

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 March 2010. The chapter also presents the analysis of the inflation prospects up to the second quarter of 2012 and of Gross Domestic Product (GDP) growth up to the end of 2010. Inflation projections are presented in two major scenarios. The first scenario, called the baseline scenario, assumes that the Selic rate will remain unchanged at 10.25% per year over the forecasting horizon, the level defined by Copom at its most recent meeting, held on June 8 and 9, and that the rate of exchange will remain at R\$1.80 per US dollar. The second scenario, named the market scenario, is based on the expected paths for basic interest and exchange rates drawn from the survey carried by Brazilian Central Bank's Investors Relation Group (Gerin) among independent analysts. It is important to stress that these scenarios are used only 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 released here utilize the set of information available up to the cutoff date of June 18, 2010.

The projections for inflation and of GDP growth released in this *Report* are not point estimates. They consist of probability intervals which embody the degree of uncertainty present at the above mentioned cutoff date. Inflation forecasts depend not only on the assumptions over the interest and exchange rates, but also on a set of assumptions on the behavior of exogenous variables. The most likely set of assumptions considered by the Copom is used to build the scenarios to which the Committee attaches the greatest weight on making its interest rate decisions. On setting out these assumptions, the Copom seeks to foster transparency to the monetary policy, thereby contributing to effectiveness of policy decisions in controlling inflation, which is its primary objective.

## 6.1 Inflation determinants

Inflation measured by the Broad National Consumer Price Index (IPCA), after reaching 4.31% in 2009 (rate 1.59 p.p. lower than that seen in 2008), returned to increase in 2010 in line with the robust growth pace of domestic demand. IPCA posted inflation of 3.09% over the first five months of 2010, the highest rate for the period since 2006 and 0.89 p.p. above that recorded in the same period last year. Twelve-month inflation up to May reached 5.22%, a rate close to that observed in the same period of 2009 (5.20%) and higher than the center of the target (4.5%). Thus, although at a slower pace in the second quarter, inflation dynamics presented important deterioration in the first months of the year.

Regulated prices rose 4.31% in twelve months up to May whereas market prices rose 5.60%. Within the set of market prices, it stands out that the price change for nontradable goods (7.24%) was much higher than that for tradable goods (3.79%). This behavior stems in part from the asymmetric effects of the world economic crisis on the domestic economy whose the most intense effects were observed in manufacturing sector while the service sector was very resilient as well as the strong expansion of the domestic demand. The gap between twelve-month inflation of regulated prices and market prices which had been declining consistently, increased again in the last three months. Actually, the gap, which was -6.21 p.p. in June 2008, reversed completely in October 2009 (0.16 p.p.) and it has again increased since March, reaching -1.29 in May. Showing the strength of the domestic demand, service sector inflation has remained at a level higher than that of market prices. In fact, the change in service prices reached to 6.78% in twelve months up to May (against 7.23% in the same period of 2009).

After growing 5.1% in 2008% and receding slightly in 2009 (0.2%), GDP at market prices grew by 2.7% in the first quarter of 2010 compared to the previous quarter according to seasonally adjusted data by the Brazilian Institute of Geography and Statistics (IBGE), after increases of 2.2% and 2.3% in the two previous quarters. Thus, the Brazilian economy is in a new cycle of growth resuming to the growth rates seen before the escalation of the world crisis in September 2008. From the supply side viewpoint, manufacturing sector increased by 4.2% in the first quarter (after increasing by 3.3% and 4.0% in the previous two quarters) on a quarterly basis with seasonal adjusted data partially, due to the effects of monetary, credit and fiscal stimulus used to mitigate the consequences of the crisis

of 2008. The service sector, whose growth rates are less volatile, expanded 1.9% in the first quarter following increases of 1.6% and 0.7% in the two previous quarters. Agriculture production, which had recorded contraction of 0.5% in the third quarter of 2009 and expansion of only 0.2% the following quarter reflecting the lower level of global activity and the consequent fall in prices of agricultural commodities, registered recovery with growth rate of 2.7% in the first quarter of 2010. In general, the strength of domestic demand – based on credit and employment expansion – was important for the rapid recovery of the economy and continues to contribute to the current cycle of economic expansion.

From the viewpoint of aggregate demand, after suffering strong reductions in the last quarter of 2008 and in the first quarter of 2009 (-9.7% and -12.0% respectively against the previous quarter), the Gross Fixed Capital Formation (GFCF) grew 7.4% in the first quarter against the previous quarter according to seasonal adjusted IBGE data, after rising more than 7.0% in the two previous quarters (7.5% and 7.1% respectively). This behavior supports the positive scenario regarding the strength of the economy's expansion. Household spending – the most important component of aggregate demand – rose 1.5% in the first quarter in same basis of comparison, a rate lower than those prevailing in the two previous quarters (2.5% and 2.1% respectively). With four consecutive quarterly increases, household spending has made solid contributions to sustain domestic demand. Government spending registered increase of 0.9%, after growing 0.5% and 0.6% in the last two quarters of 2009 respectively. On the other hand, the external sector contributed negatively to GDP growth in first quarter (-2.9 p.p.), with imports increasing by 13.1% (contribution of -4.5 p.p.) and exports by 1.7% (contribution of 1.6 p.p.). Based on recent developments, a plausible scenario includes the negative contribution of the external sector to GDP growth in the following quarters.

The resilience of domestic demand has again been the key element for sustaining the Brazilian economy. This assessment is supported by the performance of retail sales. Indeed, after they had grown 9.1% in 2008 and receded 5.9% in 2009 due to the effects of the crisis of 2008, real retail sales rose in 2010 (11.8% over the year up to April) according to IBGE. In twelve months up to April, sales increased 8.2% highlighting the sharp increase of sales in the “supermarkets, food, beverages and tobacco” segment (9.7%) and in “furniture and appliances” (9.1%). The expanded retail sales – which includes “vehicles, motorcycles, parts and

spares” and “construction material”, sectors more sensitive to credit conditions – has also presented strong performance, growing 10.7% in twelve months up to April, driven by sales of “vehicles, motorcycles, parts and spares”, which posted growth of 17.3%. Actually, car sales have already surpassed the pre-crisis level. The Copom assesses that retail sales should continue to display positive results over the coming quarters, driven, among others factors, by the expanding employment and by the household credit dynamism.

The average unemployment rate, which had been consistently falling (10.0% in 2006, 9.3% in 2007 and 7.9% in 2008), increased to 8.1% in 2009 and returned to recede in 2010. In fact, the average rate stood at 7.4% up to April, 1.3 p.p. lower than that observed in the same period of 2009. In April, the seasonally adjusted unemployment rate by IBGE reached 6.8%, the lowest level in the new series. According to IBGE, the average real earnings – which grew 3.2% in 2007, 3.4% in 2008 and 3.2% in 2009 despite the effects of economic crisis – continue to increase in 2010 with an expansion of 1.1% up to April. In turn, the average number of persons working, which had increased 2.6% in 2007, 3.4% in 2008, and slowed in 2009 (0.7%), increased again in 2010, an increase of 3.4% in the first four months of the year. Thus, real wage bill – important factor driving aggregate demand in recent years – continues to expand in 2010. After growing by 5.8% in 2007, by 6.9% in 2008 and by 3.9% in 2009, it increased by 4.5% in April mainly due to the job creation. As per National Confederation of Industry (CNI) data, with regard specifically to industrial sector, the most heavily affected by the crisis of 2008, employment in manufacturing, which grew 3.7% in 2007 and 3.9% in 2008, receded in 2009 (-3.3%). In 2010, it has grown by 3% up to April, a rate higher than those observed before the global crisis. Concerning the evolution of formal employment, after intense falls at the end of 2008 and the beginning of 2009, job creation has presented a strong pace according to Ministry of Labor and Employment (MTE) data, with the creation of 962,000 positions this year up to April. Service sector, manufacturing and construction industry and commerce created, respectively, 346,000, 287,000, 166,000 and 74,000 new positions this year up to April. In twelve months up to April, the aggregate expansion reaches 1.9 million positions.

In addition to increased payrolls, credit availability to households – largely determined by macroeconomic stability and institutional improvements achieved in recent years – had been a key element to increase private spending. After being negatively affected by the crisis of 2008, the financing conditions and credit volume returned to more favorable

patterns position. Financial system non-earmarked credit to households grew by 18.2% in April compared with the same month last year. In the same period, credit to housing, whose operations are mainly based on earmarked resources, grew 49.7%. Overall, credit expansion to households has occurred in a context of reduction of non-performing loans. Moreover, expectations of market analysts and banking sector representatives point to expansion of credit volume – less vigorously than that observed before the crisis, despite recent adjustments in reserve requirements and changes of monetary policy stance.

After being severely affected by the crisis of 2008, investment performance has been significantly positive since the second half of 2009. Actually, the rapid recovery of the domestic economy – partly due to the appropriate and timely adoption of monetary, fiscal and credit measures with countercyclical effects – and the abandonment of pessimistic scenarios for the world economy led to a reduction in the degree of uncertainty and risk aversion. This also improved the credit conditions and made entrepreneurs to resume business investment plans that had been interrupted or even abandoned during the crisis. Consequently, according to seasonally adjusted data by IBGE, the GFCF grew by 7.5%, 7.1% and 7.4% in the last three quarters compared to the previous quarter. Additionally, it is likely that the current expansion of the Brazilian economy will be boosted by several projects related to oil sector (pre-salt oil reserves), infrastructure, largely led by public sector.

The volume of credit with non-earmarked resources to corporate entities grew 15.7% in April, compared to same month the previous year, reaching R\$795.7 billion in April. Such behavior was favored by loan and financing done through the National Bank of Economic and Social Development (BNDES) system, which totaled R\$35.7 billion up to April, an increase of 39.4% over the same period in 2009. In the twelve months up to April, these outlays increased 36.6% and totaled R\$295.6 billion. Concerning capital market, the volume of initial public offerings of shares registered in the Securities and Exchange Commission (CVM) reached R\$27.2 billion in twelve months up to May. In the secondary market, the issuances amounted to R\$17.2 billion in the same period, especially for operations in the financial sector that occurred in 2009, including an issuance of R\$14.1 billion in depositary receipts. In 2010, the issuances concentrated on real estate companies and construction, showing the sector recovery. Additionally, the issuance of debentures (excluding operations involving leasing companies), after reaching R\$6.3 billion in 2008 and

R\$11.1 billion in 2009, reached R\$17.1 billion in the June 2009 to May 2010.

Regarding the external sector, the trade balance showed virtual stability in 2009 (US\$25.3 billion from US\$24.9 billion in 2008), but decreased in 2010. Up to May, the trade balance reached US\$5.6 billion against US\$9.3 billion for the same period last year, a decrease of 39.6%. This result comes from exports amounting US\$72.0 billion and imports equal to US\$66.5 billion, values respectively, 29.9% and 43.9% higher than those recorded in the same period of 2009. In this context, the drop in the trade balance comes mainly from the stronger increase in imports related to exports, in line with the fact that the domestic economy is expanding at rates higher than those observed in mostly of our business partners. It is noticeable, however, that export revenues can be positively impacted over the year, among others factors, by the expected increase in the price of iron ore.

After decreasing 2.5% in 2008 – the first drop since 1996 – and 10.7% in 2009, quantum of exports grew again in 2010 (8.5% up to April), with the gradual recovery in external demand. The resumption of external demand also positively impacted the average price of exports, which rose 15.2% over the year up to April, after declining 13.4% in 2009. In turn, after contracting 17.4% in 2009, quantum of imports increased by 41.2% up to April, reflecting the acceleration in domestic activity, particularly in the manufacturing sector, which has higher propensity to import. On the other hand, the average price of imports, after falling 10.5% in 2009, showed stability up to April (0.5%)

The remittances of profits and dividends contributed to increase the twelve-month current account deficit, that moved from US\$25.4 billion in January to US\$36.2 billion in April (2.0% of GDP). Twelve-month foreign direct investments amounted to US\$25.1 billion (1.4% of GDP) up to April 2010.

Signs of slow and uneven recovery in the global economy have continued to build up since the last *Report*. Unlike the mature economies, whose recovery has occurred in a markedly heterogeneous way, economic activity in many emerging economies continues in expansion pace, in some cases with magnitude and speed greater than those expected. Initially, these facts were reflected in commodity prices and especially in oil prices, which recently came to surpass the barrier of US\$85. Since the last *Report*, however, concerns about the effects of sovereign debt crisis in European



countries have intensified, which increased the uncertainty about the sustainability and pace of recovery in mature economies. As a result, prices of various commodities were reduced since the last *Report*. Under these conditions of heterogeneous and gradual improvement in global economic scenario and some recovery in demand for risky assets, there was appreciation of the currencies of major emerging economies and of US dollar. However, it should be noted that perception of systemic risk in international financial markets apparently reappeared. Despite recent developments in the Euro area, the prospects for the global economy have not deteriorated since the release of the last *Report*. It is plausible to assume that the current situation will stabilize or even improve over the coming quarters, even though the current situation is deemed to be shrouded in more uncertainty than the prevalent when the release of the last *Report*.

Regarding aggregate supply, after displaying sharp contraction in the fourth quarter of 2008 and first quarter of 2009 (7.6% and 4.5%), the manufacturing sector grew steadily since then. In the last three quarters up to the first quarter of 2010, there were expansions of 3.3%, 4.0% and 4.2%, according to seasonally adjusted IBGE data. This recovery was reflected in the agricultural sector, which grew 2.7% in the first quarter of 2010, after stagnation in the two previous quarters (-0.5% and 0.2%). In turn, after contraction of 1.9% in the fourth quarter of 2008, the service sector recorded the fifth consecutive quarter of expansion in the first quarter of 2010 (1.9%), which shows a consistent recovery.

Industrial production decreased 0.7% in April compared to March according to seasonally adjusted IBGE data, which is partly explained by anticipation of production to meet anticipated consumption due to the withdrawal of tax incentives for the purchase of durable goods. In general, however, industrial production shows robust expansion in 2010, even after growing the first ten months of last year. This year up to April, industrial production expanded 18.0%, and grew 2.3% in twelve months, the first positive rate in this metric since January 2009. Manufacturing and mining industries grew by 18.0% and 18.5% up to April, respectively, and 2.4% and 1.1% in the last twelve months. The sectors most dependent on credit such as automotive and construction, and consequently the most affected by the global economic crisis, show expansion and for some cases they already exceed production levels prevailing before the crisis.

From the demand viewpoint, the GDP – net of inventory adjustments of -1.2 p.p. – grew 7.7% in the first quarter of 2010 compared to the same quarter last year, with the

external sector presenting a negative contribution of 2.9 p.p. The inventory level indicator from FGV, which had receded to 78.9 in January 2009, the lowest level since August 2003, has been rising consistently since then. In April and May, the indicator reached 101.3 and 100.5 respectively, according to seasonally adjusted data, showing that the process of adjusting inventory levels in manufacturing ended. Actually, the rebuilding of inventories has contributed to the consistent recovery of activity level. Copom assesses that industrial production should continue to grow robustly, with positive effects on employment and income level.

After reaching 86.7% in June 2008, the seasonally adjusted Level of Utilization of Installed Capacity (Nuci) computed by the Getulio Vargas Foundation (FGV) moved down to 77.9% in February and March 2009 due to the 2008 crisis. This indicator has consistently risen since then and it reached 85.1% and 84.9% in April and May respectively, levels close to those prevailing before the crisis of 2008. Regarding the expansion of capacity, after robust growth of 23.8% in 2007 and 20.1% in 2008, the absorption of capital goods contracted by 13.4% in 2009. In 2010, however, the absorption has increased and there was an expansion of 28.2% up to April. This growth is due to the increase of 13.8% in imports and only 3.2% in exports of capital goods, and of 28.7% in the domestic production of these goods. It is also worth noting the production of inputs for the construction industry increased 16.1% in the same basis of comparison. Industrial production indicators and retail sales figures show a robust expansion of activity. Actually, after moving from 125.9 in June 2008 to 71.1 in December 2008, the seasonal adjusted FGV's Economic Outlook Survey indicator of global demand for the manufacturing industry surpassed the 100-point threshold in September 2009 and reached 120.8 in May 2010. Thus, an increasing number of companies qualify the demand for its products as strong and, in turn, decreases the amount of those that judges the demand as weak. In summary, the data points out the utilization rate has been rising through the last months showing virtual exhaustion of the idleness margin of the industry, despite the resumption of investment.

With the worsening of the world crisis, the National Cost of Construction Index (INCC) began to show signs of cooling off in the last quarter of 2008. However, there was a reversion of this trend since the end of 2010. Actually, after peaking in November 2008 (12.33%), the twelve-month change in INCC moved down to 3.25% in December 2009 and has been steadily increasing since then, having reached 6.07% in May. The medium term scenario for construction sector



prices – sector in which the use of imported inputs is limited – continue pointing out the continuation of this process. This is due to the intensity of activity in this sector, which must be supported by public policies, the expansion of the labor market and the expansion of housing credit markets. It should be noted that there are expectations by market analysts of increases in steel prices.

Despite rising in 2009 (8.1%), after two consecutive years of reduction (from 10.0% in 2006 to 9.3% in 2007 and then to 7.9% in 2008), the average unemployment rate have persistently receded since the end of 2009. Rigorously, not only the unemployment rate has been reduced since November 2009 compared to the same period of last year (7.2%, 7.4%, 7.6% and 7.3% in the last four months up to April against 8.2%, 8.5%, 9.0% and 8.9% in the last year) but it has also been standing at historically low levels in recent months (7.5%, 7.1%, 7.0% and 6.8% according to seasonal adjusted IBGE data). The strength in the labor market is confirmed when analyzing the numbers of formal employment and industrial employment – the most affected by the crisis, as well as the growth rates of wages. The prospects for the coming quarters continue to indicate the continuity of this dynamic.

After surpassing the threshold of US\$85 in May 2010, oil prices – a systematic source of international market uncertainty – receded to a level close to US\$75 in the latest weeks due to increasing concerns about the impact on global growth of the fiscal crisis in European countries. Despite considerable uncertainty inherent to forecasts over the path of oil prices, the baseline scenario adopted by Copom, which foresees unaltered domestic prices of gasoline for 2010, remains plausible. It is also worth noting that the impact of international oil prices over domestic inflation is not transmitted exclusively through fuel prices but also, through other channels, such as the productive chain of the petrochemical sector, as well as the expectations of consumers and entrepreneurs. It is also appropriate to note the strong increase in the price of iron ore and other metals due to the recovery of world economy especially for emerging countries. On the other hand, agricultural commodity prices have been very volatile and consistent signs of recovery cannot yet be clearly identified.

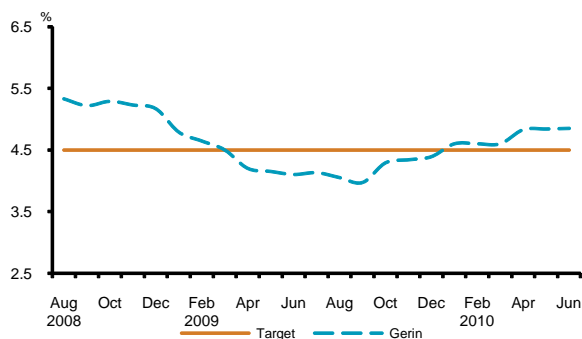
After a sharp reduction in 2009 (-1.43% against 9.10% in 2008), broad inflation – measured by the General Price Index (IGP-DI) – has been rising through 2010. Twelve-month IGP-DI inflation, which had reached 14.82% in July 2008, had receded to -1.76% in October and November of 2009

has returned to the positive territory in 2010. IGP-DI grew 5.12% over the year up to May, 5.86 p.p. higher than that observed in the same period of 2009, and the twelve-month rate reached 4.38%.

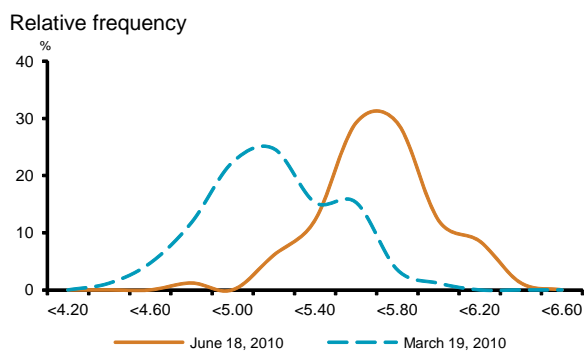
The sharp acceleration in the index in 2010 is mainly due to IPA-DI and INCC whose changes up to May reached 5.72% and 4.48% respectively against -2.29% and 1.70% for the same period of previous year. Additionally, IPC-Br grew by 3.86%. The sharp IPA-DI increase is partly due either to the change in the agricultural prices, for which the twelve-month change reached 5.26% and to manufacturing prices with an increase of 5.86%. As pointed out in previous *Reports*, the Copom assesses that the effects of wholesale price behavior over consumer inflation will depend on current and prospective demand conditions and on expectations of price makers in relation to the path of future inflation.

As for headline inflation, the three core measures computed by the Central Bank show an inflation increase in 2010. The twelve-month change in the core by exclusion (IPCA-EX), which had moved from 5.71% in December 2008 to 4.73% in December 2009, rose to 4.93% in May 2010. The other two measures of core inflation have displayed the same pattern. The change in the core by smoothed trimmed mean (IPCA-MS), which had reached 4.82% in December 2008 and had been reduced to 4.24% in October 2009, increased again to 4.99% in May. Finally, inflation measured by double weighted core measure (IPCA-DP), which had reached 6.08% in December 2008 and had reduced to 4.74% twelve months later, increased again to 5.06% in May 2010. It should be noted that all core measures are above the center of the target. Additionally, after reaching 68.75% in January 2010 (against 66.15% in January 2009) the IPCA diffusion index receded to 60.94% in May 2010 (against 58.9% in May 2009), but its level continue to indicate the spread of the inflation acceleration process.

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



**Figure 6.2 – Dispersion of inflation expectations for 2010**



The expectations for GDP growth in 2010 have changed a lot since the release of last *Report*, moving from 5.50% to 7.06%, partly due to the release of the national accounts figures for the first quarter. Inflation expectations have also increased since the release of the last *Inflation Report* and they registered 5.61%, and 4.80% for 2010 and 2011 respectively at the cutoff date of June 18, 2010 compared to 5.10% and 4.70% for 2010 and 2011 at March 19, 2010. Broadly speaking, however, there has been a reduction of the dispersion around the central tendency of inflation expectations for 2010 since the release of the last *Report*.

Figure 6.2 shows that the prospective scenario for inflation in 2010 has become less uncertain since the release of the last *Report*.

## 6.2 Main scenario: associated risks and monetary policy implementation

The projections used by Copom are based on a set of assumptions about the behavior 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 – envisages the recovery of the global economy, though uneven across countries and surrounded by uncertainties, and robust expansion of the domestic economic activity, combined with increase in the inflation projections relative to the previous *Inflation Report*.

The balance of risks related to the inflation prospects has worsened since the previous quarter, and the Committee assesses that the risks to a benign scenario for inflation are concentrated in the domestic front. The current inflationary pressures – stemming from increasing resource utilization and from the imbalances between the growths of domestic absorption and the aggregate supply – have already materialized in actual twelve-month inflation rates above the target, and the inflation projections point to inflation rates well above the target in 2010, and that difference recedes in 2011. An important risk arises from the possibility that actual and expected inflation may persistently remain above the target or even drift away from it because of the rising utilization of the production factors and/or demand expansion. The behavior of inflation expectations is an additional risk to the inflation outlook. Even though inflation expectations have remained contained in the latest weeks, the Committee is closely monitoring the developments of the expectations and other indicators as to prevent the materialization of an unfavorable scenario. In fact, if such a less benign scenario for inflation indeed materializes, the costs associated with bringing inflation back to its target may be significant. We should stress that, despite the disinflationary effects from the domestic economic downturn that was triggered by the global financial crisis, the Brazilian inflation has shown important resilience – the trough of the twelve-month inflation was 4.17% in October 2009. Therefore, to avoid that the society

incur these costs, it is recommendable the adoption of adequate and timely monetary policy measures.

On the external front, there are two main risks to be monitored, even though, in the Committee's main scenario, these risks do not pose an important threat to the materialization of a benign inflation scenario. The first risk – which has tilted to downside in the short run since the previous *Inflation Report* – is related to the recovery of commodity prices, especially if such a recovery is not offset by changes of the nominal exchange rate in the opposite direction. The second is associated with the ongoing crisis in some European countries, and the resulting worsening of the international financial conditions, which could deteriorate further. The possibility that this second risk materializes is related to the perception of systemic risk that resurfaced on the wake of the crisis. Such perception is based on the view that there is a close connection between a possible fiscal consolidation in the countries currently facing fiscal hurdles and the balance sheets of financial institutions. This scenario would likely bring about relevant movements in the price of some domestic assets.

The main scenario for the external front considers that the world economy will continue to recover in 2010, although there is more uncertainty than in the previous *Report*. Under this scenario, the global economic recovery is led by the emerging market economies, and the G3 economies (United States, Europe and Japan) regain some dynamism, though unevenly across regions. The US economic recovery is proceeding at a moderate pace, as illustrated by the fact that restocking of inventories is over, with positive effects on the performance of manufacturing production and retail sales, although the economic indicators in general are volatile and often present divergent signs. Consumer confidence is improving, even though it is well below its level prior to the 2008 crisis, and the labor market is showing signs of a rebound. The Japanese economy is also gradually recovering, led by exports directed mainly to East Asia, but its domestic demand remains weak. The economic recovery of the Euro Zone is likely to be slower and more unequal across its members given the current fiscal strains, the stagnation of household consumption and the latest indicators from the manufacturing and services sectors. In short, since the previous *Inflation Report*, there has been higher uncertainty surrounding the sustainability and the pace of the recovery of mature economies, mainly in Europe, in a context in which policy stimuli are withdrawn or even replaced by contractionary measures and prospects for credit expansion are moderate. On the other hand,

several emerging market economies continue to expand robustly, to the point of overheating in the goods, services, factors and asset markets, in some cases. As a matter of fact, there is increasing concern about the behavior of inflation in important emerging markets. Against this background, monetary policy in many countries is still in pause mode after a period of aggressive easing, but in the countries less affected by the global crisis – where recovery is faster and more intense – monetary policy is already being tightened.

The fiscal imbalances, due to or aggravated by the global crisis, constitute an important issue that the mature economies have to deal with. The implementation of fiscal stimuli by these economies and the fall of their tax revenues because of the economic contraction led to an unprecedented peacetime growth of their public debts. Projections of different experts suggest that the government debt will rise substantially if relevant measures aiming at fiscal adjustment are not implemented. Dealing with the fiscal imbalances poses a big challenge for the advanced economies because the fiscal stimuli still in place are relevant for the economic recovery. Despite this fact, many countries have already started to implement tighter fiscal policies in order to improve the financial position of the public sector and conduct stress tests for their banking systems.

In face of the significant uncertainty regarding the speed and magnitude of the global economic recovery, two alternative scenarios are considered here. In the first, the world economy recovers slowly, and market participants remain overly cautious about the solvency of some European countries, so that the contractionary effects on the domestic economy would persist over the entire projection horizon. The Committee assesses that the materialization of such a scenario would have ambiguous effects on the domestic inflation. On one hand, the global downturn would help to contain the domestic aggregate demand through the fall of Brazilian net exports. Furthermore, the contraction could cool off the prices of important commodities and thus could help to keep the domestic inflation low. On the other hand, the outlook for the domestic inflation could worsen for two reasons. First, the global deceleration could increase risk aversion and reduce the demand for Brazilian assets, depreciating their prices. Second, a possible reduction of net exports in the medium term could reinforce the depreciation of Brazilian asset prices and so put upward pressure on inflation. In the second scenario, the global economic upturn is faster than expected, accompanied by full restoration of financial conditions and confidence, together with the recovery of commodity prices. In principle, as in the first

alternative scenario, the impacts on domestic inflation would be ambiguous.

Commodity prices have not shown any clear upward trend throughout this year, with quite heterogeneous behavior within the group. In the case of iron ore, for example, a key input in the production chain of the manufacturing sector, its price has been increasing significantly over the last months. On the other hand, in the case of sugar, in part as a result of weather conditions in India, the downward trend for its prices prevails. Overall, however, the outlook for commodity prices – including oil prices – remains surrounded by considerable uncertainty. It depends on how the demand will behave in a context of asymmetric recovery of the global economy, on the uncertainties regarding the European fiscal situation as well as on the trajectory of the world supply. In any case, it is expected that these prices are more likely to rise than to remain stable in the medium and long term as the world economy recovers. It is important to remember that the analysis of the potential inflationary effects coming from the prices of raw materials must also take into account the implications for Brazilian asset prices. For instance, in the past few years, there has been a negative correlation between the international price of commodities and the exchange rate in Brazil. Nonetheless, considering a prospective scenario in which the current account worsens, that negative correlation may become weaker in the medium run.

The main domestic risk, as stressed in the beginning of this section, is associated with rising resource utilization together with the imbalance between the growths of domestic absorption and the aggregate supply. As highlighted in previous *Inflation Reports*, the increasing utilization of production factors – both the capital stock and the labor force – was taking place when the twelve-month inflation was already close to the target. Against this background, isolated inflationary pressures could quickly turn into higher overall inflation and a less benign scenario. In fact, since the first quarter of 2010, both current inflation and Copom projections point to values well above the target for 2010, but with a less challenging scenario for 2011. The economic downturn of the last quarter of 2008 and first quarter of 2009 led to an abrupt interruption of a cycle of strong economic growth and mitigated existing inflationary pressures. Nevertheless, in spite of the magnitude of the downturn – in large part mitigated by government policies implemented during the crisis and earlier – the existence of mechanisms turning the Brazilian inflation rigid downward reduces the scope for accommodative stances. Additionally, it is important to mention that the lagged effects of the fiscal and



credit stimuli implemented throughout 2009 and beginning of 2010 have not completely materialized yet. Therefore, it is natural to expect that, against this background of virtual scarcity of resources and increasing demand, price increases are more widespread.

The behavior of the GDP in the first quarter of 2010 confirmed the fast growth of the domestic economic activity. In particular, investment – the more volatile component of aggregate demand and, not coincidentally, most affected by the crisis – continues to grow robustly. For the first time since the beginning of the crisis, the gross formation of fixed capital (GFFC) surpassed its pre-crisis level of the third quarter of 2008. As a result, the investment rate – the GFFC-to-GDP ratio – is recovering, reaching 18% in the first quarter of 2010. Such a solid recovery will contribute to a more sustained economic growth in the medium run, once the current investment is translated into higher productive capacity in the future. However, there is still the risk that the growth of the capital stock may not be enough to ensure that aggregate supply meets the expected strong growth of the aggregate demand without pressures on consumer prices. The strong growth of imports during the fourth quarter of 2009 and the first quarter of 2010 – 13.3% and 13.1%, respectively (q-o-q after seasonal adjustment) – as well as the strong increase in the import volume in April 2010 are in line with the robust growth of the aggregate demand. In comparison, the growth of export volume is still weak because of the slow global recovery, especially in the developed economies. However, the rebound in the prices of raw materials and semi-manufactured products is partially offsetting the slow pace of export volume. The outlook for the external sector is largely conditioned by the necessity of filling the gap of resources resulting from the strong growth domestic demand.

The ongoing expansion of the domestic economy and its growth prospects are based on four elements. First, and in contrast to previous shocks to the Brazilian economy, this time there was no balance-of-payment crisis, deterioration of public sector finances, increase in inflation or concern about policy regime change. In short, as stressed in other Copom texts, the Brazilian economy became more resilient to external shocks. Second, the fiscal and credit stimuli are still adding to the domestic expansion. Third, and possibly more importantly, household consumption – which accounts for the largest share of the aggregate demand – has been quite resistant. The expansion of consumption is associated, in large extent, with the resumption of credit and better-than expected performance of the labor market, which has

positive effects on payroll. The expansion of labor market formalization also contributes positively since employees feel less insecure to make consumption decisions and makes easier the access to the credit market. Fourth, investment has recovered vigorously, and the prospects are very positive, given the rising confidence of consumers and entrepreneurs and the capacity utilization indices. This scenario will be reinforced by projects related to the oil sector (pre-salt) and infrastructure, in large extent, led by the public sector. We should stress that those projects, as well as the realization of events such as World Cup in 2014 and the Olympic Games in 2016, generate several externalities for the economy as a whole and should stimulate private investment expansion in the following years.

The Committee judges that there are important mechanisms making the Brazilian inflation downward rigid. In particular, the presence of regular and almost automatic mechanisms of adjustment, either *de jure* and/or *de facto*, has contributed to the persistence of inflationary pressures coming from the past. This phenomenon took place recently as inflation, in spite of the strong economic activity reduction, stood at 4.31%, close to the target of 4.5% in 2009, with price of services growing by 6.37%. It is well known that the existence (even informally) of price indexation mechanisms reduces the sensitivity of inflation to demand conditions. Even though inflation rates have been relatively low in recent years, by Brazilian standards, they still encourage feedback mechanisms as they do not correspond to the usual concept of price stability. In general, indexation mechanisms tend to prevent the economy from disinflating during downturns and increase the “starting point” of the inflation rate during upturns, thus raising the inflation risks for the prospective scenario in moments like this.

On the fiscal front, the economic recovery led by the expansion of domestic demand, as well as the phasing out of tax breaks implemented during the crisis have improved the fiscal accounts. Based on the information available so far, and provided that the primary surplus continues to rise according to the assumptions used in the inflation projections presented in the next section, the Committee assesses that is unlikely to occur any significant and consistent reversion of the trend towards a reduction of the debt-to-output ratio. The Committee also recognizes that the realization of these assumptions would contribute in a relevant way to the correction of the imbalance between the growths of domestic absorption and aggregate supply.

Breaking down the IPCA into free and regulated prices reveals that in 2009 the latter exerted larger pressure on overall inflation than the former, differently from the previous two years. However, the scenario for regulated prices in the medium term is relatively benign. In fact, the prospective scenario considers that the regulated price inflation will be lower than the free price inflation in 2010. In particular, the domestic prices of gasoline are unlikely to rise in the short run.

The recent trend of wholesale prices of manufactured goods displayed an important shift. After falling by 4.43% in 2009 – with negative changes in nine months of the year – the IPA for manufactured goods grew 5.86% in the first five months of 2010. In May 2010, this set of prices increased by 2.66%, the largest change since December 2002, when there was a confidence crisis and large exchange rate depreciation. Differently from last year, the wholesale price index of farming products has also increased quite a lot in 2010, going from a deflation of 3.16% in 2009 to an inflation of 5.26% in the first five months of the current year. In fact, the behavior of the wholesale prices of manufactured and farming products during the first five months of 2010 is similar to that observed in the same period of 2008. Given the evidence that changes in wholesale prices have lagged effects on consumer prices, as highlighted in a box of the March 2010 *Inflation Report*, the ongoing increase of wholesale prices is likely to affect headline inflation in the coming months.

In short, some sectoral or disaggregated price indices, as well as wholesale price indices, point to a less benign scenario for inflation: i) the services sector still remains as an important source of inflationary pressures; and ii) the wholesale prices of manufactured and, to a less extent, of farming goods are on the rise and will have lagged effects on consumer price indices.

The labor market is experiencing strong expansion. The unemployment rate reached its lowest level since the beginning of the new labor market survey in March 2002. The underlying risk from such tight labor market conditions is that nominal wages start to grow faster than labor productivity, which, in an environment of buoyant demand, tends to be transmitted to consumer prices. We should stress that the theory, supported by international evidence, recommends that wage moderation plays a key role in reaching price stability.

The credit market continues to expand at a strong pace. The main scenario involves the maintenance of the expansion of the domestic credit market and of the favorable conditions

for Brazilian companies to access external credit. The development of the credit market in Brazil has brought the profile of that market closer to those of economies with similar levels of economic development. However, the sustainability of the strong credit expansion must be – and has been – closely monitored given the potential side effects on inflation and prudential risks.

The possibility that unexpected changes in the inflation dynamics may have long-lasting effects on agents' inflation expectations constitutes a perennial risk for monetary policy implementation and, therefore, must be monitored continuously. In principle, short-run inflationary pressures may lead to the dissemination of second-round effects. This happens because large changes in relative prices that result in high inflation rates are followed by agents' desire to restore their real income, which, in turn, feeds back into the inflationary process. Such a risk is higher when factor markets and demand are overheated, and the evidence suggests that such is the situation the Brazilian economy is currently experiencing. The international experience, as well as the own history of inflation in Brazil, recommends that the monetary authority remains cautious in order to fight potential second-round effects.

The strategy adopted by Copom aims to ensure the convergence of inflation to its target in the current and in the next years. This requires that deviations of inflation from its target must be readily corrected. Such a strategy takes into account the lags in the transmission mechanisms and is the most appropriate way to deal with the uncertainty inherent to the process of formulating and implementing monetary policy.

The Committee evaluates that the Brazilian economy is in a new expansion cycle. This assessment is corroborated by the information released since the previous *Inflation Report*, even though there is still some uncertainty about the pace of the ongoing expansion. There are signs of overheating coming from core inflation measures, inflation expectations, tight labor market conditions and rising cost of raw materials. In fact, the Committee's inflation projections have indicated some deterioration of the prospective scenario. The Committee understands that this deterioration should be contained and, for that reason, it is necessary to reverse the signs of imbalances between the growth pace of aggregate demand and aggregate supply, which ultimately tend to increase the inflation risks. In such circumstances, monetary policy must be adjusted to eliminate those imbalances and at the same time prevent that isolated inflationary pressures result in persistent deterioration of the prospective scenario.

The Committee understand that, despite the fact that a substantial part of the policy stimuli implemented during the international financial crisis have been unwound – such as the rise of banks’ reserve requirements and the reversion of tax breaks – the risks to a more benign scenario for inflation, in which inflation would consistently converge to its target, have tilted to the upside. On the other hand, the latest developments on the external front have raised some caution about the assessment of the prospective scenario. In any case, the Committee members’ prevailing understanding is that monetary policy must act in a timely fashion in order to prevent that short-run uncertainties propagate to longer horizons.

In light of these considerations, proceeding with the adjustment of the monetary conditions to the prospective scenario, in order to ensure the convergence of inflation to its target, the Committee unanimously decided to increase the Selic rate from 8.75% p.a. to 9.5% and 10.25%, without bias, in the meetings of April and June, respectively.

### 6.3 Inflation forecasts

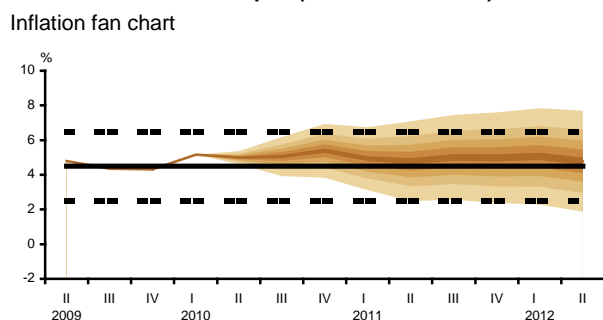
According to traditionally adopted procedures, and taking into account the available information up to the cutoff date<sup>1</sup> of June 18, 2010, the baseline scenario assumes the exchange rate remains unchanged over the forecast horizon at R\$1.80/US\$, and the target for the Selic rate stays at 10.25% p.a. – the level set by the June Copom meeting – against R\$1.80/US\$ and 8.75% p.a. considered in the March *Inflation Report*. The projection for the change, in 2010, of the set of regulated and monitored prices stands at 3.6%, against 4.0% considered in the last *Report*. This projection is based on the hypotheses of stable prices for gasoline and bottled gas; increase of 1.5% for electricity rates; and of 1.6% in the fixed telephone rates. Regarding items for which more information is available, price changes were estimated individually, whereas 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, projection of the regulated and administered prices for 2011 stands at 4.4%, above the value used in the March 2010 *Report* (4.3%), and of 4.5% for 2012.

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1/ The only exception is the inflation target for 2012, set at 4.5% through the Resolution CMN n° 3.880, of June 22, 2010. The figures and tables presented in this section already incorporate the target for 2012.

The market scenario, on the other hand, is based on 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 slightly changed in comparison to the values released in the March *Inflation Report*. For the last quarter of 2010, these expectations moved from R\$1.83/US\$ to R\$1.81/US\$, and for the last quarter of 2011, were kept at R\$1.86/US\$. For the second quarter of 2012, average survey expectations project an exchange rate of R\$1.89/US\$. The average expectation about the Selic rate increased in comparison to the values presented in the last *Report*. For the last quarter of 2010, it moved from 11.14% to 11.81% p.a., while for the last quarter of 2011, it went from 11.14% to 11.75% p.a. For the second quarter of 2012, the projection for the average Selic rate is 11.33%. This 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 (10.25% p.a.), of 260 b.p. and 175 b.p., in the last quarter of 2010 and 2011, respectively. Additionally, the market scenario assumes changes of 3.6% and 4.6% for the group of regulated prices in 2010 and 2011, respectively, and of 4.5% in 2012.

**Figure 6.3 – Projected IPCA-inflation with interest rate constant at 10.25% p.a. (Baseline scenario)**



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

**Table 6.1 – Projected IPCA-inflation with interest rate constant at 10.25% p.a. (Baseline scenario)**

Year	Q	Probability Interval					Central projection	
		50%	30%	10%	10%	30%		
2010	2	4.8	4.9	5.0	5.0	5.1	5.1	5.0
2010	3	4.6	4.8	5.0	5.1	5.3	5.5	5.1
2010	4	4.8	5.0	5.3	5.5	5.8	6.0	5.4
2011	1	4.2	4.5	4.8	5.1	5.4	5.7	4.9
2011	2	3.8	4.2	4.6	5.0	5.3	5.7	4.8
2011	3	4.0	4.4	4.8	5.2	5.6	6.0	5.0
2011	4	3.9	4.4	4.8	5.2	5.6	6.1	5.0
2012	1	3.9	4.4	4.8	5.3	5.7	6.2	5.1
2012	2	3.6	4.1	4.6	5.0	5.5	6.0	4.8

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

With regard to fiscal policy, the projections presented in this *Report* are based on the working hypothesis of a primary surplus of 3.3% of GDP in 2010. In this case, the surplus is adjusted by the possibility of reduction of 1.12 p.p. due to the implementation of projects belonging to the Growth Acceleration Program (PAC). Moreover, the primary surplus in 2011 and 2012 is assumed to remain at the level of 3.3% of GDP without any adjustment.

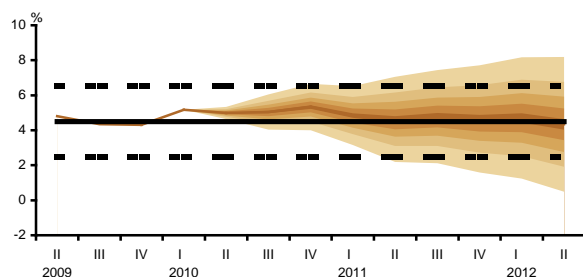
Based on the above assumptions and using the information set until the cutoff date (June 18, 2010), projections were constructed for the IPCA inflation accumulated over four quarters, consistent with the baseline and market scenarios interest and exchange rate paths.

The central projection associated with the baseline scenario shows inflation of 5.4% in 2010, an increase of 0.2 p.p. in comparison to the projection presented in the March *Report*, therefore, above the central value of 4.5% for the target determined by the National Monetary Council (CMN). As can be seen on Figure 6.3, in the baseline scenario, the projection for twelve months inflation stays above the central target for the entire relevant horizon. According to data shown on Table 6.1, the projection for twelve-month accumulated inflation moves from 5.0%, in the second quarter of 2010, to 5.1% in the third quarter and reaches 5.4% in the last quarter of 2010. The respective projections



**Figure 6.4 – Projected IPCA-Inflation with market interest and exchange rates expectations**

Inflation fan chart



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

**Table 6.2 – Projected IPCA-Inflation with market interest and exchange rates expectations <sup>1/</sup>**

Year	Q	Probability Interval					Central projection	
		50%	30%	10%	50%	30%		
2010	2	4.8	4.9	5.0	5.0	5.1	5.1	5.0
2010	3	4.6	4.8	5.0	5.1	5.3	5.5	5.0
2010	4	4.8	5.0	5.2	5.4	5.6	5.9	5.3
2011	1	4.1	4.4	4.7	5.0	5.2	5.5	4.8
2011	2	3.6	4.1	4.4	4.8	5.2	5.6	4.6
2011	3	3.7	4.2	4.6	5.0	5.4	5.9	4.8
2011	4	3.4	3.9	4.4	4.9	5.4	5.9	4.6
2012	1	3.3	3.9	4.4	5.0	5.5	6.1	4.7
2012	2	2.8	3.4	4.0	4.6	5.2	5.9	4.3

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

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

**Table 6.3 – March 2010 Inflation Report projections**

Period	Baseline scenario	Market scenario
2010 I	5.1	5.1
2010 II	4.9	4.9
2010 III	5.0	5.1
2010 IV	5.2	5.2
2011 I	4.7	4.5
2011 II	4.4	4.2
2011 III	4.7	4.3
2011 IV	4.9	4.4
2012 I	5.1	4.6

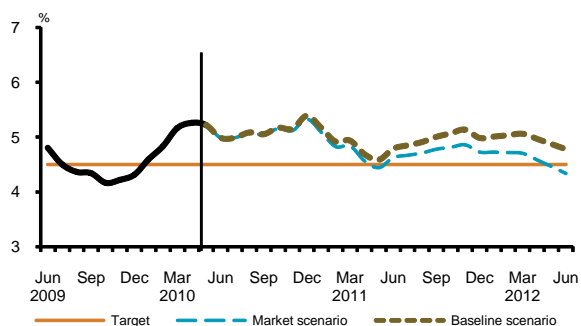
for 2011 moves from 4.9% in the first quarter, fluctuates around this value in the following quarters and ends the year at 5.0%. In this scenario, the associated projection for the first quarter of 2012 is 5.1% whereas for the second quarter is 4.8%. It is worth mentioning that the decrease of the inflation projections for 2011, in comparison to 2010, partially reflects the fact that inflation expectations, for both 2011 and 2012, are lower than the ones for the current year. According to the baseline scenario, the estimated probability that inflation for 2010 will breach the upper tolerance level of the target is close to 12%. For 2011, this probability is close to 17%.

In the market scenario, the inflation projection for 2010 is 5.3%, 0.1 p.p. lower than the respective projection of the baseline scenario, representing an increase of 0.1 p.p. in comparison to the projection presented in the last *Report*. As can be seen on Figure 6.4 and on Table 6.2, projections for inflation accumulated in twelve months fluctuate above the central value of the target along 2010, and recede along 2011, finishing the year at 4.6%, around the central value of the target. The projection for the first quarter of 2012, within this scenario, is of 4.7%, but in the second quarter moves to 4.3%, therefore, below the central value of 4.5% for the target. According to the market scenario, the estimated probability that inflation for 2010 will breach the upper tolerance level of the target is 7%. For 2011, this probability is close to 16%.

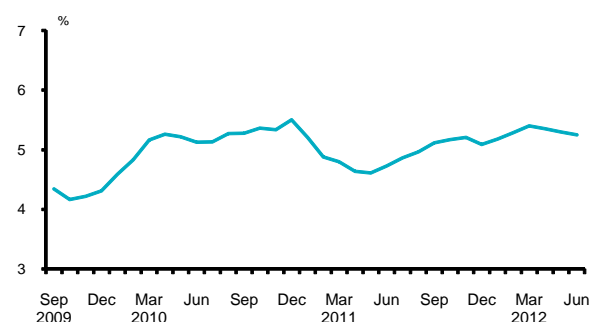
As it was shown in the last *Report*, the projected dynamics for both scenarios depart from each other along 2011, reflecting the effect of the expected increase in the Selic interest rate, which brings inflation back to inferior levels on the market scenario. Along 2010 this difference is quite smaller mainly due to the lags of the transmission mechanism of monetary policy to prices. Another aspect to highlight is that, in general, inflation projections have risen in comparison to figures in the last *Report*; however, there are indications that this movement is being reversed, at the margin.

Comparing the trajectories shown in this *Report* with those released in the previous *Report*, whose projections are shown on Table 6.3, it is apparent that there was an increase of the projections along 2010 in the baseline scenario, partially reflecting the increase of inflation expectations for the current year and inflation rates in recent months higher than the respective projections presented in the March *Report*. Regarding the market scenario changes in projections also reflect these movements. In respect to 2011, it is also shown an increase in the inflation projections, for both scenarios, in respect to those presented in the March 2010 *Report*.

**Figure 6.5 – Projections and target path for twelve-month cumulative inflation**

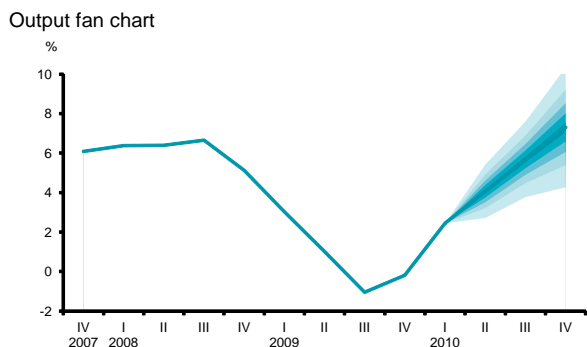


**Figure 6.6 – Inflation forecast: VAR models**



Note: accumulated inflation in 12 month (% p.a.).  
Average forecast generated by the VAR models.

**Figure 6.7 – Projected GDP growth with interest rate constant at 10.25% p.a. (Baseline scenario)**



For the first quarter of 2012, there is a relative stability in projections comparison.

Figure 6.5 shows the path of twelve-month accumulated inflation, according to the baseline and market scenarios, up to the second quarter of 2012, as well as the target trajectory. The figures are actual twelve-month inflation until May 2010, and, from June on, projections according to the two scenarios. The projections fluctuate, in both scenarios, above the target along 2010. However, it is worth noting the increasing distance between the projection paths toward the end of the considered horizon. This departure is essentially due to the expected change in the Selic rate in the market scenario.

The average forecast generated by the Vector Autoregression models (VAR) for the twelve-month accumulated inflation is presented in Figure 6.6. By May 2010, the values are actual twelve-month inflation and, as of June, refer to the average forecast of the VAR models. As well as in the projections generated in the baseline and market scenarios, the VAR models forecasts increased along the entire horizon, in comparison to those presented in last *Report*. Along 2010, the forecasts are in levels quite above the target, but tend to converge to the central target along the first semester of 2011, although afterward returning to the unconditional average of the observed inflation.

Figure 6.7 illustrates 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 2010 is 7.3%, an increase of 1.5 p.p. in comparison to the projection presented in the March 2010 *Inflation Report*.

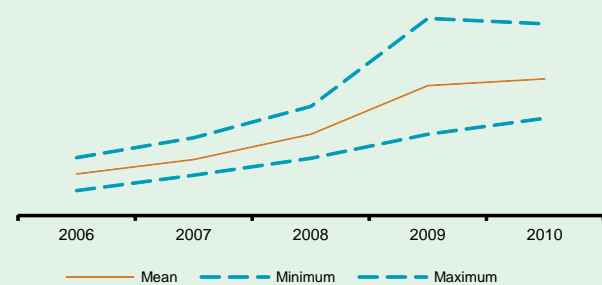
## The Power of Monetary Policy in Brazil

With inflation targeting implemented in Brazil for over a decade<sup>1</sup> and the macroeconomic stability achieved in recent years, issues related to monetary policy fine-tuning take greater relevance in the context of its execution. Among issues to be considered, the discussion about the power of monetary policy, quantifying the sensitivity of inflation rate to the policy interest rate (Selic rate), emerges as a relevant issue. Positive changes in the power of monetary policy over time can be understood, among others, as a reflection of higher credibility achieved by the central banks<sup>2</sup> and, in a feedback mechanism, may influence the actual monetary policy execution.

The aim of this box is to present evidence that the power of monetary policy has increased in recent years in Brazil, from small structural models used by the Central Bank and economic indicators usually associated with greater power of monetary policy, which are: expansion of credit to Gross Domestic Product (GDP) ratio and its average maturity; lower share of government debt indexed to the Selic rate; and increase of the average maturity of government debt.

The small structural models used by the Central Bank show, among others, an equation for aggregate demand (IS curve) and an equation for aggregate supply (Phillips curve). Thus, the power of monetary policy (short-term) can be defined by the product of the sum of the real interest rate coefficients in the IS curve by the sum of the output gap coefficients in the Phillips Curve<sup>3</sup>. Figure 1 shows the path of

**Figure 1 – Power of monetary policy (short-term)**



Source: BCB

1/ Decree 3.088, June, 21,1999.

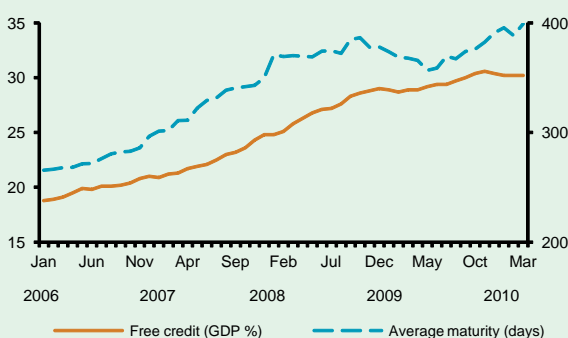
2/ The credibility of the inflation targeting regime was the subject of box in *Inflation Report* of December 2007.

3/ These models differ regarding the output gap estimation method. Its variants have been discussed most recently in *Inflation Report* of March 2010, which includes several references to earlier boxes.

the power of monetary policy regarding the various models used by the Central Bank, standardized by the average of the models in 2006 (base year). According to this measure, notice that the power of monetary policy increased in recent years, regarding not only the average of the models, but also maximum and minimum values. Indeed, this analysis is supported by credit markets and government debt evolution, as discussed below.

The literature and international experience recognize the amount of credit in the economy<sup>4</sup> as one of the drivers of the power of monetary policy. In principle, a change in policy interest rate can be quickly transmitted to credit market interest rates. With higher interest rates, households resist rising debt, which can negatively impact consumption; and companies become more reluctant to initiate new investment projects in response to higher funding costs and the prospects of decline in household consumption. Notice also that an increase in credit to GDP ratio shows that a higher share of consumption and investment depends on credit markets<sup>5</sup>. Regarding this, the greater the credit to GDP ratio, the greater should be the expected effect of monetary policy on inflation. Furthermore, if there is, for example, an increase in interest rates, the marked to market value of banks' loan portfolio may be more affected because of longer-term loans and, therefore, hinder or even prevent a credit expansion.

**Figure 2 – Free credit and average maturity**



Source: BCB

Figure 2 shows a consistent and persistent upward trend of credit to GDP ratio considering bank's free resources in this period. Moreover, the figure shows an increase in the average maturity of free resources credit. In January 2006 free resources credit to GDP was 18.8% with an average maturity of 266 days. In March 2010 that ratio rose to 30.2% and the average maturity to 399 days. Regarding this, literature suggests that the Selic rate, since somehow it is benchmark for all credit operations, has more influence on economic activity and inflation than it had a few years ago.

4/ Credit growth in Brazil in several segments, was the subject of previous boxes in *Inflation Reports* of June and September 2008 and of March 2010.

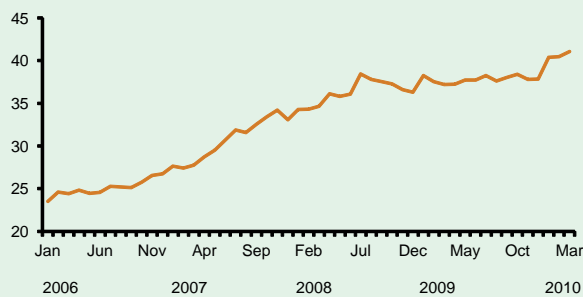
5/ A learning material about the transmission mechanisms of monetary policy can be found at "The transmission mechanism of monetary policy", in the Bank of England (<http://www.bankofengland.co.uk/publications/other/monetary/montrans.pdf>).

**Figure 3 – Share of Selic indexed government bonds**



Source: BCB

**Figure 4 – Average maturity of government bonds issued through public offering (months)**



Source: BCB

Another issue that needs some analysis is the share of government debt indexed by the Selic rate. Indeed, when there is an increase in the Selic rate, there is negative wealth effect on the holders of fixed rate government bonds, which should help containing demand pressures in the economy. With bonds indexed by the Selic, however, the opposite occurs, and an increase in the Selic rate generates positive wealth effect, which should help to raise aggregate demand and, thus, reduce the power of monetary policy. Figure 3 shows that the share of government bonds indexed by the Selic presents a downward trend over recent years, from 47.9% in January 2006 to 39.9% in March 2010, which suggests a greater power of monetary policy.

From another perspective, average maturity of government debt also contributes to the magnitude of the negative wealth effect. Thus, a larger average maturity tends to increase the power of monetary policy. Figure 4 shows that there is an upward trend in the average maturity of Brazilian government debt, considering the total bonds issued by the Treasury through public offering, which increased from 23.5 months in January 2006 to 41.1 months in March 2010.

In summary, the evidence presented in this box, based on small structural models of the Central Bank and other economic indicators, suggest that the power of monetary policy in Brazil has increased over recent years. This, on one hand, shows that inflationary pressures can be contained more efficiently and, secondly, suggests higher credibility in the conduct and execution of monetary policy in Brazil.

## Vector Autoregressive Models (VAR)

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The vector autoregressive models (VAR) are systems of simultaneous equations that capture the existence of interdependence relations among variables, and allow to assess the impact of stochastic shocks on a specific system variable. As mentioned in the literature, despite limitations such as the absence of any structural or economic relations and the relatively high number of parameters to be estimated, VAR models are important instruments of analysis and forecasting, especially for short and medium term horizons.

The Central Bank, like the vast majority of its international peers, uses VAR models as an analytical tool and, especially, for inflation forecasting since the implementation of the inflation targeting framework, in June 1999. The information provided by the VAR models, along with the ones generated by other econometric tools, are important inputs to the decision-making process of the Monetary Policy Committee (Copom). Thus, considering that the economic system is dynamic, the models used in the Central Bank's inflation forecasts are constantly subject to improvements. The box "Autoregressive vector models" in the March 2008 *Inflation Report*, presented the VAR models used at the time. Considering recent developments, the aim of this box is to provide updated information on the set of VAR models currently in use by the Central Bank.

According to the well-known World's theorem, all stationary time series have a moving average representation<sup>1</sup>, which can be approximated by an initial condition and an accumulation of new events, i.e., by an autoregressive representation. Unlike simple autoregressive models, autoregressive vectors have more explained variables (one per equation).

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1/ For more details, see Diebold (1998).



In the system of equations that defines the VAR, the variables are treated symmetrically and, for each variable considered, includes an equation containing its lags and also lags of the other system variables. Sims (1980) introduced the autoregressive vectors as an alternative to structural macroeconomic models, which were formed mostly by a large amount of equations with theoretical restrictions difficult to be tested and that resulted in inaccurate forecasts. Having simple operation and well-evaluated forecasts, VAR models had good acceptance in the academic world as well as in central banks.

VAR models examine the relations among the variables by imposing few restrictions on the structure of the economy, which are, basically, the choice of variables and lags. All other characteristics of the models are determined, generally, by the sample considered. In fact, in general, the choice of lags is based on statistical tests. Currently, the VAR models used by the Central Bank are divided into two big groups: VARs with economic fundamentals and purely statistical VARs. In both cases, the VAR models generate inflation forecasts for free prices. Inflation forecasts for the full National Consumer Price Index (IPCA) are obtained by combining the inflation forecasts of free prices from the VARs with projections of administered prices inflation, estimated independently. These projections, together with information from small and medium size structural models, are intended to assist the decision-making of the Monetary Policy Committee.

### **VARs with economic fundamentals**

VARs with economic fundamentals are, in turn, divided into two subgroups: (1) models estimated with monthly data and (2) models estimated with quarterly data. In each of the subgroups seven models are estimated: three traditional VARs, three Bayesian VARs with the Minnesota prior and a VECM (Vector Error Correction model, a way to estimate non-stationary series). The aggregate inflation forecast of each of the subgroups is given by the median forecast of the models within that subgroup. Except for the variables present in the VECM estimation, all endogenous variables are considered in first difference.

The monthly models, with a larger number of observations, are estimated from the beginning of 2000, avoiding a series of structural breaks, especially the transition of the Real Plan and the introduction of the inflation targeting framework. The nominal interest rate is given by the Selic rate held in the month, whereas the real interest rate discounts the inflation rate measured by the IGP-DI. The monetary aggregate is measured by the end-of-period M1. To select the number of lags the *Akaike* (AIC), *Schwarz* (SC) and *Hannan-Quinn* (HC) information criteria are used. Table 1 shows the set of models estimated with monthly data.

**Table 1 – Monthly models**

Denomination	Endogenous variables	Seasonal adjustment	Lags
VAR I	free prices, administered prices, exchange rate and real interest rate	yes	2
VAR II	free prices, administered prices, exchange rate, nominal interest rate, industrial production and money	yes	6
VAR III	free prices, nominal interest rate, exchange rate and industrial production	no	1
BVAR I	free prices, administered prices, exchange rate, nominal interest rate, industrial production and money	no	6
BVAR II	free prices, administered prices, exchange rate, nominal interest rate, industrial production and money	yes	6
BVAR III	free prices, administered prices, exchange rate and real interest rate	yes	2
VECM	free prices, nominal interest rate, exchange rate, industrial production and error correction	no	1

**Table 2 – Quarterly models**

Denomination	Endogenous variables	Seasonal adjustment	Lags
VART I	free prices, administered prices, real interest rate and exchange rate	yes	2
VART II	free prices, administered prices, nominal interest rate, exchange rate, industrial production and money	yes	1
VART III	free prices, administered prices, real interest rate, industrial production and risk premium	yes	1
BVART I	free prices, administered prices, real interest rate and exchange rate	yes	1
BVART II	free prices, administered prices, nominal interest rate, exchange rate, industrial production and money	yes	2
BVART III	free prices, administered prices, real interest rate and exchange rate	yes	1
VECMT	free prices, nominal interest rate, industrial production, exchange rate and error correction	no	2

Table 2 presents the set of models estimated with quarterly data<sup>2</sup>. To avoid small sample problems, these specifications use data beginning in late 1994 and trend *dummies* for the period immediately after the Real Plan. Except for the VECMT and some variables used in the VART III and BVART III models, all endogenous variables are considered in first

2/ The “T” after each acronym indicates that the model is estimated with quarterly data.

difference. In VART III, the risk premium, measured by the Emerging Markets Bond Index (EMBI + Br) as such as the real interest rate variable used in BVART III are treated in level. As in the monthly models, the nominal interest rate is given by the Selic rate held in the month, whereas the real interest rate discounts the inflation rate measured by the IGP-DI from the Selic rate. The monetary aggregate is measured by the end-of-period M1. As in the monthly VARs, the number of lags is chosen based on the *Akaike* (AIC), *Schwarz* (SC) and *Hannan-Quinn* (HQ) information criteria.

### **Statistical VARs**

The statistical VARs do not have structural restrictions (of economic order) either in the short or long term, and use a large number of variables and different lags. The variables are divided into six groups of distinct indicators (economic activity, external sector, financial, pricing, monetary and shocks). An important criterion for the choice of these variables was their correlation with inflation indexes.

The Statistical VARs are estimated with monthly data and divided into two classes, each one estimated with a different approach. In each model of the first class, principal components are extracted from variables from all different groups of indicators, totalling 1,536 different models. In the second class, the models use principal components and selected variables. In this class, only three sets of indicators are used at a time, totalling 1,440 models. The aggregate inflation projection in each class is simply the median of the projections within the class. Table 3 presents the variables used in the estimations.

In the first class, the models use the principal components extracted from each group of indicators based on variables of different subgroups of indicators. For example, in the group of economic activity, two main components of energy are obtained (first and second components), taken from the three indices of electricity energy use, and two principal components of production, extracted from the capacity utilization, real GDP and industrial production. In the second class, models are formed from selected variables and convex combinations between the first two principal components of each group of indicators used.

**Table 3 – Statistical models**

Group of indicators	Selected variables
Economic activity	retail sales, three electricity use indicators, monthly industrial production, real GDP, capacity utilization, unemployment
External sector	VIX, Embi, exchange rate, U.S. PPI (all commodities), export price index, import price index, export <i>quantum</i> index, import <i>quantum</i> index
Financial	Selic rate, real Selic rate calculated in four ways (deflated by IGP and IPCA, with 3 and 12-month expectations), spreads over Selic, calculated for individuals, corporations, total and for credits with BNDES interest rate
Prices	administered prices, IGP-DI, IPC-BR, IPC-FIPE, free prices
Money	M1, M2, M3, M4, currency held by the public, monetary base and demand deposits
Shocks	CRB commodities index, electricity, gasoline, IPA-IPC, motor oil and petroleum

### Composition of the projection

The final composition of the projections of all VAR models (economic and statistical) is a simple arithmetic average of the following six elements: (1) median of the monthly VAR and VECM models, (2) median of the monthly Bayesian VAR models, (3) median of the quarterly VAR and VECM models, (4) median of the quarterly BVAR models, (5) median of the first class of statistical VARs, and (6) median of the second class of statistical VARs.

Finally, this box shows how VAR models are being incorporated into the decision-making process of the Copom and presents a new class of VAR models, the statistical, indicating that the Central Bank models are under constant updates. In this sense, it contributes to increasing the transparency of the decision-making process and, therefore, the credibility of monetary policy.

### References

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SIMS, Christopher A. (1980). Macroeconomics and reality. *Econometrica* 48, p.1-48.

## Minutes of the 150<sup>th</sup> Meeting of the Monetary Policy Committee (Copom)

**Date:** April 27<sup>th</sup>, from 4:15PM to 6:15PM

**Place:** BCB Headquarters meeting rooms – 8<sup>th</sup> floor on April 27<sup>th</sup> and 20<sup>th</sup> floor on April 28<sup>th</sup> – Brasília – DF

**In attendance:**

**Members of the Committee**

Henrique de Campos Meirelles – Governor

Aldo Luiz Mendes

Alexandre Antonio Tombini

Alvir Alberto Hoffmann

Anthero de Moraes Meirelles

Antonio Gustavo Matos do Vale

Carlos Hamilton Vasconcelos Araújo

Luiz Awazu Pereira da Silva

**Department Heads (present on April 27<sup>th</sup>)**

Adriana Soares Sales – Research Department  
(also present on April 28<sup>th</sup>)

Altamir Lopes – Economic Department

João Henrique de Paula Freitas Simão – Open  
Market Operations Department

José Antonio Marciano – Department of Banking  
Operations and Payments System

Leonardo Martins Nogueira – International Reserves  
Operations Department

Renato Jansson Rosek – Investor Relations Group

**Other participants (present on April 27<sup>th</sup>)**

Eduardo José Araújo Lima – Deputy-Head of the  
Research Department

Fabio Araujo – Advisor to the Research Department

Ricardo Franco Moura – Advisor to the Board

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

### Recent economic developments

1. IPCA inflation, after moving from 0.75% in January to 0.78% in February, reduced to 0.52% in March. As a consequence, inflation accumulated in the first quarter of 2010 reached 2.06%, 0.8 p.p. above the level registered in the same period of the previous year. The rise in inflation in 2010 mirrors the behavior of both market prices, which increased by 2.47% in the year through March, and regulated prices. Focusing on market prices, both prices of tradable goods and non-tradable goods accelerated in the first quarter, reaching 1.48% and 3.36%, respectively, up from 0.05% and 2.39% year-over-year. On its turn, regulated prices increased by 1.11% in the first three months of the year, compared to 1.17% in the same period of 2009. The change in the prices of services, whose dynamics tends to show more persistence than that of the prices of goods, reached 3.17% until March and 6.92% in twelve months. Preliminary data for April point to consumer inflation above that observed in March. In short, information available suggests deterioration of inflation dynamics at the margin.

2. The three main underlying inflation measures calculated by the BCB showed divergent behavior

between February and March. The smoothed trimmed means core inflation increased from 0.39% in February to 0.46% in March, while the core inflation by exclusion and double weight core inflation measures reduced (from 0.68% and 0.47% in February, to 0.42% and 0.40% in March, respectively). In the year through March, the core inflation by exclusion increased by 1.70%, while smoothed trimmed means and double weight core inflation measures increased 1.33% and 1.48%, respectively. These changes are, respectively, 0.32 p.p., 0.27 p.p. and 0.31 p.p. above the rates prevailing in the same period in 2009. The twelve-month trailing inflation measures changed from 4.73%, 4.36% and 4.74% in December 2009, for the core inflation by exclusion, smoothed trimmed means and double weight core inflation measures, to 5.06%, 4.64% and 5.06% in March, respectively. It is important highlighting that all core inflation measures continued to increase on a twelve-month basis, and are above the midpoint of inflation target. Moreover, it bears emphasizing that the behavior of the IPCA diffusion index increased from 61.7% in February to 66.4% in March (compared to 60.2% in March 2009). From another perspective, the diffusion indices suggest dissemination in the inflation acceleration process.

3. The General Price Index (IGP-DI) inflation decreased from 1.09% in February to 0.63% in March. In the year through March, the IGP-DI inflation reached 2.76% (-0.96% in the first quarter of 2009). Under this comparison basis, the acceleration of the IGP-DI reflected the behavior of its three components. The Wholesale Price Index (IPA-DI) increased 2.88% in the first quarter of 2010 (-2.09% in 2009Q1). On its turn, the Consumer Price Index-Brazil (IPC-Br) increased 2.86% in the same period (1.66% in 2009Q1). Still according to the same comparison basis, the Civil Construction National Index (INCC) increased 1.76% (0.35% in 2009Q1). The IPA-DI inflation acceleration, under this comparison basis, derived mainly from the behavior of agricultural prices. While the industrial IPA increased 2.69% (-2.59% in 2009Q1), the elevation of wholesale agricultural prices reached 3.50% (-0.71% in 2009Q1). 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, as well as on price setters' expectations for the future inflation path.

4. On a three-month moving average basis, according to data seasonally adjusted by the IBGE, industrial output moved from 0.1% in January to 0.8% in February. Still considering the seasonally adjusted series, on a month-on-month basis, after expanding by 1.2% in January, industrial output increased by 1.5% in February. On a year-over-year basis, industrial output increased by 18.4% in February, up from 16.1% in January. On a twelve-month trailing basis, decline in industrial production is still observed (-2.6%), but it has been reduced (-7.4% in December and -5.0% in January). The behavior of IBGE industrial output series, and its components, shows that industrial production expands at a pace that continues to be influenced by the international outlook, by business and households expectations, as well as by domestic financial conditions. This process is supported not only by traditional sources of credit, but also by the recovery of capital markets and the performance of public financial institutions.

5. Among the use categories, according to data seasonally adjusted by the IBGE, in February it bears highlighting the expansion of 1.6% in capital goods production, and especially, in non-durable and semi-durable consumer goods production, which increased 2.4%. Durable consumer goods production increased 0.7%. Intermediate goods production declined 0.4% after rising 0.9% and 2.0% in December and January, respectively. It bears highlighting that capital goods productions expanded by 6.4% in the quarter ended in February, the most remarkable expansion among the use categories. The recovery in industrial production dynamism was initially led by the production of durable goods, but it has become even more widespread than before, reflecting tax exemption measures, in advanced process of reversion, as well as the easing in financial conditions and the income expansion. The future behavior of industrial production, which should not be uniform over time, will also depend on the evolution of consumer and businessmen confidence, which should continue to be sources of dynamism, to which will be added the recovery of external demand.



6. Labor market continues to show favorable behavior. The unemployment rate in the six metropolitan regions covered by the IBGE Monthly Labor Survey (PME) increased from 7.2% in January to 7.4% in February, 1.1 p.p. lower than that observed in the same month of last year. According to the seasonally adjusted series, the unemployment rate reached 7.2% in February, down from 7.5% in the previous month. Average real earnings increased 1.8% in February, month-on-month, after increasing by 2.2% in January. Employment, on its turn, increased by 2.1% in January and 3.5% in February, year-over-year. As a consequence, real payroll expanded by 4.4% in February, year-over-year, continuing to constitute a key driver for domestic demand growth. Still regarding the labor market, data from the Ministry of Labor and Employment (MTE) indicate that formal employment has continued to recover. In fact, 266 thousand jobs were created in March and, 657 thousand, in the first quarter of 2010, both record highs for the historical series. The manufacturing industry, services and civil construction recorded, for the third consecutive month, record highs for the month and, therefore, registered the best first quarter for the historical series (204 thousand, 250 thousand and 128 thousand, respectively). The most dynamic sector continues to be civil construction, where employment recorded a 12.3% increase in the first quarter of the year, year-over-year.

7. According to data seasonally adjusted by the IBGE, expanded retail sales increased by 2.1% in February, after increasing by 1.3% in January. On a year-over-year basis, the indicator increased 13.6% in February. The three-month moving average of expanded retail sales reached 1.4% in February, according to seasonally adjusted data, after reaching 0.8% in January. On a month-on-month basis, according to seasonally adjusted data, it bears emphasizing the expansion in the sales of pharmaceuticals and medical articles (3.9%) and fabric, clothing and shoes (3.4%). Expanded retail sales data have been evidencing growth, mainly influenced by the increase in the sales of durable goods, in response to the improvement in the access to credit supply, income expansion and temporary sector incentives granted by the government. The retail sector continues to register positive performance and indicates that the pace of

domestic demand growth remains robust, showing no signs of cooling. For the next quarters, the retail sales trajectory will be benefited by fiscal transfers, by real payroll growth, by the recovery in the access to credit and by the evolution of consumer confidence.

8. The installed capacity utilization rate (Nuci) in the manufacturing industry, calculated by FGV, without seasonal adjustment, reached 83.5% in March, 6.4 p.p. above the level registered in the same month of 2009. According to the CNI series seasonally adjusted by the BCB, the Nuci showed stability in February (80.7%). According to the seasonally adjusted monthly series calculated by FGV, the Nuci reached 84.3% in March (84.0% in the previous month), above the average observed in the last five years. Similarly, the Nuci in the consumer goods, construction material and capital goods industries in March stood, in the same order, 5.0 p.p., 7.7 p.p. and 5.3 p.p. above the respective averages for the historical series, started in 1995. On its turn, the intermediate goods industry (-1.1 p.p.) is slightly below the historical average. The reduction in the idle capacity is a result of economic activity expansion, not totally offset by the maturity of investment projects. Data regarding the absorption of capital goods showed recovery compared to the same periods of 2009 and increase in February month-on-month. The absorption of capital goods increased 5.4% in February, according to seasonally adjusted data, a 31.6% increase in year-over-year terms, but an 8.7% decrease in the last twelve months. On its turn, the production of construction inputs expanded by 1% at the margin in February, after recording stability in January. According to observed data, it increased 15.1% in February, year-over-year, accumulating a 2.7% fall in the last twelve months. In short, evidences suggest that the utilization rates have recorded upward trajectory in the last months, showing reduction in any remaining idle margin of the industry, despite the recovery of investments. 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 twelve-month cumulative trade balance retreated at the margin, reaching a US\$23.2 billion surplus in March, US\$2 billion lower than the one obtained in the same period last year. This

total resulted from US\$161 billion in exports and US\$137.9 billion in imports, equivalent to -15.4% and -16.6% changes, respectively, year-over-year. In fact, the greater dynamism of domestic demand relative to the external demand contributes to the narrowing of the trade surplus. The increase in remittances of profits and dividends contributes to elevate the twelve-month trailing current account deficit, which reached US\$31.5 billion in March, up from US\$28 billion in February, equivalent to 1.8% of GDP. On its turn, foreign direct investment reached US\$26.3 billion in the last twelve months through March, equivalent to 1.5% of GDP.

10. The period since the last Copom meeting was initially marked by the continuity in the process of normalization of activity in international financial markets and, more recently, by some increase in the volatility of asset prices, although the perception of systemic risk remains limited. These developments can be attributed to fiscal concerns in mature economies, notably in Europe. Under these conditions, there was some moderation in the demand for risky assets, as evidenced by the behavior of international financial markets. Moreover, given the fiscal concerns in the Euro Area, the emphasis in the currency market remained the depreciation of the euro.

11. Regarding the global macroeconomic scenario, the current predominant view points to the recovery in 2010 and acceleration in 2011, in a process where the US, Europe and Japan (G3) would recover some dynamism, but which would continue to be led by emerging economies. The US economy shows signs of gradual recovery, due to the improvement of conditions in labor market and industrial activity. On its turn, the economic activity in Japan continues to suggest a slow recovery, led by exports, especially to Asia. In the Euro Area, where fiscal concerns persist and where household consumption shows no signs of reaction, the economic recovery has been slower and uneven. In short, uncertainty regarding the sustainability of consumption expansion in mature economies still remains, mainly in Europe, in a scenario of withdrawal of economic policy stimuli and modest prospects for credit expansion, but the recovery shows some consolidation. On the other hand, in many emerging economies,

economic activity seems to have embarked on a consistent path of expansion, showing, in some cases, evidence of heat in the markets of goods, services, production factors and assets. Therefore, inflation troughs in mature economies and major emerging economies have been exceeded. In this context, after a period of aggressive monetary policy easing, in several countries, monetary policy continues a phase of stability, whereas those economies that were less impacted by the international crisis and recover more quickly and intensely tend to adopt more restrictive monetary policy stance. Australia and India, for instance, recently raised the basic interest rate.

12. Oil prices increased, both for spot and future markets, despite with reduced volatility, since the last Copom meeting. Uncertainty concerning these quotations remains high, as the prospective scenario depends on the evolution of demand, in a context of global economic recovery, on the prospects for the evolution of global supply, subject to the pace of investment maturation in the sector, in addition to the geopolitical issues that affect the price of this commodity. Nonetheless, the main scenario adopted by the Copom assumes unchanged domestic gasoline prices in 2010. However, it bears highlighting that, regardless the behavior of domestic gasoline prices, the evolution of international oil prices can eventually affect domestic prices both through production chains, such as the petrochemical, and through the potential effect over inflation expectations. It bears emphasizing that agricultural commodity prices, which have particularly important impact on the evolution of food costs, have presented stability since the previous Copom meeting, while the industrial commodities prices have registered slight increase, except for nickel and iron ore, which have notably increased since the last Copom meeting.

### **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 on the following assumptions:

a) the projected adjustments for gasoline and bottle gas prices for 2010 were kept unchanged at 0%;

b) the projected adjustments for fixed telephone was kept at 1.6% for 2010, while the projections for electricity prices adjustments was reduced to 0.7% for 2010, down from 3.3% considered in the March meeting;

c) the projection for regulated prices inflation for 2010, based on individual items, reduced to 3.6%, down from 4.0% considered in the March meeting, according to the benchmark scenario. This set of prices, according to data released by IBGE, accounted for 29.60% of the total March IPCA;

d) the projection for regulated prices inflation for 2011 was maintained at 4.4%, on the benchmark scenario. Such projection is based on the endogenous determination model for regulated prices, which computes, among other factors, seasonal components, foreign exchange rate changes, market prices inflation and the IGP (General Price Index) change; and

e) the projection for the spreads over the Selic rate, based on the 360-day swap rates, on the benchmark scenario, estimates 88 bps and 23 bps spreads in the fourth quarters of 2010 and 2011, respectively.

14. Regarding fiscal policy, projections assume the achievement of a public sector primary surplus target of 3.3% of GDP in 2010. This percentage can be reduced by up to 1.12 p.p., due to the implementation of the projects linked to the Growth Acceleration Program (PAC), of which 0.44 p.p. refer to amounts to be paid from 2009. Moreover, it is expected that the primary surplus in 2011 would return, without adjustments, to 3.3% of GDP. The additional assumptions considered in the previous meeting remained unchanged.

15. Since the last Copom meeting, the median of the expectations compiled by the BCB's Investor Relations Group (Gerin) for the 2010 IPCA increased from 5.03% to 5.41%. For 2011, the median of inflation expectations also increased, from 4.60% to 4.80%.

16. The benchmark scenario assumes the maintenance of the exchange rate at R\$1.75/US\$1.00 and the Selic rate at 8.75% p.a. during the forecast period. Under this scenario, the projection for the 2010 inflation

increased relative to the figure considered in the March Copom meeting, and continues to be significantly above the 4.50% midpoint target established by the National Monetary Council (CMN). According to 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 2010 also increased, standing significantly above the inflation midpoint target. For 2011, under the benchmark scenario, the projection increased relative to the figure considered in the March Copom meeting, and is significantly above the inflation midpoint target. Under the market scenario, the projection also increased, however it stands around the midpoint target.

### Monetary policy decision

17. The Copom evaluates that the monetary policy should contribute to the consolidation of a favorable longer-term macroeconomic environment. In international markets, risk aversion has improved since the last Copom meeting, despite the intensification of volatility in these markets in recent weeks, largely due to concerns about the sovereign debt of European countries. Indeed, there is a context of abundant liquidity, so that the prospects for external funding for the Brazilian economy remain favorable. In line with these developments, both the prices of Brazilian assets and of some selected commodities have continued to rise. On the other hand, the trajectory of price indices evidences the resumption of inflationary pressures in relevant economies. Consequently, the benign impact of the international scenario over the domestic inflation path could come to an end, despite the persistence of uncertainty regarding the behavior of asset and commodities prices in the context of gradual normalization of international financial conditions. On the other hand, this scenario may be quickly reversed, depending on the dynamics that derives from the market distrust regarding the solvency of some European economies. Regardless of how these aspects of the international outlook evolve, the Copom reaffirms that the main challenge of monetary policy is to ensure that the favorable results obtained over the last years are preserved.

18. The Copom believes that the indicators released since the last meeting reinforce the perception

about the existence of pressures over the market of factors, increasing the probability that initially localized inflationary episodes pose risks to the inflation trajectory. In this context, the risk of pass-through of upward costs pressures to wholesale price inflation, and from the last to consumer price inflation, increases as well. The Committee states that the materialization of this pass-through, as well as the spread of initially localized pressures over consumer prices, continues to depend critically on the economic agents' expectations for inflation and on the idleness degree of the economy, among other factors. Therefore, these and other variables are part of the information set that is taken into account in the generation of inflation forecasts of the BCB, which constitute a key element in the Committee's assessment on the prospective inflation scenario. Additionally, it should be noted that the behavior of domestic demand has exerted some pressure over the prices of non-tradable items, such as services, which, considering the perspective for the evolution of the main factors sustaining aggregate demand, tends to be observed again in this and in the upcoming quarters. In any event, the Committee reaffirms the commitment that it will continue to conduct its actions in order to ensure that the gains obtained in inflation control in recent years become permanent.

19. The Copom considers important to emphasize, once more, that there are important time lags between the implementation of monetary policy and its effects on both economic activity and inflation. Therefore, the assessment of alternative options for monetary policy should necessarily focus on the forward-looking inflationary scenario and its risks, instead of current inflation figures. The prospective scenario, indeed, suffered some deterioration at the start of 2010, a dynamic that has become even more evident since the last meeting. This occurred despite specific moves of some domestic assets, which are only relevant for monetary policy if they impact the forward-looking inflationary path.

20. Prospects for the evolution of domestic economic activity remain favorable, as evidenced by data on trade, manufacturing capacity utilization and the labor market. This assessment is also supported by signs of continued expansion of credit supply, both for individuals and corporate; by the fact that

consumers and businessmen confidence stands at historically high levels; and by income growth. The continuity and intensification of this outlook depends significantly upon the effects of fiscal stimulus measures and the additional governmental transfers that will occur in the upcoming months and, to a lesser extent, upon the pace of recovery in global activity. The dynamism of domestic activity should also be benefited by the easing of financial conditions, favored, among other factors, by the policies of official banks. Considering the Brazilian economy's new cycle of expansion, these considerations become even more relevant when one takes into account that there are lags between the implementation of monetary policy and its effects over the activity level and inflation.

21. The Copom believes that the main risks to the consolidation of a benign inflationary scenario stem, regarding the external environment, from additional rises in commodities prices and, regarding the domestic scenario, from the fiscal and credit impulse over the evolution of domestic demand, in the context of virtual exhaustion of the idleness margin in the use of production factors. Indeed, these developments may exacerbate an outlook that already evidences the presence of mismatch between the growth of domestic absorption and capacity of supply expansion.

22. International evidence, ratified by the Brazilian experience, indicates that high inflation rates lead to the increase of risk premium, both for private and public funding, and to the shortening of planning horizons, both for households and corporate. Consequently, high inflation rates reduce investment and the economic growth potential, in addition to presenting regressive effects on income distribution. Otherwise, high inflation rates do not result in any lasting results for economic growth and employment level; on the contrary, they create permanent damage to these variables in the medium and long term. Therefore, the Copom strategy aims to ensure the convergence of inflation towards the targets path in 2010 and in the next years, which requires that possible deviations from the target path be promptly corrected. Such strategy takes into account the time lags in the transmission mechanism and is the most adequate to deal with the uncertainty inherent



to the process of monetary policy formulation and implementation.

23. The Committee believes that the economy is in a new expansion cycle, and this assessment is corroborated by data released since its last meeting, although uncertainty about the pace of this process – which should be resolved over time – still persists. Signs of overheat in the economy are evidenced, for example, in core inflation trajectories, in the rise of inflation expectations, in the evidence of workers shortage for some sectors and in the rising inputs costs. In particular, during this period, the inflation projections considered by the Committee showed some deterioration in the prospective scenario. The Copom believes that this deterioration should be contained and, therefore, the signs of persistent mismatch between the pace of aggregate demand expansion and aggregate supply, which, ultimately, tend to increase the risk for inflation dynamics, must be reversed. In such circumstances, the monetary policy stance should be adjusted, on the one hand, because it contributes to the convergence between the pace of demand expansion and supply and, on the other hand, because it prevents that originally localized price pressures determine a persistent deterioration of the inflation prospective scenario.

24. In short, despite the withdrawal of substantial share of the stimuli introduced during the recent international financial crisis, since the last meeting, the risks for the achievement of a benign inflationary scenario, in which inflation would remain consistent with the inflation targets, have increased. In light of this outlook, the prevailing opinion among the Committee members was that monetary policy must act incisively in order to avoid that the greater uncertainty detected in shorter horizons spread to longer horizons.

25. Under these considerations, continuing the adjustment process of monetary conditions to the prospective scenario of the economy, in order to ensure the convergence of inflation to the targets path, the Copom unanimously decided to increase the Selic rate to 9.50% p.a., without bias.

26. Under the inflation-targeting regime, the Copom guides its decisions according to projected inflation,

the analysis of several alternative scenarios for the evolution of the main variables that determine the forward-looking dynamics for prices, and the balance of risks associated to the projections. After a brief contraction, domestic demand recovered, largely due to the effects of stimulus factors, such as income growth and credit resumption. On its turn, important fiscal and credit incentives have been provided to the economy in recent quarters, and should contribute for the consolidation of activity expansion and, hence, for the reduction of any residual idleness margin of productive factors. The effects of these stimuli, as well the reversal of substantial share of the initiatives taken during the recent international financial crisis, and a possible deepening of the fiscal crisis that several European countries face, are an important part of the context in which future monetary policy decisions will be taken, aiming to ensure a timely convergence of inflation to the targets path.

27. In addition, it bears noticing that there was consensus among the Committee members about the need to adapt the pace of adjustment of the basic interest rate to the developments in the prospective inflation scenario, as well as to the corresponding balance of risks, in order to limit the impacts caused by the behavior of current inflation over the underlying prices dynamics.

28. At the end of the meeting it was announced that the Committee will reconvene on June 8<sup>th</sup>, 2010 for technical presentations and, on the following day, to discuss the monetary policy decision, as established in Communiqué 18,927 of October 9<sup>th</sup>, 2009.

## **Summary of data analyzed by the Copom**

### **Inflation**

29. The IPCA increased 0.52% in March, down from 0.78% in February, accumulating a 2.06% increase in the year through March. In the last twelve months, the index increased 5.17% in March, up from 4.83% in February. The behavior of food and beverages prices constituted the key driver of inflation in March, contributing 0.35 p.p. to the result, in particular due to the change in tubers, roots and vegetables, pasteurized milk, refined sugar and fruit, which

jointly contributed 0.23 p.p. to the March IPCA result. Despite the pressure stemming from food and beverages, the IPCA cooled in March, mainly favored by the depletion of the impacts caused by school fees readjustment, which had pressured the index in February.

30. The deceleration in market price inflation, from 0.93% in February to 0.80% in March, reflected the slowdown in non-tradable goods inflation, which reached 1.03% in March, down from 1.54% in February, while the prices of tradable goods rose 0.53% in March, up from 0.26% in the previous month. Regulated prices fell 0.14% in the month, after rising 0.42% in February, reflecting mainly the 1.95% decrease in the price of gasoline. In the last twelve months through March, market prices rose 5.37%, the highest change since May 2009, up from 4.77% through February, while regulated prices increased 4.67%, against 4.97% for the same periods, respectively. The diffusion index stood at 66.4% in March, up from 61.7% the previous month, confirming the dissemination process of price adjustments.

31. The IPCAEX core, which excludes all fuel items and ten items of household food, decelerated in March to 0.42%, down from 0.68% in February. In twelve months, it accelerated, reaching 5.06% in March, up from 4.86% in February. The smoothed trimmed-means core measure accelerated, both for the monthly rate, increasing 0.46% in March up from 0.39% in February, and for a twelve-month trailing basis, reaching 4.64%, compared to 4.52% in the previous month. The double weight core increased by 0.40% in the month, down from 0.47% in February, increasing 5.06% on a twelve-month trailing basis, up from 4.93% in February.

32. The IGP-DI decelerated in March, increasing by 0.63%, down from 1.09% in February, favored by the cooling in wholesale price inflation, whose impact overweighed the resurgence of highs in consumer price inflation and construction prices. The IGP-DI expanded by 2.76% in the year through March and 2.26% in the last twelve months. The IPA-DI increased 0.52% in March, down from 1.38% in February, registering increase for agricultural prices (2.33%) and decrease for industrial prices (-0.05%). In the year through March, the IPA-DI increased

2.88% and in the last twelve months, it rose 0.79%. The IPC-Br grew 0.86% in March, up from 0.68% in February, accumulating 2.86% in the year and 5.17% in twelve months. In the month, three of the seven groups that compose the IPC-Br accelerated, with emphasis on food expenses, accounting for 0.74 p.p. in the composition of the monthly change, especially fruit and vegetables, which contributed 0.44 p.p.. The INCC-DI increased 0.75% in March, up from 0.36% in the previous month, with highlights to the greatest change in the prices of the labor force, which increased 1.05%, up from 0.21% in February. In the year through March and in the last twelve months, the index expanded by 1.76% and 4.71%, respectively.

33. Partial results of price indices indicated continuity in the process of inflation deceleration in April, reflecting, among other factors, the depletion of seasonal impacts responsible, in part, for the increase in inflation at the start of the year. The IPCA-15 increased 0.48%, up from 0.55% in the previous month, mainly reflecting the behavior in the prices of alcohol, which decreased 13.64% in the period, also influencing the 2.12% decline in the price of gasoline. The food and beverages group continued to be the key driver for inflationary pressure, contributing 0.39 p.p. to the monthly IPCA-15. Considering wholesale price indices, there are also less intense highs, due to the cooling in the prices of final and intermediate goods, followed by fall in the prices of raw materials.

### **Economic activity**

34. Expanded retail sales increased 2.1% in February, month-on-month, after rising 1.3% in January and 0.9% in December, according to seasonally adjusted data by the IBGE's monthly survey (PMC). The average sales for the quarter ended in February rose 1.3%, compared to the quarter ended in November. Year-over-year, growth reached 13.6%, accumulating increases of 11.9% in the first two months of 2010 and 8.3% in the last twelve months through February. The month-on-month result recorded rise in sales in eight of the ten sectors surveyed, with emphasis on pharmaceuticals and medical articles (3.9%), and fabric, clothing and shoes (3.4%).

35. Year-over-year, all commerce segments expanded in February 2010, with highlights to the increases



in the sales of furniture and appliances (22.2%), office material and equipment (18.8%), and vehicles and motorcycles, parts and pieces (16%). In the last twelve months, there were increases in eight of the ten sectors surveyed, with emphasis on the growth in vehicles and motorcycles, parts and pieces (13.1%), office material and equipment (12.3%) and pharmaceutical and medical articles (12.1%). Among the segments that presented negative performance, according to the same comparison basis, it bears noticing construction materials (-3.2%), and fabric, clothing and shoes (-1.2%).

36. Signs of continued expansion in retail activity were released by the São Paulo Trade Association (ACSP), covering the state capital, showing increases of 2.4% in the number of consultations to the Central Credit Protection Service (SCPC) and 0.6% to the Usecheque system, in March, according to the month-on-month seasonally adjusted series. In 2010Q1, these indicators increased 6.6% and 6.4%, respectively, relative to the same period last year.

37. Automobile sales by dealers, including cars, light commercial vehicles, trucks and buses, rose 15.6% in March, month-on-month, according to Fenabrave (Brazilian Federation of Automotive Vehicles Distribution) data, seasonally adjusted by the BCB. The increase in the month reflected the significant growth in sales of trucks and buses, both recording 27.2% in the period, in addition to the expansion of car sales (13.3%) and light commercial vehicles (6.9%). It should be noticed that the end in the reduction of industrialized products tax (IPI), to which flex-fuel vehicles were subject in March, favorably impacted the performance of vehicles sales in the month. Total sales increased 30.3% in March year-over-year and 14.8% in the last twelve months through March.

38. Capital goods imports decreased 1% in March, month-on-month, according to the Funcex quantum index, seasonally adjusted by the BCB. The March indicator increased 17.1% year-over-year and 16% in the year through March, but it declined 9.8% in the last twelve months through March, compared to the same period last year.

39. Capital goods production increased 1.6% in February, month-on-month seasonally adjusted, and

expanded 26.2% and 19.1% compared to February and the first two months of 2009, respectively, according to the IBGE. Considering the result by destination of products, there was monthly decline only for serial industrial use (3.3%), while there were expansions in production of agricultural pieces (20.9%), capital goods for construction (14.4%), and for mixed use (7.1%). Compared to February 2009, it bears noticing the production of capital goods for construction, which increased 196.9%, followed by agricultural parts and capital goods for agricultural production, with increases of 76.3% and 51.7%, respectively. The production of construction inputs expanded 1% month-on-month, according seasonally adjusted data, and 15.1% year-over-year.

40. Disbursements from granted by the BNDES reached R\$ 144.3 billion in the last twelve months through March, with a 53% increase over the same previous period. The industrial sector was the largest recipient of disbursements, with participation of 44% of the total released in the period, followed by the infrastructure sector, with 36%. In the first quarter of 2010, disbursements expanded by 42%, compared to same period in 2009, with emphasis on the infrastructure sector, which recorded a 40% share in the total released, followed by industry (30%), trade and services (20%) and agriculture (10%). The March result reported slowdown in disbursements by the institution, and a 12.5% increase compared to March 2009.

41. Industrial production increased 1.5% in February, month-on-month, when it registered 1.1% expansion, seasonally adjusted, according to IBGE's Monthly Industrial Survey – Physical Production (PIM-PF). Year-over-year, industrial output grew by 18.4% in February and 17.2% in the first two months, still recording negative result in the last twelve months (-2.6%), over the same previous period. Month-on-month, the category of semi- and non-durable consumer goods outperformed in February (2.4% growth), followed by capital goods (1.7%) and durable consumer goods (0.7%), while intermediate goods production decreased 0.4%. Year-over-year, all use categories expanded, with emphasis on the increases of 26.2% in capital goods and of 25.2% in durable consumer goods. On a twelve-month trailing basis, the production of capital

goods and intermediate goods decreased 12.7% and 3.1%, respectively, while the production of durable consumer goods and semi and non-durable consumer goods increased 1.5% and 0.5%, respectively.

42. Real earnings in the manufacturing industry increased 1.5% in February month-on-month, while in January it declined by 1.5%, according to data released by the CNI, seasonally adjusted. Hours worked and employment rose by 1.3% and 1%, respectively, in the same period. Year-over-year, these indicators increased by 11.4%, 5.3% and 2.8%, respectively. On a twelve-month trailing basis, the three indicators reduced by 1.3%, 5.8% and 2.9%, respectively.

43. According to CNI, the Nuci remained unchanged at 78.6% in February, relative to January, 2.1 p.p. higher than the level observed in the same month of 2009. Considering the seasonally adjusted series, the Nuci stood at 80.7% in February, compared to 80.6% in January, and accumulated a decline of 0.2% in the quarter ended in February. In eleven out of the nineteen segments of the manufacturing industry, the Nuci presented positive performance month-on-month. According to data from FGV, the Nuci reached 84.3% in March, seasonally adjusted, with increases of 0.3 p.p. in the month and 0.5 p.p. over the last three months.

44. According to Anfavea, vehicles production reached 331 thousand units in March, increasing by 20.3% year-over-year. According to data seasonally adjusted, vehicles production increased 5.3% in March, month-on-month. In the year and in the last twelve months through March, the production of vehicles increased 24.4% and 8.3%, respectively. The monthly increase in vehicles sales was exclusively due to the performance of domestic market, with a 14.5% increase in March, month-on-month, while exports fell 0.2%. In the year and twelve months through March, domestic sales increased 14.7% and 13.9%, respectively, while exports expanded by 82.7% in the year and decreased by 14.7% in the last twelve months.

45. The LSPA survey carried out by the IBGE in March estimated the production of 145.2 million tons in 2010, up from 133.8 million tons in 2009. The new estimate represents an 8.5% increase relative to

2009, remaining virtually unchanged relative to the forecast in February. The projected expansions for the production of soybeans and corn were changed to 18.1% and 3%, respectively. For products directly related to the basic basket, such as rice, beans and wheat, the new survey projected changes of -9.6%, 2.3% and 9.4%, respectively.

### **Surveys and expectations**

46. According to the Fecomercio-SP survey, the Consumer Confidence Index (ICC) decreased in April for the second consecutive month. The ICC fell 2.9% in April, compared to March, when it had fallen 1.5% compared to February, the month when it reached a record high for the series. This result reflected the fall of 8.5% in the Current Economic Conditions Index (Icea), considering that the Consumer Expectations Index (IEC) increased 0.8% in the period. Year-over-year, the ICC increased 21.8%.

47. According to the Consumer Expectations Survey carried out by the FGV nationwide, the ICC increased 0.6% in March, month-on-month seasonally adjusted, reaching 110.9 points. In the month, the Current Situation Index (ISA) decreased for the second consecutive month, from 123.4 to 121.5 points, while the Expectations Index (IE) increased from 103.2 to 105.4 points, after three consecutive months of decline. Year-over-year, the ICC increased 13.2%, reflecting increases of 21.4% in the ISA and of 8.7% in the IE.

48. The Industry Confidence Index (ICI) from FGV reached 116.5 points in March, standing 0.6% above the level observed in February, according to seasonally adjusted data and 49% higher than the level observed in March 2009. Considering the components, the ISA increased 3.4%, and the IE decreased 2.2%, seasonally adjusted. Year-over-year, the same indicators expanded by 47.2% and 50.8%, respectively.

49. According to the CNI survey, the industrial businessmen confidence remained virtually unchanged in March, compared to the previous month, as evidenced by the Industrial Businessmen Confidence Index (Icei), which stood at 67.7 points, compared to 67.8 points registered in February. The component relative to current conditions fell by

0.3 point compared to the previous month, while that relative to expectations increased by 0.1 point.

### **Labor market**

50. According to the General Record of Employment and Unemployment (Caged) of the Ministry of Labor and Employment (MTE), 266.4 thousand formal jobs were created in March, the best result for the month, surpassing by 19% the previous record in March 2008. In the last twelve months through March, 1,710.1 thousand hires were created, nearly two-fold the number recorded in the same period of 2009. Considering seasonally adjusted data, employment level expanded by 0.6% month-on-month. The manufacturing industry recorded 72.4 thousand new jobs, recording increases of 0.9% in employment in the month, considering seasonally adjusted data, and 3.5% year-over-year. The service sector created 106.4 thousand jobs in March, with increases of 0.6% month-on-month in the employment level and 4.6% in the year. The construction sector was responsible for the supply of 38.6 thousand jobs during the month, representing a 1.2% growth in the level of employment month-on-month and a 12.3% increase in the year, performing as the sector with the highest growth rate according to both comparison bases.

51. According to the IBGE employment survey (PME), carried out in the six main metropolitan regions of the country, the unemployment rate reached 7.4% in February, increasing 0.2 p.p. month-on-month and declining 1.1 p.p. year-over-year. The increase in unemployment in the month resulted from an increase of 63 thousand jobs, lower than the increase of 98 thousand people in the Economically Active Population (PEA). In seasonally adjusted terms, the unemployment rate fell by 0.3 p.p. in the month and reached 7.2%. According to the survey, average real earnings usually earned by workers increased 1.2% month-on-month, after increasing 1.1% in January. Payroll grew 1.5% month-on-month and 4.4% year-over-year.

### **Credit and delinquency rates**

52. Outstanding credit in the financial system reached R\$1,452 billion in March, equivalent to 45% of GDP, with increases of 1.1% in the month and of

16.8% in the last twelve months. Non-earmarked credit operations increased 1.1% in the month and 11.2% in the last twelve months. Among the non-earmarked operations, credit operations to individuals increased 2% in the month and 18.6% in twelve months, while non-earmarked credit operations to corporate increased 0.2% and 4.6%, according to the same comparison bases. Earmarked credit operations increased 1.1% in March and 30.2% in twelve months.

53. The average interest rate on non-earmarked credit operations, used as reference for interest rates, decreased 0.1 p.p. in March, month-on-month, reaching 34.2%. The average annual rate on credit for individuals reached 41% in the month, 0.9 p.p. below that recorded in February, and the average rate on corporate credit reached 26.3%, 0.4 p.p. above the level registered in the previous month.

54. The average tenure on non-earmarked credit operations, used as reference for interest rates, increased in March, reaching 396 days, up from 388 days in February. The average tenure of corporate credit operations reached 287 days, up from 280 days in February, while the average tenure for credit operations to individuals totaled 526 days, eight more than the previous month.

55. Delinquency rates in the financial system (non-earmarked loans used as reference for interest rates, in arrears for more than ninety days) reduced from 5.3% in February to 5.2% in March. Delinquency rates for credit operations with corporate declined 0.1 p.p., reaching 3.6%, and with individuals, declined 0.3 p.p., reaching 7%.

### **External environment**

56. Economic indicators released since the last Copom meeting have highlighted the continuing process of global economic expansion, driven primarily by emerging economies, especially in Southeast Asia. Recent projections by the IMF revised 2010 global growth to 4.2% and maintained their expectation for the performance of 2011, at 4.3%. Growth estimates for 2010 related to the US and Japan increased, respectively, to 3.1% and 1.9%, while for the Euro Area, UK and China projections remained unchanged

at 1%, 1.3% and 10%, respectively. For world trade, the IMF raised its forecast for expansion this year to 7%, 1.2 p.p. above the last forecast, released in January.

57. In the US, expectations indicators showed continued rise in consumer confidence, while labor market indicators showed positive development, reflecting the net creation of jobs in the first quarter of the year. The disposable income, in contraction, suggests that consumption growth in the period had as counterpart a reduction in the savings rate. In the Euro Area, where the resumption of activity continues contained, the most recent data evidenced that consumer spending has not shown significant recovery yet and economic activity in the region continues to be driven mainly by the external sector.

58. In larger advanced economies, although the costs to producers respond to the rise in commodities prices, the relatively low installed capacity utilization (UCI) and the high unemployment rates result in the maintenance of reduced consumer price indices (IPC), which, in the last twelve months through March, reached 2.3% in the US, 1.4% in the Euro Area and 3.4% in the UK. Among emerging economies, the CPI annual changes recorded in March 9.6% in Turkey, 5.0% in Mexico, and 2.4% in China. In light of this outlook, the central banks of major mature economies kept the basic interest rates unchanged and were involved in the management of liquidity. Moreover, among emerging economies, signs of reduction of accommodative stance for monetary policy prevail, with recent high in the interest rate in India and restrictions to credit in China.

59. As highlighted in the last Copom meeting, in face of the fiscal deterioration, especially in the European Union, tensions in the international economy remained high. The five-year CDS spreads in Greece and Portugal have recently increased, despite the statement of financial support to Greece signed in mid-April by the countries that comprise the Euro Area. The Greek long-term debt was downgraded by a rating agency, and the Greek government formalized, with the countries that comprise the Euro Area and the IMF, the request for activation of the loan scheme. However, lack of details regarding its implementation maintained the CDS in Greece at record highs.

## Foreign trade and international reserves

60. The Brazilian trade surplus reached US\$668 million in March, accumulating US\$892 million in the first quarter of the year, compared to US\$3 billion in the same period of 2009. In twelve months, the surplus reached US\$23.2 billion, decreasing 7.5% year-over-year. In the month, exports totaled US\$15.7 billion, and imports, US\$15.1 billion, both record highs for the month of March, growing by 27.4% and 43.3%, respectively, year-over-year, on a daily average basis. External trade reached US\$77.6 billion in the first quarter, growing by 30.7% relative to the same period of 2009.

61. Based on the liquidity concept, which encompasses the balance of borrowing operations in foreign currencies, international reserves reached US\$244 billion in March, recording a US\$2.6 billion growth month-on-month. Under the cash concept, international reserves totaled US\$243.8 billion, recording a US\$2.7 billion increase, according to the same comparison basis. The monetary authority's interventions accounted for net purchases of US\$3 billion in the domestic market, in March.

## Money market and open market operations

62. Since the March Copom meeting, the slope of the yield curve has increased throughout its length. The persistent rise in inflationary expectations, the slow deceleration of current inflation indices and the disclosure of activity and employment data suggesting consistent recovery of economic activity were key drivers of this movement. Between March 15<sup>th</sup> and April 26<sup>th</sup>, one- three- and six-month rates increased by 0.35 p.p., 0.52 p.p. and 0.58 p.p., respectively. The one- two- and three-year rates increased by 0.55 p.p., 0.62 p.p. and 0.69 p.p., 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 from 6.05% on March 15<sup>th</sup> to 6.36% on April 26<sup>th</sup>.

63. In its open market operations, the BCB carried out, between March 16<sup>th</sup> and April 26<sup>th</sup>, repo operations borrowing R\$24.1 billion for a six-month



period. As a consequence, the average daily balance of the long operations reached R\$87.8 billion. In the same period, the BCB also borrowed money through repo operations with tenures between 12 and 28 working days, increasing the average daily balance of short-term borrowing operations to US\$262.8 billion. The BCB also borrowed money through 28 overnight repo operations and conducted daily, at the end of day, two-working-day tenure liquidity management operations. The very short-term operations, including the two-working-day tenure liquidity management operations, averaged a daily balance of R\$56.1 billion in the period, borrowing. The average daily balance of the total stock of repurchase agreement of the Central Bank decreased from R\$487.9 billion between January 26<sup>th</sup> and March 15<sup>th</sup> to R\$406.7 billion, between March 16<sup>th</sup> and April 26<sup>th</sup>. Considering the daily balance of operations for the

most recent period, there was a fall in the repurchase agreements totaling R\$139.2 billion, with a decrease in total stock from R\$473.3 billion on March 15<sup>th</sup> to R\$334.1 billion on April 26<sup>th</sup>. The main driver of liquidity contraction in the period was the adjustment promoted by reserve requirements.

64. Between March 16<sup>th</sup> and April 26<sup>th</sup>, the National Treasury issuance regarding the traditional auctions raised a total of R\$37.4 billion. The issuance of fixed-rate securities reached R\$20.1 billion, with R\$13.4 billion via issuance of LTNs maturing in 2010, 2011 and 2012, and R\$6.7 billion via NTN-Fs maturing in 2014 and 2021. Issuance of LFTs totaled R\$10.7 billion, for securities maturing in 2013, 2014, 2015 and 2016. Issuance of inflation-linked NTN-Bs reached R\$6.6 billion, for securities maturing in 2013, 2015, 2020, 2030, 2040 and 2050.

## Minutes of the 151<sup>st</sup> Meeting of the Monetary Policy Committee (Copom)

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**Date:** June 8<sup>th</sup>, from 4:15PM to 6:00PM, and June 9<sup>th</sup>, from 4:45PM to 7:40PM

**Place:** BCB Headquarters meeting rooms – 8<sup>th</sup> floor from June 8<sup>th</sup> and 20<sup>th</sup> floor on June 9<sup>th</sup> – Brasília – DF

### **In attendance:**

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

Henrique de Campos Meirelles – Governor  
Aldo Luiz Mendes  
Alexandre Antonio Tombini  
Alvir Alberto Hoffmann  
Anthero de Moraes Meirelles  
Antonio Gustavo Matos do Vale  
Carlos Hamilton Vasconcelos Araújo  
Luiz Awazu Pereira da Silva

#### **Department Heads (present on June 8<sup>th</sup>)**

Adriana Soares Sales – Research Department (also present on June 9<sup>th</sup>)  
Altamir Lopes – Economic Department  
Ariosto Revoredo de Carvalho – International Reserves Operations Department

João Henrique de Paula Freitas Simão – Open Market Operations Department

José Antonio Marciano – Department of Banking Operations and Payments System

Renato Jansson Rosek – Investor Relations Group

#### **Other participants (present on June 8<sup>th</sup>)**

Alexandre Pundek Rocha – Advisor to the Board  
Eduardo José Araújo Lima – Deputy-Head of the Research Department  
Ricardo Franco Moura – Advisor to the Board

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

### **Recent economic developments**

1. IPCA inflation, after moving from 0.52% in March to 0.57% in April, reduced to 0.43% in May.

As a consequence, inflation accumulated in the first five months of 2010 reached 3.09%, 0.89 p.p. above the level registered in the same period of the previous year. The rise in inflation in 2010 mirrors the behavior of market prices, which increased by 3.72% in the year through May. Focusing on market prices, both prices of tradable goods and non-tradable goods accelerated in the first five months of the year, reaching 2.52% and 4.80%, respectively, up from 1.38% and 3.12% in the same period of 2009. On its turn, regulated prices increased by 1.59% in the first five months of the year, compared to 1.99% in the same period of 2009. The change in the prices of services, whose dynamics tends to show more persistence than that of the prices of goods, reached 4.33% until May and 6.78% in twelve months. In short, information available suggests continued deterioration of inflation dynamics at the margin, although at a slower pace.

2. The three main underlying inflation measures calculated by the BCB showed convergent behavior between April and May. The smoothed trimmed means core inflation increased from 0.50% in April to 0.62% in May, as well as the double weight core inflation (from 0.42% to 0.56%) and core inflation by exclusion (from 0.42% to 0.56%), respectively. In the year through May, the core inflation by exclusion increased by 2.71%, while smoothed trimmed means and double weight core inflation measures increased 2.47% and 2.48%, respectively. These changes are, respectively, 0.20 p.p., 0.62 p.p. and 0.31 p.p. above the rates prevailing in the same period in 2009. The twelve-month trailing inflation measures changed from 4.73%, 4.36% and 4.74% in December 2009, for the core inflation by exclusion, smoothed trimmed means and double weight core inflation measures, to 4.93%, 4.99% and 5.06% in May, respectively. It is important highlighting that all core inflation measures, on a twelve-month basis, are above the midpoint of inflation target. Moreover, it bears emphasizing that, despite the IPCA diffusion index remained unchanged compared to April (60.9%), its level continues to suggest dissemination in the inflation acceleration process (58.9% in the same month of 2009).

3. The General Price Index (IGP-DI) inflation increased from 0.72% in April to 1.57% in May. In

the year through May, the IGP-DI inflation reached 5.12% (-0.74% in the same period of 2009). Under this comparison basis, the acceleration of the IGP-DI reflected the behavior of its three components. The Wholesale Price Index (IPA-DI) increased 5.72% in the year through May (-2.29% in the same period of 2009). On its turn, the Consumer Price Index – Brazil (IPC-Br) increased 3.86% in the same period (2.54% in 2009). Still according to the same comparison basis, the Civil Construction National Index (INCC) increased 4.48% (1.70% in 2009). The IPA-DI inflation acceleration, under this comparison basis, derived both from the behavior of agricultural and industrial prices. While the industrial IPA increased 5.86% (-3.46% in the same period of 2009), the elevation of wholesale agricultural prices reached 5.25% (1.23% in 2009). 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, as well as on price setters' expectations for the future inflation path.

4. The IBGE (Statistics and Geography Brazilian Institute) released information about 2010Q1 GDP. The data showed expansion in activity, which increased 9.0% in the first quarter, year-over-year, and a 2.7% increase quarter-over-quarter, according to seasonally adjusted data. On the aggregate demand side, household consumption and public administration consumption increased, respectively, 9.3% and 2.0%, year-over-year. Gross fixed capital formation (FBCF) increased 26.0% and imports grew 39.5%, according to the same comparison basis, whereas exports increased 14.5%. The positive contribution of domestic absorption to the Q1 GDP growth totaled 11.8 p.p., year-over-year, overweighting the 2.9 p.p. negative contribution of the external sector. On the aggregate supply side, still according to the same comparison basis, the services sector presented a positive performance, growing by 5.9%, while industry grew by 14.6% and agriculture, 5.1%.

5. On a three-month moving average basis, according to data seasonally adjusted by the IBGE, industrial output increased 2.1% in March and 1.4% in April. Still considering the seasonally adjusted series, on a month-on-month basis, after expanding by 3.4% in



March (revised from 2.8%, an increase of 0.5 pp in the observed data), industrial output decreased by 0.7% in April. On a year-over-year basis, industrial output increased by 17.4% in April, compared to 20.2% in March. On a twelve-month trailing basis, the industrial production growth expanded in April (2.3%), after consecutive declines since February 2009. Despite the decrease on a month-on-month basis, the behavior of IBGE industrial output series, and its components, shows that industrial production expands, returning to pre-crisis levels of 2008, at a pace that continues to be influenced by the international outlook, by business and households expectations, as well as by domestic financial conditions. This process is supported not only by traditional sources of credit, but also by the recovery of capital markets and the performance of public financial institutions.

6. Among the use categories, according to data seasonally adjusted by the IBGE, in April it bears highlighting the expansions of 2.4% in capital goods production, and 0.5% in durable consumer goods production. Intermediate goods production increased 0.4%. On its turn, semi-durable consumer goods production decreased 0.8%, contributing to the 1.5% decline in the consumer goods production in the month, after rising 1.4%, 2.2% and 2.5% in January, February and March, respectively. Considering the quarterly series, all categories showed growth: capital goods, 4.9%, durable consumer goods, 4.4%, non-durable and semi-durable consumer goods, 3.5% and intermediate goods, 2.6%. It bears highlighting that capital goods productions expanded by 28.7% in the year through April, the most remarkable expansion among the use categories, demonstrating the consistent recovery of the domestic economy. The recovery in industrial production dynamism was initially led by the production of durable goods, but it has become even more widespread than before, reflecting tax exemption measures, in advanced process of reversion, as well as the easing in financial conditions and the income expansion. The future behavior of industrial production, which should not be uniform over time, will also depend on the evolution of consumer and businessmen confidence, which should continue to be sources of dynamism, to which shall be added the gradual recovery of external demand.

7. Labor market continues to show vigor in clear process of expansion in the economic cycle. The unemployment rate in the six metropolitan regions covered by the IBGE Monthly Labor Survey (PME) decreased from 7.6% in March to 7.3% in April, 1.6 p.p. lower than that observed in the same month of last year. According to the seasonally adjusted series, the unemployment rate reached 6.8% in April, down from 7.0% in the previous month. Average real earnings were stable (0.1%) in April, month-on-month, after increasing by 0.4% in March. Employment, on its turn, increased by 3.8% in March and 4.3% in April, year-over-year. As a consequence, real payroll expanded by 6.7% in April, year-over-year, continuing to constitute a key driver for domestic demand growth. Still regarding the labor market, data from the Ministry of Labor and Employment (MTE) indicate that formal employment has continued to recover. In fact, 305 thousand jobs were created in April and 962 thousand in the year through April. In the latter case, the expansion of the period was a record high for the historical series, begun in 1985. Similarly, the manufacturing industry, trade, services and civil construction registered the largest balances accumulated since 1985. The most dynamic sector continues to be civil construction, where employment recorded a 12.9% increase in the first four months of the year, year-over-year.

8. According to data seasonally adjusted by the IBGE, expanded retail sales increased by 5.0% in March, after increasing by 2.2% in February. On a year-over-year basis, the indicator increased 22.0% in March. The three-month moving average of expanded retail sales reached 3.0% in March, according to seasonally adjusted data, after reaching 1.6% in February. On a month-on-month basis, according to seasonally adjusted data, it bears emphasizing the expansion in the sales of “vehicles, motorcycles, parts and pieces” (10.3%) and “office material and equipment” (8.6%). Expanded retail sales data have been evidencing growth, mainly influenced by the increase in the sales of durable goods, in response to the improvement in the access to credit, income expansion and temporary sector incentives granted by the government. The retail sector continues to register positive performance and indicates that the pace of domestic demand growth remains robust, but might, however, show

some signs of cooling. For the next months, it is expected that the retail sales trajectory continues to be benefited by fiscal transfers, by real payroll growth, by the recovery in the access to credit and by the evolution of consumer confidence.

9. The installed capacity utilization rate (Nuci) in the manufacturing industry, calculated by FGV, without seasonal adjustment, reached 84.6% in May, 5.9 p.p. above the level registered in the same month of 2009. According to the CNI series seasonally adjusted by the BCB, the Nuci reached 82.8 in April (up from 82.4% in March). According to the seasonally adjusted monthly series calculated by FGV, the Nuci reached 84.9% in May (85.1% in the previous month), the first decline since February 2009. Among the four use categories, the Nuci in construction material (91.6% versus 89.4% in the previous month) and in intermediate goods industry (86.5% versus 85.7% in the previous month) increased on a month-on-month basis, with the former reaching a new historical record for the series, while the latter is slightly above the historical average. On its turn, the industries of consumer goods (85.4% versus 86.3% in the previous month) and capital goods (82.8% versus 83.4% in the previous month) have shown little reduction compared to the previous month. The trend of reduction in the idle capacity is the result of economic activity expansion, not totally offset by the maturity of investment projects. Data regarding the absorption of capital goods show recovery compared to the same periods of 2009. Despite the decline of 0.3% in April compared to the previous month, the absorption of capital goods increased 30.9%, year-over-year, and 28.2% in the year through April. On its turn, the production of construction inputs recorded virtual stability (-0.1%) at the margin in April, after a strong increase of 4.0% in March. According to observed data, it increased 18.2% in April, year-over-year, accumulating 1.7% growth in twelve months. In short, evidences suggest that the utilization rates have recorded upward trajectory in the last months, showing reduction in any remaining idle margin of the industry, despite the recovery of investments. 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 twelve-month cumulative trade balance retreated at the margin, reaching a US\$21.6 billion surplus in May, US\$4.1 billion lower than the obtained in the same period last year. This total resulted from US\$169.6 billion in exports and US\$148.0 billion in imports, equivalent to -6.5% and -4.9% changes, respectively, year-over-year. In fact, the greater dynamism of domestic demand relative to the external demand contributes to the narrowing of the trade surplus. The increase in remittances of profits and dividends contributed to elevate the twelve-month trailing current account deficit, which reached US\$36.2 billion in April, equivalent to 2.0% of GDP, up from US\$31.5 billion in March. On its turn, foreign direct investment reached US\$25.1 billion in the last twelve months through April, equivalent to 1.4% of GDP.

11. The period since the last Copom meeting was marked by deterioration in the process of normalization of activity in international financial markets, following the intensification of the effects of fiscal crisis in many European countries, with impact on the volatility of asset prices. Apparently, the perception of systemic risk resurfaced, fueled by the view that there would be interdependence between a possible fiscal consolidation in economies that are facing difficulties in this area and the balance sheets of financial institutions. However, until now, the possibility of realization of a stress scenario seems limited, but, anyway, there was some moderation in demand for risky assets in international financial markets.

12. The global economy continues to show recovery in 2010, whose intensity might accelerate in 2011, in a scenario in which the economies of the US, Europe and Japan (G3) recover some dynamism, but with considerable discrepancy between the regions, and with the recovery process being led by emerging economies. The US economy shows signs of recovery, as can be seen, for example, at the end of the process of rebuilding of inventories, with positive impact on industrial activity and retail sales, although these indicators show some volatility. The levels of consumer confidence also advanced, although remaining at levels well below those prevailing before the crisis of 2008. Moreover, the labor market begins to show signs of recovery. On its turn, the

economic activity in Japan continues to suggest a slow recovery, led by exports. In the Euro Area, fiscal concerns turn the recovery more uncertain, the household consumption shows no consistent signs of reaction, and the economic recovery tends to be slower and uneven. In short, since the last Copom meeting, the uncertainty regarding the sustainability and pace of consumption expansion in mature economies increased, mainly in Europe, in a scenario where economic policy stimuli are replaced by contractionary measures, and prospects for credit expansion are modest. On the other hand, in many emerging economies, economic activity remains in a path of expansion, showing, in some cases, evidence of heat in the markets of goods, services, production factors and assets. In fact, there is already concern about the dynamics of inflation in major emerging economies. In this context, after a period of aggressive monetary policy easing, monetary policy continues unchanged in several countries, and in those economies that were less impacted by the international crisis, which had recovered more quickly and intensely, the adoption of more restrictive monetary policy has started.

13. Since the last Copom meeting, oil prices showed some cooling, both in spot and future markets, despite the high volatility. In fact, the uncertainty concerning these quotations remains high, as the prospective scenario depends on the evolution of demand, in a context of asymmetric global economic recovery, on major uncertainties about the recovery of the European economy, on the prospects for the evolution of global supply, subject to the pace of investment maturation in the sector, in addition to the geopolitical issues that affect the price of this commodity. Nonetheless, the main scenario adopted by the Copom assumes unchanged domestic gasoline prices in 2010. However, it bears highlighting that, regardless the behavior of domestic gasoline prices, the evolution of international oil prices might affect domestic prices both through production chains, such as the petrochemical, and through the potential effect over inflation expectations. Furthermore, measures to reduce liquidity in China may have an effect on commodity prices. It bears emphasizing that agricultural commodity prices, which have particularly important impact on the evolution of food costs, have presented some reduction since the

previous Copom meeting. On the other hand, iron ore, an important input in the production chain of the industrial sector, has shown significant increase in price, although there was a reduction in May. Market players expect another price change in the contracts.

### **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 on the following assumptions:

- a) the projected adjustments for gasoline and bottle gas prices for 2010 were kept unchanged at 0%;
- b) the projected adjustments for fixed telephone was kept at 1.6% for 2010, while the projections for electricity prices adjustments rose to 1.5% for 2010, up from 0.7% considered in the April meeting;
- c) the projection for regulated prices inflation for 2010, based on individual items, was maintained at 3.6%, the same projection considered at the April meeting, according to the benchmark scenario. This set of prices, according to data released by IBGE, accounted for 29.27% of the total May IPCA;
- d) the projection for regulated prices inflation for 2011 was maintained at 4.4%, on the benchmark scenario. Such projection is based on the endogenous determination model for regulated prices, which computes, among other factors, seasonal components, foreign exchange rate changes, market prices inflation and the IGP (General Price Index) change; and
- e) the projection for the spreads over the Selic rate, based on the 360-day swap rates, on the benchmark scenario, estimates 86 bps and 25 bps spreads in the fourth quarters of 2010 and 2011, respectively.

15. Regarding fiscal policy, projections assume the achievement of a public sector primary surplus target of 3.3% of GDP in 2010. This percentage can be reduced by up to 1.12 p.p., due to the implementation of the projects linked to the Growth Acceleration Program (PAC), of which 0.44 p.p. refers to amounts to be paid from 2009. Moreover, it is expected that the primary surplus in 2011 would return, without

adjustments, to 3.3% of GDP. The additional assumptions considered in the previous meeting remained unchanged.

16. Since the last Copom meeting, the median of the expectations compiled by the BCB's Investor Relations Group (Gerin) for the 2010 IPCA increased from 5.41% to 5.64%. For 2011, the median of inflation expectations remained at 4.80%.

17. The benchmark scenario assumes the maintenance of the exchange rate at R\$1.85/US\$1.00 and the Selic rate at 9.50% p.a. during the forecast period. Under this scenario, the projection for the 2010 inflation increased relative to the figure considered at the April Copom meeting, and continues to be significantly above the 4.50% midpoint target established by the National Monetary Council (CMN). According to 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 2010 also increased, standing significantly above the inflation midpoint target. For 2011, under the benchmark scenario, the projection decreased relative to the figure considered at the April Copom meeting, but remains significantly above the inflation midpoint target. Under the market scenario, the projection increased, and is positioned above the midpoint target.

### **Monetary policy decision**

18. The Copom evaluates that the monetary policy should contribute to the consolidation of a favorable longer-term macroeconomic environment. In international markets, risk aversion has increased since the last Copom meeting, largely due to concerns about the sovereign debt of European countries. Although liquidity in international markets reduced, the prospects for external funding for the Brazilian economy remain favorable. In line with greater risk aversion and more scarce liquidity, the prices of some selected commodities and Brazilian assets decreased. On another front, the trajectory of price indices evidences inflationary pressures in relevant economies. In this context, the influence of the international scenario over the domestic inflation path is more ambiguous, although uncertainty persists about the behavior of asset prices and commodities

in the context of the worsening international financial conditions. The Copom assesses that this scenario can deteriorate, depending on the dynamics that derives from the market distrust regarding the solvency of some European economies, but, on the other hand, recognizes that this is not the baseline scenario considered. Regardless of how these aspects of the international outlook evolve, the Copom reaffirms that the main challenge of monetary policy is to ensure that the favorable results obtained over the last years are preserved.

19. The Copom believes that the indicators released since the last meeting reinforce the perception about the existence of pressures over the market of factors, increasing the probability that initially localized inflationary episodes pose risks to the inflation trajectory. In this context, the risk of pass-through of upward costs pressures to wholesale price inflation, and from these to consumer price inflation, increases as well. The Committee states that the materialization of these pass-throughs, as well as the spread of initially localized pressures over consumer prices, continues to depend critically on the economic agents' expectations for inflation and on the idleness degree of the economy, among other factors. Therefore, these and other variables are part of the information set that is taken into account in the generation of inflation forecasts by the BCB, which constitute a key element in the Committee's assessment on the prospective inflation scenario. Additionally, it should be noted that the behavior of domestic demand has exerted some pressure over the prices of non-tradable items, such as services, which, considering the prospects for the evolution of the main factors sustaining aggregate demand, may continue. In any event, the Committee reaffirms the commitment that it will continue to conduct its actions in order to ensure that the gains obtained in inflation control in recent years become permanent.

20. The Copom considers important to emphasize, once more, that there are important time lags between the implementation of monetary policy and its effects on both economic activity and inflation. Therefore, the assessment of alternative options for monetary policy should necessarily focus on the forward-looking inflationary scenario and its risks, instead of current and past inflation figures.



The prospective scenario, indeed, suffered some deterioration earlier this year, a dynamic that has continued since the last meeting, in spite of seasonal and occasional contributions to the rise in consumer prices as well as of price movements of certain domestic assets.

21. Prospects for the evolution of domestic economic activity remain favorable, as evidenced by data on trade, manufacturing capacity utilization and the labor market. This assessment is also supported by signs of continued expansion of credit supply, both for individuals and corporate; by the fact that consumers and businessmen confidence stands at historically high levels; and by income growth. The dynamism of domestic activity should also be benefited, among other factors, by fiscal impulses, the policies of official banks and, to a lesser extent, the pace of recovery in global activity. Considering the Brazilian economy's new cycle of expansion, these considerations become even more relevant when one takes into account that there are lags between the implementation of monetary policy and its effects over the activity level and inflation.

22. The Copom believes that the risks to the consolidation of a benign inflationary scenario stem mainly from the domestic side, for example, those resulting from the expansion of domestic demand in the context of virtual exhaustion of the idleness margin in the use of production factors. Incidentally, evidences of narrowing of the market factors are the acceleration of real wage gains in the recent past in some segments and higher producer price pressures. Indeed, these developments may exacerbate an outlook that already evidences the presence of mismatch between the growth of domestic absorption and capacity of supply expansion.

23. International evidence, ratified by the Brazilian experience, indicates that high inflation rates lead to the increase of risk premium, both for private and public funding, and to the shortening of planning horizons, both for households and corporate. Consequently, high inflation rates reduce investment and the economic growth potential, in addition to presenting regressive effects on income distribution. Moreover, high inflation rates do not result in any lasting results for economic growth and employment

level; on the contrary, they create permanent damage to these variables in the medium and long terms. Therefore, the Copom strategy aims to ensure the convergence of inflation towards the targets path in 2010 and in the next years, which requires that possible deviations from the target path be promptly corrected. Such strategy takes into account the time lags in the transmission mechanism and is the most adequate to deal with the uncertainty inherent to the process of monetary policy formulation and implementation.

24. The Committee believes that the economy is in a new expansion cycle, and this assessment is corroborated by data released since its last meeting, although uncertainty about the pace of this process – which should be resolved over time – still persists. Signs of overheat in the economy are evidenced, for example, in core inflation trajectories, in the behavior of inflation expectations, in the evidence of workers shortage and in the rising inputs costs. In particular, during this period, the inflation projections considered by the Committee showed slight deterioration in the prospective scenario. The Copom believes that this deterioration should be contained and, therefore, the signs of persistent mismatch between the pace of aggregate demand expansion and aggregate supply, which, ultimately, tend to increase the risk for inflation dynamics, must be reversed. In such circumstances, the monetary policy stance should be adjusted, on the one hand, because it contributes to the convergence between the pace of demand expansion and supply and, on the other hand, because it prevents that originally localized price pressures determine a persistent deterioration of the inflation prospective scenario.

25. In short, despite the withdrawal of substantial share of the stimuli introduced during the recent international financial crisis, since the last meeting the risks for the achievement of a benign inflationary scenario, in which inflation would remain consistent with the inflation targets remained elevated. On the other hand, it is worth noting that in that same period, external developments have introduced a certain amount of caution in the analysis of the prospective scenario. Anyway, the prevailing opinion among the Committee members was that monetary policy should be adjusted incisively in order to avoid that

the greater uncertainty detected in shorter horizons spread to longer horizons.

26. Under these considerations, continuing the adjustment process of monetary conditions to the prospective scenario of the economy, in order to ensure the convergence of inflation to the targets path, the Copom unanimously decided to increase the Selic rate to 10.25% p.a., without bias.

27. Under the inflation-targeting regime, the Copom guides its decisions according to projected inflation, the analysis of several alternative scenarios for the evolution of the main variables that determine the forward-looking dynamics for prices, and the balance of risks associated to the projections. Domestic demand appears robust, largely due to the effects of stimulus factors, such as income growth and credit resumption. Moreover, fiscal and credit incentives have been provided to the economy in recent quarters, and should contribute for the consolidation of activity expansion and, hence, for the reduction of any residual idleness margin of productive factors. The effects of these stimuli, however, counter the effects of the reversal of substantial share of the initiatives taken during the recent international financial crisis, and a possible deepening of the fiscal crisis that several European countries face. These elements are an important part of the context in which future monetary policy decisions will be taken, aiming to ensure a timely convergence of inflation to the targets path.

28. In addition, it bears noticing that there was consensus among the Committee members about the need to adapt the pace of adjustment of the basic interest rate to the developments in the prospective inflation scenario, as well as to the corresponding balance of risks, in order to limit the impacts caused by the behavior of current inflation over the underlying prices dynamics.

29. At the end of the meeting it was announced that the Committee will reconvene on July 20<sup>th</sup>, 2010 for technical presentations and, on the following day, to discuss the monetary policy decision, as established in Communiqué 18,927 of October 9<sup>th</sup>, 2009.

## Summary of data analyzed by the Copom

### Inflation

30. The IPCA increased 0.43% in May, compared to 0.57% in April, recording the lowest monthly growth since December 2009. The accumulated variation of the index reached 3.09% in the first five months of the year, compared to 2.20% in the same period of 2009, while, considering periods of twelve months, the index rose 5.22% in May, compared to 5.26% in April.

31. The deceleration recorded in the monthly IPCA reflected the larger impact of the downturn, from 0.75% to 0.47%, observed in market prices, compared to that provided by the acceleration of 0.14% to 0.33% registered in the variation of regulated prices. The segmentation of IPCA shows that its monthly change in May resulted, in large part, from the increases observed in the groups housing (0.10 p.p.); personal expenses (0.08 pp); and health and personal care (0.08 p.p.). The diffusion index reached 60.94%, recording stability compared to April and standing above 60% since November 2009.

32. The variations of the three core measures accelerated, in May, month-on-month and year-over-year. The smoothed trimmed-means core monthly values increased 0.62% from 0.50% in April, accumulating, in order, 4.99% and 4.80% for a twelve-month trailing basis ending in May and in previous month. Core by exclusion, which excludes ten items of food and fuel varied 0.56% in May, up from 0.42% in April, totaling in twelve month increases of 4.93% and 4.91% respectively. The core of double weighting grew 0.56% in May, up from 0.42% in April, totaling 5.06% and 4.98% for on a twelve-month trailing basis ending in May and in the previous month.

33. The IGP-DI increased 1.57% in May, up from 0.72% in April, accumulating 5.12% in the year and 4.38% in twelve months. The Producer Price Index Broad (IPA) changed by 2.06% in May, reflecting the increases in agricultural products prices (0.19%) and industrial prices (2.66%), whereas, considered



the period of twelve months ended in May, rose 3.77%, reflecting respective increases of 4.79% and 0.71% observed in the prices of industrial goods and agricultural products. The IPC-Br showed deceleration of 0.76% in April to 0.21% in May, totaling 5.28% in twelve months. The INCC increased 1.81% in May, up from 0.84% in April, accumulating 6.07% in twelve months. The core IPC-Br, repeating the monthly evolution observed in April, rose 0.47% in May, totaling 4.16% in twelve months.

### **Economic activity**

34. GDP grew 2.7% in the first quarter of 2010, compared to the previous quarter, up from the 2.3% increase registered in the last quarter of 2009 on the same basis of comparison, according to seasonally adjusted data from the Quarterly National Accounts of the IBGE. The result reflected respective expansions of 2.7%, 4.2% and 1.9% observed in agriculture, industry and service sectors. From the demand viewpoint, it can be emphasized the quarterly growth of 7.4% recorded in investment, while households and government consumptions have grown, in order, 1.5% and 0.9%, confirming the importance of domestic demand for the resumption of economic activity. Exports and imports increased, respectively, 1.7% and 13.1% in the quarter. Considered accumulated changes in four quarters, GDP grew 2.4% in the period, breaking a sequence of two negative results, in this type of comparison.

35. Expanded retail sales, after registering monthly growth of 1.7% in January and 2.2% in February, rose on the same basis of comparison, 5% in March, according to seasonally adjusted data by the IBGE's monthly survey (PMC). There were increases in sales in seven of the ten sectors surveyed, with emphasis on vehicles, motorcycles, parts and pieces - influenced by the impact of the last month's validity of the reduction of the Industrialized Product Tax (IPI) on the sector (10.3%), and office supplies and equipment (8.6%). Conversely, sales for the hypermarkets, supermarkets, food products, beverages and tobacco reported monthly decline of 0.8% in March. The average sales for the quarter ended in March rose 5.5% compared to the previous quarter.

36. Considered the observed data, March sales grew 22% year-over-year, accumulating increases of 15.5% in the year and 9.6% in the last twelve months. The year-over-year expansion was due to widespread increases in sales across all sectors addressed in the survey, with emphasis on equipment and office supplies, 35.4%; vehicles, motorcycles, parts and pieces (32.4%), and furniture and appliances (25.7%). Likewise, the accumulated growth in the quarter resulted from generalized sector increase in sales, emphasizing those registered in equipment and office supplies (29.9%); furniture and appliances (21.6%); and vehicles, motorcycles, parts and pieces (20.7%). The analysis of the evolution of retail trade in the periods of twelve months ending in March 2010 and March 2009 shows that only the sales of building materials fell (-1.5%), contrasting with the increases observed in vehicles, motorcycles, parts and parts (14.6%); equipment and office supplies (14%); pharmaceutical and medical articles (12.1%) and hypermarkets, supermarkets and food products (10.4%).

37. The number of consultations to the Central Credit Protection Service (SCPC) and to the Usecheque System registered declines of 2.1% and 0.4% in April, month-on-month, according to seasonally adjusted data from the Commercial Association of Sao Paulo (ACSP), covering the state capital. Considered the observed data, these indicators recorded respective increases of 7.7% and 6.6% in the first four months of the year relative to the same period of last year, and respective variations of -4% and 4.5% in the period of twelve months ended in April, year-over-year.

38. Automobile sales by dealers, including cars, light commercial vehicles, trucks and buses, declined 1.5% in May, month-on-month, according to Brazilian Federation of Automotive Vehicles Distribution (Fenabrave) data, seasonally adjusted by the BCB. In the month were recorded downturns in sales of buses (19.4%), and automobiles (4.1%), while those related to trucks and light commercial vehicles recorded respective increases of 4.1% and 4%. Total sales in May reported respective increases of 1.6%, 14.6% and 17.4% year-over-year, accumulated during the year and in the last twelve months ended in May.

39. Capital goods imports decreased 2.5% in April, month-on-month, according to the Funcex quantum index, seasonally adjusted by the BCB. Considering periods of twelve months, the indicator rose 7.9% in April, registering sharp deceleration compared to the results observed in March (17%) and February (25.7%). Also in April, imports of capital goods increased 13.8% in twelve months and fell 9.9% in the year, in relation to the same periods in 2009.

40. Capital goods production increased 2.4% in April, month-on-month, according to seasonally adjusted data from Monthly Industrial Survey (PIM) by IBGE, with emphasis on the expansions observed in the segments of capital goods for serial industrial use (6.2%), transport equipment (5.2%) and equipment for the electricity sector (3.2%). The remaining segments recorded decline in the month, emphasizing the agriculture pieces (15%), and capital goods for non-serial industrial use (7.3%). The production of capital goods increased 36.3% compared to April 2009, highlighting the increases in the segments of capital goods for construction (208.5%), agricultural goods (46.5%), and goods for serial industrial use (42.9%). The production of construction inputs recorded a drop of 0.1% month-on-month and a 18.2% year-over-year growth. The production of capital goods grew 28.7% in the first four months of 2010 compared to the same period in 2009, with emphasis on the 211.3% increase in the segment of goods for the construction sector.

41. Disbursements granted by the BNDES reached R\$146.5 billion in the last twelve months ended in April, with a 58% increase over the same period of last year. In the first four months of the year, disbursements mentioned expanded by 34%, compared to same period in 2009, with emphasis on the infrastructure sector, which recorded a 39% share in the total released in this four months period, industry (30%), trade and services (21%) and agriculture (10%).

42. The industrial production declined 0.7% in April, month-on-month, according to seasonally adjusted data from the PIM, by IBGE. This movement is associated, in particular, to the 0.8% decrease observed in the industry of semi- and non-durable consumer goods, affected by the

10.9% decrease experienced by the beverage industry. The other categories of use reported favorable results in the month, with highlights for the performance of the industry of capital goods, quoted above. Industrial production increased 17.4% year-over-year, reflecting in particular the performance of the categories of capital goods (36.3%), durable consumer goods (20.9%) and intermediate goods (17.8%). On twelve-month periods, the industry showed a 2.3% expansion in April year-over-year, due to the increases of 8.8%, 2.2% and 2% observed, respectively, in the durable consumer goods industry, intermediate goods and semi- and non-durable goods, offset in part by the decrease of 3.7% recorded in the production of capital goods.

43. Real earnings in the manufacturing industry decreased 0.4% in April, month-on-month, while in March it increased by 2.8%, according to data released by the CNI, seasonally adjusted by the Economic Department of BCB (Depec). Hours worked and employment showed relative stability in the same period. Year-over-year, these indicators increased by 12.7%, 5.4% and 8.3%, respectively.

44. Still according to CNI, the Nuci reached 82.4% in April, 3.6 p.p. higher than the level observed in the same month of 2009. Considering the seasonally adjusted series, the April Nuci recorded a monthly increase of 0.5 p.p., while the average quarterly NUCI recorded a growth of 1 p.p. in the quarter ended in April compared to the quarter ended in January.

45. Vehicles production reached 309.6 thousand units in May, increasing by 0.5% month-on-month, according to data released by the Anfavea, seasonally adjusted by BCB. In the year and in the last twelve months through May, the production of vehicles increased 20.7% and 13.7%, respectively. The monthly decrease of 5.3% in May vehicles sales reflected the performance of domestic market sales, with a 13.4% decrease, and the 23.5% increase in exports. In the year and in the twelve months through May, domestic sales increased 7.4% and 14.2%, respectively, while exports expanded by 78.6% and 2.5%.

46. The LSPA survey carried out by the IBGE in May estimated the production of 145.8 million tons of grains in 2010, representing an 8.8% increase

relative to 2009. The increase projected for the year incorporates the estimated expansions for the production of soybeans (+19.6%), wheat (+3.8%) and corn (+3.7%), as opposed to the estimated retractions for rice (-10.8 %) and beans (- 5.5%).

### Surveys and expectations

47. According to the Fecomercio-SP survey, the Consumer Confidence Index (ICC) increased 0.5% in May, after two consecutive months of decline, reaching 152.9 points. The monthly trajectory of the ICC in May reflected the larger impact of the 4.3% increase observed in the Current Economic Conditions Index (Icea), relative to the shrinkage of 1.8% recorded in the Consumer Expectations Index (IEC). Year-over-year, the ICC increased 21.6%.

48. According to the Consumer Expectations Survey carried out by the FGV nationwide, the ICC increased 0.6% in May, month-on-month seasonally adjusted, reaching 116.1 points. In the month, the Current Situation Index (ISA) increased 2.9 points, to 128.4 points, while the Expectations Index (IE) decreased 0.4 points to 109.6 points. Year-over-year, the ICC increased 12.9%, reflecting increases of 26.4% in the ISA and 5.8% in the IE.

49. The Industry Confidence Index (ICI) from FGV reached 116.1 points in May, standing 0.7% above the level observed in April, third highest result of the series according to seasonally adjusted data and 33.5% higher than the level observed in May 2009. Considering the components, the ISA decreased 0.7%, and the IE increased 2.3%, seasonally adjusted. Year-over-year, the same indicators expanded by 34% and 33.1%, respectively. According to the same survey, the seasonally adjusted Nuci reached 84.9% in May, a level 0.2 p.p. lower than in April and 1.1 p.p. higher than in January.

### Labor market

50. According to the General Record of Employment and Unemployment (Caged) of the Ministry of Labor and Employment (MTE), 305.1 thousand formal jobs were created in April, totaling 962.3 thousand formal jobs in the first four months of 2010, the most expressive result for the period since the series began

in January 1985. For the year through April, net generation of formal employment registered record highs for all segments of the economy, reaching 346.5 thousand jobs in the service sector, 287.4 thousand in the manufacturing industry, 166.1 thousand in civil construction and 74 thousand in commerce. The monthly analysis shows that the service sector recorded the creation of 96.6 thousand jobs in April, followed by the manufacturing industry, 83.1 thousand; and civil construction, 38.4 thousand. Additionally, 1,909 thousand jobs were created during the twelve months ended in April, 2.7% higher than the results reported in the same period of 2009.

51. According to the IBGE employment survey (PME), carried out in the six main metropolitan regions of the country, the unemployment rate reached 7.3% in April, declining 0.3 p.p. month-on-month and 1.6 p.p. year-over-year. The monthly decrease in unemployment reflected the 0.4% increase in the occupation and a 0.2% expansion in the Economically Active Population (PEA), while the annual decline was due to respective increases of 3.4% and 2% in the mentioned variables. In seasonally adjusted terms, the unemployment rate fell by 0.2 p.p. in the month and reached 6.8%, representing the fourth consecutive monthly decline and the lowest percentage for the series. According to the same survey, average real earnings usually earned by workers increased 0.1% month-on-month and 2.3% in twelve months. Payroll grew 0.4% month-on-month and 6.7% in twelve months.

### Credit and delinquency rates

52. Outstanding credit in the financial system reached R\$1,468 billion in April, equivalent to 45.2% of GDP, with increases of 1.1% in the month and 17.6% in the last twelve months. Non-earmarked credit operations increased 0.9% in the month and 11.7% in the last twelve months. Among the non-earmarked operations, credit operations to individuals increased 1.2% in the month and 18.2% in twelve months, while non-earmarked credit operations to corporate increased 0.6% and 5.8%, according to the same comparison bases. Earmarked credit operations increased 1.6% in April, month-on-month, and 31.6% in twelve months, with highlights for the respective expansions of 3.2% and 50.5% recorded in housing finance.

53. The average interest rate on non-earmarked credit operations, used as reference for interest rates, increased 0.1 p.p. in April, month-on-month, reaching 34.3%. The average annual rate on credit for individuals reached 41.1% in the month, 0.1 p.p. below that recorded in March, and the average rate on corporate credit reached 26.3%, showing stability relative the level registered in the previous month.

54. The average tenure on non-earmarked credit operations, used as reference for interest rates, increased in April, reaching 404 days, up from 399 days in March. The average tenure of corporate credit operations reached 287 days, one day up from the average observed in March, while the average tenure for credit operations to individuals totaled 538 days, seven days more than in the previous month.

55. Delinquency rates in the financial system (non-earmarked loans used as reference for interest rates, in arrears for more than ninety days) reduced from 5.1% in March to 5% in April. Delinquency rates for credit operations with corporate remained stable, at 3.6%, while declined from 7% in March to 6.8% in April with individuals.

### **External environment**

56. Since the last Copom meeting, strains in international financial markets amounted. Apparently the adoption of a broad set of measures to restore financial stability in Europe was not sufficient to calm market participants. Risk aversion has increased, rates of stock exchanges in several countries retreated and the euro reached the lowest value against the US dollar in the last four years. In contrast, the movement of investment in assets perceived as less risky reduced the government securities yields of major mature economies.

57. Available data suggest the continuing process of global economic expansion, driven primarily by the US, Asia and Latin America, however, in an environment of high uncertainty. Among the G3 countries, the US and Japan reported annualized quarterly growth rates of, respectively, 3% and 4.9% in the 1Q 2010, while the euro area grew 0.8%. In the US, the most recent indicators for retail sales, industrial production and the net creation of jobs

remained pointing to a positive performance. In the euro area, domestic consumption remains fragile, and the expansion of economic activity over the first quarter was due to the positive contribution of inventories. In China, although the Purchasing Managers Index (PMI) for Manufacturing activity in May has indicated deceleration, the main economic indicators continue to point the maintenance of high economic growth in the country.

58. Inflation remains at modest levels in the US and in the Euro Area – the consumer price index (CPI) annual changes in April reached 2.2% in the US and 1.5% in the Euro Area. In Japan, the CPI remains in deflation for fifteen months, having recorded, in April, annual change of -1.2%. In this context, the central banks of G3 retained the accommodative monetary policies stance. The persistence of high unemployment and idle production factors in conjunction with anchored inflation expectations should help to maintain this accommodative stance for a longer period of time than had been anticipated. Among expansionary emerging economies, the price pressures have already appeared: the CPI annual changes recorded in April 2.8%, 4.3% and 10.2%, respectively, in China, Mexico and Turkey. Like China, India and Malaysia (Asia), and Brazil and Peru (Latin America), the monetary authorities in emerging economies should change, even in 2010, the stance of their monetary policies.

### **Foreign trade and international reserves**

59. The Brazilian trade surplus reached US\$3.4 billion in May, a monthly record high since June 2009 accumulating US\$5.6 billion in the year through May. It should be noted that this performance, 39.6% lower than that reported in the same period of last year, seems consistent with the process of recovery of strong activity observed in the Brazilian economy. In the month, exports totaled US\$17.7 billion, and imports, US\$14.3 billion, growing by 47.7% and 52.3%, respectively, year-over-year. In the year through May, exports and imports grew, respectively, 29.9% and 44% relative to the same period of 2009.

60. Based both on the liquidity concept and on the cash concept, international reserves



reached US\$249.8 billion in May, recording respectively US\$10.8 billion and US\$11.3 growths month-on-month. The two concepts were equal due to the full payment of borrowing operations in foreign currencies in May. In 2010 through May, the monetary authority's interventions accounted for net purchases of US\$12.1 billion in the domestic market.

### **Money market and open market operations**

61. Since the April Copom meeting, the slope of the domestic yield curve has decreased throughout its length. The short-term rates increased influenced by the disclosure of activity data suggesting consistent recovery of the Brazilian economy and expectations of inflation above the targeted path. The resume of crisis in Europe and greater pessimism about the recovery of the global economy, moreover, were key drivers in the decline of long rates. Between April 26<sup>th</sup> and June 7<sup>th</sup>, one- three- six-month and one-year rates increased by 0.82 p.p., 0.70 p.p., 0.40 p.p. and 0.05 p.p., respectively. The two- and three-year rates decreased by 0.40 p.p. and 0.66 p.p., 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 from 6.36% on April 26<sup>th</sup> to 6.46% on June 7<sup>th</sup>.

62. In its open market operations, the BCB carried out, between April 27<sup>th</sup> and June 7<sup>th</sup>, repo operations borrowing R\$21.4 billion for a six-month period. As a consequence, the average daily balance of the long operations reached R\$92.9 billion. In

the same period, the BCB also borrowed money through repo operations with tenures between 12 and 29 working days, resulting in the average daily balance of short-term borrowing operations of US\$183.6 billion. The BCB also borrowed money through 28 overnight repo operations and conducted daily one- and two-working-day tenure liquidity management operations. The very short-term operations, including the one- and two-working-day tenure liquidity management operations, averaged a daily balance of R\$64.1 billion in the period, borrowing. The average daily balance of the total stock of repurchase agreement of the Central Bank decreased from US\$406.7 billion, between March 16<sup>th</sup> and April 26<sup>th</sup> to US\$340.6 billion between April 27<sup>th</sup> and June 7<sup>th</sup>. Considering the daily balance of operations for the most recent period, there was an increase in the repurchase agreements totaling R\$26.1 billion, with a increase in total stock from R\$334.1 billion on April 26<sup>th</sup> to R\$360.1 billion on June 7<sup>th</sup>. The net redemption of securities by the National Treasury was the main driver of liquidity expansion in the period.

63. Between April 27<sup>th</sup> and June 7<sup>th</sup>, the National Treasury issuance regarding the traditional auctions raised a total of R\$27.7 billion. The issuance of fixed-rate securities reached R\$19.5 billion, with R\$16.6 billion via issuance of LTNs maturing in 2010, 2011 and 2012, and R\$2.9 billion via NTN-Fs maturing in 2014 and 2021. Issuance of LFTs totaled R\$5 billion, for securities maturing in 2014 and 2016. Issuance of inflation-linked NTN-Bs reached R\$3.2 billion, for securities maturing in 2013, 2015, 2020, 2030, 2040 and 2050.