



THE BOARD OF DIRECTORS' REPORT TO THE  
**CONGRESS OF COLOMBIA**

March 2012

ISSN - 2145 - 6801



# THE BOARD OF DIRECTORS' REPORT TO THE CONGRESS OF COLOMBIA

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March 2012

Banco de la República  
Bogotá, D. C., Colombia

ISSN - 2145 - 6801



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José Darío Uribe Escobar

Bogotá, March 29, 2012

Honorable Chairmen and Members  
Third Standing Constitutional Committees of  
The Senate and  
The House of Representatives

Dear Sirs,

Pursuant to Law 31 of 1992, Article 5, the Board of Directors of Banco de la República hereby submits for consideration by Congress a report on the country's macroeconomic results for 2011 and so far in 2012. The report also presents the Board's targets for this year and the outlook for the different macroeconomic variables. The last two chapters describe the composition of the international reserves and discuss Banco de la República's projected financial position for 2012.

Yours truly,

A handwritten signature in black ink, consisting of a stylized 'J' followed by a horizontal line and a small flourish.

José Darío Uribe Escobar  
Governor



# INTRODUCTION

*The global economic slowdown in 2011 was caused by the euro zone's fiscal and financial crisis, which deepened toward the end of the year. In this adverse global context, the Colombian economy grew by 5.9%, its third highest rate in the past thirty years, while inflation stood at 3.7%, within the target range of 2% - 4%. This process of economic recovery and consolidation has been accompanied by a monetary policy designed to keep inflation around a long term target of 3% and use of resources around the economy's potential capacity.*

The global economy, after growing by 5.2% in 2010, seemingly announcing the final end of the 2008 crisis, slowed to a growth rate of 3.8% last year, according to IMF estimates. The slowdown in 2011 was caused by factors connected with the economic crisis in Europe, which deepened steadily over the year and became critical in the fourth quarter. Though Greece was long known to be in difficulty, its economic situation worsened in 2011 due to the lack of a credible rescue plan, which was successively postponed amid political tensions among the major European governments over how to share the costs of the rescue. This prolonged inaction in the face of a worsening crisis led to a loss of confidence in the region, causing symptoms of contagion to appear in other countries such as Ireland and Portugal. The contagion then spread to the larger economies of Spain and Italy, and fears arose about the viability of the euro, given the danger of these countries' public debt becoming generally unsustainable.

*The US economy showed mixed signals during 2011 and in the early part of this year.*

The US economy, for its part, showed mixed signals during 2011 and in the early part of this year. Although the country's GDP slowed from 3% in 2010 to 1.7% in 2011, its performance has been improving gradually. In the first half of 2011, interruption in the Japanese supply

*In 2011, as in previous years, global growth was driven by emerging economies, albeit at a slower pace.*

chain, debate over the US debt ceiling and high oil prices were reflected in a slowdown of US economic activity, with annualized quarterly growth barely reaching 0.4% in the first quarter and 1.3% in the second. However, as some of these factors were gradually surmounted and the US economy managed to withstand the European crisis, confidence began to rise, household spending became stronger, and manufacturing started to expand. Thus, in the third quarter US GDP grew by 1.8% (annualized quarterly rate) and in the fourth quarter by 3.0%. This may be regarded as a favorable performance, considering that the structural imbalances that led to the crisis have not yet been fully dealt with. As evidence of improvement in the US economy, the unemployment rate has begun to decrease, claims for unemployment insurance have fallen, and consumer confidence and consumption show positive signs.

*In this highly unequal global context with the prospect of continued uncertainty, the Colombian economy's performance has been outstanding.*

In 2011, as in previous years, global growth was driven by emerging economies, albeit at a slower pace. The IMF estimates that these economies expanded by 6.2% in 2011, compared with 7.3% in 2010. The slowdown was partly caused by weaker external demand, and by the lagged effect of restrictive monetary and fiscal policies adopted in 2010 by several emerging Asian and Latin American countries after detecting some symptoms of overheating.

In this highly unequal global context with the prospect of continued uncertainty, the Colombian economy's performance has been outstanding. GDP grew by 4% in 2010 and improved increasingly in 2011, rising to a high of 7.5% in the third quarter, comparable to the quarterly rates seen in 2006 and 2007, when world production was expanding apace and external demand was a major driver of economic activity in Colombia. Although fourth-quarter growth slowed to 6.1% in 2011, as a result of weaker external demand and the progressive withdrawal of monetary stimulus, the growth rate for the year as a whole stood at 5.9%, one of the highest rates in decades. This result clearly shows that Colombia has managed to withstand the negative shock of the European crisis, in conditions in which the US, the country's main trading partner, has been growing at moderate rates.

*Colombia's favorable economic growth in 2011 was driven by the strengthening of domestic demand.*

With the external context deteriorating and uncertain, Colombia's favorable economic growth in 2011 was driven by the strengthening of domestic demand, which expanded by 8.8%, comparable with peak growth in 2006. As detailed in this Report, fixed capital investment was the strongest spending item of domestic demand, growing by 16.6%, the second highest rate since 2000. Investment in machinery and equipment and transport equipment stands out in this item, which was

*Fixed capital investment was the strongest spending item of domestic demand.*

driven by high international commodity prices and by low commercial interest rates over much of the year. Investment in buildings (including housing) also grew well, by 5.3%, after shrinking for two years in a row. Investment in civil works continued to expand briskly, by 6.7%, a higher rate than the average for the two previous years.

Similar to investment, in 2011 growth in household spending was as strong as in the peak periods and, at registered an expansion of 6.5%, which is almost two percentage points higher than in 2010. The items that contributed the most to this performance were durable and semi-durable goods, with average growth rates close to 20%. Consumption of these goods benefited from abundant credit at relatively low interest rates and also from rising consumer confidence.

*In 2011 growth in household spending, as in investment, was as strong as in the peak periods.*

The economic activities that contributed most to growth in 2011 were mining, transport and communications, and trade. Mining continued to show double-digit expansion as in the previous four years, driven by increasing oil production thanks to high crude prices, favorable conditions for investment, and relatively successful exploration. The extraction of coal and other minerals also increased at a good pace as a result of high international prices and large inflows of foreign investment. Good performance by the sectors of transport and communications and trade was consistent with the behavior of household spending.

The economy's growth in 2010 and its further strengthening in 2011 have begun to produce positive effects on the labor market. Job creation has been expanding at record rates, significantly reducing unemployment, down to levels not seen in decades. Lower unemployment nationwide is particularly significant, considering that it has occurred in a context of rising labor supply, as measured by the global participation rate. This means that people desirous of entering the labor market have managed to find job opportunities. Job creation has been strongest in the sectors of trade, industry, construction and services. This behavior of the labor market confirms the economy's robust growth, driven in particular by domestic demand. Despite the foregoing, the informal sector accounts for a high share of the job market, and Colombia's unemployment rate continues to be one of the highest in Latin America.

*The economy's growth in 2010 and its further strengthening in 2011 have begun to produce positive effects on the labor market.*

The process of economic recovery and consolidation has been accompanied by a monetary policy designed to play its part by keeping inflation around the target and the use of resources near the economy's potential capacity. This should help to make growth sustainable, so as to avoid the traditional excesses that experience has repeatedly shown

*Monetary policy has accompanied the process of economic recovery and consolidation, playing the part expected of it.*

to be costly to well-being. To this end, starting from February 2011 the monetary stimulus began to be gradually withdrawn, by means of nine increments of 25 basis points in the policy interest rate. Thus, the one-day expansion repo rate was raised from 3%, appropriate for an economy on the brink of recession, to 5.25%, more consistent with strong domestic demand and a positive output gap.

Every decision by Banco de la República's Board of Directors has been taken after rigorous analysis of the economic situation and outlook, and after careful assessment of risks. In particular, as the threat of a European crisis began to intensify last September, it was decided to make a long pause in the adjustment process, in the expectation of greater information that would provide a clearer idea of the fate of the region and its capacity to cause contagion to Colombia's economy. Adjustments were resumed in November, when it was concluded that the Colombian economy was showing great strength despite adverse external conditions.

The incremental increases to Colombia's policy rate have been transmitted to borrowing and lending rates in the economy, in both nominal and real terms. This has helped to begin a moderation of the sharply rising trend in borrowing observed all through 2011, particularly corporate borrowing. Yet, credit continues to grow apace. In February this year the financial system's overall loan portfolio increased at an average real annual rate of almost 16% and consumer credit at 21%. This behavior was displayed last year by several Latin American countries, where, as in Colombia, debt as a share of GDP has increased.

The rapid expansion of credit in Colombia has led the Bank's Board of Directors to take great care in periodically monitoring credit quality and risks to the financial system. As described in this Report, no increase has been seen in default indicators or debt-quality deterioration that could compromise the financial system's stability. However, risky consumer loans and microcredit have been growing faster, and it is therefore important to continue monitoring them.

*Every decision by the Bank's Board of Directors has been taken after rigorous analysis of the economic situation and outlook, and after careful assessment of risks*

In a context of high economic growth, rising domestic demand and overall expansion in credit as described above, inflation rose in 2011, ending the year at 3.37%, compared with 3.17% in 2010. Although this result can hardly be classed as inflation overflow—for it stands within the 2%-4% target range—it does cause the Board concern because inflation in 2011 continued to move away from the long-term target set at 3%. The monetary authority cannot feel too pleased with this situation, in a setting in which inflation expectations for a year or more

*The evolution of annual consumer inflation over the first two months of 2012 has been promising.*

*The easing of core inflation over the first two months of this year may indicate that the adjustment made to monetary policy is beginning to operate appropriately.*

*The intervention program was resumed on February 6 with daily US\$20m competitive auctions.*

ahead run close to 4%, and demand is rising at levels liable to use up spare capacity. The Board has therefore been taking decisions that it considers to be timely and appropriate, as stated above.

The evolution of annual consumer inflation over the first two months of 2012 has been promising. In February annual CPI change stood at 3.5%, almost 20bp down from what it was at the end of 2011, interrupting its trend of moving away from the 3% target. Over the same period the average of core inflation indicators also fell slightly, from 3.15% to 3.05%. This improved behavior was achieved despite the continued rise in fuel prices caused by higher world oil quotes. Two items contributed to this improvement. First, food inflation began to ease as rainfall became normal once more and led to recovery in food supply. Second, inflation in tradable goods has also slowed, in part because of the lower exchange rate. The easing of core inflation over the first two months of this year may indicate that the adjustment made to monetary policy is beginning to operate appropriately. According to the technical staff's forecasts, this favorable trend in consumer inflation may continue over the coming months.

During 2011 changing economic conditions in Colombia and abroad caused the nominal exchange rate to behave differently over certain periods of the year, in a context of intervention by Banco de la República in the foreign exchange market with daily auctions of twenty million dollars (\$20m) in the first nine months. From January to the end of June 2011 the Colombian peso tended to appreciate, amid lower risk premiums and expectations of a higher public debt rating, which was finally granted in May and June. Later, from August to December 2011 the peso displayed a depreciation trend, associated with market nervousness over the sharpening crisis in Greece and other European countries and the IMF's announcement of fewer prospects of world economic growth. These opposite behaviors of the peso's exchange rate against the dollar tended to offset each other, so that the nominal exchange rate at the end of 2011 showed only a 1.5% depreciation relative to a year earlier. The real exchange rate, for its part, is influenced by inflation differentials between countries and provides a better diagnosis of Colombia's competitiveness by showing that the peso depreciated in 2011 against the currencies of the country's main trading partners. This Report analyses these indicators in detail and also the variables that determine them.

An appreciation trend occurred again in the first two months of 2012 in both nominal and real terms. It resulted from less uncertainty about the fate of the European economy, improved data on the US economy's



*The economic outlook for 2012 is positive, with growth estimated as likely to range between 4% and 6%.*

performance, and renewed confidence in the Colombian economy, backed by its good performance in 2011 and favorable outlook for this year. In this context, the intervention program that had been interrupted on September 30, 2011, was resumed on February 6. The Board of Directors has announced that such interventions shall continue to be made at least until August in daily amounts of not less than US\$20m.

As described in this Report, the economic outlook for 2012 is positive, with growth estimated as likely to range between 4% and 6%, depending on how the European situation develops and how it affects the global economy and Colombia's economy. Although global demand is expected to weaken, the emerging economies' growth will help to keep commodity prices high, boosting foreign investment flows into Colombia and the country's revenues through favorable terms of trade. Private demand is also expected to stay strong as a result of consumer and investor confidence remaining at record levels. Expansion in public investment will probably contribute to this scenario. The leading indicators of economic activity for the first two months of 2012 confirm that the Colombian economy continues to perform well.

The present *Report to Congress* contains four chapters. Chapter I reviews the international context, analyzing the background to and development of the European crisis, and also the developed and emerging economies' performance in 2011 and their prospects for 2012. Chapter II provides a detailed assessment of Colombia's economic results in 2011 in terms of economic activity, employment, and the financial sector and external sectors. It also describes the main aspects of the country's monetary, fiscal and exchange rate policy that contributed to macroeconomic stability, and analyzes the outlook for the present year. Chapter III reviews the behavior of Colombia's international reserves, as regards their composition, management policy, investment performance and status of claims. Lastly, Chapter IV describes Banco de la República's financial position. As is customary, the Report deals in greater depth with specific subjects, presented in individual Boxes, to provide a better understanding of Colombia's economy and the global economy, and also of the work of Banco de la República.

# I. INTERNATIONAL CONTEXT

*The world economy slowed in 2011 as a result of the euro zone's sovereign debt crisis, and the less expansionary monetary and fiscal policies implemented by emerging countries since 2010. Although economic activity in the United States has continued to show recovery, its pace of growth is still below the historical average. The IMF expects global activity to continue to weaken, mainly because a smaller momentum would be provided by Europe beset by mild recession.*

According to the IMF the world economy slowed in 2011, registering a growth rate of 3.8%, down from 5.2% in 2010. The emerging economies' performance once again led global expansion, while the developed countries' growth continued to run below their potential level because of structural problems that still persist in their economies (Graph 1).

Graph 1  
Real GDP growth



Source: IMF.

The economic slowdown of 2011 was caused by weaker growth in both emerging and advanced countries. In the emerging countries, more restrictive fiscal and monetary policies put in place from mid-2010 played a part in moderating growth rates. Weaker external demand was another contributing factor; with

*The slowdown in external demand moderated the rise in international commodity prices.*

the result that the signs of risk of over-heating detected in early 2010 in some countries of Latin American and Asia dissipated.<sup>1</sup>

Economic activity in the developed countries was affected not just by the lagged effects of the financial crisis that began in 2008, but also by other factors. Sovereign debt problems and greater financial tensions in Europe put at risk the euro's stability, depressed the confidence in the region and caused GDP to fall toward the end of 2011. Real activity in the advanced economies was adversely affected also by a number of transitory shocks, such as the natural disaster in Japan and high oil prices in early 2011.

Weaker external demand helped to moderate the rise in international commodity prices, particularly from the second half of 2011. In the case of oil, geopolitical tensions in the Middle East and North Africa, and the interruption of crude production in Libya significantly pushed up prices in the first part of the year. This situation was gradually reversed by increased production from other oil producing countries. The average price of oil in 2011 was thus relatively high: \$111.5 a barrel for Brent Reference and \$95 a barrel for West Texas Intermediate (see the shadowed section further below on *2011 Commodity Price Behavior*).

The IMF expects world economic activity to continue to slow down in 2012 because of the recession forecast for the euro zone. This is, in fact, the main risk today for the global economy, but there are also other factors liable to threaten growth. They include: high levels of public debt in the United States and Japan, strong deceleration of emerging economies, particularly China's, and the rapid rise in oil prices caused by geopolitical tensions in the Middle East and North Africa.

*For the emerging economies the challenge will be to maintain sustained long-term growth and avoid future macroeconomic imbalances.*

The depth and duration of recession in Europe will depend, in part, on the fiscal, regulatory and monetary measures that the authorities implement to get out of the crisis. Although the US and Japan, despite their high levels of indebtedness, have not yet had any difficulty in financing their public spending, the evolution of their fiscal accounts is being closely watched by the risk-rating agencies. They will therefore need to adopt in the coming years policies designed to bring their public debt down to sustainable levels, so as to reduce medium- and long-term macroeconomic risks. For the emerging economies, the challenge will be to maintain sustained long-term growth and avoid future macroeconomic imbalances.

---

<sup>1</sup> As indicated in the July 2011 *Report to Congress* some Latin American economies were showing signs of overheating resulting from closing of the output gap, growing inflation, higher current account deficits, and rising credit and asset prices. Various emerging Asian countries were also characterized by heating up of the goods and asset markets.

2011 COMMODITY PRICE BEHAVIOR

International commodity prices stayed high in early 2011, albeit lower than before the 2008 crisis. Strong growth in some emerging economies and geopolitical tensions in the Middle East and North Africa helped to push up commodity prices in the first half of the year, but this situation was partly reversed later by a weakening of global demand.

Copper and coal prices rose on average by 17% and 22% respectively last year, while the price of oil surged by almost 32%. But in the last months of 2011 and early weeks of 2012 these goods presented a decreasing price trend as a result of a slowdown in the global economy, and particularly in China.

In the oil market the Brent reference price stood at US\$127 a barrel in May 2011 and ended the year at an average of US\$111.5, higher than the 2010 average of US\$79.6. WTI behaved in a similar way and averaged US\$95 barrel for 2011. The first months of 2012 have seen prices rising again as tensions increased in Iran; thus, between January and March the average quotation for Brent was US\$118 a barrel and for WTI US\$103.11

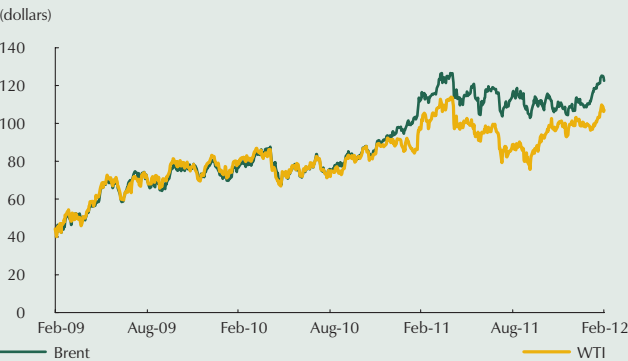
The spread between the Brent and WTI international benchmark prices is worth noting (Graph A). Historically the average spread used to be US\$2 in favor of WTI, but it has been running in favor of Brent since November 2010, widening to over US\$20 by October 2011. This difference appears to have resulted from a lack of arbitrage between the two prices, owing to the higher cost of transporting WTI crude to the Gulf of Mexico from Oklahoma, USA, where it is stockpiled and priced.

The supply of crude in Oklahoma has increased considerably since mid-2010 because of higher production from North Dakota and Canada, while transport capacity has been reduced by the need to change the direction of some pipelines to mobilize crude within the country. The increase in the domestic supply of crude and the impossibility of taking it to the

coast caused a widening spread between WTI and Brent prices. Toward the end of 2011 the spread began to narrow when the direction of one of the pipelines could be reversed, allowing a greater flow of oil from the US interior to the coast.

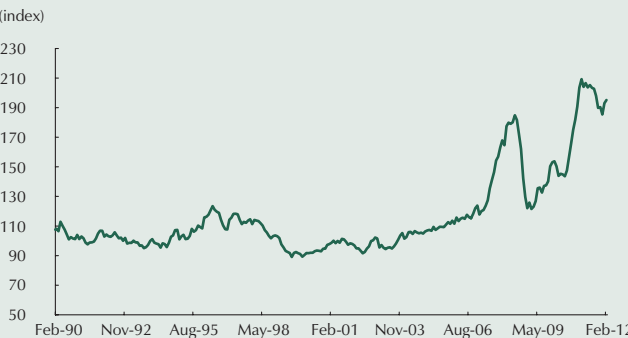
International food prices started to fall from August 2011 as a result of weather conditions becoming normal and the deceleration of external demand (Graph B). However, by January 2012 bad weather in South America and Europe caused the prices of some products to rise again, despite increased inventories at the end of 2011. Food prices are likely to fall again this year, given the continuing downturn in external demand. This should help to moderate inflation in a number of economies, particularly the emerging economies of Asia.

Graph A  
International oil prices



Source: Datastream.

Graph B  
Nominal international food price index



Source: FAO.

1 According to Ecopetrol, in the final months of 2011 Colombian oil was sold more in line with the Brent benchmark than with WTI.

*The international financial crisis of 2008-2009 helped to bring to light a number of structural problems in the euro zone.*

A. BACKGROUND TO THE EUROPEAN CRISIS

In the first place, imbalances in the US economy, the high levels of the country’s public debt and current account deficit, high household leverage, the mortgage bubble, and rapid financial innovation were identified as the main factors that triggered the sharpest fall in the output of the United States since the great depression of the thirties.

Then, the international financial crisis of 2008-2009, which occurred after an over-valuation of US housing prices, brought this problem to light also in a number of European economies beset by weak public finances and frail financial systems. This situation, heightened by the strong commercial and financial ties between the euro zone and the United States, quickly spread the crisis to the economies of the Old World.

In 2001-2007, before the crisis, there were disparities between the growth rates of European economies. Thus, in Italy and Portugal GDP growth was below their historical averages and lower than in the other countries of the region, because of low levels of competitiveness; while the Greek economy expanded beyond its potential level, fuelled mostly by excessive public and private borrowing (Table 1). In Spain and Ireland sharply rising asset prices, particularly of real estate (Graph 2), generated rates of expansion not sustainable in the medium term, resulting in imbalances that became evident some years later. And in France and Germany, the region’s largest competitive economies, growth continued to moderate.

Table 1  
Some European countries’ GDP growth rates  
(period average)

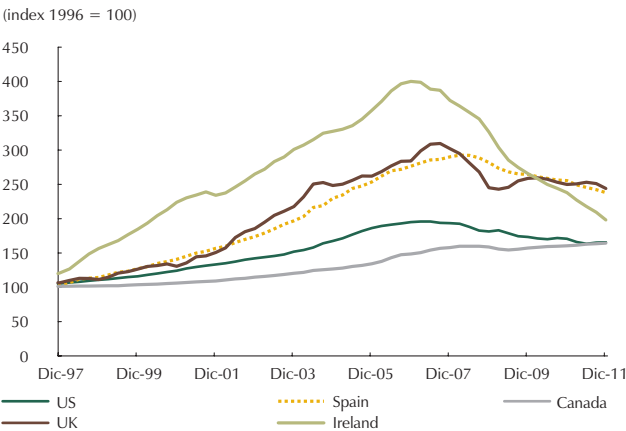
	1970-1989	1990-2000	2001-2007	2008-2010
Italy	3.2	1.6	1.1	(1.7)
Portugal	4.1	3.1	1.1	(0.4)
Greece	3.1	2.1	4.1	(2.3)
Ireland	4.0	7.3	5.5	(3.8)
Spain	3.3	2.9	3.4	(1.0)
France	3.2	2.0	1.8	(0.4)
Germany	2.5	2.2	1.4	(0.1)

Source: IMF.

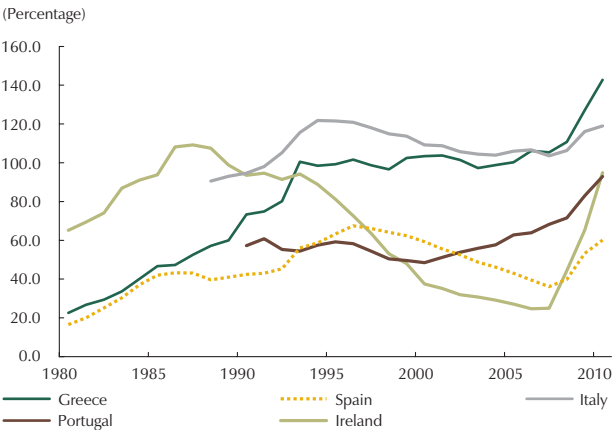
*The low cost of debt allowed a number of euro zone economies to increase their spending sharply.*

Furthermore, the adoption of the euro enabled countries such as Greece and Portugal to issue public debt at relatively low interest rates, especially in external markets. The lower cost of debt allowed these economies to finance their public and, also private, spending easily, encouraging them to increase it sharply and take it on a path not sustainable in the medium

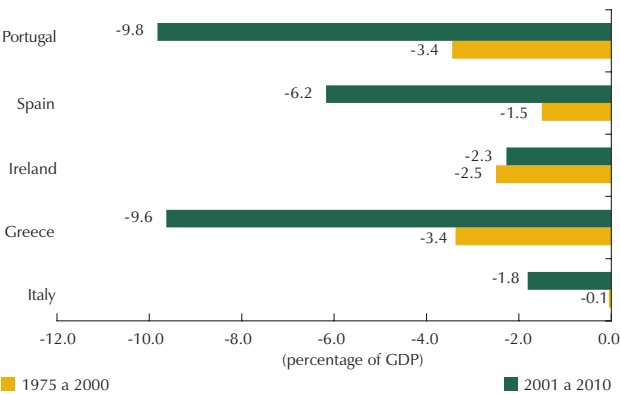
Graph 2  
Nominal housing-price index for some developed economies



Graph 3  
Public debt as a percentage of GDP for some European economies



Graph 4  
Current account deficit as a percentage of GDP (period average)



term. Public debt as a percentage of GDP surged in some European economies, outpacing output in a number of cases (Graph 3). Thus, public debt securities issued in foreign markets not only made these countries’ public finances more vulnerable to international shock, but also increased the risk to bond holders.

Commercial banks in some European countries also had greater access to cheap external funding, which allowed them to expand local credit rapidly and support booming sectors such as construction, causing asset prices to surge. This situation was attended by rising current account deficits (Graph 4), making the financial system and also the public sector more vulnerable to external shocks.

Robust expansion in the financial and construction sectors of European countries (and the US) increased these sectors’ share in GDP and also in job creation. The property boom made other branches of the economy highly dependent on property activities. Thus, commercial banks extended most of their loans to construction projects, without appropriately diversifying the lending risks; and a fraction of government revenues depended on construction growth. With the result that a sharp downturn in construction was to have strong repercussions on the revenues of banks and governments, as became evident when the property bubbles burst in those countries.

Moreover, in the years before the crisis European commercial banks were relatively highly exposed to the United States, since they held a good proportion of US securities, including mortgage paper and derivatives. After failure of Lehman Brothers at the end of 2008 and collapse of the US equity market, European banks had to assume losses on their holdings of those securities. In addition, in the first decade of the 21<sup>st</sup> century European commercial banks strongly stimulated credit in the region, encouraged



*In the years before the crisis a number of European countries saw their economies becoming more vulnerable to external shocks.*

by low international interest rates. This led to excessive household and corporate borrowing and helped to create imbalances in other sectors of the economy, which then adversely affected public finances.

After the collapse of Lehman Brothers, liquidity restrictions became acute and made it difficult for commercial banks to obtain funds, causing the credit channel to break down, which had the effect of considerably slowing global demand. The financial system's great difficulty in obtaining funds limited the system's actions and made it more vulnerable, to the point that some governments had to inject capital into the system to avert bankruptcy of some banks. State intervention further deteriorated the public finances of some euro zone economies, and this situation grew worse as economic growth declined because of the downturn in external demand.

Thus, dislocation of the credit channel, together with the subsequent slowdown of global growth, considerably affected Europe, particularly the peripheral countries, such as Greece, Ireland, Italy, Spain and Portugal, which were beset with high levels of public debt and economies highly sensitive to external shocks.

In Ireland, for example, the mortgage bubble was attended by a weakening of commercial banks, because of the financial system's loan portfolio problems. Moreover, excessive capital flows, without due moderation in taking cross-border risks, made the economy more fragile. In 2008, when it became evident that Irish banks were not sound, the country's major financial institutions were intervened by the government, and the Anglo Irish Bank was nationalized as it was unable to refinance its short-term obligations. The government's support of the banking sector thus increased public debt problems.

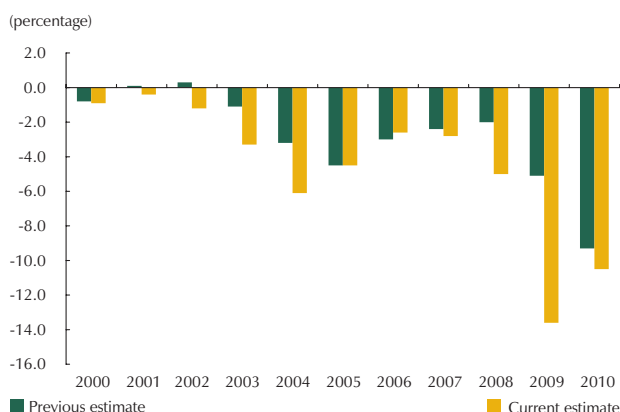
*The dislocation of credit and the global slowdown strongly affected European economies of the periphery.*

Although accelerated expansion of the construction and financial sectors was the common denominator of several European economies, the situation of Greece was different as its imbalances were not caused by the property sector but by excessive government spending and under-reporting of fiscal accounts. In 2009, when the government in office revealed that indebtedness was significantly higher than initially estimated (Graph 5), alarms were set off about the situation of Greece, and interest-rate spreads on the country's sovereign debt rose sharply, making the situation even more unsustainable.<sup>2</sup> Once Greece's

---

2 It was evident from the Greek economy's low competitiveness in an environment of global slowdown that the country's growth was insufficient to reduce its high debt levels, making it necessary to ask for help from the IMF and other European countries.

Graph 5  
Greek fiscal balance as a percentage of GDP



Source: European Commission.

weakness became evident, the market turned its attention to the region's other indebted economies: Ireland, Italy, Portugal and Spain.

The property boom in Spain and Ireland fostered an unsustainable path of growth, which became manifest as global financial tensions rose and external demand fell. Although public debt as a percentage of GDP was not as high in Spain as in other countries, Spain's rapidly growing fiscal deficit, resulting from lower tax revenues and higher spending, especially on unemployment subsidies, have increased doubts about the sustainability of its debt, particularly since the country's growth is negative. In Portugal,

excessive government borrowing, together with low economic growth, has made it difficult to reduce the ratio of public debt to GDP, especially in a setting of low competitiveness.

Thus, the financial crisis of 2008-2009 was instrumental in bringing to light the vulnerabilities of some European economies, especially those on the periphery, whose weakness is caused by high levels of public and private borrowing and unsustainable expansion of their financial and property sectors. In some countries high private leverage led to greater public borrowing, as governments felt the need to intervene in the financial sector and nationalize a number of banks. Similarly, the recession of recent years has caused tax revenues to deteriorate and the public deficit to grow in different economies. The situation described above has led to the worst crisis in the euro zone since its inception, making evident the region's political difficulties and the lack of consensus among its leaders to implement measures that would put a final end to the crisis.

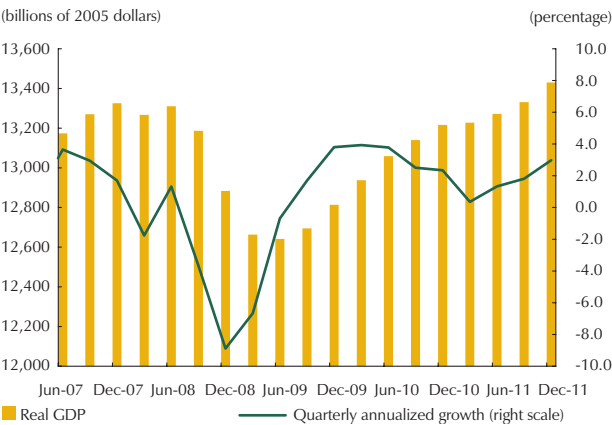
## B. DEVELOPED COUNTRIES' EVOLUTION IN 2011 AND PROJECTIONS FOR 2012

### 1. United States

The US economy grew by 1.7% in 2011, a slowdown from 3% in 2010 (Graph 6) caused by plunging growth in local investment (from 17.9% to 4.7%) and exports (from 11.3% to 6.8%), and by a 2.13% decrease in government spending. Household consumption and imports were the only components that made positive contributions to GDP.

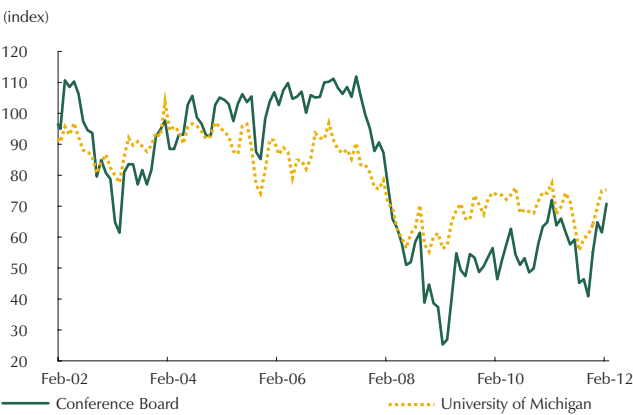


Graph 6  
US real GDP

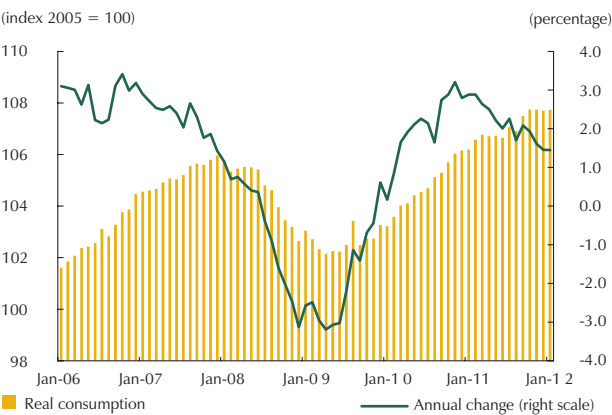


Graph 7  
US consumption indicators

A. Consumer confidence index



B. Real personal consumption (seasonally adjusted)



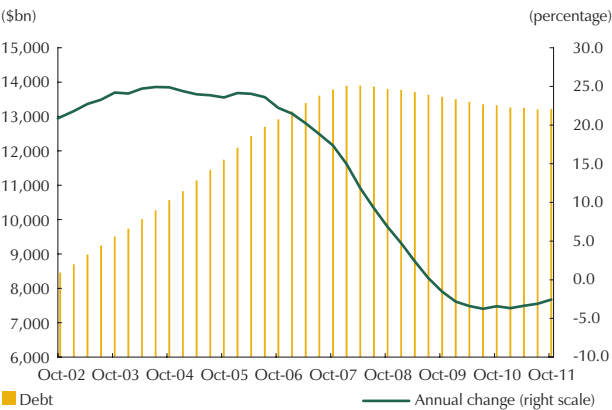
In the first half of 2011 high oil prices and disruption of the Japanese supply chain affected real activity in the US, limiting growth in both manufacturing and consumption. The debate in mid-2011 over management of fiscal accounts strongly depressed corporate and consumer confidence, affecting economic performance in the following months. As external shocks receded and confidence began to recover, household spending picked up a little and manufacturing started to expand. Despite the pick-up in consumption in September and modest growth in the following two months, in December household spending shrank slightly and continued to decelerate in annual terms (Graph 7).

GDP growth below the historical average suggests that structural problems persist in the US economy, impeding greater expansion in the short term. The slowness of recovery in the labor and housing markets and high levels of both public and private indebtedness continue to be the major concerns of US authorities and are the factors affecting corporate and consumer confidence. Although households have deleveraged from 2008 levels, their debt level is still high (Graph 8), preventing greater expansion in private consumption, which accounts for approximately 70% of GDP.

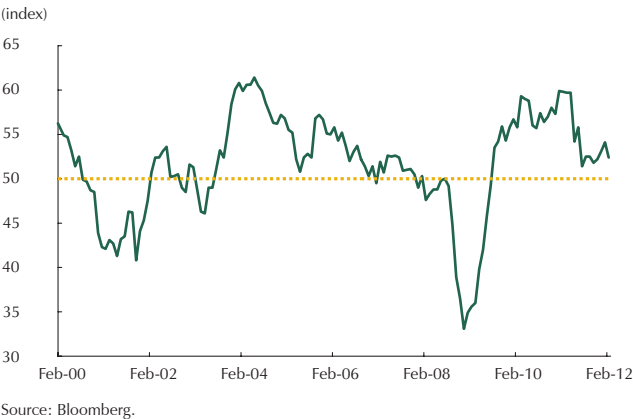
As suggested by evidence from past financial crises,<sup>3</sup> the US economy's growth is likely to remain below the historical average for some years, because recovery from this type of crisis tends to be slow, since the negative effects on the asset market, output, employment and public finances are not usually resolved in the short term. For example, some bank crises were characterized by house prices plunging by more than 30%, and it took five years on average for them to recover; this occurred in Finland in 1991, Hong Kong

3 See Reinhart and Rogoff (2009) "The Aftermath of Financial Crisis", NBER Working Paper No. 14656, National Bureau of Economic Research.

Graph 8  
US total household debt

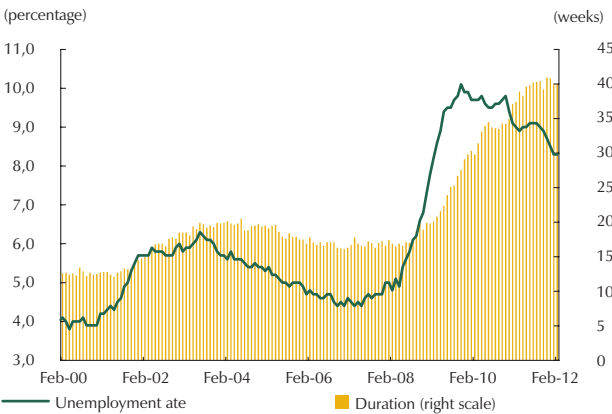


Graph 9  
US Institute of Supply Management's (ISM) manufacturing index



Graph 10  
US labor market

A. US unemployment rate and duration

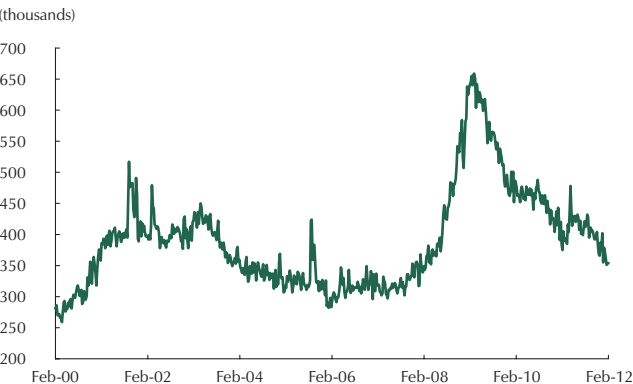


and Philippines in 1997, and Colombia in 1998. Similarly, in some countries unemployment rose by more than 7 pp after a financial crisis and took about five years to recover; this occurred in the US in 1929, Spain in 1971, Sweden and Finland in 1991, and Colombia in 1998. Output fell by more than 9% (from its peak) in some countries as a result of financial crises, and it took a little over two years for it to return to the pre-crisis level; this occurred in Finland in 1991, in Malaysia, Thailand and Indonesia in 1997, and in Argentina in 2001.

Growth in US manufacturing rose in 2011 and early 2012, resulting in a pickup in the labor market (Graph 9). Unemployment began to decrease from September, and initial jobless claims continued to fall (Graph 10).

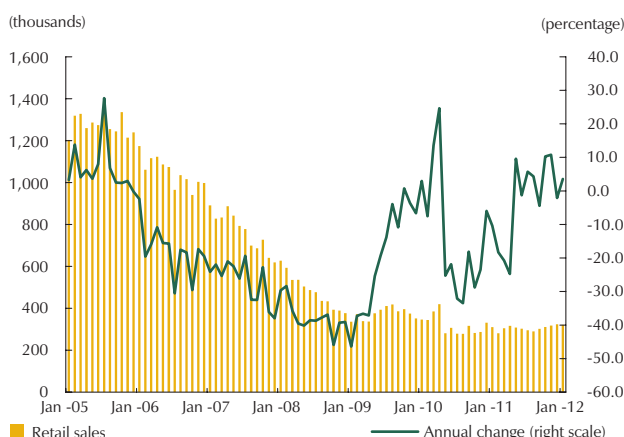
Despite the foregoing, the average duration of unemployment continues to be high, and the reduction in the number of people out of work is not entirely attributable to greater job creation, for labor supply has decreased in recent months. The decrease in labor supply may reflect two trends that have accelerated the departure of people from the job market. First, the smaller number of participants may be the outcome of a long-term trend associated with the baby-boom generation having reached retirement age, or of people simply becoming tired of looking for a

B. US initial jobless claims

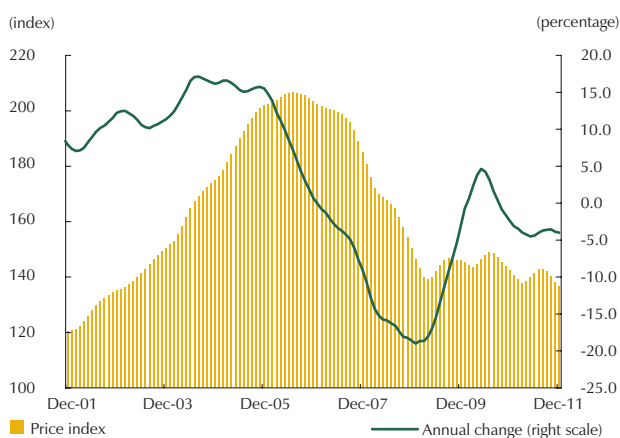


Graph 11

A. US new housing sales

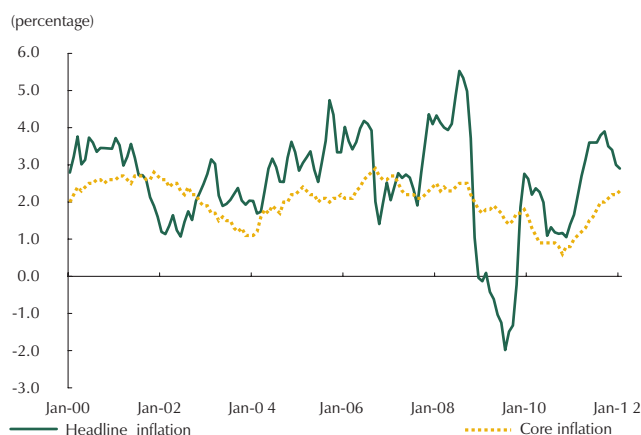


B. US housing price index



Source: Bloomberg.

Graph 12  
US headline inflation



Source: Bloomberg.

job. Second, as usually occurs during times of crisis, a fraction of the jobless decide to stop asking for work, so as to further their studies and improve their future job opportunities. Hence, though the outlook for the labor market has improved, present conditions are far from being healthy for the economy.

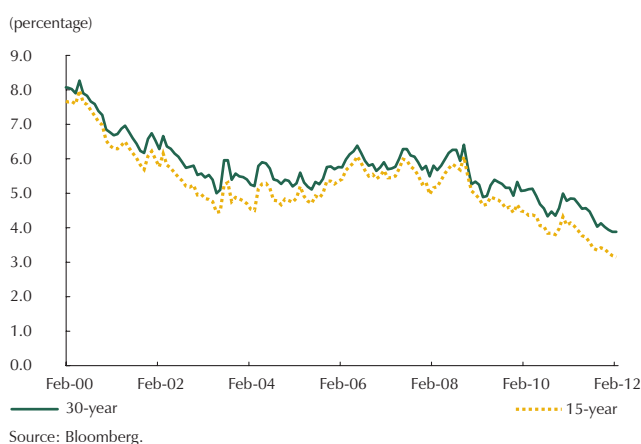
The US housing market continues to be depressed, and, though it has shown positive signs in some months, sales and prices remain very low (Graph 11). The slowdown in housing has led to limited growth in employment, as it is not only one of the sectors most affected by the mortgage crisis, but also one of the causes of the rise in the number of people out of work.

In view of the economy's slow recovery, US monetary policy has remained expansionary, continuing to provide stimuli despite the ending of the second round of quantitative easing (QE2). This expansionary policy has been implemented in a setting in which core inflation continues to rise, while headline inflation has begun to recede in recent months (Graph 12). Moreover, the US Federal Reserve decided to make a portfolio substitution by exchanging securities with short maturities for ones with longer maturities (Operation Twist), so as to keep long-term interest rates low and ease the costs of mortgage debt. This measure has had the expected effect as mortgage rates have come down and remained low (Graph 13).

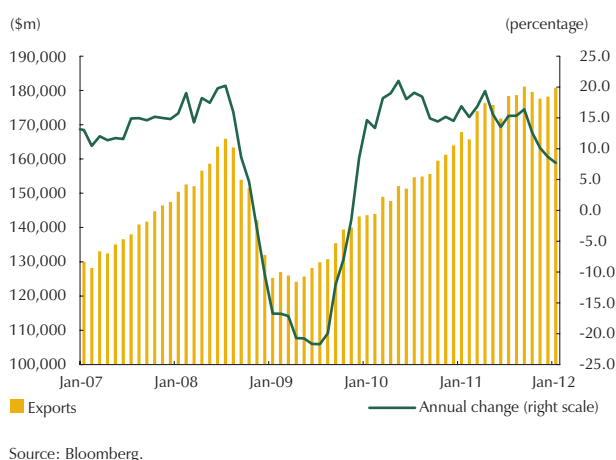
In January 2012 the Fed began to announce the future path of the intervention interest rate and an inflation target for the economy, in order to anchor longer-term interest rates and provide greater transparency to markets. According to Fed members, as things now stand the interest rate would remain unchanged until the end of 2014.

The lack of consensus among US authorities about management of the fiscal accounts led

Graph 13  
US mortgage interest rates



Graph 14  
US exports



Standard & Poor's in mid-2011 to lower the US's risk rating from the maximum AAA to AA+. Around that time the US Congress raised the public borrowing limit, because otherwise it would have had to call a technical moratorium.

Information available for 2012 has shown mixed signals for the US economy. The labor market has continued to improve, and retail sales have picked up, but consumer confidence has fallen after several months of presenting a positive trend. The IMF estimates that the US economy will grow by 1.8% this year; and, though output may continue to expand, the economy's pace of growth will be below the historical average,<sup>4</sup> as a result of structural imbalances that have yet to be fully corrected. Hence, despite relative improvement in some indicators, the economy still remains weak and vulnerable to external shocks. A sharp fall in the euro zone output would then not only cause US exports to shrink (Graph 14), it would also reduce financial-asset prices, increase uncertainty (lower corporate and consumer confidence), and give rise to greater credit restrictions.

Various analysts, including the IMF, consider that the US economy should adjust its fiscal accounts, so as to put the ratio of public debt to GDP on a path sustainable in the long run.

Postponement of this adjustment might put debt sustainability at stake and increase investor nervousness, generating a situation similar to what the euro zone is currently facing. Lastly, for economic growth in the US to return to a similar level as the historical average, there needs to be recovery in the labor and housing markets.

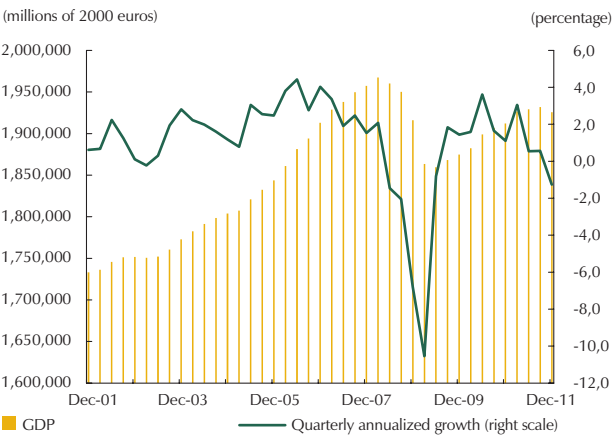
## 2. Euro zone

Although economic activity in the euro zone accelerated in the first months of 2011, particularly in the region's large economies (Germany

4

The historical average growth for the US between 1937 and 2011 was 3.2%.

Graph 15  
Euro zone real GDP

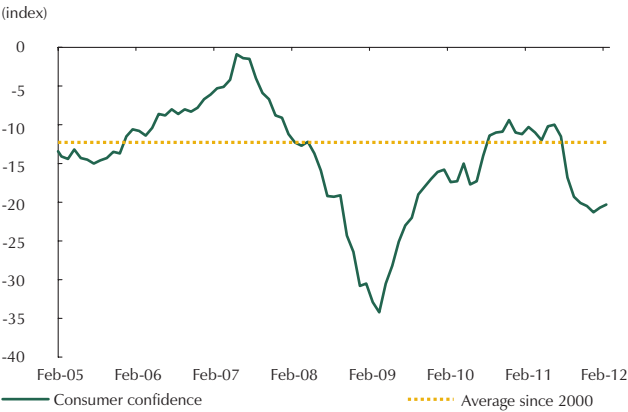


and France), the peripheral countries’ public debt problems, together with stronger financial tensions, weakened real activity. The region’s fourth-quarter output thus shrank by 0.3%, in quarterly terms, reducing annual growth from 1.4% in the third quarter to 0.9% in the fourth.

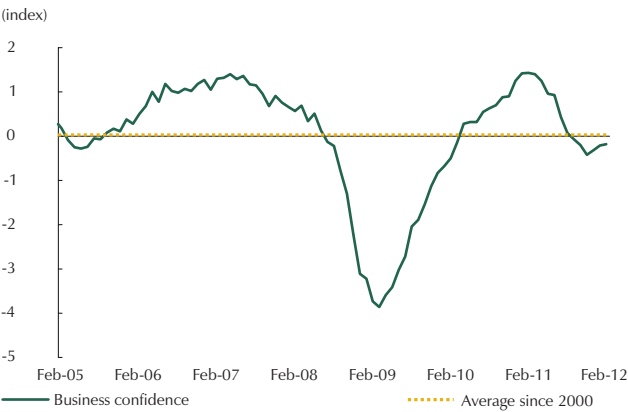
The region’s annual growth in 2011 was 1.5%, down from 1.9% in 2010 (Graph 15). The slowdown was partly caused by loss of corporate and consumer confidence (Graph 16), greater credit restrictions imposed by commercial banks (Graph 17), and weaker domestic demand resulting from high unemployment in several countries of the area.

Graph 16

A. Euro zone consumer confidence index

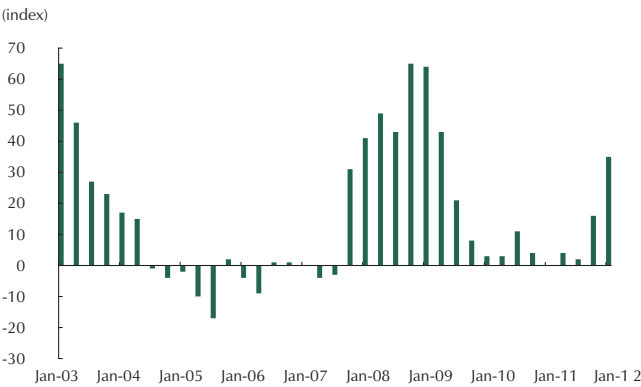


B. Euro zone business confidence index



The situation of the countries at the periphery continued to be discouraging because of lower output at the end of the year. Thus, by country, output contracted in September-December by 0.3% in Spain, by 0.7% in Italy, and by 1.3% in Portugal. In Greece output fell by 7% in annual terms during the fourth quarter.<sup>5</sup>

Graph 17  
Euro-zone credit standards<sup>a/</sup>

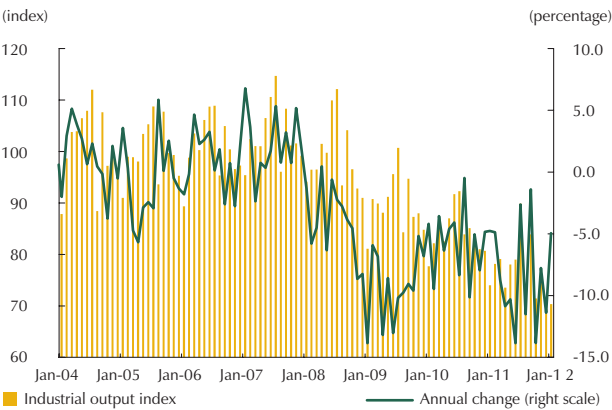


a/ This is the balance of the question put to the region’s commercial banks “How have credit standards for corporate loans changed in the past three months?”

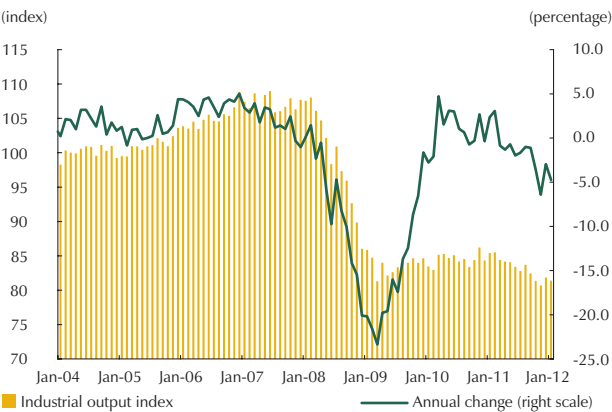
5 Greece’s quarterly growth for September-December 2011 has not yet been published.

Graph 18

A. Greece: industrial output index



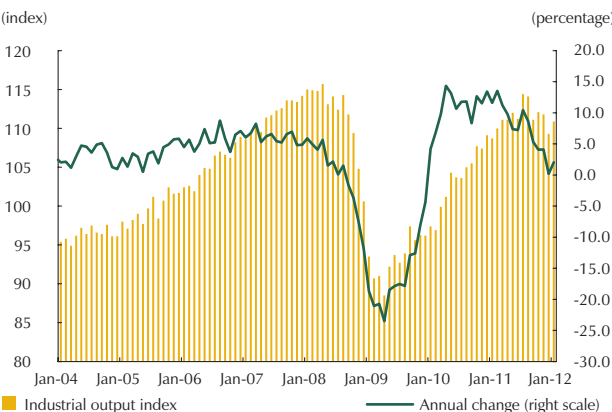
B. Spain: industrial output index



Source: Datastream.

Graph 19

A. Germany: industrial output index



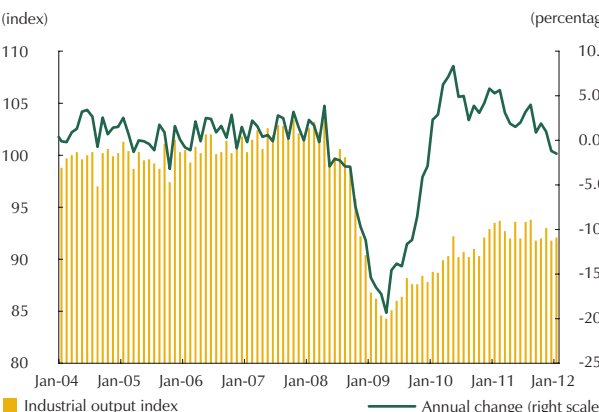
Source: Datastream.

These countries' poor performance has been reflected in the behavior of their productive sectors and in their labor market growth. In Greece, for example, industrial production continued to contract, shrinking at an annual rate of 11.4% in December (Graph 18.A), at the same time as unemployment continued rising, up to 20.9% in November 2011. Similarly, in Spain industry registered several months of negative growth (Graph 18.B), while the jobless number topped 4.5 million, historically the highest figure.

Information on industrial activity and indices of sentiment in manufacturing and services in Germany and France seem to suggest deterioration in their real activity over the final months of 2011 (Graph 19). The last quarter saw output expanding by 0.2% in France and shrinking by 0.2% in Germany and the United Kingdom, with respect to the previous quarter.

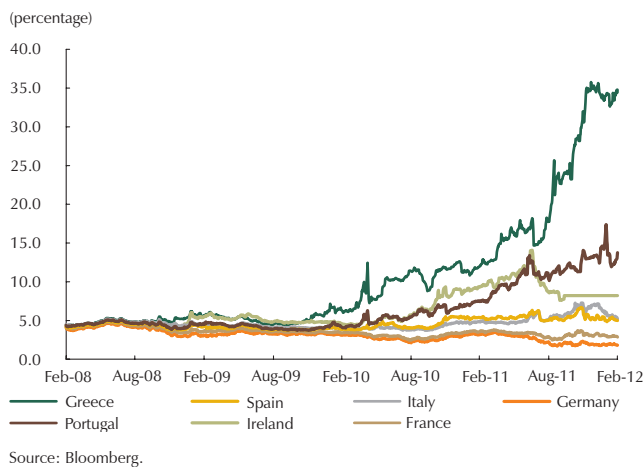
As regards the evolution of public-debt problems, uncertainty returned to international markets from June 2011, as a result of Greece's delay in applying fiscal-adjustment programs, poor results in terms of reducing its public deficit, and its shrinking output. Rising tensions led to significantly higher risk premiums for several countries on the periphery (particularly Greece),

B. France: industrial output index





Graph 20  
European countries' interest rates on 10-year sovereign debt securities



which began to see their debt sustainability threatened by higher funding costs (Graph 20).

Spain and Italy, too, were adversely affected by the increase in international uncertainty, to the point that their risk premiums rose to much the same levels as had forced Ireland, Greece and Portugal to seek help from the European Union and the IMF. Increasing pressures in sovereign debt markets led the European Central Bank to buy the securities of those countries to avert an inordinate rise in funding costs. The economic authorities of Spain and Italy, for their part, saw the need to make greater fiscal adjustments, in order to put their public debt on a sustainable medium-term path.

The European authorities started to take measures from October 2011 to contain the region's debt crisis and avert a financial-system collapse, thereby helping to partially restore market confidence; and for some weeks the markets were up. In a communiqué dated October 26 the European Commission announced greater fiscal discipline, an increase in high-quality capital needs for commercial banks, the creation of a permanent bailout fund with more resources than the existing one, and greater private-sector participation in restructuring Greece's debt. Although these measures were at first well received by markets, uncertainty came back when markets began to have doubts about how they would be implemented.

A new wave of optimism returned to international markets as a result of ECB intervention and help from other central banks to the region's financial system. At its last meeting of the year the ECB decreased the intervention interest rate by 25bp, reduced commercial banks' reserve requirement, and decided to provide massive liquidity support to the financial system. It provided liquidity through three-year loans at historically low interest, for a total amount of €489 billion, distributed between 523 banks. In February 2012 the ECB decided again to inject money into the financial sector, with loans amounting to €529.5bn to 800 commercial banks, significantly increasing the ECB's balance sheets in recent months.

Although one of the ECB's objectives is to reactivate credit in the region so as to avert a situation similar to what occurred in 2008-2009, commercial banks have continued to impose tighter credit requirements, thereby limiting the supply of loans. Greater liquidity has, nevertheless, benefited the auctions of Spain's and Italy's public-debt bonds; their risk premiums fell

*Important steps  
were taken in early  
2012 to solve  
the problems of  
European public  
debt.*

during the first weeks of 2012, and they have moved away from the Greek situation. This suggests that the measures taken by the European authorities to contain the crisis and stop it from spreading further are being effective.

Greece, for its part, asked the European authorities for a second bailout and entered into negotiations with the private sector to restructure its public debt. This has involved greater fiscal adjustments, including, among others, measures to reduce the minimum wage and the number of public employees. On February 21 the European Commission announced its approval of a second bailout for Greece, to be subject to a series of restrictions for this country, such as greater oversight of its public accounts by a permanent representation of the Troika and stronger private sector participation in restructuring the country's public debt. Thus, on March 8 private creditors agreed to swap Greek bonds for others with a lower par value, lower interest rates and a longer maturity. This public debt "haircut" and the new bailout plan are meant to reduce the fiscal deficit from its current level of 160% of GDP to 120.5% by 2020.

Despite the new fiscal adjustment programs, the rating agencies have continued to lower the credit ratings of some euro zone countries, contending that their current growth rates and their prospects are inadequate for bringing the public debt to GDP ratio down to sustainable levels in the coming years. In early 2012 Standard & Poor's lowered the risk ratings of several countries, including France.<sup>6</sup> The agency stated that, though France's public debt posed no threat in the short term, high exposure to indebted countries such as Italy did present a potential risk to the stability of its economy.

In view of the foregoing, the IMF expects the euro zone to contract by 0.5% in 2012 owing to lower domestic demand, resulting from the fiscal problems of peripheral economies and greater credit restrictions. Output would shrink in the first months of year and gradually recover in the second half, driven by the economies of Germany and France.

*Despite fiscal  
adjustment  
programs, risk  
rating agencies have  
continued to lower  
credit ratings in  
Europe.*

### **3. Japan**

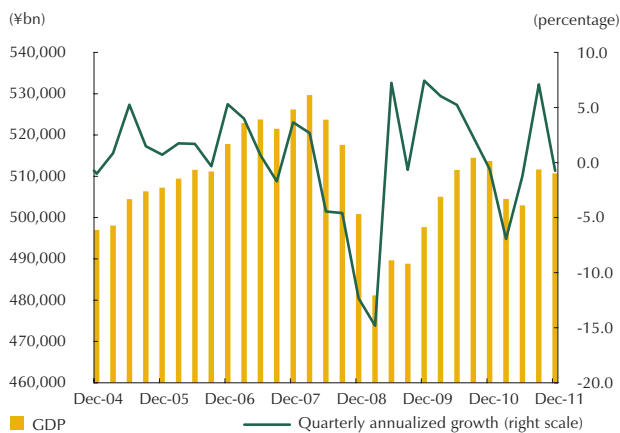
The Japanese economy contracted by 0.73% in 2011 because of the natural disaster of early March, which disrupted the supply chain for several months and affected the provision of energy in several regions of

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<sup>6</sup> Between January and February 2012 Standard & Poor's also downgraded the risk ratings of Austria, Italy, Spain, Greece, Portugal, Malta, Slovenia, Slovakia and Cyprus. Similarly, Moody's downgraded the risk ratings of Italy, Portugal, Spain and Greece, among others.



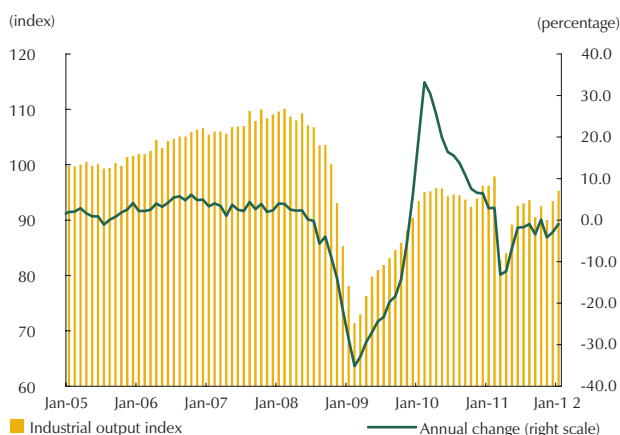
Graph 21  
Japan: real GDP



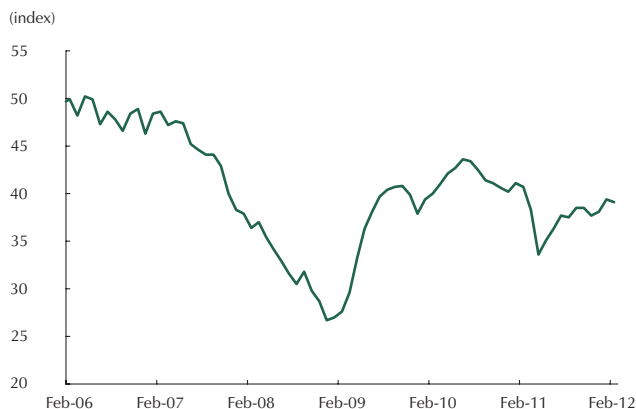
Source: Bloomberg.

Graph 22

#### A. Japan: Industrial output index



#### B. Japan: Consumer confidence index (index)



Source: Bloomberg.

the country (Graph 21). Growth picked up in the third quarter thanks to strong recovery in exports, but this behavior went into reverse in the final three months of the year, as external sales slowed down, affected by floods in Thailand. In quarterly terms, exports fell by 3.1% in the final three months, having expanded by 8.6% between July and September. In contrast, imports continued to grow because of higher energy purchases needed to replace the drop in the country's nuclear energy generation. Falling exports and rising imports in 2011 caused Japan to register a trade deficit for the first time in thirty years.

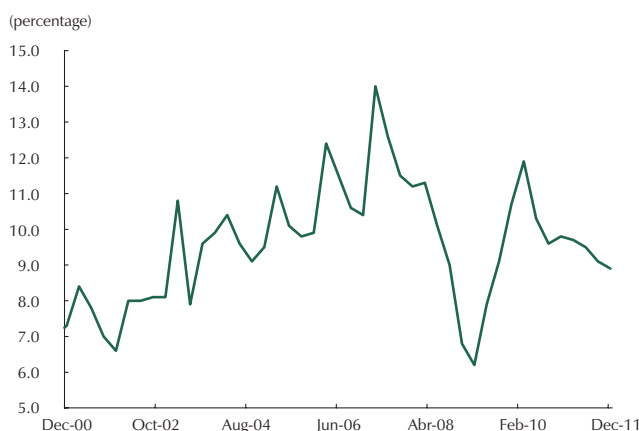
Household consumption decreased in the first quarter of 2011 but recovered moderately in the fourth, offsetting weaker support from the export sector. Moreover, government spending grew because of reconstruction work undertaken after the natural disaster in March. Household confidence has picked up recently. But industrial activity has still not risen to pre-disaster levels and does not provide confirmation of an uptrend in the short term (Graph 22). The IMF however expects Japan's economy to expand by 1.7% in 2012, on account of reconstruction work and the lower base of comparison.

### C. EMERGING ECONOMIES' PERFORMANCE IN 2011 AND PROSPECTS FOR 2012

#### 1. Emerging Asia

Growth in the emerging economies of Asia has moderated in response to less expansionary monetary and fiscal policies and weaker external demand, particularly from the euro zone. In 2011 there were two clearly defined periods of economic-policy decision-making in the region. Thus, in the first months of 2011 domestic factors in each economy prompted economic policy to be

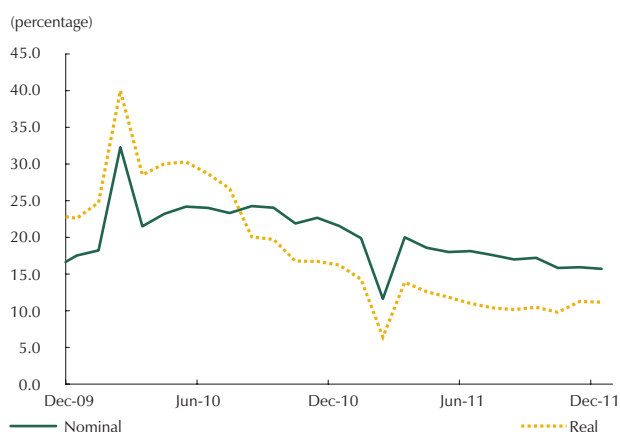
Graph 23  
China: real GDP growth rate



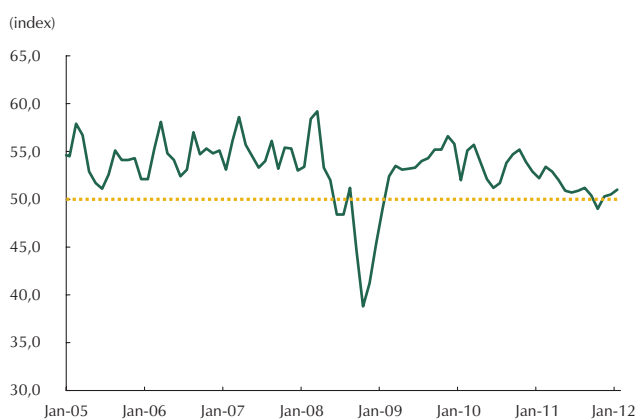
Source: Bloomberg.

Graph 24  
China

A. China: Retail sales (annual change)



B. China: Manufacturing purchasing index (PMI)



Source: Bloomberg.

less expansionary to avoid overheating, whereas in the second half of the year both monetary and fiscal policy became more flexible to counteract the effects of a lower momentum of exports.

In the specific case of China, output growth slowed from 10.4% in 2010 to 9.2% a year later (Graph 23), mostly because growth in exports fell from 31.3% in 2012 to 20.3% in 2011. Similarly, expansion in investment decreased from 13.9% to 10.2% over the same period. Rising consumption and falling imports helped to offset the behavior of the other spending components.

Despite the Chinese economy's slower growth in 2011, fears of a sharp downturn have decreased thanks to the satisfactory behavior of a number of real-activity indicators. Retail sales have continued to grow in both real and nominal terms; as well as industrial activity, which continues to grow by more than 10%, despite a slowdown in the final months of 2011 (Graph 24). Although some real-activity indicators show positive signs, exports are still losing buoyancy, particularly exports to the euro zone.<sup>7</sup>

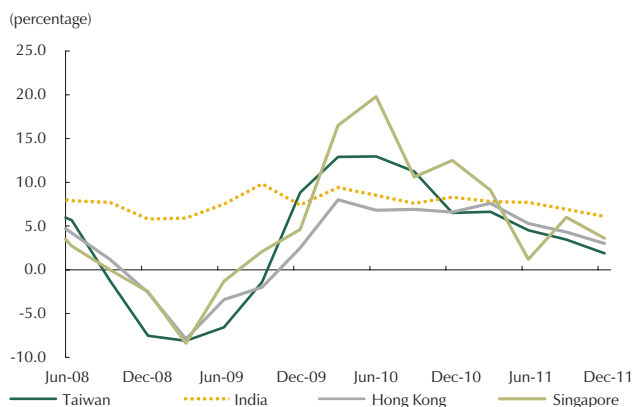
In view of the economy's slower growth and lower inflationary pressures, the Central Bank of China has kept its intervention interest rate unchanged since July 2011 and has reduced its reserve requirement for commercial banks.

China's economic authorities are concerned by the fall in recent months in housing prices because it could strongly affect the construction sector and, hence, the country's output, given that China's real activity in recent years has been greatly influenced by this sector. The present situation of the housing market may

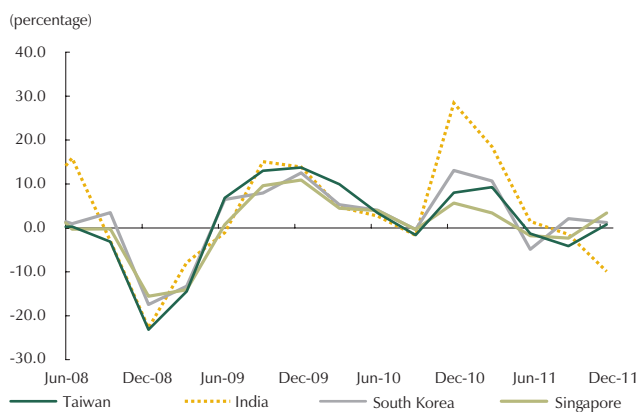
<sup>7</sup> Owing to the Chinese new year, January data do not show the economy's real behavior, but figures for the previous months show a declining trend in exports.

Graph 25

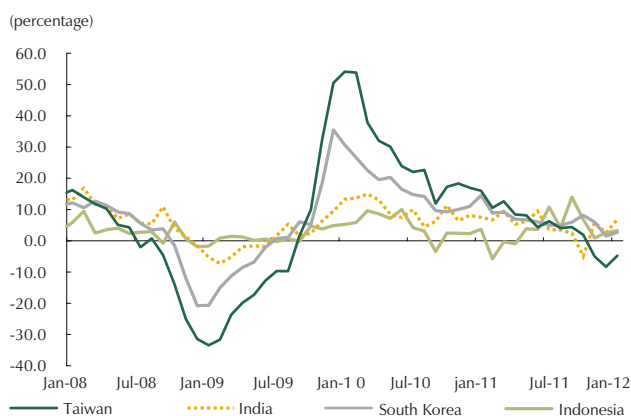
A. Some Asian economies: Real GDP growth



B. Some Asian economies: Quarterly export growth



C. Some Asian economies: Annual change in industrial output index



Fuente: Bloomberg y Datastream.

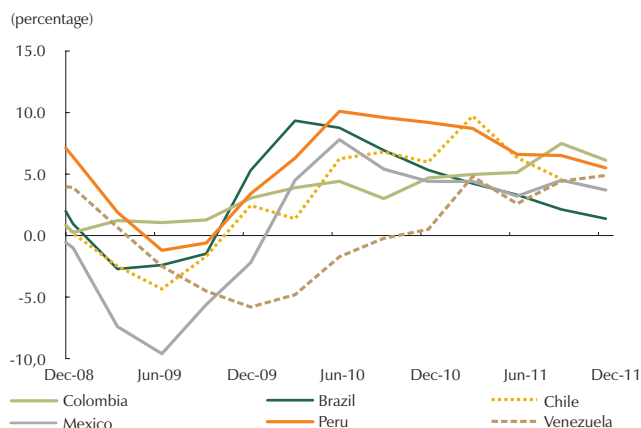
be connected with the measures taken in 2010 to prevent the formation of a mortgage bubble forming as housing prices were surging. Nevertheless, it is a cause for concern for the authorities.

For the other countries of the region the pace of growth moderated in 2011 and in some cases contracted in the fourth quarter (Graph 25.A). High dependence on exports in a setting of global slowdown affected these countries, particularly Taiwan, South Korea and Singapore, which have greater trade links with the European Union. The effects of the slowdown were reflected in declining growth in both external sales and industrial activity (Graph 25.B and C). As regards domestic demand, except in the case of Indonesia, retail sales and imports have decelerated in recent months despite growth in credit.

Other countries, too, have been affected by domestic factors. In India, for example, sharp rises in the intervention interest rate to control inflation, together with declining corporate and consumer confidence, have reined in economic activity. And in Thailand, floods in October 2011 disrupted industrial activity and supply chains in several sectors.

Lastly, during much of 2011 various countries of the region were beset by inflationary pressures resulting from high international commodity prices earlier in the year, which prompted some central banks to raise interest rates. However, as global activity began to lose pace and prices started to fall, the region's economies saw their local inflation ease, and consequently monetary policy became a little more expansionary. The IMF expects growth in these economies to slow again in 2012 and to be driven more by domestic demand than in previous years.

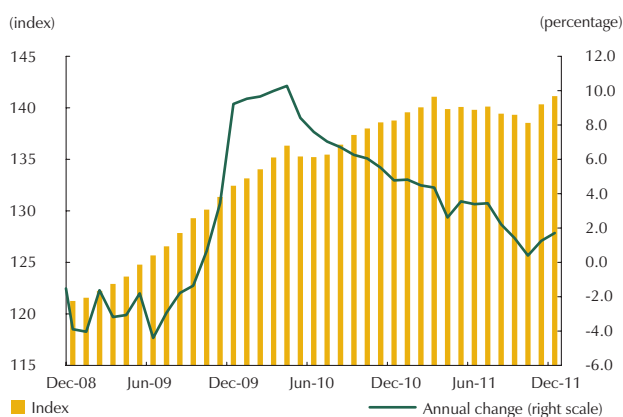
Graph 26  
Some Latin American economies: real annual GDP growth



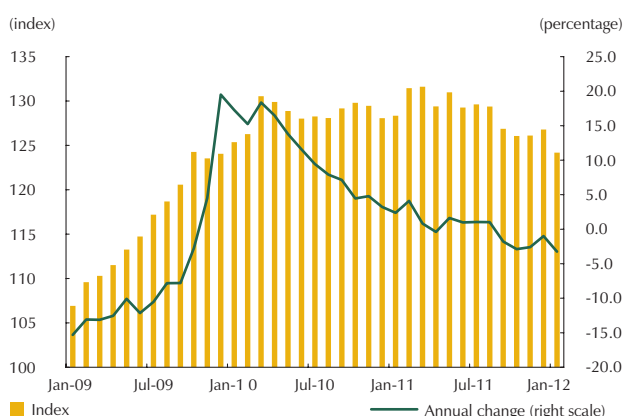
Source: Bloomberg

Graph 27

#### A. Brazil: Real activity index



#### B. Brazil: Industrial output index



Fuente: Bloomberg.

## 2. Latin America

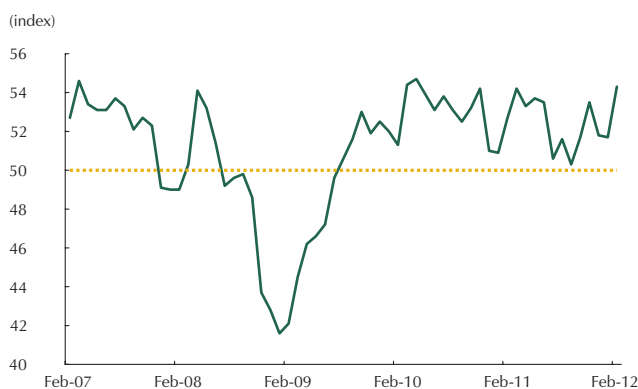
In most Latin-American countries, as in emerging Asian economies, growth moderated in 2011 (Graph 26), because of declining external demand and the effect of more restrictive fiscal and monetary policies. However, some oil-exporting countries, such as Venezuela, Ecuador and Colombia saw their output rising, thanks in part to higher terms of trade, which increased their national revenues.

The IMF's preliminary estimates show that in 2011 the GDP of Latin America and the Caribbean expanded by 4.6%, down from 6.1% in 2010. This slower growth was highly influenced by weak behavior on the part of the region's largest economies, such as Brazil and Mexico. Brazil's output expansion decelerated sharply last year, plunging from 7.5% in 2010 to 2.9% in 2011.

The slowdown in Brazil's real activity resulted in part from policies that were implemented from mid-2010 and were designed to moderate economic growth and inflation. They were also meant to prevent the formation of risks that would drive the economy to a level not sustainable in the medium and long run, such as accelerated expansion in credit and in the current account deficit. Moreover, for several months in 2011 Brazil's inflation ran above the central bank's target range, effectively preventing adoption of a less restrictive monetary policy. However, as the economy began to grow more slowly than expected, the monetary authority saw the need to boost real activity with lower interest rates. As a result, in the final months of 2011 both the real-activity index, calculated by the Central Bank of Brazil, and the industrial-output index started to recover (Graph 27).

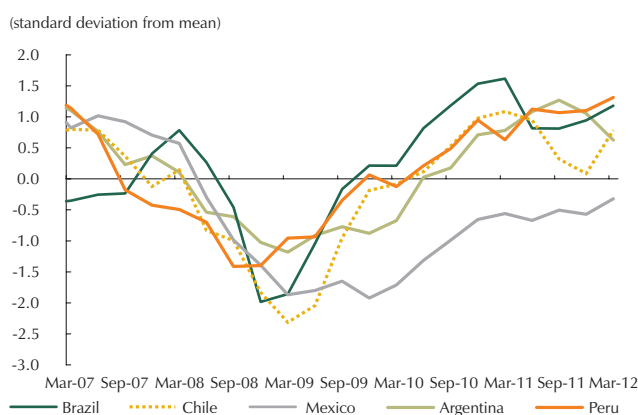
Recovery in the United States has been driving real activity in Mexico, and this is reflected in

Graph 28  
Mexico: manufacturing purchasing index (PMI)



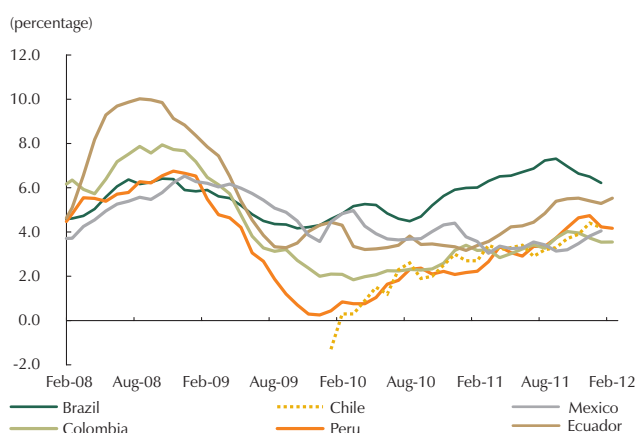
Source: Bloomberg.

Graph 29  
Latin-American countries: consumer confidence index



Sources: Universidad del Desarrollo (Chile); Inegi (Mexico); Universidad Di Tella (Argentina); Getulio Vargas Foundation – Brazilian Institute of Economics (Brazil); Grupo Apoyo (Peru).

Graph 30  
Latin-American economies: annual inflation



Source: Bloomberg.

both the manufacturing sector and consumer confidence (Graph 28). Exports, however, continue to lose pace in annual terms.

Mining activity in Chile decreased in the final months of 2011, because of the negative effects on the international price of copper of falling external demand and, in particular, the slowdown in China (see *2011 Commodity Price Behavior* on page 19). This situation affected business and consumer expectations in the second half of the year (Graph 29). In contrast, high oil prices, especially in early 2011, drove mining activity in Ecuador,<sup>8</sup> Venezuela and Colombia, speeding up these countries' growth rates relative to 2010 levels (Graph 26).

Inflation in Mexico, Colombia and Brazil stood within the target range set by each country's central bank, whereas in Chile and Peru it rose above the respective target-range ceilings (Graph 30).<sup>9</sup>

Monetary policy decisions in the different countries since late 2011 have not all moved in the same direction. For example, Chile and Brazil have lowered their intervention interest rates, while Mexico has not altered its rate, and Colombia's has been raised (see Box 1). A number of factors explain the differences in monetary-policy decisions. First, the European crisis may have unequal effects on the region's economies, given that each country has different trade and financial flows with the euro zone.<sup>10</sup> Moreover, internally, not only have high international crude

8 According to projections by the Central Bank of Ecuador, the country's growth in 2011 should be 8%, higher than the potential rate

9 The target range set by each country's central bank for consumer inflation in 2011 was: 2%-4% for Chile, Colombia and Mexico; 2.5%-6.5% for Brazil; and 1%-3% for Peru.

10 So, for example, while Colombia and Mexico have a stronger trading relationship with the US than with Europe, in the case of Chile and Brazil the European market is of greater importance than the US market in terms of share of trade.

*In the coming years various countries will need to adjust their economies to avoid the occurrence of crises similar to those of recent years.*

prices boosted the national revenues of oil-producing countries such as Venezuela, Ecuador and Colombia, but the economic cycles of all the countries are different. In effect, while Colombia's economic growth in 2011 was higher than its historical average, Brazil's was lower. The Colombian economy has benefited from favorable terms of trade, generated by the expansion of Asian economies, especially China's, and from higher capital inflows as a consequence of low external interest rates. Lastly, inflation expectations in countries such as Chile and Brazil are closer to the midpoint of their target ranges than in Colombia.

Accordingly, the IMF estimates that the economies of Latin America and the Caribbean will grow by 3.6% in 2012, more slowly than in 2010 and 2011. Although weakness in the external context and moderation of international commodity prices may limit the region's behavior in 2012, buoyant internal demand should offset the effects of the global slowdown and provide the region's economies with positive expansion.

#### D. FUTURE CHALLENGES

In the next few years several countries will need to make structural adjustments to their economies to prevent the creation of any risks similar to those that triggered the current crisis, and thereby ensure sustainable growth in the medium and long run. For example, the United States, Japan and some euro zone economies will have to make progress in consolidating their fiscal accounts by reducing their debt-to-GDP ratios. This will require making significant spending cuts, including in such important and sensitive items as health-care and pensions programs.

In this respect, the United States should continue deleveraging the private sector, particularly households, and reviving the labor and housing markets. If these imbalances are not corrected, the country's economic growth will continue to be moderate.

Europe will have to adjust its internal disparities. The less competitive economies, such as Italy, Greece and Portugal, will therefore need to become more competitive in some key sectors, particularly the service sector, so as to improve productivity and be able to vie with the region's larger, stronger economies, such as Germany and France.

Asia's emerging economies must make the transition to a growth model dependent more on domestic demand and less on exports. In this

*In Latin America the expansion in credit and asset prices will need to become more restrained.*

connection, China's development plan for the coming years proposes to stimulate consumption and the determinants of domestic growth. The economies of Latin America will need to moderate the expansion in credit and asset prices in order to prevent internal imbalances from arising and current-account deficits from surging.

Lastly, it is worth noting that in 2012 presidential elections or the election of high political leaders will be carried out in several countries, including the United States, Russia, France, Mexico, Greece, Iran and Venezuela, which together account for over half of world GDP.



Box 1  
POLICY-RATE DECISIONS IN LATIN AMERICA

In the aftermath of the 2008-2009 international financial crisis, the central banks of several developing countries decided to start withdrawing monetary stimulus, in view of existing inflationary pressures and potential macroeconomic imbalances. However, Europe’s sovereign debt crisis and the risks of a new global recession, plus certain domestic factors, led the monetary authorities of various emerging countries to decide at the end of 2011 to stop raising their benchmark interest rates, or even to reduce them.

This Box compares the external and internal conditions in four countries that use inflation targeting: Brazil, Chile, Colombia and Peru. It aims to explain why the central banks of Brazil and Chile reduced their benchmark interest rates, while Peru kept its rate unchanged and Colombia raised its rate.

First, it is important to note that in 2011 these four countries’ benchmark interest rates were different in real terms. So, for example, the average real rate (deflated by headline CPI and by non-food CPI) was lower in Colombia than in Chile, Brazil and Peru. (Table B1.1). And it is still among the lowest, despite the latest nominal increments made by Banco de la República and the cuts made by the central Banks of Chile and Brazil (Graphs B1.1 and B1.2).

Table B1.1  
2011 Average real policy rates  
(percentage)

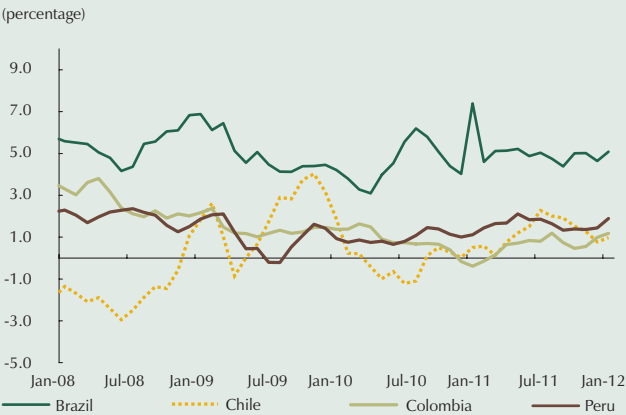
	Brazil	Chile	Colombia	Perú
Deflated by headline CPI	5,1	1,2	0,5	1,6
Deflated by non-food CPI	6,0	3,2	1,0	1,6

Source: Each country’s central bank. Calculations by Banco de la República.

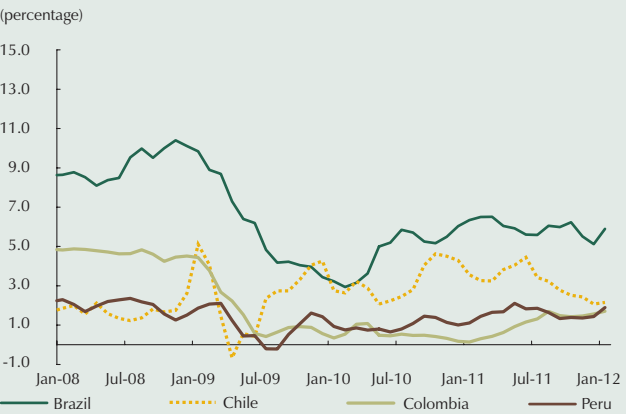
1. Each country’s external context

Although deterioration of the European situation has affected global activity, the external conditions of each country under study may have caused the impact on its economy to be different. Such conditions include

Graph B1.1  
Real policy rates  
(deflated by headline CPI)



Graph B1.2  
Real policy rates  
(deflated by non-food CPI)



the degree of economic openness, trade and financial relations with the euro zone, and dependence on and behavior of the terms of trade. Analysis of these variables at the time of making decisions on interest rates may alter the balance of risks.

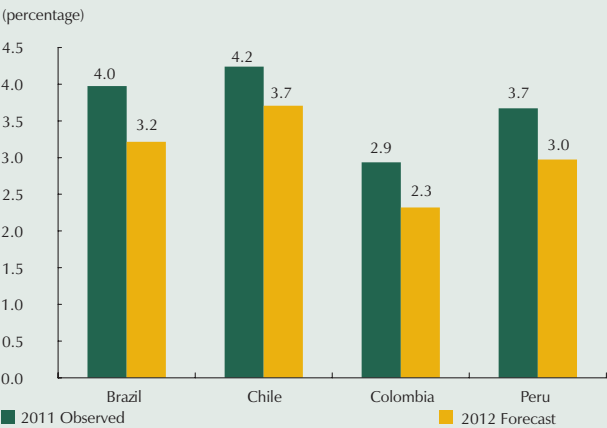
The European crisis has led various multilateral organizations and analysts to lower the 2012 growth forecasts for most countries. Graph B1.3 shows that a similar slowdown is expected on average for the trading partners of the four countries. However, any error in these forecasts—particularly if the European situation’s

deterioration is underestimated—could have greater negative consequences for the more open countries or those having stronger trade relations with the euro zone.

Calculating the degree of openness as exports plus imports, as a percentage of GDP, Colombia’s openness turns out to be the second lowest among those of the four countries (Graph B1.4). Similarly, the Colombian economy is the least exposed to Europe in terms of exports, since the greatest part of the country’s external sales go to the United States, which is expected to show positive growth somewhat below its potential; the other countries’ sales to the US represent a much smaller share of their total exports (Graph B1.5).

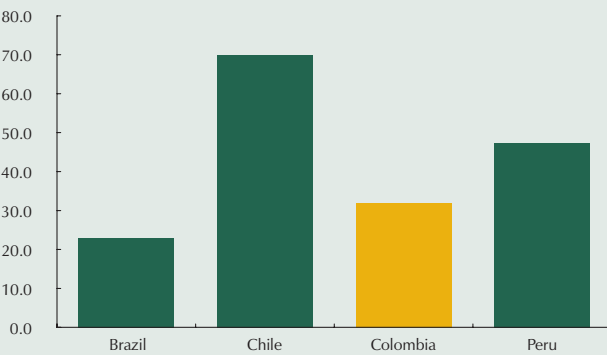
In terms of external funding, Brazil and Colombia have the lowest ratios of foreign debt to GDP (Graph B1.6). Similarly, the share of European banks in the local credit

Graph B1.3  
Trading partners’ growth  
(weighted by total exports)



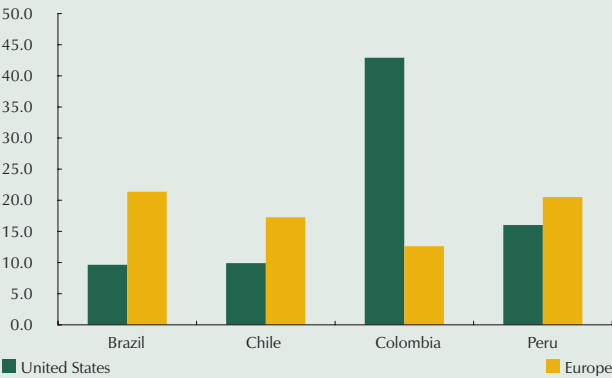
Source: IMF World Economic Outlook.

Graph B1.4  
Degree of openness  
(exports plus imports, as a percentage of GDP)



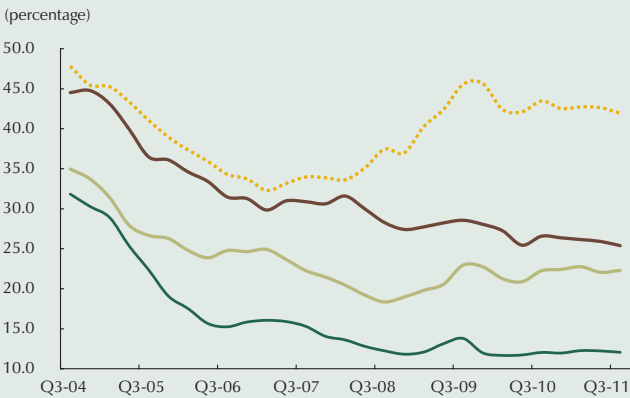
Source: IMF World Economic Outlook.

Graph B1.5  
Exports exposure  
(percentage of exports to different destinations)



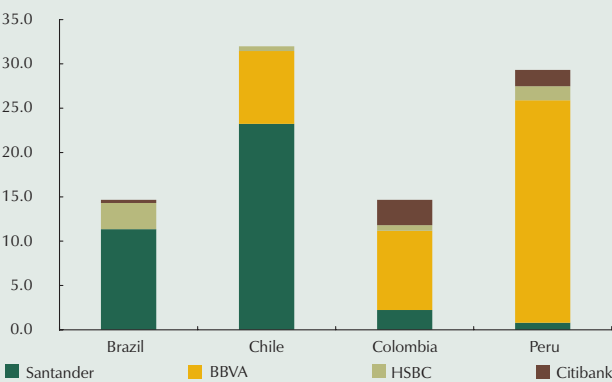
Source: IMF World Economic Outlook.

Graph B1.6  
Total external debt  
(percentage of past four quarters’ GDP)



Source: Each country’s central bank.

Graph B1.7  
European banks’ share of the credit market  
(percentage)



Source: BMI and each country’s financial oversight body.

market is the smallest in Colombia compared with the other countries of the sample, and the biggest in Chile. Colombia's lower dependence on foreign funding and on European banks will be a relative advantage in the event of international credit restrictions being imposed (Graph B1.7).

Regarding the terms of trade, all four countries registered levels favorable to their national revenues, with Colombia and Chile exhibiting the highest indices in 2011. However, Chile saw its terms of trade affected by the falling trend in the price of copper all through 2011. In the case of Colombia, high oil prices kept its terms of trade on a rising trend (Graph B1.8).

In conclusion, although the European crisis affected growth in external demand for all four countries, the Colombian economy seems to have been less vulnerable to greater deterioration in the euro zone.

## 2. Each country's domestic situation

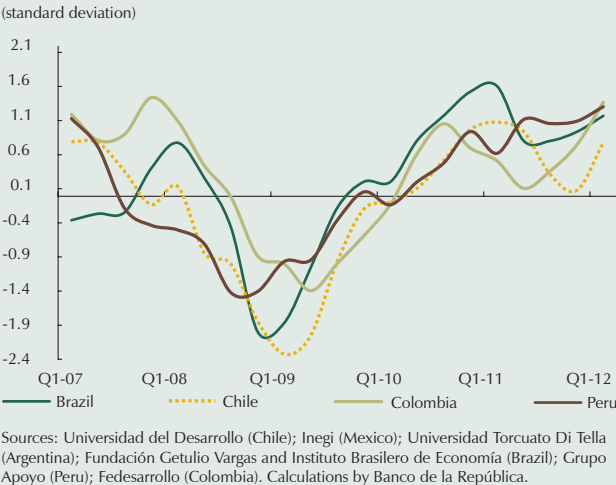
One of the channels by which the European crisis could spread to other countries is through a fall in confidence. This channel, which was quite relevant in the past financial crisis, seems to be less so this time in the four countries under study. At the end of 2011, confidence levels declined in Chile and Brazil, whereas in Peru and Colombia they have been on a rising trend, reaching record values in the particular case of Colombia (Graph B1.9).

Another variable strongly affected by the past crisis was credit, but this time around financial-deepening levels in 2011 ran above or close to their long-term trends (see Box 3). Of the four countries, Colombia

Graph B1.8  
Terms of trade



Graph B1.9  
Confidence indices of Latin-American countries (standard deviation from the mean)



was the one that came closest to a situation that could be described as a credit boom.

Colombia's economic growth, unlike the other countries', is estimated to have ended 2011 far above the average calculated since 2000, a performance that Colombia has been exhibiting over the past five quarters.<sup>11</sup> Chile came next in terms of growth, though its GDP began to slow down from mid-2011 and is forecast to be equal to its average for the fourth quarter. The situation was similar in Brazil and Peru, but with faster slowdowns. According to growth forecasts for 2012, it is feasible that Colombia's output gap will be more strongly positive than those of the other countries (Graph B1.10).

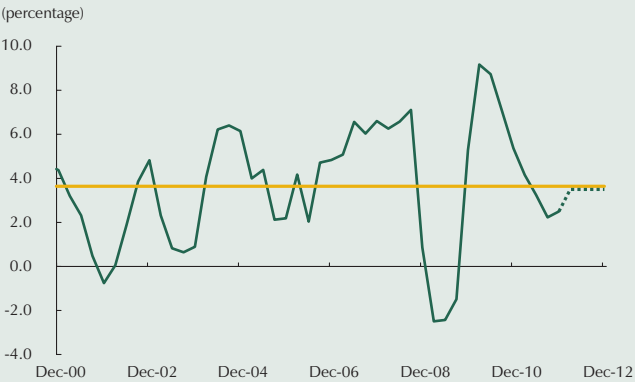
In 2011 Colombia and Brazil managed to meet their inflation targets (2%-4% and 2.5%-6.5%, respectively), whereas inflation in Chile and Peru<sup>22</sup> ran above their target ceilings. At December 2011 Colombia was the country with inflation closest to the target mid-point, while the countries with inflation farthest from the mid-point were Peru, Brazil and Chile, in descending order (Graph B1.11). Regarding expectations, the market's perception is that inflation in 2012 will run above the target mid-point by approximately the same amount in all the countries except Chile (Graph B1.12).

1 Estimated on the basis of forecasts for the fourth quarter of 2011, taken from the different countries' inflation reports.

2 Note that Peru is the country with the lowest inflation target range: 1%-3%.

Graph B1.10  
Real annual GDP growth and its average since 2000

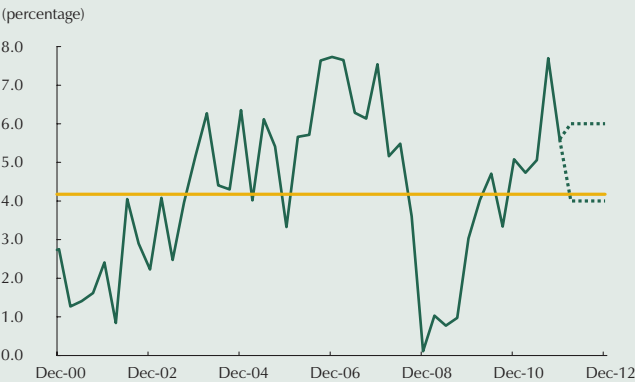
A. Brazil



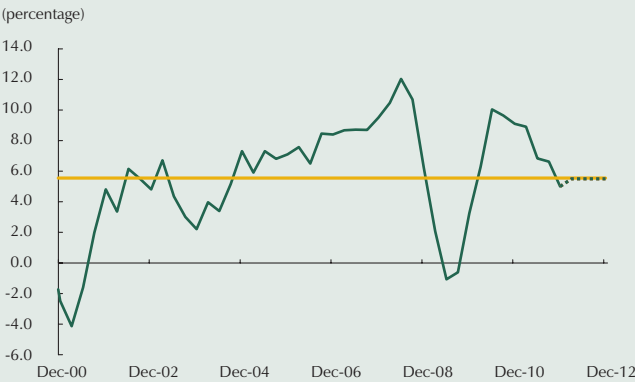
B. Chile



C. Colombia

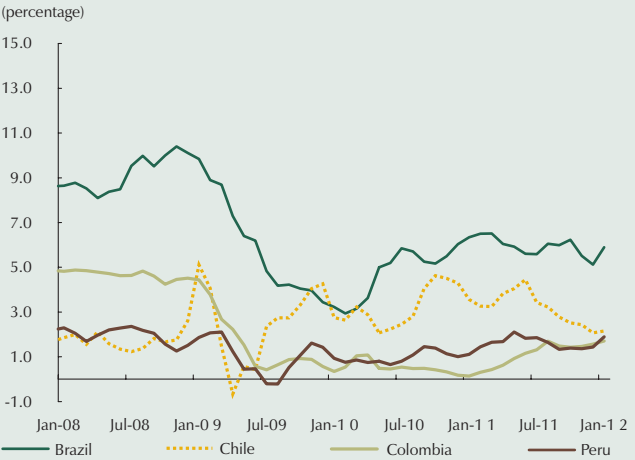


D. Peru



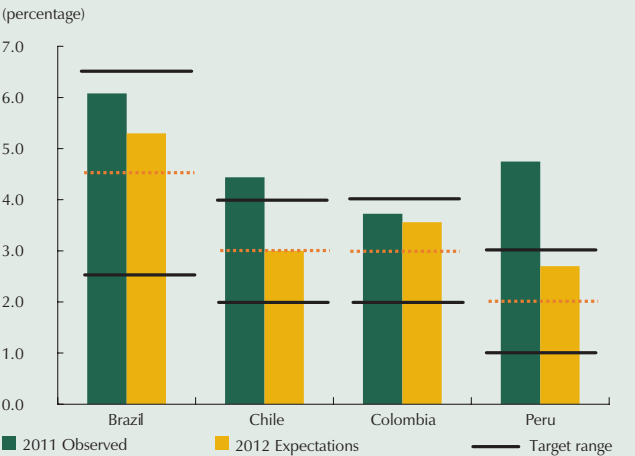
Sources: Datastream and each country's central bank.

Graph B1.11  
Distance of Observed Inflation from the Mid-point of the Target Range (percentage of exports to different destinations)



Source: IMF World Economic Outlook.

Graph B1.12  
Inflation expectations



Sources: *Latin Focus* and Banco de la República (economic expectations survey).

To sum up, in a context of inflation targeting, of the four countries reviewed Colombia provides greater evidence of the appropriateness of withdrawing the monetary stimulus supplied in past months. Colombia's level of openness and its external trade and finance indicators suggest that it is the country with the least connection to Europe's deteriorated economy. And it has the highest terms of trade. In contrast to Colombia, Chile has a high level of economic openness, a high percentage of exports going to Europe, and a not negligible share of its domestic credit held by European banks. Moreover, the fall in the price of copper has further affected its national income.

In the second half of 2011 Chile and Brazil exhibited falling confidence indices and surging economic activity, while Peru registered slower growth. Over the same period the confidence index and credit rose in Colombia, and GDP expanded faster than it had in the first half of the year. In all, growth forecasts for 2012 suggest that Colombia's output gap is likely to be the most positive in the region. In terms of inflation expectations for 2012, Chile is expected to come closest to the target mid-point, followed by Colombia (0.6bp), Peru (0.7bp) and Brazil (0.8bp).

## II. THE COLOMBIAN ECONOMY: 2011 RESULTS AND 2012 OUTLOOK

*In 2011 Colombia's economy grew by 5.9%, the third highest rate in thirty years and comparable only with growth in 2006 and 2007, years of economic boom for the country. Last year's growth was driven by domestic demand and by exports not significantly affected by international economic problems. The economy is expected to expand in 2012 at a rate between 4% and 6%. Inflation ended 2011 at 3.73%, within the target range, and is expected to converge this year to the long-term target of 3%.*

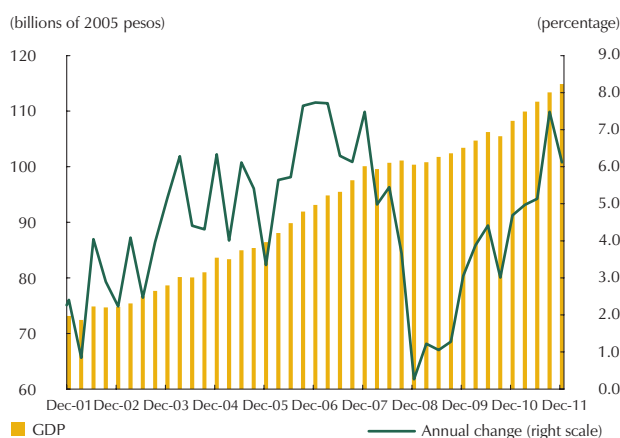
### A. ECONOMIC ACTIVITY

According to the National Statistics Agency (DANE), Colombia's GDP grew by 5.9% in 2011, its best performance in four years. In early 2011

the economy was expanding at a rate somewhat higher than its average since 2000. It continued to gain momentum over the year and by the third quarter was growing at a peak rate of 7.5%, one of the biggest expansions in recent decades. The fourth quarter saw the economy's growth slowing down to 6.1%, which was still a higher rate than in the first half of the year (Graph 31).

Broadly speaking, Colombia may be said to have managed to resist in large measure the assaults of international economic problems in 2011, particularly those from Europe. Although some European economies are among the country's

Graph 31  
Real GDP  
(seasonally adjusted)



Source: DANE: National Statistics Agency.

*The fastest growing spending item in 2011 was fixed-capital investment, particularly purchases of machinery and transport equipment*

main trading partners, their problems do not seem to have hit Colombian exports particularly hard. Furthermore, the external situation does not seem to have significantly affected investor and consumer confidence, nor was it reflected in a risk-premium increase.

The delicate international situation did not prevent domestic demand from growing by 8.8%, the highest rate since 1990 and the same as in 2006, when Colombia's economy was booming. This performance was made possible in part by high terms of trade and abundant flows of foreign direct investment, which reached record levels, particularly the amounts invested in the oil and mining sectors.

## **1. 2011 GDP growth by type of spending**

*Housing and civil works construction grew, but more slowly.*

The fastest growing spending item of domestic demand and the one that contributed most to GDP expansion was fixed-capital investment, which increased by 16.6%, its second highest rate since 2000 (Table 2). Investments in machinery and transport equipment accounted for this good performance, rising at rates far above their average growth. In 2011 these components benefited from low commercial interest rates throughout the year, and from an exchange-rate appreciation that in relative terms helped to lower the cost of imported capital goods.

Investment in building construction (including housing) and civil works also grew, but more slowly than fixed-capital investment. Investment in building construction increased by 5.3% in 2011, having decreased in the previous two years. But its growth is still below the 13.2% peak registered in 2008, which makes it the only spending item that has not fully recovered after the crisis that began in that year. Investment in civil works grew at a good pace (6.7%), faster than the average rates for the two previous years, thanks to a strong spurt in the second half of 2011 that made up for slowness earlier in the year.

*Total investment in 2011 rose to 27.1% of GDP, which points to the possibility of future expansions in potential GDP.*

At the same time, inventory accumulation doubled in size in 2011 relative to 2010. Total investment thus surged by some 17% and rose as a share of GDP to 27.1%, compared with barely 14.5% in 2000. This buoyancy bodes well for the possibility of future expansions in potential GDP.

Household consumption, like investment, showed strong expansion in 2011, comparable only with its performance in times of economic boom, growing by 6.5%, almost 2pp more than in 2010. It was driven mainly



Table 2  
Real annual GDP growth, by type of spending

	2009	2010	2011				2011
	Full year	Full year	Q1	Q2	Q3	Q4	Full year
Total consumption	1.6	5.1	5.0	6.8	5.9	5.5	5.8
Household consumption	0.6	5.0	5.5	7.8	6.7	6.1	6.5
Non-durable goods	1.3	1.8	2.4	6.2	4.9	3.7	4.3
Semi-durable goods	(3.7)	9.8	13.6	19.4	13.8	13.7	15.1
Durable goods	(6.0)	20.9	36.7	34.4	19.6	8.5	23.9
Services	2.2	3.5	3.3	4.4	5.1	5.3	4.6
Final government consumption	5.9	5.5	2.4	2.6	2.6	3.0	2.6
Gross capital formation	(4.1)	7.3	16.0	18.3	22.4	12.4	17.2
Gross fixed capital formation	(1.3)	4.6	12.7	13.8	23.7	16.5	16.6
Farming, forestry, hunting & fishing	2.6	5.5	3.0	3.1	1.9	1.3	2.3
Machinery & equipment	(12.1)	20.2	26.7	28.9	28.0	20.2	25.8
Transport equipment	(5.4)	12.0	51.9	52.2	40.5	39.1	45.2
Construction & buildings	(4.9)	(2.0)	1.1	5.2	13.2	2.3	5.3
Civil works	13.1	(2.0)	(10.8)	(13.1)	22.2	15.5	6.7
Services	1.1	9.6	5.7	6.3	8.9	1.4	5.5
Domestic demand	0.3	5.6	7.9	9.7	9.8	7.9	8.8
Total exports	(2.8)	1.3	10.1	7.6	12.3	15.8	11.4
Total imports	(9.1)	10.5	21.1	24.7	20.3	20.1	21.5
<b>GDP</b>	<b>1.7</b>	<b>4.0</b>	<b>5.0</b>	<b>5.1</b>	<b>7.5</b>	<b>6.1</b>	<b>5.9</b>

Source: DANE.

by durable and semi-durable goods, which increased at an average annual rate of 20%. Purchases of such goods benefited from low interest rates that stayed all year below their historical averages calculated since 1998; they benefited also from a sound financial system that was able to provide sufficient funds to cover agents' credit needs: consumer credit grew by 20% in real terms in 2011. As in the case of investment, private consumption further benefited from a slight exchange rate appreciation that helped to lower the costs of durable goods, with vehicles as the main item. Thus, sales of durable goods in 2011 again broke records, though their growth weakened in the second half of the year.

Non-durable goods and services also performed well. These items grew apace in 2011, together contributing more than half the growth in household consumption. In general terms, household consumption increased in a context characterized by lower unemployment rates, by levels of household confidence that may be considered high though they were uneven over the year, and by a higher level of remittances.

*Despite deterioration of the international economic situation, Colombia's degree of openness increased in 2011, with considerable growth in exports and imports.*

In contrast to private consumption, government consumption posted a more moderate expansion (2.6%), which made it the slowest growing component of demand. Its performance was particularly weak in the first half of the year, but improved notably in the second half when central-government transfers accelerated.

Regarding the international flow of goods and services, it should be noted that the country's degree of openness increased significantly in 2011. Both imports and exports grew faster in 2011 than at any time since 2000, despite international problems and the moderate performance of the US, Colombia's principal trading partner. Imports increased at a real annual rate of 21.5%, thanks mainly to purchases of capital goods and commodities. Though growth in exports was relatively slower (11.4%), it was a considerable improvement on the almost zero average rate observed in the previous two years. The net result was that the contribution of external demand to GDP was greater than in 2010 but still negative.

## **2. 2011 GDP growth by economic activity**

The fastest growing economic activities in 2011 were mining, transport and communications, and commerce, in that order (Table 3). For the fourth year running the mining sector was the most buoyant of all the large branches of activity, posting double-digit rates of growth. This result owed much to oil production, which ended 2011 slightly below of the target of a million barrels a day, with a 16.4% increase on the year before. Oil activity continued to be driven by high crude prices, favorable conditions for investment, and relative success in exploration. In 2011 a record number of wells were drilled (126) with a high percentage of success.

Oil was not the only driver of strong growth in mining GDP in 2011. Coal production increased by 15.5% relative to the year before, and its aggregate value expanded at the highest rate in five years. This strong increase in coal mining resulted in part from the statistical effect of the 2010 fall in production caused by a heavy rainy season; even so, the amount of coal mined in 2011 (85.8 million tonnes) was the biggest annual production since records began. As in the case of oil, the mining of coal and other minerals continues to be driven by good international prices and by FDI flows into the sector, which has made it possible for large projects to be carried out for export production.

*The fastest growing sectors in 2011 were mining, transport and communication, and commerce.*

The transport and communications sector grew at an annual rate of 6.9%, the highest since 2007. The telecommunications subsector contributed

Table 3  
Real annual GDP growth, by branch of economic activity

	2009 Full year	2010 Full year	(annual change)				2011 Full year
			Q1	Q2	Q3	Q4	
Farming, forestry, hunting & fishing	(0.7)	1.0	7.8	1.6	1.7	(2.0)	2.2
Mining and quarrying	11.1	12.3	9.2	10.8	18.9	18.1	14.3
Manufacturing	(4.1)	2.9	3.8	2.0	5.6	4.1	3.9
Electricity, gas and water	1.9	1.2	(0.8)	1.9	3.4	2.7	1.8
Construction	5.3	(1.7)	(1.9)	(3.4)	18.4	10.7	5.7
Buildings	(1.6)	(2.1)	1.4	5.1	12.4	1.6	5.0
Civil works	13.2	(1.3)	(10.6)	(13.1)	21.9	15.1	6.5
Commerce, repairs, restaurants & hotels	(0.3)	5.1	5.7	6.6	6.0	5.3	5.9
Transport, warehousing & communications	(1.4)	5.0	6.4	7.0	8.1	6.0	6.9
Financial entities, insurance, real estate and business services	3.1	2.9	4.3	5.8	6.4	6.4	5.8
Social, community and personal services	4.4	4.8	2.4	2.9	3.7	3.2	3.1
Subtotal value added	2.0	3.8	4.4	4.4	7.3	5.9	5.5
Taxes less subsidies	(1.7)	6.4	10.5	13.5	10.3	9.0	10.8
<b>GDP</b>	<b>1.7</b>	<b>4.0</b>	<b>5.0</b>	<b>5.1</b>	<b>7.5</b>	<b>6.1</b>	<b>5.9</b>

Source: DANE.

most to this growth, itself driven especially by double digit increases in internet coverage and subscription television. The transport subsector, too, performed well, in all categories but outstandingly so in air transportation, which expanded at the highest rate in five years. This was thanks mainly to passenger numbers, estimated by the Civil Aviations Agency, to have exceeded 14.5 million for national destinations and 6.5 million for international ones. These figures are the highest recorded in the series, and in the case of international flight passengers indicate a growth rate of more than 10%.

Satisfactory growth in commerce was produced in good part by retail trade, which was on the whole consistent with the favorable performance of household consumption. Retail sales increased by 10.8% in 2011, driven mainly by automobile sales, which were strong in the first half of the year but weakened in the second half, and by textiles, apparel and household appliances. Much of the significant expansion in purchases of such products resulted from consumers making use of low real interest rates and good availability of credit, which allowed a considerable increase in sales of durable and semi-durable goods.

*Other sectors that contributed to growth were financial services, industry and construction.*

Other sectors that also contributed to economic growth in 2011 were: financial, property and corporate services, industry, and construction. The service sector, weighing most in the total aggregate value, was boosted mostly by financial services, particularly financial intermediation, the aggregate value of which increased at two-digit rates, thanks to strong growth in credit demand, with commercial banks keeping credit supply active. Industrial production grew by 3.9% over the year, driven by considerable investments in machinery and equipment, which allowed industrialists to renew their installed capacity and thus achieve productivity gains without putting significant pressure on capacity utilization. The construction sector exhibited growth in both infrastructure works and buildings, but performed best in residential starts and works in progress, with social housing as the fastest expanding component.

No contraction occurred in the aggregate value of any branch of activity in 2011. The worst performing but yet growing branch was the electricity, gas and water sector. Its behavior was associated with both weak expansion in energy demand and contraction in gas. Energy demand, which accounts for more than 60% of the sector's total GDP, grew by only 1.8% over the year (more slowly than in 2010 but at much the same rate as in 2009). The contraction in gas resulted from the process of substitution carried out in power generation<sup>11</sup> and also from transport problems.

### **3. 2012 Economic outlook**

Economic growth in 2012 for Colombia, as for all other emerging countries, will depend on the size and evolution of the European crisis and on how it impinges on local output via the different channels of transmission. If, as is more likely, no deeper deterioration occurs in Europe, the effect on Colombia's economy is expected to be limited. That would exclude the possibility of the country being strongly affected by contagion, as it was affected in the second half of 2011.

*Colombia's economic growth in 2012 will depend on how the European crisis evolves, though the potential impact of the crisis should be cushioned by the expansion forecast for emerging economies.*

In this context, demand for Colombian exports is expected to be weaker in 2012 than a year earlier. However, the expansion forecast for emerging economies will result in commodity prices remaining high, which will attract FDI to the country, and increase national income thanks to high terms of trade. In addition, local investment is likely to boost domestic demand, particularly in the construction sector; and the economy will continue to be

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<sup>11</sup> Power generation from thermal sources, which requires gas, was replaced by hydraulic power to take advantage of last year's heavy rainfalls in Colombia.

*Almost all components of demand are expected to slow down in 2012, but even so household consumption should grow by more than its average rate since 2000.*

supported by a solid financial system that will keep on providing credit at relatively low rates.

In this most likely scenario, risk perception should remain low, and there should be no deterioration in agent confidence. These two factors will not allow any significant transmission of external turbulence and will help the Colombian economy to grow at a higher rate than its average in recent years.

The most recent projections for 2012, based on the above assumptions, suggest that the different types of spending should grow well, though most of them more slowly. Thus, for example, household consumption is estimated to grow by more than its average rate since 2000, driven by purchases of durable and semi-durable goods, but more slowly than last year. If household spending on services continues on the trend started in the second half of 2011, it should expand notably and, by its great weight, boost private consumption considerably. These forecasts take into account Banco de la República's recent intervention rate increases, which are known to have a lagged effect on household borrowing and spending levels.

Government consumption is expected to be the only demand component to accelerate in 2012, growing by almost double last year's 2.6% expansion; this estimate takes into account that spending usually rises in the second year of a new administration. Moreover, work on projects that were started last year is expected to be continued and brought to completion in 2012. Government spending has, in fact, been growing faster since the second half of 2011.

Although fixed-capital investment is expected to grow by 10% in 2012, its various components will behave differently from last year. In particular, spending on machinery and transport equipment is projected to decelerate from the very fast growth of 2011, but should still continue to increase this year, making it the third year of recovery since the 2009 crisis. In fact, by the end of 2012 investments in machinery and transport equipment should respectively be approximately 50% and 100% higher than three years ago.

*Investment is expected to slow down, but its components should continue growing, particularly investment in civil works*

In contrast to projected investment in industry (represented by machinery and equipment) and in the transport sector, investment in both building and civil works construction is expected to accelerate in 2012. The biggest expansion is expected in civil works: completion of power infrastructure projects and oil and gas transportation projects, among others, and the start of road works in ports and airports intended to prepare the country

*In 2012 Colombian exports should grow faster than their average rate, thanks in part to moderate but positive US expansion.*

for implementation of the recently signed free trade treaties. Building construction is projected to grow faster than in 2011 thanks to: the number of building permits approved in 2011; the government's plans to build around a million units of social housing in the next few years; expectations of rising house prices; and the ample availability of credit.

Regarding international trade in 2012, a significant deceleration is foreseen in import growth, in parallel with a slower one in exports. Colombia's purchases of external goods and services are expected to expand this year at a slower pace than their average since 2000, as domestic demand moderates. In contrast, exports are forecast to grow at a higher rate than their average, consolidating last year's good performance. This relatively good behavior of the country's external sales, within the context of a turbulent international economy, should be possible given the positive, though moderate growth forecasts for the United States, Colombia's main trading partner. The foregoing would suggest that the contribution of net external demand to GDP growth will be slightly negative.

Regarding the branches of activity, mining and construction should continue to perform well in 2012, each expanding by more than 8%. In the mining sector, oil production at the end of 2012 is expected to be close to 1.07 million barrels a day. Though this figure is consistent with 2011 prospecting discoveries, it is based on the assumption that some bottlenecks in crude transportation will be cleared. Coal production is forecast to exceed 95 million tonnes, which, together with higher oil output, will mean a good expansion in mining. The favorable result forecast for the construction sector in 2012 should reflect expected buoyancy in investment into the sector, mainly in the infrastructure projects referred to above and in the residential segment, to judge by the works started in 2011.

The greatest risk envisaged in the forecasting is a significant worsening of the European situation if the measures designed by the European authorities to stabilize their economy should prove ineffective. In this scenario the contagion to the Colombian economy would become stronger, further affecting agents' confidence and risk perception and reducing growth forecasts for most aggregates.

*Among the branches of activity, mining and construction should continue to perform well in 2012, with mining being mostly driven by higher oil production.*

Accordingly, considering both the most likely scenario and the different risks that could arise, Colombia's economy is forecast to grow at a rate between 4% and 6%. The growth rate should be around the midpoint of this range if no further deterioration occurs in the European situation, involving a deeper and longer recession than expected and greater paralysis of the channels of credit. But if these risks do materialize and



*The greatest risk for 2012 is a worsening of the European situation. In this scenario Colombia's economic growth would be close to the lower limit of the forecast range.*

the measures adopted by Europe's economic authorities prove to be inadequate, Colombia's growth will tend to be closer to the lower limit of the forecast range. The possibility of the country's economy expanding by less than 4% cannot be ruled out completely if circumstances abroad replicate the size of the 2008-2009 crisis. However, these last two scenarios are assigned a low probability.

## B. LABOR MARKET

The Colombian economy's good performance in 2011 had a positive effect on the labor market. Generally speaking, job creation increased considerably in the country's different geographical domains for the third consecutive year, with almost a million jobs being created a year, on average. Moreover, the unemployment rate fell sharply. A complete analysis of Colombia's labor market is provided in Box 2, at pages 104-105.

### 1. Unemployment

According to the National Statistical Agency's Large Scale Integrated Household Survey (GEIH, in Spanish), the unemployment rate decreased notably and significantly in 2011 relative to the year before. Information for the moving quarter of October to December shows unemployment for the country as a whole standing at 9.3%, 1.4pp lower than a year earlier; for the thirteen cities it dropped from 11.0% to 10.3%, while for townships it fell from 11.3% to 10.4%; the biggest decrease occurred in rural areas,<sup>12</sup> with the rate plunging from 8.6% to 5.5% (Graph 32).

Analysis of the seasonally adjusted series<sup>13</sup> confirms that during 2011 the respective unemployment rates for all geographical domains exhibited a falling trend, with a marked steepening in the second and third quarters (Graph 33). The negligible fall in the final months of the year may be explained by acceleration of the participation rate.

*The Colombian economy's good performance in 2011 had a positive effect on the labor market.*

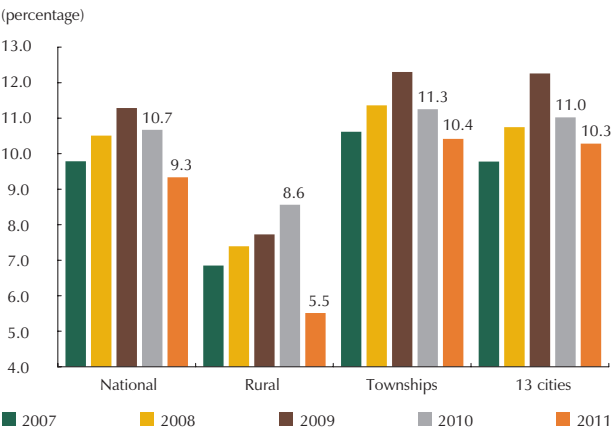
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12 In this Report the rural area is associated with the geographic domain referred to as "the rest" by the National Statistics Agency.

13 Labor market information tends to present seasonality problems. That is to say, records for a specific period cannot be compared with those of the immediately following or preceding periods, because depending on the time of year they are determined by different contexts. For example, the unemployment rate is usually higher earlier in the year and tends to decline over the year, so that rates at the beginning of the year cannot be compared directly with those for later months. It is therefore advisable to study the seasonally adjusted series.

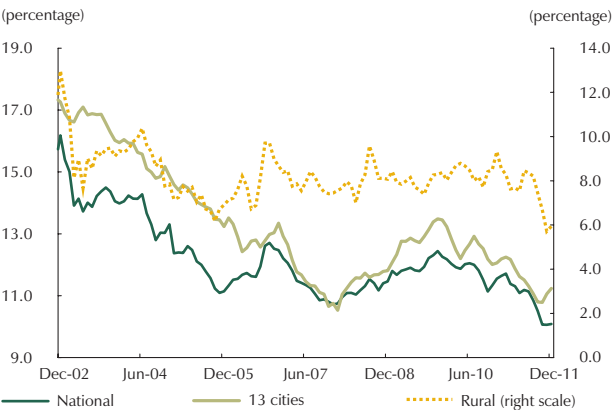


Graph 32  
Unemployment rate  
(October-November-December moving quarter)



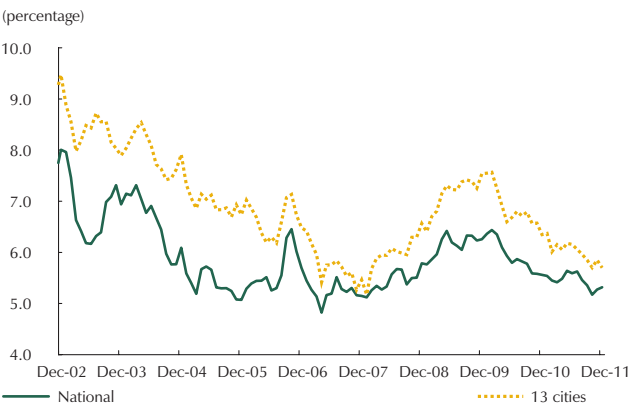
Source: DANE (GEIH).

Graph 33  
Unemployment rate  
(seasonally adjusted moving quarter)



Source: DANE (GEIH). Calculations by Banco de la República.

Graph 34  
Head-of-household unemployment rate  
(seasonally adjusted)



Source: DANE (GEIH). Calculations by Banco de la República.

In 2011 the unemployment rate also fell for heads of household, both nationwide and in the thirteen cities. The seasonally adjusted series shows year-end levels comparable with the lowest observed in the past ten years. Analysis of this variable allows demographic or participation effects to be eliminated, and its behavior confirms that the economy’s good situation in 2011 improved labor market conditions (Graph 34)

## 2. Labor supply and demand

Unemployment may be understood as an imbalance between labor demand and supply, so that in practice its evolution is associated with the behavior of the global participation rate, understood as labor supply, and the employment rate, understood as labor demand.

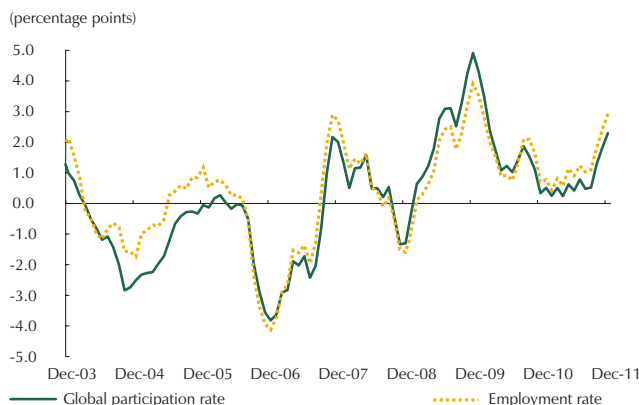
Hence, if demand (the employment rate) grows faster than supply (the overall participation rate), the outcome will be a fall in the unemployment rate, which is consistent with what occurred in 2011. In the domains under study, annual variations in the employment rate were consistently higher than in the global participation rate (Graph 35). For 2011, average growth of the employment rate was 1.3% nationwide and 1.0% for the thirteen cities, while average growth of the global participation rate was 0.8% and 1.0%, respectively.

Labor supply also increased in 2011, particularly for workers entering the market, other than heads of household. Note that for those workers the overall participation rate has been rising sharply and consistently since mid-2006 (Graph 36).

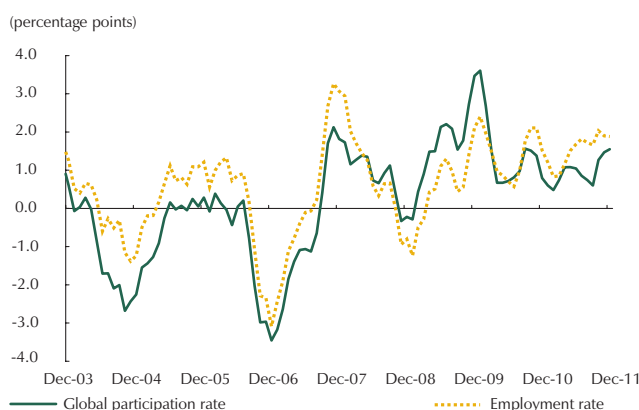
At all events, in 2011 the growth in labor participation was absorbed by employment. Graph 37 shows that the employed population in all domains is growing at rates of around 5% in absolute terms.

Graph 35  
Global participation rate and employment rate  
(moving-quarter annual change)

A. National

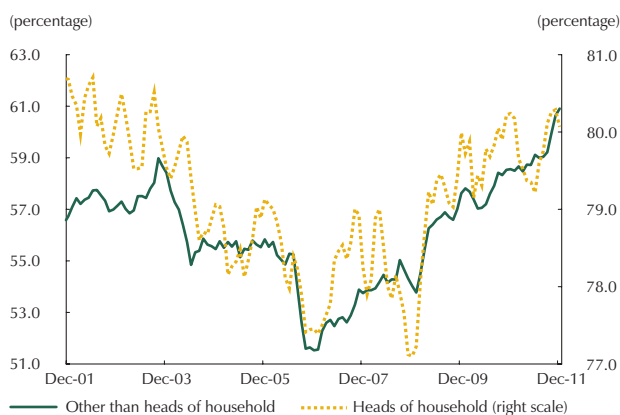


B. 13 cities



Source: DANE (GEIH).

Graph 36  
Global participation rate: 13 cities  
(seasonally adjusted moving quarter)



Source: DANE (GEIH). Calculations by Banco de la República

In 2011 the number of people with jobs rose faster than the non-working population, which made the absolute number of the jobless fall. That is to say, people who were part of the economically non-working population before and then entered the economically active population did not increase the number of jobless. On the contrary, the considerable growth in job creation mentioned above is not only absorbing new entrants into the economically active population, but is causing the unemployment rate to fall.

Breakdown by sector shows that in 2011 commerce contributed most to raising the number of employed people in the thirteen cities. Industry and construction, too, made positive contributions, in contrast to their behavior in 2010 (Graph 38). This information confirms the economy's robust growth, driven mainly by domestic consumption.

Regarding wages, there is no evidence of big adjustments in most sectors, although the economy is going through a good period and the labor market is tight. Deflating nominal wages by a core inflation indicator such as the CPI excluding food and regulated items reveals that in real terms adjustments were made over the year at average rates of 2%, down from a 2.6% average in 2010 (Graph 39).

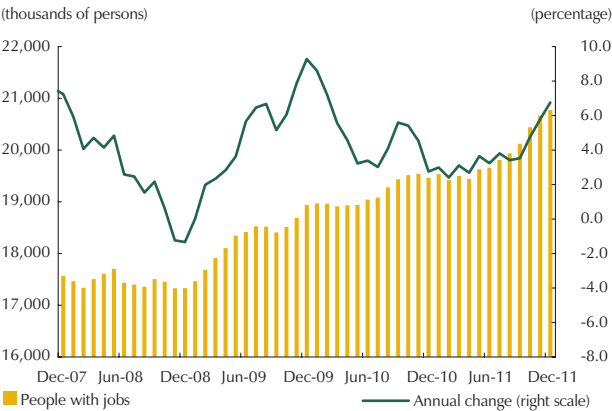
### 3. Employment quality and labor market conditions

Despite the labor market's overall good performance, concerns persist about the quality of employment. Although the number of people with jobs is growing fast, the number of workers classified as non-wage earners<sup>14</sup> (in the 13 cities)

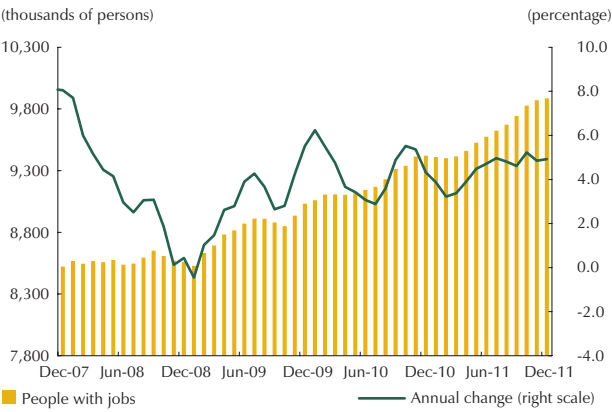
14 The National Statistics Agency defines non-wage earners as: domestic employees, the self-employed, bosses or employers, unremunerated family workers, unremunerated workers in other enterprises, day laborers or farmhands, among others.

Graph 37  
Employed population  
(seasonally adjusted moving quarter)

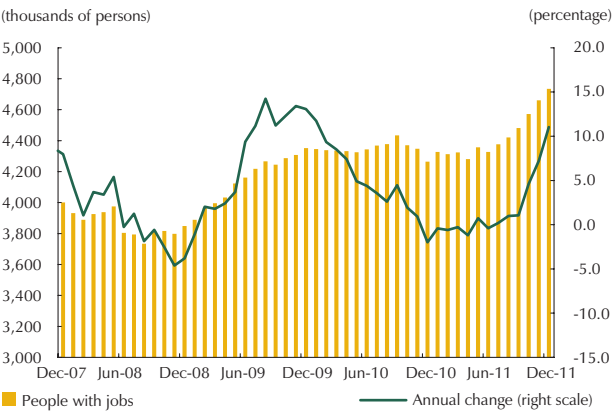
A. National



B. 13 cities

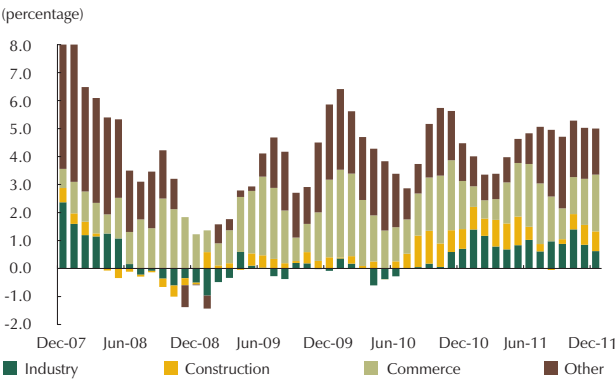


C. Rural



Source: DANE (GEIH). Calculations by Banco de la República.

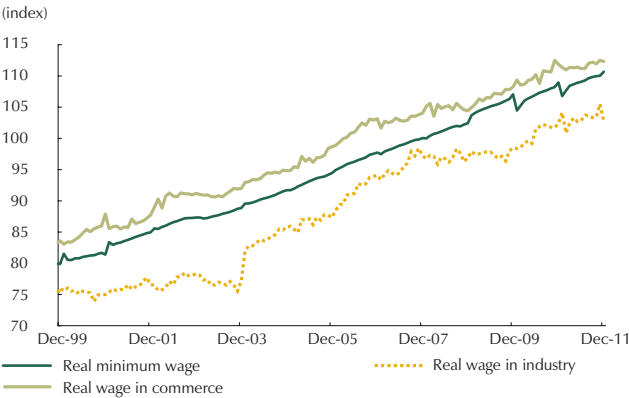
Graph 38  
Sectoral contribution to growth in number of people with jobs: 13 cities  
(seasonally adjusted monthly figure)



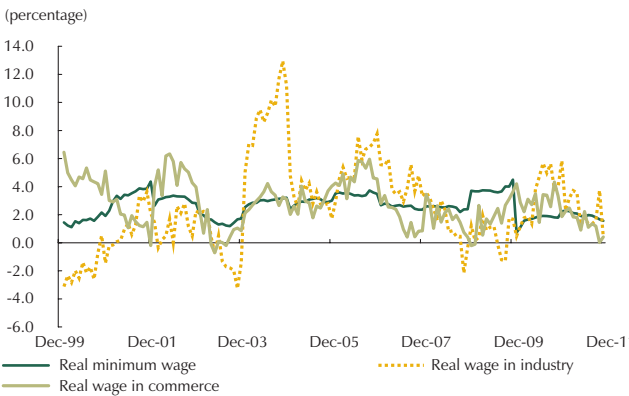
Source: Bogota Realtors Association.

Graph 39  
Real wages and annual change  
(seasonally adjusted, deflated by CPI excluding food and regulated items)

A. Real wages

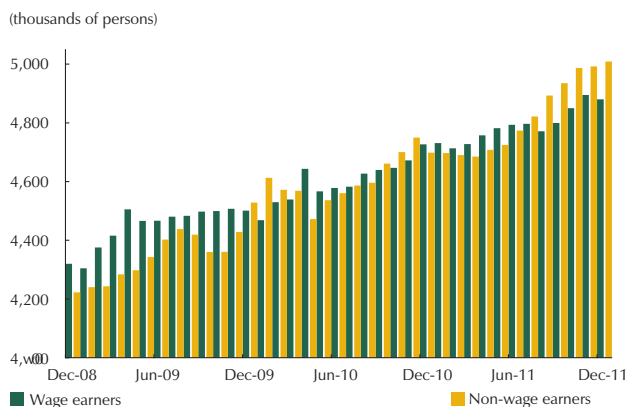


B. Annual change



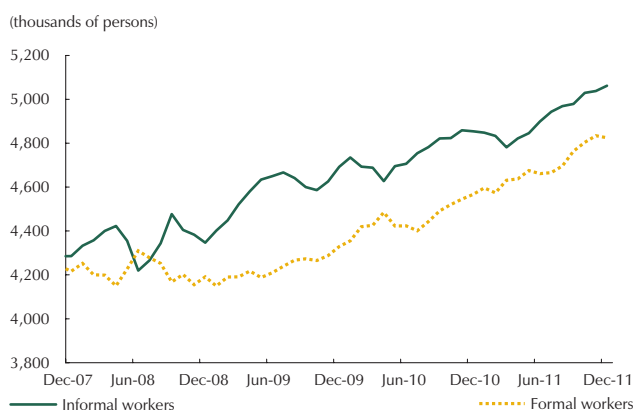
Source: DANE and Ministry of Social Protection. Calculations by Banco de la República.

Graph 40  
Number of workers by type of employment  
(13 cities, seasonally adjusted moving quarter)



Source: DANE (GEIH). Calculations by Banco de la República.

Graph 41  
Number of formal and informal workers  
(13 cities, seasonally adjusted moving quarter)



Source: DANE (GEIH). Calculations by Banco de la República.

has been rising even faster. This became evident in the second half of 2011, whereas in the first half wage-earning employment grew faster than non-wage employment (Graph 40).

Moreover, according to the National Statistics Agency's alternative classification, the number of informal workers<sup>15</sup> is even higher than the number of people employed in the formal economy, despite the latter's higher rates of growth throughout 2011 (Graph 41).

A more detailed analysis reveals that in the formal sector the expansion in numbers was relatively equal among people with higher education and those without. In the case of informal workers the number of people with higher education—still a very low proportion of this group—rose at a faster pace (9.7% annual average) than the number of those without higher education (2.5%) (Graph 42).

Lastly, the behavior of underemployment varied during 2011. The seasonally adjusted rate of objective underemployment<sup>16</sup> presented a steeply falling trend in the first half of the year but reversed it toward the end of the year. In December the rate stood at 13.3% for the thirteen cities and 12.3% nationwide, much the same levels as in December 2010, but higher than in October and November 2011 (Graph 43). However, it is too early to conclude from the available information that the quality of employment has worsened

#### 4. Forecasts for 2012

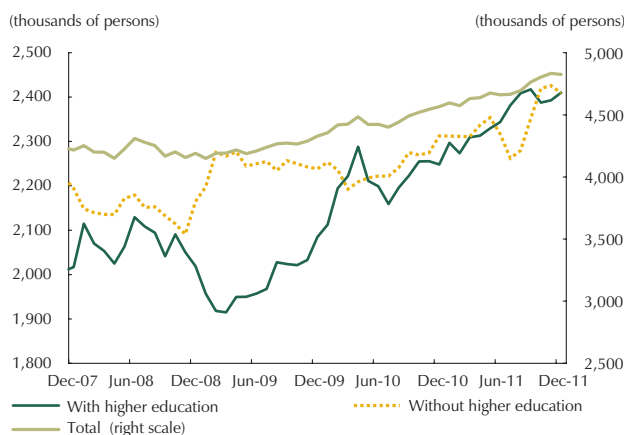
For 2012, unemployment is expected to continue on a downtrend in all domains and among the different groups of the population. It may rise to double-digit

<sup>15</sup> The National Statistics Agency defines informal workers as all employees and employers in businesses with less than five workers, self-employed people with no professional education, domestic employees, and unremunerated workers.

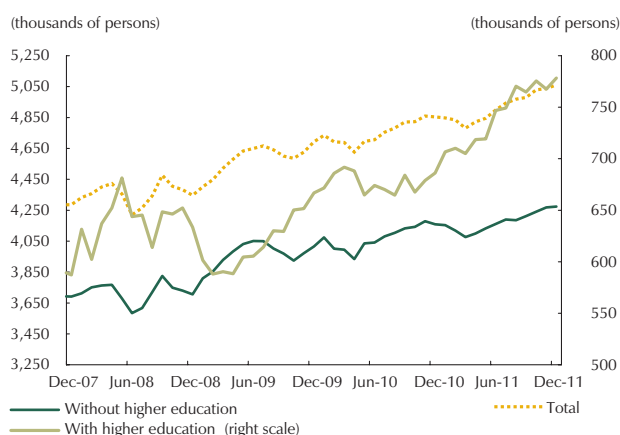
<sup>16</sup> The National Statistics Agency defines objective underemployment as the condition of a worker with a stated desire to improve his income or the number of hours worked or to have a job more suited to his qualifications and abilities, and who has, moreover, done everything possible to achieve his aspiration and is in a position to make the change.

Graph 42  
Number of workers, by skill level  
(13 extended cities, seasonally adjusted moving quarter)

A. Formal workers

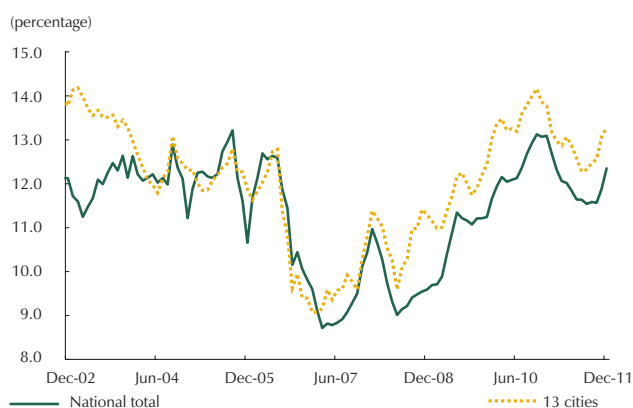


B. Informal workers



Source: DANE (GEIH). Calculations by Banco de la República.

Graph 43  
Objective underemployment rate  
(seasonally adjusted moving quarter)



Source: DANE (GEIH). Calculations by Banco de la República.

levels at the start of the year, but that would be because of the characteristic seasonal variation of the series. Information from the National Statistics Agency indicates that at January 2012 the unemployment rate stood at 13.3% for the thirteen cities and 12.5% nationwide, higher than in December but lower than in January 2011 by 1.4 and 1.1 pp, respectively. It is noteworthy that the nationwide unemployment rate at January 2012 was the lowest January rate of the past decade. As the year progresses and the growth forecasts of the previous section are confirmed, employment is expected to continue rising much as it did last year. In this setting the unemployment rate will more probably continue to fall and stay firmly below two digits, at the same time as wages may come under greater pressure.

## C. INFLATION

### 1. Consumer prices in 2011

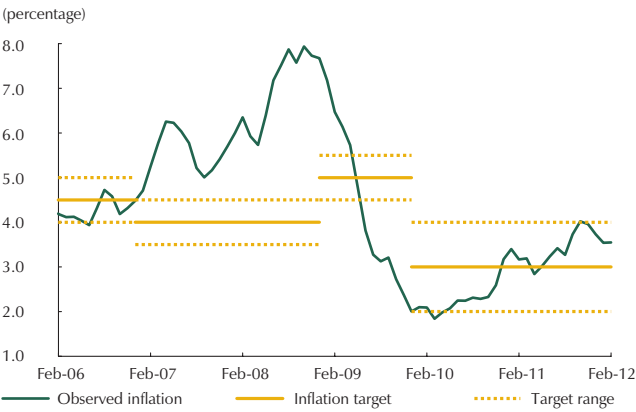
Annual consumer inflation, after rising several times in the course of 2011, dropped by 19bp between October and December, ending the year at 3.73%, within the 2%-4% long-term target range set by the Banco de la República's Board of Directors. This result is 56bp over the rate observed a year earlier (Graph 44 and Table 4).

Although inflation never went over the target ceiling, it remained above the mid-point almost the whole year long, reaching 4% in October. This behavior was in contrast to inflation in 2010, when it never went beyond 3%, except in December (Graph 44).

Core inflation, estimated as the average of its four indicators,<sup>17</sup> also presented a rising trend over the

17 The four indicators of core inflation are: non-food CPI; core 20; CPI excluding perishables, fuel and utilities; and CPI excluding food and regulated items.

Graph 44  
Headline consumer inflation



Sources: DANE and Banco de la República.

year, going up from 2.6% in December 2010 to 3.2% a year later. However, as will be described further below, this rising trend reversed in early 2012, perhaps partly as a result of the interest rate adjustments that had begun to be made from February 2011.

Analysis of each of the core inflation indicators shows some differences in their behavior, with the core 20 rising sharply to end the year at 3.9%, up by 75bp on 2010. The CPI excluding food and regulated items also went up significantly, though remaining the lowest of the four indicators (2.4% at December 2011). In contrast, non-food CPI increased by 31bp to stand at 3.1% in December (Graph 45).

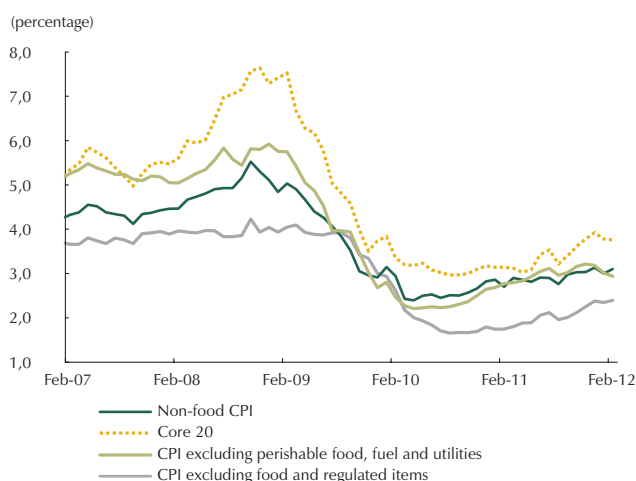
In general, consumer inflation in Colombia was subject to several types of upward pressure in 2011. First, higher international food prices in the

Table 4  
Consumer inflation indicators  
(at February 2012)

Description	Weight	Dec-10	Mar-11	Jun-11	Sep-11	Dec-11	Jan-12	Feb-12
<b>Headline CPI</b>	<b>100.00</b>	<b>3.17</b>	<b>3.19</b>	<b>3.23</b>	<b>3.73</b>	<b>3.73</b>	<b>3.54</b>	<b>3.55</b>
<b>Non-food CPI</b>	<b>71.79</b>	<b>2.82</b>	<b>2.90</b>	<b>2.91</b>	<b>2.98</b>	<b>3.13</b>	<b>3.00</b>	<b>3.10</b>
Tradable	26.00	(0.29)	(0.17)	(0.13)	0.16	0.80	0.72	0.73
Non-tradable	30.52	3.52	3.40	3.83	3.49	3.64	3.64	3.70
Regulated	15.26	6.64	6.91	5.96	6.45	5.81	5.27	5.58
<b>Food CPI</b>	<b>28.21</b>	<b>4.09</b>	<b>3.93</b>	<b>4.08</b>	<b>5.71</b>	<b>5.27</b>	<b>4.94</b>	<b>4.70</b>
Perishables	3.88	10.96	3.09	5.27	13.54	7.73	6.39	5.69
Processed	16.26	2.32	3.48	3.30	4.09	4.50	4.05	3.94
Eating out	8.07	4.52	5.17	4.97	5.26	5.59	5.93	5.65
<b>Core inflation indicators</b>								
Non-food CPI		2.82	2.90	2.91	2.98	3.13	3.00	3.10
Core 200		3.17	3.12	3.43	3.40	3.92	3.78	3.76
CPI excl. perishable foods, fuel & utilities		2.65	2.79	3.05	3.02	3.18	3.01	2.94
CPI excluding food and regulated items		1.79	1.80	2.06	2.01	2.38	2.35	2.39
<b>Average of all indicators</b>		<b>2.61</b>	<b>2.65</b>	<b>2.86</b>	<b>2.85</b>	<b>3.15</b>	<b>3.03</b>	<b>3.05</b>

Source: DANE. Calculations by Banco de la República.

Graph 45  
Core inflation indicators



Source: DANE. Calculations by Banco de la República.

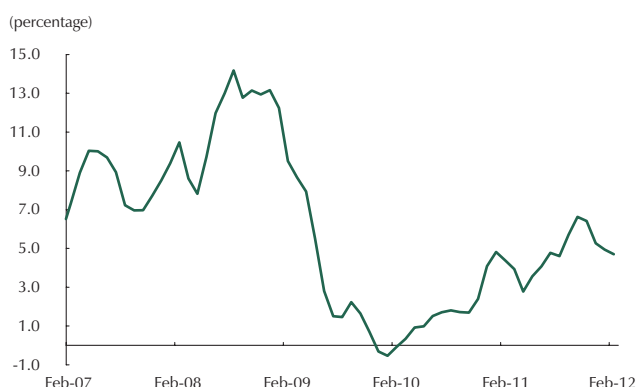
second half of 2010 and early 2011, which were transmitted during much of 2011 to domestic prices. Second, weather shocks caused by excessive rainfall in 2010 and the first half of 2011. And third, the behavior of the farming cycle for certain perishable food, which reduced supply over a good part of 2011.

Another source of pressure was the upturn in international fuel prices in late 2010 and the first half of 2011, which led to over 5% annual readjustment all through the year in domestic gasoline prices and transport fees. In addition, there were problems in the transportation of gas. These two circumstances resulted in non-regulated CPI rising at relatively high rates, similar to those observed in 2010.

Moreover, the above factors arose amid strong economic growth and a decrease in excess installed capacity. With the result that the prices of non-tradable goods and services, which in other circumstances might have offset the upward pressures mentioned above, failed to do so this time. Thus, their annual rates of adjustment remained at relatively high levels, similar to those observed in 2010, with some acceleration in the second half of 2011.

Wage increases of no more than 5% in industry and construction were in line with the Bank's target and suggest that no obvious pressures were caused by wage hikes in 2011. In commerce, wages rose at a similar rate but accelerated toward the end of the year. Exchange rate appreciation in the first half of 2011 may have lessened external upward pressures, but as it reversed in the second half several tradable goods showed price rises not seen in over a year.

Graph 46  
Food CPI  
(annual change)

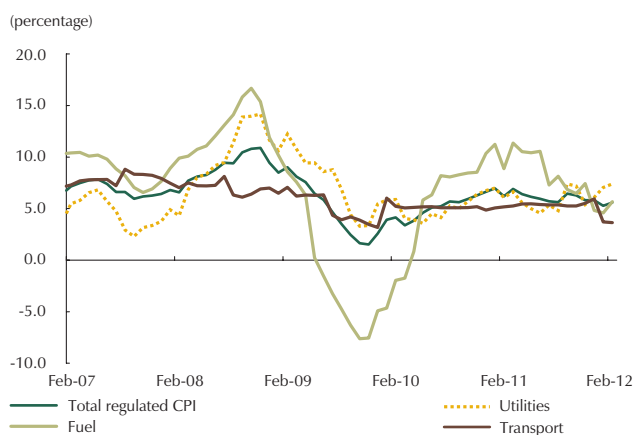


Source: DANE. Calculations by Banco de la República.

Breakdown of the CPI by sub-baskets shows that the greatest price increases occurred in food and in regulated goods and services. Food CPI topped 6.0% in October and November but dropped to 5.3% in December (Graph 46). The prices of various perishable and semi-processed foods went up between May and October, sharply in the



Graph 47  
Regulated CPI and its components  
(annual change)



Source: DANE. Calculations by Banco de la República.

case of potatoes and poultry products, probably as a result of heavy rains in late 2010 and the first half of 2011. Moreover, the relatively low prices of potatoes and other produce in 2010 may have resulted in low supply a year later. However, both factors began to abate in 2011.

Higher international food prices in 2011 than in 2010, together with exchange rate behavior in the second half of 2011, also increased consumer prices for imported products such as oils, cereals and their byproducts. Although those increases were not substantial, their comparison with the 2010 price decreases points to a steady speeding up of annual inflation. In addition, the favorable conditions of domestic demand led

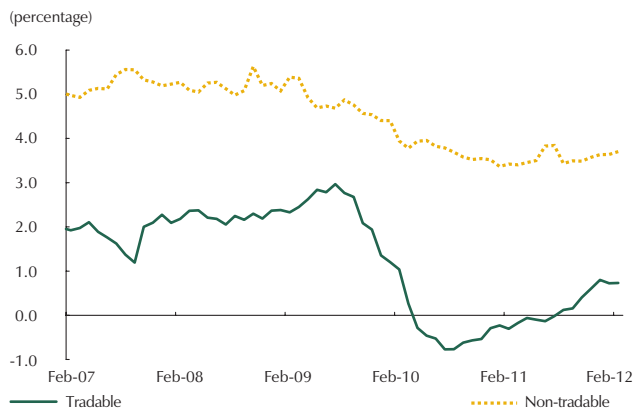
to increasingly large rises in eating out (representing 8.1% of the CPI basket), which probably constitutes the main evidence of demand pressure (Table 4).

Annual variation in regulated CPI remained near or over 6.0% all year long, dropping only in November and ending the year at 5.8%. Regulated prices have been exerting inflationary pressures since mid-2010, once international oil quotations recovered from the fall caused by the 2008-2009 global recession. In 2011 the price of oil stayed at all-time highs, which resulted in considerable adjustments to the domestic price of gasoline that amounted to over 6.0% (annual rate) through most of the year, although they were lower and fewer than

in 2010. Note that part of the domestic price of gasoline is tied to the international price and to the exchange rate through formulas set by the government, with the result that their movements are somewhat correlated in the long term, but not necessarily so in the short and medium term.

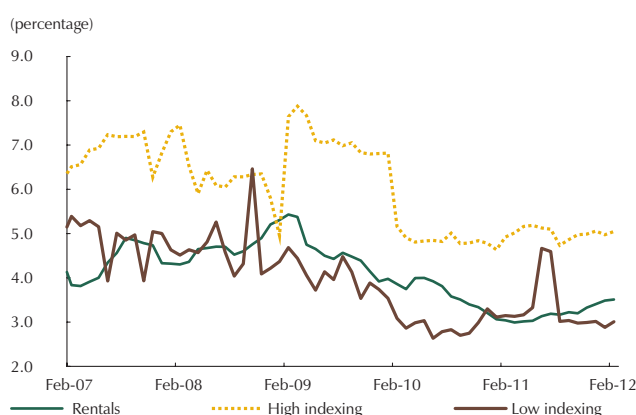
Among regulated items, considerable adjustments were also observed in the price of natural gas, a contributing factor thereto being the lack of sufficient transport capacity to meet burgeoning demand. The above circumstances were, in turn, reflected in quite high increases in power charges and urban public transport (Graph 47, Table 4).

Graph 48  
Tradable and non-tradable CPI, excluding food and regulated items



Source: DANE. Calculations by Banco de la República.

Graph 49  
Non-tradable CPI



Source: DANE. Calculations by Banco de la República.

Tradable prices excluding food and regulated items, presented a trend change in 2011, the annual variation turning positive in mid-year after four quarters of contraction and ending the year at 0.8% (Graph 48). The prices of several tradable goods, notably vehicles, stopped falling and registered moderate pick-ups at year-end. The trend break coincided with the peso's depreciation from August on, which might have caused it in part, though it may also have resulted from buoyancy in domestic demand.

Annual variation in the non-tradable CPI excluding food and regulated items showed no definite trend in 2011 and fluctuated around 3.5%, except for some transitory rises in mid-year. This contrasted with its behavior in the previous two years, when it fell from more than 5.0% in response to weakening demand and lower inflation expectations caused by the global recession (Graph 49).

Stability in non-tradable goods precludes the existence of price pressures from domestic demand; however, analysis of the components of this sub-basket might suggest that some pressures did exist. This was so in the case of rents, with annual adjustments accelerating in the second half of 2011 (from 3.0% in May to 3.4% in December), despite the fact that housing construction, and hence supply, speeded up in the second half.

## 2. Inflation in 2012: early results and outlook

Annual consumer inflation fell in the first two months of 2012 from its level at the end of last year to 3.55% in February. Core inflation also decreased in January and changed little in February, when the average of the four indicators stood at 3.05%, slightly below its December level (Graphs 44 and 45, and Table 4).

*Annual consumer inflation fell in the first two months of 2012 from its level at the end of last year.*

Inflation results, by groups of items, have generally been consistent with the projections made by the market and Banco de la República's technical staff. The decline in the first two months resulted from a fall in the annual variation in food and regulated items. In contrast, figures for tradable and non-tradable CPI remained at much the same levels as in December 2011.

*Core inflation also decreased in January and changed little in February.*

Good food supply conditions have continued to bring down the prices of some perishables such as potatoes, while the peso's appreciation in the first two months limited price rises for imported foods despite some international price increases. However, these good results were partially offset by increases in eating out, which may be connected with higher consumption and with the 5.8% rise in the minimum wage. Research by the Bank shows that there is a close relationship between minimum wage increases and higher eating out costs (Graph 46).<sup>18</sup>

The decline in the annual variation of regulated CPI resulted from a less than expected hike in public transport charges in Bogota, in contrast to what had occurred in early 2011. However, gasoline, natural gas and energy prices continued to be raised significantly in the first two months of 2012, mostly because of higher international oil quotations (Graph 47).

The peso's rising strength could have slowed down tradable inflation excluding food and regulated items, which stood at 0.7% annual rate in February, but the fact that this indicator did not fall, as it had fallen on previous occasions, may indicate robust consumption.

Non-tradable CPI excluding food and regulated items was 3.7% in February, only slightly higher than in December. However, major items such as rentals and health services continued to speed up, as was expected in view of rising demand and the importance of indexation in the pricing of such items. The increases were offset by specific developments such as expansion of free education<sup>19</sup> and limitation of adjustments to financial service charges.<sup>20</sup>

*For the rest of 2012 forecasting by the Bank's technical staff shows that annual consumer inflation will remain at similar or somewhat higher levels as currently until the third quarter and then fall in the fourth.*

Rents have been on a rising trend for several months, which might suggest a considerable increase in demand that has not been easily met by supply, although housing construction has been gaining strength. In effect, investment in buildings (mostly housing) grew by 5.3% over 2011, with a spurt in the second half of the year.

For the rest of 2012 forecasting by the Bank's technical staff shows that annual consumer inflation will remain at similar or somewhat higher levels as currently until the third quarter and then fall in the fourth.

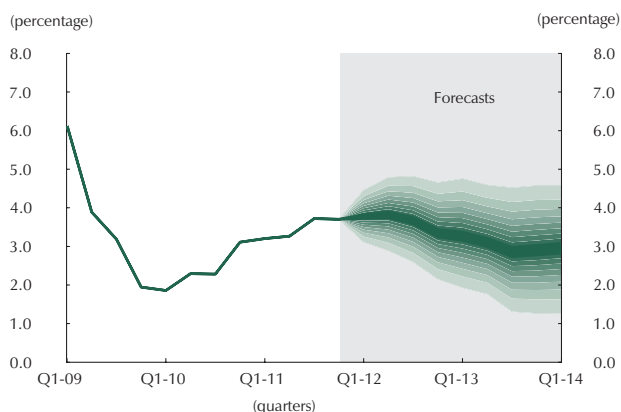
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18 See L.E. Arango, L. Ardila, M. Gómez (2010), "Efecto del cambio del salario mínimo en el precio de las comidas fuera del hogar en Colombia", *Borradores de Economía* No. 584, Banco de la República.

19 See Ministry of Education Decree 4807, dated December 20, 2011.

20 See Ministry of Finance and Public Credit Decree 4809, dated December 20, 2011.

Graph 50  
Headline inflation fan chart



Source: DANE. Calculations by Banco de la República.

Inflation should not surpass the target range ceiling (2%-4%), but neither is it expected to run below the mid-point (3%). Note that the forecasting took into account the effect of the monetary policy adjustments (Graph 50).

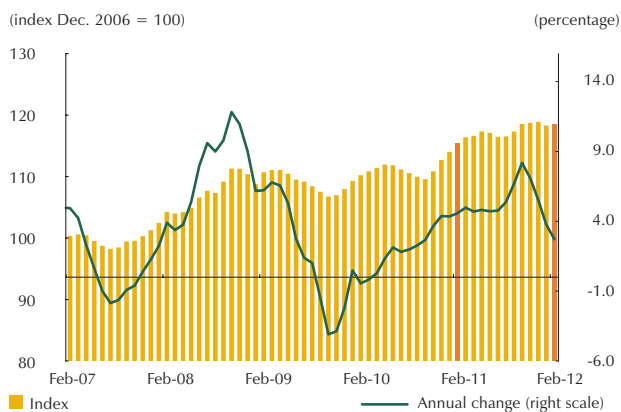
Price pressure from demand should continue to be contained, because economic growth is expected to be moderate, as stated in the preceding sections, and also because the Board of Directors' interest-rate decisions of past months will prevent credit overflow and should restrain inflation expectations. Accordingly, non-tradable CPI excluding food and regulated items is expected only to edge up during

2012 and then decline next year. Much the same is expected to happen with other CPI components that are highly sensitive to demand, such as eating out.

Furthermore, demand moderation together with a low impact expected from the exchange rate will curb price rises in tradable goods. Even so, tradable CPI excluding food and regulated items is still forecast to continue rising until the third quarter, though remaining at all times below the target-range floor.

The central path of the 2012 forecast envisages still significant increases in regulated and food prices, higher than expected for tradable and non-tradable prices, yet lower than those observed in 2011. The relatively significant increases are based on the assumption that international oil and food prices will remain at last year's high levels, continuing to put pressure on the costs of producing and marketing home-grown and imported foods, and on the costs of services such as public transport, energy and gas.

Graph 51  
Headline PPI



Source: DANE. Calculations by Banco de la República.

However, the expected exchange-rate behavior might dampen those upward cost pressures. Something of this has been seen in recent months with the drop in the annual variation of the producer price index, caused in good measure by a fall-back in the price variation of imported commodities that was associated with the pesos appreciation earlier this year (Graph 51).

Weather conditions are forecast to become normal from the middle of the second quarter once the phenomenon of La Niña has disappeared. In view

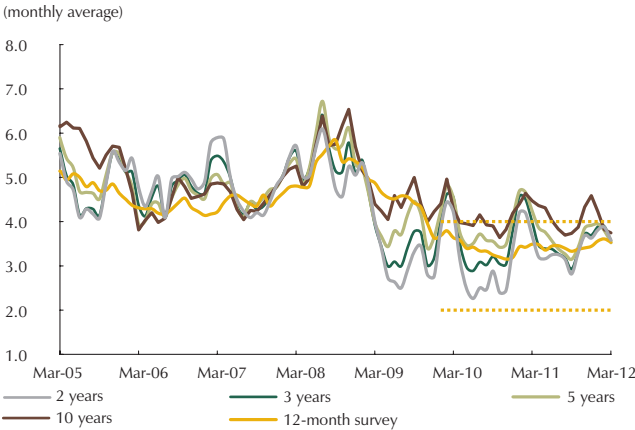
of this and the still high prices of a number of perishables, agricultural supply may be relied on to be relatively favorable, precluding higher increases than those observed in 2011.

It is therefore highly probable that headline consumer inflation will be within the 2012 target range, and much the same may be said about core inflation. The central path assumes that the effects of lower tariffs resulting from implementation of the Free Trade Agreement with the United States should occur in 2013 or subsequent years.

However, these forecasts face upside risks, the biggest one from high international fuel prices caused by geopolitical problems and strong demand from emerging economies. In mid-March the price of Brent oil stood at \$112 a barrel, higher than the \$108 average for 2012 envisaged in the inflation forecasts. If oil prices do not fall back, external and domestic production and transport costs would rise, significantly impacting consumer inflation in Colombia through fuel and transport CPI and inflation expectations, as happened in 2007 and 2008.

Robust domestic demand also presents upward inflation risks, especially if the raising of the benchmark interest in previous months fails to moderate credit expansion. Despite Colombia’s considerable investment effort in previous years, expected to be similarly undertaken in 2012, different indicators and models now suggest that spare production capacity has been much reduced. Bottlenecks began to appear in the second half of 2011 and earlier this year in such sectors as natural gas and transport. In such a setting, stronger economic growth than the expected rate of approximately 5% may result in price increases incompatible with meeting the long-term target.

Graph 52  
2, 3, 5 and 10 years break-even inflation<sup>a/</sup>



a/ Nelson and Siegel methodology.  
Source: Banco de la República.

The 5.8% rise in the minimum wage for 2012 is also a source of risk. Given that in Colombia work productivity gains are not usually higher than 1.0%, the 2012 wage rise may cause labor costs per unit of output to increase by more than 3%, which may lead to other salaries and some prices being revised through the various indexation mechanisms.

The last upward risk is posed by inflation expectations for a year or more ahead, which run above 3.5% (Graph 52). Thus, a transitory price shock may affect inflation expectations and thereby the possibility of meeting the long-term target.

*The one-day repo expansion rate fell from 10% in December 2008 to 3% in April 2010.*

*In February 2011 the Board decided that the monetary stimulus should be reduced and started raising the intervention rate gradually.*

*The rise in the benchmark rate passed through to the interbank borrowing rate and the average lending and deposit rates, which registered similar increments.*

## D. FINANCIAL SECTOR AND INTEREST RATES

At the end of 2008 growth and price rise forecasts for 2009 depicted a strongly declining economy and inflation rate, as a result of the international financial crisis. The Bank's Board of Directors therefore made several substantial cuts in the benchmark interest rate, bringing the one-day repo expansion rate down from 10% in December 2008 to 3% in April 2010.

In February 2011 the Board decided that the monetary stimulus should be reduced and started raising the intervention rate gradually. This occurred in a context of buoyant domestic demand and slowly, but steadily rising, inflation. House prices continued to grow relative to the CPI, reaching all-time highs, while credit, particularly for consumption, expanded at increasingly higher annual rates, far above nominal GDP rates. The benchmark rate was therefore raised nine times between February 2011 and a year later, lifting it from 3% to 5.25%.

The rise in the benchmark rate passed through to the interbank borrowing rate and the average lending and deposit rates, which registered similar increments.<sup>21</sup> Breakdown by credit destination shows that all interest rates, except on mortgage loans, have gone up by more than the one-day repo expansion rate.

The loan portfolio expanded considerably from late 2009 to the third quarter of 2011. Its real annual variation in pesos surged from 1.6% in November 2009 to 18% in August 2011 but has been stable since then, standing at 16% in February 2012. The strongest expansion has been in consumer loans, at real annual rates almost four times as high as estimated economic growth for this year.

### 1. 2011 Interest-rate behavior

#### a. Market interest rates

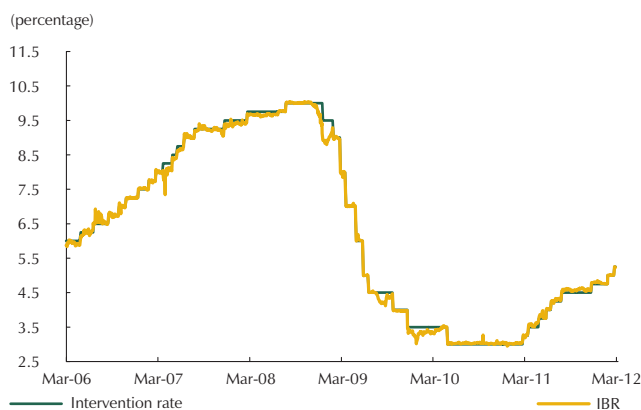
As stated above, since changing its monetary stance the Bank's Board of Directors has raised the benchmark interest rate nine times, lifting it from 3.0% at February 25, 2011, to stand today at 5.25% (a total rise of 225bp). Over the same period the one-day interbank borrowing

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<sup>21</sup> In this Report annual interest-rate comparisons refer to actual monetary-month closing rates; thus, February 2011 rates are rates at closing of February 25; and February 2012 rates are rates at closing of March 2.



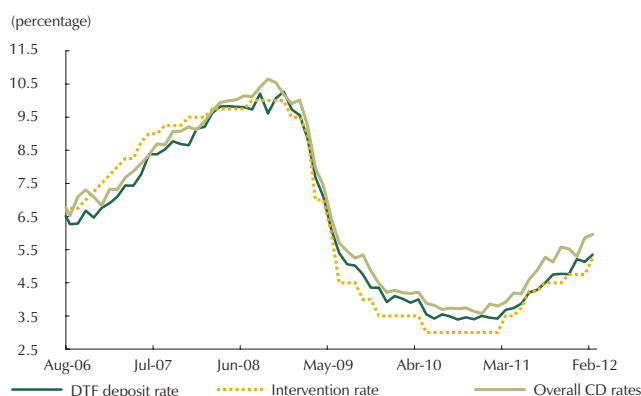
Graph 53  
Banco de la República intervention rate, and the interbank borrowing rate (IBR)



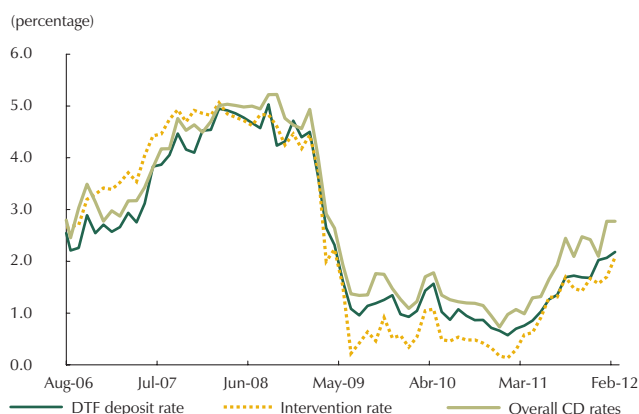
a/ Figures are working-day data; the last figure is for March 2, 2012.  
Sources: Financial Superintendency and Banco de la República.

Graph 54  
Deposit rates, and Banco de la República intervention rate

#### A. Nominal rates<sup>a/</sup>



#### B. Real rates<sup>b/</sup>



a/ The information relates to end of the monetary month. The DTF rate is the estimated rate at the time of the deposit operation and comes into effect the following week.  
b/ The information relates to end of the monetary month. Deflated by non-food CPI.  
Sources: Banco de la República and Financial Superintendence.

rate went up by 218bp, from 3.05% to 5.23% at March 2, 2012 (Graph 53).

The Board's change of stance has been reflected in widespread rises in both lending and deposit rates. From February 2011 to the end of February 2012 the DTF (deposit) rate rose by 193bp to 5.35%,<sup>22</sup> while the average certificate of deposit rate for all terms rose by 216bp to 5.96%<sup>23</sup> (Graph 54).

Regarding lending rates, as explained on previous occasions, at the start of 2011 and before the monetary-policy stance was changed, commercial loan demand fell sharply in response to the tax reform adopted at the end of 2010, particularly changes to the financial transactions levy (4 x 1000).<sup>24</sup> Consequently, the share of consumer loans, which have higher interest rates, expanded. This fact, together with a higher usury rate, produced a significant impact on the average weighted lending rate of the entire system in early 2011.

The interest rate on household consumer loans went up from 17.5% in February 2011 to 18.52% in late December and then to 18.96% in February 2012. Regarding other lines of credit for families, over the past year credit card interest rose by 632bp,<sup>25</sup> in line with an increase of 647bp in the usury rate, while interest on

22 This is the level of the DTF deposit rate as calculated in a given week, to be in force for the following week. Specifically, the DTF is the 90-day deposit rate for Term Certificates of Deposit of banks, investment banks, and finance companies.

23 The rate for Term Certificates of Deposit is the all-maturities rate reported by all credit establishments to the Financial Superintendence.

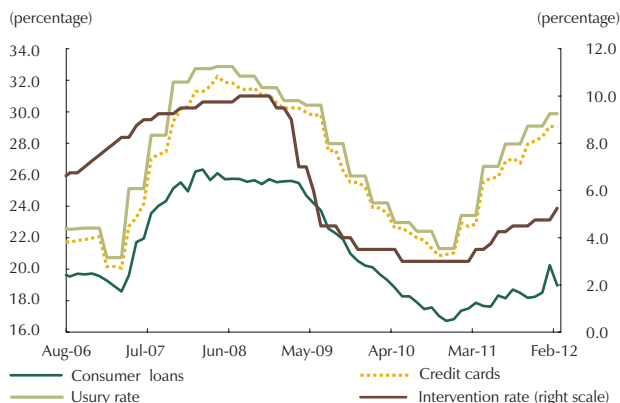
24 In 2010 average weekly disbursements of commercial loans amounted to 4,094bn pesos (compared with 2,321bn pesos in 2011) and of consumer loans to 512bn pesos (compared with 629bn pesos in 2011). Thus, disbursements of commercial loans, which bear lower interest rates, declined as a share of overall disbursements.

25 Credit-card interest rose from 22.72% in February 2011 to 29.05% in February 2012.

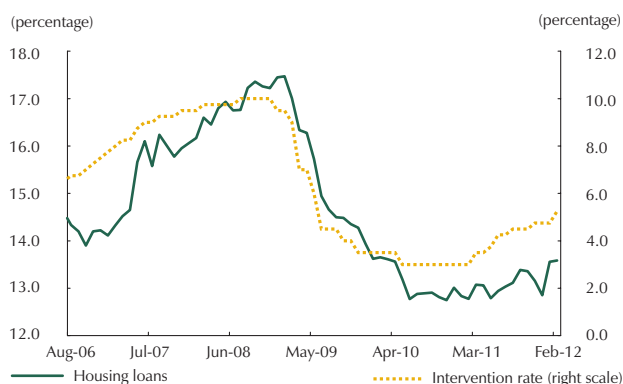


Graph 55  
Nominal interest rates on household loans, and Banco de la República nominal intervention rate<sup>a/</sup>

A. Consumer loans

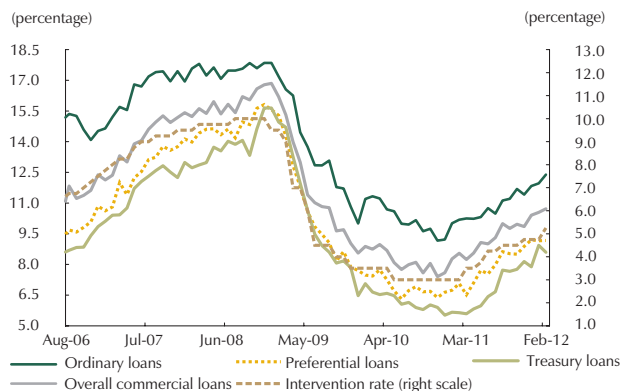


B. Housing loans



a/ Los datos corresponden al fin del mes monetario.  
Fuentes: Banco de la República y Superintendencia Financiera de Colombia.

Graph 56  
Nominal commercial-loan interest rates and Banco de la República nominal intervention rate<sup>a/</sup>



a/ Data relate to end of the monetary month. Given the high rotation of treasury loans, a weighting of one-fifth of their disbursement was used in calculating the overall commercial-loan interest rate.  
Sources: Banco de la República and Financial Superintendence of Colombia.

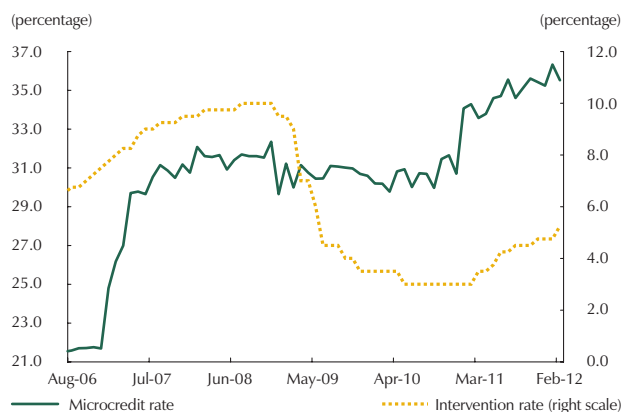
housing loans went up by 81bp, from 12.77% to 13.58% (Graph 55).

Interest on commercial loans rose from 8.55% in February 2011 to 10.72% a year later (217bp).<sup>26</sup> The rate increase by type of loan was: for ordinary loans, from 10.19% to 12.39% (221bp); for preferential loans, from 7.06% to 9.17% (211bp); and for Treasury loans, from 5.64% to 8.59% (295bp) (Graph 56).

Interest on microcredit went up from 34.29% in February 2011 to 35.52% at the end of February 2012 (123bp) (Graph 57).

The weighted average consumer and commercial interest rate, calculated by Banco de la República, rose from 10.97% in February 2011 to 12.97% in February 2012 (201bp) (Graph 58).<sup>27</sup>

Graph 57  
Nominal microcredit interest rates and Banco de la República nominal intervention rate<sup>a/</sup>

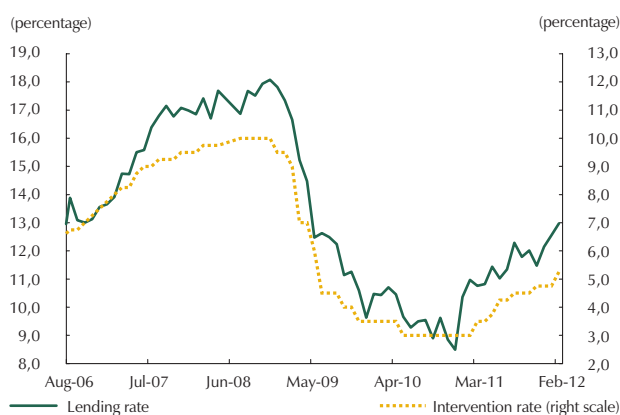


a/ Data relate to end of the monetary month.  
Sources: Banco de la República and Financial Superintendence of Colombia.

26 Given the high rotation of treasury loans, a weighting of one-fifth of their disbursement was used in calculating commercial-loan interest.

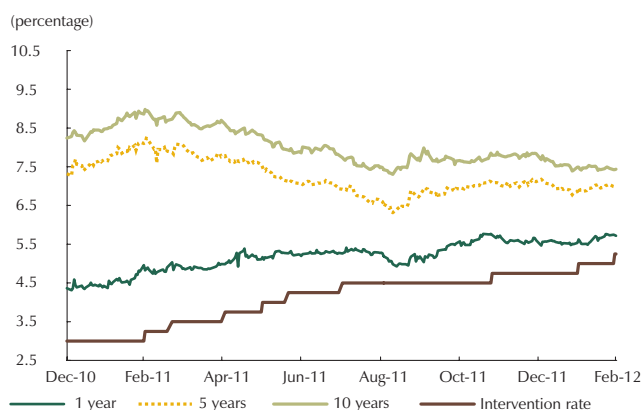
27 The lending rate calculated by the Bank is based on commercial and consumer loans. The types of commercial loan considered are common, preferential and treasury loans. In the case of treasury loans, given their high rotation, a weighting of one-fifth of their disbursement was used.

Graph 58  
Banco de la República intervention rate, and  
financial system lending rate<sup>a/</sup>



a/ Data relate to end of the monetary month. The lending rate is the amount-weighted average of consumer, preferential, common and treasury loan rates. Given the high rotation of treasury loans, one-fifth of their disbursement was used in calculating their weight. Source: Financial Superintendence of Colombia. Calculations by Banco de la República.

Graph 59  
Zero-coupon peso TES rate, and Banco de la República  
expansion auction rate



Sources: SEN (electronic trading system) and MEC (Colombian electronic market). Calculations by Banco de la República.

## b. Public debt market

In 2011 rates on zero-coupon Treasury securities (TES) denominated in pesos displayed a mixed behavior. Rates on TES with maturities of 0-2 years and 2-5 years rose on average by 116bp and 14bp, respectively, while rates on 5-15-year TES fell on average by 43bp (Graph 59).<sup>28</sup> The outcome was a flattening of the curve by about 159bp over the year.

In the first two months of 2011 the TES curve showed losses of value at all maturities as inflation expectations rose on account of a very heavy rainy season and publication of the December 2010 inflation rate, which was higher than expected by the market.<sup>29</sup> In this context, expectations arose that the Bank would start withdrawing the monetary stimulus in the first half of the year. The withdrawal was put into effect at six meetings of the Board of Directors starting from February 25, with the benchmark rate being raised during that period by successive increments of 25bp. A further increase was made in November, and the one-day repo rate stood at 4.75% at the end of 2011.

The losses of value of Treasuries in the first two months of 2011 were attenuated by a number of fiscal announcements that brought calm among agents in the public-debt market, by reducing

expectations of further TES issues. In January 2011 the Ministry of Finance presented its plan for dealing with the heavy rainfall emergency, making it clear that no new Treasuries would be issued to raise the necessary funds.<sup>30</sup> The Ministry later released the preliminary results

28 These figures are drawn from the zero-coupon curve of fixed-rate TES securities calculated by the Bank using the Nelson and Siegel (1987) method.

29 In December 2010 annual inflation was 3.17%; the market had expected a rate of 2.78%.

30 The Ministry of Finance stated that the necessary funds (14.3-16.3 trillion pesos in 2011-2014) would be obtained from the wealth tax (3.3tr pesos), the financial transaction levy (2tr pesos), 2010 treasury surplus (1.0tr pesos), and sale of a percentage of Ecopetrol (8-10tr pesos).

of the government's fiscal balance for 2010, providing evidence of a smaller fiscal deficit than initially estimated.<sup>31</sup>

Then, short-term rates went up as the Bank's benchmark rate increments were gradually introduced, but these had been mostly anticipated by the market. The values of medium- and long-term securities trended up until early September, in response to various factors, notably: i) the credibility of monetary policy measures being implemented; ii) publication of inflation data<sup>32</sup> showed that rates were lower than expected by the market, and the price of gasoline was reduced;<sup>33</sup> iii) positive fiscal announcements were made to the effect that: tax revenues in the first quarter of 2011 were higher than estimated in the budget and the tax-revenue target was raised;<sup>34</sup> the Fiscal Rule Law was passed by Congress; the 2012 deficit projection was lowered;<sup>35</sup> and favorable results were obtained from a global bond issue;<sup>36</sup> iv) Colombia's foreign-currency debt rating was raised to investment grade by Standard & Poor's in March, Moody's in May, and Fitch Ratings in June.<sup>37</sup> And v) GDP growth in the first part of the year exceeded analysts' expectations.

From September 2011 to the end of the year bond values fell, though long-term bonds did so to a lesser degree relative to the value increases registered up to the third quarter. The rise in short-term rates was associated with the 25bp increment made to the benchmark rate in November. The behavior of medium- and long-term rates was connected

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31 Excluding the effect of the rainstorm emergency, the central government's deficit, at 3.7% of GDP, was 0.6pp lower than forecast in the 2011 financial plan, as revised in September 2010. Including the fiscal cost of the emergency, the deficit rose to 3.9% of GDP, lower than in 2009 (4.1%).

32 February, March, April and August.

33 In August it was announced that the price of gasoline was to be reduced by 100 pesos.

34 The government reported that first-quarter tax revenues were higher than budgeted by 1.0tr pesos, stating that 2011 tax revenues could well exceed initial estimates by 4.0tr pesos. On August 30 the government revised up the 2011 tax-revenue target from 76.1 to 79.2 trillion pesos, saying that tax collection might even range between 80 and 85 trillion pesos.

35 In the 2012 *Medium-Term Fiscal Framework* and *Financial Plan* presented to Congress, the Ministry of Finance projected a reduction in the central government's fiscal deficit, from 4% of GDP in 2011 (including the rainstorm emergency), to 2.4% of GDP in 2014. For 2012 the deficit is expected to drop by 0.5% from the figure projected for 2011, to 3.5% of GDP (including the rainstorm emergency).

36 The government issued dollar-denominated bonds worth \$2,000m, maturing in 2021 with a coupon of 4.375%. Demand for this issue amounted to \$7,300m (bid-to-cover ratio of 3.65), and the issue rate stood at 4.425%, giving a spread of 130bp relative to a US Treasury bond of equal maturity. The government stated that the funds obtained were to be used for foreign-debt service payments and pointed out that the funding rate was the government's lowest in long-term international markets.

37 On March 16, 2011 Standard & Poor's upgraded the long-term rating from BB+ to BBB-, and the short-term from B to A3, with a stable outlook. Moody's raised the rating from Ba1 to Baa3 on May 31. On June 22 Fitch Ratings upgraded the rating from BB+ to BBB-, with a stable outlook.

with the Colombian government's debt swap,<sup>38</sup> and with a higher perception of international risk in view of the greater likelihood of default by Greece and poor performance of other European economies.

In the year to date (to February 29, 2012), peso-denominated TES securities have displayed a mixed behavior. Rates on TES with maturities of 0-2 years have risen on average by 13bp, while 2-5-year and 5-15-year rates have fallen on average by 10bp and 31bp, respectively. The outcome has been a flattening of the curve by about 45bp in the year to date. Up to mid-February, short-term rates were stable because the upward effect of January's 25bp increase in the benchmark rate (to 5.0%) was offset by the market's response to the announced suspension by the Ministry of Finance of short-term bond auctions.<sup>39</sup> Subsequently, the rates rose on expectations of a further increment to the benchmark rate in February, which was in fact made, lifting it to 5.25%.

The behavior of medium- and long-term rates appears to be connected with optimism among market participants in view of positive fiscal developments,<sup>40</sup> the successful issuance of external-debt bonds,<sup>41</sup> and some signs of US economic recovery, which have helped to reduce local agents' risk perception. Rates have also been influenced by the decrease in inflation expectations brought about by the latest monetary policy decisions and the by February inflation result, which turned out lower than the market's forecast.

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38 The debt swap was made on September 20, 2011, and demand amounted to 8.7tr pesos, of which 6.4tr pesos was approved. The domestic public-debt swap consisted of gathering up from the market securities maturing in 2012, 2013 and 2014, and delivering in exchange TES securities maturing in 2015, 2018 and 2026, with the latter date corresponding to a new issue. The government claimed it was the biggest swap ever made in Colombia. It stated further that the operation had improved the maturity profile and reduced the need of issuing TES securities by auction for the next three years by: 1.7tr pesos for 2012, 2.2tr pesos for 2013, and 2.5tr pesos for 2014.

39 Short-term TES auctions were suspended until the last week of June, 2012, when liquidity needs for the second half of the year will be revised.

40 In early February 2012 the Ministry of Finance reported that, on preliminary data, the consolidated public-sector deficit in 2011 was 2.2% of GDP, lower than the 2.9% estimated in December, thanks to improved fiscal performance by the central government and the regions. Accordingly, the government deficit forecast for 2012 was reduced from 3.0% to 2.8%. The Ministry further stated that the greater availability of funds on hand and the lower projected deficit meant lower liquidity needs for the Ministry's National Treasury and Public Credit Office at least for the first half of the year.

41 Thirty-year foreign-debt bonds worth \$1,500m were issued at a lower rate than the issue rates on bonds previously auctioned at similar maturities. The bonds mature in 2041 and were issued at a rate of 4.964% after bids were received for some \$3,600m. In 2009 foreign-debt bonds were issued at a rate of 6.198%. Bonds maturing in 2037 were issued in 2006 and 2008 at rates between 6.601% and 7.453%; bonds maturing in 2033 were issued in 2003 at 11.250% and 8.947%; and bonds maturing in 2028 were issued in 2000 at 11.587%. The funds obtained were used to buy back foreign-debt bonds maturing between 2013 and 2027, with the remainder to be used to finance 2012 budgetary needs in dollars.

## 2. Monetary base, credit and funding sources in the financial system

In a scheme in which the central bank provides all the liquidity needed for keeping market interest rates aligned with the policy rate, the behavior of the monetary base and other monetary aggregates mainly reflects the real sector's money demand and the financial system's demand for primary liquidity. Credit performance is determined both by all agents' spending needs and by the credit establishments' supply.

### *a. Monetary base: sources and uses*

#### *i. Sources of expansion of the base*

Primary liquidity is provided to the economy by Banco de la República through operations with all other agents, particularly financial institutions. The Bank injects liquidity into the economy when it increases its assets or reduces its non-monetary liabilities, and vice versa.

At December 2011 nominal annual growth in the monetary base was 14.4%, signifying an increase of 6,464 billion pesos in the balance. As may be seen from Table 5, the main operations accounting for the liquidity expansion in pesos were: the Bank's net purchases in the foreign currency market worth 6,790bn pesos (\$3,720m), and greater liquidity provided by the Bank through operations with the financial system (1,534bn pesos), specifically an increase of 1,210bn pesos in repos and a decrease of 323bn pesos in non-reserve interest-bearing deposits.

This was partly offset by a higher balance of deposits held at the Bank by the Ministry of Finance<sup>42</sup> (2,363bn pesos) and, to a lesser extent, by a lower balance of TES securities by reason of maturities of (325bn pesos).

#### *ii. Uses of the monetary base*

In 2011 demand for the monetary base grew at an average annual rate of 15%, 3.8pp higher than in 2010. In real terms this meant an increase of 11.2%, 2.5pp higher than in 2010 (Graph 60).

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<sup>42</sup> Since June 2005 the Ministry of Finance (through its National Treasury and Public Credit Office) has been depositing its excess peso funds at Banco de la República, and the Bank pays market interest rates on the balance of these deposits.

Table 5  
Sources of the monetary base  
(billions of pesos)  
(quarterly change)<sup>a/</sup>

Item	2010					2011				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
<b>I. Government</b>	<b>(3,363)</b>	<b>(2,914)</b>	<b>(3,466)</b>	<b>8,974</b>	<b>(769)</b>	<b>(8,782)</b>	<b>(2,795)</b>	<b>(3,229)</b>	<b>12,443</b>	<b>(2,363)</b>
Transfer of profits <sup>b/</sup>	0	0	0	0	0	0	0	0	0	0
Pesos	0	0	0	0	0	0	0	0	0	0
Deposits at Banco de la República	(3,363)	(2,914)	(3,466)	8,974	(769)	(8,782)	(2,795)	(3,229)	12,443	(2,363)
<b>II. Regulation TES</b>	<b>(805)</b>	<b>(1,250)</b>	<b>(57)</b>	<b>(334)</b>	<b>(2,446)</b>	<b>(5)</b>	<b>(258)</b>	<b>(27)</b>	<b>(36)</b>	<b>(325)</b>
Definite purchases	0	0	0	0	0	0	0	0	0	0
Definite sales	(800)	(1,199)	0	0	(1,999)	0	0	0	0	0
Maturities	(5)	(52)	(57)	(334)	(448)	(5)	(258)	(27)	(36)	(325)
<b>III. Banco de la República liquidity operations</b>	<b>(158)</b>	<b>4,366</b>	<b>1,627</b>	<b>(3,862)</b>	<b>1,974</b>	<b>2,995</b>	<b>2,108</b>	<b>64</b>	<b>(3,634)</b>	<b>1,534</b>
Expansion <sup>c/</sup>	526	3,174	1,412	(3,033)	2,079	2,160	2,014	78	(3,042)	1,210
Contraction	(683)	1,192	215	(829)	(105)	835	94	(14)	(592)	323
<b>IV. Foreign exchange operations<sup>d/</sup></b>	<b>764</b>	<b>2,341</b>	<b>433</b>	<b>2,283</b>	<b>5,822</b>	<b>2,329</b>	<b>2,193</b>	<b>2,267</b>	<b>0</b>	<b>6,790</b>
Put options for volatility control	0	0	0	0	0	0	0	0	0	0
Call options for volatility control	0	0	0	0	0	0	0	0	0	0
Direct purchase auction	764	2,341	433	2,283	5,822	2,329	2,193	2,267	0	6,790
<b>V. Other<sup>e/</sup></b>	<b>238</b>	<b>173</b>	<b>134</b>	<b>205</b>	<b>750</b>	<b>202</b>	<b>196</b>	<b>150</b>	<b>280</b>	<b>828</b>
<b>Total change in the base</b>	<b>(3,323)</b>	<b>2,716</b>	<b>(1,329)</b>	<b>7,267</b>	<b>5,330</b>	<b>(3,261)</b>	<b>1,445</b>	<b>(774)</b>	<b>9,053</b>	<b>6,464</b>
<b>Monetary-base balance</b>	<b>36,222</b>	<b>38,937</b>	<b>37,608</b>	<b>44,875</b>	<b>44,875</b>	<b>41,614</b>	<b>43,060</b>	<b>42,286</b>	<b>51,339</b>	<b>51,339</b>

a/ These figures relate to the end of the calendar month

b/ On February 27, 2009 profits were transferred to the government in dollars: \$320.4m (818.6bn pesos).

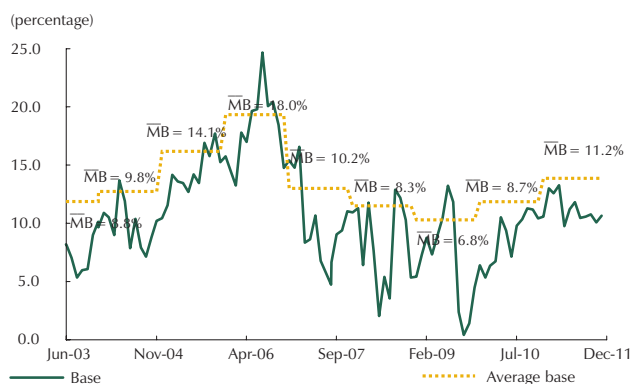
c/ Including one-day, overnight and medium-term repos.

d/ Excluding operations with international organizations.

e/ "Other" includes the monetary effect of Banco de la República's profit and loss statement, and the monetary effect of deposits from external borrowings and external portfolio investment.

Source: Banco de la República.

Graph 60  
Real monetary base  
(annual % change in monthly averages)



Source: Banco de la República.

Higher demand in 2011 resulted from a 15.2% increase in cash in circulation and a 14.8% increase in the financial system's bank reserves; these average annual rates were higher than in 2010 by 4.9pp and 1.8pp, respectively. In real terms the increases were 11.4% and 11%, respectively.

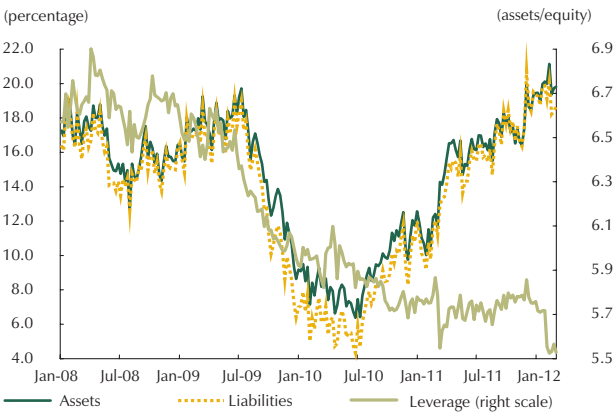
#### b. Credit establishments' sources and uses

Analysis of credit establishments' main balance-sheet accounts shows that loans and

investments are their chief assets,<sup>43</sup> while liabilities subject to reserve requirements (LSR) constitute their main obligations. Loans continued to grow apace in 2011, particularly consumer loans, but the pace slowed in the final quarter.

Leverage, measured as the ratio of assets to equity, decreased all through 2009 and up to the second quarter of 2010, accompanied by increasingly slower growth in both the assets and liabilities of credit establishments (Graph 61). From then on the trend reversed, and balance-sheet accounts generally expanded, without leverage changing significantly. At the end of 2011 both assets and liabilities showed a 19.4% nominal annual expansion.

Graph 61  
Annual percentage growth in credit establishments' assets and liabilities, and leverage level<sup>a/</sup>



a/ Liabilities include repos with the Bank and LSR. Assets are net of liabilities other than such repos and LSR. Leverage level is calculated as the ratio of assets to equity.  
Source: Financial Superintendency. Calculations by Banco de la República.

#### i. Sources

In 2011 LSR were the credit establishments' chief source of funding (Table 6), growing by 36,221bn pesos (19%) over the year, thanks to nominal growth of 17,614bn pesos (22.5%) in savings accounts and 12,755bn pesos (23%) in term certificates of deposit. Current accounts expanded by 3,072bn pesos (9.5%) and bonds by 2,341bn pesos (14.9%). Note that, compared with their performance in 2010 and early 2011, term deposits gained momentum subsequently, accelerating their pace of growth.

The expansion in LSR led to M3 rising in 2011 at an average annual rate of 14.4% (real rate of 10.6%) (Graph 62). Breakdown of M3 shows a nominal increase of 13.9% in public-sector M3 and 19% in private-sector M3 (Table 7).

#### ii. Uses

In 2010 the credit establishments' assets were directed more toward loans than investments. The same occurred in 2011, and at year-end the

43 For this analysis credit establishments' liabilities are regarded as consisting only of repos with the Bank and LSR. The assets are thus the net value between total assets and the liability accounts different from the above.



Table 6  
Credit establishments' main balance-sheet accounts  
(billions of pesos)

	End of month balance			Absolute annual change		Annual % change	
	Dec-09	Dec-10	Dec-11	Dec-10	Dec-11	Dec-10	Dec-11
<b>Assets<sup>a/</sup></b>							
Own cash position <sup>b/</sup>	1,245	440	773	(746)	325	59,9	73.9
Bank reserves	13,756	15,105	17,940	1,350	2,835	9,8	18.8
Banco de la República OMO liabilities & non-reserve interest-bearing deposits	746	490	588	(256)	98	(34,3)	20.0
Total local-currency loan portfolio incl. leasing	144,448	163,762	198,568	19,314	34,806	13,4	21.3
Gross loan portfolio	131,147	149,484	180,552	18,337	31,069	14,0	20.8
Gross loan portfolio incl. leasing	13,301	14,278	18,016	977	3,737	7,3	26.2
Investments	49,561	57,039	59,691	7,477	2,652	15,1	4.6
Other net assets <sup>c/</sup>	(2,646)	(3,705)	908	(1,118)	4,622	40,0	(124.5)
<b>Total</b>	<b>207,110</b>	<b>233,131</b>	<b>278,468</b>	<b>26,021</b>	<b>45,337</b>	<b>12,6</b>	<b>19.4</b>
<b>Liabilities</b>							
Repos with Banco de la República	441	2,496	3,595	2,055	1,099	466,0	44.0
Liabilities subject to reserve requirements	171,693	190,294	226,515	18,601	36,221	10,8	19.0
Current accounts	26,967	32,321	35,394	5,354	3,072	19,9	9.5
Savings accounts	65,748	78,306	95,920	12,558	17,614	19,1	22.5
Term CDs	59,312	55,481	68,236	(3,830)	12,755	(6,5)	23.0
Bonds	11,502	15,680	18,020	4,178	2,341	36,3	14.9
Trust deposits	4,044	4,077	4,219	33	142	0,8	3.5
Demand deposits	3,554	4,423	4,726	869	304	24,5	6.9
Repos with the real sector	567	6	0	(560)	(6)	(98,9)	(100.0)
<b>Equity</b>	<b>34,976</b>	<b>40,340</b>	<b>48,358</b>	<b>5,364</b>	<b>8,018</b>	<b>15,3</b>	<b>19.9</b>
<b>Total</b>	<b>207,110</b>	<b>233,131</b>	<b>278,468</b>	<b>26,021</b>	<b>45,337</b>	<b>12,6</b>	<b>19.4</b>

a/ Net of credit entities' equity and liabilities other than repos with the Banco de la República and liabilities subject to reserve requirements.

b/ Excluding stockbrokers. Absolute change relates to changes in dollars multiplied by the average exchange rate for the period.

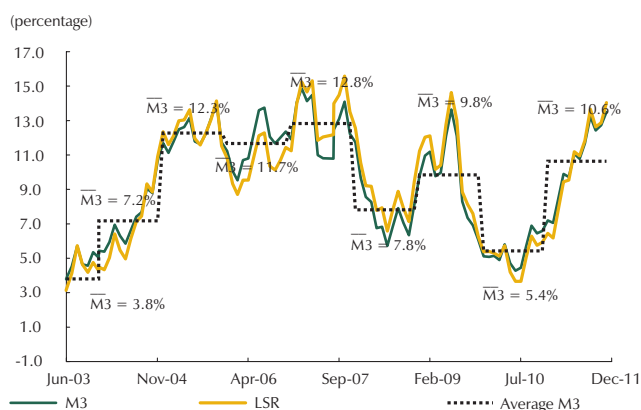
c/ Change in other net assets captures changes in asset, liability and equity accounts (including profits for the year) not specified in this Table, together with changes in own cash position not explained by change in the account balance

Source: Banco de la República.

share of loans, relative to investments, in total assets was even greater (Table 6 and Graph 63). Specifically, in 2011 the credit establishments' balance of local-currency investments rose by 2,652bn pesos (4.6%), while their gross local currency loan balance surged by 34,806bn pesos (21.3%). Inclusion of securitizations gives a gross local currency loan balance of 204,822bn pesos in December 2011, up by 33,799bn pesos (19.8%) on a year earlier (Table 8).

Local currency loans of every type continued to grow vigorously in 2011. Commercial loans grew by 17.0% (nominal rate) over the year and consumer loans by 24.6%, up by 3.66 and 7.99 pp, respectively, on

Graph 62  
Real broad M3  
(annual % change in monthly averages)



Source: Banco de la República.

a year earlier. The expansion in mortgage loans, adjusted for securitizations, was 17.6% at year-end, 1.3 pp higher than in 2010.

In real terms<sup>44</sup> the adjusted local currency loan balance picked up strongly from the second quarter of 2010. Its annual growth rate surged from 1.4% in May 2010 to 18% in August 2011 (Graph 64), then eased and ended the year at 16.1%, similar to its rate in February 2012. By type of loan, local-currency commercial loans plus microcredit grew by 14.2% in real terms during 2011 and consumer loans by 21.2%.

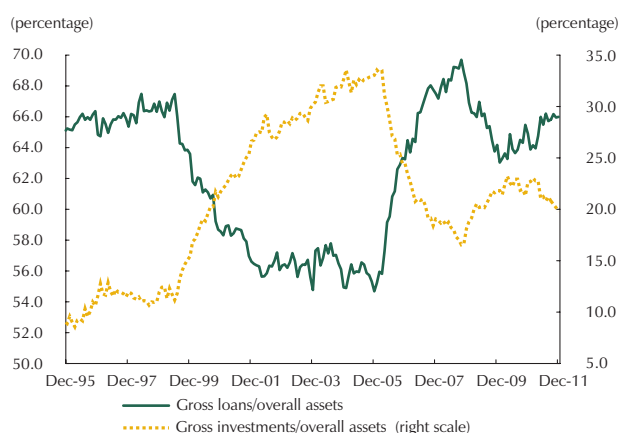
Table 7  
Broad money supply: public and private M3  
(billions of pesos)

	Balance at December		Annual growth (percentage)
	2010	2011	
<b>Private M3</b>	<b>186,273</b>	<b>221,716</b>	<b>19.0</b>
Cash	29,720	33,404	12.4
LSR	156,553	188,312	20.3
Checking accounts	24,476	27,597	12.7
Term CDs	52,055	64,222	23.4
Savings <sup>a/</sup>	62,660	76,661	22.3
Other	17,361	19,833	14.2
<b>Public M3</b>	<b>33,556</b>	<b>38,213</b>	<b>13.9</b>
Checking accounts	7,859	7,859	0.0
Term CDs	3,426	4,014	17.1
Savings	15,653	19,062	21.8
Other	6,617	7,279	10.0
<b>Total M3</b>	<b>219,828</b>	<b>259,930</b>	<b>18.2</b>
Cash	29,720	33,404	12.4
LSR	190,108	226,525	19.2
Checking accounts	32,335	35,456	9.7
Term CDs	55,481	68,235	23.0
Savings	78,313	95,722	22.2
Other	23,979	27,112	13.1

a/ Excluding deposits of the Military Housing Bank, created in July 2006.  
Source: Banco de la República and Financial Superintendence of Colombia.

44 Using non-food CPI.

Graph 63  
Gross loans and investments / overall assets<sup>a/</sup>



a/ Excluding special financial entities  
Source: Banco de la República.

### 3. Financial-system risk indicators

This section analyzes the exposure of the financial system's major establishments to credit, market and liquidity risks, using indicators with information to December 2011. An analysis of credit behavior in Latin America is provided in Box 3 further below.

The credit risk indicators used are the default indicator, defined as the ratio of non-performing loans<sup>45</sup> to total loans, and the loan-quality indicator, estimated as the proportion of risky loans<sup>46</sup> in total loans.

In 2011 the strong growth in loans of different types was greater than the increase in non-performing and risky loans and was reflected in the credit-risk indicators displaying a downward trend. Although the

Table 8  
Financial system's gross loan portfolio<sup>a/</sup>

	Balance in billions of pesos end of December			Annual percentage growth end of December		
	2009	2010	2011	2009	2010	2011
<b>A. Local-currency loans</b>	<b>149,196</b>	<b>171,023</b>	<b>204,822</b>	<b>4.4</b>	<b>14.6</b>	<b>19.8</b>
Commercial loans <sup>b/</sup>	88,233	100,123	117,172	4.0	13.5	17.0
Consumer loans <sup>c/</sup>	41,198	48,080	59,929	1.3	16.7	24.6
Adjusted mortgage <sup>d/</sup>	15,925	18,514	21,765	11.5	16.3	17.6
Microcredit <sup>e/</sup>	3,840	4,305	5,956	24.6	12.1	38.4
<b>B. Foreign-currency loans</b>	<b>4,720</b>	<b>10,171</b>	<b>14,273</b>	<b>(37.5)</b>	<b>115.5</b>	<b>40.3</b>
<b>Total adjusted loan portfolio (A + B)</b>	<b>153,916</b>	<b>181,194</b>	<b>219,095</b>	<b>2.3</b>	<b>17.7</b>	<b>20.9</b>
Memo item						
Mortgages <sup>f/</sup>	11,178	11,254	15,511	11.4	0.7	37.8

a/ Excluding FEN (development funding agency), special financial entities and entities in liquidation. Annual changes were calculated as of the following closing dates: 2008: January 1, 2009; and 2009: January 2, 2010.

b/ Loans other than the housing, consumer and microcredit loans defined in notes c/, d/, e/ and f/.

c/ Loans extended to individuals to purchase consumer goods or pay for services for non-commercial or non-business purposes, regardless of the amount.

d/ Housing loans, regardless of the amount, extended to individuals to purchase new or used housing or to build individual housing. They relate to credit entities' mortgage-loan accounts, as adjusted by securitizations.

e/ Loans extended to micro-enterprises whose outstanding debt to the respective entity does not exceed one hundred and twenty (120) times the prevailing legal monthly minimum wage (Decree 919 of 2008).

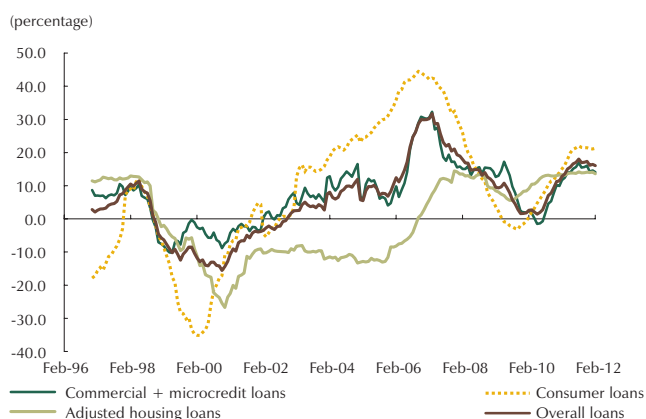
f/ Housing loans, regardless of the amount, extended to individuals to purchase new or used housing or to build individual housing. They related to credit entities' mortgage-loan accounts.

Source: Financial Superintendence's Weekly Form 281. Calculations by Banco de la República.

45 Non-performing loans are loans that are overdue for thirty days or more.

46 Risky loans are loans with a credit rating less than A.

Graph 64  
Percentage change in real gross peso loans<sup>a/</sup>



Note: Non-food CPI was used.  
a/ Including FEN, now called Financiera de Desarrollo Nacional.  
Source: Financial Superintendence of Colombia, Titularizadora Colombiana.  
Calculations by Banco de la República.

quality ratio deteriorated with the new loans, it stands at historically low levels in all loan types.

Regarding market risk, an analysis is provided of movements in the overall balance of TES holdings owned or managed by financial entities. In addition, a sensitivity exercise was carried out to quantify the portfolio valuation losses the financial entities would incur as a result of an adverse change in market conditions. On available information to February 10, 2012, sensitivity exercises show that commercial banks, pension fund managers and trust fund managers became more exposed to market risk because of an increase in the balance and duration of their TES portfolios.

Lastly, exposure to funding liquidity risk was analyzed by using the liquidity-risk indicator scaled by each entity's illiquid assets.<sup>47</sup> This indicator is constructed as a short-term liquidity gap calculated for seven-, fifteen- and thirty-day horizons. A positive value of the indicator shows that the entities have enough funds to meet their short-term liquidity needs, while a negative value means they lack the necessary funds to cover such needs. A sensitivity exercise was also carried to analyze the behavior of the scaled liquidity risk indicator in the event of an unexpected withdrawal of deposits. In the second half of 2011 the behavior of this indicator was stable for the different groups of entities, which continued to be in a comfortable position to overcome significant deposit shocks.

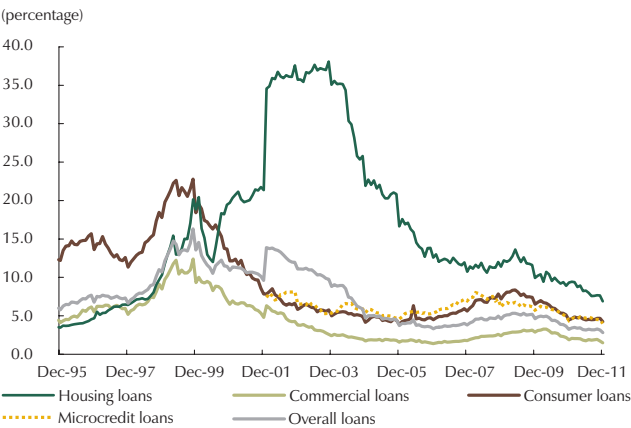
#### a. Credit risk

In the second half of 2011 financial intermediaries' loan portfolio expanded greatly. Although risky and non-performing consumer and microcredit loans increased, the risk indicators for all types of loan continued to trend down (Graph 65).

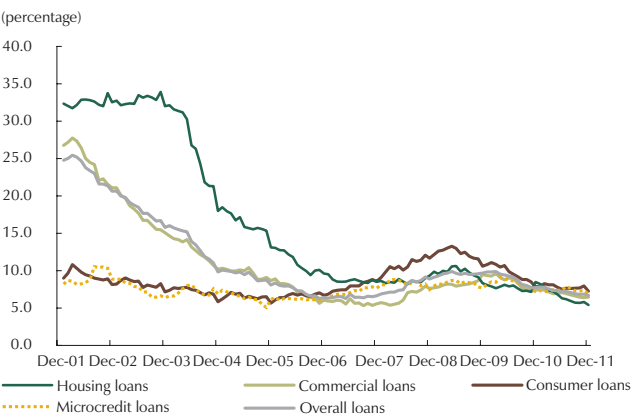
47 The liquidity-risk indicator was introduced in Colombia by the Financial Superintendence with the entry into force of the liquidity-risk management systems (SARL) in the first half of 2009. Some changes were made to this methodology by Financial Superintendence External Circular 43 of 2011, but no new reports are as yet available about the modified indicator.

Graph 65

A. Default indicator: non-performing loans/gross loans



B. Loan-quality indicator, by type of loan



Source: Financial Superintendence of Colombia. Calculations by Banco de la República.

In December 2011 quality and default indicators for the different loan portfolios were observed to have declined. For overall loans the quality indicator stood at 6.7% in December 2011, 1.1pp lower than a year earlier, and the default indicator at 2.8%, 40bp lower than a year earlier (Table 9). But there was positive real growth over the year in risky consumer loans (11.9%) and risky microcredit loans (27.8%), while total risky loans expanded by 2.2% (Graph 66). Similarly, non-performing consumer loans grew by 14.6% and non-performing microcredit loans by 22.1%, while total non-performing loans increased by 2.7% (Graph 67).

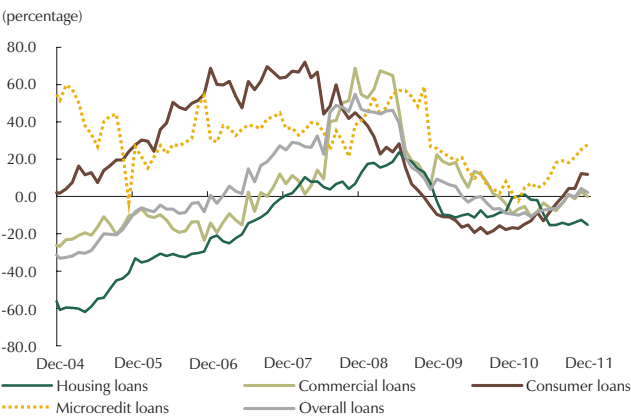
In conclusion, credit-risk indicators continued to trend down because of robust growth in gross loans of all types. However, the increase in non-performing and risky consumer and microcredit loans is cause for concern, in view of households' rising debt (Graph 68.A) and their increasing financial burden (Graph 68.B). It is therefore necessary to continue monitoring credit risk to identify situations that may create greater vulnerability for the financial system.

Table 9  
Credit-risk indicators  
(percentage)

Loan type	Default indicator		Quality indicator	
	Dec-10	Dec-11	Dec-10	Dec-11
Overall loans	3,2	2,8	7,8	6,7
Commercial loans	1,9	1,5	7,4	6,5
Consumer loans	4,5	4,2	7,8	7,2
Housing loans <sup>a/</sup>	9,3	6,9	8,5	5,4
Microcredit	4,4	4,0	7,2	6,9

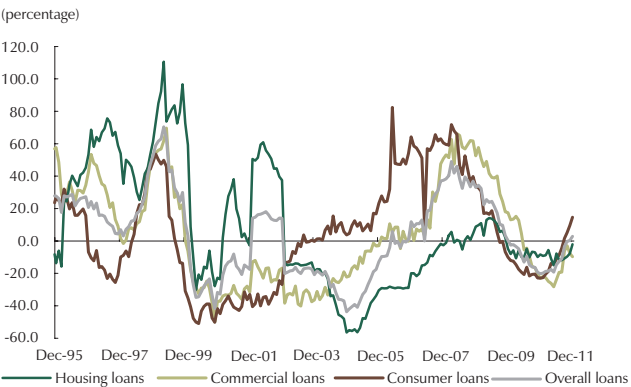
a/ The default indicator of housing loans is greater than their quality indicator, because such loans are considered risky after two months of being overdue, in view of the guarantees and payment behavior of housing-loan debtors. In other types of loan, risk comes before default. See Basic Accounting and Financial Circular, Chapter II, Annex 1 (External Circular 100 of 1995).  
Source: Financial Superintendence of Colombia.

Graph 66  
Real annual growth in risky loans, by type of loan



Source: Financial Superintendence of Colombia. Calculations by Banco de la República.

Graph 67  
Real annual growth in non-performing loans, by type of loan



Source: Financial Superintendence of Colombia. Calculations by Banco de la República.

**b. Market risk**

The largest portfolios of TES securities are held by pension fund managers (38.4 trillion pesos at February 10, 2010, up by 2.4tr pesos on July 2011), trust fund managers (31tr pesos, up by 0.9tr pesos), and commercial banks (30.2tr pesos, up by 4tr pesos)<sup>48</sup> (Table 10).

Commercial banks’ investments, unlike those of pension fund managers and trust fund managers, are not all exposed to market-price changes. At February 2012 the exposed amount<sup>49</sup> of commercial banks’ holdings stood at 20.8tr pesos, higher than in July 2011.

The exposure of financial-system entities to market risk was analyzed by performing a sensibility exercise that assumed a parallel increase of 200bp<sup>50</sup> in the zero-coupon TES curve and calculating the valuation losses this shock would cause.

The results of the exercise show that these financial intermediaries would incur greater losses over the course of the second half of 2011 because of the increase in their TES position and the duration of the portfolio (Table 11). Their greater risk exposure makes it necessary to continue monitoring this risk closely, since a change in volatility, accompanied by higher

securities holdings, might produce adverse results on the financial entities’ balance sheets.

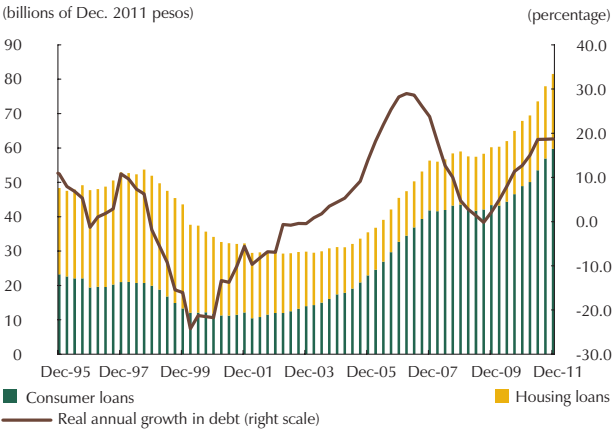
48 The TES portfolios of commercial banks are owned by the banks, whereas pension fund managers and trust fund managers administer third-party funds.

49 The exposed amount is defined as the TES balance that is subject to market-price changes. It is therefore the sum of negotiable securities and the securities available for sale.

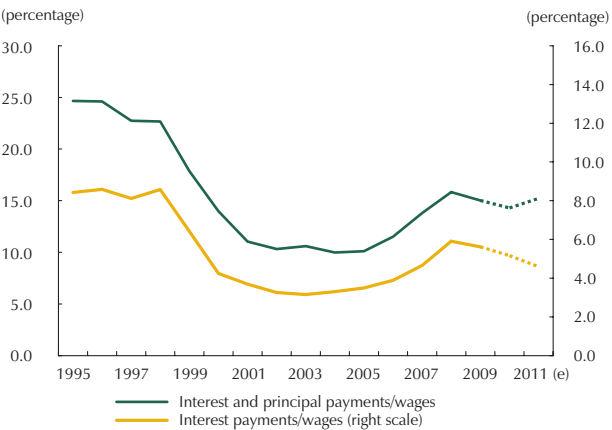
50 Note that this is an extreme and unlikely scenario.

Graph 68

A. Annual growth in household debt



B. Household financial burden



(e) Estimated.  
Sources: Financial Superintendence of Colombia, and DANE. Calculations by Banco de la República.

c. Liquidity risk

For a one-week horizon the formula for the scaled liquidity risk indicator is based on the sum of liquid assets (adjusted for market liquidity) and net liquidity requirements for that time range:<sup>51</sup>

$$LRI = \frac{\text{liquid assets} + \text{net liquid requirements}}{\text{total assets} - \text{liquid assets}}$$

In the following analysis, a weighted average of the liquidity risk indicator's last four available observations was used to reduce the indicator's volatility. For December 23, 2011 the financial systems' liquidity risk indicator stood at 11.3%, down by 1.2 pp on the same week a year earlier (12.5%) (Graph 69), because of a decrease in liquid investments during the first half of 2011. In the second half of the year, the liquidity level of the different groups of entities remained relatively stable, with a slight increase for commercial finance companies caused by higher available assets. For the other groups of entities, liquid investments and net liquidity requirements remained stable.

Banks were also stress-tested using liquidity indicators over a horizon of seven and fifteen days and assuming a 4% deposit shock.<sup>52</sup> The results show that banks can withstand the shock in the first and second weeks without facing high liquidity risk.

To sum up, the increase in overdue and risky consumer and microcredit loans did not impair their risk indicators, owing to the significant increase in the overall loan balance. There is, however, evidence of higher risk from new consumer and microcredit loans extended in the

51 Net liquidity requirement is the sum of net cash flow from contractual maturities of assets, liabilities and off-balance sheet positions over the following seven calendar days, and the estimated net cash flow, for the following seven days, of deposits and liabilities other than contractual maturities, for each time horizon.

52 This was in addition to the shock included in calculating net non-contractual flows, which involved reducing deposits by a percentage equal to each entity's maximum coefficient of actual historical withdrawals.



Table 10  
TES portfolio balance  
(billions of pesos)

	TES portfolio		
	July 2011 <sup>a/</sup>	February 2012 <sup>b/</sup>	Difference
Banks	26.2	30.2	4.0
Pension fund managers	35.9	38.4	2.4
Trust fund managers	30.2	31.0	0.9

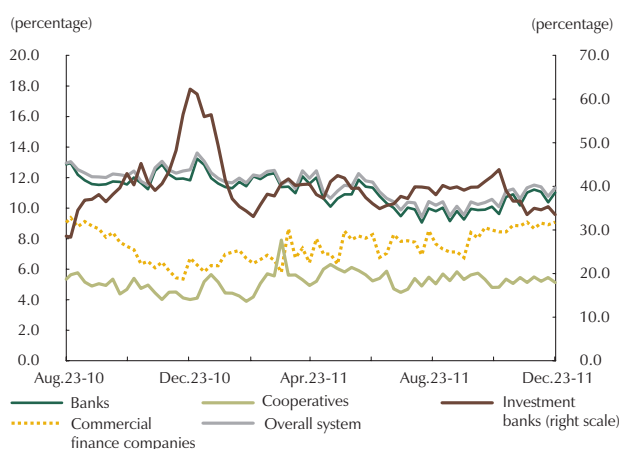
a/ Figures to July 31, 2011.  
b/ Figures to February 10, 2012.  
Source: Banco de la República.

Table 11  
Sensitivity exercise  
(billions of pesos)

	Losses from 200bp shock		
	July 2011 <sup>a/</sup>	February 2012 <sup>b/</sup>	Difference
Banks	0.92	1.06	0.14
Pension fund managers	4.17	4.47	0.30
Trust fund managers	2.09	2.21	0.12

a/ Figures to July 31, 2011.  
b/ Figures to February 10, 2012.  
Source: Banco de la República

Graph 69  
Scaled 7-day liquidity risk indicator  
(total by group of entities)



Source: Financial Superintendence of Colombia. Calculations by Banco de la República.

third quarter of 2011. Entities became more exposed to market risk because of the greater TES holdings and duration of their portfolios. Lastly, financial entities' liquidity levels remained stable during the second half of 2011, and stress tests indicate that they continue to have a comfortable liquidity position that would allow them to withstand sizable deposit withdrawals over a two-week horizon.

## E. EXTERNAL SECTOR

### 1. Exchange-rate movements

#### a. Nominal exchange rate

The US dollar weakened in 2011 against the currencies of both developed and emerging countries. Specifically, comparison of 2011 average exchange rates with those of 2010 shows that all Latin-American currencies appreciated: the Chilean peso and Brazilian *real* were the currencies that appreciated most (5.2% and 4.9%, respectively),

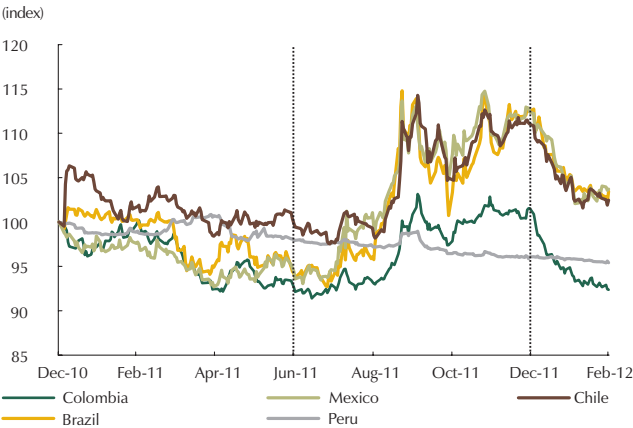
followed by the Colombian peso (2.6%), the Peruvian *sol* (2.5%), and the Mexican peso (1.5%). However, comparison of 2011 year-end rates with those of 2010 shows a 1.5% depreciation in the Colombian peso, which was less than the depreciation in the Brazilian *real* (12.5%), the Mexican peso (12.4%) and the Chilean peso (11%), while the Peruvian *sol* appreciated by 3.9% (Table 12 and Graph 70).

Table 12  
Exchange rates against the dollar  
(percentage change)

	Jan-2002 to Dec-2009	2010	2011	Average 2011 vs. 2010	Average 12nd half 2011 vs. 1st half 2011	January-February 2012
Colombia	(10.7)	(6.4)	1.5	(2.6)	1.1	(9.0)
Brazil	(24.7)	(4.7)	12.5	(4.9)	5.3	(8.0)
México	42.5	(5.2)	12.4	(1.5)	9.3	(8.1)
Perú	(16.1)	(2.8)	(3.9)	(2.5)	(2.0)	(0.5)
Chile	(23.2)	(7.8)	11.0	(5.2)	3.5	(7.8)
Euro	(38.2)	7.9	2.5	(4.8)	1.8	(2.7)
British Pound	(9.7)	4.2	(0.7)	(3.7)	1.7	(3.1)
Yen	(29.5)	(11.8)	(5.7)	(9.3)	(5.4)	4.5

Sources: Set-FX and Bloomberg.

Graph 70  
Nominal exchange-rate indices of Latin-American countries  
(Dec.30, 2010 = 100)



Sources: SET-FX and Bloomberg.

The Colombian peso’s behavior against the US dollar in 2011 may be divided into two periods. In the first, from January to the end of July, the peso trended up, having depreciated steeply at the end of 2010.<sup>53</sup> The peso’s appreciation was influenced by lower international risk premiums, which, as in other emerging economies, encouraged capital inflows. This was further supported by expectations of Colombia’s public-debt rating being upgraded. In effect, Standard & Poor’s raised its rating to investment grade in March, and Moody’s and Fitch followed suit in May and June, respectively.

In the second period, from the end of July to December, the peso depreciated, particularly because of a higher perception of international risk. This perception was

53 The exchange rate depreciated owing to a specific event in a context of low market liquidity, to a maximum of \$2,028.13 pesos on December 28, 2010.

based on: the fiscal situation of some European countries; uncertainty about a bailout for Greece; the downgrading of the debt ratings of several countries<sup>54</sup> and a number of US and French banks; and the IMF's lowering of its world growth forecast.

During the greater part of 2011 Banco de la República carried out its program of daily purchases of international reserves of at least US\$20m. This program was started on September 15, 2010 and ended on September 30, 2011, after the Bank's Board of Directors announced that it would hold spot-market auctions in the amount of US\$200m when the market exchange rate deviated by 2% or more from its tenth-order moving average. On October 28 this mechanism was replaced by one of volatility options in the amount of US\$200m to be activated when the market exchange rate deviated by 4% or more from its twentieth-order moving average.

According to figures from the foreign-exchange balance,<sup>55</sup> in 2011 the capital account showed net inflows of US\$4,891m for the private sector and US\$9,087m for the public sector. These inflows were partly offset by current-account operations, which resulted in net outflows of US\$9,385m, with the trade balance accounting for net payments of US\$8,684m (export receipts of US\$10,155m, and import payments of US\$18,840m). The capital account included, notably, inflows of FDI (US\$13,982m), particularly to the oil and mining sectors, portfolio investments (US\$1,672m) and foreign loans (US\$1,432m). Operations to overseas accounts generated outflows of US\$12,197m, which partly offset receipts (Table 13).

*Given the lower perception of international risk, the peso and other currencies of the region have appreciated in the year to date (February 2012).*

The peso has appreciated in the year to date (to February 29, 2012), by 9%, as have other currencies of the region, by similar rates, owing to a lower perception of international risk. Several factors account for this lower risk perception: two auctions carried out by the European Central Bank to provide three-year liquidity;<sup>56</sup> publication of positive data in the United States, the euro zone and China;<sup>57</sup> a statement by the Fed indicating that it would probably keep the benchmark exceptionally

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54 Sovereign-debt downgrades were imposed on the US, Japan and a number of European countries, including Belgium, Cyprus, Greece, Ireland, Italy, Portugal and Spain.

55 The foreign-exchange balance shows movements in the currency spot market by exchange-market intermediaries with other agents in the economy, and transactions channeled through Banco de la República.

56 The first auction was held at the end of 2011 and the second at the end of February 2012.

57 Positive figures were released on the US confidence, employment and economic-growth indices, on confidence in the euro area and Germany, and on China's fourth-quarter growth in 2011, which was higher than expected.

Table 13  
Foreign exchange balance<sup>a/</sup>  
(millions of dollars)

	Jan-Dec 2010	Jan-Dec 2011	Absolute change
I. Net current-account reimbursements (1 + 2 + 3)	(10,412)	(9,385)	1,027
1. Return on international reserves	149	260	110
2. Interest on Finance Ministry debt	(1,932)	(2,116)	(184)
3. other (i + ii + iii) <sup>b/</sup>	(8,630)	(7,529)	1,101
i. Goods trade balance (a + b)	(9,023)	(8,684)	339
a. Goods exports <sup>c/</sup>	8,442	10,155	1,713
b. Goods imports	(17,465)	(18,840)	(1,374)
ii. Net financial services balance	(2,610)	(1,898)	712
iii. Net non-financial services balance	3,004	3,053	49
II. Net private-capital reimbursements (1 + 2 + 3 + 4)	6,791	4,891	(1,900)
1. Loans	(1,181)	1,432	2,613
2. Direct investment (i + ii)	9,123	13,982	4,859
i. FDI in Colombia (a + b)	9,485	15,032	5,548
a. Oil and mining	7,973	12,241	4,268
b. Direct and supplementary, other sectors	1,512	2,792	1,280
ii. Colombian direct investment abroad	(361)	(1,050)	(689)
3. Portfolio investment (i + ii)	1,455	1,673	219
i. Foreign portfolio investment in Colombia	2,349	2,628	279
ii. Colombian portfolio investment abroad	(894)	(954)	(60)
4. Special operations <sup>d/</sup>	(2,606)	(12,197)	(9,590)
III. Net public-sector reimbursements <sup>e/</sup>	6,657	9,087	2,430
IV. Other special operations <sup>f/</sup>	62	(754)	(816)
V. Change in gross international reserves (I + II + III + IV)	3,099	3,839	741

a/ It includes operations channeled through currency-market intermediaries and Banco de la República. It does not include settlement accounts.

b/ It includes other current operations by the Bank and Finance Ministry, such as payment for non-financial services

c/ Including advances and pre-funding payments.

d/ This item records currency movements in settlement accounts, purchase-sale of free-account balances in the domestic currency market, and currency movements in derivative operations.

e/ Most Finance Ministry operations are channeled through the Ministry's foreign-currency deposit accounts at Banco de la República and do not therefore have any foreign-exchange impact.

f/ This includes Banco de la República liabilities, the purchase and sale of currency by the Bank in the currency market and with the Finance Ministry, the transfer of profits in dollars by the Bank to the Ministry, and accrual and active valuation of international reserves. It also includes the purchase-sale of currency between the real sector and currency-market intermediaries, purchase-sale of currency in the currency market to hedge against risk from exchange-rate fluctuations and statistical errors and omissions.

Source: Banco de la República.

low to the end of 2014; monetary stimuli provided by other central banks;<sup>58</sup> and approval of a euro-zone disbursement to Greece as part of the second bailout package for this country.

Furthermore, the rating agency DBRS upgraded Colombia's sovereign-debt outlook from stable to positive, in view of the country's good

58 The central banks of England and Japan increased their asset-purchase programs by £50 billion and ¥10 trillion. The Reserve Bank of India cut its reserve-requirement rate by 50bp to inject approximately 320 billion rupees into the financial system.

macroeconomic management and its capacity to face adverse shocks. Note that on February 6 the Bank's Board of Directors started a program for the daily purchase of at least US\$20m of international reserves through competitive auctions. The program was intended to last for at least three consecutive months but was extended on February 24 to run at least until August 4, 2012.

### ***b. Real exchange rate***

External and domestic price movements need to be taken into account in analyzing the repercussions of exchange-rate behavior on the country's competitiveness. The real exchange rate, which compares external and domestic inflation in the same currency, is an indicator used in making the analysis. Variations in the real exchange rate may be interpreted as changes in competitiveness between two countries or as a production-cost differential.

Real exchange-rate bilateral indices, using CPI and PPI as price measures, show that in general the Colombian peso depreciated in 2011 against the country's main trading partners. In PPI terms it depreciated against the US, Venezuela, Brazil, the euro zone, Peru, Japan, Chile, Canada and England, but appreciated against Ecuador and Mexico (Table 14).

In aggregate terms, the real exchange rate in 2011 remained at much the same levels as in 2010. The real exchange-rate index (RERI) measured

Table 14  
Bilateral exchange rates: Colombian peso against other currencies

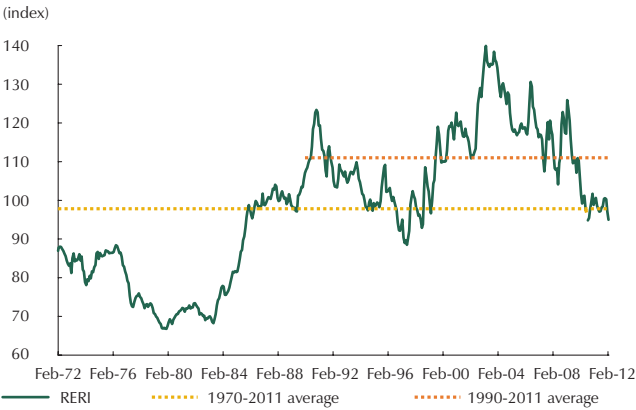
	2010 <sup>a/</sup>		2011 <sup>a/</sup>		To February 2012 <sup>b/</sup>	
	PPI	CPI	PPIP	CPI	PPI	CPI
US	(7.3)	(12.5)	0.4	(2.9)	(2.7)	(3.7)
Venezuela	(22.1)	(21.1)	5.1	11.6	7.3	13.3
Ecuador	(10.3)	(10.8)	(3.6)	(1.7)	(1.0)	(1.3)
México	(4.2)	(3.9)	(1.2)	(1.0)	(7.0)	(10.1)
Brazil	3.6	2.4	6.3	5.6	(6.3)	(5.3)
Euro zone	(11.8)	(13.5)	7.1	6.3	3.9	3.1
Perú	(5.9)	(6.7)	0.7	(0.2)	1.4	0.8
Japan	(7.6)	(8.8)	3.6	3.3	0.3	(0.4)
Chile	(6.9)	(4.2)	2.9	2.4	0.0	(4.1)
Canadá	(3.0)	(2.8)	0.5	0.8	(5.0)	(5.2)
UK	(10.4)	(11.7)	1.0	2.0	(4.2)	(4.9)

a/ Average change between January and December.

b/ Average change between January and February.

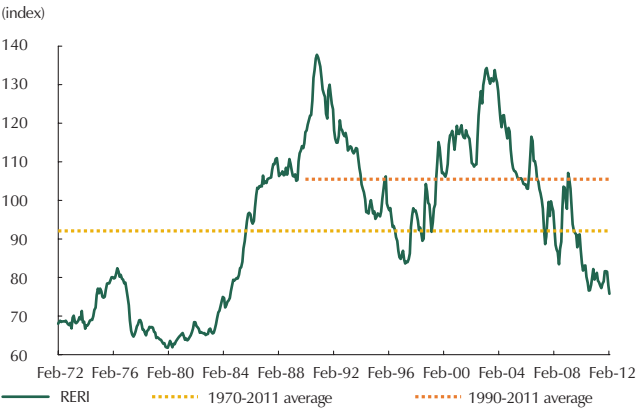
Source: Banco de la República.

Graph 71  
Multilateral real exchange-rate index based on PPI, and its averages (1994 = 100)



Source: Banco de la República.

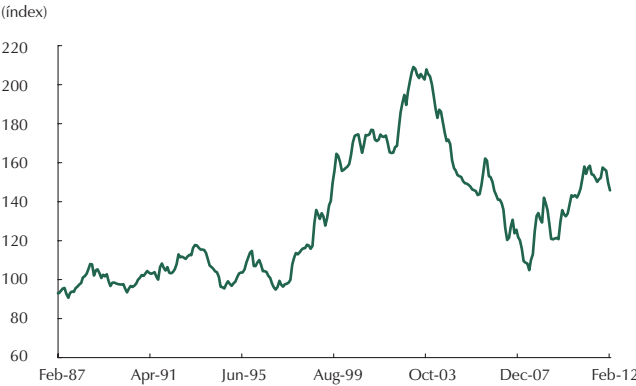
Graph 72  
Multilateral real exchange-rate index based on CPI, and its averages (1994 = 100)



Source: Banco de la República.

Graph 73

A. Nominal exchange-rate index (1994 = 100)



Source: Banco de la República.

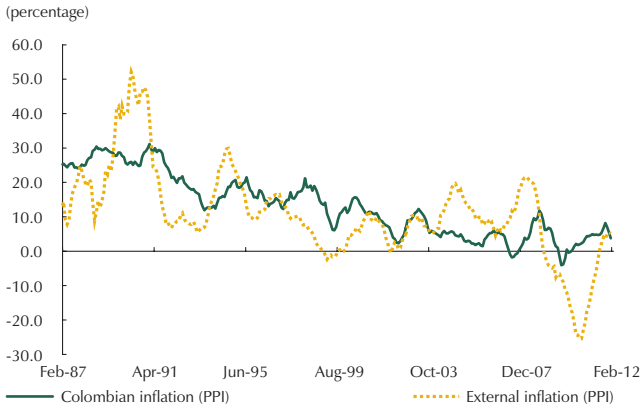
with the PPI appreciated by 0.4% relative to its 2010 average, while the RERI-CPI appreciated by 1.5% (Graphs 71 and 72). With those appreciations, the RERI-PPI came very close to its historical average, while the RERI-CPI stood at its lowest level since 1984.

Real exchange-rate movements were supported by a nominal depreciation of 8.4% against the group of trading partners and by a PPI inflation that was higher in Colombia (5.5%) than abroad (-3.3%), based on weightings of non-traditional trade items (Graph 73).

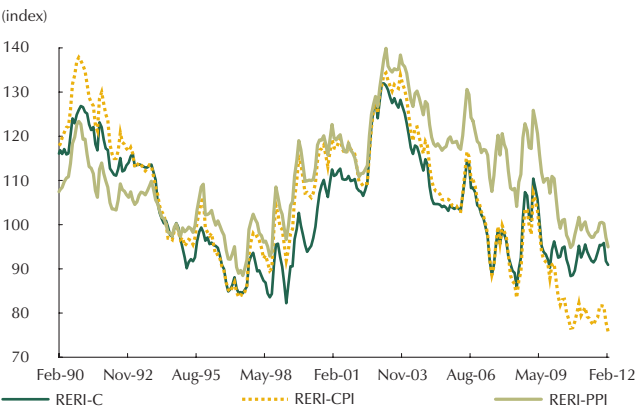
Another indicator of competitiveness is the RERI-C, which represents a multilateral exchange rate with respect to countries that compete with Colombia’s chief export products (coffee, bananas, flowers and textiles) in the US market. According to this indicator, there was a 1.6% gain in competitiveness in 2011 relative to 2010 (Graph 74).

In the year to date, to February 2012, the real exchange rate has appreciated by 2.9% relative to the 2011 average, according to the PPI index, and by 3.5%, according to the CPI index. This has resulted both from appreciation against the dollar (1.6%), and from appreciation against trading partners as a group (4.8%), which was offset by lower inflation in Colombia.

B. Price movements (1994 = 100)

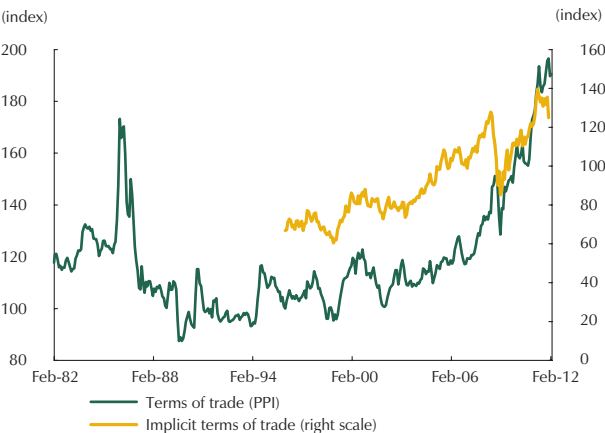


Graph 74  
US real exchange-rate index - competitiveness  
(1994 = 100)



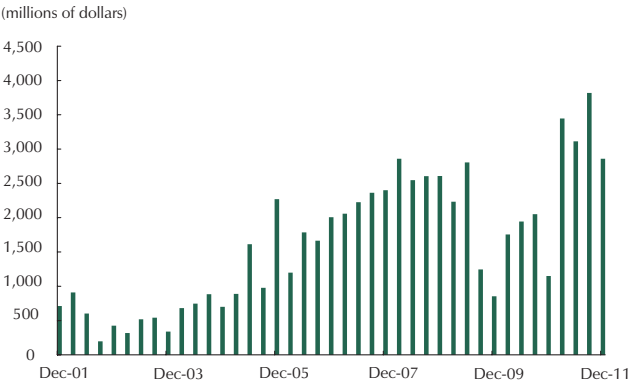
Source: Banco de la República.

Graph 75  
Terms of trade  
(January 1996 = 100)



Source: Banco de la República.

Graph 76  
Foreign investment in Colombia



Note: Excluding \$4,502m for purchase of Bavaria in the fourth quarter of 2005.  
Source: Banco de la República.

c. *Factors that have affected currency behavior*

The factors influencing exchange-rate behavior are connected with variables that affect the relative prices and economic performance of Colombia and its trading partners. In this respect, Colombia’s terms of trade, though already high, rose on average by 16.4% in 2011 against 2010 (Graph 75).

Investment inflows returned to high levels after a sharp fall resulting from the international crisis (Graph 76). In the short term, the increase in foreign-investment funds may generate a real currency appreciation.

A country’s competitiveness is determined by both production costs and by efficiency in the tradable sector. Productivity gains in the sector of export goods will be reflected in real exchange-rate appreciation. In 2011 industrial productivity gains per hour worked were higher in Colombia (4.0%) than in the United States (2.8%) (Graph 77) and may have created currency-appreciation pressures.

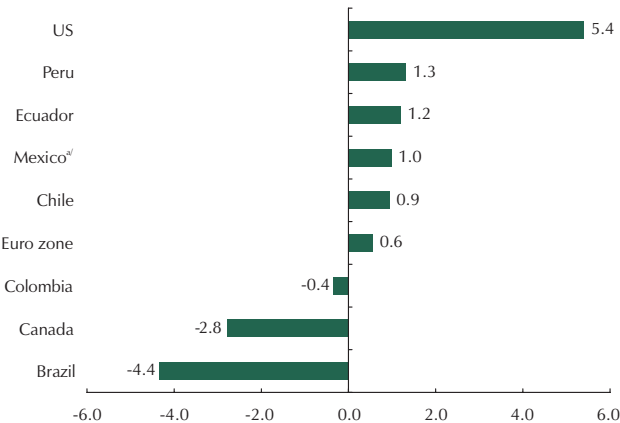
Graph 77  
Industrial productivity per hour worked: differential between US and Colombia  
(1990 = 100)



Note: Ratio of US productivity per hour worked to Colombia’s.  
Sources: Bureau of Labor Statistics and DANE. Calculations by Banco de la República.



Graph 78  
Multilateral real exchange rates, annual change in 2011  
against 2010  
(percentage)



a/ Data to November.  
Sources: Each country's central bank.

Lastly, greater confidence in emerging economies, the resulting capital inflows, the evolution of commodity prices, and expansionary monetary policy in the United States, with the ensuing weakness of the dollar, have been the determinants of movements in Latin-American currencies (Graph 78).

## 2. Evolution of Colombia’s balance of payments in 2011

In 2011 Colombia’s external sector benefited from expanding exports, particularly sales of mineral commodities, which were mainly driven by the behavior of international prices.

Similarly, good consumption and investment performance accounted for rising imports, which, together with higher profit and dividend remittances to foreign companies, resulted in a current-account deficit of US\$9,980m (3% of GDP) (Table 15).

The rising trend in international commodity prices and in shipped volumes of some products contributed to the trade surplus in goods. Overall goods exports rose by US\$16,872m (41.3%) in 2011, relative to the year before, exceeding the year’s rise in imports: US\$13,598m (35.2%). However, net current receipts from sales of goods abroad and the recovery in transfer receipts were not sufficient to make up for net payments under the items of factor income and foreign trade in services; hence, the current account deficit.

The current account deficit was financed from the surplus on the financial and capital account, which amounted to US\$13,322m and came mostly from FDI and portfolio investment, and also from new external borrowings. Balance of payment transactions produced an increase of US\$3,744m in international reserves. The evolution of Colombia’s current account deficit is analyzed in Box 4.

### a. Current account

The current deficit in 2011 (US\$9,980m) came from a deficit in factor income (US\$15,820m) and a deficit in foreign trade services (US\$4,621m), which were partly offset by the goods account surplus (US\$5,514m) and net current transfer receipts (US\$4,948m).

Table 15  
Colombia's balance of payments  
(millions of dollars)

	2010 (pr)	2011 (pr)	Change (dollars)
I. Current account (A + B + C)	(8,760)	(9,980)	1,219
Receipts	52,100	70,603	18,503
Payments	60,861	80,583	19,722
A. Nonfactor goods and services	(1,384)	893	2,277
Receipts	45,314	62,646	17,333
Payments	46,697	61,753	15,056
1. Goods	2,240	5,514	3,274
Receipts	40,867	57,739	16,872
Payments	38,628	52,225	13,598
2. Nonfactor services	(3,623)	(4,621)	998
Receipts	4,446	4,907	461
Payments	8,070	9,528	1,458
B. Factor income	(11,851)	(15,820)	3,969
Receipts	1,444	2,284	839
Payments	13,296	18,104	4,808
C. Transfers	4,475	4,948	473
Receipts	5,343	5,673	331
Workers' remittances	4,023	4,168	144
Other transfers	1,319	1,505	186
Payments	868	726	(142)
II. Capital and financial account (A + B)	11,770	13,322	1,551
A. Financial account (1 + 2)	11,770	13,322	1,551
1. Long-term financial flows (b + c - a)	6,733	12,673	5,941
a. Assets	6,560	8,288	1,728
i. Colombian investment abroad	6,562	8,289	1,727
Direct	6,562	8,289	1,727
Portfolio	0	0	0
ii. Loans	0	0	0
iii. Commercial credit	0	0	0
iv. Other assets	(2)	(1)	(1)
b. Liabilities	13,301	20,979	7,678
i. Colombian investment abroad	7,813	18,537	10,724
Direct	6,899	13,234	6,335
Portfolio	913	5,303	4,389
ii. Loans	5,486	2,015	(3,470)
iii. Commercial credit	(13)	(108)	95
iv. Leasing	16	535	519
v. Other liabilities	0	0	0
c. Other long-term financial movements	(8)	(18)	9

Cuadro 15 (continuación)  
Balanza de pagos de Colombia  
(millones de dólares)

	2010 (pr)	2011 (pr)	Change (dollars)
2. Short-term financial flows (b-a)	5,038	648	(4,389)
a. Assets	1,567	5,388	3,821
i. Portfolio investment	2,066	1,512	(554)
ii. Commercial credit	5	(407)	(412)
iii. Loans	(20)	2,778	2,797
iv. Other assets	(484)	1,505	1,989
b. Liabilities	6,604	6,036	(568)
i. Portfolio investment	2,349	2,899	550
ii. Commercial credit	311	423	112
iii. Loans	3,836	2,679	(1,157)
iv. Other liabilities	108	35	(73)
B. Special capital flows	0	0	
III. Net errors and omissions	126	402	
IV. Change in gross international reserves	3,136	3,744	
Memo items (millions of dollars):			
I. Gross international reserves	28,464	32,303	
II. Change in gross international reserves caused by balance-of-payment transactions	3,136	3,744	
III. Valuation gains/losses in international reserves	(37)	95	
IV. Change in gross international reserves (II + III)	3,099	3,839	

(pr): Provisional.  
Source: Banco de la República.

Comparing 2011 results with those of 2010 shows a US\$1,219m widening of the external deficit, resulting from a greater increase in current payments, US\$19,722m, than in receipts, US\$18,503m. Current payments were made for goods imports (US\$52,225m, 65% of the total), factor income (US\$18,104m, 22% of the total), and service imports (US\$9,528m, 12% of the total). The bulk of current receipts, 82%, came from goods exports (US\$57,739m), boosted by higher export prices, while 8% came from current transfers (US\$5,673m) and 7% from non-factor service exports (US\$4,907m).

#### ***b. Capital and financial account***

In 2011 the Colombian economy posted a surplus of US\$13,322m on the capital and financial account, up by US\$1,551m on the year before. Net capital receipts from abroad consisted of inflows in respect of: i) FDI in

Colombia amounting to US\$13,234 m; ii) foreign portfolio investment of US\$8,202 m; and iii) net external loan disbursements of US\$5,579 m. These inflows were partly offset by outflows of Colombian capital (US\$13,693 m), consisting of Colombian direct investments abroad in the amount of US\$8,289m and acquisition of external assets worth US\$5,404 m (Table 16).

Table 16  
Colombia's balance-of-payment capital and financial account  
(millions of dollars)

	2010 (pr)	2011 (pr)	Change (dollars)
Capital and financial account (I - II)	11,770	13,322	1,551
I. Foreign-capital inflows (liabilities) (A + B + C)	19,897	27,015	7,118
A. Foreign direct investment	6,899	13,234	6,335
B. Foreign portfolio investment (i + ii)	3,263	8,202	4,939
i. Public sector	1,328	3,703	2,375
Long term (bonds)	330	2,789	2,459
Short term (TES)	999	914	(84)
ii. Private sector	1,934	4,498	2,564
Long term	584	2,514	1,930
Short term	1,351	1,985	634
C. Loans and other external credit (i + ii)	9,735	5,579	(4,156)
i. Public sector:	1,691	462	(1,230)
Loans	1,709	470	(1,239)
Long term	1,053	305	(748)
Short term	656	165	(491)
Other	(18)	(8)	(10)
ii. Private sector:	8,044	5,117	(2,926)
Loans	7,612	4,224	(3,388)
Long term	4,432	1,710	(2,722)
Short term	3,180	2,514	(666)
Commercial credit	302	317	15
Other	130	576	446
II. Colombian capital outflows (assets) (A + B)	8,127	13,693	5,567
A. Direct investment abroad	6,562	8,289	1,727
B. Other investments abroad	1,565	5,404	3,840
i. Public sector:	(2,000)	1,310	3,310
Portfolio investment	(1,918)	1,342	3,260
Loans	(62)	(88)	26
Other	(19)	57	76
ii. Private sector:	3,565	4,095	529
Portfolio investment	3,984	170	(3,814)
Loans	43	2,866	2,823
Commercial credit	5	(407)	(412)
Other	(466)	1,465	1,932

(pr): Provisional.  
Source: Banco de la República.

*Net FDI inflows to Colombia in 2011 amounted to US\$13,234m (4% of GDP), 92% higher than in 2010.*

Table 16 shows that net FDI inflows to Colombia in 2011 amounted to US\$13,234m (4% of GDP), 92% higher than in 2010, and representing 49% of overall foreign capital inflows. These funds were mainly received by branches and subsidiaries of foreign companies operating in the oil and mining sector, which absorbed 58% (US\$7,704m) of the total. Other sectors that also received direct investments were: commerce (US\$2,264m), transport and communications (US\$1,421m), electricity, gas and water (US\$585m), and manufacturing (US\$533m).

In 2011 Colombia made direct investments abroad totaling US\$8,289m, up by US\$1,727m on the year before. This capital was spent mainly on expansion plans of local companies abroad, through greater share ownership in mining-energy, manufacturing and commercial companies. Other than direct investments abroad, Colombian capital outflows for acquisition of external assets amounted to US\$5,404m, approximately US\$3,840m more than in 2010, and consisted mostly of portfolio investments by the government and pension funds, and other investments and deposits made by financial entities and real sector companies.

The public sector received portfolio investment funds of US\$3,703m, made up of long-term debt securities issued in external markets (US\$2,789m) and foreign portfolio investments in the local market (US\$914m). Loans and other external credit extended to the public sector amounted to US\$462m, consisting mainly of long-term debt (US\$305m) of the central government and public sector power companies.

The private sector received portfolio-investment funds of US\$4,498m, approximately US\$2,564m more than in 2010, mainly from greater issuance of long-term bonds in international markets by financial-sector and power-sector companies. In addition, non-resident investors purchased equity securities worth US\$1,985m, which is consistent with the record of share issues on the stock exchange. The private sector received direct loans and other external credits totaling US\$5,117m, with loans accounting for US\$4,224m of this amount, and other credits (leasing, commercial credit, etc.) for US\$893m. Note that these funds were connected with the funding of foreign-trade operations.

*In 2011 Colombia made direct investments abroad in the amount of US\$8,289.*

### **c. International reserves**

In 2011 balance of payment transactions increased the country's gross international reserves by US\$3,744m, as a result of net purchases of

foreign currency worth US\$3,720m from currency intermediaries, net returns of US\$210m on international reserves, and net payments of US\$186m in respect of other operations by Banco de la República.

### 3. Balance of payment outlook for 2012

The balance of payments for 2012 is forecast to show a current account deficit approaching 3.5% of GDP, wider than in 2011 and attributable in particular to goods and services trade, the balance of which was in surplus last year but is expected to be in deficit this year (Table 17).

Table 17  
Colombia's balance-of-payment forecast

	(millions of dollars)				(percentage of GDP) <sup>c/</sup>			
	2009	2010 (pr)	2011 (pr)	2012 (proj)	2009	2010 (pr)	2011 (pr)	2012 (proy)
<b>I. Current account</b>	<b>(4,960)</b>	<b>(8,760)</b>	<b>(9,980)</b>	<b>(12,968)</b>	<b>(2.1)</b>	<b>(3.0)</b>	<b>(3.0)</b>	<b>(3.5)</b>
A. Goods and nonfactor services	(275)	(1,384)	893	(3,028)	(0.1)	(0.5)	0.3	(0.8)
1. Goods	2,545	2,240	5,514	1,578	1.1	0.8	1.7	0.4
2. Nonfactor services	(2,821)	(3,623)	(4,621)	(4,606)	(1.2)	(1.3)	(1.4)	(1.3)
B. Factor income	(9,298)	(11,851)	(15,820)	(14,849)	(3.9)	(4.1)	(4.8)	(4.0)
C. Transfers	4,613	4,475	4,948	4,909	2.0	1.5	1.5	1.3
<b>II. Capital and financial account</b>	<b>6,254</b>	<b>11,770</b>	<b>13,322</b>	<b>15,474</b>	<b>2.6</b>	<b>4.1</b>	<b>4.0</b>	<b>4.2</b>
A. Private sector: net direct investment and other capital flows <sup>a/</sup>	(1,042)	6,742	10,449	10,162	(0.4)	2.3	3.1	2.8
B. Public sector	7,295	5,028	2,873	5,312	3.1	1.7	0.9	1.4
<b>III. Errors and omissions</b>	<b>54</b>	<b>126</b>	<b>402</b>	<b>0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>
<b>IV. Change in gross international reserves <sup>b/</sup></b>	<b>1,347</b>	<b>3,136</b>	<b>3,744</b>	<b>2,506</b>	<b>0.6</b>	<b>1.1</b>	<b>1.1</b>	<b>0.7</b>

(pr) Preliminary.

(proj) Projected.

a/ Comprises net flows of foreign direct and portfolio investment, and net foreign-debt operations.

b/ The change in gross international reserves takes into account contributions to the Latin-American Reserve Fund. For 2012 it takes into account daily foreign-currency purchases of at least US\$20m by the Banco de República from February 6 to August 4.

c/ Real GDP growth for 2012 is the forecast made by the Bank's Office of the Deputy Governor for Economic Studies.

Source: Banco de la República

The forecast assumes that the world economy will slow down in 2012, mainly because of a mild euro-zone recession, modest US growth, and slower expansion in the emerging countries. In addition, the prices of export commodities such as coal, ferronickel and coffee are expected to fall, though not the prices for oil and gold. Exports of products other than the major items are forecast to grow by less than last year, since no great recovery is expected in sales to Venezuela, nor a full and fast substitution of this market by new markets. Import behavior will be consistent with the Colombian economy's most probable growth

*Colombia's external vulnerability, as measured by international reserve indicators, shows that the country is in a relatively favorable position with respect to other countries of the region.*

scenario (described in the first section of this Chapter), signifying slower import expansion than in 2011.

The deficit is expected to be financed from FDI funds. External funding by the public sector is projected to run higher than in 2011, as a result of net external credit operations. There will be less direct overseas investment by Colombia than there was last year. Lastly, the variation in the country's gross international reserves is estimated to consist of financial returns on the reserves and currency purchases of at least US\$20m a day to be made by Banco de la República from February 6 to August 4, 2012.<sup>59</sup>

#### **4. External vulnerability indicators**

Colombia's external vulnerability, as measured by international-reserve indicators, shows that the country is in a relatively favorable position with respect to other countries of the region. The Bank's strategy of international reserve accumulation recognizes the importance of having an adequate level of international liquidity to face capital outflows from the country, which may be set off by such factors as deterioration in the terms of trade, financial panic, or funding crises in neighboring countries. In this context, keeping an adequate level of international reserves also serves to increase confidence in the country, making it better able to deal with a crisis in external markets.

Furthermore, on May 6, 2011 the IMF approved a line of contingency financing for Colombia in the amount of US\$6,220m, for a term of two years. Contingency financing is provided to member states with good economic performance, prudent policies and a sound economic policy framework. Although Colombia's economic authorities do not expect to make use of such financing, they feel it is advisable to have the possibility of doing so should external funding be suddenly cut off.

*On May 6, 2011 the IMF approved a line of contingency financing for Colombia in the amount of US\$6,220m, for a term of two years.*

Various vulnerability indicators are used to determine whether a country's international reserves are sufficient to avert or deal with external shocks. The most important are the ratio of reserves to monetary aggregates (such as M2 or M3) and the ratio of reserves to external-debt payments in the next twelve months. The ratio of reserves to monetary aggregates is designed to ascertain the economy's capacity to respond to capital outflows set off by a speculative attack. The ratio of reserves to total external debt payments and current account deficit shows the

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Banco de la República press release dated February 24, 2012.



country's capacity to meet its credit obligations to the rest of the world in an extreme scenario in which access to international financing is completely closed. In general, international markets regard low values of these ratios as warning signs of an economy's extreme vulnerability.

Table 18 presents the evolution of different ratios of Colombia's net international reserves from 2006 to 2012. The ratio of net reserves to M3 has been stable for the past four years, while the ratio of net reserves to external debt and current account deficit has run above 1. Note that one of the most used measures is the quotient of net reserves and goods imports; for 2012 it is estimated at 6.7 months.

Table 18  
Colombia's international reserve indicators

	2008	2009	2010 (pr)	2011 (pr)	2012 (proj)
Balance					
Net international reserves (NIR) (millions of dollars) <sup>a/ b/</sup>	24,030	25,356	28,452	32,300	33,102
Indicators					
A. Foreign-debt repayment indicator					
Foreign-debt repayments (millions of dollars)	10,369	11,418	10,308	14,418	20,730
NIR/current-year foreign-debt repayments	2,3	2,2	2,8	2,2	1,6
NIR/following-year foreign-debt repayments	2,1	2,5	2,0	1,6	1,5
B. Adequate external-liquidity position					
NIR/(current-year debt service)	1,8	1,7	2,1	1,8	1,3
NIR/(following-year debt service)	1,7	1,9	1,6	1,2	1,2
NIR/(current-yr. debt repayments + current-yr. currt-acct. def.)	1,4	1,5	1,5	1,3	1,0
NIR/(following-yr. debt repayments + following-yr. currt.-acct. def.)	1,5	1,3	1,2	1,0	1,0
C. Other international-reserve indicators					
NIR as months of goods imports <sup>c/</sup>	7,7	9,7	8,8	7,4	6,7
NIR/M3 (percentage) <sup>d/</sup>	29,2	26,2	24,7	24,1	22,0
NIR/GDP <sup>e/</sup>	9,8	10,7	9,9	9,7	9,0

(pr) Preliminary.

(proj) Projected.

a/ The balance of net international reserves forecast for 2012, which takes into account daily currency purchases of at least US\$20m from February 6 to August 4, 2012.

b/ The forecast also takes into account contributions to the Latin-American Reserve Fund.

c/ Based on the value of goods imports forecast for 2012.

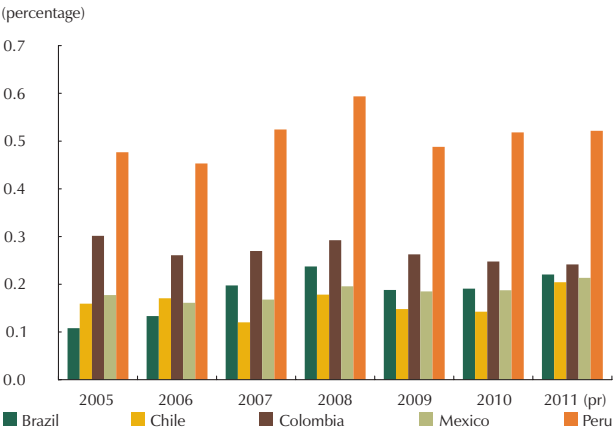
d/ The balance of broad M3 forecast for 2012.

e/ Real GDP forecast for 2012.

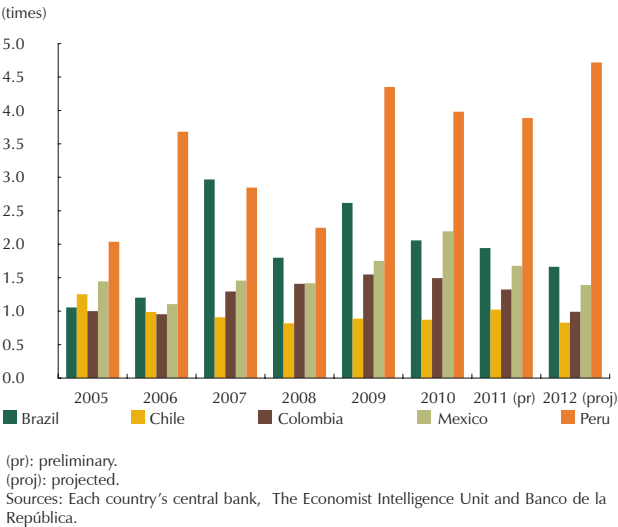
Source: Calculations by Banco de la República.

Comparison of the different international liquidity indicators for individual Latin American countries shows that the reserves/M3 ratio is greater for Colombia than for Chile, Mexico and Brazil. For Peru this ratio's growth and level are notable, because local banks in Peru can take deposits in dollars, and their dollar holdings are accounted as reserves (Graph 79).

Graph 79  
International reserves/M3

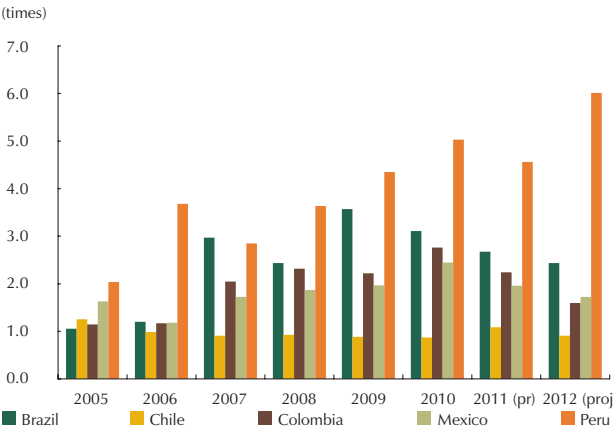


C. International reserves/(current-account deficit + debt repayments)

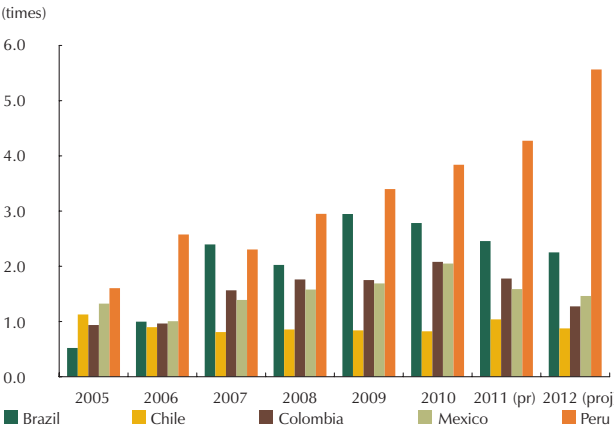


Graph 80

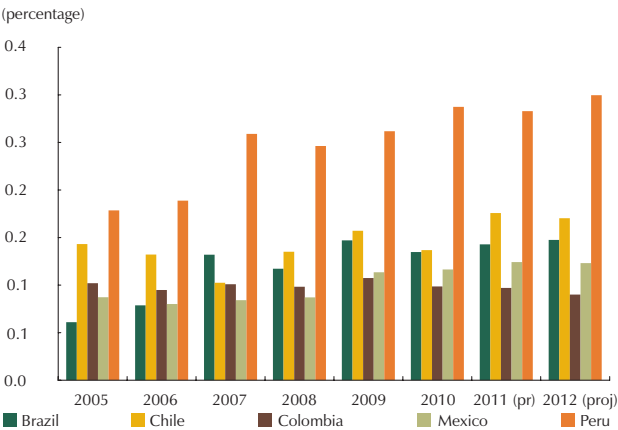
A. International reserves/debt repayments



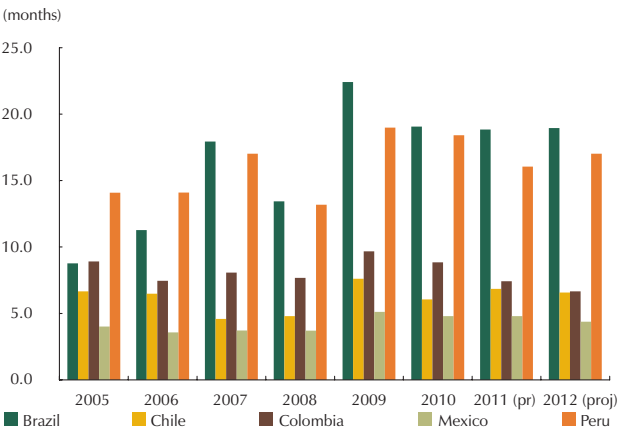
B. International reserves/debt service



A. International reserves/GDP



B. International reserves as months of goods imports



(pr): preliminary.  
(proj): projected  
Sources: Each country's central bank, The Economist Intelligence Unit and Banco de la República.

Colombia's ratios of reserves to debt repayments, to debt service, and to current-account deficit plus debt repayments are higher than Chile's, but similar to or less than those of Mexico, Brazil and Peru (Graph 80).

Colombia has a lower reserves/GDP ratio than Mexico, Chile, Brazil and Peru. In terms of reserves measured as months of goods imports, Colombia has a relatively higher position than Chile and Mexico but lower than Brazil and Peru (Graph 81).

## F. FISCAL POLICY

### 1. 2011 Fiscal results

Preliminary estimates by the Ministry of Finance and Public Credit show a consolidated public-sector deficit of \$13,354bn pesos in 2011, equivalent to 2.2% of GDP.<sup>60</sup> This is 1pp of GDP lower than in 2010

Table 19  
Consolidated public sector fiscal balance <sup>a/</sup>  
2010 and 2011

Item	Billions of pesos		Percentage of GDP	
	2010	2011 (pr)	2010	2011 (pr)
A. Total nonfinancial public sector (1 + 2)	(16,934)	(12,717)	(3.1)	(2.1)
1. Central government	(21,019)	(17,874)	(3.8)	(2.9)
2. Subtotal decentralized sector <sup>b/</sup>	4,085	5,157	0.7	0.8
Social security	4,835	6,200	0.9	1.0
National level enterprises	197	(166)	0.0	0.0
Local level enterprises	(426)	(528)	(0.1)	(0.1)
Regional and local governments	(521)	(350)	(0.1)	(0.1)
B. Banco de la República quasi-fiscal balance	223	(183)	0.0	0.0
C. FOGAFIN (deposit insurance agency) balance	426	(175)	0.1	0.0
D. Financial restructuring costs <sup>c/</sup>	(392)	(279)	(0.1)	0.0
E. Adjustments <sup>d/</sup>	(1,037)	0	(0.2)	0.0
F. Total consolidated public sector fiscal balance(A+B+C+D+E)	(17,713)	(13,354)	(3.2)	(2.2)

(pr): Preliminary.

a/ Including the rainstorm-emergency balance.

b/ Excluding ECOPETROL and ISAGEN balances.

c/ Costs assumed by the Nation in respect of payment of interest, principal and indexations associated with the late 1990s financial crisis.

d/ Statistical discrepancy between the calculation methodologies used by the Ministry of Finance and Public Credit and the Bank.

Note: deficit (-) or surplus (+).

Source: Ministry of Finance and Public Credit.

*The consolidated public-sector posted a deficit of \$13,354bn pesos in 2011, equivalent to 2.2% of GDP.*

*The fiscal improvement was made possible by the central government's deficit falling from 3.8% of GDP in 2010 to 2.9% of GDP at the end of 2011.*

*Year-end fiscal results for 2011 are in line with the government's announced fiscal strategy.*

and 1.2pp of GDP lower than the target announced in June 2011 for the medium-term fiscal framework. The improvement was made possible by the central government's deficit falling from 3.8% of GDP in 2010 to 2.9% of GDP at the end of 2011. The decentralized public sector posted a surplus of \$5,157bn pesos (0.8% of GDP), similar to its 2010 surplus, thanks to resources from public pension funds belonging to the social-security sector. Financial restructuring costs amounted to \$279bn pesos and consisted of indexations, interest and repayments of debt assumed by the Nation following the 1999 financial crisis (Table 19).

Year-end fiscal results for 2011 are in line with the government's announced fiscal strategy, which is designed to ensure medium-term public-finance sustainability and foster economic growth by allocating resources to key sectors in view of their impact on the economy. Given this good fiscal performance, the government may be expected to meet—possibly in advance—the 2014 fiscal-balance targets, set at a deficit of 2.4% of GDP for the central government, and fiscal equilibrium for the decentralized public sector, as announced in the 2011 medium-term fiscal framework. The reforms submitted to and approved by Congress will undoubtedly help to ensure fiscal sustainability for Colombia and foster economic growth and job creation. Such reforms include, among others, the 2010 tax reform, the two constitutional reforms of 2011 (on royalties and fiscal sustainability), and other laws passed in 2011 (on fiscal rule and first employment).

The central government's fiscal position in 2011 reflects the effect of a series of economic, legal and regulatory factors that led to its revenues for the year rising by more than 25.6%, with tax revenues growing by 25.4% and income on capital by 30.3%. The increase in tax revenues was higher than expected by \$6,000bn pesos and came from growth of 23.0% in domestic VAT, 56.9% in the financial-transaction levy, and 114.5% in the wealth tax. The behavior of these taxes is associated with: robust economic growth, management of the Tax and Customs Administration (DANE, in Spanish), income-tax payment by Ecopetrol [the state oil company], and the 2009 and 2010 tax reforms.<sup>61</sup> Regarding capital resources, note that the transfer of Ecopetrol's financial surplus to the government rose by almost 60%, from \$3,311bn pesos in 2010 to \$5,276bn pesos in 2011 (Table 20). Note also that because of the

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<sup>61</sup> The 2009 reform reduced the tax deduction for fixed-asset investments from 40% to 30%, and the 2010 reform made some changes to the financial-transaction levy and the wealth tax.

Table 20  
Central-government fiscal balance 2010 and 2011

Item	Billions of pesos		Percentage of GDP	
	2010	2011 (pr)	2010	2011 (pr)
I. Total revenues (A+B+C+D+E)	74,957	94,120	13.7	15.5
A. Tax revenues	66,781	83,733	12.2	13.8
Income tax and domestic VAT	46,155	56,749	8.4	9.3
External VAT and customs duties	13,885	15,948	2.5	2.6
Gasoline tax	1,419	1,603	0.3	0.3
Financial transaction levy	3,226	5,062	0.6	0.8
Wealth tax <sup>a/</sup>	1,971	4,226	0.4	0.7
Other	127	144	0.0	0.0
B. Non-tax revenues	627	570	0.1	0.1
C. Special funds	1,010	1,305	0.2	0.2
D. Capital resources	6,522	8,496	1.2	1.4
Financial returns	498	867	0.1	0.1
Financial surplus	5,242	6,794	1.0	1.1
Other	782	836	0.1	0.1
E. Accrued revenues	17	17	0.0	0.0
II. Total expenditures (A+B+C+D)	95,976	111,994	17.5	18.4
A. Interest	14,847	16,811	2.7	2.8
External	3,652	3,568	0.7	0.6
Domestic	11,195	13,243	2.0	2.2
B. Operating expenses <sup>b/</sup>	70,442	78,071	12.8	12.8
Personal services	11,649	12,413	2.1	2.0
Transfers <sup>c/</sup>	54,461	60,907	9.9	10.0
Overhead	4,331	4,751	0.8	0.8
C. Investment <sup>b/ c/</sup>	10,473	16,881	1.9	2.8
D. Net loans	214	232	0.0	0.0
III. Deficit (-) or surplus (+) (I - II)	(21,019)	(17,874)	(3.8)	(2.9)
Financial restructuring costs	392	279	0.1	0.0
IV. Total deficit to be financed	(21,410)	(18,153)	(3.9)	(3.0)
V. Funding (A+B+C+D+E)	21,410	18,153	3.9	3.0
A. Net external credit	2,974	3,426	0.5	0.6
Disbursements	6,305	5,667	1.2	0.9
Debt repayments	3,331	2,241	0.6	0.4
B. Net domestic credit	16,282	15,118	3.0	2.5
Disbursements	37,465	29,436	6.8	4.8
Debt repayments	21,183	14,318	3.9	2.4
C. Banco de la República profits	0	0	0.0	0.0
D. Privatizations	533	19	0.1	0.0
E. Other	1,621	(410)	0.3	(0.1)
VI. Total deficit to be financed, as a percentage of GDP	(3.9)	(3.0)		

(pr) Preliminary

a/ Including levy imposed for rainstorm emergency.

b/ Including payments and change in accounts payable.

c/ Including costs of rainstorm emergency.

Source: Ministry of Finance and Public Credit.

*The consolidated public-sector deficit is forecast to come to 1.8% of GDP in 2012, which is consistent with the process of gradual fiscal adjustment projected over the medium-term.*

recent rainstorms the government had to raise additional funds to cover emergency costs, without compromising the originally set targets.<sup>62</sup>

The central government's total expenditures expanded by 16.7%, including funds allocated to dealing with the rainstorm emergency, which amounted to 0.8% of GDP. Breakdown of expenditures by item shows that operating expenses grew by 10.8%, interest on debt by 13.2%, and investment by 61.2%. Under operating expenses, personal services rose by 6.6%, overhead by 9.7%, and transfers by 11.8%. Transfers included, notably, the general revenue-sharing system, which increased by 1.1% to \$23,193bn pesos, and pension transfers, which rose by 8.0% to \$20,776bn pesos. Under pension transfers, the main item was the transfer to the Social Security Institute of \$6,500bn pesos, up by 6.6% on 2010. The expansion in investment spending stemmed chiefly from the rainstorm emergency, and from current execution of projects affecting future budgets in respect of the transport sector.

The central government's deficit, with the inclusion of financial restructuring costs and rainstorm-emergency costs, came to \$18,153bn pesos, equivalent to 3.0% of GDP. Net external funding stood at \$3,426bn pesos, resulting from disbursements of \$5,667bn pesos minus debt repayments of \$2,241bn pesos. Net long-term domestic funding ran to \$15,118bn pesos, with disbursements of \$29,436bn pesos and debt repayments of \$14,318bn pesos. The decentralized sector's surplus (0.8% of GDP) came from social security, particularly from FONPET, the sub-national pension fund, and from the Private Minimum Pension Guarantee Fund.

## **2. Fiscal outlook for 2012**

*Official forecasts by the Ministry of Finance and Public Credit envisage an 11.0% increase in central government revenues.*

The most recent estimates by the Ministry of Finance and Public Credit show fiscal policy in 2012 fulfilling the commitment of fiscal sustainability for the country and meeting the government's stated aims of growth and employment. The consolidated public sector is forecast to post a deficit of 1.8% of GDP in 2012, which is consistent with the process of gradual fiscal adjustment projected over the medium-term.<sup>63</sup> That figure is based on the assumption of a central government deficit of

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62 On December 29, 2010 the government issued Decree 4825 to generate additional revenue for dealing with the rainstorm emergency, by setting a 25% wealth-tax surcharge on taxable wealth exceeding 3bn pesos. The Decree also made wealth of \$1bn-\$3bn pesos subject to the wealth tax. In 2011 the costs of the emergency amounted to \$5,000bn pesos and were financed from revenues provided by this Decree (\$1,000bn pesos) and from 2011 budget funds.

63 This forecast is based on economic growth of 4%.

Table 21  
Consolidated public sector fiscal balance <sup>a/</sup>  
2011 and 2012

Item	Billions of pesos		Percentage of GDP	
	2011 (pr)	2012 (proy)	2011 (pr)	2012 (proj)
<b>A. Total non-financial public sector (1 + 2)</b>	<b>(12,717)</b>	<b>(11,257)</b>	<b>(2,1)</b>	<b>(1,7)</b>
1. Central government <sup>l</sup>	(17,874)	(17,987)	(2,9)	(2,8)
2. Subtotal decentralized sector <sup>b/</sup>	5,157	6,730	0,8	1,0
Social security	6,200	5,135	1,0	0,8
National-level enterprises	(166)	(1,514)	0,0	(0,2)
Local-level enterprises	(528)	(215)	(0,1)	0,0
Regional and local governments	(350)	3,324	(0,1)	0,5
<b>B. Banco de la República quasi-fiscal balance</b>	<b>(183)</b>	<b>(404)</b>	<b>0,0</b>	<b>(0,1)</b>
<b>C. FOGAFIN (deposit insurance agency) balance</b>	<b>(175)</b>	<b>492</b>	<b>0,0</b>	<b>0,1</b>
<b>D. Financial restructuring costs <sup>c/</sup></b>	<b>(279)</b>	<b>(99)</b>	<b>0,0</b>	<b>0,0</b>
<b>E. Adjustments<sup>d/</sup></b>	<b>0</b>	<b>0</b>	<b>0,0</b>	<b>0,0</b>
<b>F. Total consolidated public-sector fiscal balance (A+B+C+D+E)</b>	<b>(13,354)</b>	<b>(11,268)</b>	<b>(2,2)</b>	<b>(1,8)</b>

(pr) Preliminary.

(proj) Projected.

a/ Including the rainstorm-emergency balance.

b/ Excluding ECOPETROL and ISAGEN balances.

c/ Costs assumed by the Nation in respect of payment of interest, principal and indexations associated with the late 1990s financial crisis.

d/ Statistical discrepancy between the calculation methodologies used by the Ministry of Finance and Public Credit and the Bank.

Note: deficit (-) or surplus (+).

Source: Ministry of Finance and Public Credit.

2.8% of GDP and decentralized sector surplus of 1.0%. Cash operations by Fogafin, the deposit guarantee agency, are expected to show a surplus of 0.1% of GDP, and financial restructuring costs are projected to fall sharply to less than 100bn pesos (Table 21).

Official forecasts by the Ministry of Finance and Public Credit envisage an 11.0% increase in central government revenues, with tax revenues rising by 9.1% and income on capital by 29.3%. Higher tax revenues will come from the item of income tax and domestic VAT, the two together growing by 11.7%. This item's behavior is associated with income-tax payment by Ecopetrol (which will surge from \$3,155bn pesos to \$6,074bn pesos), and with the 2010 tax reform, which abolished the special deduction for investment in fixed assets. Note that the item of excess funds is projected to grow by 47.0%; it captures the transfer of profits from Ecopetrol to the central government, estimated at \$8,404bn pesos, thanks to the company's excellent results at the close of operations of 2011 (Table 22).

The central government's expenditures in 2012 are projected to grow by 9.3% to \$122,444bn pesos. Interest payments will increase by 13.2%, operating costs by 8.8%, and investment by 8.7%. The increase



Table 22  
Central government fiscal balance  
2011 and 2012 (billions of pesos)

Item	Billions of pesos		Percentage of GDP	
	2011 (pr)	2012 (proj)	2011 (pr)	2012 (proj)
<b>I. Total revenues (A+B+C+D+E)</b>	<b>94,120</b>	<b>104,457</b>	<b>15,5</b>	<b>16,2</b>
A. Tax revenues	83,733	91,337	13,8	14,2
Income tax and domestic VAT	56,749	63,421	9,3	9,9
External VAT and customs duties	15,948	16,748	2,6	2,6
Gasoline tax	1,603	1,694	0,3	0,3
Financial transaction levy	5,062	5,125	0,8	0,8
Wealth tax <sup>a/</sup>	4,226	4,194	0,7	0,7
Other	144	154	0,0	0,0
B. Non-tax revenues	570	638	0,1	0,1
C. Special funds	1,305	1,493	0,2	0,2
D. Capital resources	8,496	10,972	1,4	1,7
Financial returns	867	869	0,1	0,1
Excess funds	6,794	9,989	1,1	1,6
Other	836	114	0,1	0,0
E. Accrued revenues	17	17	0,0	0,0
<b>II. Total expenditures (A+B+C+D)</b>	<b>111,994</b>	<b>122,444</b>	<b>18,4</b>	<b>19,0</b>
A. Interest	16,811	19,026	2,8	3,0
External	3,568	4,286	0,6	0,7
Domestic	13,243	14,740	2,2	2,3
B. Operating expenses <sup>b/</sup>	78,071	84,920	12,8	13,2
Personal services	12,413	14,121	2,0	2,2
Transfers <sup>c/</sup>	60,907	66,426	10,0	10,3
Overhead	4,751	4,373	0,8	0,7
C. Investment <sup>b/ c/</sup>	16,881	18,354	2,8	2,9
D. Net loans	232	145	0,0	0,0
<b>III. Deficit or surplus (I - II)</b>	<b>(17,874)</b>	<b>(17,987)</b>	<b>(2,9)</b>	<b>(2,8)</b>
Financial restructuring costs	279	99	0,0	0,0
<b>IV. Total deficit to be financed</b>	<b>(18,153)</b>	<b>(18,087)</b>	<b>(3,0)</b>	<b>(2,8)</b>
<b>V. Funding (A+B+C+D+E)</b>	<b>18,153</b>	<b>18,087</b>	<b>3,0</b>	<b>2,8</b>
A. Net external credit	3,426	3,894	0,6	0,6
Disbursements	5,667	7,380	0,9	1,1
Debt repayments	2,241	3,486	0,4	0,5
B. Net domestic credit	15,118	10,718	2,5	1,7
Disbursements	29,436	24,774	4,8	3,8
Debt repayments	14,318	14,056	2,4	2,2
C. Banco de la República profits	0	0	0,0	0,0
D. Privatizations	19	5,114	0,0	0,8
E. Other	(410)	(1,639)	(0,1)	(0,3)
<b>VI. Total deficit to be financed, as a percentage of GDP</b>	<b>(3,0)</b>	<b>(2,8)</b>	<b>(0,0)</b>	<b>(0,0)</b>

(proj): Projected.

a/ Including levy imposed for rainstorm emergency.

b/ Including payments and change in accounts payable.

c/ Including costs of rainstorm emergency.

Source: Ministry of Finance and Public Credit.

in operating costs is associated with the items of transfers and personal services, which will expand by 9.1% and 13.8%, respectively. The behavior of transfers will be driven by the general revenue sharing system and by pension transfers, which together are expected to grow by 8.3%. Investment expenditures include funds earmarked for expanding the mandatory health care plan under the subsidized system for children under twelve, and the execution of projects affecting future budgets in respect of transport infrastructure.

The central government's deficit, including financial restructuring costs, will amount to \$18,087bn pesos (2.8% of GDP). Net external funding will climb to \$3,894bn pesos, while net long-term domestic credit is projected at \$10,718bn pesos. In addition, privatizations are expected to produce funds amounting to \$5,114bn pesos.

The decentralized sector is projected to post a surplus of 1.0% of GDP, arising from the social security sector (0.8% of GDP) and from the regional and local public sector (0.5% of GDP). The social security surplus will be lower than at year-end 2011 by 0.2pp of output, owing to the gradual unification of benefit plans of the contributory and subsidized systems, which will again be reflected in a deficit in the area of health care. The regional and local public sector will post an improved fiscal result, turning last year's deficit of 0.1% of GDP into a surplus of 0.5% of GDP in 2012. This improvement results, in part, from the creation of the Savings and Stabilization Fund, which is part of the new general system of royalties and is projected to accumulate a surplus equivalent to 0.2% of GDP.

Lastly, it is important to point out that Constitutional Amendment 05 of 2011 changed the way of distributing royalties and authorized the government to issue transitory regulations for the new system, until Congress passes a law to determine the distribution and also the objectives, management, execution, control, efficient use and appropriation of royalty funds. The government, by virtue of said authority, issued Decree 4923 dated December 26, 2011 ensuring the operation of the general system of royalties.

Box 2

COLOMBIAN LABOR MARKET: FACTS, TRENDS AND INSTITUTIONS

Good labor-market performance is a key element for a society's well-being. It is therefore important that employers, employees, the non-working population, the unemployed and public-policy makers, including the monetary authority, understand the labor market's dynamics. Its functioning is determined, among other things, by technical change, the relative price of labor and capital, the existence of distortions and rigidities, demographic factors, the tax structure, aggregate demand, laws and regulations and institutions.

The Colombian labor market, judged by its performance, might be considered vigorous and dynamic on the one hand and, on the other, sclerotic and rigid. The indicators pointing to great dynamism include: the large flows of people going into and out of the categories of employed, unemployed, and non-working; the entry of a large numbers of women into the labor market in the past twenty-five years; the change in the relative composition of the work force in favor of people with more years of formal education;<sup>1</sup> mobility of the work force to other countries; and real-wage behavior both over the long term and during the characteristic frequency of economic cycles.

The indicators suggesting a low-performing market include: the existence of a structural unemployment rate that has ranged between 9% and 12% in the past two decades; the tremendous growth of the informal sector; high levels of underemployment; the unemployment rate's rise from the end of 1994 to early 2001 at an average monthly rate of 0.18% until it reached almost 20%, then its slow fall from June 2001 to December 2007 at an average monthly rate of 0.11%; scant mobility of the work force within the country; and persistent differences between performance indicators of cities.

These contradictory perceptions led Banco de la República to believe that the major labor-market analyses previously undertaken by many Bank insiders and others should be updated, broadened and supplemented to provide a better understanding of the market's functioning, especially in view of Colombia's increasing insertion into the world economy. The Bank therefore undertook once more a series of research projects, nineteen in all, to describe the characteristics of the Colombian labor market and identify its determinants. The series bears the title of this Box: Colombian Labor Market: Facts, trends

1 The ratio between the number of hours of unskilled and skilled work fell from 7.5 to 2.0 in a little more than two decades.

and institutions. The work was mostly carried out by the Bank's staff of researchers.

In the course of the research a number of labor-market specialists were consulted, who responded with the opinion that the structural urban rate of unemployment hovers around 9%. They also felt that Colombia's high rate of unemployment may be caused by the mismatch between labor supply and demand,<sup>2</sup> by the relative prices of the factors of production, and by high rates of taxation. The respondents, accordingly, considered that policy measures to improve labor-market functioning should focus on reducing payroll taxes (parafiscal taxes) and designing mechanisms for a more efficient matching of employees and employers. Notable differences emerged, however, regarding unemployment effects attributed to the minimum wage and its negotiation mechanism, the peso's appreciation and investment subsidies.

The specialists' points of view strengthened the opinion that the labor market should be analyzed once more not only in terms of its microeconomic aspects of supply and demand, but also in terms of its macroeconomic, regulatory and institutional aspects governed by the Substantive Labor Code, Law 50 of 1989, Law 100 of 1993, the Constitutional Court's Decision C-185, and the reforms designed to make the labor market flexible and to reorganize the pension system. These reforms were introduced, among others, by Laws 789 of 2002 and 797 of 2003 and have modified some aspects of the market, but others have remained in place,<sup>3</sup> apparently obstructing its functioning.

Research findings

The research studies have provided abundant, varied and in many cases innovative findings. The most important conclusions drawn from them include the following:

- 
- 2 This might be connected with the lack of education of the workforce.
  - 3 The most relevant cases include, among others: the National Apprenticeship Service (SENA) being maintained as the central pillar of system of labor-force training; the mechanism and frequency of negotiating or determining the minimum wage; the funding of such an important institution as the Family Welfare Institute (ICBF) by means of a payroll tax; and the lack of private unemployment insurance.

1. In the past twenty years new labor institutions have been created that range in character between protecting labor and expanding labor flexibility.
2. Changes in the sector composition of production over the past three decades have brought greater demand for skilled labor and the resulting increase in the salaries of people with higher levels of education.
3. The large flows of workers going into and out of employment, unemployment, and inactivity suggest that Colombia's labor market is more dynamic than would appear from the persistence and structural level of the unemployment rate.
4. Across the country, Colombia's labor market appears to be heterogeneous, with little workforce mobility and large differences between cities in terms of unemployment, employment and participation rates. This might point to a need for differential policy-making among regions.
5. The level of Colombia's structural unemployment rate (10.8% for 1984-2010)<sup>44</sup> suggests that the labor market is beset with problems that do not allow the rate to fall significantly without giving rise to collateral effects such as inflation. Given that this rate is higher than those estimated before 2001, either the labor reforms carried out early in the 2000 decade did not apparently produce the desired effects or these were counteracted by other decisions or shocks.
6. Colombia's informal sector is associated with the high cost of formally setting up a company, an inappropriate tax structure, a minimum wage higher than the equilibrium wage, and inappropriate parafiscal contributions. Eliminating the parafiscal contributions and curbing minimum-wage increases would be beneficial for reducing the size of the informal sector and increasing that of the formal sector, though their effect on the unemployment rate may not be too clear.
7. Colombia's minimum-wage level is not helping the very poor and is, in fact, an obstacle to the creation of modern unskilled employment.
8. Remittances sent from Spain and the United States may have an influence on the Colombian labor market, because the higher the remittances, the lower labor participation. This has been particularly evident in the coffee-growing region.
9. Labor supply movements caused by changes in non-labor income (such as remittances) affect real wages, to the extent that they might make them appear rigid. If monetary policy is designed on the basis of such apparent rigidity, it might prove to be inappropriate.
10. The short-term evolution of the labor market is determined by the type of shocks received (productivity, aggregate demand and labor supply), and by changes in exogenous variables such as the terms of trade, the minimum wage, and non-wage labor costs.
11. Stimulus measures for physical capital investment, such as the stimulus recently abolished by Law 1430 of 2010, do not necessarily reduce employment in the short term. In fact, a higher scale of capital would, in the long run, stimulate growth and employment.

Labor market performance is a mainspring of monetary-policy transmission and, hence, of the character of short-term fluctuations. Understanding how it functions will allow the country to take relevant measures to become more tuned to the demands of the modern world. For Colombia, in particular, they mark the start of open competition within the framework of different trade agreements, essentially with Chile, Canada, Mercosur, the United States and the European Union, to mention only a few, plus the agreements being negotiated with Panama, Korea and Turkey.

Over the next ten to fifteen years farm products will become completely duty free (tariffs on most industrial products are lifted upon entry into force of the agreements), hence the importance of having a labor market that is fully in tune with domestic and external demands. That is to say, the systems for educating and training the workforce should be capable of receiving signals from the goods market, which is highly influenced by external demand, and even of anticipating them so as to adapt the labor force to corporate and market needs. Changes to those systems may, however, be slow and costly. The foregoing suggests, among many other things, that education should move toward training the workforce efficiently for the production of goods and services.

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4 This is the average of estimates by Arango, L.E., García-Suaz, A., and Posada, C.E. (2011), "Inflación y desempleo en Colombia: Nairo y tasa de desempleo compatible con la meta de inflación (1984-2010)", *Borradores de Economía* No. 453, Banco de la República.

### Box 3

## HOUSING-PRICE AND CREDIT BEHAVIOR IN SOME LATIN AMERICAN COUNTRIES

The large losses resulting from the recent international financial crisis have led to a stronger awareness of the need to identify in time the potential macroeconomic imbalances that economies may face, such as credit excess or overvaluation of assets. Moreover, discussion has revived about economic policy measures that could be employed to prevent such imbalances being formed.<sup>1</sup>

One theory that explains the link between credit excess and overvaluation of assets is called the financial accelerator (Bernanke, Gertler and Gilchrist, 1999). It holds that where there is asymmetric information, favorable economic conditions and high levels of confidence, agents tend to assume greater risk, raising demand for different types of assets and pushing up asset prices. Such valuation gains increase household and corporate borrowing capacity and boost the demand for credit to buy those assets. Thus, greater demand for assets again causes asset prices to rise.<sup>2</sup>

The above process, which in the short run boosts economic activity and improves financial deepening, may continue to provide feedback to itself and in the long run generate unsustainable asset-price levels and high rates of leverage. If this occurs, a sudden fall in asset prices will result in a huge loss of wealth for agents, leading possibly to defaults in credit payments, and consequently to a financial crisis.

For all the above reasons, this Box analyzes housing-price and credit behavior in Colombia, comparing it with the evolution of these variables in other countries of the region. The Box ends with conclusions.

### 1. Housing prices

Housing prices have trended up over the past five years in several countries of the region. Relative to CPI they have risen considerably in Colombia, Peru and Chile over that period. Much the same has happened in Argentina, where prices in dollars have been climbing since the end of 2002. Note that real housing price growth has been occurring in two different settings: in Colombia and Peru it was preceded by a sharp fall in the late 1990s and early 2000s, whereas in Chile and Argentina it has been rising systematically since 1990.

Preliminary information for 2011<sup>3</sup> shows that in all cases housing price indices are at all-time highs (Graph B3.1). In Colombia, in particular, real prices for new and used housing were still rising in the third quarter at average rates of nearly 5% (Graph B3.2).

The rising trend may be explained by both supply and demand factors. Regarding supply, the scarcity of urban terrain may explain part of the increase in housing prices. Some factors that have recently affected housing demand are connected with: high international volatility in financial-asset prices (shares and bonds), and deep loss of income faced by families in world markets, which has made land and housing in the region a better investment option. Moreover, the crisis in developed countries may have led to a certain percentage of remittances sent by workers to their countries of origin being used to buy housing, in view of the possibility of returning to their countries, or to diversify their investments. Some demand pressure in the property sector may have also resulted from housing subsidy programs, demographic changes or migration to cities.

High housing prices may also be connected with agents' expectations of future increases in property values. In a context of great confidence, strongly rising domestic demand, a favorable labor market, and considerable capital inflows, agents may think that price growth

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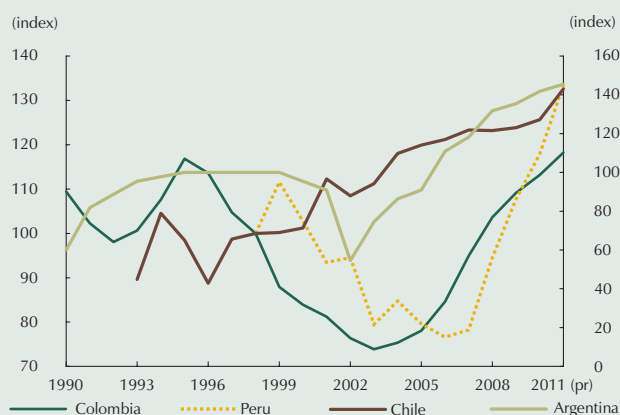
1 For example, the low opportunity cost of money may encourage agents to channel their investments into risky projects or raise their debt level. That is why Gambacorta (2009) suggests that unnecessarily low interest rates should be avoided, because they can exacerbate financial imbalances.

2 Besides what is stated by the financial-accelerator theory, note that credit supply may also rise when asset prices go up, because the collateral offered as guarantee increases in value, giving the financial sector greater confidence to lend.

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3 For Peru, Chile and Colombia, observed annual growth to September was used. For Argentina the BBVA Research projection was used.

Graph B3.1  
Housing-price index relative to CPI<sup>a/</sup>  
(1998 = 100)



a/ Except for Argentina, which is in current dollars.  
Sources: Central Bank of Peru, Observatorio Habitacional, Reporte Inmobiliario, BBVA Research and Banco de la República.

Graph B3.2  
Colombia housing-price index relative to CPI



1/ National Statistics Agency.  
Source: Banco de la República.

in this sector will continue into the long term. These expectations may boost credit demand and lead to unsustainable levels of household borrowing.<sup>4</sup>

Based on figures to February 2012, the ratio of mortgages to GDP and the value of loans relative to housing price show that home purchases have been made with a large share of own funds. Hence, the greater acceleration in household debt has come from consumer credit.

4 In some countries, including Colombia, such situations have been accompanied by sharp falls in housing prices, financial crises, recessions and fiscal problems.

## 2. Evolution of credit

A useful variable for identifying credit imbalances is the ratio of loans to GDP, which measures both financial deepness and the percentage of output that is leveraged. The ratio of loans to GDP has been rising constantly in a number of Latin-American countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico and Peru. Thus, from the first quarter of 1994 to the third quarter of 2011 Chile presented the greatest average deepness 65.2%), followed by Brazil (43.4%), while the country with the smallest average deepening was Argentina (16.2%). Colombia's loans-to-GDP ratio averaged 27.4% over that period.

Analyzing the series in terms of trends shows that in Chile and Costa Rica the loans-to-GDP ratio increased constantly over the sample period, whereas in Colombia, Ecuador and Peru its trajectory was more varied, albeit with a positive trend. Note that the ratio for Brazil exhibited the greatest variation, having dropped from nearly 70% at the start of the period to 30% in 2002 and trending up recently to stand at nearly 56% in September 2011 (Graph B3.3).

The financial deepness indicator for Colombia went up from 26.5% in December 2006 to 36.2% at the end of 2011, standing lower at year-end 2011 than the indicators for Chile (77.3%) and Brazil (55.8%) but higher than the indicators for Mexico (17.4%) and Argentina (14.7%). Real annual credit growth in September 2011 was strongest in Argentina (36.2%), Colombia (19.7%) and Peru (18.8%) and least strong in Mexico (12.7%) and Costa Rica (8.3%).

To identify periods of lending boom in the countries referred to above, the method proposed by Gourinchas *et al.* (1999) was used. According to those authors, a lending boom begins when the absolute deviation indicator (the difference between the loans-to-GDP ratio and the ratio's trend<sup>5</sup>) is greater than two percentage points. By this method, three periods were identified in which booms occurred in at least two countries of the sample: Q3-1993 to Q3-1994;

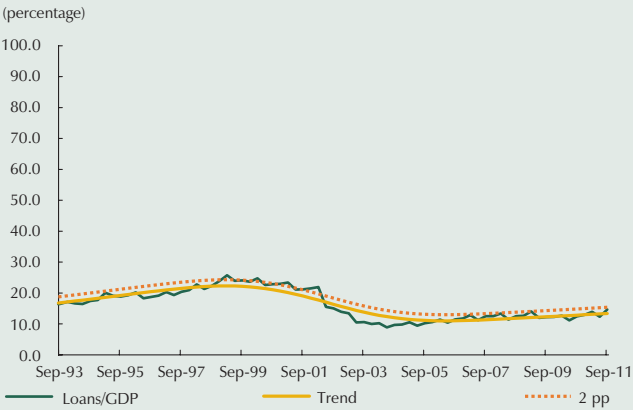
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$$Absolute\ deviation = \left( \frac{Loans}{GDP} \right)^{observed} - \left( \frac{Loans}{GDP} \right)^{trend}$$

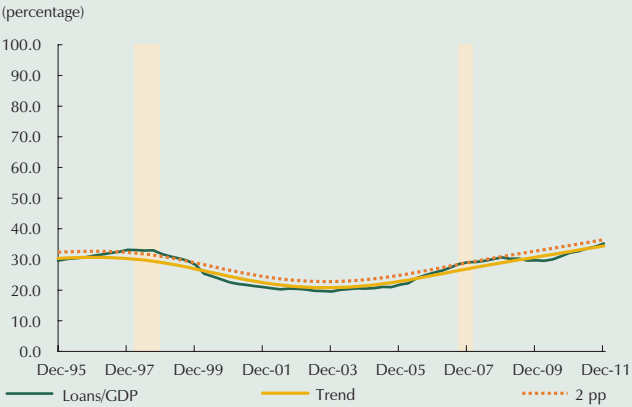
The trend is calculated by using the Hodrick-Prescott filter for quarterly data from the early 1990s to September 2011 for all countries except Colombia; for Colombia it was calculated to December 2011.

Graph B3.3  
Financial deepness, trend and absolute deviation for some Latin-American countries  
(loans/GDP)

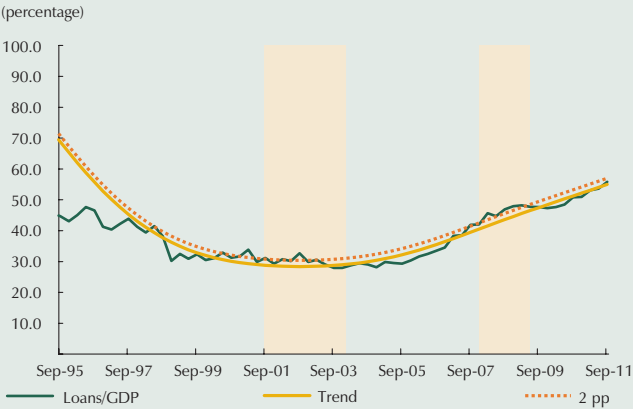
A. Argentina



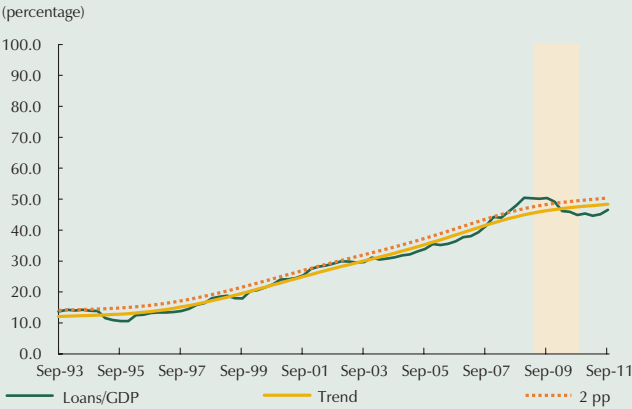
D. Colombia



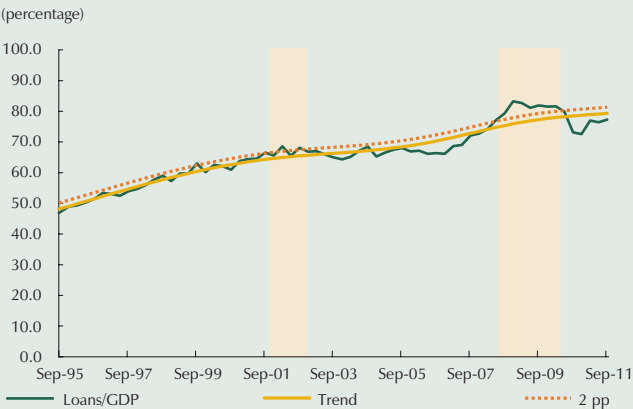
B. Brazil



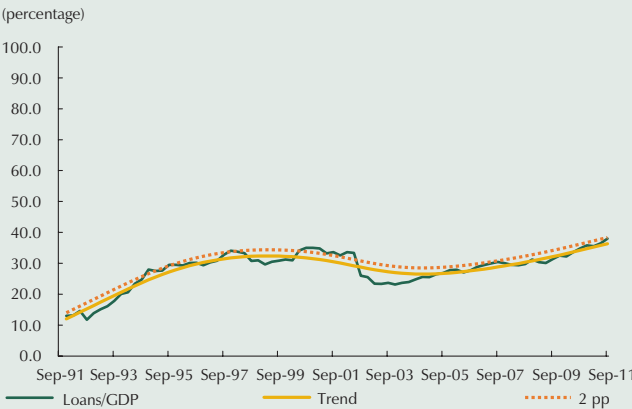
E. Costa Rica



C. Chile



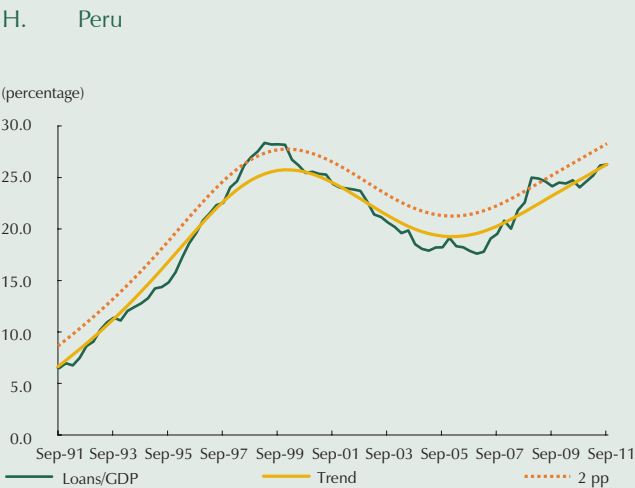
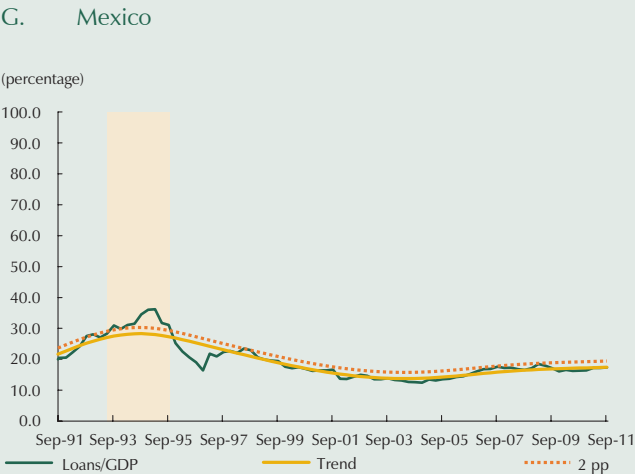
F. Ecuador



Sources: Central banks and financial regulators of the countries, Bloomberg and DANE. Calculatiaons by Banco de la República.



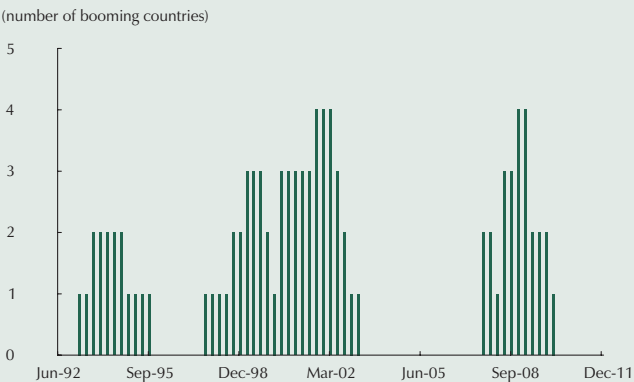
Graph B3.3 (continuation)  
Financial deepness, trend and absolute deviation for some Latin-American countries (loans/GDP)



Q3-1998 to Q3-2002; and Q2-2008 to Q4-2009 (Graph R3.4). The results show that at September 2011 the countries with the greatest deviations above trend were Ecuador (1.64pp), Argentina (1.26pp), and Colombia (0.8pp), without these deviations signifying lending booms (Table B3.1).

Two lending booms were identified for Colombia using the method of Gourinchas *et al* (1999): the first occurred from September 1997 to September 1999, when the loans-to-GDP ratio reached a peak of 33.7%; and the second, during the third and fourth quarters of 2007, when the ratio ran 2pp above its trend. The ratio is now rising faster than its trend but without exceeding the 2pp limit.

Graph B3.4  
Lending booms according to Gourinchas (1999)



Source: IMF. Calculations by Banco de la República.

Table B3.1  
Lending booms in Latin America

Country	Start	Finish	Maximum deviation (percentage points)
Argentina	Mar-99	Mar-02	4.2
Brazil	Mar-93	Sep-94	95.6
Brazil	Jun-00	Mar-03	4.6
Brazil	Sep-07	Mar-09	4.1
Chile	Sep-01	Sep-02	3.6
Chile	Jun-08	Mar-10	7.3
Colombia	Sep-97	Sep-99	3.6
Colombia	Sep-07	Dec-07	2.1
Costa Rica	Jun-08	Dec-09	5.5
Ecuador	Jun-00	Jun-02	4.2
México	Sep-93	Sep-95	8.2
Perú	Sep-98	Dec-99	3.0
Perú	Dec-08	Mar-09	2.9

a/ If Brazil’s second lending boom is included, the average is 11.5 pp; but if it is excluded the average maximum deviation would be 4.4 pp.  
Source: IMF. Calculations byBanco de la República.

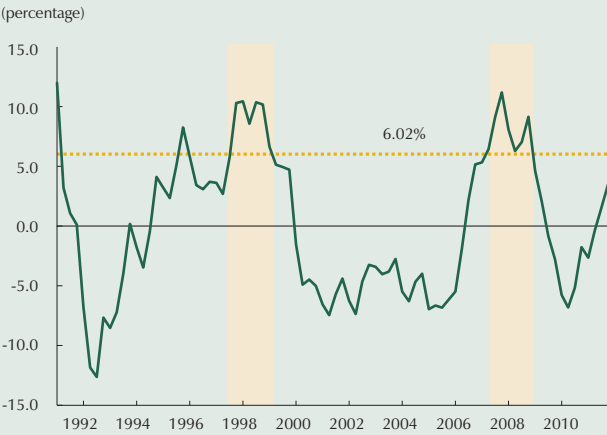
Colombia was also the subject of an econometric exercise that was performed following the work of Mendoza and Terrones (2008), with two objectives: first, to determine the robustness of the booms identified by the method of Gourinchas *et al.* (1999) and, second, to characterize the behavior of a number of macroeconomic and financial variables around the two booms.<sup>6</sup> In this respect, the aim was to see

6 This exercise updated the information presented in Box 4 of the *June 2011 Inflation Report*, on pages 67-71.

whether the current loan growth<sup>7</sup> could be identified as a lending boom with similar characteristics to those found in the country sample.

According to the method of Mendoza and Terrones, there is a lending boom when the cyclical component of real per-capita loans exceeds the historical average by more than a standard deviation.<sup>8</sup> On this criterion, Colombia experienced two lending booms, with peak levels occurring in the second quarter of 1998 and the first quarter of 2008. At the end of 2011 the cyclical component was positive but not higher than two standard deviations (Graph B3.5).

Graph B3.5  
Cyclical component: real per-capita loans



Source: Banco de la República.

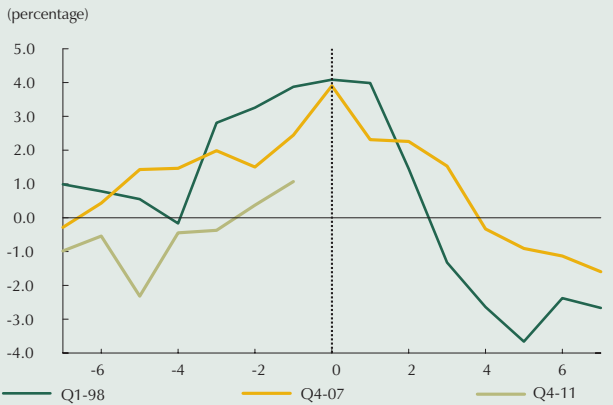
This exercise also sought to determine whether the behavior and recent levels of some macroeconomic variables are similar to those observed during the identified lending booms. To this end, the above dates were considered as point zero on the horizontal axis, and all the variables were centered around that point (seven periods forward and seven back). The next step was to suppose that December 2011 ended at said point zero. All this was done to compare whether the levels of the variables analyzed were similar to those

7 In 2011 the financial system’s loan portfolio grew, in nominal terms, at annuals rates of over 20%, that is to say, about twice as fast as nominal GDP growth estimated for 2011.

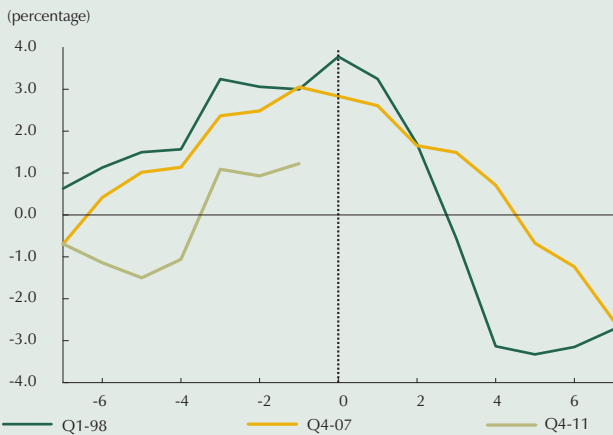
8 Gourinchas et al. (2009) use real per-capita loans as an indicator of credit, because this measure is not affected by financial deepening, as the loans-to-GDP ratio would be.

Graph B3.6

A. Real GDP



B. Real consumption



Source: Banco de la República.

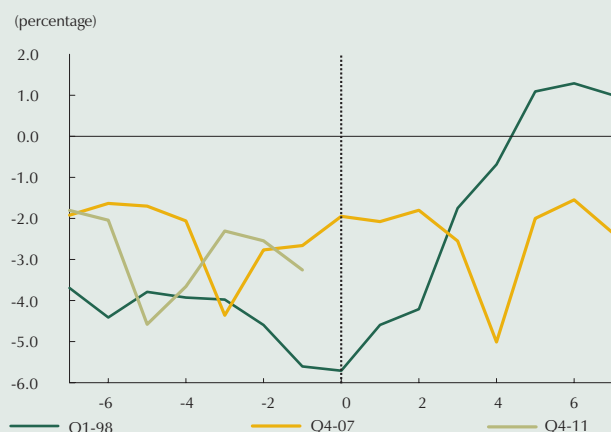
recorded in the two identified lending booms (Graphs B3.6 to B3.8).

Graph B3.6 shows that domestic demand continues to run above its long-term trend but at lower levels than during the booms. Specifically, GDP and consumption present a positive cyclical component for two and three consecutive quarters. Similarly, according to the Mendoza and Terrones method, the evolution of the external sector variables analyzed is consistent with the formation of a lending boom, by showing that there is a widening of the current account deficit and growing capital inflows (Graph B3.7).

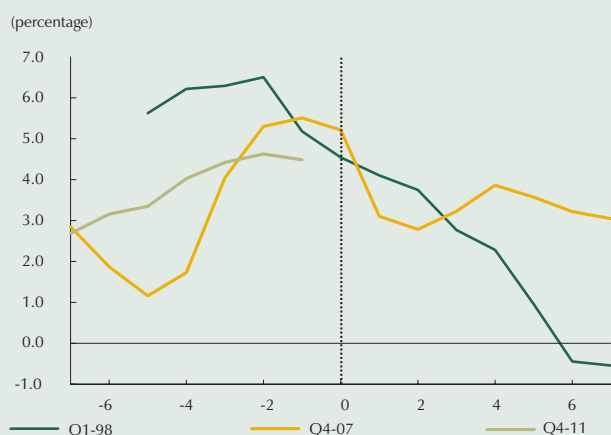
The cyclical component of share prices over the past five quarters has been falling continuously (Graph B3.8). This behavior is similar to that registered by share prices in the previous lending booms and is

Graph B3.7

A. Current account GDP  
(percentage of GDP)

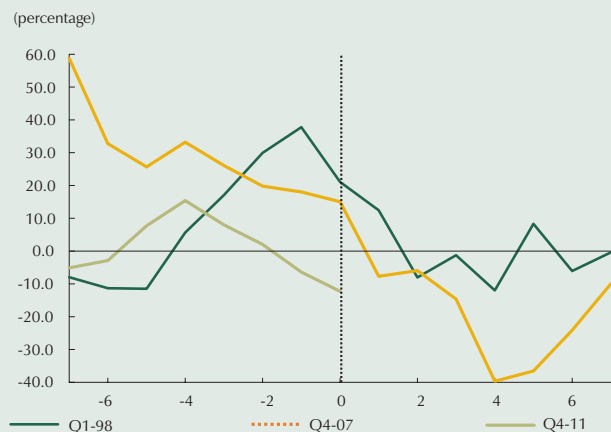


B. Net capital inflows / GDP



Source: Banco de la República.

Graph B3.8  
Real share price



Source: Banco de la República.

consistent with the findings reported by Mendoza and Terrones (2008).

In general, both credit and housing prices are growing apace and running high with respect to their historical levels. Moreover, according to the methods of Gourinchas *et al.* (1999) and Mendoza and Terrones (2008), the behavior of the domestic demand and external sector variables is on a rising cycle, together with positive values of the cyclical component of loans and its growth, showing that, although the Colombian economy is not yet in a credit boom, those variables should continue to be monitored very closely, in view of their recent behavior.

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## Box 4

### EVOLUTION OF COLOMBIA'S CURRENT ACCOUNT DEFICIT

One characteristic of Colombia's economic growth is a current account deficit that reflects an excess of investment over domestic saving. Investment growth has meant greater demand for imported goods and services and higher factor income payments to abroad, widening the current-account deficit in the country's balance of payments, with the deficit being funded from foreign capital inflows. This Box reviews the most relevant facts explaining movements in the current account over the past decade, describing at first the overall results and main causes of the deficit, according to its components. Next, the current operations of the different economic sectors are disaggregated to find at the sector level the greatest sources of pressure on the country's current deficit.

#### 1. The current account and its components

Goods exports constitute the main component of current income in Colombia's balance-of-payments current account, accounting in recent years for 78% of total receipts, equivalent to 15% of GDP. Next come current transfers, which, despite trending up in the early years of the past decade, have lost relative importance and now represent 11% of total income and 2% of GDP. Exports of services made up 8% of average current receipts from 2007 to 2011 (Table B4.1).

Regarding current payments, goods imports account for around 64% of the total (15% of GDP), followed by factor income payments (consisting mainly of profit transfers and, to a lesser extent, of interest on external debt), which represent 22% of payments (Table B4.1). The share of service imports has trended down, representing 13% of the average flow of current payments in 2007-2011.

#### 2. Movements in the current-account deficit

The current-account deficit in dollars has been rising sharply, doubling over the past two years its level in 2006-2007 (Graph B4.1). But, as a percentage of GDP, it has remained relatively stable in the past five years. Three periods are discernible in the evolution of the current account in terms of GDP between 2002 and 2011: 2002-2004, when the deficit was around 1% of GDP; 2005-2007, when it went up to 2.9% of GDP; and lastly 2008-2011, when the annual average deficit was 2.7% of GDP (Graph B4.2). The latter behavior resulted from an upward trend in factor-income payments and lower net current transfer income.

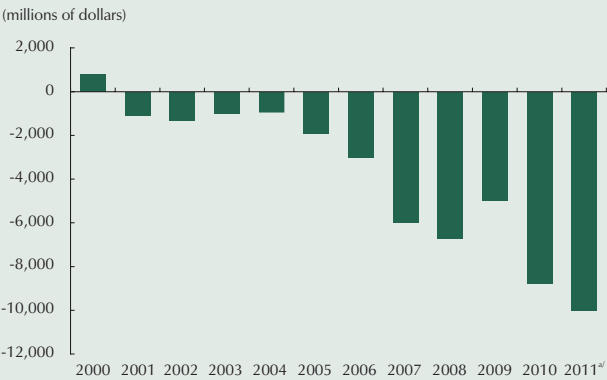
During the first period (2002-2004) net current transfer income rose steadily, partly offsetting higher factor-income payments and the deficit in goods and services trade.

Table B4.1  
Current receipts and payments  
(2007-2011 average)<sup>a/</sup>

	(millions of dollars)	(% of GDP)	Distribution (%)
Current receipts	51,981	19.9	100.0
Exports of goods	40,348	15.4	77.6
Exports of services	4,266	1.6	8.2
Factor income	1,805	0.7	3.5
Transfers	5,562	2.1	10.7
Current payments	59,257	22.6	100.0
Imports of goods	38,211	14.6	64.5
Imports of services	7,623	2.9	12.9
Factor income	12,814	4.9	21.6
Transfers	609	0.2	1.0

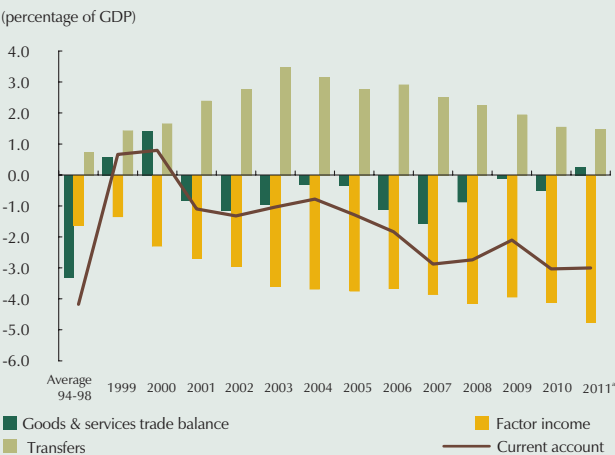
<sup>a/</sup> Provisional figures for 2011.  
Source: Banco de la República (balance of payments).

Graph B4.1  
Current account



a/ Provisional figures.  
Source: Banco de la República (balance of payments).

Graph B4.2  
Current account and its components



a/ Provisional figures.  
Source: Banco de la República (balance of payments).

During the second period (2005-2007) the country’s current deficit rose from 0.8% of GDP in 2004 to 2.9% of GDP in 2007, owing in particular to higher import spending,<sup>1</sup> which exceeded higher external sales of industrial and farm products, mostly to Venezuela.<sup>2</sup> Moreover, the second period saw higher profit transfers by foreign subsidiaries to their parent companies, and a pace of growth in transfer income that was slower than GDP growth.

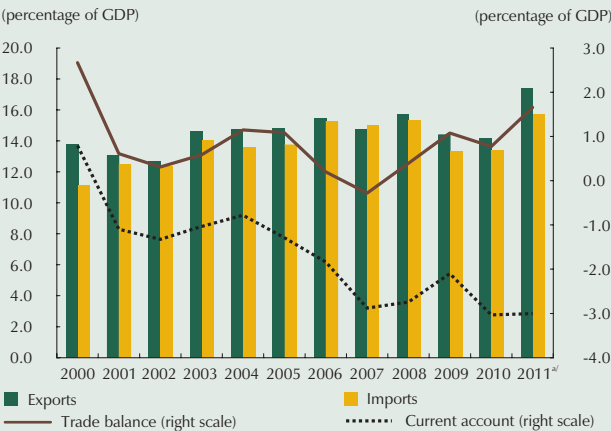
- 1 The increase in imports of goods and services was connected with high rates of economic growth in 2006 (6.7%) and 2007 (6.9%).
- 2 Exports to Venezuela surged on average by 50% a year from 2005 to 2007.

From 2008 on, the negative balance on the current account stayed annually at around 2.7% of GDP, peaking at 3% of GDP in 2010 and 2011. The main source of this deficit was the negative balance of factor-income payments, which remained close to 4.2% of GDP. In addition, net current transfer income continued the downtrend of previous years, to stand at 1.5% of GDP in 2010 and 2011. The trade deficit decreased in the third period thanks to a sharp climb in export value, resulting from higher sales of mineral and energy products, which made up for widespread growth in imports.

Analysis of the goods and services trade balance shows that the balance of foreign trade in goods either accentuated or smoothed the current deficit in the different periods (Graph B4.3), and that the service balance registered a deficit that remained around 1.3% of GDP. In these circumstances, the goods trade surplus has in recent years made up for the slowdown in transfer receipts and the rise in factor income. Note that the positive evolution of foreign trade in goods reflects export growth concentrated in a few products, in contrast to the widespread increase in imports.

Since 2003, except in 2009 owing to the international crisis, the dollar value of goods exports has been rising on average by 24% a year, thanks to higher international commodity prices, resulting from the effect, on world commodity demand, of growth in emerging countries including China and India.

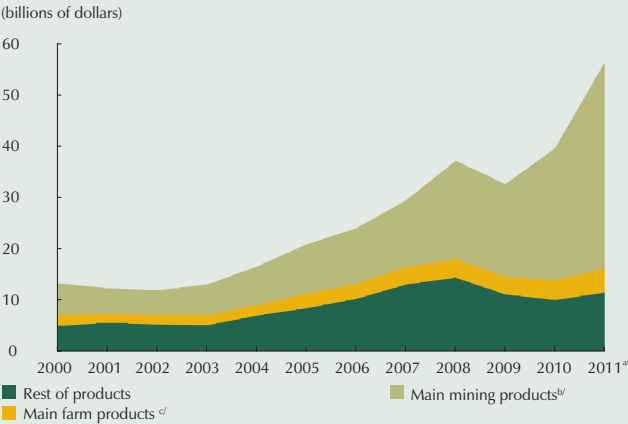
Graph B4.3  
Goods & services trade balance, and current account



a/ Provisional figures.  
Source: Banco de la República (balance of payments).

Export growth in recent years has stemmed from greater external sales of mineral and energy goods (crude oil and its derivatives, coal, ferronickel and gold), which accounted for 43% of total exports in 2000-2007, then 55% in 2009 and up to 71% in 2011 (Graph B4.4). Such external sales have been boosted in particular by higher export prices, though from the second half of 2008 shipped volumes have also trended up because of higher domestic production and higher world demand. In 2009 and 2010 external sales of the rest of products (chiefly industrial goods) fell by value but picked up by 15% in 2011; their share of the country's export basket fell from an average 43% in 2000-2007 to 23% in the past two years.

Graph B4.4  
Composition of goods exports

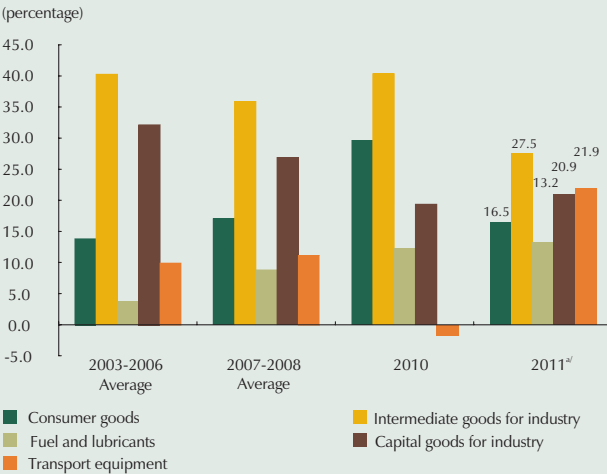


a/ Provisional figures.  
b/ Includes crude oil and its derivatives, coal, gold and ferronickel.  
c/ Includes coffee, flowers and bananas.  
Source: Banco de la República (balance of payments).

Imports have been growing gradually, rising in 2011 to the highest level of the past ten years, and their behavior has been connected with growth in real activity. The sectors that contributed most positively to GDP expansion in 2010 and 2011 were at the same time the ones responsible for higher import spending, namely: manufacturing, transport, commerce, mining and quarrying. In 2010 and 2011 manufacturing and trading companies accounted for approximately 65% of the total import value in dollars, followed by the sectors of mining and quarrying, and transport and communications. In contrast to export growth, import expansion has resulted particularly from higher volumes of overseas purchases. Quantity growth contributed 71% of total nominal import increase in 2011, compared with 87% a year earlier.

By type of product, from 2003 to 2010 the main sources of import growth were purchases of intermediate and capital goods for industry, accounting on average for 67% of such growth (Graph B4.5). Consumer goods imports also expanded considerably, contributing 30% of total growth in 2010, up from 14% in 2003-2006. In 2011 there was significant expansion in purchases of aircraft by the transport sector and of fuel and lubricants by the mining and energy sector.

Graph B4.5  
Percentage contributions to overall import growth, by type of product



a/ Provisional figures.  
Source: Banco de la República (balance of payments).

### 3. Sector evolution of Colombia's balance-of-payments current account

Table B4.2 presents the balance of current external operations, by economic sector. Over the entire period under study only the mining and energy sector<sup>3</sup> posted current surplus, which partly offset the deficit of the other activities. In addition, up to 2007, current-transfer income had a significant effect on the economy's current-account deficit.

The sector composition of the economy's current deficit in 2010-2011 (3% of annual average GDP) shows that, excluding mining and energy, the other sectors together posted a negative balance of almost 10.4% of GDP, consisting mostly of deficits (as percentages of GDP) in the sectors of commerce (4%), manufacturing (2.7%), and transport and communications (1.5%).

3 The mineral and energy sector includes crude oil and its derivatives, coal, gold and ferronickel.

Table B4.2  
Current deficit, by economic sector  
(annual average)

	2002-2004	2006-2007	2008-2009	2010-2011 <sup>a/</sup>
	(percentage)			
A. Mining and energy sector	3.5	3.4	3.8	5.8
B. Subtotal, excluding the mining-energy sector	(7.6)	(8.6)	(8.4)	(10.4)
Manufacturing	(2.1)	(2.4)	(2.4)	(2.7)
Commerce	(3.0)	(3.6)	(3.4)	(4.0)
Transport and communications	(1.3)	(1.5)	(1.6)	(1.5)
Public sector	(1.6)	(0.9)	(0.9)	(0.9)
Rest of sectors and unclassified firms <sup>b/</sup>	0.3	(0.2)	(0.1)	(1.4)
Subtotal (A+B)	(4.1)	(5.2)	(4.6)	(4.6)
Net receipts from transfers and other current operations	3.0	2.8	2.2	1.6
Overall current account of the economy	(1.0)	(2.4)	(2.4)	(3.0)

a/ Provisional figures for 2011.

b/ Unclassified firms are those that could not be included in any sector for lack of sources of information for characterizing them.

Source: Banco de la República (balance of payments).

That negative balance was partly offset by the mining and energy sector's current surplus (5.8% of GDP), and by net receipts from transfers and other operations (1.6% of GDP).

Table B4.3 disaggregates for 2002-2004 and 2010-2011 the evolution of the current account's net components in terms of GDP for the main activities. The 2pp widening of the country's overall current-account deficit between those two periods resulted mostly from higher deficits in commerce and manufacturing (together amounting to 1.7pp of GDP) and a decrease in net transfer receipts (1.5pp of GDP).

The increase in the current deficit of the sectors of commerce and manufacturing<sup>4</sup> consisted especially of a higher trade deficit (nearly 1.7pp of GDP), driven by domestic consumption and investment. These activities together generated 60% of the country's total import value and 22% of its export value. In addition, companies with foreign capital that operate in these activities periodically transfer profits to their parent companies, increasing the negative imbalance of their current external operations.

The current deficit in the rest of sectors, excluding mining and energy, increased by 1.1pp of GDP in the

period under study. This increase resulted from the fall in farm exports<sup>5</sup>—as a share of GDP, they dropped from 1.9% to 1.2% over said period—, and also from higher profit transfers to parent companies by foreign subsidiaries operating in the sectors of finance, electricity, gas and water, and construction, which together rose by 0.5pp of GDP.

The transport and communications sector's current-operations deficit remained at around 1.5% of GDP, reflecting higher purchases of aircraft and communications equipment (such as cell phones) and greater imports of services. The public-sector current deficit, which has remained around 0.9% of GDP since 2006, fell from 1.6% to 0.9% of GDP from 2010 to 2011. This reduction resulted from lower interest payments on external debt.

In contrast, the mining and energy sector increased its current surplus by 2.4pp of GDP, thanks to a higher positive trade balance, which expanded by 3.6pp of GDP, offsetting the 1.1pp rise in factor income. Note that the mining and energy sector's external sales in the past two years accounted for 68% of the country's total exports and 15% of overall import value. Furthermore,

4 Companies of this kind are characteristically focused on the domestic market, and therefore exports are not their main source of income.

5 Farm exports as a proportion of GDP fell because of the moderate rise in external sales of flowers, bananas and coffee in the past two years, compared with overall economic growth. Moreover, cattle exports to Venezuela were lower in 2010-2011 compared with the previous years' high base.



Table B4.3  
Components of the current deficit, by economic sector  
(annual average)

	2002-2004 average:			2010-2011 average <sup>a/</sup>			Change in current account (2010-2011 / 2002-2004) (percentage)
	Trade balance	Factor income	Current account	Trade balance	Factor income	Current account	
	(percentage)			(percentage)			(percentage)
A. Mining and energy sector	4.6	(1.1)	3.5	8.2	(2.2)	5.8	2.4
B. Subtotal, excluding the mining-energy sector	(5.2)	(2.3)	(7.6)	(8.3)	(2.2)	(10.4)	(2.8)
Manufacturing	(1.7)	(0.4)	(2.1)	(2.4)	(0.3)	(2.7)	(0.6)
Commerce	(2.8)	(0.1)	(3.0)	(3.8)	(0.2)	(4.0)	(1.0)
Transport and communications	(1.2)	(0.2)	(1.3)	(1.2)	(0.3)	(1.5)	(0.2)
Public sector	(0.2)	(1.4)	(1.6)	(0.2)	(0.7)	(0.9)	0.7
Rest of sectors	0.7	(0.3)	0.3	(0.1)	(0.7)	(0.7)	(1.1)
Unclassified firms <sup>b/</sup>	(0.0)	0.0	(0.0)	(0.7)	0.0	(0.7)	(0.6)
Subtotal (A + B)	(0.7)	(3.4)	(4.1)	(0.2)	(4.4)	(4.6)	(0.4)
Net receipts from transfers and other current operations			3.0			1.6	(1.5)
Overall current account of the economy			(1.0)			(3.0)	(2.0)

a/ Provisional figures for 2011.

b/ The 0.7% deficit of unclassified firms in recent years points to the greater share of firms and individuals in imports compared with previous years.

Source: Balance of Payments, Banco de la República.

this sector also accounted for about half the amount of factor income.<sup>6</sup> This might suggest that, if a price shock were to reduce the value of mining exports, profit payments would be proportionately reduced.

#### 4. Final considerations

In conclusion, breakdown of the country's balance-of-payment's current deficit into its components (goods, services, factor income and transfers) reveals that the deficit widened because of a negative factor-income balance and a smaller compensating effect from current transfers. Moreover, sector results show that the mining and energy sector, despite contributing greatly to both the growth and negative balance of factor income, provided exports earnings that exceeded the sector's current payments in respect of profits and imports, thereby permanently obtaining a current surplus. In contrast, the rest of sectors registered a wider external current-operations deficit, because of higher net imports, particularly by companies in the sectors of commerce and manufacturing, and because of higher factor-income transfers by foreign companies

in the sectors of electricity, gas and water, finance and construction.

Furthermore, buoyancy in domestic activity has led to higher import spending and higher profit transfers. At the same time, foreign-capital inflows have increased; they are mostly long term in nature and connected especially with direct capital investment. Note that short-term debt has expanded in recent years, as a consequence of higher import spending. It has thus been possible to finance growth in overall investment, the size of which has exceeded the economy's overall domestic saving in terms of GDP.

If the economy continues to grow apace, both profits and imports are expected to increase in the sectors that meet higher domestic demand (excluding the mineral and energy sector). Furthermore, the evolution of current transfers, which have had an offsetting effect—albeit a minor one—on the current deficit, will depend on economic recovery in the countries where overseas Colombians live, particularly Europe and the US. Lastly, it should be mentioned that, although import spending has been increasing and becoming widespread, it has been offset by considerable expansion in mineral goods exports, which demonstrates the dependence of the trade balance on the behavior of international commodity prices.

<sup>6</sup> That is, net factor income (receipts less payments) associated with interest, profits and dividends.

### III. INTERNATIONAL RESERVES

*In 2011 the return on international reserves amounted to US\$136m, owing to: lower interest rates in the major developed economies, Banco de la República's decision to hold a portfolio with a conservative risk profile, and the euro's depreciation against the dollar.*

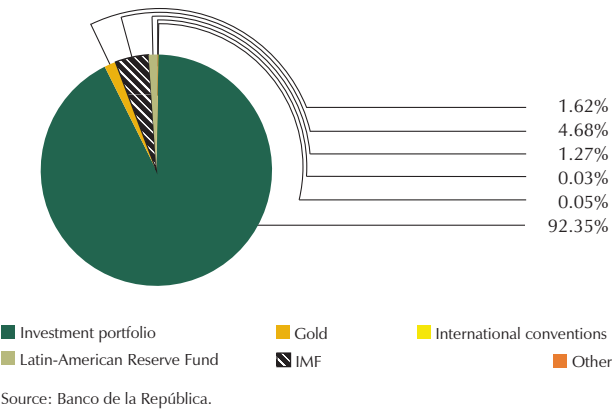
At December 2011 Colombia's net international reserves stood at US\$32,300.4m, up by US\$3,848.6m on the balance at December 2010.<sup>64</sup> The main component of the reserves is the investment portfolio, consisting of investments in financial instruments on the international market and accounting for 92.35% (US\$29,831.8m) of total gross reserves. The remaining balance is distributed as follows: i) Colombia's IMF position and special drawing rights (SDRs) (US\$1,510.6m); ii) contributions to the Latin-American Reserve Fund (LAREF, US\$411.3m); iii) gold investments (US\$524.1m); iv) contributions to the international convention with the Latin-American Integration Association (ALADI, US\$16.9m); and v) other (US\$8.2m).<sup>65</sup> Graph 82 presents the composition of the international reserves.

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64 Net international reserves are equal to total or gross international reserves, less the Bank's short-term external liabilities consisting of foreign-currency demand obligations to non-resident agents. Values are rounded to the first decimal place. Gross international reserves amounted to US\$32,302.9m and short-term external liabilities to US\$2.5m.

65 The item "other" includes cash on hand and demand deposits.

Graph 82  
Composition of international reserves



This Chapter explains the main policies for management of Colombia’s international reserves, and the current composition of the reserves.

### A. INVESTMENT-PORTFOLIO MANAGEMENT POLICIES

The investment portfolio of the reserves, representing 92.35% of the total, is divided into two components: working capital, and the investment tranche.

- The *working capital* is intended to cover the reserves’ immediate liquidity needs. Funds obtained from intervention in the exchange market go into this portfolio, and its investments are concentrated in very short-term dollar-denominated assets. Given that the working capital is meant to provide immediate liquidity for purposes of intervention in exchange markets, it is concentrated in deposits and investments that can be liquidated in a day at very little cost. By decision of the International Reserves Committee<sup>66</sup> the working capital may range between US\$390m and US\$2,000m; at December 2011 it stood at US\$799.8m.
- The *investment tranche* is executed with longer term and a higher expected return profile than the working capital. This tranche is invested in a greater number of instruments with longer maturities than is the case with the working capital. At December 2011 the value of the investment tranche amounted to US\$29,032m.

The investment portfolio’s securities are deposited in financial entities known as custodians. The chief custodians of Colombia’s international-reserve securities are the Federal Reserve Bank of New York, Euroclear and JP Morgan Chase.

### 1. Portfolio benchmark index and management

Banco de la República, like the great majority of central banks in the world, defines a theoretical portfolio or benchmark index for the

<sup>66</sup> The International Reserves Committee is responsible for setting the general objectives, principles and policies for management of the reserves. Committee meetings are usually held at least once every two months, chaired by the Bank’s Governor General and attended by all full-time members of the Board of Directors and the Minister of Finance and Public Credit (or his representative).

investment tranche of the reserves.<sup>67</sup> This index serves as a framework of reference for measuring the management of each portfolio.

A first step in building the benchmark index is to determine the foreign-currency composition. At December 31, 2011 the investment tranche’s target currency composition was: 85% US dollars, 12% euros, and 3% yen.<sup>68</sup>

The benchmark index is the theoretical portfolio that meets the target currency composition and maximizes expected returns on the investment tranche of reserves. This portfolio is also estimated not to produce negative returns over a 12-month horizon with 95% confidence, excluding the exchange effect. The outcome is a highly conservative portfolio, which is presented in Table 23.

As stated above, in view of the different purposes served by the reserves, the investment portfolio is divided into working capital and

Table 23  
Composition of the investment-tranche benchmark index at December 31, 2011

Currency	Type of asset	Associated index	Share (percentage)
US dollars	Investments in US government bonds	Merrill Lynch 0 to1year Government Bond Index	81.3
		Merrill Lynch 1 to 5 year Government Bond Index	1.4
		Merrill Lynch 5 to 10 year Government Bond Index	1.3
		Merrill Lynch TIPS 1to 10 year Government Bond Index	1.0
		<b>Total dollars</b>	<b>85.0</b>
Euros	Investments in short-term government securities	Merrill Lynch German T-Bill Index	11.0
	Investments in German government bonds	Merrill Lynch 0 to 5 year Government Bond Index	1.0
		<b>Total euros</b>	<b>12.0</b>
Yenes	Investments in short-term government securities	Merrill Lynch Japan T-Bill index	2.0
	Investments in Japanese government bonds	Merrill Lynch 10+ year Government Bond Index	1.0
		<b>Total yen</b>	<b>3.0</b>

Source: Banco de la República.

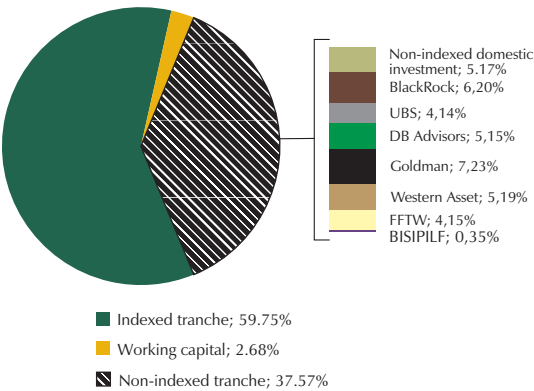
67 In capital markets, a benchmark index is a basket of assets with weights pre-determined by rules defining the basket’s composition. An index is usually designed to replicate broadly the behavior of a market of financial assets and serves as a measure of other investment portfolios’ performance in that same market. For example, in Colombia there is the IGBC (general stock-market index), and in the US the better-known equity-market indices are the S&P500 and the Dow Jones. The Bank uses only fixed-income market indices.

68 As of February 29, 2012 the investment tranche’s new target currency composition is: 86% US dollars, 4% euros, 4% British pound, 3% Australian dollars, and 3% Canadian dollars. Box 5 “International-reserve portfolio’s new currency composition” describes the changes made to the currency-composition methodology.

an investment tranche. The investment tranche is in turn divided into two components: an indexed tranche and a non-indexed tranche.

- The *indexed tranche* is designed to replicate the composition of the benchmark index. The investments of this tranche are made in securities issued by the governments of the United States, Germany, Canada, the United Kingdom and Australia. The indexed tranche is the most liquid portfolio after the working capital and is intended, among other things, to meet high liquidity needs. It is managed within strict guidelines designed to make both its asset-share composition and currency composition very similar to the benchmark index. At December 2011 the value of the indexed tranche amounted to US\$17,825.1m (59.75% of the investment portfolio).
- The *non-indexed tranche*, or asset, is managed with the aim of obtaining a higher return than that of the benchmark index. To this end, the portfolios of this tranche differ in composition from the index. Within a framework of controlled risk, the managers of this tranche apply their experience and resources to designing strategies that will increase the return on reserves in the long run. The investment guidelines for this tranche allow portfolios to deviate from the index to a defined extent in respect of currency composition, share of instruments and issuers and asset types.<sup>69</sup> At December 2011 the non-indexed tranche had a value of US\$11,206.9m (37.57% of the investment portfolio).

Graph 83  
Composition of the investment portfolio  
(at December 31, 2011)



Source: Banco de la República.

Graph 83 presents the investment portfolio’s composition in December 2011. The Markets Subdivision of the Bank’s International Reserves Department manages the working capital, the indexed tranche and one of the non-indexed portfolios, amounting in all to US\$20,165.9m (67.6% of the investment portfolio). Since May 2011 the Bank has been investing reserves in the inflation-indexed fund managed by the Bank for International Settlements (BIS Investment Pool Series ILFI, BISIPILF); they amount to US\$104m.<sup>70</sup> All other reserves are managed

69 In the non-indexed tranche, investments are permitted to be made in low credit-risk entities such as governments, quasi-governments and mortgage agencies.

70 This BIS investment fund is available only to central banks and multilateral organizations. It is designed to obtain a return equal to or higher than US Treasury inflation-indexed securities. The fund’s

*At December 2011 Colombia's net international reserves stood at US\$32,300.4m, up by US\$3,848.6m on the balance at December 2010.*

under the external management program put in place in 1994 by the International Reserves Committee. The program is described in the following section.

## **2. External management program**

Many central banks employ external portfolio managers to handle their reserves. They do it in part because of limited resources, but also for other reasons: to have access to the experience and tools employed by external manager; to obtain training for staff engaged in the management of international reserves; and to have a basis for comparison.

Managers of the non-indexed tranche are authorized to invest in different assets and in different proportions from those of the benchmark index, in accordance with policies and limits set by the Reserves Committee.

The use of external managers is intended to generate added value to the investment portfolio of reserves, by relying on the greater capacity for analysis and more sophisticated infrastructure of such managers in defining investment strategies. The selected firms possess both these characteristics, besides having access to many sources of information. The funds handled by external managers are held in accounts administered by Banco de la República, and the agreements may be cancelled when deemed necessary.

The external management program has benefited the Bank in the following ways:

- Since the beginning of the program, its net return (after fees) has been higher than the benchmark index's by an average of 6bp a year.
- The external managers' capacity for analysis has allowed them to choose investments with a good risk/return profile within the permitted limits of the investment guidelines
- External managers have trained Bank staff and thus helped to develop skilled personnel. In addition, their advisory services have helped to improve the Reserves Department's processes of investment and risk analysis.

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investment policies are applicable equally to all investors. Reserve investments in this fund are part of the non-indexed tranche.

- The Reserves Department receives information and analyses from specialists in the financial markets where reserves are invested. Moreover, the firms participating in the program each have a solid staff of credit analysts, allowing them to complement and improve on the rating agencies' analysis of issuers.

External managers may deviate from the benchmark index in their interest-rate and exchange-rate strategies and by investing in debt issued by entities with low credit risk, such as governments and quasi-governments,<sup>71</sup> and in securities backed by US mortgage agencies. The Bank monitors the portfolios on a daily basis to ensure that external managers comply with the set limits.

Table 24  
External managers of reserves  
(at December 31, 2011)

Firm	Amount under management (millions of dollars)
BlackRock Institutional Trust	1,849.4
DB Advisors (propiedad de Deutsche Bank)	1,535.2
Fisher Francis Trees & Watts (propiedad de BNP Paribas)	1,236.9
Goldman Sachs Asset Management	2,157.6
UBS Global Asset Management	1,235.3
Western Asset Management	1,547.5
<b>Total</b>	<b>9,561.9</b>

Source: Banco de la República

The firms currently participating in the external management program are: Blackrock Institutional Trust, DB Advisors (owned by Deutsche Bank), Fisher Francis Trees & Watts (owned by BNP Parisbas), Goldman Sachs Asset Management, UBS Global Asset Management, and Western Asset Management (Table 24).

The Bank defines parameters for evaluating the management firms' performance and revises them periodically.<sup>72</sup> And, depending on the success of their performance, the Bank may decide to alter the amount under management or cancel the agreement.

71 The securities in question are such as are issued by entities backed or sponsored by governments (e.g. Fannie Mae and Freddie Mac), supranational organizations (e.g. World Bank, Inter American Development Bank), and local authorities (e.g. cities and States), among others.

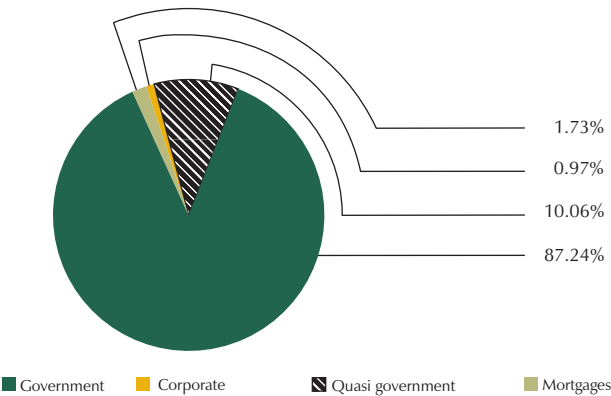
72 The Reserves Committee is provided with monthly reports containing information on the portfolios' performance. Moreover, all management of reserves is reviewed every year in a consolidated manner.



B. INVESTMENT-PORTFOLIO COMPOSITION

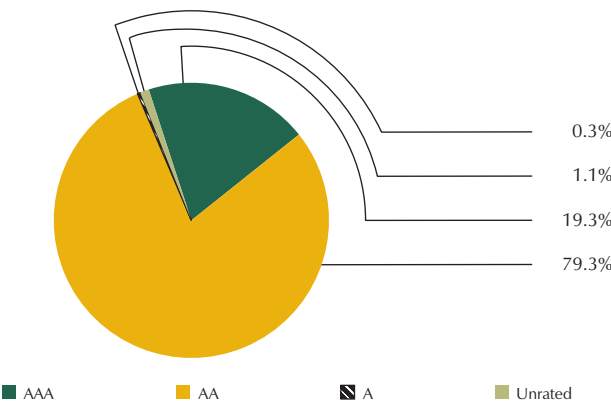
In response to uncertainty caused by the worsening of the European sovereign debt crisis during 2011, Banco de la República decided to take the following measures with respect to the investment portfolio of reserves:

Graph 84  
Composition of the investment portfolio, by sector  
(at December 31, 2011)



Source: Banco de la República.

Graph 85  
Breakdown of investments by credit rating



Source: Banco de la República

- To reduce investments in bank and corporate debt to the lowest possible level. Investments are now allowed only in banks with a rating of AA- or higher, and for a maximum term of seven days. The maturities of foreign-currency operations have been reduced, and trading is only carried out with the better-rated entities.
- To increase the minimum rating for governments and quasi-governments from A- to AA-.

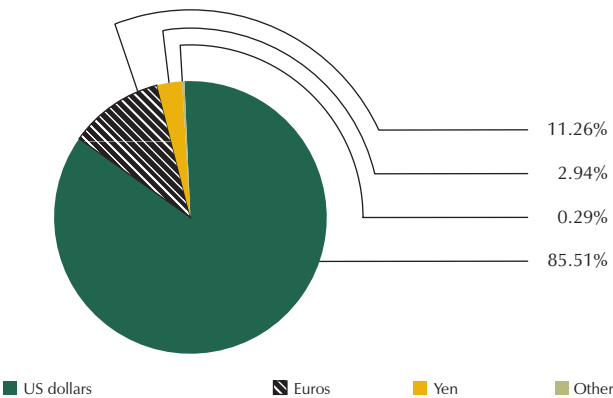
At December 2011 almost 98% of the investment portfolio was invested in paper issued by governments or quasi-governments and in repurchase agreements with the Federal Reserve. Bank and corporate debt securities of industrialized countries accounted for 0.97% of the investment portfolio (Graph 84), down from 4.4% at the end of 2010.

Graph 85 depicts the investment portfolio’s credit quality. During 2011 Banco de la República maintained its policy of investing only in issues having the highest ratings assigned by the major rating agencies (S&P, Moody’s and Fitch Ratings). The Bank uses as

a benchmark the lowest ranking given by at least two of these agencies. The Graph shows that 19.3% of investments are rated AAA, the highest rating, 79% are AA, and only 1.1% of the portfolio is rated A.<sup>73</sup> The high share of AA securities is explained by the portfolio’s concentration in US government debt, which was downgraded from AAA to AA+ by

73 The measures adopted in 2011 to reduce the international reserves’ credit risk were implemented gradually. Both the decreasing of exposure to bank and corporate risk and the raising of credit ratings required of governments and quasi-governments finished being implemented in the first weeks 2012.

Graph 86  
Currency composition of the investment portfolio  
(at December 31, 2011)



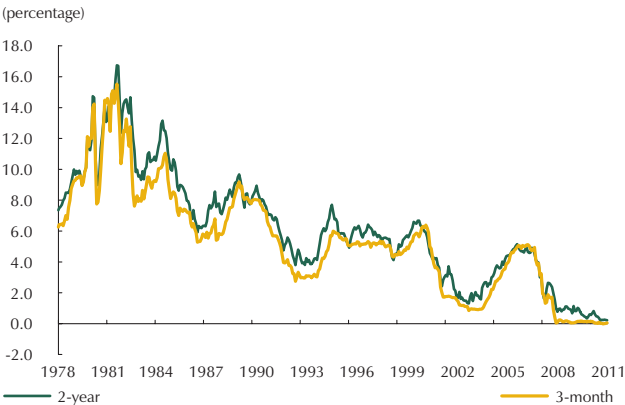
Source: Banco de la República.

S&P on August 5, 2011. Investments having no credit rating (1%) are with the Federal Reserve Bank of New York, which is one of the safest investment alternatives for reserves. The above figures are evidence of the high quality of the investment portfolio’s assets.

Lastly, Graph 86 shows the investment portfolio’s currency composition at December 31, 2011. The currency composition of the portfolio differs slightly from the target because of inclusion of the working capital, which is invested only in dollars. Moreover, it is permissible, within strict limits, for portfolios

to deviate slightly from fixed parameters, and for investments to be made in other developed-country currencies, such as yen, Swedish and Norwegian crowns, Swiss francs and New Zealand dollars.

Graph 87  
US Treasuries interest rates



Source: Bloomberg.

As a preventive measure in case of a possible interest-rate rise in developed economies, the investment tranche had a low modified duration (0.8) at the end of 2011.<sup>74</sup>

### C. INVESTMENT PERFORMANCE

In 2011 the return on international reserves was US\$136m (0.45%). Valuation gains on investments and accrued interest amounted to US\$225m in 2011, and foreign-exchange differential loss (other currencies’ depreciation against the dollar) US\$89m. Various factors explain this rate of return on reserves, including the following:

- Interest rates remained very low in the major developed economies. Graph 87 presents the historical series of rates on three-month and two-year US government securities. It shows that rates observed since the end of 2008 are the lowest in the past three decades.

74 Modified duration is defined as the percentage decrease (increase) produced in a portfolio’s value by a 1% increase (decrease) in all interest rates.

*Since May 2011 the Bank has been investing reserves in the inflation-indexed fund managed by the Bank for International Settlements.*

- The decision of having a portfolio with a conservative risk profile, as illustrated in Graphs 84 and 85, has meant receiving low returns.
- The euro depreciated by 3% against the dollar in 2011.

The return on reserves did, however, benefit from the yen's 5.1% appreciation against the dollar over the year, and from the 8.9% rise in the price of gold.

#### D. STATUS OF CLAIMS ARISING FROM 2008 CREDIT EVENTS

As reported in previous *Reports to Congress*, at the end of 2008 two credit situations involved Colombia's international reserves: i) a Lehman Brothers security worth US\$2.7m purchased by BlackRock Financial Management Inc. under an external management agreement; and ii) a Sigma Finance Inc. security worth US\$20m, unconditionally and irrevocably guaranteed by Sigma Finance Corporation (hereinafter Sigma) purchased under a securities lending program managed by The Bank of New York Mellon. The current status of the Bank's claims is described in the following sections.

##### 1. Restructuring process of Lehman Brothers Holdings, Inc.

As reported before, Banco de la República, represented by the law firm of Morrison & Foerster LLP, filed a claim at the Bankruptcy Court of New York on August 25, 2009, supplemented on September 9, 2009, to be recognized as a creditor in the restructuring process of Lehman Brothers Holdings, Inc., under Chapter 11 of the US Bankruptcy Code.

*During 2011 Banco de la República maintained its policy of investing only in issues with the highest ratings given by the major rating agencies (S&P, Moody's and Fitch Ratings).*

During the process the Bankruptcy Court granted Lehman Brothers multiple extensions to submit its Restructuring Plan, which was finally submitted on August 31, 2011 and approved by the majority of recognized creditors having voting rights and confirmed by the judge at a hearing held on December 6, 2011. According to this Plan, the Bank will receive a distribution percentage estimated at 21.1% of the amount owed to it. The Bank's claim represents 0.0009% of overall claims against Lehman Brothers Holdings, Inc.

The initial distribution phase is expected to start around April 17, 2012 and may extend over several years.

*According to the  
Restructuring  
Plan submitted by  
Lehman Brothers,  
the Bank will receive  
a distribution  
percentage  
estimated at 21.1%  
of the amount owed  
to it.*

## **2. Banco de la República's claim against The Bank of New York Mellon**

Regarding the action brought by Banco de la República, represented by the law firm of Cromwell & Moring LLP, against Bank of New York Mellon Corporation, Bank of New York Mellon N.A. and Bank of New York Mellon Asset Services B.V., hereinafter BNYM, the following is reported:

As previously communicated to Congress, the Bank filed the suit at the New York State Supreme Court on April 21, 2009. After the suit and the answer thereto were filed and other procedures were carried out, the case was transferred at the request of BNYM to the New York Southern Federal District Court at the end of January 2010, and, at the judge's request, the suit was filed anew to adapt it to the new jurisdiction.

Once the suit was answered and other usual procedures were carried out in the case, the federal judge at a hearing on December 1, 2010 heard pleadings by counsel for the parties and determined the claims and pleas to be proved at trial. In particular, he decided that the suit had merit in view of the investment in Sigma constituting possible default under the securities-lending agreement and in view of possible tort-liability charges.

At a hearing on January 28, 2011 the parties submitted a joint case-management plan, which was approved by the Federal Court. The relevant points agreed on included opting for a bench trial rather than a jury trial, and establishing the discovery schedule.

On August 30, 2011 Banco de la República filed a motion for summary judgment, requesting the judge to pronounce on specific claims and facts of the complaint that can be resolved directly by him, without the need to complete discovery or to go to trial, solely on the basis of pleadings by each party's counsel. The judge was requested, in particular, to find for the Bank on default of the securities lending agreement by BNYM.

At a hearing on February 23, 2012 at the New York Southern Federal District Court the judge decided not to grant the motion for summary judgment without giving a chance for discovery to be carried out to see whether BNYM could prove its defense. The judge therefore decided to continue with the discovery stage and to return in June for a hearing on the status of the suit.

Banco de la República, in addition to having filed a legal action against BNYM to recover the investment, became a party to Sigma's liquidation proceedings and with value date of November 17, 2010 received approximately US\$1m, or US\$0.5 per dollar, according to the method approved by the liquidator for ranking creditors' claims and distributing the available assets.

Box 5

INTERNATIONAL RESERVE PORTFOLIO'S NEW CURRENCY COMPOSITION

Given that one purpose of international reserves is to enable the country to meet external payments in times of crisis, the currency composition of Colombia's reserves is designed to replicate payment behavior in the country's balance of payments. In this way, reserves try to cover the volatility that exchange-rate movements cause in the country's overseas payments. For example, if many goods imports are denominated in euros, investing part of the reserves in euros helps to mitigate the higher cost payable should the euro appreciate, because the value of reserves in dollars will rise, making up for the higher import cost.

To improve the way in which balance of payment expenditures are covered, effective from February 29, 2012 Banco de la República changed the target currency composition<sup>1</sup> of the international reserves' investment tranche, as shown in Table B5.1.

This Box explains the changes made to the methodology for estimating the currency composition.

Table B5.1  
Changes to the reserves' target currency composition

Currency	Previous currency composition	New currency composition (from February 12, 2012)
US dollars	85	86
Euros	12	4
Yen	3	0
British pound	0	4
Canadian dollars	0	3
Australian dollars	0	3

Source: Banco de la República.

1. Previous methodology

The previous methodology classified balance of payment expenditures on relatively simple criteria. This section explains the main rules that were used to classify balance of payment expenditures by currency.<sup>2</sup>

- *Trade balance:* The greater part of imports were allocated to the dollar, except for imports from Europe, which were allocated to the euro, and imports from Japan, allocated to yen.
- *Service balance:* Payments for non-financial shipping services (import freights) were classified according to currency shares in imports; all other payments for non-financial services were allocated to the dollar. Outflows of interest payment on both public-sector and private-sector debt were allocated according to balances at each year-end. Profit and dividend outflows in respect of foreign direct investment were entirely allocated to the dollar, because the exchange risk is assumed by the firms investing in Colombia.
- *Capital account:* Capital payments associated with foreign direct investment in Colombia were entirely allocated to the dollar, because the exchange risk is assumed by the firms investing in Colombia.<sup>3</sup> The following were also classified as operations in dollars: all payments in respect of Colombian investments abroad; contributions to international organizations; short-term capital movements; and portfolio investment (if negative). Both public-sector and private-sector debt repayments were classified by currency according to the respective debt composition.<sup>4</sup>

2 The three-year moving average of currency shares was calculated to smooth out any changes that might have occurred in payment denominations.

3 Capital outflows from the capital reimbursement account, in respect of FDI, do not include the oil sector. Capital reimbursements in the oil sector are made in kind and do not, therefore, translate into demand for foreign exchange.

4 The debt balance of global TES securities is not included in the calculation because these instruments do not represent an exchange risk for the issuer.

1 The observed currency composition may differ from the target currency composition, because investment guidelines allow portfolios of the non-indexed tranche to deviate from the target.

On the above criteria, every payment component of the balance of payments was allocated to the US dollar, the euro or yen.

## 2. Why change the methodology?

The currency-composition methodology was changed to incorporate movements against the dollar in the currencies of most of Colombia’s trading partners, given that trade between emerging countries has been on a rising trend in recent years. One consequence of having more trading partners is that the relevant quotation is not necessarily the Colombian peso’s quotation against the dollar but rather its quotation against the currency of the country the imports come from. For example, if the dollar appreciates against the peso, imports from Brazil will not necessarily be more expensive, because the Brazilian *real* may at the same time depreciate against the dollar, although not all exchange-rate movements necessarily pass through to the prices of imports in dollars.<sup>55</sup> To return to the example of imports from Brazil, as trade with Brazil increases, it becomes desirable to increase investments of reserves in *reals* or, if this is not possible due to conditions of market depth and liquidity, in a reserve currency that behaves in a relatively similar way as the *real*.

Graph B5.1 compares the behavior of two indices of goods imports, one reflecting returns on the previous currency composition (85% dollars, 12% euros and 3% yen), and the other reflecting returns on the “real” basket of currencies, that is to say, the basket based on the PPI of imported goods, which includes the price impact of changes in the currencies of all countries participating in international trade.

The main conclusion to be drawn from Graph B5.1 is that it is possible to alter the methodology to improve coverage against the price changes of imported goods

Graph B5.1  
Comparison of currency-basket indices of goods imports



Sources: Datastream and each country’s central bank.

resulting from appreciation or depreciation in the currencies of Colombia’s major trading partners. For example, in 1996-2002, the “real” index fell by much more than the previous currency-composition index. This means that the dollar value of Colombian exports decreased significantly, while the dollar value of reserves did so more moderately. In contrast, from 2002 on, the dollar value of imports has risen sharply and the dollar value of reserves more moderately. This can be explained by the fact that the “real” index captures the effect produced on goods import prices both by the dollar’s weakness and by higher commodity prices.

With this observation in mind, the Bank built a currency index for all balance of payment expenditures, applying the same assumptions as in the previous currency composition methodology, for the capital account and the service balance. But, for calculating the trade balance sub-index, the PPI of imported goods was used,<sup>66</sup> deflated by the peso/dollar exchange rate, so as to have a price index of imported goods in dollars. Note that this sub-index takes into account currencies not considered for reserves, such as the Brazilian *real*, the Thai Baht and the Chilean peso, among others.

5 It is difficult to estimate the pass-through of each exchange rate to the prices of imported goods, because it would mean estimating it for each type of good. Homogeneous products such as commodities would be less affected by the producing country’s exchange rate, for they are traded in a highly competitive market. In the case of differentiated products, such as manufactured goods, the producer is better able to adjust the price depending on favorable or unfavorable exchange-rate movements. Another factor that may affect price sensitivity to the exchange rate of the producing country is easy substitution of suppliers from other countries, because the easier the substitution, the less flexibility the producer will have to adjust his price. To avoid making assumptions about pass-through, it was decided to use the producer price index (PPI) for imported goods.

6 For a detailed explanation of the implications of this change and for all technical support regarding the new methodology, see Gómez, J., and Hernández J. (2011), “Composición cambiaria y poder adquisitivo de las reservas internacionales”, Borradores de Economía No. 654, Banco de la República, Colombia.



### 3. Explaining the new methodology

According to the foregoing analysis, the simplest way of replicating the behavior of balance-of-payment expenditures would be to invest the reserves in all the currencies of the major trading partners. This alternative, however, encounters the following practical difficulties:

- It involves a high degree of operational complexity in investing the reserves, because small proportions would need to be invested in many currencies. Besides, the low liquidity of many of these currencies would make them ineligible for reserves.
- Many of the countries of origin of Colombia's imports lack the minimum credit rating for portfolio investment. The minimum rating currently allowed for sovereign issuers is AA-, and only a small group of countries meet this criterion.

Since it is not feasible to invest the reserves directly in the currencies of all the major trading partners, an alternative needs to be found that replicates in the best possible way the behavior of balance of payment expenditures, using only currently approved reserve currencies (US dollars, euros, yen, British pound, Swiss francs, Canadian, Australian and New Zealand dollars, and Norwegian and Swedish crowns).

The new currency composition methodology consisted in finding a currency composition that minimized the difference (as measured by the standard error) with respect to the index of balance of payment expenditures, using only reserve currencies. In determining a target currency composition, two restrictions had to be borne in mind to ensure that reserves would continue to be invested in instruments with a high degree of liquidity.

- Only reserve currencies with very high trading volumes were used. The criterion was that eligible currencies should have more than a 5% share of the average daily volume traded in the world.<sup>7</sup> This criterion reduced the universe of eligible currencies to US dollars, euros, yen, British pound, Swiss francs and Canadian and Australian dollars.

- Since the reserves are mainly invested in public debt, restrictions were imposed to avoid the Bank becoming a very great player in any of these markets. The obvious reason for this was that when an investor acquires a very considerable share of a market, his operations may impact on prices, leading to high transaction costs. Restrictions were not placed on countries with very broad public-debt markets, such the United States, Germany, the United Kingdom and Japan but were imposed on investing in Switzerland, Canada and Australia. In the case of Switzerland, the public-debt market is very small, despite its currency's high trading volume, hence the prohibition on investing in Swiss francs. In the case of Canada and Australia, the restriction consisted of limiting investment to 3% for each.

Furthermore, allocating a share of less than 2% to any currency was not considered appropriate, since its impact on the portfolio would be low and its implementation costs high. Table B5.2 presents the results of the optimizing exercise, with and without restrictions.<sup>8</sup> The last column shows the replication error, the variable to be minimized.

In none of the exercises performed was it found that the yen should be included in the currency composition, despite the considerable amount of yen-denominated public debt. The reason was that yen behavior is not highly correlated with Colombian import prices. In contrast, Australian and Canadian dollars and Swiss francs help to improve replication error significantly. The alternative with the least replication error (2.5%) involved raising the share of dollars to 87.3%, reducing the share of euros to 0%, and allocating positive values to Swiss francs (2.54%) and Australian dollars (10.04%). However, this was not a suitable currency composition, because it meant relatively high investments in Australian public debt in comparison with the size of the market. In every case the US dollar continued to be the major currency for meeting the country's external obligations.

The currency composition chosen for the investment tranche of reserves was: US dollars (86%), euros

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<sup>7</sup> The triennial survey published by the Bank for International Settlements was used as a benchmark.

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<sup>8</sup> A standard method of non-linear programming was used to minimize the mean quadratic error, restricting also the result so that the basket should have no negative (short) exposure to any currency and the weightings should add up to 1.



Table B5.2  
 Currency composition that minimizes the difference relative to the real basket  
 (percentage)

	Currency composition							Replication error
	US dollars	Euros	Yen	British pound	Swiss francs	Australian dollars	Canadian dollars	
Without restrictions	87.34	0.00	0.00	0.08	2.54	10.04	0.00	2.50
With restrictions	86.23	4.13	0.00	3.64	0.00	3.00	3.00	2.58
Previous composition	85.00	12.00	3.00	0.00	0.00	0.00	0.00	2.89

Source: Banco de la República.

(4%), British pound (4%), Australian dollars (3%), and Canadian dollars (3%). This composition significantly improves standard error relative to the index of balance-of-payment expenditures (2.5%, compared

with 2.9% before), and has the further advantage of providing high liquidity and diversification, both desirable features for the investment portfolio of reserves.

## IV. BANCO DE LA REPÚBLICA'S FINANCIAL POSITION

*In 2011 Banco de la República had a negative operating result of \$356.1bn pesos, owing to low external interest rates, which affected the return on international reserves.*

*The operating result for 2012 is forecast to remain negative, by \$467.7bn pesos.*

Banco de la República posted an operating result of -\$356.1bn pesos for 2011, owing to low external interest rates, which affected returns on international reserves, the Bank's main source of income, and owing also to the effect of foreign currency purchases on the income statement. Note that in the financial years when the Bank posted profits it built up reserves that have allowed it to cover the losses of 2010 and 2011, without needing to rely on the national budget. Lastly, note also the rise in the Bank's assets and capital, as a result of purchases of reserves and the peso's depreciation against the dollar, respectively.

### A. BANCO DE LA REPÚBLICA'S BALANCE SHEET

A description follows of changes in Banco de la República's main items of assets, liabilities and equity at December 31, 2011, compared with balances posted a year earlier (Table 25).

Table 25

Banco de la República's balance sheet, classified by economic criteria (December 2010 to December 2011)  
(billions of pesos)

Accounts	December 2010		December 2011			
	Balance	% share	Balance	% share	Absolute	Percentage
<b>Assets</b>	<b>64,800</b>	<b>100.0</b>	<b>73,825</b>	<b>100.0</b>	<b>9,026</b>	<b>13.9</b>
Gross international reserves	54,479	84.1	62,755	85.0	8,276	15.2
Contributions to international organizations & entities	2,798	4.3	2,759	3.7	(39)	(1.4)
Investments	1,334	2.1	1,161	1.6	(174)	(13.0)
Public sector: monetary control	1,321	2.0	1,154	1.6	(167)	(12.6)
Bonds: capitalization of public banks & other	14	0.0	7	0.0	(7)	(48.1)
Loan portfolio	1	0.0	1	0.0	(0)	(42.2)
Public sector, central government	1	0.0	0	0.0	(0)	(60.0)
Other loans	4	0.0	2	0.0	(2)	(57.2)
Provisions	(3)	(0.0)	(1)	(0.0)	2	(62.8)
Resale agreements (transitory liquidity support)	2,539	3.9	3,749	5.1	1,210	47.7
Accounts receivable	43	0.1	58	0.1	15	35.3
Other net assets	3,605	5.6	3,343	4.5	(263)	(7.3)
<b>Liabilities and equity</b>	<b>64,800</b>	<b>100.0</b>	<b>73,825</b>	<b>100.0</b>	<b>9,026</b>	<b>13.9</b>
<b>Liabilities</b>	<b>54,186</b>	<b>83.6</b>	<b>62,287</b>	<b>84.4</b>	<b>8,102</b>	<b>15.0</b>
Foreign-currency liabilities affecting international reserves	22	0.0	5	0.0	(18)	(78.4)
Monetary base	44,875	69.3	51,339	69.5	6,464	14.4
Cash	29,769	45.9	33,399	45.2	3,630	12.2
Reserve	15,105	23.3	17,940	24.3	2,835	18.8
Non-reserve interest-bearing deposits	935	1.4	612	0.8	(323)	(34.6)
Deposits from external borrowing and foreign-capital portfolio investment	0	0.0	0	0.0	0	0.0
Other deposits	101	0.2	74	0.1	(27)	(27.1)
Government (Finance Ministry, local currency)	3,115	4.8	5,482	7.4	2,367	76.0
Government (Finance Ministry, foreign currency)	295	0.5	291	0.4	(4)	(1.5)
Obligations with international organizations	4,118	6.4	3,880	5.3	(238)	(5.8)
Accounts payable	38	0.1	36	0.0	(2)	(4.3)
Other liabilities	686	1.1	569	0.8	(117)	(17.1)
<b>Total equity</b>	<b>10,614</b>	<b>16.4</b>	<b>11,538</b>	<b>15.6</b>	<b>924</b>	<b>8.7</b>
Capital	13	0.0	13	0.0	0	0.0
Reserves	3,019	4.7	2,746	3.7	(273)	(9.0)
Capital surplus	7,854	12.1	9,135	12.4	1,281	16.3
Special foreign-exchange account settlement	453	0.7	453	0.6	0	0.0
Foreign-exchange adjustment from 1993 on and surplus	6,085	9.4	7,358	10.0	1,273	20.9
Other	136	0.2	137	0.2	2	1.1
Valuation gains on property and donations	1,180	1.8	1,187	1.6	7	0.6

Table 25 (continuation)  
Banco de la República's balance sheet, classified by economic criteria (December 2010 to December 2011)  
(billions of pesos)

Accounts	December 2010		December 2011		Change	
	Balance	% share	Balance	% share	Absolute	Percentage
Results	(272)	(0,4)	(356)	(0,5)	(85)	31,1
Profit/loss from previous years	0	0,0	0	0,0	0	0,0
Profit/loss for the year	(272)	(0,4)	(356)	(0,5)	(85)	31,1

Source: Banco de la República.

## 1. Assets

At December 31, 2011 the Bank's assets stood at \$73,825bn pesos, up by \$9,026bn pesos (13.9%) on December 2010, when assets amounted to \$64,800bn pesos. The main changes in asset accounts stemmed from:

- *International reserves:* At the end of 2011 gross international reserves, valued at market prices, amounted to \$62,755bn pesos (US\$32,303m), up by \$8,276bn pesos (15.2%) on a year earlier. This change resulted mainly from: i) foreign-currency purchases by the Bank, which raised the peso value of reserves by \$6,790bn pesos; ii) exchange-rate adjustment, resulting from the pesos' depreciation against the dollar, which raised the balance in pesos by \$1,273bn pesos; and iii) interest returns, market-price valuation gains and the exchange-rate differential, which raised the reserves by \$250bn pesos.
- *Local-currency investment portfolio:* The balance, valued at market prices, stood at \$1,161bn pesos in December 2011, down by \$174bn pesos on a year earlier. This decrease is attributable to maturities of TES securities held by the Bank (\$325bn pesos), which were partly offset by the portfolio's market-price valuation gains and the transfer of TES by trust companies.
- *Repo operations used to provide transitory liquidity:* The balance amounted to \$3,749bn pesos at the end of December 2011, an increase of \$1,210bn pesos relative to year-end 2010.

## 2. Liabilities

At 31 December 2011 the balance of liabilities stood at \$62,287bn pesos, up by \$8,102bn pesos (15%) on a year earlier. The main sources of change were:

*The Bank's negative operating result for 2011 was influenced by ...*

- *Monetary base:* At the end of 2011 the monetary base amounted to \$51,339bn pesos, higher by \$6,464bn pesos (14.4%) than at year-end 2010.
- *Government deposits:* The balance of government deposits at the Bank, made through the Finance Ministry's National Treasury and Public Credit Office, was \$5,482bn pesos at the end of December 2011, up by \$2,367bn pesos (76%) on December 2010.

### 3. Equity

The Bank's equity amounted to \$11,538bn in December 2011, presenting an increase of \$924bn pesos (8.7%) on a year earlier. This increase came chiefly from a rise of \$1,273bn pesos (20.9%) in the exchange-adjustment account, owing to the peso's depreciation against the dollar.

#### B. THE BANK'S 2011 INCOME STATEMENT

The Bank's operating result for 2011 was negative by \$356.1bn pesos, the net result of income of \$884.2bn pesos and expenditures of \$1,240.3bn pesos (Table 26).

This result was influenced by persistently low external interest rates, which affected returns on international reserves, the Bank's main source of income. Graph 88 shows, for example, that interest on two-year US Treasury bonds fell from 4.81% in 2006 to 0.77% in 2008 and 0.24% in 2011. This caused returns on reserves to plunge from almost \$2,000.0bn pesos in 2006 to barely \$250.0bn pesos today. This, in turn, converted the Bank's profits of over \$1,500.0bn pesos in 2006 into losses of \$356.1bn pesos last year.

Total income amounted to \$884.2bn pesos in 2011, showing a growth of \$123.1bn pesos (16.2%) over the year. The following were the major income items:

*persistently low external interest rates, which affected returns on international reserves, the Bank's main source of income.*

- International reserves provided a return of \$250.0bn pesos, down by \$21.8bn pesos (8.0%) on a year earlier, owing in particular to the euro's depreciation against the dollar, which affected the portion of reserves invested in euros.
- Repo liquidity operations provided income of \$241.2bn pesos, higher than in 2010 by \$135.1bn pesos (127.4%), as a result of

Table 26  
Banco de la República income statement, 2011  
(billions of pesos)

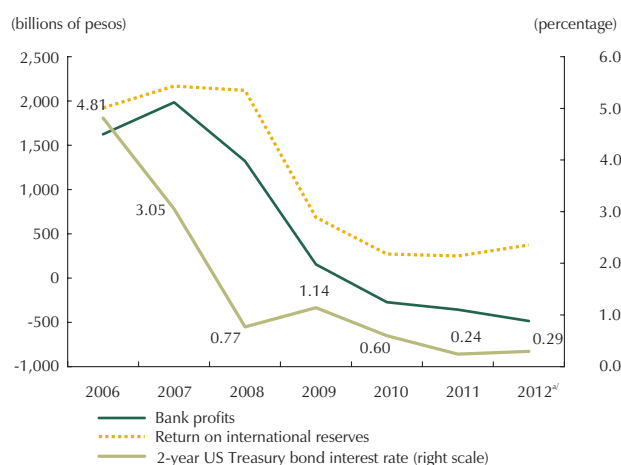
	Executed		Annual change	
	2010	2011	Percentage	Absolute
<b>I. Income</b>	<b>761.1</b>	<b>884.2</b>	<b>16.2</b>	<b>123.1</b>
<b>A. Monetary income</b>	<b>559.5</b>	<b>712.1</b>	<b>27.3</b>	<b>152.5</b>
1. Interest and returns	454.0	565.1	24.5	111.1
International reserves	271.8	250.0	(8.0)	(21.8)
Returns	362.7	399.6	10.2	36.9
Exchange-rate differential	(91.0)	(149.6)	64.5	(58.7)
Liquidity operations	106.0	241.2	127.4	135.1
TES valuation gains/losses	75.4	71.9	(4.7)	(3.5)
Other interest	0.8	2.0	162.4	1.2
2. Exchange differences	5.9	31.5	429.3	25.5
3. Coins	76.3	87.0	14.1	10.7
4. Other	23.3	28.5	22.2	5.2
<b>B. Corporate income</b>	<b>201.5</b>	<b>172.1</b>	<b>(14.6)</b>	<b>(29.4)</b>
1. Fees	106.7	107.1	0.4	0.4
Banking services	55.1	51.6	(6.3)	(3.5)
Fiduciary operations	51.6	55.5	7.5	3.9
2. Non-monetary gold	76.5	44.4	(42.0)	(32.1)
3. Other	18.4	20.7	12.6	2.3
<b>II. Expenditures</b>	<b>1,032.6</b>	<b>1,240.3</b>	<b>20.1</b>	<b>207.7</b>
<b>A. Monetary expenditures</b>	<b>610.7</b>	<b>792.3</b>	<b>29.7</b>	<b>181.5</b>
1. Interest and returns	349.0	585.8	67.9	236.8
Remuneration on Finance Ministry accounts	271.3	547.8	101.9	276.5
IMF flexible commitment fee	27.9	22.0	(21.3)	(6.0)
International-reserve management expenses	21.6	8.2	(62.1)	(13.4)
Monetary-contraction operating expenses	28.2	7.8	(72.2)	(20.3)
2. Exchange differences	117.2	59.3	(49.4)	(57.9)
3. Cost of issuing and distributing bills & coins	144.3	147.0	1.9	2.7
4. Other	0.2	0.2	(15.3)	(0.0)
<b>B. Corporate expenditures</b>	<b>335.1</b>	<b>343.5</b>	<b>2.5</b>	<b>8.4</b>
1. Personnel costs	213.6	221.9	3.9	8.2
2. Overhead	50.5	51.2	1.4	0.7
3. Recovery of deductible VAT (CR)	(4.1)	(1.6)	(60.2)	2.5
4. Taxes	6.9	6.8	(1.3)	(0.1)
5. Insurance	6.6	6.1	(9.0)	(0.6)
6. Contributions and membership dues	3.7	3.0	(18.6)	(0.7)
7. Cultural expenditures	8.9	9.0	1.2	0.1

Table 26 (continuation)  
Banco de la República income statement, 2011  
(billions of pesos)

	Ejecutado		Variaciones anuales	
	2010	2011	Porcentuales	Absolutas
8. Depreciation, provisions, debt repayments & other expenditures (including deferred software costs)	49.0	47.2	(3.7)	(1.8)
<b>C. Pensioners' expenses</b>	<b>86.7</b>	<b>104.5</b>	<b>20.5</b>	<b>17.8</b>
<b>III. Operating result (I - II)</b>	<b>(271.5)</b>	<b>(356.1)</b>	<b>31.1</b>	<b>(84.5)</b>

Source: Banco de la República.

Graph 88  
Banco de la República profits vs. return on international reserves (NIR), and 2-year US Treasury bond interest rate



a/ Actual data at the end of February 2012.  
Source: Banco de la República.

greater liquidity demand from the financial sector and the raising of the intervention interest rate.<sup>75</sup>

- The Bank received \$107.1bn pesos in fees—slightly more than in 2010—, in connection with management of TES securities and operations of the Central Securities Depository.
- Putting more coins into circulation generated an income of \$87bn pesos at face value, up by 14.1%, owing to greater demand for coins.
- Income from valuation gains on TES securities held by the Bank amounted to \$71.9bn pesos, 4.7% less than in 2010, because of the behavior of TES trading rates and a smaller balance on this portfolio.
- Valuation gains on non-monetary gold generated an income of \$44.4bn pesos. Note that in 2011 the Bank incorporated this gold into the international reserves, which means that henceforth changes in the external price of gold will be reflected in the item of return on reserves.

Total expenditures amounted to \$1,240.3bn pesos, showing a growth of \$207.7bn pesos (20.1%), as a result of the following:

75 The intervention interest rate went up from 3.0% in December 2010 to 4.75% a year later.



*A negative operating  
result of \$467.7bn  
pesos is forecast for  
2012*

- Remuneration on deposits kept at the Bank by the Finance Ministry's National Treasury and Public Credit Office came to \$547.8bn pesos, owing in particular to the deposits' higher average daily balance. Payments to the government in this respect were higher by \$276.5bn pesos (101.9%) than in 2010 and accounted for the biggest increase in the Bank's expenditures in 2011.
- The cost of issuing and distributing monetary species was \$147.0bn pesos, up by 1.9%, as a result of execution of the issuing program.
- The net result of income and expenditures arising from differences in the peso's exchange rate against the dollar was -\$27.8bn pesos, produced by the exchange-rate effect on foreign-currency asset and liability accounts, other than international reserves. Such accounts included contributions to international organizations, foreign-currency deposit accounts, and other foreign-currency assets and liabilities.
- Corporate expenditure decreased by 1.2% in real terms, down to \$343.5bn pesos. It included personnel costs associated with salaries, social benefits, social-security contributions, family benefit funds and assistance to personnel, which amounted to \$221.0bn pesos, with a real growth of 0.1%. Overhead came to \$51.2bn pesos, down by 2.2% in real terms.
- Lastly, net pensioner costs stood at \$104.5bn pesos, resulting in particular from pension expenses less income from return on the portfolio built with pension-liability funds. In 2011 net pensioner costs were up by 20.5% on a year earlier, owing to the portfolio's lower returns, caused by the behavior of TES trading rates; approximately 82.0% of the portfolio is invested in TES securities.

### C. RESERVE ACCUMULATION AND PROFIT DISTRIBUTION

Under the Banco de la República's Statutes, Articles 60 to 63, any profit remaining after appropriation to reserves shall belong to the Nation. In the event of loss, it shall be covered, in the first place, from the monetary and exchange stabilization reserve,<sup>76</sup> created specifically for this purpose, and should this be insufficient the shortage shall be covered from the Nation's general budget. The profit to be transferred or

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<sup>76</sup> The amount of the monetary and exchange stabilization reserve is based on projections of the Bank's budget losses for the following two fiscal years.

loss to be borne by the government is defined as the result of deducting, from income, the Bank’s expenditures (including depreciations) and its operating and investment expenses in performing its cultural and scientific responsibilities.

Note that, where exchange-rate movements between the US dollar and the foreign currencies in which Bank assets and liabilities are denominated (currency differential) generate a net negative result at the end of the fiscal year, the loss may be covered from the currency fluctuation reserve. This reserve is built or augmented with the positive result of exchange-rate movements, provided the fiscal year has produced profits.

Fiscal year 2011 produced negative results (losses) of \$356.1bn pesos. The Bank’s Board of Directors has decided that the losses shall be covered: i) in part–\$212.3bn pesos—from the monetary and exchange stabilization reserve; and ii) in the case of the net negative exchange differential of \$149.3bn pesos, from the currency fluctuation reserve. There is therefore no need to have recourse to the National Budget (Table 27).

Accordingly, at February 2012 the balances of capital reserve were as follows: currency fluctuation reserve, \$2,276.2bn pesos;<sup>77</sup> ii) monetary and exchange stabilization reserve, \$107.9bn pesos, which can be used for future losses; and iii) asset protection reserve, \$0.1bn pesos.

Table 27  
Distribution of profits  
(billions of pesos)

<b>A. Fiscal-year result (loss)</b>	<b>(356.1)</b>
<b>B. Less allocation to reserves</b>	<b>5.6</b>
Foreign-exchange result reserve	0.0
Foreign-exchange fluctuation reserve	0.0
Monetary and currency stabilization reserve	0.0
Net investment in cultural-activity property	5.6
<b>C. Plus use of reserves</b>	<b>361.6</b>
Foreign-exchange result reserve	0.0
Foreign-exchange fluctuation reserve	149.3
Monetary and currency stabilization reserve	212.3
Asset-protection reserve	0.0
<b>Net result to be credited or debited to the government (A – B +C)</b>	<b>0.0</b>

Source: Banco de la República.

77       The currency fluctuation reserve is intended to cover potential losses from fluctuations in the dollar’s exchange rate against the other currencies in which the Bank’s foreign-currency assets and liabilities are denominated. Such other currencies are mostly the ones that make up the international reserves.

## D. INCOME AND EXPENDITURE FORECAST FOR 2012

A negative operating result of \$467.7bn pesos is forecast for 2012, with income projected at \$941.9bn pesos and expenditures at \$1,409.6bn pesos (Table 28).

External interest rates are expected to remain at all-time lows in 2012, which means that income from return on international reserves will continue to be moderate, affecting the Bank's income statement, as explained above.

Income is forecast to grow by \$57.7bn pesos (6.5%) over the year, to \$941.9bn pesos. The main income items are the following:

- Return on international reserves is projected at \$388.5bn pesos, with an average return rate of 0.52%, higher than last year's 0.34%. The exchange rates of the currencies in which reserves are invested and the price of gold are expected to stay at the average levels observed in the first two months of this year: 0.7% appreciation in the euro and 7.9% rise in the price of gold. Note that returns on the portfolio may be affected if the euro depreciates or appreciates against the dollar, or if the price of gold is different from the projected values.<sup>78</sup>
- Repo liquidity operations are estimated at \$119.6bn pesos, down by \$121.5bn pesos (50.4%) on last year, because a considerable part of the financial system's higher liquidity demand is to be met by daily purchases of international reserves, already put in place by the Bank.
- Income from valuation gains on TES securities held by the Bank is estimated to grow by 9.1% to \$78.4bn pesos.<sup>79</sup>
- Greater circulation of coins will generate income, at face value, of \$135.6bn pesos, up by 55.9%. This growth is mainly associated with putting into circulation in the second half of 2012 approximately 45 million new coins of 1,000 pesos.

*External interest rates are expected to remain at all-time lows in 2012, affecting the Bank's income statement.*

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<sup>78</sup> The euro's average exchange rate against the dollar: \$1.3067. Average price of gold: \$1,698.5 per troy ounce.

<sup>79</sup> Although the balance of local public-debt securities forecast for December 2012 (\$776.1bn pesos) is lower than the actual balance a year earlier (\$1,153.8bn pesos), this portfolio is expected to provide income from valuation gains, based on the observed behavior of the market's average trading rates in the first two months of 2012.

Table 28  
Banco de la República's projected income statement for 2012  
(billions of pesos)

	Executed	Projected	Annual change	
	2011	2012	Percentage	Absolute
<b>I. Income</b>	<b>884.2</b>	<b>941.9</b>	<b>6.5</b>	<b>57.7</b>
A. Monetary income	712.1	784.2	10.1	72.1
1. Interest and returns	565.1	586.9	3.9	21.8
International reserves	250.0	388.5	55.4	138.5
Returns	399.6	326.2	(18.4)	(73.4)
Exchange-rate differential	(149.6)	62.3	(141.6)	211.9
Liquidity operations	241.2	119.6	(50.4)	(121.5)
TES valuation gains/losses	71.9	78.4	9.1	6.5
Other interest	2.0	0.3	(85.4)	(1.7)
2. Exchange differences	31.5	36.2	15.0	4.7
3. Coins	87.0	135.6	55.9	48.6
4. Other	28.5	25.5	(10.7)	(3.1)
B. Corporate income	172.1	157.7	(8.4)	(14.5)
1. Fees	107.1	108.8	1.6	1.7
Banking services	51.6	49.6	(3.8)	(2.0)
Fiduciary operations	55.5	59.1	6.6	3.7
2. Non-monetary gold	44.4	0.0	(100.0)	(44.4)
3. Other	20.7	48.9	136.6	28.2
<b>II. Expenditures</b>	<b>1,240.3</b>	<b>1,409.6</b>	<b>13.6</b>	<b>169.3</b>
A. Monetary expenditures	792.3	875.3	10.5	83.1
1. Interest and returns	585.8	581.8	(0.7)	(3.9)
Remuneration on Finance Ministry accounts	547.8	508.7	(7.1)	(39.1)
IMF flexible commitment fee	22.0	26.7	21.2	4.7
International-reserve management expenses	8.2	22.1	169.2	13.9
Monetary-contraction operating expenses	7.8	24.4	212.4	16.6
2. Exchange differences	59.3	113.7	91.9	54.4
3. Cost of issuing and distributing bills & coins	147.0	179.6	22.1	32.5
4. Other	0.2	0.2	16.3	0.0
B. Corporate expenditures	343.5	385.4	12.2	42.0
1. Personnel costs	221.9	241.0	8.6	19.2
2. Overhead	51.2	56.8	10.9	5.6
3. Recovery of deductible VAT (CR)	(1.6)	(1.3)	(19.9)	0.3
4. Taxes	6.8	7.3	7.1	0.5
5. Insurance	6.1	6.6	8.7	0.5
6. Contributions and membership dues	3.0	6.4	110.7	3.3
7. Cultural expenditures	9.0	9.5	5.8	0.5
8. Depreciation, provisions, debt repayments & other expenditures (including deferred software costs)	47.2	59.1	25.4	12.0
C. Pensioners' expenses	104.5	148.8	42.3	44.3
<b>III. Operating result (I - II)</b>	<b>(356.1)</b>	<b>(467.7)</b>	<b>31.4</b>	<b>(111.6)</b>

Source: Banco de la República.

- Fees received by the Bank, mainly for managing TES securities and operating the Central Securities Depository, will come to \$108.8bn pesos, growing by 1.6% over the year.
- As stated above, the gold that was held in the Bank's vaults was incorporated into the international reserves in 2011; no movement is therefore projected for this year in the item of "non-monetary gold". Changes in the external price of gold will be reflected in the item of "return on reserves".

Expenditures for 2012 are projected at \$1,409.6bn pesos, with a growth of \$169.3bn pesos (13.6%). The following are the main items:

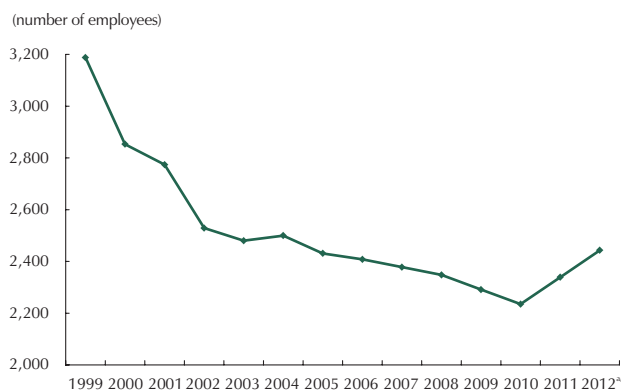
*The gold that was held in the Bank's vaults was incorporated into the international reserves in 2011.*

- Remuneration on deposits of the Finance Ministry's National Treasury and Public Credit Office held at the Bank is expected to fall by 7.1%, to \$508.7bn pesos, as a result of an expected decrease in the average balance of the deposits.
- The cost of issuing and distributing monetary species is estimated at \$179.6bn pesos, 22.1% higher than in 2011, resulting from execution of the monetary-species issuing program.
- The net result of income and expenditures relating to currency differentials is projected at -\$77.5bn pesos based on the exchange rate observed in the first two months of this year. Differentials affect exchange adjustments on foreign-currency accounts other than international reserves.
- Corporate expenditures are forecast to amount to \$385.4bn pesos, with \$241.0bn pesos representing personnel costs and \$56.8bn pesos overhead.
- Personnel costs will grow by 5.4% in real terms owing to: i) a salary rise of 5% (estimated as 2% over the inflation target of 3.0%) under the collective bargaining agreement currently in force; ii) the statistical effect of replacing the employees who retired under Constitutional Amendment 1 of 2005, which was concentrated in the second half of 2011<sup>80</sup> and hence the full effect of the payments involved will materialize in 2012; and iii) an increase in personnel to meet new needs, such as the reopening of the library in Neiva,

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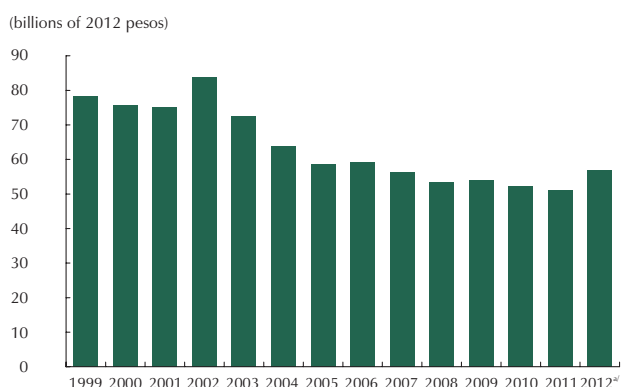
80 Of the 556 employees who became eligible for retirement in 2006-2010, 530 retired. Of the income realized by the Bank in 2010, 52% was covered in the second half of the year, and of the income realized in 2011, 59% became effective in the second half. In real terms, personnel costs fell by -4.5% in 2010 and rose by 0.1% in 2011.

Graph 89  
Changes in total payroll staff



a/ Estimated payroll staff.  
Source: Banco de la República.

Graph 90  
Overhead



a/ 2012 forecast based on the inflation target.  
Source: Banco de la República.

management of the Savings and Stabilization Fund, and enterprise-resource planning and infrastructure projects<sup>81</sup> (Graph 89).

- Overhead is projected to rise by \$5.6bn pesos (7.6% in real terms), to \$56.8bn pesos (Graph 90). Note that overhead has been trending down in recent years, as a result of implementation of programs to rationalize spending, savings campaigns and administrative-management measures. However, overhead is projected to rise in 2012, mainly because of: i) the high share of agreements that are adjusted by the minimum-wage increase and last year's inflation; ii) execution of projects connected with the maintenance and remodeling of a number of Bank properties across the country that are in a very bad state of repair and were further damaged by last year's rainstorms; and iii) the reopening of the library in Neiva.
- Other corporate expenditures not under direct control of the Bank are estimated at \$79.4bn pesos and include taxes, insurance, depreciation, provisions, debt repayments, contributions and membership dues.<sup>82</sup>

- Lastly, net pension expenditure is estimated to rise by \$44.3bn pesos, to \$148.4bn pesos, as a result of higher monthly payments, financial aid and social-security contributions, and lower projected income from return on the portfolio of pension liabilities.

81 The purpose of the enterprise resource planning project is to unify the Bank's processes of providing goods and services (budgeting, engaging and paying suppliers); inventory and asset maintenance; developing an accounting plan in line with international accounting standards; personnel management processes (payroll, social benefits, parafiscal contributions insurance, staff recruitment, career plans, and performance management; production of bills and coins (production planning). All this will be supported by information-technology tools and document-management systems (management of archives, documents and agreements).

82 Contribution costs are projected to grow considerably because of payment of \$2.2bn pesos in fiscal-control charges for fiscal years 2009, 2010 and 2011, as estimated by the State Comptroller's Office.

## BANCO DE LA REPÚBLICA'S MEMBERSHIP OF THE BANK FOR INTERNATIONAL SETTLEMENTS

In December 2011 Banco de la República subscribed 3,000 shares of the Bank for International Settlements (BIS), an institution made up of the world's major central banks and based in Basle, Switzerland. BIS fosters international monetary and financial cooperation and provides financial services to its members.

Banco de la República's membership of BIS and payment of the respective contribution with funds from the international reserves were authorized by Law 1484 of 2011. The respective bill was submitted by the Ministry of Finance and Public Credit to the Colombian Congress in September of the preceding year and passed into law on December 12, 2011. The amount of the investment came to SDR 65,712,000 (US\$100,978,715) and involved the recomposition of the Bank's foreign-currency assets into accounting items of "international reserves" and "contributions to international organizations and entities". As a shareholder of BIS the Bank is entitled to receive an annual dividend, which for this first year will be prorated from the date of payment of the subscription.<sup>1</sup>

BIS membership constitutes recognition of Colombia's growing importance in the global economic context and of the Bank's substantial contribution to international economic and financial cooperation. Moreover,

pursuant to the 2010-2014 National Development Plan's strategic guideline of strengthening and diversifying international cooperation, BIS membership complements participation by the country and the Bank in multilateral settings such as the International Monetary Fund (IMF), the Latin-American Reserve Fund (FLAR) and the Andean Development Corporation (CAF).

It also signifies for the Bank greater connection and cooperation with the major central banks of the world, through active participation in periodic meetings held at BIS headquarters. Discussions at such meetings revolve around recent events, global and regional economic and financial prospects, and, where circumstances warrant, coordinated policy decision-making between central banks. Thus, membership of BIS facilitates analyzing financial markets and exchanging viewpoints and experiences with different countries. This is beneficial to formulating and implementing effective economic policies and understanding their potential effects. Furthermore, at BIS the economic authorities of member countries take part and have a say in specialized working groups (committees) where policies are discussed and designed for preserving global monetary and financial stability. This is of benefit to the Bank and the country's financial oversight and regulatory entities.



This Report was coordinated, edited and diagrammed by the Publications Section of the Bank's Economic and Financial Education Department, in 10.5-point Times New Roman characters.

Translated by Fereshteh Ebrahimzadeh