# Inflation outlook

This chapter of the *Inflation Report* presents the Monetary Policy Committee's (Copom) assessment of the behavior of the Brazilian economy and of the international scenario since the release of the previous Report in June 2008, as well as the analysis of the inflation prospects up to the third quarter of 2010 and of the Gross Domestic Product (GDP) growth up to the end of 2008. One should highlight that since the March 2008 Inflation Report, Copom starts to systematically release inflation forecasts for a period of two years, starting from the first month after the Report release, a procedure similar to the one previously adopted in the case of Reports released in each December. Thus, *Reports* published in March, June and September, which used to consider inflation forecasts for the current year and the next, henceforth they will contain forecasts for a two-year span. Inflation projections are presented in two major scenarios. The first scenario, called the baseline scenario, assumes that the Selic rate will remain unchanged at 13.75% per year, over the forecasting horizon a value decided by Copom in its last meeting, on September 9 and 10, and that the foreign exchange rate will remain at R\$1,80 per US dollar. The second, named market scenario is based on the expected paths for Selic rate and for the foreign exchange rate drawn from the survey carried out by Central Bank's Gerin with private sector analysts. The projections released here utilize the set of information available up to cut-off date of September 12, 2008. It is important to stress that these scenarios are used as support for monetary policy decisions and should not be viewed as Copom forecasts of the future behavior of interest and exchange rates.

The projections for Inflation and GDP growth released in this Report are not point estimates. They consist of probability intervals which embody the degree of uncertainty present in the above mentioned cut-off date. Inflation forecasts depend not only on assumptions over interest and exchange rates, but also on a set of assumptions on the behaviour of the external variables. The most likely set of assumptions considered by Copom is used to build up the scenarios to which the Committee attaches the greatest weigh on making its interest

rate decision. On setting out these assumptions, the Copom seeks to foster transparency to the monetary policy, thereby contributing to the effectiveness of policy decisions in controlling inflation, which is its primary objective.

### Inflation determinants

The inflation measured by the IPCA growth reached 4.48% over the year up to August, against 2.8% in the same period of 2007. Since January, the twelve-month inflation rate stands higher than the center of the target, with an increasing gap since then. Actually, twelve-month inflation up to August stood at 6.17% (against 6.37% in July and 4.18% in August 2007). This upturn in inflation – initiated in the first half of 2007 – is largely due to the mismatch between the expansion pace of demand and supply, in a context of pressure – observed on a global scale – on the prices of agricultural commodities, namely beef, milk and dairy products, which started to increase with higher intensity last year, and which, notwithstanding the downturn registered in the latest weeks, still remain on historically high levels. These increases are due to structural factors which tend to persist such as the higher demand by big Asian countries – China and India – and the displacement of some crops, such as corn, for biofuel production.

Additionally, transitory factors, such as weather conditions, also put pressure on food prices, as well as tariff and nontariff barriers to the trade of specific products by several countries in the latest months. Mainly in the first quarter, a more intensive increase of oil prices - significantly decreased since the last Inflation Report, though still remains at levels higher than the average prices observed in previous years - and high readjustments on prices of some nonagricultural commodities, for example, iron ore – though the metal commodities also had shown decreases in their costs since the last Inflation Report - joined up with the above factors. Another important difference in the inflation upturn comes from the behavior of the regulated and monitored prices which, in 2007, for the first time since the inception of the Inflation Targeting System in 1999, increases lower than the market prices, a trend which persists in 2008, but it is not expected for next year. Actually, while, over the year up to August market prices grew by 5.4%, and the regulated prices grew by 2.37%. On the other hand, sharp general prices increase and with the end of the tariff revision cycle in the electricity sector anticipate a higher pressure the administered prices in the next quarters. The behavior of nontradable prices indicates that the demand pressure

continues to have a relevant impact on inflation dynamics. Therefore, among the set of market prices, nontradables prices increased 8.41% in twelve months up to August, and the increase in prices of nontradable goods, although smaller (6.82%), also stood higher than the upper limit of the inflation target.

According to IBGE-seasonally adjusted data, GDP at market prices grew by 6.1% in the second quarter of 2008 compared to the same quarter of the previous year and by 1.6%, against the first quarter. From the production viewpoint, the agricultural sector grew by 7.1%, compared to the same period of the previous year, while the industry and the services sector reached 5.7% and 5.5%, respectively. Regarding demand, Gross Fixed Capital Formation (GFCF) expanded 16.2%, against the same quarter of the previous year, followed by household and government spending, which grew by 6.7% and by 5.3% respectively. Just as it has been occurring since the first quarter of 2006, growth was exclusively due to domestic market. Actually, domestic demand contributed with 8.6 p.p. in the GDP expansion of 6.1% of in the second quarter, while the external sector contributed with -2.5 p.p. Copom considers that, even with the prospects of weakening of global economy compared to the situation at the time of release of the last Report, the upturn in domestic demand activity should continue, with some moderation, in the next months, favored by several sustaining factors that still impact on economic activity, such as credit and employment expansion. Taking into account, additionally, the narrowing of the factor market observed in the latest quarters, the Copom assesses that the pace of demand expansion continues to dominate the risk balance for inflation.

At a moment when global growth cools off more rapidly than was expected some months ago, and that expectations of world economy expansion continues deteriorating, private spending has been contributing, in an important way, to sustain domestic demand. In fact, in the first quarter of 2008, household spending grew 6.7% in relation to the same period of the previous year. This robust performance can also be seen, and anticipated through retail data. The seasonally adjusted series of expanded retail sales registered increase of 1% in July 2008, as compared to the previous month, after increases of 1.3% in June, 1.1% in May, 1.5% in April and 1.3% in March. As a consequence, the average of the quarter ended in July registered growth of 3.8% as compared to the quarter ended in April. In comparison with the previous month, there was growth of 16.5%, compounding 14.6% over the year and 14.2% in twelve months. Over the year, there were increases in all surveyed segments, with emphasis to "office equipment, informatics and communications", 29.2%; and "automotive, motorcycles, parts and spares", 22.9%; "other articles of personal and domestic use", 21.5%; "furniture and home appliances", 18.6%. The segment that registered the lowest growth in the period (5.8%) was that of "supermarkets, food, beverages and tobacco".

The growth in economic activity has been producing steady improvements in the labor market. In July, according to PME, the working population increased by 4% as compared to the same month of the previous year, and 3.6% in twelve months. The average nominal earnings of the working population rose by 10.5% in July, on the interannual comparison, the highest since December 2005, led by the increase in the public sector wages. On the other hand, the real average earnings fell by 3% compared to July 2007, causing a 7.2% increase in the real overall wages on the same basis of comparison and 5.9% in twelve months. The employment level in the manufacturing industry registered, in July, growth of 4.4% in relation to the same months of 2007 according to CNI data. In relation to CLT formal employment, data released by MTE indicates that respective growth intensified in 2008, with the creation of 1.8 million job positions up to August, a number higher than that registered in 2007, when it registered the highest annual balance of Caged's historical series. In percentage terms, formal employment expansion in 2008, up to August, was led by the civil construction (17.7%), followed by commerce (6.7%), manufacturing (6.2%) and services (5.9%). The favorable developments in the labor market strengthen the perception, expressed by Copom in previous Reports, that the wage bill will continue to be one of the sustaining pillars of aggregated demand. One should mention that the favorable performance of the labor market has contributed to maintain consumer confidence indices at high levels.

Credit availability to households, favored by macroeconomic stability and institutional advancements, despite the increase in the resource acquisition cost by financial institutions, has been another important boosting component of private spending. In twelve months up to July, the financial system credit (with earmarked resources) to households grew 30.7%, with emphasis on the expansion of leasing operations (141.7%). One should mention that this credit expansion has been followed both by the average term lengthening and by the relative stability of default. Concerning the prospective scenario, market analysts and banking sector representatives expect that the credit will continue expanding in 2008, especially in some segments like the real estate, although with some moderation on the margin, due to the lagged effects of monetary policy and, also, of some repercussions of tightening financial conditions on a global scale.

On the other hand, investment has been shown as the most dynamic component of domestic demand. After an increase of 10% in 2006 and 13.4% in 2007, the GFCF increased, in real terms, 15.7% in the first semester of 2008, as compared to the same period of the previous year. As GDP share, the GFCF increased from 17.5% in the second half of 2007 to 18.7% in the second quarter of 2008, the highest value since the beginning of the series, in 2000. The behavior of the investment reflects heated activity in an environment of economic stability, increased companies' earnings, reduction in import costs and improved financial conditions.

In fact, there is evidence that credit expansion has been helping to sustain investment expansion. Credit with earmarked resources to corporate entities grew by 41% in twelve months up to July, and 19.1% this year. However, loans disbursements and financings through BNDES system resources increased 42.8% up to July 2008 in relation to the same period of the previous year. Besides, on the capital market, the volume of initial public offerings of shares (R\$31.7 billion up to August) as well as debenture issuances (R\$5.7 billion up to August, excluding the issuances carried out by leasing companies) contributed to financing investments in practically all sectors. On the one hand, the strengthening of the real also had importantly favored investment growth, since the cost of importing capital goods was reduced. On the other hand, the deepening of the PAC implementation process should expand public investments on infrastructure. In summary, even in the context of a greater than anticipated world economy deceleration, in the next year, and of higher volatility in the global markets since mid-2007, the combination of profitability and high confidence, coupled with favorable financing conditions, should contribute to the continuity a benign performance, despite the volatility which characterizes the investment series.

According to IBGE, government spending grew 5.3% in the second quarter of 2008, in relation to the same period of 2007, a development which was accompanied by strong increase of public revenues. In spite of not counting anymore on tax revenues from the Provisional Contribution on Financial Operations (CPMF), the Central Government's revenues increased 17.7% over the year up to July, compared to the same period of the previous year. On the other hand, the ICMS revenues, the main state tax, increased 18.9% up to June, against the same period of the previous year. In the face of budgetary conditioning, currently prevailing in the country's public policy guidelines, it is expected that the growth in government spending remains robust in the next quarters.

Concerning the foreign sector, after registering a US\$40 billion surplus in 2007, the trade balance registered US\$16.9 billion in the first eight months of 2008, a value 38.4% lower than that observed in the same period of the previous year. The result of trade balance is due to exports of US\$130.8 billion and imports of US\$113.9 billion. Despite the relative loss of dynamism in exports, one should mention that the results of the beginning of the year were negatively affected by specific factors linked with the Federal Revenue officers' strike, the delay of the grains harvest and the lockout of rural producers in Argentine. In fact, despite the relevant reduction in the results of the trade balance compared to the previous year, this difference has been falling for five consecutive months. Part of this relative recovery also reflects significant price adjustments of important export products, such as iron ore.

Concerning exports, after an observed growth of 5.5% in 2007 (against 3.3% in the previous year), a cutback of 0.7% was verified in the first seven months of the year, the first cutback on this basis of comparison since 2003, partly reflecting the effects of foreign demand deceleration and reallocation to domestic market of part of production previously directed to the external market. On the one hand, after growing 22% in 2007 (against 16% in 2006), the imports registered growth of 23% in the first seven months of the year. It is important to highlight that the cutback in exports volume was partially offset by the increase in the exports prices, which, even after increasing 12.6% in 2006 and 10.6% in 2007, showed a significant rise of 27.2% in the first seven months of 2008. On the other hand, import prices, which grew 8.1% in 2007 (against 7% in 2006), also showed an expressive growth in the period (23.5%). In this way, despite evidence pointing to an important reduction in the trade balance in 2008, Copom does not foresee an abrupt reversal in the trade balance in the short term.

One should stress that the high volume of imports reflects, in a good extent, the significant growth of external purchases of capital goods, after growing 32.1% in 2007, the highest rate since 1998, it still accelerate on the margin. In fact, the growth observed in the first seven months of the year topped 38.9%. In part, reflecting these developments, the net exports contribution to the aggregated demand growth was negative by 2.5 p.p. in the second quarter of 2008, just as it occurred in the latest years (-1.4 p.p. in 2006 and 2007). The evolution of net exports is due to the effects of the acceleration of domestic demand activity vis-à-vis the situation of our trade partners. Copom assesses that net exports has become less effective as auxiliary instrument to maintain price stability. The recent behavior of prices of Brazilian assets, especially foreign exchange rate, corroborates this. Concerning current transfers, Copom works with the assumption of deficit in 2008. In fact, in the latest twelve months, the deficit reached US\$19.5 billion, 1.4% of GDP, while the net inflow of direct foreign investments totaled US\$30.1 billion, corresponding to 2.2% of the GDP.

The external scenario showed relevant changes since the last *Inflation Report*. After more than one year since its outbreak, the subprime crisis, which not only affected the real state market, but also the North-American financial and credit market before having effects on the financial system of other countries – especially on the main European economies – continue far from a solution. Some signs indicate that there will be strong impacts on the global economy. The losses declared by the financial institutions up to the moment reach high numbers, and significant new losses are expected. After a period when the crisis apparently showed signs that it had reached an inflexion point, it is plausible to assume that the expectations for global economy deteriorated even further since the release of the last Inflation Report. Europe, whose real sector seems to be, at a first moment, showing some resilience to adverse developments of the financial system, appears to be suffering the cumulative effects of the exchange terms deterioration, of the deterioration in the financial conditions, of the higher risk aversion and of more pessimistic prospects for world growth in 2008 and 2009. Therefore, the European Central Bank, which had increased the interest rate in a context of lower tolerance to inflation, interrupted the contractive movement and started to observe the economic deceleration with greater attention.

In fact, although the subprime mortgage crisis had originated in the USA, are signs, up to the moment, that the European economy would be even more strongly affected than the American economy. One should note that the USA economy displayed a non negligible growth in the first half year, after having grown in 2007. Notwithstanding the effects of the expansionary fiscal package implemented at the beginning of the year seem to have vanished, expectations of recession in a near future gains momentum. Stronger indication seems to come from the labor market, which clearly reflect the lower economic activity level, with sharp increase of the unemployment rate, worsening even more consumer confidence, and importantly contributing to reduce

spending. Besides, Japan, which did not seem to have been strongly affected by the financial crisis – especially due to the intensive trade with other countries of the region – experienced strong downturn in the second quarter.

One should mention that, in the case of the USA and, more importantly, of Europe and Japan, the worsening terms of trade caused by the increase in the commodity prices had contractionary effects on disposable income; on corporate earnings and on household and business confidence. Thus, the reduced prices of primary products must contribute toward easing the tendency for economic slowdown in these regions.

On the other hand, the crisis impacts on emerging economies are still limited. One should highlight, therefore, the raising of some signs, still incipient, of deceleration in China. It is not clear, however, if they stemmed from specific factors, associated, for example, to weather events or to the Olympics, or it really anticipated a tendency. Additionally, the recent decrease in commodity prices may contribute to mitigate the monetary policy dilemma faced by several central banks, especially in countries which import raw materials, where inflation and economic activity have been moving in opposite directions. In this sense, one should mention that raw materials, not negotiated on the stock market, such as iron ore, continue with their prices quite under pressure, suggesting that the recent fall in commodity prices may have been exaggerated by the movement of closing positions by financial investors and, therefore, overestimating the deceleration condition.

As consequence of the above scenario, the growth prospects of the world economy became worse since the last Report as well as the risk balance, which started to present a clearly negative bias to the activity. The dominant scenario seems to indicated a more consistent recovery only in 2009 or even in 2010. On the other hand, the commodity price decrease, especially of oil, seems to indicate that world inflation which continues quite high – would have already reached its peak.

Regarding the aggregate supply, the three economic sectors showed quite robust performance in the second quarter of 2008. The level of activity in manufacturing grew by 5.7% (6.9% in 2007) as compared to the same period of 2007. The services also presented strong growth, expanding 5.5%, compared to the same period of the previous year (4.5% in 2007). The best performance was shown by agriculture, which grew 7.1%, recovering from the bad performance

observed in the previous quarter (3%), and showing strong acceleration, as compared to the same period of 2007 (1.1%). One should highlight that the weak result in agriculture, in the first quarter, was due adverse specific factors, such as delays of harvests of some important crops. In this way, the performance in the second quarter only recovers the strong growth tendency initiated in the third quarter of the previous year. In fact, the expansion of this sector in the latest two quarters of 2007, on this basis of comparison, was quite significant (9.7% and 8.6%, respectively).

After expressive increase of 6% in 2007 – the highest rate in the latest three years and the second since 2001 – industrial production accelerated and presented expansion of 6.6% in the first seven months of 2008. In this period, manufacturing expanded 6.5%, while mining increased 6.8%. Consequently, after a growth rate lower than manufacturing in 2007 – not the usual dynamics over the years – the mineral extractive industry returned to grow more than the manufacturing industry. Data already released concerning the latest months, pointed the continuity of the industrial growth cycle, even with a pace conditioned by possible limitations to supply expansion and by effects of monetary policy actions.

While from the supply viewpoint, GDP grew 6.1% in the second quarter, compared to the same period of the previous year, from the demand viewpoint – excluding inventory adjustments – expansion topped 5.6%. In this regard, considering only the manufacturing, FGV's Economic Outlook Survey August data shows that, since October 2007, the inventory indicator remained for the sixth consecutive month higher than 100 – a level higher than the number of companies that considers the inventories as not sufficient surpasses the ones which considers that their inventories are excessive – but returned to fluctuate around 100 since February, which suggests that the inventories have been maintained close to the levels planned by the surveyed companies. On the other hand, according to the CNI, at the end of June, the final inventories remained at a level higher than the one registered in the corresponding period of the previous year. Besides, the difference between planned and effective inventories, which had been posed lower than 50 in the last quarter of 2007 – a level which indicates effective demand higher than anticipated – returned to stand higher than 50 since that time, which from this viewpoint may suggest some moderation, on the margin, of the mismatch between supply and demand.

On the other hand, the Nuci reached 83.7% in July, showing increase against the rate of 83.1% registered in June,

according to the CNI seasonal adjusted data released by the Central Bank. The CNI seasonally adjusted data, which had decreased in May, returned to increase in June and July, reaching in this last month the record level of 83.5%. Considering the series without seasonal adjustment, in July, the Nuci stood 1.47 p.p. higher the level registered in the same month of 2007. As a result, the average rate of the first seven months of the year was 1 p.p. higher than the one observed in the corresponding period of 2007. Additionally, the monthly non seasonal adjusted Nuci calculated by the FGV, reached 86.5% in August, 0.8 p.p. higher than the level observed in the same month of 2007.

Generally, the high level of capacity use mirrors economic activity deceleration and it is manifested in several sectors, notwithstanding the substantial growth of investment volume. The FGV's Economic Outlook Survey on the manufacturing industry shows that, between April and July, there was growth of 1 p.p., in the number of companies considering that there will be limitation in their production increase. Nevertheless, when the figures of July and January are compared, it is verified an increase of 2 p.p. (38% against 36%, respectively). As concerns the expansion capacity, the absorption of capital goods, which had been showing high growth rates (5.1% in 2005, 13.9% in 2006 and 19.6% in 2007), remains robust in 2008, and registers expansion of 19.6% up to July, compared to the same period of the previous year. This performance reflects not only the strong growth of capital goods imports (39% in volume up to July), but also in the production of these goods (19.9%). One should highlight the growth of 10.5% in the construction inputs, the highest growth on this basis of comparison since April 1995. On the other hand, taking into account the recent behavior of the capacity utilization rates, the timely maturation of investment projects is a crucial factor to avoid the deepening of the important mismatch verified between the growth in supply and aggregated demand in the latest quarters, which has exacerbated the inflation.

The National Cost of Construction Index – Domestic Availability (INCC – DI) shows an increase in production costs associated to this sector. The INCC growth over the year up to August reached 9.24% against 4.09% registered in the previous year. On one hand, growth in the latest twelve months topped 11.4% in August, a value 6.4 p.p. higher than the one verified in the same period of 2007. This development has been raising concerns regarding possible supply restrictions in this segment which, given its production structure, would hardly be relieved by imports. Besides, the construction industry seems to face cost pressures given the apparent scarcity of specialized labor. The worries about the price evolution in the construction industry are reinforced by the prospects of aggregated demand expansion in an environment where financial conditions remain favorable.

Upon overcoming the "courage" effect, typical of the initial phases of expansion cycles, the economically active population (PEA) growth has been decelerating. In twelve months up to July expansion reached 2%, against 2.8%, compared to the same period of the previous year. This dynamics coupled with the accelerated pace of economic activity and to the consequent expansion of labor demand, contributed to faster downfalls in unemployment rates. Actually, unemployment rate stood at 8.1% in July against 9.5% and 10.7%, respectively in the same months of 2007 and 2006. Consequently, the average rate of unemployment in the year up to July (8.2%) stood 1.6 p.p. lower than the one verified in the same period of the previous year. On analyzing the average rate in twelve months, it is verified that July registered the eighteenth consecutive cutback on this basis of comparison. With the strong upturn in labor demand, the PEA tendencies were maintained, and unemployment rates may decline over next months, which might lead to pressure for stronger wages increases possibly higher than the growth in labor productivity.

The oil price, a systematic source of uncertainty of the international scenario, has fallen since the latest Inflation Report release, but it continues quite volatile, suggesting caution in the interpretation of its recent dynamics. This behavior has not only reflected the lower demand by developed countries, in a context of economic deceleration, but, especially, worries of stronger global deceleration in the next quarters. One should highlight that the impact of international prices of oil on domestic inflation is not exclusively transferred through fuel prices, but also, for example, through the production chain of the petrochemical sector and through consumer and entrepreneurs' expectations. The price volatility of other imported commodities continues equally high, although, likewise oil, prices had been falling with some intensity since the last *Report*, due to the greater uncertainties concerning the prospects of world demand growth, as well as the greater turbulence in the global financial markets.

After more than doubling in 2007 (7.89%, against 3.79% in 2006), broad inflation – measured by IGP-DI – continued to increase in 2008. Up to August, IGP-DI rose by 7.93% against 3.23% in the same period of the previous year and, in twelve months, 12.8%, a percentage 7.61 p.p. higher than

that for the same period of 2007. The strong acceleration of the index was essentially due to the behavior of IPA-DI which expanded 15.7% in the latest twelve months, against 5.49% in 2006. On the other hand, on the same basis of comparison, the IPC-Br and the INCC increased, respectively, 5.93% and 11.4%, against 4.47% and 5.04% observed in the same period of the previous year. Still about the Wholesale Price Index (IPA), one should note that the industrial price acceleration, the process initiated in the second half of 2007 and was intensified in the latest quarters. In fact, the industrial price inflation in twelve months up to August (13.37%) remained 10.72 p.p. higher than the value registered in the same period of the previous year, and the agriculture prices (22.51%), 7.64 p.p. Nevertheless, one should mention that the agriculture prices growth reached, in twelve months up to August, a level markedly higher than that registered by industrial prices. As highlighted in previous Reports, Copom assesses that the effects of wholesale prices on consumer inflation will depend on current and prospective conditions associated to demand and price-setters expectations regarding the path of future inflation.

The benign scenario for consumer prices which materialized in 2006, started to revert by mid-2007 and showed higher deterioration since the beginning of the current year. These developments were considered in thee risk balance posed by the Committee in previous *Reports*, which anticipated that twelve-month inflation could accelerate this year. Similarly to what occurred in 2007, this year the market prices grew markedly more than the regulated and monitored prices, with latter reducing the IPCA acceleration. While market prices grew 5.4% in the first eight months of the year (7.64%) in twelve months), regulated prices only increased 2.37% (2.84% in twelve months). In the set of market prices, the price of nontradable goods increased 5.53% up to August (8.41% in twelve months), while the price of tradable goods grew 5.27% (6.82% in twelve months).

The three measures of core inflation calculated by the Central Bank registered, up to August, values higher than the ones verified in the same period of the previous year. Besides, the twelve-month inflation remained higher than the center of the target in all the cases. Actually, over the year up to August, the core that excludes monitored prices and food at home prices registers inflations of 4.18% (2.45% in the period in 2007), the smoothed trimmed mean core stands at 3.26% (2.47% in the same period of 2007) and the non-smoothed trimmed mean core shows inflation of 3.52% (2.24% in the same period of 2007). In twelve months the values are 5.87%, 4.85% and 4.92%, respectively.

Figure 6.1 - Inflation target path and market expectations for twelve-month ahead inflation

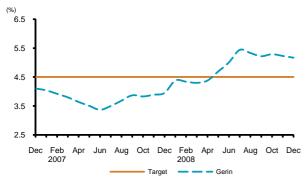
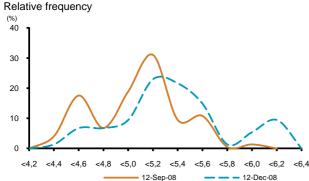


Figure 6.2 - Dispersion of inflation expectations for 2009



As mentioned in the last Inflation Report, inflation expectations for 2008 has continued rising, in some moments even higher than the center of the target (6.5%), actually standing at 6.26%, against 5.8% in July. For 2009, expectations have also deteriorated, increasing from 4.63% in June, to 4.99%, influencing the prospective scenario posed by Copom. For 2010, expectations have stood at 4.5%. In the Copom assessment, these developments, as well as the inflation acceleration in 2007 and 2008, indicate that the inflation convergence to the target in 2009, even facing activity deceleration scenario on a global scale, requires the timely actions by the monetary authorities through adjusting the basic interest rate.

# 6.2 Main scenario: associated risks and monetary policy implementation

The projections used by Copom are based on a set of assumptions about the behaviour of the main macroeconomic variables. This set of assumptions, as well as the risks associated with it, make up the main prospective scenario based on which the Committee makes policy decisions. In general terms, the prospective scenario - whose corresponding projections are presented in the following section – considers intensification of the global crisis compared with the assessment of the previous Inflation Report, with the continuity of turbulences in the financial markets, on the external side, and slowing down of the economic activity, on the domestic side. More importantly, however, the main scenario contemplates high uncertainty. In particular, from the viewpoint of the balance of risks related to the inflation prospects, even though the materialization of a scenario in which inflation diverges from its target became less probable, there remain both offsetting and reinforcing factors.

There are three main risks associated with the main scenario: those related to the duration and magnitude of the global crisis; the risks associated with the exchange rate pass-through due to the strong depreciation of the domestic currency; and those related to the pace of the domestic economic activity.

Compared with the previous Inflation Report, the main scenario considers a stronger contraction of the economic activity worldwide and, in particular, the effects of the worsening global crisis on the emerging market economies. After a period in which the effects of the global crisis over the

emerging markets were expected to be – and in fact they were – less pronounced due to the robust growth of commodity prices, in the latest months these economies began to suffer more strongly the impacts of the crisis. The increase in risk aversion since mid-September has led the authorities of the US, Europe, Asia and Oceania to implement unprecedented intervention in their financial systems using a wide range of instruments in order to ensure the minimum conditions for the functioning and liquidity of money markets. Despite the perception that the systemic risk has decreased, interbank markets are still pressured by the fact that financial institutions will starting closing their balance sheets soon as the end of the year approaches. The worldwide liquidity contraction continued to help fund managers to deleverage their positions, which has put further downward pressure on asset prices. In such an environment, in which risk aversion is high and capital flows are reduced, the currencies of the emerging market economies are still under pressure.

On the global macroeconomic scenario, the dominant view still points to a modest expansion of the world economy in 2009, but data released in the latest weeks indicate an intense and widespread weakening of the economic activity in mature economies as well as in important emerging market economies. There is evidence that the more pronounced fragility of the economic activity in Europe and in parts of Asia was due, to a large extent, to the negative terms of trade shock caused by the rise of commodity prices, which may be already reverting. On the other hand, the problems affecting the international financial system have been aggravating by a cyclical deterioration of credit quality, which tends to reinforce the deterioration of financial conditions and thus the economic downturn itself. The US economy got into a recession at the end of 2007 and continues suffering the impact of the crisis in the real estate sector. Both the weakening of the labour market due to the recession and the negative wealth effects associated with the fall of asset prices, have negatively affected consumers' confidence and contributed to depress aggregate spending in the US. The predominant assessment is that economic activity in Europe and in Japan will keep slowing down in the coming months. In mature economies, where inflation expectations are better anchored and economic activity has been weakening considerably, inflationary pressures have decreased rapidly. In emerging economies, where the second-round effects of the rise in the prices of raw materials over consumer prices and the pressures from excess demand had been more intense, inflationary pressures have shown some persistence. In this context, while monetary policies in mature economies have been strongly expansionary,

the policies adopted in emerging economies have been heterogeneous due to the above-mentioned factors and because of the exchange rate depreciation. Note, however, that policy-makers of mature economies have been announcing important fiscal stimuli aiming at a gradual economic recovery in these regions. One should highlight that the severity and persistence of the economic downturn in mature economies will depend to a great extent on the behaviour and resilience of the labour market.

As a matter of fact, the previous *Inflation Reports* already pointed to the risks associated with a scenario in which the world economic downturn would be more intense and widespread. However, as highlighted in those documents, the effects on the domestic inflation are ambiguous. On one hand, both the deceleration of the aggregate demand due to the reduction in exports and the fall of commodity prices contribute to mitigate domestic inflationary pressures. On the other hand, greater risk aversion and capital outflows have reduced the demand for assets from emerging economies, leading to sharp depreciation of local currencies that ultimately may translate into higher domestic prices. In such a context, even though the Brazilian economy has become more resilient to sudden changes in the mood of international financial markets, the Brazilian external sector may no longer be able to help to mitigate inflationary risks.

In the previous *Inflation Report*, it was highlighted that the net effect would depend, among other factors, on the relative importance of the financial component. Since then, the growth prospects of mature economies have worsened with negative consequences for the Brazilian exports. Despite this fact, the financial component has been dominant during this period, which would tend to fuel the domestic inflation. However, the world crisis is affecting the domestic economic activity not only through the fall of external demand but also through the reduction of external financing sources. Additionally, there are the indirect negative effects on the domestic financial conditions, as well as rising uncertainty leading agents to postpone consumption and investment decisions. As a consequence, this transmission channel may become particularly relevant for restraining the domestic inflation.

The scenario for commodity prices became more benign than that at the time of the release of the previous *Inflation* Report. Oil prices remain highly volatile, but they fell significantly since then. The prices of the other commodities also decreased significantly, reacting both to the greater pessimism with the prospects regarding world economic growth and to the turbulence in the global financial markets.

Such dynamics of commodity prices contributes to a more benign scenario for the domestic inflation. However, as mentioned above, the analysis of downward inflationary effects due to the recent trend in the prices of raw materials cannot be decoupled from the analysis of the effects that these exert over Brazilian asset prices, and the consequent impact on the domestic inflation.

A more in-depth analysis of the possible effects of the exchange rate depreciation observed during the quarter is required, focusing on the pass-through to consumer price indices (see the box Exchange Rate Pass-Through to Prices, in this chapter). First, the consolidation of the monetary and fiscal institutions, in particular the inflation targeting regime, may help to reduce the pass-through. It is important to highlight that the current context is quite different from that in 2002, when agents even considered a change of the monetary regime, which exacerbated inflation expectations and so the pass-through. A second aspect refers to the fall of commodity prices in foreign currency, which partially offsets the impact of the exchange rate depreciation and so reduces the effects that these prices might have in local currency. On the other hand, it is worth recognizing that commodities represent a small share of the basket of imported goods. A third factor is the deceleration of the domestic economic activity and its implication for the behaviour of the exchange rate pass-through. There is evidence showing that the magnitude of the pass-through depends on the economic cycle, being more intense during upturns. A fourth factor refers to the initial conditions for the level of inflation and the effective real rate of exchange. When inflation rates are low – which is certainly not the case now – the pass-through tends to be smaller. Similarly, when changes in the nominal exchange reflect adjustments of the real exchange rate the pass-through also tends to be smaller. In the Brazilian case, some price adjustment due to the currency depreciation was expected given the growing current account deficits and the deterioration of the terms of trade because of the slower growth of commodity prices. It is also possible that the exchange rate appreciation occurred previously may have created some buffer in the price levels that is now helping to absorb part of the exchange rate depreciation.

There are arguments favouring a larger exchange rate pass-through. First, the economy experienced a relatively long period of strong growth. Therefore, if price adjustments take into account the recent demand or, in the case of many sectors, the current demand conditions, the pass-through would be higher. Nonetheless, spending decisions based on expected - for now weak - economic conditions may

have the opposite effect on the pass-through. Second, even considering a low exchange rate pass-through, the magnitude of the current exchange depreciation is large enough to yield potentially significant inflationary effects.

The behaviour of domestic prices has not yet shown signs of significant exchange rate pass-through. However, it is important to highlight that there exist lags between the changes in the exchange rate and their effect over consumer prices. This is because there is a whole chain going from imports priced in local currency at the dock to the distribution sector and then to final consumers. Secondly, agents may be waiting for a clearer picture for adjusting prices, in face of the high volatility of the exchange rate in the latest months and thus of the uncertainty about its level over the relevant horizon. In principle, the latest changes of wholesale prices have pointed to mild exchange rate pass-through in the short run. However, if agents perceive that the recent changes in the exchange rate are rather permanent than transitory it is likely that the pass-through becomes more intense. It is quite possible that a scenario materializes in which economic growth is weak and the exchange rate pass-through is low, but still the corresponding inflationary effects are non-negligible. In such a scenario, inflation may rise in the short run but fall in the medium run because the transmission mechanism from the exchange rate to prices operates faster than that of the output gap. Under this circumstance, monetary policy must prevent price movements caused by the exchange rate depreciation from contaminating inflation expectations or translating into second-round effects due to adjustments in wage and price to levels prevailing before the depreciation.

The growth prospects of the Brazilian economy pose another risk to the inflation outlook. Up to the third quarter of the current year, the economy was expanding fast, led by strong growth of the domestic demand. However, despite greater resiliency of the Brazilian economy to external shocks, there are signs that the global crisis is affecting the domestic economic activity more intensively than anticipated. There are several factors pointing to the slower pace of the economic activity: consumption and investment decisions are postponed due to the higher uncertainty brought about by the crisis, more restrictive credit conditions in both the external and the domestic credit markets (higher interest rates, shorter maturity and tighter lending standards), fall of the world demand, and exchange rate depreciation which is raising the cost of imported investment goods. In fact, both leading and coincident indicators of economic activity, such as sales and production of manufactured goods, confidence indices, rate of capacity utilization and vacation shutdown in some companies, already signal the downturn.

However, assessing the magnitude of the downturn is still subject to a lot of uncertainty and so are the inflation projections. As mentioned before, one problem is that the transmission mechanism of the output gap to prices tends to occur with time lags normally higher than those of the exchange rate. The assessment is further aggravated by the fact that the economy is coming from a strong expansion, with high level of resource utilization. As a consequence, there could still be some inflationary pressures coming from price adjustments based on previous or current demand conditions.

On the fiscal side, there is still uncertainty about the effects of the fiscal stimuli announced recently on consumption. Uncertainty also involves the very details of the fiscal stimuli, as well as their final impact on the overall economic activity.

The assessment is also aggravated by the fact that the international financial crisis should have heterogeneous effects on the economic sectors. The sectors most sensitive to credit conditions tend to be more affected, at least initially. Among these sectors, it is worth mentioning the ones that produce goods whose purchase requires a greater commitment of the household's income, either in terms of installments or in terms of the number of installment periods. On the other hand, the still high levels of employment and the good prospects about the minimum wage should work as buffers against the short-run effects of external turbulences on the domestic economic activity.

In the medium term, however, the initial effects may be amplified since consumption and investment decisions are postponed due to the restrictive credit conditions and greater uncertainty. On the other hand, as the trough of the international financial crisis is overcome and domestic agents realize that is no longer justified to act too conservatively in face of the strong domestic fundamentals, then the economy will gradually resume its expansion.

One should also notice that the expected fall of crop production in 2009 adds further uncertainty to the prospective scenario. The crop problem would tend to slow down the expansion of income and activity in regions such as the country's Midwest and South but at the same time the smaller food supply could put upward pressure on food prices.

The Committee assesses that the strong fundaments of the Brazilian economy will help to cope with the global crisis without any disruption or change of the policy regime such as that occurred in early 1999. The basic economic policy framework founded on inflation targeting, fiscal adjustment

and floating exchange rate, proved to be mature, combining resilience and flexibility. Besides, the solid external financial position – as portrayed by large international reserves, trade surpluses and external financing based mainly on direct investment – reinforce the view that the ongoing turbulences in the international scenario could be overcome without any disruptions.

The domestic economy downturn should also be analyzed taking into account the current conditions regarding external financing. Actually, the expansion of the Brazilian economy up to the third quarter was partially sustained by a growing world demand for exports and by a boom in commodity prices, which made possible to increase imports and in this way attenuate inflationary pressures coming from imbalances between the domestic demand and supply. In fact, in the last ten years the external sector has helped to maintain the inflation around the targets established by the CMN. The external sector has helped to discipline the prices of tradable goods and expand the domestic investment. Nonetheless, now the domestic absorption should adjust itself to the reversal of external conditions – as reflected by the fall in the world demand for exports and a significant reduction of commodity prices.

Breaking down the IPCA into market and regulated prices reveals that the latter will no longer play the role of cooling off inflationary pressures as they did in the last two years. In fact, for 2009, the main scenario considers that the regulated price inflation will be higher than the inflation target. Specialists are particularly concerned about the impact that the changes in general price indices observed this year may have on regulated prices in the next year. Despite the fall of commodity prices, the strong exchange rate depreciation in the latest months may indeed put upward pressure on the general price indices. However, even if regulated prices are influenced by changes in general price indices, the direct effect is relatively small. In any case, it is reasonable to expect that at some point in time the inflation of regulated prices would converge to the inflation of market prices, thereby ceasing to mitigate inflationary pressures.

Up to the third quarter of this year, the employment expansion – in part sustained by the macroeconomic stability – exerted a strong positive effect on real wages. Most likely, the labor market will cool down in the next months, thereby helping to intensify the initial downturn in the domestic demand and cool off inflationary pressures stemming from the exchange rate depreciation.

Credit growth was an important element for sustaining the previous expansion of aggregated demand, and now is also playing a key role in the economic downturn. Higher bank interest rate spreads, shorter maturity of new loan contracts and tighter lending standards all contribute to further deceleration of the domestic demand. In fact, tighter credit conditions may even amplify the effects of past monetary policy decisions on activity.

The possibility that changes in the inflation dynamics may have long-lasting effects on agents' inflation expectations - even when perceived as transitory in preliminary assessments - constitutes a perennial risk for monetary policy implementation and, therefore, must be monitored continuously. Given the past behavior of the Brazilian inflation, the Committee considers significant the probability that localized inflationary pressures still pose risks to the domestic inflation dynamics. Therefore, monetary policy must remain especially vigilant in order to avoid deterioration of the prospective scenario. In particular, short-run inflationary pressures due to the exchange rate depreciation may lead to the dissemination of second-round effects. This happens because large changes in relative prices that result in large inflation rates are followed by agents' desire to restore their real income which in turn feeds back into the inflationary process. The international experience, as well as the own history of inflation in Brazil, recommends that the monetary authority remains cautions in order to fight potential second-order effects.

Compared to the previous Inflation Report, the Committee considers that the risk of a less benign scenario for inflation has decreased but remains relevant. The Committee highlights that the main challenge to monetary policy in the current context is to ensure that the favorable results obtained in the past years are preserved. Especially, monetary policy must prevent that the deterioration of the inflation dynamics in 2008 becomes persistent. Additionally, the Committee assesses that monetary policy must act cautiously and timely in order to ensure that the inflation in Brazil converges to its target already in 2009.

For the short term, the Committee assesses that the main risk to the inflation dynamics stems from the behavior of Brazilian asset prices in face of tighter external financing conditions. Given the developments observed since the Committee's last meeting, the domestic demand may no longer be a threat to price dynamics, thereby limiting the impact of the balance-of-payment adjustment on inflation. The speed in the reduction of the imbalances between demand and supply that were relevant until the third quarter of 2008 still remains a key factor for the monetary policy assessment.

The Committee has taken into account the information available since the previous Inflation Report pointing to the slower pace of the economic activity: indicators of manufacturing production, labor market data, measures of capacity utilization in the manufacturing sector, consumers' and entrepreneurs' confidence indices, as well as inflation expectations. Given this information, the Committee assesses that the risks to a benign scenario for inflation – in which IPCA would consistently converge to its target - remain relevant but less significant. As a matter of fact, the likelihood of such a prospective scenario is already manifested in the inflation projections considered by the Committee. The Committee also considers smaller the probability that the imbalances between aggregate demand and supply will persist overtime. Under these circumstances, monetary policy must remain cautious in order to ensure convergence of inflation to its target.

The strategy adopted by Copom aims to bring inflation back to its target of 4.5% already in 2009. Such strategy – whose results will be evident overtime – takes into account the lags in the transmission mechanism and is the most appropriate way to deal with the uncertainty inherent to the process of formulating and implementing monetary policy.

In the light of these considerations, and taking into account a macroeconomic environment surrounded by high uncertainty, the Committee decided to maintain the Selic rate at 13.75% p.a. in its October and November meetings.

#### 6.3 Inflation forecasts

According to the traditionally adopted procedures, and taking into account the available information up to December 12, 2008 (cutoff date), the baseline scenario assumes the exchange rate remains unchanged over the forecast horizon at R\$2.40/US\$, and the target for the Selic rate stays at 13.75% p.a. – the level set by the December Copom meeting – against R\$1.80/US\$ and 13.75% considered in the Inflation Report of September. In the baseline scenario, the projection for the change, in 2008, of the set of regulated and monitored prices was reduced to 3.5% from the 4.0% level considered in the last *Report*. This projection for 2008 is based on the hypotheses of stable prices for gasoline; 2.6% in bottled gas prices; against null variation in both cases as considered in last Report; 1.1% in electricity rates; and of 3.6% in fixed telephone rates, against 3.5% of last Report. Regarding the items for which information is available, price changes were estimated individually. For the others, the projections are based on models of endogenous determination of regulated prices, which consider seasonal components, exchange rate variations, market price inflation and General Price Index (IGP) inflation, among others. According to those models, the projection of the regulated and administered prices for 2009 was modified from 4.8%, in the last *Report*, to 5.5%; and for 2010, from 4.5% to 4.8%.

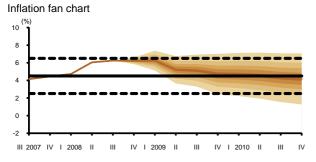
The market scenario, on the other hand, incorporates data from the expectations survey carried out by Gerin with a representative group of institutions up to the cutoff date. In this scenario, average exchange rate expectations considerably expanded in comparison to the values released in the September Inflation Report. For the last quarter of this year, these expectations moved from R\$1.65/US\$ to R\$2.25/US\$ and, for the last quarter of 2009, from R\$1.75/US\$ to R\$2.20/US\$. This is also the level expected for the last quarter of 2010. The average expectations about the Selic rate dropped, when compared to values contained in the last *Inflation Report*. For the last quarter of 2008, it moved from 14.13% to 13.68%, and for the last quarter of 2009, it decreased from 14.07% to 13%. For the fourth quarter of 2010, the projection for the average Selic rate is 11.83%. In the market scenario, the trajectory of the Selic rate is consistent with a pre-DI swap of twelve months spread, with respect to the current target for the Selic rate, of 180 b.p., 30 b.p., and -103 b.p., in the last quarters of 2008, 2009 and 2010, respectively. Additionally, the market scenario assumes changes of 3.5% for the group of regulated prices in 2008, of 5.1% in 2009 and of 4.6% in 2010.

With regard to fiscal policy, the projections presented in this Report are based on the working hypothesis of a primary surplus of 3.8% of GDP in 2008 and 2009, augmented by 0.5 p.p.

Based on the above assumptions and using the information set up to the cutoff date, projections were constructed for the IPCA inflation accumulated over four quarters, consistent with the baseline and market scenarios interest and exchange rate paths.

The central projection associated with the baseline scenario indicates inflation of 6.2% in 2008, an increase of 0.1 p.p. in comparison to the projection presented in the September Report, therefore, higher than the central value

Figure 6.3 - Forecasted IPCA-inflation with interest rate constant at 13.75% p.a. (Benchmark scenario)



Note: Accumulated inflation in 12 months (% p.a.).

Table 6.1 – IPCA-inflation with interest rate constant at 13.75% p.a.

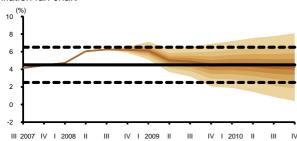
(Benchmark scenario)

Confidence interval							
			50	)%			
Year Q			30	)%			Central
		10%					projection
2008 4	6.1	6.1	6.2	6.2	6.3	6.4	6.2
2009 1	5.8	6.0	6.2	6.3	6.5	6.7	6.3
2009 2	4.6	4.8	5.1	5.3	5.6	5.8	5.2
2009 3	4.4	4.7	5.0	5.3	5.5	5.9	5.1
2009 4	3.8	4.2	4.6	4.9	5.3	5.7	4.7
2010 1	3.7	4.1	4.5	4.9	5.2	5.7	4.7
2010 2	3.5	3.9	4.3	4.7	5.2	5.6	4.5
2010 3	3.2	3.7	4.1	4.5	5.0	5.5	4.3
2010 4	3.0	3.5	4.0	4.4	4.9	5.4	4.2

Note: accumulated inflation in 12 months (% p.a.)

Figure 6.4 - Forecasted IPCA-inflation with market expected interest and exchange rates

Inflation fan chart



Note: Accumulated inflation in 12 months (% p.a.).

Table 6.2 - IPCA-inflation with market expected interest and exchange rates 1

Confidence interval							
	50%						
Year Q			30	)%			Central
		10%				projection	
2008 4	6.1	6.1	6.2	6.2	6.3	6.4	6.2
2009 1	5.7	5.9	6.0	6.2	6.4	6.5	6.1
2009 2	4.5	4.7	4.9	5.1	5.3	5.5	5.0
2009 3	4.2	4.5	4.7	5.0	5.3	5.6	4.9
2009 4	3.5	3.9	4.3	4.7	5.0	5.5	4.5
2010 1	3.5	3.9	4.3	4.7	5.2	5.6	4.5
2010 2	3.2	3.8	4.3	4.7	5.2	5.7	4.5
2010 3	2.9	3.5	4.0	4.6	5.1	5.7	4.3
2010 4	2.7	3.3	4.0	4.5	5.2	5.8	4.3

Note: accumulated inflation in 12 months (% p.a.).

of 4.5% for the target established by the National Monetary Council (CMN). For 2009, the projection for the inflation accumulated in twelve months moves from 6.3% in the first quarter to 4.7% in the last one. For the last quarter of 2010, the projection is of 4.2%. In this way, as illustrated in Figure 6.3, in the projection horizon, the accumulated twelve-month inflation tends to approach the inflation target's central value established by the CMN.

Data on Table 6.1 indicates a slight growth of the inflation accumulated in twelve months in the first quarter of 2009, to 6.3%, with a decrease of 1.1 p.p. in the second quarter of 2009. This movement reflects a lower projection for the market prices inflation in the second quarter of 2009, when compared to the occurred inflation in the corresponding period of 2008, which is enough to offset the effects of a projection for the inflation of the set of regulated and monitored prices higher than the one registered in the second quarter of 2008. In the third quarter the projection remains relatively stable and decreases by 0.4 p.p. in the last quarter, in part caused by a lower value of the inflation expectations for 2010 (4.5%), against 5.2% for 2009. According to the confidence interval illustrated on Table 6.1, in the baseline scenario, the estimated probability that inflation for 2008 will breach the upper tolerance level of the target (6.5%) is close to 11%.

In the market scenario, the projection of 6.2% for the inflation of 2008 is 0.2 p.p. higher than that contained in the last Report and coincides with the one associated to the baseline scenario. According to Figure 6.4 and Table 6.2, the projection for inflation accumulated in twelve months drops to 6.1% in the first quarter of 2009, continues in the same tendency in the following quarters and ends the year at 4.5%, therefore, reaching the central value for the target established by the CMN. This movement somewhat reflects the expectations of an appreciation of the Brazilian real in relation to the U.S. dollar in 2009. Still according to the market scenario, the projection for the inflation accumulated in twelve months reaches 4.3% in the last guarter 2010. According to the confidence interval illustrated on Table 6.2, in the market scenario, the estimated probability that inflation for 2008 will breach the upper tolerance level of the target is close to 9%.

Comparing the trajectories shown in this *Report* with those released in the last *Report*, whose projections are illustrated on Table 6.3, it is apparent that there was a slight increase of the projections for 2008, both according to the baseline scenario (0.1 p.p.) and to the market scenario (0.2 p.p.) On

<sup>1/</sup> According to Gerin.

Table 6.3 - September 2008 Inflation Report forecasts

Period	Benchmark scenario	Market scenario
2008 III	6.3	6.3
2008 IV	6.1	6.0
2009 I	5.7	5.6
2009 II	4.8	4.6
2009 III	4.9	4.7
2009 IV	4.8	4.7
2010 I	4.7	4.7
2010 II	4.6	4.6
2010 III	4.6	4.6

Figure 6.5 - Forecasts and target path for twelve-month cummulative inflation

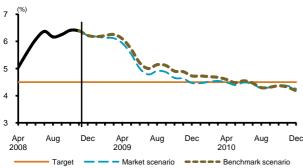
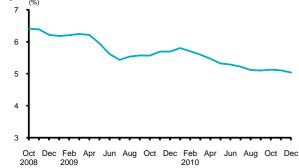


Figure 6.6 - Inflation Forecast: VAR Models



Note: accumulated inflation in 12 month (% p.a.)

Average forecast generated by the VAR models

Figure 6.7 - GDP growth with interest rate constant at 13.75% p.a. Benchmark scenario

Output fan chart 10 0

the other hand, for 2009, it is worth noting a decrease of 0.1 p.p. in the baseline scenario projection and of 0.2 p.p. in the market scenario one.

Figure 6.5 shows the path of the twelve-month accumulated inflation, according to the baseline and market scenarios, up to the end of 2010, as well as the target trajectory. The figures are actual twelve-month inflation until November 2008, and, from December on, projections according to the two scenarios. The projection in the baseline scenario slightly increases in the first quarter of 2009, occurring the opposite in the market scenario. In the second quarter of 2009, the projections changed levels and assume a downward tendency, remaining, up to June 2010, slightly above the central value of 4.5% for the target, in the case of the baseline scenario, and around this value, in the case of the market scenario. As of mid-2010, the projections show to be relatively stable in both scenarios and remain slightly lower than the central target up to the end of the considered horizon.

The average forecast generated by the Vector Autoregression models (VAR) for twelve-month accumulated inflation is shown on Figure 6.6. Up to November 2008, the values are inflation occurred in twelve months and, as of December, refer to the average forecast of the VAR models. As observed, the models indicate inflation maintenance in the actual levels up to the second quarter of 2009, when it moves to a lower level, but still higher than the target's central value (4.5%) up to the end of the forecast horizon. It is worth noting that the average forecast generated by the VAR models increased in relation to the one showed in the last *Report*.

Figure 6.7 shows the output growth fan chart built under baseline scenario assumptions. Considering that the model which generates GDP growth projections uses two variables that are not directly observable, potential output and the output gap, the forecast errors associated to these projections are considerably higher than the errors related to the inflation projections. According to this scenario, the GDP growth projected for 2008 moved to 5.6%, which is 0.6 p.p. higher than the projection presented in the September Inflation Report, due to the output growth pace verified in the third quarter, which has surpassed the respective projection. The GDP growth projected for 2009 is 3.2%.

## **Exchange Rate Pass-through to Prices**

The recent international financial turbulence, intensified since September, has been causing significant exchange rate movements. The American dollar increased, between the end of August and the end of November, 16% as compared to the Euro, 18% against the Sterling Pound, 31% against the Australian dollar and 41% as compared to the Real. The increase in the risk aversion and the capital repatriation has also been strengthening the Japanese Yen, which grew 12% as compared to the American dollar and 24% when compared to the Euro, in the same period. In this context, it is natural that monetary authorities worry about the possibility of pass-through of the exchange rate change to prices. Given the relevance of the present subject, this box aims at showing a summary of the recent literature on this topic.

Monacelli (2008) identifies three different layers of pass-through, according to the degree of sensitivity of domestic prices to international prices. The pass-through to the prices of imported products at the dock or in the border would be high, but not complete (not unity). In the case of economies of the Organization for Economic Co-operation and Development (OECD), Campa and Goldberg (2005) estimate an average pass-through, in this layer, of 0.46 p.p. in the short term (a quarter) and of 0.64 p.p. in the long term. The pass-through to imported products prices in retail would be low, as the pass-through to consumer price index, which would depend on the participation of imported goods in the consumption basket and on the elasticity of substitution.

Mishkin (2008) emphasizes the role played by better monetary systems in the latest decades as a factor of reduction of the exchange rate pass-through. In contexts of more stable and predictable monetary policies, with anchored inflation expectations, the pass-through would tend to be smaller. He presents some reasons for an incomplete pass-through even at the dock: the pricing-to-market practice (importers would adjust the coefficient of pass-through in markets regarded as strategic); local currency pricing (firms define the price in the currency of the countries to which they are exporting); price rigidity (incomplete pass-through in the short term, but complete in the long term); and international production (when different phases of production occur in different countries, the cost of the product will comprise variations of diverse currencies).

Besides, one should underscore that part of the distribution costs is domestic, which contributes to a smaller pass-through. However, referring to imported goods which are used in the production process, the pass-through depends on the degree of substitutability among imported inputs and domestically produced inputs (Engel, 2002).

Generally, literature points to the reduction of the exchange rate pass-through in the latest decades. Gagnon and Ihrig (2004), for example, estimated pass-through coefficients for a broad set of mature economies from 1971 to 2002, and found an average pass-through of about 0.2 p.p. However, when re-estimate the coefficient based on samples that include only periods of more stable monetary policy, initiated in the 1980s in most of the countries, they found an average value of 0.05 p.p.

Several explanations have been offered for the reduction of the pass-through coefficients. Campa and Goldberg (2005) found evidence that the main factor in the reduction of the pass-through import prices in developed countries was the change in the composition of imports, with an increase of the share of manufactured goods, whose prices tend to have a lower pass-through, and corresponding reduction of the share of raw materials. Other explanations emphasize the role played by the price rigidity of differentiated goods. Mishkin (2008), as mentioned above, highlights the improvement of the monetary

policy quality, which would be responsible for the strengthening of inflation expectations anchoring, as a fundamental factor:

> "...a stable monetary policy - supported by an institutional framework that allows the central bank to pursue a policy independent of fiscal considerations and political pressures – effectively removes an important potential source of high pass-through of exchange rate changes to consumer prices... an important corollary is that low exchange rate pass-through will persist only so long as the monetary authorities continue to ratify the public's expectations that they will continue to respond aggressively to shocks that have potentially persistent adverse effects on inflation"

Empirical works have been seeking to identify factors which impacted the foreign exchange pass-through. Goldfajn and Werland (2000) used a sample of 71 countries, in the period between 1980 and 1998, to assess to which extent different macroeconomic factors would explain pass-through magnitude. The statistically more robust results point to the degree of initial valuation of the real exchange rate and the initial level of inflation as the main determinants. In this sense, the greater the initial valuation, against average or equilibrium rates, the smaller the pass-through. The justification is that, if the growth of the nominal exchange rate is only correcting a great disarray of the real exchange rate, the pressure for pass-through to prices will be lower. On the other hand, the greater the initial inflation the greater the pass-through will be, because a higher inflation is accompanied by a higher degree of inflation persistence. Taylor's (2000) explanation is based on the expectation of greater persistence of changes in costs and prices. Besides, in case of emerging market economies, a hypothesis would be the still high indexation level. Among the factors statistically less robust, the text in question highlights the output gap and the economy's degree of openness: the greater the gap (when the economy is heated), the greater the pass-through; the greater the openness, the greater the pass-through.

Correa and Minella (2006) investigated the presence of non-linear mechanisms of the exchange rate pass-through in Brazil, using a Phillips curve with threshold, for the period from the first quarter of 1995 to the fourth quarter of 2005. The estimates point to a greater pass-through to the market prices when the economy is more heated and when the exchange rate depreciation is higher than a certain value, than in episodes of modest depreciation or of exchange rate appreciation. Estimates updated with a sample that goes up to the end of the second quarter of 2008 do not show significant changes in the previous results.

One should note that, in this estimation, the exchange pass-through occurs with a lag of one quarter, and the output gap affects inflation with a lag of two quarters. The result is in line with the view that there are lags in the transmission mechanisms to inflation and that the exchange rate operates with a lower lag than the output gap. In this sense, see, for example, the box "Monetary Policy and Transmission Mechanism Lags" contained in the "Inflation Report" of September 2007. In this respect, one should note that estimates of vector autoregressive (VAR) and semi-structural models, on a monthly basis, to the Brazilian Economy, indicate that the impact on market prices is concentrated in the first three months, with slight predominance of the second one; from the fourth to the sixth month the impact would be slightly lower; and, in the two classes of models, after twelve months, the effect is practically over. We should consider, however, that the pass-through lag to the Broad National Consumer Price Index (IPCA) can be longer, taking into account that the monitored items respond with delay to the effect of exchange rate changes on the reference price index.

Burstein, Eichenbaum and Rebelo (2005) studied five episodes of significant exchange rate depreciation (including Brazil in 1999), which are accompanied by great decreases of the real exchange rate. The text traces a parallel between the role played by the price of non-tradable items and that of pure tradable items, which would have a greater change. According to these authors, generally, the literature makes a mistake when divides the price indices simply into prices of non-tradables and of tradables. The

reason is that the prices of tradable goods have two non-tradable important components: distribution costs (retail and wholesale services, marketing and publicity, and local distribution services) and local goods (defined as goods which are produced only to the domestic market).

In summary, in the prospective evaluation of the pass-through magnitude, we should take into account several factors, such as the inflation initial level, the current and expected degree of utilization of the production factors, the behavior of international inflation and the initial degree of real exchange rate appreciation. Furthermore, the literature strongly suggests that the degree of final pass-through depends, importantly, on the agents' perception of the monetary policy stance.

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### Inflationary Persistence

For the monetary policy makers, one of the most relevant characteristics of the inflation dynamics is its degree of persistence. Monetary Policy acts in the sense of decreasing it. One way of doing this is by anchoring expectations. This is because the more anchored the expectations the less persistent will be inflation. In the last years, both mature and emerging economies have experienced important changes in the persistence degrees of their inflations. Besides making a little summary of relevant literature, this box aims to analyze the inflationary persistence from 1995 up to the present in some mature and emerging economies<sup>1</sup>.

According to the Cechetti et al. (2007), both volatility and inflation's persistence have been decreasing in the last years in mature economies. In these economies, the decades of 1960's and 1970's were marked by monetary policies not so active in combating inflation. On the other hand, the most recent decades (1990's and 2000's) are distinguished by active monetary policies and levels of moderate inflation. In the United States of America, in particular, the decade of the 1990's is known as the period of great moderation, with growing output and decreasing inflation<sup>2</sup>.

Unlike the mature economies, the emerging markets lived for much longer with high levels of inflation. Some countries - such as Brazil, Argentine and Turkey – experienced long periods of hyperinflation in the last 40 years. Only recently, inflation rates in these countries started falling. To some extent, this may be attributed to important modifications in the

<sup>1/</sup> The sample of emerging countries is composed by Brazil and Chile, while Germany, Canada, United States of America, French, Italy and United Kingdom make up the sample of mature economies.

<sup>2/</sup> See Stock and Watson (2003) for a short analysis of the monetary policy in mature economies in recent years.

conduct of their macroeconomic policies<sup>3</sup>. Even so, it is not clear if the reduction of the inflationary levels in these countries was accompanied by the reduction in the persistence of their respective inflations.

In the specific case of Brazil, there are two aspects especially linked to inflation's persistence. First, taking into account the extremely high levels of inflation, which the country experienced during decades, the inflationary memory is perhaps still relevant. Besides, to a large extent the Brazilian inflation linked to prices of goods contract-administered and monitored services are still formally indexed in view of contractual clauses. Even in the set of market prices, there are some items, such as rental and condominium tariffs, which suggest indexation practices.

The literature on the subject is diversified. For example, Stock and Watson (2007) show that the inflation upturn in the USA is well described by the sum of latent factors, cycle and tendency, the former being a stationary process and the latter a non-stationary process. The authors sustain that inflation's persistence, represented by the tendency, has decreased considerably in the latest years. These results are confirmed by Mishkin (2007).

Cechettti et al. (2007) also used the Stock and Watson (2007) methodology to study inflation behavior in the countries of the G7<sup>4</sup> in the last 30 years, and obtained similar results.

The semi-structural models, such as the neo-Keynesian Phillips' curve, also evaluate persistence. For example, RuddandWhelan(2007)use a neo-Keynesian Phillips' hybrid curve (with inflation lags) and conclude that the North-American inflation is much more forward-looking than backward-looking, suggesting that inflationary persistence has been decreasing.

Now returning to this box's main target, that is, compare the inflation persistence in emerging and mature economies, the following approaches were selected: the auto-regressive model with p lags to

<sup>3/</sup> It can be mentioned as examples, the introduction of the inflation targeting system, the reduction of budgetary deficits, the adoption of floating foreign exchange regimes and trade opening, among others.

<sup>4/</sup> United States, England, French, Japan, Italy, Germany and Canada.

the inflation, AR(p); a AR(P) including the lags of the output gap<sup>5</sup>; and neo-Keynesian Phillips' hybrid curve<sup>6</sup>. In all cases, the dependent variable is represented by headline consumer inflation in each economy. In the auto-regressive models, lags were chosen aiming to eliminate serial autocorrelation. In the case of the new hybrid Keynesian curve, autoregressive terms and a lag of the output gap were added. The sample considering the estimations to countries out of Europe comprise quarterly information for the period which goes from the second quarter of 1995 to the second quarter of 2008 (1995T2-2008T2), while to European countries, the period is shorter, from 1999T1 to 2008T2<sup>7</sup>. The persistence measure is given by the sum of the inflation's lagged coefficients in all the estimation process. In order to analyze the persistence's timely evolution, we have resorted to the technique of recursive minimum squares.

Figure 1 shows the results obtained by AR(p) models. One should note that, in Brazil and Chile, the inflationary persistence is greater than in the other countries. We observe greater stability of the Brazilian inflation persistence after adopting the inflation targeting system in 1999, except in the period of confidence crisis (the end of 2002 and the beginning of 2003). We can see that mature economies, except Italy, showed persistent negative measures, indicating that the inflation reverts to the mean in a few quarters. Finally, in a recent past these countries' inflation showed a greater degree of persistence.

According to Figure 2, which reproduces the results created by AR(p) models with lags of the output gap, the inflation's reversal to the mean is a pattern behavior. Brazil and Chile continue with the highest level of inflationary persistence, when compared to other economies.

The results obtained with the estimation of a hybrid Phillips' curve (Figure 3) show that Brazil presents

Figure 1 - Sum of autoregressive coefficients

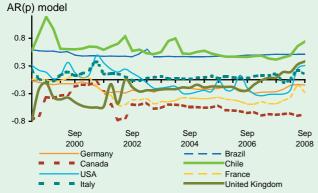
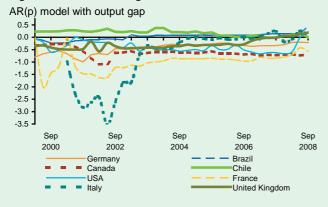


Figure 2 - Sum of autoregressive coefficients

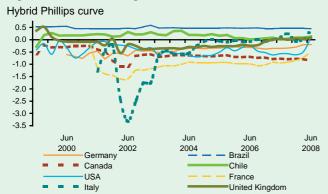


<sup>5/</sup> The output's gap is calculated by the difference between the seasonally adjusted Gross Domestic Product (GDP) and the GDP potential, calculated with Hodrick-Prescott's filter.

<sup>6/</sup> The Phillips' curves are without the foreign exchange rate and include inflation's lagged terms.

<sup>7/</sup> The inflation of consumer data and the GDP of Germany, Brazil, Canada, Chile, United States, French, Italy and United Kingdom were obtained in the International Financial Statistics of the International Monetary Fund (IFS-IMF)

Figure 3 - Sum of autoregressive coefficients



the consumer inflation most persistent among other analyzed countries, basically during the entire sample, followed by Chile, however in some other countries, such as the United States and the United Kingdom, inflation has showed greater persistence recently.

In general terms, we can conclude that, despite that in emerging countries the analyzed sample – Brazil and Chile – had reduced its inflationary persistence level in the last years, they still show levels of inflation persistence higher than those observed in mature economies.

Notwithstanding the recent efforts by Brazilian and Chilean monetary authorities in anchoring the inflationary expectations, it seems that decades of high inflation rates in these economies cause the preservation of formal and informal mechanisms of indexation, which is manifested in higher degree of inflationary persistence, in comparison to the ones observed in mature economies.

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## **Observed Inflation and Inflation Target:** international experience and Brazil

This box follows the same line of the text published in the Inflation Report of December 2006 and, based on an updated information set, it analyses the evolution of observed inflation in relation to established targets, taking into account the respective tolerance intervals, to a sample of countries which adopted the inflation targeting regime. For each country, the analyzed period goes from the quarter in which the targeting regime was adopted up to the third quarter of 2008. It compares four-quarter accumulated inflation with established values, also for the four-quarter cumulative, of the targets and tolerance intervals, making interpolations when necessary.

Table 1 shows, country by country, the frequencies associated to different observed inflation situations in relation to the established target. The sample was divided between emerging economies – historically more sensitive to external shocks – and industrialized economies. The analyses carried out appearing on Table 1, infers that, for both groups, the frequency with which the observed inflation remained out of the tolerance interval was high: 40% in the industrialized economies and 49% in emerging economies. In the periods in which inflation was out of the tolerance interval in emerging economies, there was, approximately, equilibrium between the frequency in which remained below or above the inferior and superior limits; and, in the case of emerging economies, the frequency in which inflation was above the tolerance interval was quite higher.

Table 1 – Inflation target quarterly fulfillment in selected countries

Country	Adoption year of Inflation Targeting	π< lower bound of the target	lower bound of the target < \pi < central value of the target	central value < π< upper bound of the target	upper bound of the target < π	π < central value	π > central value	π= centra value
Emerging		(A)	(B)	(C)	(D)	(A + B)	(C + D)	
South Africa	2000	0%	30%	26%	44%	30%	70%	0%
Chile	1991	14%	31%	37%	15%	45%	52%	3%
Hungary	2001	3%	26%	16%	52%	29%	68%	3%
Mexico	2001	0%	19%	32%	45%	19%	77%	4%
Peru	1994	37%	27%	12%	19%	64%	31%	5%
Poland	1999	46%	13%	5%	33%	59%	38%	3%
Weighted mean		19%	25%	22%	30%	45%	52%	3%
Developed								
Australia	1993	32%	13%	17%	32%	44%	49%	7%
Canada	1991	24%	25%	34%	14%	49%	48%	3%
England	1992	3%	34%	51%	7%	37%	58%	5%
Norway	2001	39%	32%	16%	13%	71%	29%	0%
New Zealand	1990	4%	24%	39%	32%	28%	71%	1%
Sweden	1995	38%	35%	20%	7%	73%	27%	0%
Weighted mean		21%	27%	31%	19%	47%	50%	3%
Brazil	1999	0%	24%	43%	27%	24%	70%	6%

 $<sup>^*\</sup>pi$  denotes four-quarter accumulated inflation.

In only 3% of the considered quarters, both to emerging and industrialized economies, on average, inflation matched with the central value. The data show also that, for the sample of industrialized economies, inflation was lower than the target center in 48% of the time (44% in the case of the emerging ones). In the industrialized economies, in 27% of the quarters inflation was positioned between the inferior limit of the tolerance interval and the target center (25% in the emerging ones); and in 31%, between the inferior limit of the tolerance interval and the target center (22% in the emerging ones). In the industrialized economies, in 19% of the occasions the interval superior limit was surpassed (30% in the emerging ones). That is, in the considered period, to remain above the central value was, in the industrialized economies group, more associated to remain within the tolerance interval, and, in the emerging group, to stay above the superior limit of the tolerance interval.

As in other economies, also in Brazil, the central value of the tolerance interval was rarely reached.

Table 2 - Inflation deviations from the upper bound of the target

Country	2008					2009		
		II	III	IV		II	III	
Emerging								
South Africa	-0.5	0.4	0.7	2.6	4.1	5.6	7.0	
Chile	-1.4	-0.8	1.8	3.8	4.5	5.5	5.2	
Hungary	4.6	4.3	2.3	3.4	2.7	2.7	1.7	
Mexico	0.2	0.0	-0.2	-0.2	0.3	1.3	1.5	
Peru	-2.7	-1.4	-0.2	0.9	2.6	2.7	3.2	
Poland	-1.0	-0.9	-1.2	0.5	0.6	1.1	1.0	
Mean	-0.1	0.3	0.5	1.8	2.5	3.2	3.3	
Developed								
Australia	-0.6	-0.9	-1.1	0.0	1.2	1.5	2.0	
Canada	-0.7	-0.8	-0.5	-0.6	-1.6	0.1	0.4	
England	0.1	-0.6	-1.2	-0.9	-0.5	8.0	2.2	
Norway	-2.4	-3.1	-3.8	-0.7	-0.3	-0.1	1.8	
New Zealand	-0.5	-1.0	-1.2	0.2	0.4	1.0	2.1	
Sweden	-1.1	-1.1	-0.8	0.5	0.4	1.2	1.4	
Mean	-0.9	-1.3	-1.4	-0.3	-0.1	8.0	1.7	
Brazil	-3.5	-2.8	-2.4	-2.0	-1.8	-0.4	-0.2	

<sup>\*</sup>Refers to four-quarter accumulated inflation.

In only 6% of the cases – which corresponds to two observations, last quarter of 2000 and last quarter of 2007 – the observed inflation coincided with the target central value. The total frequency in which inflation remained out of the tolerance interval (27%) was lower than the one observed, on average, both in the emerging (49%) and industrialized (40%) groups. However, unlike the occurred in most of the other economies, in Brazil the observed inflation never remained lower than the inflation interval inferior limit. In this sense, as verified in Mexico and South Africa, inflation out of the tolerance interval corresponded, always, to inflation above this interval superior limit.

In relation to the inflation distribution in the tolerance interval, the Brazilian experience diverges from the pattern observed in the sample average. In Brazil, when the inflation remained in the tolerance interval, the frequency in which it was positioned above the central value surpassed with extensive margin the frequency in which remained below, a distribution which gets distant from the other economies average, emerging or industrialized. One should also note that, differently from what was observed in most of the countries, it was verified in Brazil a low frequency of cases in which the inflation was lower than the target central value, only 24%, against 44% in the emerging group and 48% in the industrialized one.

When the recent behaviour is analyzed, Brazilian inflation remained lower than the target central value from the second quarter of 2006 to the last of 2007 and higher since the first quarter of 2008. The inflation rate growth in 2008 was not restricted to the Brazilian economy. Table 2 shows, country by country, the difference between the realized inflation and the target ceiling, for 2007 and for the first three quarters of 2008. While only two emerging countries (Hungary and Mexico) and one industrialized (England) showed inflation above the target ceiling in the first quarter of 2007, all the sampled countries - industrialized and emerging (Brazil is the only exception) – showed inflation higher than the target ceiling in the third quarter of 2008.

In summary, the evidence presented in this box, based on data of various countries which use the

inflation targeting as a framework for the monetary policy conduction, shows that it cannot be expected that inflation gets systematically observed below or above the central value of the tolerance interval. It is natural, and consistent with the international experience, that effectively observed inflation rate fluctuates around the central value of the tolerance interval, rarely reaching this central point. It is also not uncommon, according to the patterm identified in other economies that, observed inflation, when fluctuating around the central value of the target, breaks through the superior or inferior limit of the tolerance interval.

# Minutes of the 138<sup>th</sup> Meeting of the Monetary Policy Committee (Copom)

Date: October 28th, from 6:10PM to 8:05PM, and

October 29th, from 5:40PM to 7:50PM

**Place:** BCB Headquarters meeting rooms – 8<sup>th</sup> floor on October 28th and 20th floor on October 29th -

Brasília – DF

#### In attendance:

#### **Members of the Committee**

Henrique de Campos Meirelles – Governor Alexandre Antonio Tombini Alvir Alberto Hoffmann Anthero de Moraes Meirelles Antonio Gustavo Matos do Vale Maria Celina Berardinelli Arraes Mário Gomes Torós Mário Magalhães Carvalho Mesquita

## **Department Heads (present on October 28th)**

Altamir Lopes – Economic Department Carlos Hamilton Vasconcelos Araújo – Research Department (also present on October 29<sup>th</sup>) João Henrique de Paula Freitas Simão - Open Market Operations Department José Antônio Marciano - Department of Banking Operations and Payments System Márcio Barreira de Ayrosa Moreira - International Reserves Operations Department Renato Jansson Rosek – Investor Relations Group

## Other participants (present on October 28th)

Alexandre Pinheiro de Moraes Rego – Press Secretary Alexandre Pundek Rocha – Advisor to the Board Eduardo José Araújo Lima – Advisor to the Research Department

Flávio Pinheiro de Melo – Advisor to the Board

The members of the Monetary Policy Committee analyzed the recent performance of and prospects for the Brazilian economy under the monetary policy framework, which is designed to comply with the inflation targets established by the government, and also the recent performance of and prospects for the international economy.

## **Recent economic developments**

1. IPCA inflation retreated in September, to 0.26%, down from 0.28% in August and 0.53% in July. As a consequence, inflation reached 4.76% in the first nine months of 2008 – the highest change in the period since 2004 – up from 2.99% in the same period of 2007. Twelve-month trailing inflation increased 6.25% in September, up from 6.17% in August (4.15% in September 2007), resuming acceleration. Under this comparison basis, the acceleration of consumer price inflation mirrors the behavior of both regulated prices and market prices. Indeed, market prices and regulated prices increased 7.66% and 3.05%, respectively, in the twelve months through September, up from 5.07% and 2.12% in the twelve months through September 2007. Moreover, despite the BRL appreciation observed until then, the prices of tradable goods accelerated, reaching 6.78% (compared to 4.92% in September 2007), according to the same comparison basis. Regarding the prices of non-tradable goods, greatly pressured by the behavior of perishable food and services prices, twelve-month trailing inflation

- was even higher (8.49%), evidencing the influence of domestic factors over inflationary dynamics. For instance, the price of services increased 6.27% in September 2008, up from 5.19% in December and 4.79% in September 2007, according to the same comparison basis. Preliminary data for October point to consumer inflation index above that observed in September. In short, the reversal of the progressive divergence trend of inflation from the targets path, which had been observed since the end of 2007, hasn't consolidated yet.
- The three main underlying inflation measures calculated by the BCB have evolved differently from the headline index. The core inflation by exclusion of household food items and regulated prices and the smoothed trimmed means core inflation measures increased from 0.50% and 0.36% in August to 0.62% and 0.43% in September, respectively, while the non-smoothed trimmed means core inflation measure increased 0.41% down from 0.42% in August. Similarly to the headline inflation, the three core inflation measures accelerated remarkably in the first nine months of the year, compared to the same period of 2007, with increases from 2.70%, 2.81% and 2.43% to 4.83%, 3.71% and 3.94% for the core inflation by exclusion, smoothed and non-smoothed trimmed means core inflation, respectively. On a twelve-month trailing basis, the core inflation by exclusion of household food items and regulated prices continues to record substantial increase, rising from 5.70% in July to 5.87% in August and 6.26% in September. The smoothed and non-smoothed trimmed means core inflation also accelerated, despite at a lower degree, under this criterion, in the last months. The smoothed trimmed means core inflation changed from 4.89% in July to 4.85% in August and 4.94% in September, whereas the non-smoothed trimmed means core inflation changed from 4.92% in July to 4.91% in August and 5.15% in September. As a consequence, all core inflation measures stand above the central value for the inflation target. Moreover, it bears emphasizing that the behavior of the IPCA diffusion index, whose average is the highest recorded since 2004, continues to suggest an inflationary process relatively disseminated, confirming the analysis present in previous Copom Minutes.
- The General Price Index (IGP-DI) inflation changed from 1.12% in July to -0.38% in August and 0.36% in September. On a twelve-month trailing basis, IGP-DI inflation decreased to 11.90% in September, down from 12.80% in August and 14.81% in July, compared to 6.16% in September 2007. In the twelve months through September, the IGP-DI increase reflected the behavior of the three main components. The Consumer Price Index-Brazil (IPC-Br) increased 5.60% (4.50% in September 2007), while the Wholesale Price Index (IPA-DI) totaled 14.33% (6.92% in September 2007). According to the same comparison basis, the Civil Construction National Index (INCC) increased 11.88% (5.46% in September 2007). Regarding the agricultural IPA, inflation reached 15.84% (19.50%) in the twelve months through September 2007). It also bears highlighting the continuity of upward pressures over wholesale industrial prices, a process that began in the second half of 2007 and does not show consistent signs of accommodation. In the first nine months of the year, wholesale industrial price inflation increased 11.72%, up from 2.54% in the same period of 2007. In addition, in the last twelve months, wholesale industrial price inflation increased 13.78% in September, up from 4.42% in December 2007. As mentioned in previous Copom Minutes, the Copom evaluates that the effects of wholesale prices over consumer price inflation will depend on current and prospective demand conditions and price-setters' expectations for the future inflation path.
- On a three-month moving average basis, according to data seasonally adjusted by the IBGE, industrial output increased 1.0% in August, after growing by 1.1% in the previous month. Still considering the seasonally adjusted series, after the 1.4% expansion observed in July, industrial output retreated by 1.3% in August, month-onmonth, partially reflecting the unusual working day distribution observed this year. It bears noticing that general industrial output grew 6.0% in the year through August, with respective increases of 6.0% and 7.1% in manufacturing and in mining output. On a year-over-year basis, industrial output expanded by 2.0% in August (with one less working day), with respective growth of 1.6% and 8.5% in manufacturing and extraction industries, respectively.

The data already released for the last months point, in short, to the continuity of the industrial production expansion cycle, despite some accommodation at the margin may occur, due to restrictions to supply expansion in some sectors, as well as to the effects of the monetary policy change in Brazil and to the international financial turmoil.

- 5. Among the use categories, according to data seasonally adjusted by the IBGE, durable consumer goods production increased 2.1% in August. Regarding the other use categories, intermediate goods production decreased 2.7%, semi-durable consumer goods production retreated by 0.3%, while the production of capital goods production remained stable. In the year, capital goods production leads the expansion, with an 18.1% increase, followed by the 11.8% elevation in durable consumer goods production. The strength of capital goods production until August has reflected the consolidation of favorable prospects for the continuity of macroeconomic stability. On its turn, the expansion of durable goods production reflects, predominantly, credit conditions, which remained, until recently, more favorable than historical patterns.
- Labor market continues to present quite favorable performance. The unemployment rate in the six metropolitan regions covered by the Monthly Labor Survey (PME) retreated from 8.1% in July to 7.6% in August, the same level reached in September, down from 9% in September 2007. As a result, the average unemployment rate in the first nine months of the year was 1.6 p.p. below that observed in the same period of 2007. According to data seasonally adjusted by the BCB, the unemployment rate changed from 7.4% in August to 7.6% in September, showing stability in historically low levels in the last months. The nominal average earnings increased 13.0% in August, year-over-year, and accelerated to 13.7% in September. In August, real average earnings increased 2.1% month-on-month and 5.7% year-over-year. In September it grew 0.9% month-on-month and 6.4% year-over-year (the highest level of the series since July 2006), behavior that evidences the labor market tightening. In the first nine months of 2008, real average earnings increased 3.2%, while employment grew 3.9%. As a consequence, real payrolls expanded by 7.3% (10.0% growth in September in year-over-
- year terms), continuing to constitute a key driver for domestic demand growth. According to the National Industry Confederation (CNI) data seasonally adjusted by the BCB, manufacturing employment increased by 0.1% in August (compared to 0.6% in July and 0.5% in June). In year-over-year terms, employment grew 4%, totaling 4.4% growth in the last twelve months. According to data seasonally adjusted by the IBGE, manufacturing employment decreased by 0.1% in August (compared to increases of 0.7% in July and 0.6% in June). In year-over-year terms, manufacturing employment grew 2.5%, totaling 2.9% growth in the last twelve months. Still regarding employment, data from the Ministry of Labor and Employment (MTE) indicate the continuity of strong expansion in formal employment this year, with the creation of 239.1 thousand jobs in August and 282.8 thousand jobs in September, a record high for the monthly, year-to-date and twelve-month historical series. In the first nine months of the year, employment reached a record high of 2,086.6 thousand hires, 25% above the previous record high observed for the historical series in 2004, an evidence of the robust demand for work. Formal employment grew by 0.6% in September, seasonally adjusted, and observed data point to a 6.3% expansion in the last twelve months. Manufacturing industry recorded the highest hiring rate in September, with the creation of 114.0 thousand new jobs, followed by the services sector (104.7 thousand new jobs) and by the retail sector (53.3 thousand new jobs). On the other hand, the agricultural sector, due to seasonal factors related to the inter-harvest observed in the Middle-Southern part of the country, was the only sector recording employment retreat (extinction of 25.3 thousand jobs).
- 7. According to data seasonally adjusted by the IBGE, expanded retail sales decreased by 1.6% in August, after increasing 0.3% in July and 1.1% in June, and grew by 7.0% year-over-year in August and 13.5% in 2008 through August. Expanded retail sales three-month moving average decreased 0.1% in August, month-on-month, interrupting the sequence of 27 consecutive monthly increases in this indicator. According to seasonally adjusted data, on a monthon-month basis, it bears emphasizing the expansion in the sales of "books, newspapers, magazines and stationary" (3.2%), followed by "supermarket, food products, beverages and tobacco" (1.1%) and

"furniture and domestic appliances" (1.0%). In the year through August, cumulative growth was more significant in "books, newspapers, magazines and stationary" (31.3%), "other personal and domestic articles" (20.6%) and "vehicles, motorcycles, parts and pieces" (19.8%). The decrease in expanded retail sales was already expected, due to the decrease of 11.1% in vehicles sales in August, according to data seasonally adjusted by the National Federation of Distribution of Automotive Vehicles - Fenabrave. Expanded retail sales should resume growth in September, reflecting the positive performance of vehicles sales, which grew 8.6% month-onmonth, according to data seasonally adjusted by the Fenabrave. The steady growth of retail sales had been reflecting, in short, the performance of both the sectors more sensitive to income and employment expansions and those more sensitive to credit conditions. For the next quarters, the retail sales trajectory will continue to be favored by fiscal transfers, as well as by employment and income growth, but it also will be affected, in case of persistence, by the changes in the access to credit supply, which cannot be fully associated to the monetary policy stance, and by the deterioration of consumer confidence.

The installed capacity utilization rate (Nuci) in the manufacturing industry reached 83.1% in August, similarly to the level observed in June, after the increase to 83.7% in July, according to CNI data seasonally adjusted by the BCB. According to data seasonally adjusted by CNI, the Nuci in the manufacturing industry showed a slight upward trend, reaching 83.5% in August, a record high for the series since 2003. Without the seasonal adjustment, the Nuci stood 0.4 p.p. above the level registered in August 2007. As a consequence, the average rate in the first eight months of 2008 was 0.9 p.p. above the level observed in the same period of 2007. The monthly Nuci calculated by Fundação Getúlio Vargas (FGV) reached 86.4% in September, standing 0.3 p.p. above the level registered in the same month of 2007. The elevation in the Nuci in September 2008, year-over-year, is also observed in the production of civil construction inputs (5.4 p.p.), of consumer goods (3.5 p.p.) and of capital goods (1.9 p.p.). For the intermediate goods sector, the Nuci stood 1.5 p.p. below the level observed in September 2007. The maintenance of installed capacity utilization rates at historically high levels occurs in several sectors (records highs for consumer goods sector and civil construction inputs sector were observed in September) despite investments made in the last twelve months. In fact, recent data about the absorption of capital goods was still inconclusive about an inflexion in the investment expansion trend. The absorption of capital goods increased 1.3% in August, according to seasonally adjusted data, accumulating a 19.7% expansion in 2008, in observed terms, compared to -1.3% and 20.9% in July, respectively, according to the same comparison bases. On the other hand, the production of civil construction inputs showed stability at the margin in August, after increasing by 2.4% in July, maintaining the 10.5% growth in 2008. In short, evidences suggest that, although investment has been importantly contributing to soften the increasing trend of capacity utilization rates, the maturation of investment projects has not been sufficient, so far, to significantly limit the existing mismatches regarding the evolution of supply and domestic demand. As stressed in previous Copom Minutes, the inflation trajectory is closely linked to current and prospective developments related to the expansion of supply of goods and services, to adequately meet demand conditions.

9. The trade balance continues to register deceleration at the margin, an already anticipated trend, and which is in line with assessments present in previous Inflation Reports and Copom Minutes. In the last twelve months through September the trade surplus reached US\$28.7 billion (33.5% below September 2007). Exports and imports totaled US\$194.9 billion and US\$166.2 billion, equivalent to 27.0% and 50.7% growth, respectively, according to the same comparison basis. As highlighted in previous Copom Minutes, imports have been growing faster than exports, both due to the strengthening of the BRL and to the robust expansion of domestic absorption, notwithstanding the elevated price levels of several commodities included in the Brazilian export basket (this supporting factor for the exports value can moderate in case of persistence of recent trends in the prices of raw materials). The decrease in trade surplus contributed to the US\$25.2 billion current account deficit registered in the twelve months through September 2008, equivalent to

1.6% of GDP. Foreign direct investment reached US\$37.4 billion in the twelve months through September, equivalent to 2.4% of GDP.

10. The period since the last Copom meeting was marked by the intensification of severe intensification of stress on international financial markets, which originated in the US and Europe, but whose impact on emerging economies has become more significant. The increased risk aversion, observed since mid-September, after the bankruptcy of an important US financial institution, led the authorities in the US, Europe and Oceania to intervene in an unprecedentedly way in their financial systems, using wide range of instruments, in order to ensure minimum conditions of operation and liquidity in money markets. Although systemic risk perception is still high, such initiatives, accompanied by programs to reinforce the capital base of relevant financial institutions, seem to have managed to restore the functioning of the interbank markets. The international liquidity contraction contributed to a deleverage process by asset managers, which in turn has been pressuring down the prices of financial assets. In the environment of increased risk aversion and shortage of capital flows, pressures on emerging economies' currencies have intensified. In this context, the recent announcement of the currency swap agreements between the US Federal Reserve and the Central Bank of Brazil, as well as with the Monetary Authority of Singapore, the Bank of Korea and the Bank of Mexico, should contribute to mitigate – without, however eliminate – the impacts of international financial turmoil on emerging markets.

11. Regarding the global macroeconomic scenario, the contraction trends seem to be gradually prevailing over the inflationary pressures, which, however, are still present. The dominant view still points to the expansion, at a moderate pace, of global economic activity in 2008 and 2009, but data released in the last weeks indicate a more intense and generalized cooling of activity in mature economies. There are evidences that the deeper weakening of economic activity in Europe and parts of Asia was predominantly due to the negative shock in the terms of trade caused by the elevation of commodities prices, which could be reversing. On the other hand, the problems in the financial system

have been aggravated by a cyclical deterioration in credit quality, which may reinforce the contraction in financial conditions and, as a consequence, the risk of intensification of deceleration. The US economy, specifically, started to decelerate in the last quarter of 2007 and it still continues to suffer the impacts of the housing sector crisis, with spillover effects on the labor market, whose weakening, together with the negative wealth effect associated to the fall in the prices of financial assets, has affected the consumer's confidence, significantly contributing for depressing expenditure. The prevailing interpretation is that the activity in Europe and Japan may continue to lose dynamism in the next months. In mature economies, where inflation expectations are better anchored and economic activity is decelerating considerably, inflationary pressures have reduced relatively fast. On the other hand, in emerging economies, where the secondary effects of raw materials price increases over consumer prices and the heated demand pressures over the supply expansion capacity had been more intense, the inflationary pressures have been more persistent. In this context, the monetary policy stance is mainly expansionist in mature economies, whereas in emerging economies, which have been affected by the exchange rate depreciation trend, in addition to the facts mentioned above, the situation seems to be more heterogeneous.

12. Oil prices remain highly volatile, but reduced considerably since the last Copom meeting. Future markets have followed the prices of oil in the spot market. However, uncertainty concerning oil prices is remarkably high, as the prospective scenario depends on the evolution of demand, especially in emerging countries, on the supply's reaction to stimuli derived from previous changes on relative prices, in addition to geopolitical issues that affect the price of this commodity. Nonetheless, despite the great uncertainty inherent to the projections of oil prices' trajectory, the main scenario adopted by the Copom, which assumes unchanged gasoline prices in 2008, remains plausible. However, it bears highlighting that, regardless of the behavior of domestic gasoline prices, the reduction of international oil prices can affect domestic prices both through productive chains, such as the petrochemical, as well as through the potential effect over inflation expectations. The prices of other commodities also showed important reductions since the last Copom meeting, reacting both to the greater pessimism about the prospects for global economic growth and to the intensification of the global financial markets turmoil.

## **Assessment of inflation trends**

- 13. The identified shocks and their impacts were reassessed according to newly available information. The scenario considered in the simulations was based in the following assumptions:
- a) the projected adjustments for gasoline and bottled gas prices were maintained at 0% for 2008;
- b) the projections adjustments for electricity prices and fixed telephone prices were maintained unchanged at 1.1% and 3.5%, respectively, for 2008;
- c) the projection for regulated prices inflation in 2008, based on individual items, was altered to 3.8%, down from the 4.0% considered in the September meeting. This set of prices, according to data released by the IGBE, corresponded to 29.71% of the total September IPCA:
- d) the projection for regulated prices inflation in 2009 was altered to 5.5% up from 4.8%. This projection is based on the endogenous determination model for regulated prices, which computes seasonal components, foreign exchange rate changes, market prices inflation and the IGP (General Price Index) variation;
- e) the projection for the spreads over the Selic rate, on the benchmark scenario, based on the 360-day swap rates estimates a 147 bps spread in the fourth quarter of 2008 and 85 bps in the last quarter of 2009. The identified shocks and their impacts were reassessed according to newly available information.
- 14. Regarding fiscal policy, the projections assume the achievement of the public sector primary surplus target of 3.8% of GDP in 2008 and 2009, increased by 0.5 p.p. The related assumptions considered in the previous meeting were maintained.
- 15. Since the September Copom meeting, according to the median IPCA inflation expectations compiled by the BCB's Investor Relations Group (Gerin),

the 2008 IPCA variation remained relatively stable, increasing from 6.27% to 6.29%. Twelve-monthahead inflation expectations also increased slightly, from 5.22% to 5.29%, considering the medians of expected monthly rates. Inflation expectations for 2009 remained at 5.00%.

16. Considering the hypotheses under the benchmark scenario - which assumes the maintenance of the exchange rate at R\$2,25/US\$1.00 and the Selic rate at 13.75% during the forecast period – the projection for the 2008 IPCA inflation increased relative to the figure considered at the September Copom meeting, and remained above the 4.5% target established by the National Monetary Council (CMN). According to the forecast based on the market scenario – which incorporates the consensus exchange and Selic rates trajectories collected by Gerin on the eve of the Copom meeting – IPCA inflation forecast for 2008 also increased compared to the figure considered at the previous Copom meeting, and remained, therefore, above the central target for the year. Regarding 2009, projections based on the benchmark scenario increased in relation to the figure forecast at the September meeting and the projections based on the market scenario showed a slight decrease, but, in both cases, remained above the 4.5% central target for that year.

## Monetary policy decision

17. The Copom evaluates that the monetary policy should contribute for the consolidation of a favorable long-term macroeconomic environment. Economic activity data indicate that the pace of domestic demand expansion continues quite robust, and it is at least partially responsible for the inflationary acceleration trend, despite strong imports growth and the favorable investment performance. Additionally, the increase in risk aversion and the unprecedentedly constraints observed in liquidity conditions in the international markets impose some adjustment in the balance of payments which, despite the increase in Brazilian economy external resilience, can increase the inflationary pressures, especially in the short run. In general terms, the influence of the external scenario on the future trajectory of Brazilian inflation continues to be subject to contradictory effects, which can act with distinct intensity throughout

time and surrounded by significant uncertainties. On the one hand, more generalized deceleration of global economic activity in the upcoming quarters points to an accommodation of both commodities prices and external demand, therefore influencing negatively the local financial conditions. On the other hand, the trend of economic cooling has caused an increase in risk aversion, impacting the demand for Brazilian assets, and consequently, depreciating their prices. In this scenario, the additional reduction of net exports can occur, with similar effects over the behavior in the prices of certain Brazilian assets. Moreover, the recent trajectory of price indices still evidences the existence of significant inflationary risks, in several economies, despite the remarkably lower intensity compared to the middle of 2008. In light of the deterioration of inflation prospects occurred in the last months, in a more uncertain environment, the Committee evaluates that the risk of materialization of a less benign scenario is still high. The Copom emphasizes that the main challenge of monetary policy in this context is to guarantee the maintenance of favorable results achieved in the last years. Particularly, monetary policy should act so that initially limited impacts on price indices do not cause persistent deterioration of inflation dynamics due to the worsening of expectations.

18. The Copom reaffirms that is still high the probability that initially localized inflationary pressures may cause risks to domestic inflation trajectory. The heating of domestic demand and markets of factors, despite under higher uncertainty, as well as the possibility of emergence of supply restrictions in some sectors, may facilitate the pass-through of wholesale prices to consumer price inflation. The Committee evaluates that the materialization of this pass-through and the generalization of pressures initially localized on consumer price indices depend critically on inflation expectations, which remain in levels incompatible with the inflation targets path and continue to be carefully monitored. Additionally, it is worth pointing that although the external sector had been imposing some discipline on tradable goods inflation, the heating of domestic demand has pressured the prices of non-tradable items, as services. In this context, the Copom will act to ensure the gains obtained in inflation control in recent years become permanent. Doing so, the Copom will carefully monitor the evolution of inflation and the several core inflation measures, as well as of inflation expectations within the forecast period, being ready to promptly adjust the monetary policy stance in order to avoid the consolidation of a scenario in which one-off price readjustments become persistent or generalized.

- 19. The maintenance of inflation rates in line with the targets path and the consequent consolidation of a long-term stable macroeconomic environment will contribute for the progressive reduction of macroeconomic risk perception. The Copom thinks that the persistence of a cautious and timely monetary policy stance is essential to increase the probability that inflation in Brazil evolves once again according to the targets path in 2009. For this higher probability to continue to materialize, however, it is necessary that forward-looking inflation indicators, particularly the expected dynamic of aggregate supply and demand, converge throughout the relevant period for the monetary policy.
- 20. The Copom emphasizes, once again, that there are important time lags between the implementation of monetary policy and its effects on economic activity and inflation. Therefore, the evaluation of alternative options for monetary policy should necessarily focus on the forward-looking inflation scenario and its risks, instead of current inflation indices. This viewpoint is even more important in periods of higher uncertainty.
- 21. The prospects for the evolution of economic activity became more uncertain since the last Copom meeting. In particular, the effects of the international crisis on the domestic financial conditions indicate that the contribution of credit to support domestic demand may decline more intensively than the magnitude of what would happen exclusively by the monetary policy effects. Additionally, the intensification of international crisis seems to have caused a negative effect on consumers' and businesses' confidence. If this situation persists, the strength of economic activity would increasingly depend on real payroll expansion and the effects of governmental transfers expected for this and the next quarters. These considerations become even more relevant considering the signs of still heated

domestic demand at the end of the third quarter, the dissemination of pressures derived from relative prices adjustments, including the labor market, and the fact that the monetary policy decisions will have concentrated impacts in 2009.

- 22. The Copom recognizes the important contribution of investment to expand productive capacity. Moreover, it bears noticing that the accommodation of commodities prices, whose consistent signs emerged last weeks, could contribute to avoid even more intense inflationary pressures. However, the Copom evaluates that the pace of domestic demand expansion continues to present important risks to the inflationary dynamics, to which may be added, particularly in the short run, the risks derived from the trajectory of Brazilian assets prices, in a process of decreasing external funding. In this context, the prompt and consistent reduction of the mismatch between the growth of aggregate demand and supply of goods and services continues to be crucial to the assessment of different possibilities for the monetary policy stance.
- 23. International evidence, as well as the Brazilian experience, indicates that high inflation rates lead to higher risk premium, to shorter planning horizons and, consequently, to lower potential economic growth, besides having regressive effects on income distribution. Moreover, in the current circumstances, there is the risk that economic agents start to attribute higher probability that inflation acceleration become persistent, reducing the efficacy of monetary policy. Therefore, the Copom's strategy aims to bring inflation rates timely back to the 4.5% midpoint target established by CMN already in 2009. This strategy, which will have its results evidenced throughout time, takes into account the time lags in the transmission mechanism and is the most adequate to deal with uncertainties inherent to the process of monetary policy formulation and implementation.
- 24. The Copom evaluates that, in light of the economic heating signs regarding, for instance, labor market available data and the industry capacity utilization rates, and the behavior of inflation expectations, the risks for the materialization of a benign inflation scenario, in which IPCA would resume evolution in line with the targets path, continue relevant. Indeed,

an unfavorable forward-looking scenario is still present in the inflation projections considered by the Committee. The Copom also thinks that the persistence of a significant mismatch between the growth paces of aggregate supply and demand continues to represent risk for the inflationary dynamics, but evaluates that the expected trajectories of domestic consumption and investment have become more uncertain. Under these circumstances, monetary policy should act according to the requirements of the balance of risks of the inflationary dynamics, through the adjustment of the basic interest rate, although not necessarily in a continuous way, aiming, on the one hand, to reduce that mismatch and, on the other hand, to avoid that inflationary pressures initially restricted to some prices indices lead to a persistent deterioration of expectations and of the inflation forward-looking scenario. Finally, the Committee thinks that the consolidation of more restrictive financial conditions could intensify the effects of monetary policy over aggregate demand and, throughout time, over inflation.

- 25. In such context, evaluating the prospective scenario and the balance of risks for inflation in a more uncertain environment, the Copom unanimously decided, at this moment, to keep unchanged the Selic rate at 13.75% p.a., without bias.
- 26. Under the inflation-targeting regime, the Copom guides its decisions according to the projected inflation, the analysis of several alternative scenarios for the evolution of the main variables that determine the forward-looking prices dynamics and the balance of risks associated to their projections. Domestic demand continues to increase vigorously, supporting the economic activity strength, including sectors less exposed to external competition, at a moment when the effects of stimuli factors, such as income growth, are still influencing the Brazilian economy. In addition, the contribution of the external sector to a favorable inflationary scenario, in light of the strong depreciation in the prices of Brazilian assets and the apparent reduction in the country's capacity to import, has become less effective, at a moment when the effects of investment on the economy's productive potential still need to consolidate. In this context, the monetary policy should act so to bring inflation back to the targets path already in 2009, in order to avoid that the higher uncertainty detected

in shorter-term horizons disseminate to longer-term periods. Evidently, if the risk profile changes in a way that implies shifts in the basic prospective scenario for inflation considered by the Committee in this meeting, the monetary policy stance will be promptly adjusted to the circumstances.

27. At the end of the meeting, it was announced that the Copom would reconvene on December 9th 2008, for technical presentations, and on the following day, to discuss the monetary policy decision, as established in Comuniqué 16,051 of September 3<sup>rd</sup>, 2007.

# Summary of data analyzed by the Copom

#### Inflation

- 28. IPCA reached 0.26% in September, repeating IPCA-15, compared to 0.28% in August. For the second consecutive month, the prices of food and beverages decreased (-0.27% in September, after -0.25% in August) and contributed -0.06 p.p. to the September IPCA. Market prices increased 0.30% in September, up from 0.25% in the previous month, with price elevations of 0.22% for tradable and 0.36% for non-tradable goods. Regulated prices increased 0.17%, up from 0.35% in August. The diffusion index reached 60.94% in September, down from 63.02% in August, reaching a 63.05% average in 2008. On a twelve-month trailing basis, IPCA increased 6.25%, up from 6.17% in August, mainly due to the increases on market prices (7.66%) and regulated prices (3.05%).
- 29. IPCA core inflation indices increased in the last twelve months through September, while the core inflation by exclusion and the smoothed trimmed means core inflation measures accelerated over the same period. Core excluding household food items and regulated prices increased 0.62% in September, up from 0.50% in August, totaling 6.27% in the last twelve months, compared to 5.87% in the previous month. The non-smoothed trimmed means core increased from 0.42% in August to 0.41% in September, while on a twelve-month basis, it increased from 4.91% to 5.15%. The smoothed trimmed mean core inflation reached 0.43% in September, up from 0.36% in August, reaching 4.94%

over the last twelve months, compared to 4.85% in the previous period.

- 30. IGP-DI increased 0.36% in September, after a 0.38% decrease in August, reaching 11.90% over the last twelve months. Within the index components, only IPA accelerated, with a 0.44% increase in comparison to a 0.80% decrease in August, reaching a 14.33% increase over the last twelve months. IPC-Br decreased 0.09% after increasing by 0.14% in August, reaching 5.60% over the last twelve months. INCC increased 0.95% in September (1.18% in August) and 11.88% in the last twelve months.
- 31. The milder variation of IPC-Br in September reflected the persistent decrease in the prices of food and beverages and deceleration in the prices of the remaining components of the index, except for clothing. IPC-Br core increased 0.22% in September, down from 0.30% in August, reaching a 3.71% increase over the last twelve months.
- 32. The September IPA result reflected the less sharpen fall in agricultural prices, while industrial prices showed deceleration. Agricultural-IPA decreased 0.46% in September, in comparison to a 5.09% decrease in August, reaching 15.84% over the last twelve months. Industrial-IPA grew 0.77%, down from 0.86% in the previous month, reaching 13.78% over the last twelve months. By stages of processing, IPA decelerated regarding the prices of intermediate goods prices, increasing 0.95% in September, down from 1.35% in August, while the prices of final goods decreased 0,29%, after a 0.07% slight increase in the previous month. The prices of raw material increased 0.51%, reverting the August result (-4.84%). In the last twelve months IPA by stages of processing registered 17.41%, 8.13% and 17.89% growth, respectively.
- 33. Partial indexes on October inflation show acceleration relative to September results for both wholesale and consumer price inflation. IPCA-15 grew 0.30%, reflecting the hike on clothing and the reversal in the fall of food and beverages prices. As for wholesale, according to IGP-M results for the second ten-day period of October, agricultural and industrial prices indicate stronger growth than on the previous month.

## **Economic activity**

- 34. According to seasonally adjusted data from the IBGE's monthly survey (PMC), expanded retail sales, which include construction material and vehicles and motorcycles, parts and pieces, decreased 1.6% in August, month-on-month. Despite the retreat in the expanded index, six out of the ten segments surveyed by the IBGE increased, with highlights to the 3.2% elevation in the sales of office materials and equipment. The sales of vehicles, motorcycles, parts and pieces decreased 3.7% in the month.
- 35. Comparing equivalent periods of 2008 and 2007, sales grew 7% in August and 13.5% in 2008, considering the expanded retail sales. According to these two comparison basis, there was generalized growth in all segments, with highlights for office material and equipment; other personal and domestic outlays; and furniture and home appliances. Vehicles, motorcycles, parts and pieces strongly decelerated in August, growing by 2.9% year-over-year, despite the strong growth observed in the year (19.8%).
- 36. According to São Paulo Trade Association (ACSP) data, related to the city of São Paulo and seasonally adjusted by the BCB, database consultations for credit sales (SCPC) increased 3.7% in September, month-on-month, while consultations to the Usecheque system decreased by 0.2%, according to the same comparison basis. In the year through September, these indicators increased 8.3% and 5.6%, respectively, compared to the same period of 2007.
- 37. Regarding investment indicators, domestic production of capital goods and construction typical inputs remained relatively stable month-on-month in August, seasonally adjusted, while on a year-overyear basis, these indicators grew 12.1% and 9.4%, respectively. In the year through August, compared to the same period of 2007, the production of capital goods grew 18.1%, while the production of construction typical inputs grew 10.5%.
- 38. Capital goods imports increased 3.7% in September month-on-month. The quantum capital goods imports grew 19.7% month-on-month,

- according to data from Fundação Centro de Estudos do Comércio Exterior (Funcex), seasonally adjusted by the BCB. The September indicator expanded by 41.3%, year-over-year, higher than the twelve-month growth result (39%) and 2008 through September result (40%), reflecting the recent dynamism of capital goods imports and its contribution to the current cycle of investments in the Brazilian economy.
- 39. CNI indicators show a stable industrial activity pace in August, with a 0.6% increase in hours worked in industrial production, in contrast with a 0.7% reduction in installed capacity utilization, considering seasonally adjusted data. The strong fall (6.8%) in month-on-month seasonally adjusted real revenues in August came after increase over the two previous months, resulting in 4% growth in the quarter ended in August, quarter-on-quarter. In comparison to the same periods in 2007, real revenues grew 0.8% in August and 8.2% in the year through August, while hours worked in industrial production increased 3% and 5.7%, according to the same comparison basis. Installed capacity utilization (Nuci) reached 83.1% in August, 0.6 p.p. below the July level, considering seasonally adjusted data.
- 40. According to IBGE's Monthly Industrial Survey (PIM), industrial production decreased 1.3% in August month-on-month, seasonally adjusted. Fifteen out of the twenty-seven activities surveyed recorded production decrease in the month, with highlights to the negative performance in the production of chemical products (-5.5%), oil refine and ethanol production (-4.1%), influenced by the technical interruption in one of the refineries. It is also noteworthy the decline in the production of food products (-3.1%). Considering to the use categories in the seasonally adjusted series, the unfavorable industrial performance reflected mainly the retraction in intermediate goods production (2.7%), comparing to July, the sharpest fall since October 2001. Durable goods production expanded by 2.1%, while the production of semi- and non-durable consumer goods registered a slight retreat of 0.3%.
- 41. Comparing to August 2007, industrial production increased 2%, a percentage significantly lower than the ones observed in the previous months. Except for

the production of semi- and non-durable consumer goods, which registered a 1.1% retreat due to pressures stemming from the food and beverages sector elaborated for household consumption, all categories showed expansion, with highlights to the production of capital goods, which increased 12.1%. By segments, twelve sectors registered growth, with remarkable increases in vehicles (9.9%), pharmaceuticals (16.3%) and mining (8.6%). In the year through August, the increase in industrial production reached 6%, with highlights to the expansion in both capital goods and durable consumer goods: 18.1% and 11.8%, respectively. In the same period, the growth in the production of intermediate goods and of semi- and non-durable consumer goods reached 5% and 1.7%, respectively. The twelve-month increase in industrial activity totaled 6.8% in July and 6.5% in August, indicating a deceleration at the margin.

- 42. Vehicles production reached 298.4 thousand units in September, according to Anfavea, increasing 18.2% year-over-year. Considering seasonally adjusted data, the production of vehicles fell 1.5% in September month-on-month. In the year through September, the production of vehicles and agricultural machinery increased 20% and 32.6%, respectively, compared to the same period of 2007. According to the same comparison basis, domestic vehicles sales increased 26%, while vehicles exports decreased 4.6%.
- 43. According to the LSPA survey carried out by the IBGE in September, the planted area should grow by 4.6% in 2008, year-over-year. The grains harvest was estimated in 145.3 million tons, a 9.1% increase over 2007. This result encompasses increases of 9.2%, 13% and 3.4% in the production of rice, corn and soybean, respectively, which are responsible for 90% of total grains production. The survey also estimated a 13.7% increase in the production of sugar cane, and a 28.3% increase in the production of coffee.

## Surveys and expectations

44. The Fecomercio-SP survey showed a 0.7% month-on-month decrease in the Consumer Confidence Index (ICC) in October, month-onmonth, reflecting both a 1.5% retraction in the Consumer Expectations Index (IEC) and a 0.5%

expansion in the Current Economic Conditions Index (Icea). The ICC grew by 3.6% year-over-year.

- 45. According to the FGV survey, the ICC decreased 10% in October, month-on-month, having the index reached its lowest level since June 2006. Both current situation and the expectations for 6-month ahead expectations assessments deteriorated relative to the previous month, decreasing by 12.7% in the Current Situations Index (ISA) and by 8.5% in the Expectations Index (IE). Relative to October 2007, the survey also registered decreases of 10.1%, 2.3% and 14% in the ICC, ISA, and IE, respectively.
- 46. Still according to the FGV, the Industry Confidence Index (ICI) stayed on high levels after reaching 120.3 points in September, compared to 123 in August. The indicator stood 2.3 p.p. below the level registered in the same month of 2007, reflecting the retractions of 3.2 p.p. in the ISA and 1.3 p.p. in the IE. Among the components related to the Current Situation, the levels of both global demand and current business situation remained high. Regarding the activity sectors, the segment of construction material was the only one that showed effective growth, 3.3% month-on-month and 8.8% year-over-year. Regarding manufacturing employment, despite being more cautious than they had been in the same period of last year, 32% of the managers projected an increase in labor force hiring in the next three months.
- 47. The monthly Nuci calculated by Fundação Getúlio Vargas (FGV) reached 86.4% in September, a result 0.2 p.p. lower than the August figure and 0.3 p.p. higher than the level registered in the same month of 2007. In September new records highs were registered in two categories: consumer goods, which totaled 88.1%, exceeding by 3.5 p.p. the September 2007 level; and civil construction inputs, which reached 92.1%, recording a 5.4 p.p. increase year-over-year.

#### Labor market

48. According to the Ministry of Labor and Employment, 282.8 thousand new formal jobs were created in September 2008, a record high for the historical series for any period, considering monthon-month, year-to-date or twelve-month periods. In

the first nine months of the year, employment reached 2,086.6 thousand new jobs. Employment level increased by 0.6% month-on-month in seasonally adjusted terms expanding in all sectors, with highlights to the 1.5% expansion in the construction sector, and the creation of 114 thousand new jobs in the manufacturing industry sector. Considering the observed series, there were increases in year-to-date terms (6.5%) and on a twelve-month basis (6.3%).

- 49. According to the IBGE employment survey (PME) carried out in the six main metropolitan areas of the country, the unemployment rate stayed at 7.6% of economically active population (PEA) in September recording stability relative to August. Compared to September 2007, unemployment declined 1.4 p.p. The survey also showed that the number of unemployed remained stable in the six main metropolitan regions. Year-over-year, employment grew 3.4%, while PEA increased 1.9%. Considering the number of employed by activity sectors, the total of workers in the private sector increased 0.9% in September, month-on-month, representing 112 thousand jobs, mainly reflecting the creation of 104 thousand formal jobs. The number of self-employed workers decreased 0.4%, while the number of employers increased 4.7%. Year-over-year, formal workers in the private sector led occupation growth (6% increase), the number of employers and informal workers increased 0.2% and 3.2%, respectively, while the number of self-employed workers decreased by 0.1%. Still in year-over-year terms, the number of employed workers in the public sector increased 5.1%.
- 50. The same survey showed that average real earnings of occupied workers increased 0.9% in September, month-on-month, and 6.4% year-overyear. Real payrolls increased 1.7% in September, month-on-month, and 10% year-over-year.
- 51. According to CNI data seasonally adjusted by the BCB, employment in manufacturing industry was stable in August, after increasing 0.6% in July, resulting in a 1.1% increase in the quarter ended in August, quarter-on-quarter. Year-overyear, employment in the manufacturing industry and industrial real payroll increased 4% and 3.6%, respectively, in August. In the first eight months of

2008, the same indicators increased by 4.4% and 5.1%, respectively, year-over-year.

## Credit and delinquency rates

- 52. Outstanding credit in the financial system reached R\$1,149 billion in September, setting a new volume-to-GDP ratio record high, 39.1%. Credit operations in the financial system expanded by 3.5% in September, totaling 34% expansion on a twelve-month trailing basis. According to the same comparison bases, non-earmarked credit operations increased 3.5% and 37.1%, respectively, while earmarked credit operations elevated 3.4% and 26.6%, respectively. Among the non-earmarked operations, leasing operations remained strong, with expansions of 148.5% and 61.9% for credit to individuals and to corporate, respectively, in the last twelve months. Regarding earmarked credit, it bears highlighting the 34.4% and 27.4% increases in operations related to housing and the agricultural sector, respectively, according to the same comparison basis. Considering other sectors, loans to industry increased 5.4% month-on-month in September and 40.1% in twelve months.
- 53. The average interest rate on non-earmarked credit operations, used as reference for interest rates, reached 40.4% p.a. in September, up from 40.1% p.a. in August and 35.5% p.a. in September 2007. The average rate on credit for individuals increased 1 p.p. in September, reaching 53.1% p.a., while the average rate on corporate credit was stable in September, at 28.3% p.a., In September 2007, the average rate on credit to individuals and credit to corporate stood at 46.3% p.a. and 23.1% p.a., respectively.
- 54. The average tenure on non-earmarked credit operations, used as reference for interest rates for individuals reached 378 days in September, compared to 372 days in August and 341 days in September 2007. The average tenure of corporate credit operations reached 303 days, while the average tenure for credit operations to individuals totaled 480 days, compared to 269 days and 420 days, respectively, in September 2007.
- 55. Delinquency rates in the financial system (non-earmarked loans, used as reference for interest

rates, in arrears for more than ninety days) stood at 4% in September, a 0.6 p.p. decrease year-over-year. Delinquency rates for credit operations with corporate and individuals reached 1.6% and 7.3%, respectively, compared to 2.3% and 7.1% in September 2007.

56. Net delinquency rate for retail credit, measured by the ACSP, reached 5.9% in September, up from 5.2% in the same month of 2007. In the year trough September, the average delinquency rate stood at 6.8%, up from 6.2% in the same month of the previous year.

#### **External environment**

- 57. After Lehman Brothers declared insolvent, instability increased in the international financial markets, once risk aversion and lack of liquidity affected more decisively real economy funding, mainly in the US. The financial crisis assumed more generalized aspect world wide, spreading geographically. Credit channels were obstructed by uncertainty and liquidity and solvency problems that emerged subsequently. In addition to that, the exchange rate depreciation movement, simultaneous in various economies, found international trade in contraction, or, in the best hypothesis, in a situation of important deceleration.
- 58. Due to the deterioration of the international financial crisis and the widening of global recession risk, governments and central banks of developed economies committed themselves to an aggressive movement in defense of the soundness of their respective financial systems. In this sense, they increased the deposits guarantees, expanding the government guarantees on interbank operations and committed to support all the banks considered systemically important, even encompassing capitalization. Moreover, central banks increased their actuation through liquidity operations (wider acceptance of collaterals, larger volume in interventions and extended tenures to pay the loans).
- 59. The adoption of stability and financial system soundness plans started with the approval of the US Troubled Asset Relief Program (TARP), instrument that allowed the treasury to buy up to US\$700 billion of bad assets of financial institutions, in an effort

to recapitalize the sector, minimize the concerns regarding the system viability and foster the recovery of its lending function.

- 60. In Europe, rescue plans aiming to recapitalize banks and defreeze the credit market are being approved. It is important to highlight that the resources will be provided from each respective country's budget and there isn't forecast of creation of any single fund. Regarding single measures, only uniformed intervention rules were adopted, which intend to avoid distortions in the regional banking market.
- 61. Recent data point to the reduction of inflationary pressures in the global economy. With the substantial fall in the prices of oil and agricultural commodities, and the increase of unemployment, the inflationary process already records turning points in the majority of mature economies. In the US, this behavior is intensified by the dollar appreciation. In UK, inflation is still pressured by the prices of food and services, and in Norway, expectations point to inflationary peek in September, as well as in Australia and New Zealand (3<sup>rd</sup> quarter). In China, despite the increase in domestic energy prices, inflation cooling is confirmed.

#### Foreign trade and international reserves

- 62. Brazilian trade surplus reached US\$2.8 billion in September, totaling surpluses of US\$19.6 billion in the year and US\$28.7 billion in the last twelve months. In the year through September, exports reached US\$150.9 billion, and imports, US\$131.2 billion, growing by 29.4% and 53.2%, respectively, year-over-year. Total external trade recorded a US\$282.1 billion in the first nine months of 2008, totaling US\$361.1 billion in twelve months.
- 63. In September, exports totaled US\$20 billion, reaching a US\$909.9 million daily average, a 22% growth year-over-year. Imports totaled US\$17.3 billion in the month, with a US\$784.7 million daily average, a 39.5% increase year-over-year.
- 64. International reserves totaled US\$207.5 billion in September, with increases of US\$2.4 billion in the month and US\$27.2 billion relative to the end of 2007.

## Money market and open market operations

- 65. In the period between the September and the October Copom meetings, the future yield curve shifted sharply upwards, with increase in the slope. The period was characterized by high volatility and increased risk aversion in the international markets, as a result of the development of the financial crises in the US and in Europe and of the fear of global economy deceleration. The risk aversion boosted the generalized reduction of the leveraged positions in several markets, generating high losses in the international stock exchanges and the dollar appreciation. Under this scenario, the future interest rate in domestic markets recorded sharp increase, intensified by the BRL depreciation against the dollar. At the end of the period, the central bank operations in the FX market and the selling/purchase auctions of fixed-income securities carried out by the Treasury contributed to smooth this movement. Between September 8 and October 27, one-, three-, and six-month rates increased by 47 bps, 38 bps and 72 bps, respectively. Moreover, one-, two- and three-year rates increased by 146 bps, 268 bps, and 359 bps, respectively. Real interest rates, measured by the differential between the one-year forward nominal interest rate and the smoothed twelve-month ahead inflation expectations, increased to 10.33% on October 27, up from 8.96% on September 8.
- 66. On September 29, the BCB carried out reverse FX swap auction, with the rollover of the redemption of October 1. This operation amounted US\$0.5 billion, or 26% of the total redemptions. From October 6, the BCB offered traditional FX swap auctions on a daily basis, in which assumes a long position in domestic interest rate and a short position in FX. In the month through October 27, these operations totaled US\$19.1 billion.
- 67. In its open market operations, the BCB carried out, from September 9 to October 27, weekly five- and seven-month fixed rate repo operations, borrowing. The average daily balance of these operations reached R\$57.9 billion, of which R\$40.3 billion were

- seven-month operations. In the same period, the BCB conducted 36 overnight repo operations, borrowing. The BCB also conducted daily, at the end of day, one- and two-working-day-tenure liquidity management operations. Operations with tenors less than thirty days, including daily liquidity management operations, averaged R\$60.5 billion, on a daily basis, borrowing. In addition, on September 11, 15, 22 and 29, and on October 1 and 6, the BCB conducted borrowing operations with tenures from 10 to 28 working days, totaling R\$20.0 billion, R\$7.0 billion, R\$5.7 billion, R\$4.7 billion, R\$2.7 billion, R\$38.9 billion and R\$2.2 billion, respectively. Moreover, the BCB also conducted, on September 11, a borrowing operation with tenure of 35 working days amounting R\$127.3 billion. These operations averaged R\$172.0 billion, on a daily basis.
- 68. Between September 9 and October 27, the National Treasury raised a total of R\$12.2 billion, of which R\$7.5 billion in fixed-rate securities: R\$5.9 billion via issuance of LTNs maturing in 2009, 2010 and 2011, and R\$1.6 billion in NTN-Fs maturing in 2012 and 2017. Issuance of LFTs totaled R\$2.8 billion, for securities maturing in 2012 and 2014. Issuance of inflation-linked NTN-Bs reached R\$1.9 billion, for securities maturing in 2011, 2013, 2017, 2024, 2035 and 2045.
- 69. In the same period, the Treasury conducted auctions to sell LTNs maturing in July and October 2009 and bought LTNs maturing in October 2008 and January 2009, totaling R\$2.1 billion. Issuance of inflation-linked NTN-Bs for securities maturing in 2011, 2013, 2017, 2024, 2035 and 2045, settled in other National Treasury securities, totaled R\$2.1 billion. The Treasury also conducted purchase auctions of LTNs and NTN-Bs totaling R\$1.0 billion and R\$0.1 billion, respectively.
- 70. On October 23, 24 and 27, the Treasury conducted simultaneous purchase/ selling auctions of NTN-F maturing in 2012, 2014 and 2017. The purchase totaled R\$1.6 billion, while the selling amounted R\$0.1 billion.

# Minutes of the 139<sup>th</sup> Meeting of the Monetary Policy Committee (Copom)

Date: December 9th, from 4:35PM to 6:40PM, and

December 10th, from 5:10PM to 9:15PM **Place:** BCB Headquarters meeting rooms – 8<sup>th</sup> floor on December 9th and 20th floor on December

10th - Brasília - DF

#### In attendance:

#### **Members of the Committee**

Henrique de Campos Meirelles – Governor Alexandre Antonio Tombini Alvir Alberto Hoffmann Anthero de Moraes Meirelles Antonio Gustavo Matos do Vale Maria Celina Berardinelli Arraes Mário Gomes Torós Mário Magalhães Carvalho Mesquita

#### Department Heads (present on December 9th)

Altamir Lopes – Economic Department Carlos Hamilton Vasconcelos Araújo – Research Department (also present on December 10th) João Henrique de Paula Freitas Simão – Open Market Operations Department José Antônio Marciano – Department of Banking Operations and Payments System Márcio Barreira de Ayrosa Moreira - International Reserves Operations Department Renato Jansson Rosek – Investor Relations Group

## Other participants (present on December 9th)

Alexandre Pinheiro de Moraes Rego – Press Secretary Alexandre Pundek Rocha - Advisor to the Board Eduardo José Araújo Lima – Advisor to the Research Department Flávio Pinheiro de Melo - Advisor to the Board Katherine Hennings – Advisor to the Board Sergio Almeida de Souza Lima – Executive Secretary

The members of the Monetary Policy Committee analyzed the recent performance of and prospects for the Brazilian economy under the monetary policy framework, which is designed to comply with the inflation targets established by the government, and also the recent performance of and prospects for the international economy.

## **Recent economic developments**

- 1. IPCA inflation changed from 0.26% in September to 0.45% in October and 0.36% in November. As a consequence, inflation reached 5.61% in the first eleven months of 2008 – the highest change in the period since 2004 – up from 3.69% in the same period of 2007. Twelve-month trailing inflation changed from 6.25% in September to 6.41% in October and 6.39% in November (4.19% in November 2007). Under this comparison basis, the acceleration of consumer price inflation mirrors the behavior of both regulated prices and market prices. Indeed, market prices and regulated prices increased 7.80% and 3.16%, respectively, in the twelve months through November, up from 5.03% and 2.31% in the twelve months through November 2007. Moreover, both prices of tradable goods and non-tradable goods accelerated, reaching 7.87% and 7.74% in twelve months, respectively (compared to 4.13 and 5.88% in November 2007). The price of services, whose dynamics tends to show more persistence than the prices of goods, increased 6.48% in the twelve months through November 2008, up from 6.36% in October, 6.27% in September and 4.89% in November 2007, an evolution that reflects the influence of domestic factors over the inflationary dynamics. Preliminary data for December point to consumer inflation index above that observed in November. In short, the reversal of the divergence trend of inflation from the targets path, which had been observed since the end of 2007, hasn't consolidated yet, although the risk of an even higher deterioration of the inflationary dynamics has been reducing.
- The three main underlying inflation measures calculated by the BCB have reduced in the margin, in the last months. The core inflation by exclusion of household food items and regulated prices and the smoothed and non-smoothed trimmed means core

inflation measures decreased from 0.62%, 0.45% and 0.41% in September, to 0.51%, 0.37% and 0.32% in October, and to 0.36, 0.35% and 0.28% in November, respectively. Similarly to the headline inflation, the three core inflation measures accelerated remarkably in the first eleven months of the year, compared to the same period of 2007, with increases from 3.50%, 3.62% and 3.16% to 5.74%, 4.48% and 4.57% for the core inflation by exclusion, smoothed and nonsmoothed trimmed means core inflation, respectively. On a twelve-month trailing basis, the core inflation by exclusion of household food items and regulated prices rose from 6.26% in September to 6.38% in October and reduced to 6.36% in November. The smoothed and non-smoothed trimmed means core inflation slightly reduced, under this criterion, in the last months. The smoothed trimmed means core inflation changed from 4.97% in September to 4.91% in October and 4.90% in November, whereas the non-smoothed trimmed means core inflation fell from 5.15% in September to 5.11% in October and 5.04% in November. Despite the reduction observed in November, all core inflation measures remain above the central value for the inflation target. Moreover, it bears emphasizing that the behavior of the IPCA diffusion index, whose average in the year through November is the highest recorded since 2004, showed substantial increase in November, and continues to point to an inflationary process relatively disseminated, confirming the analysis present in previous Copom Minutes.

The General Price Index (IGP-DI) inflation changed from 1.09% in October to 0.07% in November. On a twelve-month trailing basis, IGP-DI inflation decreased to 11.20% in November, from 12.29% in October, compared to 6.60% in November 2007. In the twelve months through November, the IGP-DI increase reflected the behavior of its three main components. The Consumer Price Index-Brazil (IPC-Br) increased 6.27% (4.53% in November 2007), while the Wholesale Price Index (IPA-DI) totaled 12.88% (7.51% in November 2007). According to the same comparison basis, the Civil Construction National Index (INCC) increased 12.34% (5.92% in November 2007). Regarding IPA-DI, the inflationary acceleration, under this comparison basis, derives basically from the behavior of industrial prices. The agricultural IPA changed 7.38% (18.92% in November 2007), while the elevation of wholesale industrial prices reached 14.93% (3.76% in November 2007). In fact, despite the cooling in November, wholesale industrial prices increased 13.80% in the first eleven months of the year, up from 3.39% in the same period of 2007. As mentioned in previous Copom Minutes, the Copom evaluates that the effects of wholesale prices over consumer price inflation will depend on current and prospective demand conditions and price-setters' expectations for the future inflation path.

- The IBGE released data for 2008 third quarter GDP. Data still show robust growth rates, both for accumulated results in the year (6.4% up from 6.2% in the previous quarter), and for year-over-year results (6.8% as against 6.2% in the previous quarter). On the aggregate demand side, gross fixed capital formation continued to post strong figures, growing by 19.7% in the third quarter of 2008, year-over-year. Household consumption grew by 7.3%, according to the same comparison basis, influenced by the expansions of credit and real payroll. The contribution of domestic absorption to GDP growth reached 9.3 p.p., overweighing the 2.5 p.p. negative impact stemming from the external sector. On the aggregate supply side, it bears emphasizing the increase in industrial production (7.1%), followed by the agricultural sector (6.4% growth) and by the services sector (5.9%), on a year-over-year basis. Regarding industrial activity, it bears highlighting the civil construction industry (11.7% expansion), benefited by public works and by the increase in credit to housing. The GDP deflator at market prices increased from 6.1% in the second quarter of the year, year-over-year, to 6.8% in the third quarter.
- On a three-month moving average basis, according to data seasonally adjusted by the IBGE, industrial output decreased 0.6% in October, after growing by 0.5% in the previous month. Still considering the seasonally adjusted series, after the 1.5% expansion observed in September, industrial output retreated by 1.7% in October, monthon-month, partially reflecting the programmed interruption in the petrochemical industry. Moreover, it bears noticing that general industrial output grew 5.8% in the year through October, with respective increases of 5.7% and 7.4% in manufacturing and in

mining output. On a year-over-year basis, industrial output expanded by 0.8% in October (with one more working day), with respective growths of 7.2% and 0.4% in mining and manufacturing industries, respectively. The data already released for the last months point, in short, to the interruption of the industrial production expansion cycle, mainly due to the deterioration of global economic prospects and its effects over the Brazilian economy.

- 6. Among the use categories, according to data seasonally adjusted by the IBGE, the production of capital goods decreased by 0.5% in October. Regarding the other use categories, intermediate goods production decreased 3.0%, semi-durable consumer goods production retreated by 2.2%, while the production of durable goods production reduced by 4.7%. In the year, capital goods production leads the expansion, with an 18.4% increase, followed by the 10.5% elevation in durable consumer goods production. The recent slowdown in capital goods production has been reflecting the intensification of the international financial turmoil and its consequences over business confidence. On its turn, the cooling in the pace of expansion of durable goods production reflects, predominantly, tighter credit conditions and the deterioration of consumer expectations.
- 7. Labor market continues to present favorable performance, but with signs of accommodation in the generation of formal employment. The unemployment rate in the six metropolitan regions covered by the Monthly Labor Survey (PME) retreated from 7.6% in August and September, to 7.5% in October, down from 8.7% in October 2007. The October monthly result is the second lowest rate for the series, above only December last year, which stood at 7.4%. As a result, the average unemployment rate in the first ten months of the year was 1.6 p.p. below that observed in the same period of 2007. According to data seasonally adjusted by the BCB, the unemployment rate stood at 7.6%, the same rate recorded in September, at a historically low level. Nominal average earnings increased 12.0% in October, year-over-year, decelerating from the 13.7% rate observed in September, but maintained a robust pace. In October, average real earnings fell 1.3% month-on-month (4.5% expansion relative to October 2007). In the first ten months of the

year, average real earnings increased 3.3%, while the number of occupied workers grew 3.9%. As a consequence, real payroll increased 7.4% (8.6% expansion in October, in year-over-year terms), continuing to constitute a key driver for domestic demand growth. According to the National Industry Confederation (CNI) data seasonally adjusted by the BCB, manufacturing employment increased by 0.1% in October (compared to 0.7% in September and 0.1% in August). In year-over-year terms, employment grew 3.9%, totaling 4.3% growth in the last twelve months. According to data seasonally adjusted by the IBGE, manufacturing employment increased by 0.1% in September (compared to a 0.1% fall in August and a 0.7% increase in July), totaling increases of 2.9% in the last twelve months and 2.2% year-over-year. Still regarding employment, data from the Ministry of Labor and Employment (MTE) indicate loss of dynamism in the generation of formal employment in the margin, with the creation of 61.4 thousand jobs (compared to 282.8 thousand jobs in September this year and 205.3 thousand jobs in October 2007), as a result of the probable reassessment of businessmen regarding the effects of worsening of global difficulties. However, in the first ten months of the year, employment reached 2,148.0 thousand hires, 18.5% above the same period of the previous year, an evidence of the robust demand for work in the period. Formal employment grew by 0.2% in October, seasonally adjusted, and observed data point to a 6.4% expansion in the last twelve months. The retail sector recorded the highest hiring rate in October, with the creation of 54.6 thousand new jobs, followed by the services sector (36.1 thousand new jobs), by the manufacturing industry (8.7 thousand new jobs) and by civil construction (2.1 thousand new jobs). On the other hand, the agricultural sector, due to seasonal factors related to the inter-harvest observed in the Middle-Southern part of the country, was the only sector recording employment retreat (extinction of 38.4 thousand jobs).

8. According to data seasonally adjusted by the IBGE, expanded retail sales increased by 4.0% in September, after decreasing 1.3% in August, and grew by 15.9% year-over-year in September and 13.8% in 2008 through September. Expanded retail sales three-month moving average increased 1.0% in September, month-on-month seasonally adjusted, after increasing by 0.1% in August and 0.9% in July. According to seasonally adjusted data, on a monthon-month basis, it bears emphasizing the expansion in the sales of "office material and equipment" (6.9%), followed by "vehicles and motorcycles, part and pieces" (5.5%) and "furniture and domestic appliances" (3.1%). In the year through September, cumulative growth was more significant in "office material and equipment" (33.7%), "vehicles and motorcycles, part and pieces" (20.7%) and "other personal and domestic articles" (20.3%). In October and November, expanded retail sales data should evidence the effects of credit supply restrictions and the deterioration of consumer confidence over vehicle sales, already captured by the data from the National Federation of Distribution of Automotive Vehicles – Fenabrave for these months. The steady growth of retail sales had been reflecting, in short, the performance of both the sectors more sensitive to income and employment expansions and those more sensitive to credit conditions. For the next quarters, the retail sales trajectory will continue to be favored by fiscal transfers, as well as by employment and income growth, but it will also be affected, in case of persistence, by the changes in the access to credit supply, and by the deterioration of consumer confidence.

The installed capacity utilization rate (Nuci) in the manufacturing industry reached 83.2% in October, slightly above the level observed in September, according to CNI data seasonally adjusted by the BCB. According to data seasonally adjusted by CNI, the Nuci in the manufacturing industry showed reduction, reaching 82.9% in October, down from 83.4% in September. Without the seasonal adjustment, the Nuci stood 0.1 p.p. above the level registered in October 2007, a record high for the series. As a consequence, the average rate in the first ten months of 2008 was 0.9 p.p. above the level observed in the same period of 2007. The monthly Nuci calculated by Fundação Getúlio Vargas (FGV) reached 85.2% in November, standing 2.0 p.p. below the level registered in the same month of 2007. The reduction in the Nuci in November 2008, year-overyear, is also observed in the production of consumer goods (-1.2 p.p.) and of intermediate goods (-2.7 p.p.). For the capital goods sector, the Nuci showed stability compared to the level observed in November 2007

while for the production of civil construction inputs the Nuci presented a 1.9 p.p. increase. The reduction on Nuci calculated by FGV seems to be a result of a combination between investment projects maturity with softening on economic activity, which should point to a start of less pressure over the idle capacity level. Recent data about the absorption of capital goods still show a strong expansion compared to the same periods of 2007. The absorption of capital goods decreased 1.0% in October, according to seasonally adjusted data, accumulating a 22.7% expansion in 2008, in observed terms, compared to 3.9% and 22.2% in September, respectively, according to the same comparison bases. On the other hand, the production of civil construction inputs showed stability at the margin in October, after decreasing by 1.5% in September, accumulating a 10.5% growth in 2008 (10.9% growth in 2008 through September). Although not widespread, evidences so far suggest to an ongoing process of reduction in the mismatches regarding the evolution of supply and domestic demand. As stressed in previous Copom Minutes, the inflation trajectory is closely linked to current and prospective developments related to the expansion of supply of goods and services, to adequately meet demand conditions.

10. The trade balance continues to register deceleration at the margin, an already anticipated trend, and which is in line with assessments present in previous Inflation Reports and Copom Minutes. In the last twelve months through November the trade surplus reached US\$26.1 billion (37% below November 2007). In the same period, exports and imports totaled US\$198.4 billion and US\$172.3 billion, equivalent to 25.0% and 46.9% growth, respectively, year-over-year. The reversal on the strengthening trend of the BRL and the softening on the pace of expansion of domestic demand may contribute to a recover on the trade surplus, notwithstanding the reduction on price levels of exports acting on the opposite direction. The decrease in trade surplus contributed to the US\$26.6 billion current account deficit registered in the twelve months through October 2008, equivalent to 1.7% of GDP. Foreign direct investment reached US\$38.2 billion in the twelve months through October, equivalent to 2.5% of GDP.

- 11. The period since the last Copom meeting was marked by the continuity of stress on international financial markets, which originated in the US and Europe, but whose impact on emerging economies has become more significant. The increased risk aversion, observed since mid-September, after the bankruptcy of an important US financial institution, led the authorities in the US, Europe and Oceania to intervene in an unprecedentedly way in their financial systems, using wide range of instruments, in order to ensure minimum conditions of operation and liquidity in money markets. Although systemic risk perception has showed moderation, pressures on the functioning of the interbank markets came back resulting from the nearness of the end of the year and the closing of the balance sheets of financial institutions. The international liquidity contraction has been contributing to a deleverage process by asset managers, which in turn has been pressuring down the prices of financial assets. In an environment of increased risk aversion and shortage of capital flows, pressures on emerging economies' currencies have been kept.
- 12. Regarding the global macroeconomic scenario, at least in the short term the contraction trends prevail over the inflationary pressures. The dominant view still points to the expansion, at a modest pace, of global economic activity in 2009, but data released in the last weeks indicate a more intense and generalized cooling of activity in mature economies and also in some emerging economies. There are evidences that the deeper weakening of economic activity in Europe and parts of Asia was predominantly due to the negative shock in the terms of trade caused by the elevation of commodities prices, which could be reversing. On the other hand, the problems in the financial system have been aggravated by a cyclical deterioration in credit quality, which may reinforce the contraction in financial conditions and, as a consequence, the risk of intensification of deceleration. The US economy, in particular, entered into recession at the end of 2007 and still continues to suffer the impacts of the housing sector crisis, with spillover effects on the labor market, whose weakening, together with the negative wealth effect associated to the fall in the prices of financial assets, has affected the consumers' confidence, significantly
- contributing for depressing expenditure. The prevailing interpretation is that the activity in Europe and Japan may continue to lose dynamism in the next months. In mature economies, where inflation expectations are better anchored and economic activity is decelerating considerably, inflationary pressures have reduced fast. On the other hand, in emerging economies, where the secondary effects of raw materials price increases over consumer prices and the heated demand pressures over the supply expansion capacity had been more intense, the inflationary pressures have been more persistent. In this context, the monetary policy stance is mainly expansionist in mature economies, whereas in emerging economies, which have been affected by the exchange rate depreciation trend, in addition to the facts already mentioned, the reaction seems to be more heterogeneous. It is worth pointing that, particularly in mature economies, the authorities are announcing a series of initiatives aimed at sustaining the economic activity, particularly through fiscal incentives, which could contribute to a gradual economic recovery.
- 13. Oil prices remain highly volatile, but reduced considerably since the last Copom meeting. Future markets have followed, in general, the prices of oil in the spot market. However, uncertainty concerning oil prices is remarkably high, as the prospective scenario depends on the evolution of demand, especially in emerging countries, on the supply's reaction to stimuli derived from previous changes on relative prices, in addition to geopolitical issues that affect the price of this commodity. Nonetheless, despite the great uncertainty inherent to the projections of oil prices' trajectory, the main scenario adopted by the Copom, which assumes unchanged gasoline prices in 2008, remains plausible but with the persistence of the current framework of the oil market, it does not seem prudent to completely disregard the hypothesis that price reductions for oil can occur in 2009. However, it bears highlighting that, regardless of the behavior of domestic gasoline prices, the reduction of international oil prices can affect domestic prices both through productive chains, such as the petrochemical, as well as through the potential effect over inflation expectations. The prices of other commodities also showed important reductions since the last Copom

meeting, reacting both to the greater pessimism about the prospects for global economic growth and to the continuity of the global financial markets turmoil.

## Assessment of inflation trends

- 14. The identified shocks and their impacts were reassessed according to newly available information. The scenario considered in the simulations was based in the following assumptions:
- a) compared to the values considered in the October Copom meeting, the projected adjustment for 2008 for gasoline prices was maintained at 0%, whereas for bottled gas price was revised to 2.6%;
- b) compared to the values considered in the October Copom meeting, the projected adjustment for 2008 for fixed telephone price was revised to 3.6% from 3.5%, while for electricity prices was maintained unchanged at 1.1%;
- c) the projection for regulated prices inflation in 2008, based on individual items, was altered to 3.5%, down from the 3.8% considered in the October meeting. This set of prices, according to data released by the IGBE, corresponded to 29.62% of the total November IPCA;
- d) the projection for regulated prices inflation in 2009 was maintained unchanged at 5.5%. This projection is based on the endogenous determination model for regulated prices, which computes seasonal components, foreign exchange rate changes, market prices inflation and the IGP (General Price Index) variation;
- e) the projection for the spreads over the Selic rate, on the benchmark scenario, based on the 360-day swap rates, estimates a 180 bps spread in the fourth quarter of 2008 and 102 bps in the last quarter of 2009. The identified shocks and their impacts were reassessed according to newly available information.
- 15. Regarding fiscal policy, the projections assume the achievement of the public sector primary surplus target of 3.8% of GDP in 2008 and 2009, increased by 0.5 p.p. The related assumptions considered in the previous meeting were maintained.

- 16. Since the last Copom meeting, according to the median IPCA inflation expectations compiled by the BCB's Investor Relations Group (Gerin), the 2008 IPCA variation showed reduction to 6.20% from 6.29%. Twelve-month ahead inflation expectations increased slightly to 5.34%, from 5.29%, considering the medians of expected monthly rates. Inflation expectations for 2009 increased to 5.20%, from 5.00%.
- 17. Considering the hypotheses under the benchmark scenario - which assumes the maintenance of the exchange rate at R\$2,40/US\$1.00 and the Selic rate at 13.75% during the forecast period – the projection for the 2008 IPCA inflation slightly decreased relative to the figure considered in the October Copom meeting, but remained above the 4.5% target established by the National Monetary Council (CMN). According to the forecast based on the market scenario – which incorporates the consensus exchange and Selic rates trajectories collected by Gerin on the eve of the Copom meeting – IPCA inflation forecast for 2008 also decreased compared to the figure considered in the previous Copom meeting, but remained, therefore, above the central target for the year. Regarding 2009, both projections based on the benchmark scenario and on the market scenario showed a decrease, in relation to the figures forecast in the previous Copom meeting, but are above the 4.5% central target for that year (benchmark scenario) and around this value (market scenario).

## Monetary policy decision

18. The Copom evaluates that the monetary policy should contribute for the consolidation of a favorable long-term macroeconomic environment. Economic activity data indicate that the pace of domestic demand expansion continued quite robust until the third quarter, and it is at least partially responsible for the inflationary acceleration trend, despite strong imports growth and the favorable investment performance in line with assessments present in previous Copom Minutes. Additionally, the increase in risk aversion and the unprecedentedly constraints observed in liquidity conditions in the international markets impose adjustments in the balance of payments which, despite the increase in Brazilian economy external resilience, can increase the inflationary

pressures, especially in the short run. In general terms, the influence of the external scenario on the future trajectory of Brazilian inflation continues to be subject to contradictory effects, which can act with distinct intensity throughout time and surrounded by significant uncertainties. On the one hand, more generalized deceleration of global economic activity in the upcoming quarters points to a cooling of both commodities prices and external demand, therefore influencing negatively the local financial conditions. On the other hand, the economic cooling has caused an increase in risk aversion, impacting the demand for Brazilian assets, and consequently, depreciating their prices. Moreover, the recent trajectory of price indices evidences the reduction of inflationary external pressures, especially in mature economies, but also in emerging economies, with important implications on domestic inflationary trajectory. The Committee evaluates that the risk of materialization of a less benign scenario retreated when compared to the risk prevailing months ago, but is still relevant. The Copom emphasizes that the main challenge of monetary policy in this context is to guarantee the maintenance of favorable results achieved in the last years. Particularly, monetary policy should act to avoid that the deterioration of inflation dynamics observed in 2008 become persistent.

19. The Copom evaluates that the probability that initially localized inflationary pressures may cause risks to domestic inflation trajectory could be lowering. The evidences of cooling of domestic demand, and more incipient, of accommodation of pressures on the market of factors, despite under uncertainty, may mitigate the pass- through of wholesale prices pressures to consumer price inflation. The Committee evaluates that the materialization of this pass-through and the generalization of pressures initially localized on consumer prices depend critically on inflation expectations, which still remain in levels above the inflation targets path and continue to be carefully monitored. Additionally, it is worth pointing that, according to recent data and the indicators available so far, the heating of domestic demand was still pressuring the prices of non-tradable items, as services. In this context, the Copom will act to ensure that the gains obtained in inflation control in recent years become permanent.

- 20. The maintenance of inflation rates in line with the targets path and the consequent consolidation of a long-term stable macroeconomic environment will contribute for the progressive reduction of macroeconomic risk perception. The Copom evaluates that the persistence of a cautious and timely monetary policy stance is essential to increase the probability that inflation in Brazil evolve once again according to the targets path in 2009. For this higher probability to continue to materialize, however, it is necessary that forward-looking inflation indicators, particularly the expected dynamics of aggregate supply and demand, converge throughout the relevant period for the monetary policy.
- 21. The Copom emphasizes, once again, that there are important time lags between the implementation of monetary policy and its effects on economic activity and inflation. Therefore, the evaluation of alternative options for monetary policy should necessarily focus on the forward-looking inflation scenario and its risks, instead of current inflation indices. This viewpoint is even more important in periods of higher uncertainty.
- 22. The prospects for the evolution of economic activity deteriorated since the last Copom meeting. In particular, the effects of the international crisis on the domestic financial conditions indicate that the contribution of credit to support domestic demand may decline more intensively and, possibly, more persistently than the magnitude of what would happen exclusively by the monetary policy lagged effects. Additionally, the intensification of international crisis has caused a negative effect on consumers' and businesses' confidence. If this situation persists, the strength of economic activity would increasingly depend on real payroll expansion and the effects of governmental transfers expected for this and the next quarters. These considerations become even more relevant considering the fact that the monetary policy decisions will have concentrated impacts in 2009.
- 23. The Copom highlights the important contribution of investment to expand productive capacity. Moreover, it bears noticing that the accommodation of commodities prices could contribute to restrain inflationary pressures. However, the Copom

evaluates that, particularly in the short run, the main risk to the inflationary dynamics derives from the trajectory of Brazilian asset prices, in a process of decreasing external funding. If trends observed since the last Copom meeting prevail, the pace of domestic demand expansion could not present important risks to prices dynamics anymore, which would contribute to limit the inflationary impact of balance of payments adjustment. In this context, the pace of reduction of the mismatch between the growth of aggregate demand and supply of goods and services, relevant up to the third quarter, continues to be crucial to the assessment of different possibilities for the monetary policy stance.

24. International evidence, as well as the Brazilian experience, indicates that high inflation rates lead to higher risk premia, to shorter planning horizons and, consequently, to lower potential economic growth, besides having regressive effects on income distribution. Moreover, in the current circumstances, there is the risk that economic agents start to attribute higher probability to the fact that inflation acceleration become persistent, reducing the efficacy of monetary policy. On the other hand, the shortage of financing conditions in the economy amplifies monetary policy effects, contributing to promote inflation convergence to the targets path. Therefore, Copom's strategy aims to bring inflation rates in 2009 timely back to the 4.5% midpoint target established by CMN. This strategy, which will have its results evidenced throughout time, takes into account the time lags in the transmission mechanism and is the most adequate to deal with uncertainties inherent to the process of monetary policy formulation and implementation.

25. The Copom evaluates that, in light of signs, evidenced after the last meeting, of economic activity slowdown (relative among others to industrial production indicators, some data on the labor market and industrial capacity utilization rates, as well as confidence of consumers and businessmen), as well as inflation expectations behavior, risks against the materialization of a benign inflation scenario, in which IPCA would resume evolution in line with the targets path, are less influential but still relevant. Indeed, prospective scenario evolution has started to reflect on inflation projections considered by the Committee. The Copom also understands that the probability of persistence of mismatch between growth pace of aggregate supply and demand, that continues to represent risk for inflation dynamics, has diminished. Under these circumstances, monetary policy should be cautiously conducted, aiming to assure inflation convergence to the targets path.

26. The Copom believes that the consolidation of restrictive financial conditions for a longer period could significantly intensify monetary policy effects over demand and, throughout time, over inflation. Under these circumstances, the majority of the Committee members, taking into account the balance of risks for economic activity, and therefore for the inflation scenario in 2009, debated the possibility of a 25 bps reduction of the Selic rate. However, the understanding that inflation central prospective path would still justify the maintenance of the Selic rate unchanged has prevailed.

27. Other Copom members considered that the still remaining risks for inflationary dynamics, resulting from the possible persistence of inflation increases in 2008 and consequences of the adjusting process of balance of payments are still predominantly conditioning the various alternatives for monetary policy.

- 28. In such context, having the majority of Committee members discussed the possibility of reducing the Selic rate at this meeting, in a macroeconomic environment surrounded by severe uncertainty, the Copom unanimously decided, at this moment, to keep unchanged the Selic rate at 13.75% p.a., without bias. The Copom will closely monitor the prospective scenario evolution for inflation in order to timely define the next steps for its monetary policy strategy.
- 29. Under the inflation-targeting regime, the Copom guides its decisions according to the projected inflation, the analysis of several alternative scenarios for the evolution of the main variables that determine the forward-looking prices dynamics and the balance of risks associated to their projections. There are signs that domestic demand expansion rhythm, which remained expanding at high rates in the third quarter, would be currently contributing less intensely for the economic activity dynamics, in spite of persistence of

stimulus factors such as income growth influencing the economy. On the other hand, the contribution of the external sector to a favorable inflationary scenario, in light of the strong depreciation in the prices of Brazilian assets and the apparent reduction in the country's capacity to import, has become less effective. In such environment, the monetary policy should act so to bring inflation back to the targets path already in 2009, in order to avoid that the higher uncertainty detected in shorter-term horizons disseminate to longer-term periods, thus favoring a sustained recovery of economic activity. Evidently, if the risk profile changes in a way that implies shifts in the basic prospective scenario for inflation considered by the Committee in this meeting, the monetary policy stance will be promptly adjusted to the circumstances.

30. At the end of the meeting, it was announced that the Committee would reconvene on January 20th 2009, for technical presentations, and on the following day, to discuss the monetary policy decision, as established in Communiqué 17,327 of August 27th, 2008.

# Summary of data analyzed by the Copom

## **Inflation**

- 31. IPCA reached 0.36% in November, below market expectations and indicating inflation decrease taking into account IPCA-15 figures in November (0.49%) and October (0.45%). Market prices increased 0.44% in November, down from 0.54% in October, with increases of 0.60% for tradable and 0.28% for non-tradable goods. Regulated prices increased 0.18%, down from 0.24% in October. The diffusion index has remained above 60% since July, reaching 64.58% in November and a 62.93% average in 2008. On a twelve months trailing basis, IPCA increased 6.39% in November, down from 6.41% in October, reflecting the increase on market prices (7.80%) and regulated prices (3.16%).
- 32. In November, twelve month trailing basis and monthly IPCA core inflation have shown generalized deceleration for the first time since July 2007. Core

excluding household food items and regulated prices increased 0.36% in November down from 0.51% in October, totaling 6.36% in the last twelve months, compared to 6.38% in the previous month. The smoothed trimmed means core decreased to 0.35% in November down from 0.37% in October, reaching 4.90% over the last twelve months, compared to 4.91% in the previous month. The non-smoothed trimmed means core decreased to 0.28% in November down from 0.32% in October, reaching 5.04% over the last twelve months, compared to 5.11% in the previous month.

- 33. IGP-DI increased 0.07% in November after a 1.09% increase in October, reaching 11.20% over the last twelve months, in comparison to 12.29% in October. Wholesale prices index (IPA) went down 0.17%, influenced by the fourth decrease in a row of agricultural prices (-0.64%) together with the decrease of industrial prices (-0.01%). Over the last twelve months, IPA increased 12.88%, down from 14.72% in October. IPC-Br accelerated, reaching 0.56% in November, in comparison to 0.47% in October, totaling 6.27% over the last twelve months. INCC increased 0.50% in November, down from 0.77% in October, reaching 12.34% over the last twelve months. IPC-Br core increased 0.45% (0.31% in October) reaching 3.98% over the last twelve months.
- 34. Among IPA components, the simultaneous fall of agricultural and industrial prices had not been registered since March 2006. Agricultural-IPA decreased 0.64%, in comparison to a 0.02% decrease in October, reaching 7.40% over the last twelve months. Industrial-IPA was stable in comparison to the 1.86% increase observed in the previous month, reaching 14.93% over the last twelve months. By stages of processing, IPA decreased in November in both final goods – from 0.93% in October to -0.15% in November – and intermediate goods – from 1.38% to -0.47%. Raw material prices increased 0.26% in comparison to 1.82% in the previous month. In the last twelve months, IPA by stages of processing registered 6.38%, 17.56% and 14.03% increases, respectively.
- 35. Weekly Consumer Price Index (IPC-S) variation accelerated from 0.56% over the last week of November to 0.73% over the first week of December.

## **Economic activity**

- 36. According to seasonally adjusted data from IBGE's monthly survey (PMC), expanded retail sales, which include construction material and vehicles and motorcycles, parts and pieces, increased 4% in September, month-on-month. All ten segments surveyed by the IBGE increased, with highlights for the 6.9% growth of office material and equipment, and the 5.5% growth on sales of vehicles, motorcycles, parts and pieces, the latter partially resulting from the weak performance in the previous month.
- 37. Comparing equivalent periods of 2008 and 2007, expanded retail sales grew 15.9% in September and 13.8% in 2008. According to these two comparison basis, there was generalized growth in all segments, with highlights for office material and equipment; vehicles, motorcycles, parts and pieces; other personal and domestic outlays; and furniture and home appliances. Vehicles, motorcycles, parts and pieces presented significant growth on a year-overyear comparison (28.8%) after a weak performance in August (2.4% growth over August 2007).
- 38. According to São Paulo Trade Association (ACSP) data, related to the city of São Paulo and seasonally adjusted by the BCB, database consultations for credit sales (SCPC) decreased 0.3% in November month-on-month while consultations to Usecheque system expanded 2.7% according to the same comparison basis. In the year through November these indicators increased 7.3% and 4.2% respectively, compared to the same period of 2007.
- 39. Regarding investment indicators, domestic production of capital goods decreased 0.5% while production of construction typical inputs remained stable in October, month-on-month, seasonally adjusted. Within capital goods production, it bears highlighting the 4.9% increase for transport equipment, softening the fall in all remaining segments. Production of capital goods increased 15.7% in October, compared to October 2007, while production of construction typical inputs grew 7.7%. In the year, through October these indicators increased 18.4% and 10.5%, respectively, compared to the same period of 2007.

- 40. Capital goods imports declined 4.9% in October, month-on-month, according to the quantum indices of Fundação Centro de Estudos do Comércio Exterior (Funcex), seasonally adjusted by the BCB. The October indicator expanded by 41.2%, year-overyear, higher than the 2008 through October and the twelve-month growth results (40.1% and 39.5%, respectively), sustaining the recent dynamism of capital goods imports.
- 41. CNI indicators showed a relatively stable industrial activity pace in October, with a 0.1% increase in both employment and installed capacity utilization and a 0.5% reduction in worked hours, according to seasonally adjusted data by the BCB. Real revenues increased 0.7% compared to September, with a 0.2% growth in the quarter ended in October, quarter-on-quarter, seasonally adjusted. In comparison to the same periods in 2007, real revenues expanded 6.9% in October and 8% in the year through October, while worked hours in industrial production increased 4.9% and 6%, in the same comparison basis. Installed capacity utilization (Nuci) reached 83.2 in October, 0.04 above the level of September, in seasonally adjusted terms.
- 42. According to IBGE's Monthly Industrial Survey (PIM), industrial production decreased 1.7% in October, month-on-month, seasonally adjusted, after a 1.5% variation in the previous month. Durable consumer goods production, a category of use more responsive to credit conditions and consumers' confidence, was the most affected, with a 4.7% decline, partially reflecting the collective vacations in most automotive sector plants. Intermediate goods production decreased 3% in the same comparison basis, influenced by the falls of production of other chemical products (11.6%) and oil refine and ethanol production (9%), the latter partially caused by a technical interruption in one of the refineries.
- 43. Industrial production grew 0.8% in October compared to October 2007, an increase significantly lower than the ones observed in previous months. Eleven out of the twenty-six activities surveyed showed expansion in October in the same comparison basis, in the observed series, with highlights to the production of other transportation equipment, which increased 63%. It should also be noticed the

variations of 28.2%, 24.3% and 10.5% registered respectively in the production of pharmaceuticals, medical equipment and non-metallic minerals. In the same comparison basis, the segments with more significant declines were office machines and IT equipment (-18%), other chemical products (-15.9%) and wood (-13.3%).

44. Considering the use categories, production of intermediate goods and durable consumer goods declined 2.4% and 1.5% in comparison to October 2007, respectively, while production of capital goods and semi- and non-durable consumer goods expanded 15.7% and 0.6%, respectively. In the year through October, industrial production growth reached 5.8%, with highlights to the expansions of capital goods (18.4%) and durable consumer goods (10.5%). In the same period, the growth of production of intermediate and semi- and non-durable consumer goods reached 4.4% and 2.1%, respectively. The twelve-month increase in industrial activity totaled 6.8% in September and 5.9% in October, indicating a significant deceleration at the margin.

45. Vehicles production reached 194.9 thousand units in November, according to Anfavea, decreasing 28.2% year-over-year. Considering seasonally adjusted data, the production of vehicles fell 31% in November, month-on-month. In the year through November, production of vehicles and agricultural machinery increased by 13.2% and 31.5%, respectively, compared to the same period of 2007. According to the same comparison basis, domestic vehicles sales increased 16.9%, while vehicles exports decreased 6.4%.

46. According to the LSPA survey carried out by the IBGE in November, the increase in the grains harvest in 2008 was confirmed, with an estimated production of 145.7 million tons, a 9.4% increase over 2007. For 2009, the second estimate for the grains harvest points to a 3.8% fall in production, which should reach 140.2 million tons. One expects declines of 7.4% and 0.2% in the production of corn and soybean, respectively.

## Surveys and expectations

47. According to the Fecomercio-SP survey, the Consumer Confidence Index (ICC) decreased 4.5% in November, month-on-month, reflecting the reductions of 4.1% in the Consumer Expectations Index (CEI) and 5.3% in the Current Economic Conditions Index (ICEA). The ICC declined 3% year-over-year.

48. According to the FGV survey, the ICC decreased 4.2% in November, month-on-month, reaching the lowest historic level in the series started in September 2005. Both current situation and 6-month ahead expectations assessments deteriorated relative to the previous month, decreasing by 5.7% in the Current Situation Index (ISA) and by 3.3% in the Expectations Index (IE). Relative to November 2007, the survey also registered decreases of 1.52% in the ICC, 11.9% in the ISA and 17% in the IE.

49. Still according to the FGV, businessmen confidence declined in November, as in October. The Industry Confidence Index (ICI) reached 84.1 points in November, seasonally adjusted, down 20.3 points month-on-month and 35.1 points in comparison to the August-October quarter. The index reached the lowest level since July 2003 and fell below 100 points, indicating expectations of declining industrial activity. Among its components, and also in seasonally adjusted terms, the Current Situation Index (ISA) leveled at 85.3 points, 24.4 points below the October outcome. The Expectations Index (IE) declined more moderately, 16.4 points, reaching 82.8 points. Considering use categories, all indicators stood below 100 points. Consumer goods, that registered the higher confidence level in the observed series, 90.1 points, had a 46 points reduction in comparison to November 2007. In the same comparison basis, construction material had the smallest fall, 33.1 points, while capital goods registered the biggest one, 51.9 points, leveling at 76.3 points.

50. In accordance with the FGV Manufacturing Industry Survey, installed capacity utilization (Nuci) reached 85.2% in November, 2 p.p. below November 2007, and 84% in the seasonally adjusted series, 1.3 p.p. below the previous month. In November 2008, only construction materials registered a yearover-year positive change (1.9 p.p.). Considering industrial segments, pharmaceuticals and textiles, should be highlighted in the same comparison bases, with 2.8 p.p. and 2.2 p.p. increases, respectively.

## Labor market

- 51. According to the Ministry of Labor and Employment (MTE), 61.4 thousand new formal jobs were created in October 2008, the worst outcome for the month since 2002, reflecting a significant deceleration in comparison to the previous months. In the year through October, 2,148 thousand new jobs were registered, with an 18.5% increase in comparison to the same period of 2007. Employment level increased by 0.2% month-on-month in seasonally adjusted terms, expanding in all sectors but in the manufacturing industry, in which it remained stable; one should highlight the 0.6% increase in the construction sector and the 54.6 thousand new jobs in retail sector. Considering the observed series, there were increases year-to-date terms (6.5%) and on a twelve-month basis (6.4%).
- 52. According to the IBGE employment survey (PME), carried out in the six main metropolitan areas of the country, the unemployment rate stood at 7.5% of the economically active population (PEA) in October, remaining relatively stable in comparison to the 7.6% registered in the two previous months. Compared to October 2007, unemployment declined 1.2 pp, corresponding to the second smallest rate of all series, just below the 7.4% registered in December 2007. In seasonally adjusted terms, unemployment reached 7.6%, leveling with September's outcome. The relative stability of the unemployment rate in September and October, in the observed series, reflected the 143 thousand people growth in the PEA and 176 thousand new jobs. Compared to October 2007, occupation increased 4%, sustaining the pace of new jobs creation, which had a 3.9% increase in the ten first months of 2008. The PEA expanded 2.6% year-over-year, and 2.2% in the year through October. The number of formal workers increased 1.9% in October, month-on-month, corresponding to 186 thousand jobs; the total of informal workers reduced by 42 thousand jobs (-1.4%), while the number of self-employed workers remained stable. In the year through October, formal workers in the private sector led occupation growth (8.1% increase), followed by the 3.7% increase in public sector employees; jobs for informal workers had the worst performance in the period, with a 0.1% expansion.

- 53. The same survey pointed that average real earnings of occupied workers reduced by 1.3% in October, month-on-month, and increased 4.5% yearover-year, with a deceleration in relation to the two previous months, when they showed 5.7% and 6.4% expansions, respectively. Real payrolls decreased 0.5% in October, month-on-month, but still show an 8.6% increase year-over-year. In the year through October, real payrolls expanded 7.4%, with highlights for the 9.4% and 8% increases in private and public sectors, respectively.
- 54. In October, the PME survey shows that the aggravation of the international crisis did not affect yet the labor market in the country's main metropolitan areas. In a first moment, the adjustment should happen through the reduction of work shifts and adoption of collective vacations, impacting real earnings, while layoffs will become an option if the crisis lasts for a longer period.
- 55. According to the CNI data seasonally adjusted by the BCB, employment in manufacturing industry grew 0.1% in October, after a 0.7% expansion in September, resulting in a 1.1% elevation in the quarter ended in October, quarter-on-quarter. Yearover-year, employment in the manufacturing industry and industrial real payroll increased 3.9% and 3.8%, respectively, in October. In the first ten months of 2008, the same indicators increased by 4.3% and 5.2%, respectively, year-over-year.

## Credit and delinquency rates

56. Outstanding credit in the financial system reached R\$1,187 billion in October, an expansion of 2.9% in monthly terms, and of 34% on a twelvemonth trailing basis. This volume corresponded to 40.2% of GDP, compared to the figures of September (39.2%) and October/2007 (33.6%). According to the same comparison basis, non-earmarked credit operations increased 2.6% and 37.3%, respectively. Among the non-earmarked operations, leasing operations remained dynamic, with a share of 71.7% in the total of financial system, with expansions of 116.3% and 71.9% for credit to individuals and to corporate, respectively, in the last twelve months. Credit to agricultural sector expanded 11.8% in the month, 37.4% in the quarter, and 70.3% in the last twelve months. Regarding earmarked credit, operations increased 3.9% month-on-month 28.2% on a twelve-month trailing basis. This monthly result was basically due to the 5.4% increase in credit operations performed by the BNDES (Brazilian Development Bank). Considering the segmentation by economic activity, loans to industry increased 3.8% in October month-on-month and 41.8% in the last twelve months.

- 57. The average interest rate on non-earmarked credit operations, used as reference for interest rates, reached 42.9% p.a. in October, up from 40.4% p.a. in September and 35.4% p.a. in October 2007. The average rate on credit for individuals increased 1.7 p.p. in October, month-on-month, reaching 54.8% p.a., while the average rate on corporate credit showed expansion of 3.3 p.p. also on monthly terms, reaching 31.6% p.a. In October 2007, the average rate on credit to individuals and credit to corporate stood at 45.8% p.a. and 23.4% p.a., respectively.
- 58. The average tenure on non-earmarked credit operations, used as reference for interest rates for individuals reached 374 days in October, compared to 375 days in September and 342 days in October 2007. The average tenure of corporate credit operations reached 297 days, while the average tenure for credit operations to individuals totaled 482 days, compared to 270 days and 421 days, respectively, in October 2007.
- 59. Delinquency rates in the financial system (non-earmarked loans, used as reference for interest rates, in arrears for more than ninety days) stood at 4.1% in October, a 0.4 p.p. decrease year-over-year. Delinquency rates for credit operations with corporate and individuals reached 1.7% and 7.4%, respectively, compared to 2.3% and 7.0% in October 2007.
- 60. Net delinquency rate for retail credit, measured by the ACSP, reached 6.4% in November, up from 5.5% in the same month of 2007. In the year through November, the average delinquency rate stood at 6.8%, up from 6.1% in the same month of the previous year.

#### **External environment**

- 61. Global economy and particularly, advanced countries face severe deceleration, and there are clear evidences of recession in many of these countries. Overall, forecasts for 2009 show contractions of both real GDP growth and inflation indexes.
- 62. Global financial crisis has affected both consumer and businessmen confidences. Data from previous weeks have shown that businessmen confidence has suffered sharply deterioration in many countries. This situation reflects particularly a generalized decrease in services and manufacturing PMIs recently published. It is also evident in emerging economies, where the levels of businessmen and consumer confidence have also fallen sharply, giving additional evidences that these countries will suffer the impact of the recession that hits the developed economies.
- 63. In the fourth quarter of 2008, global demand retraction sharpened, installed capacity utilization lowered and unemployment increased. In the U.S., numbers of November showed the most significant job cuts since the 70s, bringing the unemployment rate to reach the highest level in fifteen years (6.7%). In the other developed economies, labor market conditions also show deterioration.
- 64. Price behavior confirms the trend of disinflation started in the third quarter of this year. This pattern is more evident in economies that present lower level of activity and quicker falls in commodities prices, particularly reflecting the sharp reduction in oil prices. In the United States, this pattern is reinforced by the dollar appreciation. However, in some emerging countries, exchange-rate depreciation prevents further price reductions and limits the actions of their central banks.
- 65. In this context, the majority of central banks started or intensified monetary easing procedures, based not only on the broadening of the risks of recession, but also on fears of deflation. In emerging economies from Southeast Asia, that are more dependent upon exports, local central banks have performed cuts in their policy rates in an attempt to mitigate the impact that the negative expectations about the worldwide economy have over their

local industrial production. In China, besides the US\$ 586 billion fiscal package, the People's Bank of China implemented the most drastic rate reduction since October 2007 (the fourth since September 2008) from 6.66% to 5.58%. The deterioration in global macroeconomic conditions may increase the number of emerging countries to perform rate cuts in the near future.

## Foreign trade and international reserves

- 66. Brazilian trade surplus reached US\$1.6 billion in November, totaling surpluses of US\$22.4 billion in the year and US\$26.1 billion in the last twelve months. In the year through November, exports reached US\$184.1 billion, and imports, US\$161.7 billion, growing by 25.2% and 46.3%, respectively, year-over-year. Total external trade recorded a US\$345.8 billion from January to November, totaling US\$370.6 billion in twelve months.
- 67. In November, exports totaled US\$14.8 billion, reaching a US\$737.7 million daily average, a 5% growth year-over-year. Imports totaled US\$13.1 billion in the month, with a US\$657 million daily average, a 9.2% increase year-over-year.
- 68. Based on the liquidity concept, international reserves totaled US\$206.4 billion in November, with increases of US\$3.2 billion in the month and US\$26 billion relative to the end of 2007. Under the cash concept, international reserves totaled US\$194.7 billion, a US\$2.6 billion decrease month-onmonth and a US\$14.3 billion increase year-over-year.

#### Money market and open market operations

69. Immediately after the last Copom decision in October, the future yield curve experienced an upward parallel shifting. The interruption of the tightening monetary cycle and the expectation of a higher inflation in the near term were decisive factors for this movement. From November on, however, the behavior of the yield curve changed and the interest rates began to show a falling trajectory, mainly influenced by the release of both inflation data below market expectations, and economic data showing a retreat in the economic activity level. In the beginning of December, the fall in interest rates became more intense especially in the long-term segment. Between October 27 and December 8, one-, three-, and sixmonth rates decreased by 50 bps, 78 bps and 168 bps, respectively. Moreover, one-, two- and three-year rates decreased by 299 bps, 376 bps, and 430 bps, respectively. Real interest rates, measured by the differential between the one-year forward nominal interest rate and the smoothed twelve-month ahead inflation expectation, decreased from 10.33% on October 27, to 7.38% on December 8.

- 70. In the period between October 28 and December 8, the BCB carried out traditional FX swap auctions, in which assumes a long position in domestic interest rate and a short position in FX. These operations totaled US\$18.1 billion, US\$5.1billion of them rolling contracts due on December 1.
- 71. In its open market operations, the BCB carried out, from October 28 to December 8, weekly five- and seven-month fixed rate repo operations, borrowing. The average daily balance of these operations reached R\$45.1 billion, of which R\$31.8 billion were seven-month operations. In the same period, the BCB borrowed money through 32 overnight repo operations. The BCB also conducted daily, at the end of day, two-working-day-tenure liquidity management operations. Operations with tenors less than thirty days, including daily liquidity management operations, averaged R\$93.6 billion, on a daily basis, borrowing. In addition, the BCB conducted borrowing operations with tenures of 12 and 30 working days on October 30; of 10 and 29 working days on October 31; and of 23 working days on November 7. These operations draw from the market the following amounts: R\$139.5 billion, R\$13.1 billion, R\$15 million, R\$1.3 billion, and R\$4.4 billion, respectively. These operations averaged R\$151.9 billion, on a daily basis.
- 72. Between October 28 and December 8, the National Treasury raised a total of R\$19.1 billion: R\$6.9 billion via issuance of LTNs maturing in 2009 and 2011; R\$11.5 billion LFTs maturing in 2010, 2011, and 2012; and R\$0.7 billion in NTN-Bs maturing in 2013, 2017, 2035, and 2045.
- 73. In the same period, the Treasury conducted auctions to sell LTNs maturing in July and October

2009 and bought LTNs maturing in January 2009, totaling R\$1.5 billion; and conducted auctions to sell LFTs maturing in March and December 2011 against the purchase of LFTs maturing in December 2008, totaling R\$2.7 billion. The sales of NTN-Bs settled in other National Treasury securities maturing 2017, 2024, 2035 and 2045 totaled R\$0.9 billion. The Treasury also conducted purchase auctions

of LTNs and NTN-Bs totaling R\$2.0 billion and R\$0.1 billion, respectively.

74. On October 29, the Treasury conducted simultaneous purchase/selling auctions of NTN-F maturing in 2012, 2014 and 2017. The purchase totaled R\$0.3 billion, while the selling amounted R\$74 thousand.

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