agricultural commodities led to a rise in food prices that has been particularly intense in Latin America, especially when compared with industrial countries. It is hardly surprising, therefore, that food prices have driven up the overall inflation indices. Brazil is a prime example of this trend: after a benign inflation rate of 2.9% in the first quarter of 2007, rising food price indexes – which recorded an annual rate of increase of 10% in the second half of the year – pushed up the IPCA to 4.46% at the end of the year, practically the Central Bank's targeted rate of 4.5%. Chile is experiencing similar signs of pass-through, with inflationary pressures initially concentrated in energy and food prices, but subsequently spreading to the services sector. As a result, the annual rate of inflation in December came in at 7.8%, above the most pessimistic forecasts. In Colombia this type of pressure on food prices is combined with strong domestic demand, so that the inflation target for 2007 was missed by 2 percentage points, making this year's target also difficult to meet.

In response to this rise in price indexes, a number of governments have opted to introduce price controls in some industries, with little success. In Venezuela, the most paradigmatic case, the adoption of such measures has impacted negatively on corporate profits in the sectors affected. This in turn has led to a reduction in supply and, in many cases, to shortages. Argentina has also sought to avert inflationary pressure, in particular by imposing quotas and duties on exports of primary products and introducing subsidies in several products (milk). In Colombia, the agreement reached by the government and supermarket chains to limit the rise in prices has also failed to bring positive results. More recently, new measures aimed at temporarily cutting tariffs on some food products and commodities have been introduced. These are unlikely, in our view, to have the desired effect of reducing inflation.

In other cases, policies aimed at controlling prices have taken the form of subsidies, either direct or through cuts in taxes. In Peru, the Fund for the Stabilization of Oil-Based Fuel Prices has prevented the pass-through of higher crude oil prices to domestic fuel. Chile, too, has pursued the same objective with its reductions in oil tax, leading to a fall in prices of almost 9%, with no corresponding fiscal erosion[4]. This was not the case in Peru, where subsidies are likely to be reduced if oil prices remain high.

Together with global developments in commodity prices, the other cause of the upswing in inflation is domestic, and lies in the economic dynamics of the region. The strength of domestic demand has given rise to price tensions, particularly in situations in which there are production constraints. In addition to Chile and Venezuela, Colombia has also been affected by supply problems. In this case, climatic phenomena *(El Niño* and *La Niña*) caused temporary disruptions to

[4] This is so because the measure falls within the structural surplus rule, which means there is a temporary decline in spending.

supplies of a number of basic products and exacerbated the spikes in inflation to such an extent that the steady downward trend in inflation in place since 1996 was reversed.

The combined effect of both factors pushed up end-year inflation in most cases to above the rates targeted by most of the Latin American central banks. In countries without explicit inflation targets, the problem is of even greater concern. Of the major economies, inflation is highest in Venezuela as a result of the combined impact of strong domestic demand, high capacity utilization rates, supply shortages in a number of products, higher indirect taxes and an economic policy that has given precedence to activity over price stability. Elsewhere, in Argentina despite the slight improvement in consumer prices compared with the end of 2006 (down from 9.8% to 8.5%), inflation remains above the regional average. In both countries, we expect inflationary pressures to persist in 2008.

In this context, it is worth noting the case of Peru since it is the country where inflation is most subdued. Despite the fact that inflation at the end of the year was above the central bank target rate, it was still one of the lowest among the major Latin American economies (3.9% compared with a targeted rate of 2%). In the first few months of 2008, however, inflationary pressures have been rising steadily as a result of the external supply shocks which have increased the prices of food and fuel. This situation has led to higher inflation expectations, which have risen from 2.0% to around 3.5%, according to the Central Bank's (BCR) Macroeconomic Outlook Survey. In response to this, both the BCR and the Ministry of Economics and Finance (MEF) have introduced measures to contain inflation expectations and reduce the risks of demand pressures on prices. On the monetary policy side, therefore, benchmark interest rates have been raised by 75 basis points since July of last year, and reserve requirements have been lifted twice since January, which will mean an increase in lending rates. For its part, the MEF announced a cut in food tariffs and a reduction in current spending, which should generate a surplus in the fiscal account.

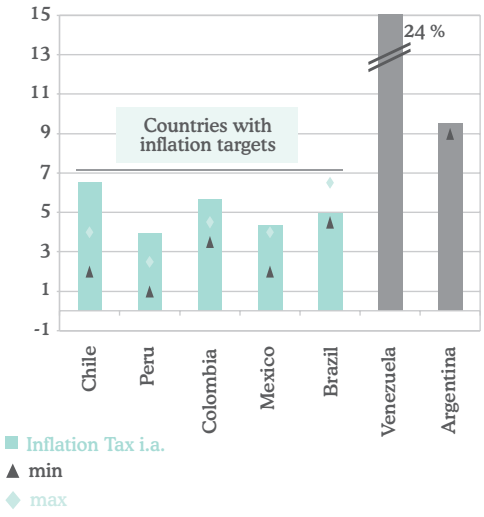
The risk of indexation and of an inflationary spiral in some countries could lead to further rate tightening by central banks

In addition to the global pressure on commodity prices, a further source of inflationary pressures lies in the possibility of second-round effects if higher prices pass through into wages. This factor constitutes a risk to the anchoring of inflation expectations in a number of countries in the region, most notably in those in which wages are indexed to inflation (Chile, for instance). Other countries such as Brazil and Colombia are also seeing systematic rises in inflation expectations which could result in wider second-round effects.

Looking forward to the end of 2008, our forecasts suggest an easing of price tensions in Chile, whereas Brazil, Colombia and Peru are expected to see little change. The increased doubts regarding Venezuela's commitment to price containment imply facing the greatest risk of a further rise in inflationary tensions.

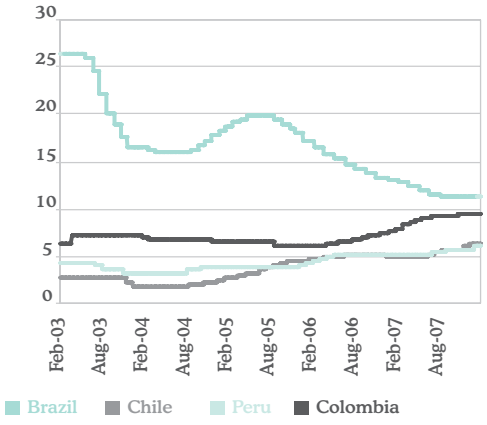
The risks to price stability pose fresh challenges for Latin America that will condition the region's monetary policy. Although interest rates

Inflation and Central Banks targets



Source: BBVA

South America: official rates in countries with explicit inflation targets



Source: Bloomberg

Inflation Expectations in 2008*

Survey	Oct-07	Feb-08
Argentina	11.1	10.0
Brazil	4.1	4.4
Chile	3.4	4.2
Colombia	4.2	4.6
Peru	2.3	2.9
Venezuela	19.8	24.8

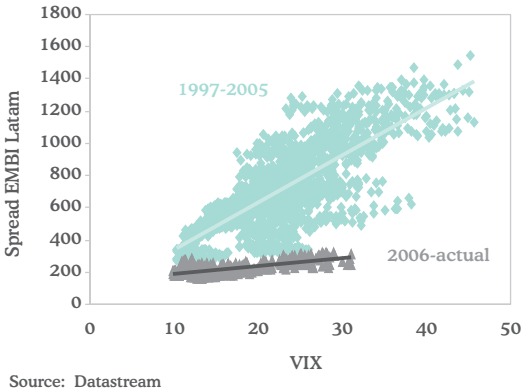
*Average forecast for end-year CPI
Source: Consensus Forecasts

Inflation (% end-year)

	2007	2008 (f)
Argentina	8,5	11,0
Brazil	4,5	4,5
Chile	7,8	4,4
Colombia	5,7	5,7
Peru	3,9	3,4
Venezuela	22,5	21,6

Source: BBVA

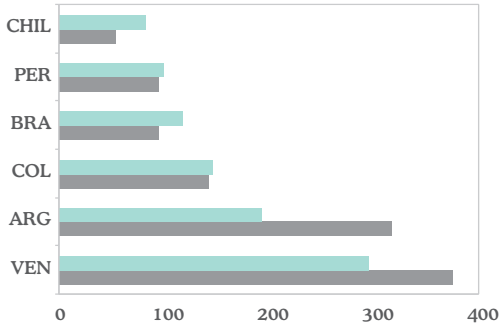
Global Risk Aversion and EMBI Latam



Source: Datastream

CDS and EMBI spread

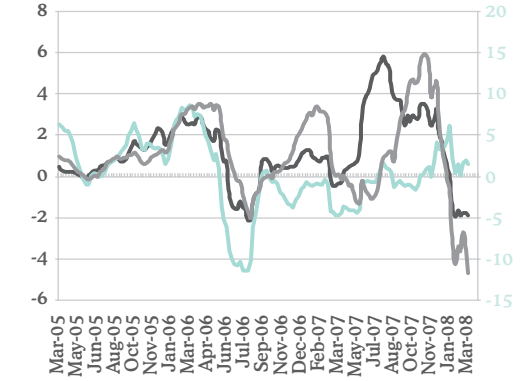
(change since Jul-07, basis points)



Source: Datastream and Bloomberg

Net inflows to investment funds

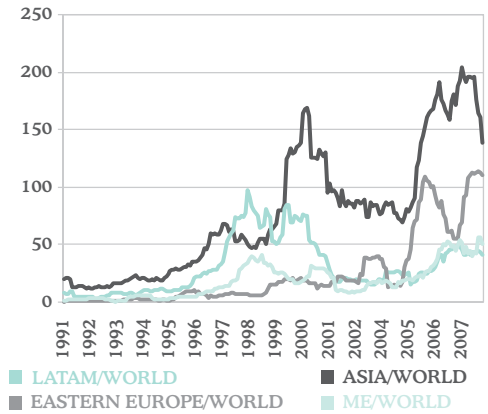
($bn accumulated quarterly in fixed-income)



Source: EPFR and AMG

Mergers and acquisitions completed in emerging countries

(accumulated annual $bn)



Source: Thomson one

around the globe have been falling, most Latin American central banks have maintained their commitment to price control and have adopted a tighter monetary policy stance in response to rising inflation. Brazil interrupted a long period of monetary policy loosening and has kept the SELIC rate on hold since September. Chile, Colombia and Peru have responded with hikes to benchmark interest rates and in the case of Peru reserve requirements were also increased. Argentina, in contrast, with its position of abundant liquidity in the financial system, saw a sharp decline in Badlar rates[5] in January, to as low as 9.5%. Venezuela, despite a hike in reserve requirements, has kept monetary policy expansive, putting further upward pressure on prices. However, the measures included in the anti-inflation plan approved by the government in 2007 indicate that monetary policy will be tighter in the months ahead.

Looking forward, monetary policy in the region should aim to keep prices within the range targeted by central banks, while also ensuring that further monetary tightening does not give rise to effects monetary authorities would rather avert, especially in those economies where exchange rates could be affected by the interest rate differential with the United States. Brazil, Chile, Colombia and Peru are particularly exposed to this risk after recording a sustained appreciation of their currencies against the dollar. This trend would probably be strengthened by further monetary policy tightened.

In general, monetary policy in the region may be said to have a neutral stance. We expect that in view of continuing price tensions and fears these will get worse, some countries will raise interest rates, and that this will result in more monetary policy tightening by most of the region's central banks.

South America: What is the perception of investors?

Rising risk aversion, falling stock market indices and, above all, higher corporate borrowing costs in the industrial countries have so far fed through to only a relatively limited extent to the emerging-market economies, in general, and Latin America in particular.

In fact, sovereign debt spreads in the region – measured in terms of EMBI Latam – have shown a lower correlation with the global risk aversion index as estimated by VIX[6] than during similar events in the past. This indicator has risen by almost 10 percentage points since the crisis started, to stand at its highest level since the spring of 2003. EMBI Latam, meanwhile, is up 125 basis points, considerably less than might be expected given the historical relationship between both variables[7]. Therefore, it is worth noting that in the current context of increasing risk aversion, the perception of risk in the region is comparatively low compared with previous crises. However, we also need to acknowledge that in the past few years debt levels, particularly dollar-denominated, have come down, so that EMBI indices may have become less relevant when measuring country risk. Therefore, other measures such as sovereign CDS might be a more accurate indicator of current risk perception for the region. In this case, the rise in sovereign spreads for 5-year bonds has been of similar magnitude to that registered by EMBI spreads, with the exception of a number of countries in the region such as Venezuela and Argentina, where rises have been much more marked.

[5] Average interest rates for fixed-term deposits over one million pesos published daily by the Central Bank.
[6] An estimate of global risk aversion calculated as an index of the implied volatility of S&P 500 option prices.
[7] On average, a 10-point increase in VIX has resulted in a rise of over 200 basis points in EMBI Latam.

As far as equities are concerned, whereas the stock market indices of the industrial countries are recording falls over 13%, Latin American indices are up by roughly the same percentage. With regards to capital flows, the deepening since the beginning of 2008 as the crisis deepened, there has been a net outflow of capital from the region, though here Latin America is being penalised less than other emerging-market areas, and Asia in particular.

Finally, from a more medium-term perspective, merger and acquisition activity, which has contracted significantly in the industrial countries and even in some Asian countries, is holding up well in Latin America.

External vulnerability mainly relates to global risk aversion and commodity prices

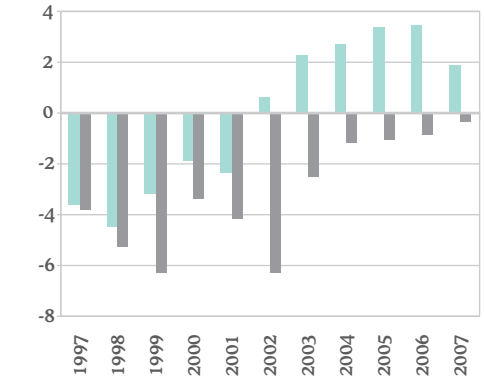
The outlook for the region rests on the assumption of no further deterioration of the international context. However, it should be highlighted that the main sources of external vulnerability are a sharp deterioration in financial variables (especially country risk and external borrowing) and a significant drop in commodity prices.

In the first case, we do not expect financial variables to deteriorate dramatically thanks to the improved levels of solvency in the region. Several countries are running fiscal or external surpluses, or both. Another major macroeconomic success has been the improvement in public debt ratios. Since the beginning of the expansion in 2003, public and external debt ratios have fallen in tandem and without interruption. Particularly noteworthy is the reduction in external debt, which in barely 4 years has shrunk by 30 percentage points of GDP. A second important factor in the region's improved solvency is the greater proportion of debt issued in local currencies as well as the lengthened maturities. With regard to the latter, few countries in Latin America have large amounts of debt maturing in the near future. In Argentina and Venezuela, public debt due this year only amounts to 1.9% and 0.82% of GDP, respectively. These figures will change very little in 2009. Colombia and Peru, meanwhile, have lower levels of debt than in previous periods of crisis, though they represent a much greater financial burden. For Colombia, debt maturing over the next two years amounts to 3.8% and 4.8% of GDP, whereas in the case of Peru, the figures are 2.7% in 2008 and 1.9% in 2009. It is clear that efforts to reduce debt and apply orthodox macroeconomic policies have made it possible to use the export boom to strengthen financial solvency to an extent unseen in the recent past of the region, placing it in a much better position to withstand the current crisis.

Leaving aside the vulnerability associated with tighter borrowing conditions, the export channel is another potential area of crisis transmission. Latin American exports are highly concentrated in commodities, which generally have a cycle strongly correlated with economic activity. Although there are reasons for believing that commodity prices are unlikely to stay at such high levels, it is difficult to imagine a slump in prices in the short term. Even in a scenario in which commodities stall, the outlook for Latin America would continue to be relatively bright. For a start, countries like Brazil, Peru and Chile have managed to diversify enough their exports, both in terms of market and type of products, for this to be a defence against a recession confined to the United States (see article "Anatomy of trade in Latin America" in this edition). In other cases (e.g., Argentina), the level of trade openness is low compared to the rest of the region, making the national economy more dependent of the evolution of the domestic market. Venezuela is a case apart in this respect, since its

South America: current account and fiscal balance

(% GDP)



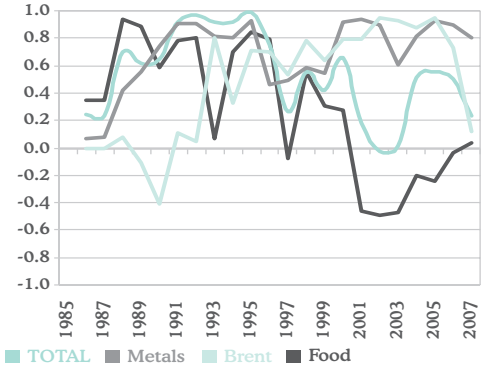
Source: BBVA

South America: public and external debt

(% GDP)

Sources: BBVA using National Statistics Offices' data

Correlation of increase in commodity prices and world growth

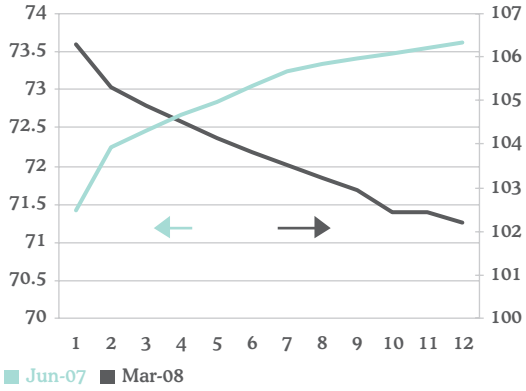


Source: BBVA

Wheat: annual change in global stocks (%)

Source: USDA

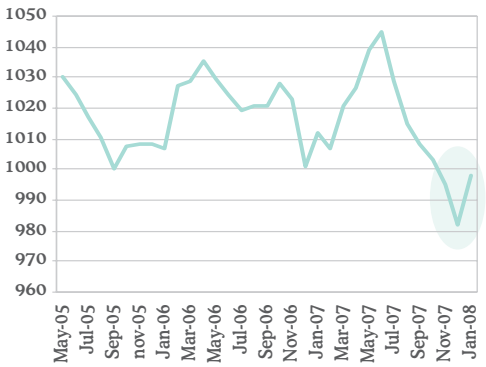
Oil futures curve ($/barrel)



Source: Bloomberg

US oil inventories

('000s of barrels)



Source: EIA

economy is highly dependent on oil. The same is true for Colombia because of the extent to which its exports are concentrated in the US and Venezuelan markets.

While the existence of alternative markets to the United States will help countries withstand the crisis, of even greater importance are the expected trends for most commodities. In this sense, a sharp downturn in commodity prices is far from being the most likely scenario over the short term. In fact, the defining characteristic of the current situation in commodity markets is the low level of stocks, both for agricultural products as well as mineral and energy products. The relative shortage of such products has had a direct effect on the futures markets, particularly of oil, which during 2007 went from contango (upward sloping) to backwardation (downward sloping), illustrating the relative undersupply that exists in the market[8].

Together with the level of stocks, other factors reduce the likelihood of large falls in prices over the months ahead. Starting with agricultural products, soy beans will continue to be buoyed by rising Chinese demand for this product and the strong demand expected from the bio-fuel industry[9]. The outlook for wheat is also bright. In this case, several of the producing countries (Russia, Argentina, Ukraine, Kazakhstan) have already limited exports of this cereal so as to keep domestic prices down. It is also important to remember that other farm commodities could see higher prices as farmers switch production to crops with a better price outlook, thereby reducing supply of crops initially unaffected by rising prices.

Within the group of base metals, copper prices are expected to ease back a little, but to remain near their all-time highs as the strong demand forecast in Asia offsets any fall-off in demand on the part of the United States. On the supply side, the new mines expected to come on stream in Chile could help to contain prices in 2008. However, the possibility of a repetition of energy restrictions and labour tensions in the extraction sector are two factors which could cancel out the effect of the new ore deposits and which could leave copper supply largely unchanged over the next year.

Currently, crude oil appears as the commodity most likely to register a slight fall in price. Even though markets continue to be affected by low levels of inventories and OPEC remains reluctant to step up production, we expect prices to come off the highs reached at the beginning of March, to levels of around $75-80 a barrel at the end of 2008[10].

In sum, commodity markets are still seeing strong demand, while in some cases there are impediments to growth in supply. For these reasons, we are inclined to believe that prices will remain high for most of these products. Over a longer timeframe, a greater degree of uncertainty exists as to commodity price developments, which to a large extent will be shaped by whether or not the US slowdown spills over to the other major economic areas. Such a scenario would test the resilience of Latin America more severely and would in our view encounter widely differing responses across countries.

[8] When stocks of a commodity fall, spot prices rise, leading to an inversion of the futures curve (backwardation).
[9] As this industry expands, it will require an increasing share of world soya bean production (one-fifth of world supply over the next decade). A more detailed analysis of the impact of the bio-fuel industry on agricultural prices can be found in our publication "Situación Argentina" of the first quarter of 2008.
[10] A fall in prices seems reasonable given the slowdown in world economic growth and because of the expected increase in supply from non-OPC members, which should help to boost inventory levels.

III. Background topics

Anatomy of trade in Latin America

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The Latin American economies have been very vulnerable to external crises as well as crises originated in the region. The current financial turbulence is scarcely comparable with a large part of previous episodes. In this occasion, the crisis originated in a developed country. While during episodes in which the crises originated in emerging countries (e.g. the Mexican, Russian and Asian crises) the region was affected by "contagion", this time the crisis originated in a developed country, and has barely spread to emerging countries. A comparison with the immediately previous crisis, the recession in the US economy in 2001, is also not very useful since Latin America was hit by a crisis originated the region, namely the Argentinian crisis.

In all of these episodes the financial channel had an amplifying effect which provoked a sharp adjustment in the economies in the region. In this occasion, the financial impact appears to be mute, and the question is whether this will also be the case for the real economy.

Are the economies in the region less vulnerable now?

The degree of vulnerability and, therefore, the potential impact in terms of growth of the economies in the region depends basically on three factors: 1) the existence of other sources of growth which help offset a slowdown in exports; 2) the degree of openness of the economies, and lastly 3) the degree of diversification of exports both geographically as well as by product type.

In the context of a clear slowdown in the developed economies in which we will be operating in the coming months, foreign trade is a sensitive issue for the economies in the region.

(1) **Growth is less dependent on the foreign sector.** Growth in the region in the past few years has been driven by domestic demand, both consumption and investment. The increase in domestic demand is the result of higher disposable income, due to favourable terms of trade on one hand, and on the other by the push given by public spending. From 2004 to 2006, the foreign sector was a drag on growth.

(2) **The economies in the region are more open, and therefore, more integrated.** One way of gauging the possible scope of the impact of an economic slowdown is the degree of openness to trade as measured by the sum of exports and imports as a ratio of GDP. The degree of openness of the Latin American economies has grown in the past few years, thereby strengthening their growth and increasing their trade options. On the other hand, this implies a greater degree of integration with the trend in the global economy, which makes them more sensitive to external circumstances, and therefore, more exposed to difficult periods. In **Table 1** we can see that the ratio has increased significantly in the majority of the economies in the region from the 1990s up to the present.

(3) **Degree of diversification of exports** One way to reduce vulnerability is to diversify export markets and the range of products which are exported. It is essential, therefore, 1) to

Table 1.
Trade openness

	1990	2006
Argentina	15%	45%
Brazil	12%	26%
Chile	61%	75%
Colombia	33%	43%
Peru	28%	48%
Venezuela	58%	58%

Note: Exports plus imports as % of GDP
Source: IFS and IMF

Table 2:
Exports of Latin America as % of world total

	1998	2006
Argentina	0.5	0.4
Brazil	0.9	1.2
Chile	0.3	0.5
Colombia	0.1	0.2
Peru	0.4	0.6
Venezuela	0.2	0.2

Source: Direction of Trade Statistics IMF and BBVA

Table 3:
Index of exports by price and volume

	2006	
Exports	Volume	Price
Argentina	143.4	122.4
Brazil	173.5	144.1
Chile	141.9	213.1
Colombia (coffee)	119.1	115.7
Peru	144.2	264.4
Venezuela	107	168.7

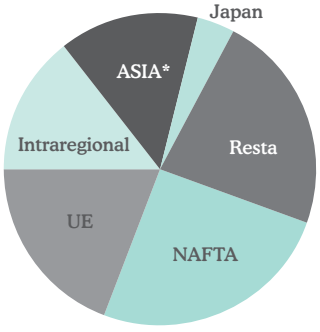
Year 2000=100
Source: IFS and IIF

Table 4: Exports to the US as % of total exports

	1998	2002	2006
Argentina	7.8	11.5	8.8
Brazil	19.3	25.7	17.8
Chile	14.3	19	15.6
Colombia	38.2	44.1	35.7
Peru	32.8	26.2	24
Venezuela	42.1	45.1	46.2

Source: DOTS

Chart 1:
Distribution of exports by market
(in %)



Source:DOTS
*India, China, Tailandia, Filipinas, Malasia, Indonesia, Vietnam y Bangladesh

examine the changes which have taken place in the trade relations of the countries in the region, 2) understand the reasons behind these changes in the past few years (globalization, trade treaties …), and 3) analyze the effects this will have within the current international situation.

The trade relations of the countries in the region are changing on different fronts. Firstly, there has been a significant increase in export volumes, a phenomenon known in the literature on trade as the "intensive margin". Secondly, diversification of export markets is taking place, while lastly, but to a lesser extent, there has also been diversification of the range of products and product varieties exported, a phenomenon known as the "extensive margin".

a) **The volume of exports of the region has maintained high growth rates.** Latin American exports have grown at rates above those for growth in exports on a global level. In **Table 2** we show how the importance of exports of the economies of the region in global trade has been increasing. As is to be expected, the biggest economies have continued to gain more weight. However, it is interesting to break down this growth both in terms of prices as well as volumes given that some of the regions have benefited from positive real terms of trade, mainly for commodities. Looking at the export price indexes and volume index in **Table 3** we can see that both have increased, with Chile and Peru the countries which have benefited most from higher prices for their export products.

b) There has been a **diversification of market destinations**

…other markets have gained in importance…

Traditionally, the US and the NAFTA area have been the main destinations for Latin American exports. However, trade with the NAFTA area has become less important, accounting for only 25.4% of the region's exports in 2007, compared with 32.7% in 1997. By country, one can see **(Table 4)** how exports to the US fell in the period 2002-2006 in all countries, with the exception of Venezuela. The biggest fall was in Brazil where the percentage of total exports to the US dropped from 25% to 17%. Argentina is the country where the US accounts for the lowest percentage of exports at only 8.8% of the total. There has been a similar trend in exports to the EU where the percentage of the total fell from 29% to 19%.

Other emerging regions have grown in importance such as Asia as well as other countries within the Latin American region itself (**Chart 1**). Asia accounted for 14% of the region's exports in 2007, up from 6%. Exports to China and India in particular have increased. The number of trade agreements with the Asian region has increased in the past few years[1]. At the same time intra-regional trade now accounts for 14% of the total, up from 8%.

The progress made in diversifying export markets is very clear in the region as a whole. However, this is not so clear when one looks at individual countries, with the Colombian and Venezuelan economies still very dependent on the US.

[1] Chile signed free trade agreements with Korea (2003), China (2005) and Japan (2007) and Peru with Thailand (2005).

…the number of export destinations has increased…

One means of gauging the trend in market diversification is to identify the degree of penetration in new markets (independently of the small market share they might represent). We have constructed an indicator which measures which market destinations have acquired a certain degree of representativity.[2] This indicator shows that in the past few years the majority of countries have increased the number of export markets by more than 50%.

A more standard indicator for evaluating the degree of export market diversification is the one that uses the concentration of exports by country. For example, we can see that 50% of the exports of the countries in Latin America are very concentrated in a limited number of markets, the average being 5 destinations. However, this indicator also shows a certain degree of diversification in that the number of countries which account for this 50% of exports has increased in the period 1998-2006, although not significantly.

Both measures show the progress made by the region in terms of geographical diversification. However, although this trend is positive there remains a great deal of scope to increase the number of export markets.

…intra-regional trade has benefited from the preferential trade agreements signed in the past few years…

The countries in the region are taking advantage of areas in which they complement each other as well as their productive differences in order to boost growth. The signing of preferential trade agreements is strengthening relations within the region. Latin America is increasingly finding greater acceptance of its products among neighbouring countries, which favours the development of new industries, trade relations as well as greater specialization.

Comparing export levels in 2007 with those in 2002 and 1998 as shown in **Table 5** we can see how the share of intra-regional trade has increased in Brazil and Colombia. However, the advances made are scant despite geographic proximity. It is to be hoped the trend towards closer ties in the region intensifies.

Most of the countries in Latin America have free trade and preferential treatment agreements. Chile, Colombia and Peru have signed trade agreements with other countries in the region in the past few years, and this could give a push to growth in intra-regional trade. Although it does not appear that these trade agreements have directly impacted on growth in intra-regional trade in terms of volumes, they may have strengthened diversification and led to the development of new areas of trade.

c) Product diversification

Another factor which reduces vulnerability through the channel of trade is the diversification of export products and varieties. There are new sectors in the region involved in international trade with high-value-added products such as car components, textiles, footwear and aeronautics. The development of new industries has given access to non-traditional international markets, but the degree of entry continues to be low, while exports of commodities continue to be very important.

[2] We calculate the number of "new markets" which countries in the region are accessing, defining a market as new when it accounts for at least 2% of exports as a percentage of GDP. This concept has been borrowed from the empirical literature on international trade based on company data, see Eaton, Korturn and Kamarz, (2005) "An anatomy of international trade: Evidence on French Firms".

Table 5:
Intra-regional exports
(% of total)

	1998	2002	2007
Argentina	41.3	36.48	33.1
Brazil	23.2	15.42	27.1
Chile	19.2	16.81	15.2
Colombia	20.8	20.26	28.7
Peru	16.0	12.78	20.5
Venezuela	16.0	8.64	5.6

Source: DOTS

A recent study carried out by the Andean Development Corporation[3] shows the direct effect preferential agreements has on the pattern of trade of countries. Countries with preferential agreements show a clear increase in the range of products exported and in sectors with higher value-added, which is a very positive factor in the development of trade in Latin America.

The region has not made much progress in product diversification. There continues to be a series of predominant products which make up the bulk of their production. This gives rise to two areas of risk which will be explained later in more detail. On the one hand there is a high degree of dependence on commodities, while on the other there is competition from new emerging economies, particularly China, and to a lesser extent India.

Dependence on commodities

Commodities have become a key component of world trade, particularly in Latin America, making up more than half of total exports, while their prices have increased markedly in the past few years (See **Table 6**)

The current rise in prices has improved the terms of trade for commodity exporters, increasing the value of their exports in what has been a very favourable external shock. The increase in trade with Asian countries and the characteristics of this trade has strengthened the concentration of commodity exports in Latin America. However, it is necessary to take advantage of the current price boom to invest in other sectors, which, although they may not appear so profitable, will allow greater growth in the long term.

Measures are being taken among the countries in the region to increase the number of export industries and varieties of products. The study made by the Andean Development Corporation (CAF) mentioned above with a breakdown of the figures by industry and range of product[4] shows Peru had high levels of growth in the range of the products it exports, while growth in Chile and Colombia is moderate. Brazil starts from a situation with a wide range of export products but growth in this range is moderate.

Another key factor in maintaining growth is investment in innovation and the adoption of new technologies in order to gain competitiveness in international markets. The region has a long way to go in this area. According to a recent study by the OECD using its Global Competitiveness Index, Chile and Brazil are the two most advanced countries, while Peru is also making an effort to achieve higher levels of innovation. [5]

Latin American countries are not alone among emerging economies in being involved in international trade.

The appearance of new markets such as the case of China and India has led to an increase in competition in the international markets as well as an increase in the number of potential markets. If the countries in the region maintain their pattern of concentrating on commodities they will not face strong competition while demand for these remains

Table 6:
Commodity exports as % of total exports by market

	2000	2006
NAFTA	79.09	76.15
UEM	69.74	60.34
ASIA	81.45	80.91
Japan	82.19	90.05

Source: COMTRADE and BBVA

Box. Methodology

Coefficient of specialization:

$$C.E. = 1 - \frac{1}{2}\sum_n (a_{it}^n - a_{jt}^n)$$

Coefficient of conformity:

$$C.C. = \frac{\sum_n a_{it}^n a_{jt}^n}{\sqrt{\sum_n (a_{it}^n)^2 \sum_n (a_{jt}^n)^2}}$$

Where ***a*** represents the share of good ***n*** in total exports of country ***I*** (in our case, we assess each country in the Latam region) and this is compared with the share of exports of good ***n*** in total exports of country ***j*** in this case, j represents China.

[3] "Export Variety in Latin America", Jose Pineda and Pablo Sanguinetti (2007), Working Paper of the Andean Development Corporation, (CAF).
[4] Using the international harmonized classification.
[5] See "Trade for Development: China, India and the challenge of specialization", (2008), Economic Prospects for Latin America OECD.

high. However, it is necessary to increase investment in new productive processes in order to guarantee their role in world trade in the future. With a view to gauging the specialization process and the degree of competition to which the region could be subject due to the appearance of new markets, we have formulated two indexes which measure the degree of specialization in the export of certain products in two economies: *the coefficient of specialization (CE)* and the *coefficient of conformity (CC).* In order to calculate these coefficients we have used the COMTRADE database compiled by the United Nations with a level of disaggregation for the exported products of up to three digits. The calculation of the indexes has been carried out for the largest economies in the region against the structure of exports in China as one of the main economies which could pose a threat to the region in international markets. We also calculate the *coefficient of regional specialization* which measures the degree of specialization of different sectors within the region.

Coefficients of specialization and conformity

These two indicators allow us to compare the trade structures of two markets/countries. We compare the countries in the region with China because of its importance in world trade and the impact it could have on competition in the international markets. These coefficients are not without their limitations given that they do not take into account factors which could be important for some studies such as the case of the size of the economies under study. We also do not take into account the import pattern of the Chinese economy to gauge the complementarity of its products and possible intra-industrial interaction. However, in our case what we want to examine is the trend in exports for each country over the past 15 years and its impact on competition.

These coefficients compare the importance a particular good has within total exports of two economies. If the importance different goods has within the structure of exports is identical in the two economies then the *coefficient of specialization* will be equal to 1, which implies that the degree of competition is high. On the other hand, if the export structure is totally different, the coefficient will be equal to 0. The results obtained indicate that competition between countries in Latin America and China is decreasing, while there does not appear to be a great deal of overlap given that the levels of the indexes are increasingly lower. The specialization coefficient shows that, except in the case of Brazil, specialization in China and the Latin American countries follow divergent trends. The *coefficient of conformity* gives a similar reading. A value of 1 indicates a high degree of specialization while a low value indicates a low level of specialization. **Table 7** shows how the value falls in all countries with the exception of Brazil.

From the above, it can be inferred that China is not a big competitor of Latin America given that the region's pattern of trade remains concentrated in commodities.

Coefficient of Regional Specialization (CER): In order to compare the level of specialization achieved by each of the countries in Latin America we have calculated the *Coefficient of Regional Specialization* (CER) of each country compared with the region.

If the CER>100, the region is specialized in this sector; CER<100 signifies a lack of specialization, and if CER= 100, the level of specialization of the country is similar to that of the region. In the study CER is used to determine the level of specialization of the country in the industrial manufacturing sector.

Table 7: Coefficient of conformity and specialization

		1997	2006
Argentina	I.E.	0.16	0.10
	I.C.	0.06	0.02
Brazil	I.E.	0.24	0.30
	I.C.	0.12	0.22
Chile	I.E.	0.16	0.10
	I.C.	0.06	0.02
Colombia	I.E.	0.25	0.22
	I.C.	0.17	0.09
Peru	I.E.	0.21	0.14
	I.C.	0.11	0.05
Venezuela	I.E.	0.13	0.04
	I.C.	0.13	0.02

Source: COMTRADE and BBVA

Box. Coefficient of Regional Specialization:

This coefficient measures the level of regional specialization compared with the country as a whole for the sector considered (Saenz de Buruaga; 1988; 430).

$$CER = \frac{\left(P_{ir} / P_{iN}\right)}{\left(P_r / P_N\right)} \cdot 100$$

Where we calculate the ratio of the value of the exports,P, of a country r in the sector I to total exports of country N. Dividing by the ratio of the exports of country r to the total exports of the region. The countries included are:

Argentina
Chile
Colombia
Mexico
Peru
Venezuela

The level of disaggregation of the sectors is 10, taking a single digit from 0 to 9 in keeping with the international classification:

0 Food and livestock
1 Tobacco and beverages
2 Raw materials except food and
3 Fuel/lubricants, minerals
4 Animal or vegetable wax/fat/o
5 Chemical products no specified
6 Manufactured goods
7 Transportation machinery and equipment
8 Diverse manufactured goods
9 Raw materials not included

Tables 8 and **9** give the results obtained for 1997, 2002 and 2006. For each year we list the countries which have the highest coefficient of specialization for each of the sub-groups. In the first place, we state which is the country most specialized in the production of different product items. As we can see there have been slight changes throughout these years. As is to be expected, Venezuela has been number one in section 3, for oil, while Chile has been the leader in manufactured and merchandise goods. Meanwhile, in the drinks and food section, Brazil, Chile and Mexico have disputed the leading position in the chosen years. **Table 9** shows the coefficients for 2006, and as we can see commodity items, whether these been extracted or cultivated goods, are those with the highest coefficients. This highlights the fact the region has scope to encourage the development of activities related to sectors with higher value-added.

Conclusions

The slowdown in the world economy led by the US will be reflected in lower exports in the region. However, there are factors which allow us to be reasonably optimistic as regards the scale of the impact of this. Firstly, there has been significant geographical diversification of exports in most of the Latin American economies towards high-growth regions. In addition, the indicators of specialization and complementarity suggest that trade with Asia, and more specifically with China, is heading in the right direction for most of the countries in the region. However, on the negative side one should mention the high degree of sector concentration in raw materials, given that the prices of these are expected to moderate in the short term. This is a clear area of vulnerability in the medium term which the region should address.

Table 8: Ranking of coefficients of regional specialization for Latin America

Sector*	1997		2002		2006	
0	Argentina	252.23	Argentina	284.42	Argentina	286.73
1	Brazil	221.39	Chile	267.53	Argentina	128.79
2	Chile	360.05	Chile	369.97	Chile	337.77
3	Venezuela	533.57	Venezuela	538.04	Venezuela	443.42
4	Argentina	648.16	Argentina	784.02	Argentina	859.19
5	Venezuela	218.11	Colombia	231.87	Colombia	180.88
6	Chile	243.09	Chile	265.23	Chile	289.61
7	Mexico	173.79	Mexico	159.32	Mexico	182.79
8	Mexico	163.11	Mexico	151.57	Mexico	177.81
9	Peru	737.70	Peru	1330.77	Peru	789.63

* Legend sees in Stall page 17
Source: COMTRADE and BBVA

Table 9: Coefficients of regional specialization for Latin America

	2006									
Sector*	0	1	2	3	4	5	6	7	8	9
Argentina	287	129	102	70	859	177	70	43	30	121
Brazil	171	119	173	37	109	147	127	82	59	111
Chile	124	163	338	9	11	96	290	5	9	141
Colombia	138	35	64	184	55	181	100	21	120	160
Mexico	38	109	15	74	4	77	58	183	178	33
Peru	128	5	296	38	89	43	164	2	105	790
Venezuela	1	5	4	443	0	25	34	3	2	1

* Legend sees in Stall page 17
Source: COMTRADE and BBVA

The natural interest rate: estimation for Colombia and Peru[1]

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The main instrument used by central banks to communicate a change to their monetary policy stance is the short-term interest rate. An increase in the rate indicates a more restrictive monetary policy stance (or less expansive), while cuts reflect more accommodating conditions (or less restrictive). That is to say, the key is the direction of the change in monetary policy, comparing the new rate with the previous level.

However, the level of the intervention rate per se is not an indicator of the absolute position, whether expansive or restrictive, adopted by monetary policy at any particular moment of time. In order to find this position in absolute terms, one needs to compare the real short-term interest rate with a reference rate, which is of a more structural nature. This is known in the economic literature as the natural interest rate (NIR).

According to Wicksell (1989), the NIR is the rate which establishes an equilibrium for savings and investment in a situation of price stability. This takes place when the interest rate is similar to the marginal productivity of capital. Greenspan (1993), for his part, defines the NIR as the rate which allows economic activity to maintain its potential level over time. Woodford (2003) offers a third definition in which the NIR is the outcome of a general model of equilibrium without nominal rigidities; that is to say, with flexible prices.

An expansive monetary stance (restrictive) corresponds to an interest rate which stands below (above) its natural rate. By adopting this stance, the central bank is seeking to induce an acceleration (slowdown) in economic activity by putting upward (downward) pressure on inflation in order to gradually bring it in line with its target.

If a central bank knew what the level for the natural interest rate was, this would simplify policy decisions in that these should be directing the intervention rate towards its natural level. Likewise, it would be easier to communicate the true monetary policy stance.

However, the NIR is neither observable nor constant given its determinants fluctuate over time. In particular, the NIR depends on the preference rate of economic agents over time, growth in total factor productivity, the elasticity of the substitution between consumption and saving, tax policy, the premiums assigned to different risks, and restrictions on the movement of capital, among other variables. Given that some of these variables are not observable, neither is the natural interest rate observable, which means it has to be estimated.

There are different approaches to estimating the NIR. Firstly, using a simple statistical approach one can obtain the moving average of the real interest rate. This approach uses a window which reflects the average duration of an economic cycle in such a way that idiosyncratic shocks to the nominal rate of interest and the rate of inflation are offset. In this way the average interest rate is expected to be similar to the natural. The advantage of this methodology is its simplicity, while the disadvantage is it does not incorporate structural or systemic changes. The estimate, therefore, depends to a large extent on inflation and the rate of growth of economic activity being relatively stable.

Secondly, one can estimate the natural interest rate level using macroeconomic models. The advantage of this methodology is that it

[1] We are grateful to Mario Nigrinis for his help with estimating the natural rate of interest and with the description of the results for the case of Colombia.

allows one to obtain not only the natural level for the interest rate, but also the sources of changes in this. An example of this model is the one used by Bomfim (1997). One of the limitations of this approach is that it uses extensive and complicated models, which makes the estimate expensive. Likewise, the series estimated for the natural interest rate is very much dependent on the assumptions used in the model.

A third and more specific approach is that proposed by Laubach and Williams (2003) for the United States. Given that the NIR is not observable, these authors estimate it using the Kalman filter smoothing algorithm in a small-scale, semi-structural model for a closed economy in which the NIR is determined by productivity. While the methodology of Laubach and Williams (2003) is one of the most used, it can end up being expensive in the case of cross-sectional studies, given that it requires defining semi-structural models for each country in question.

In this article we develop an alternative approach to arrive at an estimate of the NIR. We use a flexible structure in the shape of a space-state representation, which takes the form of a VAR(2). The variables included in the model are the real ex-post interbank market rate[2] (r_t); the output gap (og_t) and the inflation gap (gap_inf_t). The last two variables are obtained by using the Hodrick-Prescott filter.

The model used involves a scheme of three equations:

$$r_t = \mu_{1t} + \sum_{i=1}^{2} \beta_{1it} r_{t-i} + \sum_{j=1}^{2} \alpha_{1jt} og_{t-j} + \sum_{l=1}^{2} \delta_{1lt} gap\_\inf_{t-j} + \varepsilon_{1t}$$

$$og_t = \mu_{2t} + \sum_{i=1}^{2} \beta_{2it} r_{t-i} + \sum_{j=1}^{2} \alpha_{2jt} og_{t-j} + \sum_{l=1}^{2} \delta_{2lt} gap\_\inf_{t-j} + \varepsilon_{2t}$$

$$gap\_\inf_t = \mu_{3t} + \sum_{i=1}^{2} \beta_{3it} r_{t-i} + \sum_{j=1}^{2} \alpha_{3jt} og_{t-j} + \sum_{l=1}^{2} \delta_{3lt} gap\_\inf_{t-j} + \varepsilon_{3t}$$

The NIR is obtained from the states of the equation of the interest rate (the first in the model) when output and inflation gaps are closed. Thus the natural interest rate is equivalent to:

$$r_t^* = \frac{\mu_{1t}}{(1 - \sum_{i=1}^{2} \beta_{1it})}$$

Lastly, the states μ_1, β_{1t} y β_{2t} are estimated with a smoothing factor for the states which is endogenous to the estimate.

Results

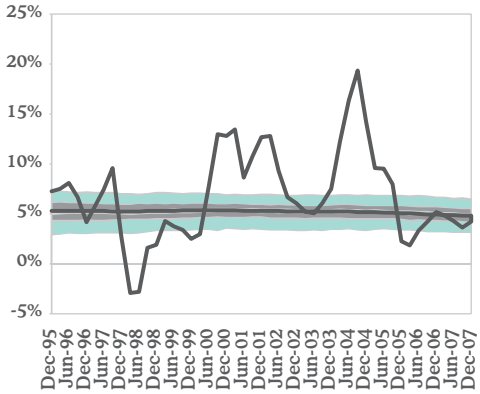
In the case of **Colombia**, the NIR is between 4 and 5 percent, with a slight downward trend. This estimate is quite similar to that of previous studies carried out by the Bank of the Republic of Colombia, such as by Echavarria et.al 2006.

A number of lessons can be drawn from the estimate of the NIR for Colombian monetary policy from the 1990s. In this respect, it is worth reminding ourselves that Colombia began using inflation-targeting in 1999. Prior to that, the strategy used was a hybrid of monetary aggregates and exchange rate control by using a band system. The first thing which is observable is the wide changes in the interest rate in the 1990s, compared with the movements seen throughout the current decade under the inflation-targeting system.

[2] The real interest rate ex-post is obtained by deflating the nominal interest rate with the observed inflation rate.

At the start of the 1990s, the Colombian economy went through a period of structural reforms. The country began a process of opening up its economy, institutional changes were introduced, with the Central Bank made independent, while it set itself the target of maintaining the purchasing power of the local currency by aiming for a low and stable rate of inflation. The first challenge which the Central Bank faced was in 1992 when the country suffered electricity rationing because of the negative effects of the El Niño climate phenomenon on reserves of water used by hydroelectric plants. The Central Bank decided to adopt an expansive monetary policy stance[3] with a view to easing the negative effects of this shock on the economy. Afterwards, in the mid-1990s, the Central Bank adopted a restrictive policy consistent with softening the economic cycle. The decade ended with the biggest fall in output since records have been available as a result of the crisis created by the Russian debt moratorium, and increased aversion to risk on the part of international investors, which led to reduced capital flows and a strong adjustment in the exchange rate.

Colombia: Natural Interest Rate

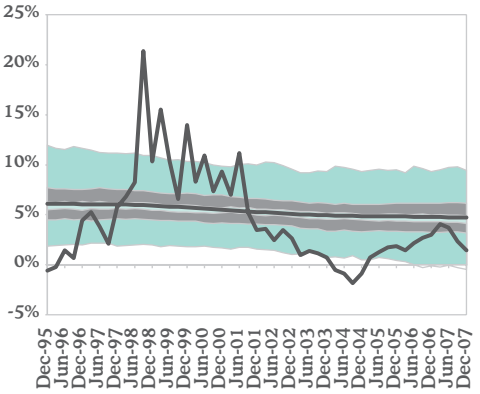


Source: BBVA

In the first part of this decade, the Central Bank adopted an expansive monetary policy stance aimed at aiding the economic recovery. Since 2006, the Central Bank has been increasing its reference rate as it moves towards a neutral stance in monetary policy. The estimate for the NIR confirms this perception, and shows the monetary policy stance as of December 2007 to be neutral. Considering the decision taken by the Central Bank in February 2008 to increase its intervention rate by 25bp, as well as the observed and expected trend in inflation and the forecast for the economic cycle, it cannot be ruled out that the monetary authority decides to keep to this stance for the rest of the current year. In order for this to be the case, it is forecast it would be sufficient for the Central Bank to maintain its intervention rate at the current level of 9.75 percent.

In the case of **Peru**, the estimated NIR for the period 1995-2007 stands at about between 5 and 6 percent, with a more marked downward trend than in the case of Colombia. The estimated level is in keeping with that of Castillo et al. (2006), who, using a general equilibrium model, estimated the average NIR for the period 1994-2005 at 4.7 percent. The NIR between 1994 and 2005 is 4.7 percent.

Peru: Natural Interest Rate



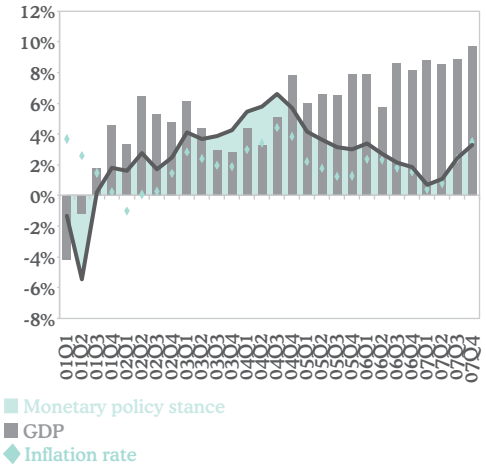
Source: BBVA

The results obtained reflect quite well the different periods in which the Central Reserve Bank of Peru (BCRP) has carried out monetary policy in the past few years. As can be seen, between the end of 1995 and 1997 monetary policy was expansive, which is reflected in a strong recovery in the rate of growth of economic activity (7.1 percent on average annually between 1993 and 1997) after the recession in the period 1988-1992 in which GDP fell by an annual average of 5.3 percent. The economic expansion brought with it imbalances in the foreign sector, with a current account deficit of about 7 percent of GDP annually on average between 1993 and 1997. Inflation, however, began to slow gradually to levels in accordance with price stability in line with a monetary policy stance which was consistently less relaxed.

Between 1998 and the first half of 1999, the NIR stood at around 6 percent. Given that the real interest rate in this period remained significantly above this level, monetary policy was clearly restrictive. In this period (external financial shocks in Russia and Brazil, which had a negative impact on the rest of the emerging economies), the BCRP appeared to allow the depreciation of the Peruvian sol to moderate (with the slowdown in economic activity that this would bring about) in order to reduce the negative impact on the probability of defaults by economic

[3] The monetary policy stance is measured as the difference between the real interbank rate of interest and the estimated natural rate of interest.

Peru: Monetary Policy Stance[1/], inflation rate and GDP growth: 2001-2007



[1/] The monetary policy stance is calculated as the difference between the interbank interest rate in real terms and the natural interest rate. The graph shows the negative of this difference, so that an expansive monetary policy stance has a positive sign.
Source: BBVA

agents (balance sheet effect), given the high level of financial dollarization of the economy.

After this crisis period and the political turbulence in 2000-2001, the Central Bank looked to promote growth in economic activity (0.2 percent in 2001) to avoid the risk of deflation (the general level of prices fell 0.1 percent in 2001). Given that in 2002 the BCRP began to adopt inflation-targeting as part of its monetary policy, with a target of 2.5 percent (+/- one percentage point)[4], and that inflation at the time was significantly below that level, one would expect to see an expansive monetary policy stance from 2002. In effect, the estimate we arrived at shows not only the change in direction in monetary policy, but also policy becoming expansive from around that time.

In the second half of 2004, the BCRP began an upward cycle in its reference rate, increasing it twice during this period within a context in which supply shocks were putting upward pressure on inflation, which in turn started to make itself felt in inflationary expectations. From then and until 2006, the estimate shows a gradual withdrawal of monetary stimulus in line with the statements made by the Central Bank. As a result of this, at the end of 2006, and taking into account the uncertainty of the estimate, monetary policy was basically neutral.

However, during 2007 and until recently, the estimate shows the start of a new period in which the monetary policy stance has been more relaxed. This has to do with the fact that the increases in the intervention rate (in July and September of that year) did not counterbalance the increase in inflation. To the extent that the transitory effects of the rise in the inflation rate generated by the increase in international prices of food and oil are not translated in higher inflationary expectations, we expect to see the monetary policy stance move gradually towards a level closer to neutral over the next few quarters. This could take place by raising the reference interest rate or the bank reserve requirement ratio. The BCRP has already used the latter policy option twice in 2008. It is estimated that the accumulated impact of these measures would be equivalent to raising the reference rate by 100 basis points over the next 12 months.

In short, the methodology proposed in this article allows us, therefore, to obtain estimates for the tone of monetary policy which appear to closely reflect policy action by the central banks of Colombia and Peru over the past few years. At the same time, the estimates are similar to those obtained using models which are more complex, and therefore, more costly to implement. This is an advantage of the approach used here.

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[4] The inflation target has been 2.0 percent (+/- one percentage point) since 2007. It is important to point out that since it started using inflation-targeting, the BCRP has used the overnight interbank rate as its target reference rate. Before that monetary aggregates were used.

Potential output and the output gap: The case of Argentina, Chile and Venezuela

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Estimating potential output is important because it determines how much the Gross Domestic Product (GDP) can expand without generating inflationary pressures. Its estimation also determines the welfare lost due to the failing to grow at the potential rate.

Two methodologies have been traditionally used to calculate potential output: i) the estimation of a Cobb-Douglas production function through the use of production factors data; and ii) the application of a filter on the GDP series to extrapolate their trends[1] . Both methodologies are no flawless. The former estimates the total factor productivity (TFP) as a residual. This supposes a volatile TFP behaviour that is not consistent with what is usually assumed. The main criticisms on the filter method are its lack of conceptual underpinnings and that its construction throws up an output gap equal to zero.

The methodology presented and applied in this article provides a procedure that better approaches the idea of potential output that is relevant for policy-makers and that can be employed, for example, in the use of a Taylor rule or to forecast the movements in both GDP and inflation. Koop, Osiewalski and Steel (1999) and Hall (2005) are two benchmarks to analyse the differences among potential output, production possibilities frontier and trend output.

Below we present both a methodology that combines the virtues of the two previously commented methods and the results of its application to Argentina, Chile and Venezuela.

Departing from Solow (1957)' famous affirmation that the TFP is a "measure of our ignorance", a whole body of literature interested on both the estimation and explanation of TFP has been developed. The main problem faced by this literature is to deal with a non-observable variable that encopasses concepts as diverse as technology level, institutional development and growth factors. Therefore, it seems reasonable to use a model that allows one to combine observable and non-observable variables in the estimation of a country's production function. This can be done with a state-space representation of a GDP function that includes labour and capital stocks (observable variables) and TFP (non-observable variable), such as follows[2] :

$$\ln(PIB_t) = \ln(ptf_t) + \alpha_t \ln(L_t) + \beta_t \ln(K_t) + \omega_t \qquad (1)$$

$$\ln(ptf_t) = \ln(ptf_{t-1}) + \gamma_t \ln(Z) + \varepsilon_{1t} \qquad (2)$$

$$\alpha_t = \alpha_{t-1} + \varepsilon_{2t} \qquad (3)$$

$$\beta_t = \beta_{t-1} + \varepsilon_{3t} \qquad (4)$$

$$\gamma_t = \gamma_{t-1} + \varepsilon_{4t} \qquad (5)$$

Where L is the labour factor, K is the capital factor, Z is a generic exogenous variable, and ω and ε_i are random perturbation terms.

[1] Stochastic frontier production estimates are a recent contribution to this field. See Koop, Osiewalski and Steel (2005).
[2] There is, however, a surprising lack of reference about the use of this methodology in this field. Two exceptions are: Fuentes, R. And M. Morales (2007) and Castro, E., R. Mendez and A. Puente (2007).

$$\begin{pmatrix} \omega_t \\ \varepsilon_{1t} \\ \varepsilon_{2t} \\ \varepsilon_{3t} \\ \varepsilon_{4t} \end{pmatrix} \sim iid \left[\begin{pmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix}, \begin{pmatrix} \sigma_\omega & 0 & 0 & 0 & 0 \\ 0 & \sigma_{\varepsilon 1} & 0 & 0 & 0 \\ 0 & 0 & \sigma_{\varepsilon 2} & 0 & 0 \\ 0 & 0 & 0 & \sigma_{\varepsilon 3} & 0 \\ 0 & 0 & 0 & 0 & \sigma_{\varepsilon 4} \end{pmatrix} \right]$$

In state-space uni-equacional models, the equation with observed variables, equation (1), is referred to as observation equation. In the present case, the observation equation refers to a production function with constant returns to scale such that $\alpha+\beta=1$. Equations (2) and (5) are denominated state equations. They represent the dynamic behaviour of non-observable variables. In general, state equations include observable variables and Z as independent variables. In particular, in the case of Venezuela, equation (2) also includes the variable terms of trade due to its importance for this country. The other states allows us to calculate the pseudo productivities (3) and (4) and also the TFP sensitivity to the terms of trade in the case of Venezuela.

The estimation method described above uses the Kalman filter, which is an algorithm for the sequential updating of the linear projection of a system.

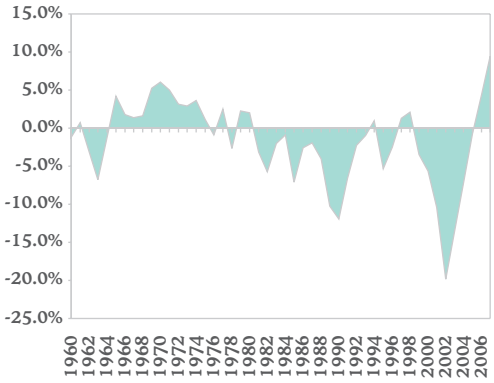
Following the estimation of the parameters from equation (1) and of the TFP, the next step in calculating potential GDP is to recover labour and capital potential levels. For the labour factor, the natural rate of unemployment is such that the natural or full employment defines the potential. With regards to capital, the potential one is given by total capital adjusted for unemployment rate's positive deviations from its natural rate[3].

We apply this briefly described technology to the three countries (Argentina, Chile and Venezuela) for which we have accessed or compiled anual series for capital and labour, where capital was adjusted to account for retirements due to obsolescence and depreciation, and labour was adjusted for schooling level. Moreover, for both labour and capital, qualitative changes in the employed production factors were accounted for[4]. The sample period is 1960-2006.

In the case of Argentina, the potential output growth rate for the end of the period is estimated as 3.2%. Additionally, the gap between actual and potential output was estimated to be 9.4% at the end of 2007[5]. This is consistent with expectations of higher inflation and lower growth for 2008, which are 11% and 7.5%, respectively. These figures, however, do not fully reflect the magnitude of the gap.

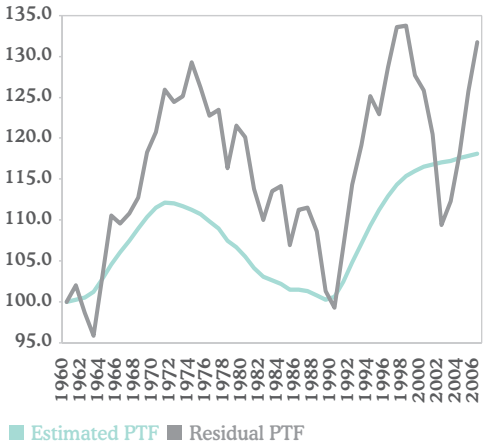
From a historical point of view, the potential output estimation appears to adequately reflect the idea of a generally positive gap in the first two

Chart 1.
Argentina: Output Gap



Source: BBVA

Chart 2.
Argentina: Total Factor Productivity



Source: BBVA

[3] In the case of Chile, worked hours were used. However, in this case it is not possible to define potential in the same terms as used for Argentina and Venezuela. Instead, adjusted worked hours and the total stock of capital were used. This means that the labour has been underestimated and the capital factor overestimated to some extent.

[4] Latinwatch N° 1 of 2006 describes the methodology used to estimate stocks of physical and human capital for Venezuela.

[5] The series is divided into three sub-periods: 1960-1972, where the noise/signal parameter (lambda) has a value of 10; 1973-1990, where a value of 5 for the lambda is used; and 1991-2006, in which once again the lambda is equal to 10. The value of 5 for the period 1973-1990 indicates greater volatility in the economy in this period, which is attributed to greater volatility, or variance, in the trend in relation to the volatility of the noise (strictly random shocks). The year 2002 is considered to be atypical.

decades and a negative one in the following two, particularly in the year in which convertibility was abandoned, as shown in Chart 1. Separately, Chart 2 allows us to compare the estimation of the TFP using the traditional residual method with that obtained from the state-space methodology. It is quite clear that, despite the similarities in the results, the smooth performance of the estimate derived from our methodology appears to be more coherent.

Finally, we should point out that pseudo productivities for capital and labour, estimated for the end of the period, were 0.64 and 0.36, respectively.

In the case of Chile, we estimate a potential growth rate of 4.2%, at the end of the period, and a positive output gap of 0.6%[6]. These results make explicit the difficulties that Chile has had in repeating the growth observed in the period that goes from the end of the 1980s until the Southeast Asian crisis in 1998. On the other hand, despite the fact that the 5.1% growth observed in 2007 would be higher than the potential growth rate, there was a positive output gap under 1%. This supports the idea that the rebound in inflation in the past year is due to punctual and exogenous factors (higher energy costs and drought) rather than to an excess of demand. However, policies aiming growth levels over 4% that do not take into account the need to increase the potential output growth rate could translate into renewed inflationary pressures. It is interesting to note that other studies about Chile, such as Fuentes, Gredig and Larrain (2007), also estimate the potential output growth rate to be around 4%.

Regarding historical output gap data, the results seem to reflect the general perceptions about the Chilean economic cycle. In the 1990s, output growth was above potential growth. However, the adjustment of the potential growth allowed both the continuity of a narrow gap and a reduction in the inflation. In this same period, productivity gains were observed.

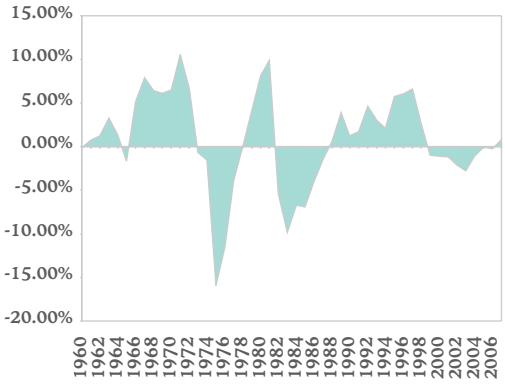
The estimations for output elasticities with regards to both capital and labour, at the end of the series, were 0.65% and 0.35%, respectively.

Lastly, in the case of Venezuela, the estimation of the TFP equation incorporated the variable terms of trade as an explanatory variable (observable). The relevant measure used for terms of trade in Venezuela is the oil price in real terms. Besides investment and schooling levels, this variable is another channel to capture the financing benefits due to oil revenues.

It is also assumed that the increase in the output volatility, observed since 1977, generates a structural change. This is taken into account through the adjustment of the noise/signal parameter from 1977 on[7]. As in the case of both Argentina and Chile, the estimations of potential output and output gap for Venezuela are considered to be a coherent reflection of this country's historical performance. In particular, they are coherent with the gap positive performance in the second half of the 1970s (a period characterised by a sound output growth that followed the first oil shock), the positive performance in the 91-93 period (the first Gulf War), and the negative performance in the 83-84 period (when there was a financial crisis and the fixed exchange-rate regime was abandoned). More recently, after sharp falls in the GDP observed in

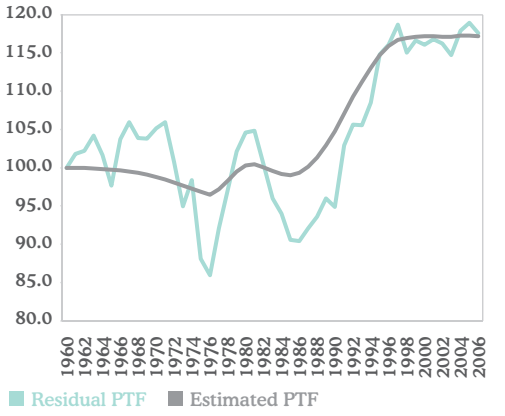
[6] The years 1975 and 1982 are considered atypical because the country was under deep recessions.
[7] 2003 is considered atypical because in this year the Venezuelan economy suffered a severe recession due to a general strike that lasted for about two months.

Chart 3.
Chile: Output Gap



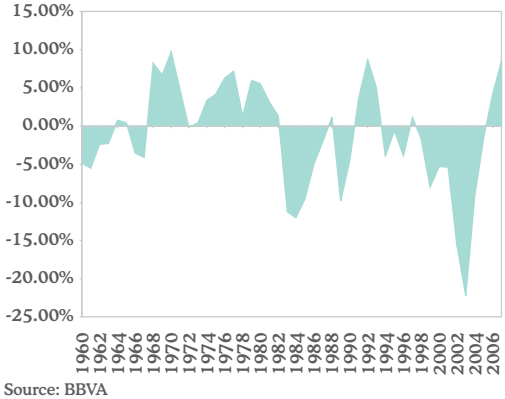
Source: BBVA

Chart 4.
Chile: Total Factor Productivity



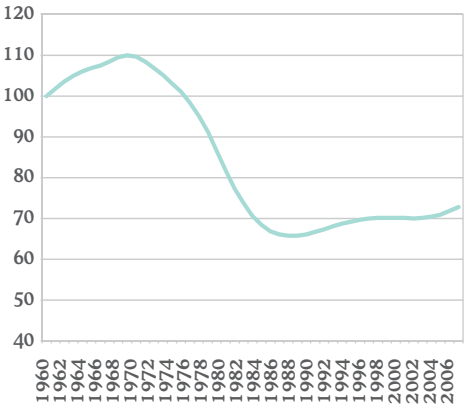
Source: BBVA

Chart 5.
Venezuela: Output Gap



Source: BBVA

Chart 6.
Venezuela: Total Factor Productivity



Source: BBVA

2002 and 2003, the economy remained below potential output until 2006, when the downward trend shown by inflation was reversed. We estimate an output gap of 8.5% at the end of 2007 and GDP growth potential of 4.3%, which helps explain forecasts for a slowdown in growth and high inflation in Venezuela in 2008.

Finally, the estimations for the pseudo productivities of capital and labour, at the end of the series, are 0.36 and 0.64. These values are quite close to the contribution these respective factors make to national income, and to the estimate of the total factor productivity contribution to growth. In addition to reflecting the smooth performance previously highlighted in the cases of Argentina and Chile, it also is a good reflection of the role that the fall in productivity has had in the slowdown in growth observed since the start of the 1980s. Moreover, despite its rebound in the past few years, its contribution remains very below what it was three decades ago, which would indicate that growth in Venezuela is basically sustained by the accumulation of factors of production.

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International Context

	Real GDP (%)				Consumer prices (%. average)			
	2006	2007	2008	2009	2006	2007	2008	2009
USA	2.9	2.2	1.1	1.5	3.2	2.9	2.9	1.8
EMU	2.9	2.6	1.4	1.5	2.2	2.1	2.6	2.0
Japan	2.4	2.0	1.4	1.8	0.2	0.0	0.6	0.5
China	11.1	11.4	10.1	10.4	1.5	4.8	5.7	4.5

	Official interest rate (%. end of period)				Exchange rate (vs $. end of period)			
	31/12/07	Jun-08	Dec-08	Dec-09	31/12/07	Jun-08	Dec-08	Dec-09
USA	4.25	2.00	2.00	2.75	—	—	—	—
EMU ($/€)	4.00	3.75	3.50	3.50	1.46	1.49	1.45	1.40
Japan (yens/$)	0.50	0.50	0.50	1.00	112	106.0	105	100
China (cny/$)	7.47	7.47	7.88	8.01	7.30	6.73	6.6	6.3

Latin America

	Real GDP (%)				Consumer prices (%. end of year)			
	2006	2007	2008	2009	2006	2007	2008	2009
Argentina	8.5	8.7	7.5	5.3	9.8	8.5	11.0	10.0
Brazil	3.7	5.2	4.6	4.3	3.1	4.5	4.5	4.5
Chile	4.0	5.1	4.6	4.0	2.6	7.8	4.4	2.5
Colombia	6.8	7.0	5.0	4.6	4.5	5.7	5.0	4.5
Mexico	4.8	3.3	2.7	3.4	4.1	3.8	3.6	3.3
Peru	7.6	9.0	7.0	6.0	1.1	3.9	3.4	2.9
Venezuela	10.3	8.4	5.5	4.3	17.0	22.5	24.0	28.0
LATAM [1]	**5.4**	**5.7**	**4.7**	**4.3**	**5.1**	**6.3**	**6.2**	**4.6**
LATAM Ex-Mexico	5.7	6.5	5.4	4.6	5.4	7.2	7.1	5.2

	Fiscal balance (% GDP)				Current account balance (% GDP)			
	2006	2007	2008	2009	2006	2007	2008	2009
Argentina [2]	1.8	1.2	2.0	2.0	3.8	2.7	2.5	1.6
Brazil	-3.0	-2.2	-1.8	-2.0	1.6	0.6	-0.5	-1.0
Chile [2]	7.8	8.9	5.0	2.7	3.9	3.4	-0.3	-1.4
Colombia	-0.8	-0.9	-1.0	-0.9	-2.1	-3.3	-4.0	-2.4
Mexico	0.1	0.0	0.0	0.0	-0.3	-0.8	-1.1	-2.4
Peru	2.1	2.9	1.4	0.5	2.9	1.4	-1.4	-2.4
Venezuela [2]	0.0	1.5	0.5	0.3	15.0	11.4	10.8	9.6
LATAM [1]	**-0.5**	**-0.3**	**-0.3**	**0.0**	**2.3**	**1.1**	**0.3**	**-0.0**
LATAM Ex-Mexico	-0.8	-0.4	-0.4	0.3	3.5	2.0	0.8	0.0

[1] Average of the countries. [2] Central Government.

	Exchange rate (vs $. end of year)				Interest rates (%. end of year)[3]			
	2006	2007	2008	2009	2006	2007	2008	2009
Argentina	3.06	3.14	3.23	3.47	8.90	12.20	12.70	12.70
Brazil	2.15	1.78	1.75	1.80	13.25	11.25	10.75	10.50
Chile	530.00	499.00	486.50	495.00	5.25	6.00	5.75	4.65
Colombia	2261.34	2014.20	2075.00	2161.00	6.82	8.98	9.84	9.26
Mexico	10.88	10.86	10.93	11.25	7.02	7.44	6.47	6.47
Peru	3.21	2.98	2.80	3.00	4.50	5.00	5.50	5.50
Venezuela	2150.00	2150.00	2.15	3.00	10.30	11.70	14.0	14.00

[3] For each country interest rate see the following page.

Argentina

	2006	2007	2008f	2009f
GDP (%)	8.5	8.7	7.5	5.3
Consumer prices (% end of year)	9.8	8.5	11.0	10.0
Trade balance ($bn)	12.3	11.2	11.8	8.4
Current account (% GDP)	3.8	2.7	2.5	1.6
Reserves ($bn. end of year)	32.0	45.2	53.0	56.7
Exchange rate (end of year vs US$)	3.06	3.14	3.23	3.47
Fiscal balance (% GDP) [1]	1.8	1.2	2.0	2.0
Interest rate (end of year) [2]	8.9	12.2	12.7	12.7
Real effective exchange rate (end of year. dec-97=100)	52	48	52	—
BBVA-MAP (fin de año. jun-95=100)	140	157	149	—

[1] Argentina: Central Government Balance. Excluding privatisation receipts
[2] Argentina: 30-d deposits interest rate in pesos; Brazil: SELIC rate

Brazil

2006	2007	2008f	2009f
3.7	5.2	4.6	4.3
3.1	4.5	4.5	4.5
46.1	41.3	26.0	15.6
1.6	0.6	-0.5	-1.0
85.8	180.0	235.0	240.0
2.15	1.78	1.75	1.80
-3.0	-2.2	-1.8	-2.0
13.25	11.3	10.8	10.5
83	98.9	101.8	—
81	79.8	83.1	—

Chile

	2006	2007	2008f	2009f
GDP (%)	4.0	5.1	4.6	4.0
Consumer prices (% end of year)	2.6	7.8	4.4	2.5
Trade balance ($bn)	22.2	24.5	21.2	11.6
Current account (% GDP)	3.9	3.4	-0.3	-1.4
Reserves ($bn. end of year)	19.4	16.9	16.0	16.0
Exchange rate (end of year vs US$)	530	499	487	495.00
Fiscal balance (% GDP) [1]	7.8	8.9	5.0	2.7
Interest rate (end of year) [2]	5.25	6.00	5.75	4.7
Real effective exchange rate (end of year. dec-97=100)	93	91	89	87.0
BBVA-MAP (fin de año. jun-95=100)	139	133	125	—

[1] Chile: Central Government
[2] Chile: Official interest rate (from August 2001 in nominal terms); Colombia: 90-d DTF interest rate

Colombia

2006	2007	2008f	2009f
6.8	7.0	5.0	4.6
4.5	5.7	5.0	4.5
-0.1	-0.8	-0.9	1.4
-2.1	-3.3	-4.0	-2.4
15.4	21.1	20.7	18.3
2261	2014	2075	2161
-0.8	-0.9	-1.0	-0.9
6.8	9.0	9.8	9.3
91	98	95	95
158	167	157	—

Mexico

	2006	2007	2008f	2009f
GDP (%)	4.8	3.3	2.7	3.4
Consumer prices (% end of year)	4.1	3.8	3.6	3.3
Trade balance ($bn)	-6.1	-11.2	-12.0	-25.1
Current account (% GDP)	-0.3	-0.8	-1.1	-2.4
Reserves ($bn. end of year)	67.7	78.0	83.0	87.0
Exchange rate (end of year vs US$)	10.88	10.86	10.93	11.25
Fiscal balance (% GDP)	0.1	0.0	0.0	0.0
Interest rate (end of year) [2]	7.0	7.4	6.5	6.5
Real effective exchange rate (end of year. dec-97=100)	112	114	114	114.4
BBVA-MAP (fin de año. jun-95=100)	203	220	195	—

[2] Mexico: 28-d Cetes interest rate; Peru: Interbank interest rate

Peru

2006	2007	2008f	2009f
7.6	9.0	7.0	6.0
1.1	3.9	3.4	2.9
8.9	8.4	5.5	4.0
2.9	1.4	-1.4	-2.4
17.3	27.7	35.7	37.5
3.21	2.98	2.80	3.00
2.1	2.9	1.4	0.5
4.50	5.00	5.50	5.50
88	86	83	—
142	145	138	—

Uruguay

	2006	2007	2008f	2009f
GDP (%)	-11.0	2.2	11.8	6.6
Consumer prices (% end of year)	25.9	10.2	7.6	4.9
Trade balance ($bn)	0.0	0.2	0.0	0.0
Current account (% GDP)	3.1	-0.5	-0.8	0.6
Reserves ($bn. end of year) [3]	0.8	1.9	2.3	3.1
Exchange rate (end of year vs US$)	27.1	29.2	26.6	23.51
Fiscal balance (% GDP) [1]	-4.1	-3.2	-1.8	-2.5
Interest rate (end of year) [2]	69.9	7.5	5.7	4.6
Real effective exchange rate (end of year. dec-97=100)	90	75	81	87.5
BBVA-MAP (fin de año. jun-95=100)	87	88	88	82.5

[1] Venezuela: Central Government
[2] Uruguay: 30-d BCU Papers interest rate in pesos; Venezuela: 90-d Certificado Participaciones rate
[3] Venezuela: including FIEM

Venezuela

2006	2007	2008f	2009f
10.3	8.4	5.5	4.3
17.0	22.5	24.0	28.0
33.0	25.1	35.1	28.2
15.0	11.4	10.8	9.6
37.3	33.9	31.9	31.9
2150	2150	2.15	3
0.0	1.5	0.5	0.3
10.3	11.7	14.0	14.0
101	114	129	102
310	357	299	—

BBVA

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