Inflation outlook

6

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 September 2011. The chapter also presents the analysis of the inflation prospects up to the fourth quarter of 2013 and of the Gross Domestic Product (GDP) growth up to the end of 2012. Inflation projections are presented in two major scenarios. The first scenario, called the baseline scenario, assumes that the Selic rate will remain unchanged at 11% per year over the forecasting horizon, the level set by Copom at its most recent meeting on November 29 and 30, and the exchange rate will remain at R$1.80 per US dollar. The second scenario, named the market scenario, is based on the expected paths for the policy interest rate and for the exchange rate drawn from the survey carried out by the Banco Central do Brasil's Investor Relations and Special Studies Department (Gerin) among independent analysts. It is important to stress that these scenarios are used only as support for monetary policy decisions and their assumptions should not be viewed as Copom forecasts of the future behavior of interest and exchange rates. The projections released here are based on the information set available up to the cutoff date of December 9, 2011.

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 that was present at the above mentioned cutoff date. Inflation projections depend not only on assumptions about 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

Twelve-month inflation measured by the change in the Broad National Consumer Price Index (IPCA) which had rose in the first three quarters of 2011, has decreased since October, reaching 6.64% in November (5.97% over the year, 0.72 percentage points (p.p.) higher than in the same period of 2010). The increase in inflation in the last twelve months was not only determined by the behavior of market prices, but also by the behavior of administered and regulated prices, which has been less favorable than it was in 2010. In fact, regulated prices rose by 6.27% in the twelve months up to November, and market prices increased by 6.79%. Within the set of market prices, the price change for non-tradable goods (8.48%) stands out, while the prices of tradable goods presented a lower increase (4.87%) in the same period. Service sector inflation has consistently remained higher than that of market prices, reaching 9.08% in twelve months up to November (against 7.36% in the twelve-month period up to November 2010).

The average change of the five measures of core inflation calculated by the Banco Central do Brasil presented slight reduction at the margin in the last twelve months and on a monthly basis. The core measure by smoothed trimmed mean moved from 0.58% in September to 0.59% in October and 0.55% in November, whereas by non-smoothed trimmed mean changed from 0.55% in September to 0.44% in October and 0.42% in November. Inflation measured by the double weighted core measure, after reaching 0.51% in September, moved to 0.50% in October and 0.53% in November. The exclusion core measure that excludes ten items from the groups food at home and fuels moved from 0.45% in September to 0.47% in October and November, whereas the measure that excludes prices for monitored goods and food at home changed from 0.44% to 0.43% and 0.45% for the same period. The average monthly change of the five core inflation measures from 0.51% in September to 0.49% in October and 0.48% in November. In the twelve months up to September, they reached 6.57%, 6.08%, 7.36%, 6.91% and 7.45%, respectively, compared to 6.61%, 5.98 %, 7.27%, 6.94% and 7.32% in October and 6.60%, 5.80%, 7.13%, 6.89% and 7.19% in November.

The IPCA diffusion index stood at 67.19% in November 2011, the same value registered in November 2010 and above the historical average of 60.40% (since September 1994). The quarterly average of the index rose to 63.80% between September and November – 4.95 p.p. above the average for the three-month period from June to August and 0.35 p.p. below the average for March to May.

Broader inflation, measured by the General Price Index (IGP-DI), after a sharp drop in 2009 (-1.43% against 9.10% in 2008), reached 11.30% in 2010. In contrast, the IGP-DI moved to 5.17% between January and August 2011, below the value registered in the same period of 2010 (10.88%). Over the past two months, the changes in the IGP-DI were 0.40% (October) and 0.43% (November). Since monthly inflation from January to November has been lower than in the same period of 2010, the twelve-month inflation recorded the eleventh consecutive drop in November, reaching 5.56%. The behavior of the index is basically due to its main component, the Broad Producer Price Index (IPA-DI), whose twelve-month change receded from 6.63% in October to 4.91% in November. By the origin and for the same periods, prices of agricultural products rose by 9.01% in the twelve months up to October, and 3.83% by November, whereas prices for industrial products ranged 5.80% and 5.30%, respectively. According to the Consumer Price Index (IPC-DI), another component of the IGP-DI, the twelve-month inflation decreased from 6.78% in October to 6.28% in November, being 0.55 p.p. above inflation until November 2010. The highest increases in consumer prices in the period occurred in the groups of transportation and clothing. In the same period, the twelve-month inflation of the National Cost of Construction Index (INCC), which is the component with the lowest weight in the index, moved from 7.72% in October to 8.09% in November (0.93 p.p. higher than that recorded in November 2010), mainly due to increased labor costs in the sector.

The Index of Economic Activity of the Central Bank – Brazil (IBC-Br) is an important coincident indicator of economic activity as it incorporates estimates for monthly production of the three sectors of the economy, as well as taxes on products. In the third quarter of this year, the index displayed a growth rate of -0.3% over the previous quarter and 2.4% when compared to third quarter of 2010. The twelve-month growth rate has confirmed the path of moderation, as it moved from 4.2% in August to 3.8% in September, after reaching 7.4% in December 2010. Likewise, the Services Confidence Index (ICS) computed by Getulio Vargas Foundation (FGV), fell for the fourth consecutive month, after falling 0.6% in November, indicating a tendency of accommodation in the sector's activity. As it had occurred in the previous three months, there was an improvement in the perception component that reflects the current situation and drop of the component concerning the expectations of companies operating in the sector in November. Note also that the level of this indicator in November was 2.2% lower than the value for November 2010 and 2.7% below the average level of 2010.

Industrial production drop by 0.6% in October in the monthly comparison (-1.9% in September and -0.1% in August), according to seasonally adjusted data by the Brazilian Institute of Geography and Statistics (IBGE). The growth rate of the three-month moving average was -0.9% from August to October, after falling by 0.6% in the period from July to September. Industrial production also declined in the twelve-month growth rate, moving to 1.3% in October from 1.6% in September and 2.3% in August.

By industry categories of use, the production of capital goods posted the greatest change (4.4%) in the year up to October in comparison with the same period of 2010. In the same period, production of durable goods decreased by 0.6% and that of semi-durable and nondurable goods by 0.1%, whereas the production of intermediate goods rose 0.5%. Considering the three-month moving average rate from August to October 2011, the production of capital goods was 2.2% lower than that registered between July and September; whereas the production of non-durable and semi-durable goods decreased by 1.2%; durable consumer goods fell by 3.7%; and intermediate goods decreased by 0.2%, in the same basis of comparison. It is noteworthy that the growth of the indicator of activity in the capital goods industry reached the largest expansion among the categories of use. It is an evidence of the robust investment activity in the period, a relevant factor for the sustainability of a new expansion cycle in the post 2008/2009 crisis period. This behavior is supported by the expansion of capital goods imports, which rose by 16.7% in the twelve months up to October.

The rates of capacity utilization, still at high levels, have gradually receded, partly due to the slowdown in activity and maturity of undertaken investments. In fact, the seasonally adjusted Installed Capacity Utilization Level (Nuci) computed by FGV receded from 83.5% in October to 83.3% in November. According to data from the National Confederation of Industry (CNI), seasonally adjusted by the Banco Central do Brasil, the Nuci decreased from 81.7% in September to 81.4% in October, which represents the lowest level since February 2010. Regarding the expansion of installed capacity, the absorption of capital goods grew by 7.6% in twelve months up to October 2011 compared to the previous twelve-month period. The seasonally adjusted inventory level indicator from the Manufacturing Industry Survey of FGV displayed stability in the last three months, after indicating significant accumulation in the previous three months. In fact, in November, 8.4% of respondents expressed their inventory levels as excessive and 0.6% as insufficient (lowest level since February 2009), considering the seasonally adjusted series. It is also noteworthy that the process of accumulation of inventories has been more pronounced in the durable consumer goods sector.

FGV, jointly with the Banco Central do Brasil, started to publish, since October 2011, the Commerce Confidence Index (ICOM). The new monthly survey provides an important additional indicator, as it portrays the current state and signals the evolution of commercial activity more timely. The survey allows for detailed tracking of seventeen business segments, both wholesale and retail. In three months from September to November, the ICOM fell by 4.5% against the same period in 2010, after falling 3.3% in the three-month period up to October. On average for the three-month period ended in November, 64.2% of surveyed companies projected growth in sales for the following quarter while 7.3% of them expected reduction.

Unlike industrial production, the volume of expanded retail sales grew by 4.7% in September compared to the same month last year, after growing 7.2% in July and 5.4% in August. The twelve-month growth rate up to September was 9.6%, with expansion in all ten groups of activities surveyed by IBGE. In turn, the real retail sales grew 7.7% in the twelve months up to September, mainly due to the increase in sales of “furniture and appliances” (17.9%) and “equipment, office supplies, computer and communication” (16.6%). It is worth noting that the twelve-month growth rates of both expanded and restrict retail sales are higher than the rate of expansion of industrial production and output. The recent behavior of retail sales was also reflected in the imports of durable goods, whose volume rose by 28.8% in the twelve months up to October. For the next quarters, retailing should continue to be bolstered by the growth of real payroll, by government transfers, the moderate expansion of credit and consumer confidence.

The Brazilian economy grew 2.1% in the third quarter of 2011, compared to the same quarter last year, after growing 4.2% in the first quarter and 3.3% in the second quarter, on the same basis of comparison. According to seasonally adjusted IBGE data, compared to the immediately previous quarter, GDP was unchanged in the third quarter, after growing 0.8% in the first and 0.7% in the second quarter. The four-quarter growth rate of GDP fell from 4.9% to 3.7%, which confirms that the Brazilian economy is in a cycle of expansion, growing at a pace more consistent with rates assessed to be long-term sustainable. Still from the production viewpoint, the services sector, which exhibits less volatile growth rates, contracted by 0.3% in the third quarter of

2011 compared to the previous quarter according to seasonally adjusted IBGE data (the first decline since the last quarter of 2008), whereas the value added by industry decreased by 0.9% on the same basis of comparison. In turn, agricultural production grew by 3.2%. The process of moderation in the pace of economic growth is partly due to policy actions implemented since the end of last year, boosted by the deterioration of the global economic scenario since the third quarter.

From the viewpoint of aggregate demand, compared to the previous quarter, and based on seasonally adjusted IBGE data, the Gross Fixed Capital Formation (GFCF) fell 0.2% in the third quarter of 2011, after growing 1.3% in the previous quarter. Thus, the growth rate of the GFCF accumulated over the past four quarters amounted to 7.0%. Despite a low share in aggregate demand compared to consumption, the growth rate of investment has helped greatly to sustain the level of economic activity in the post-crisis period, although at decreasing rates. However, the prospect of new large-scale investments, as in the case of the oil (pre-salt layer) and infrastructure sectors, favors the expectations of positive growth rates of the GFCF in this and the coming quarters. Household consumption – the most important component of aggregate demand – fell 0.1% in the third quarter, after growing 0.5% in the second quarter. Government consumption fell by 0.7% in the third quarter of 2011, after having expanded by 1.9% in the second quarter. The external sector contributed positively to GDP growth in the third quarter, with growth of 1.8% in exports and a decline of 0.4% in imports.

Unemployment, measured by the rate of unemployment in the six metropolitan areas covered by the monthly survey of the IBGE, declined significantly in recent years and stood at 6.0% in October, considering the seasonally adjusted series. Based on the non-seasonally adjusted series, the rate was 5.8% – 0.3 p.p. lower than that of the same month of 2010. In twelve months, there was a decrease in the unemployment rate in the metropolitan areas of Belo Horizonte, Salvador, São Paulo and Recife, whereas it was observed stability in Rio de Janeiro and increase in Porto Alegre – which, however, continues with the lowest unemployment rate among the six areas surveyed, according to IBGE's monthly survey. In turn, the annual employment growth measured by the total number of persons working in the six largest metropolitan regions moved to 1.5% in October, which is below the historical average. Thus, the total number of persons working in the six regions reached 22.7 million in October 2011 from 22.3 million in October

2010. Also according to the IBGE, the average real earnings usually earned by the employed population decreased by 0.3% in October over the same month of 2010, and real payroll increased 0.9% on the same basis of comparison. Concerning the evolution of formal employment, job creation continues to expand, albeit in a moderate way. According to figures released by the Ministry of Labor and Employment (MTE), 1.66 million job positions were created between November 2010 and October 2011. In short, the body of evidence indicates that the labor market remains robust, despite signs of moderation in the margin.

In addition to rising payrolls, the availability of credit to households – largely determined by macroeconomic stability and institutional reforms in recent years – was an important driving force in the growth of household consumption. The stock of credit to households with non-earmarked resources grew 17.3% in October 2011, compared to the same month of the previous year, reaching R$629.4 billion. In the same period, housing loans, whose operations are mainly based on earmarked resources, grew by 46.9%. Overall, the pace of total credit expansion presented some moderation, in part due to the process of adjustment of monetary conditions in the beginning of 2011 and the effects of macro prudential measures. Delinquency rates have remained at levels consistent with the phase of the cycle. In fact, the share in total outstanding credit with earmarked and non-earmarked fund of loans that is 90 days or more past due moved from 4.7% in October 2010 to 5.5% in October 2011.

The total volume of credit to corporations grew by 15.5% in October 2011, compared to the same month of 2010, considering non-earmarked and earmarked operations, and totaled R$1,041.1 billion. This credit expansion was boosted by loans and financing with resources from the National Bank of Economic and Social Development (BNDES), which amounted to R$398.3 billion in October 2011, an increase of 15.1% over the same period in 2010. Regarding the capital market, the volume of primary issues of shares in the Securities and Exchange Commission (CVM) reached R$13.5 billion from January through October 2011 (R$141.9 billion in the same period of 2010). In turn, bond issuance after reaching R$13.6 billion from January through October 2010, reached only R$3.0 billion in the same period of 2011.

Regarding the external sector, the twelve-month trade balance increased for the twelfth consecutive month in November, supported by the favorable terms of trade, and reached US$31.3 billion (US$17 billion in November 2010). This result includes exports of US$ 254.8 billion and imports of US$223.5 billion. These values are respectively 30.4% and 25.2% higher than those recorded in twelve months ending in November 2010. External demand, weakened by the complex global environment, has contributed modestly to the growth of exports. In fact, the volume of exports recorded an increase of 5.5% in the twelve months up to October 2011, against the previous twelve months, while the average price of exports rose by 25.0%. The volume of imports increased 12.2% during this period, in part reflecting the strength of domestic demand, despite the slowdown at the margin, shown by the gradual reduction of that rate since the beginning of the year. The average price of imports rose by 13.2% in twelve months up to October.

The twelve-month current account deficit receded at the margin, moving from US$48.0 billion in September to US$47.3 billion in October 2011, equivalent to 2.0% of GDP. Remittances of profits and dividends have been an important component of this deficit, reaching US$36.5 billion in the same period. In turn, foreign direct investment amounted US$75.1 billion in twelve months up to October 2011, equivalent to 3.17% of GDP, surpassing the external financing requirement in the period.

In international financial markets, volatility and risk aversion have remained at very high levels since the release of the previous *Report* – above the levels reached in mid-2010 – reflecting uncertainty and instability in the global scenario. In particular, the risks to global financial stability have increased due, among other reasons, to the exposure of international banks to sovereign debt of countries with fiscal imbalances, especially in the euro area. The credit default swap (CDS) rates of banks in the euro area, for example, reached higher levels than those observed during the 2008/2009 crisis. Uncertainties have remained high since the release of the previous *Report*, due to the fact that interest rates on government bond auctions have reached record levels in some countries of the euro area, and the risk ratings of sovereign debt of fifteen economies had been placed under review. It should be noted that the monetary authorities of the United States, euro area, Japan, Canada, England and Switzerland announced coordinated actions of liquidity assistance to the global financial system.

Still regarding the pace of global economic activity, the prospect of more moderate activity than anticipated in the advanced countries coupled with risks of recession in specific cases has strengthened. In particular, the need for fiscal adjustment – that, indeed, in many cases is already being implemented – as well as the limited room for monetary policy actions have contributed to downward revisions in the growth projections in these economies, or even of the growth of potential output, indicating broader and volatile business cycle. In fact, leading indicators, as published by the Organization for Economic Co-operation and Development (OECD), reinforced the signs of inflection in the pace of activity in all major economies, with less favorable prospects in this and the coming semesters. Coincident indicators, such as the Purchasing Managers Index (PMI) support this assessment. In November, the PMI has increased at the margin in the United States, and has displayed stagnation or economic downturn in the major economies of the euro area, Japan and China. Regarding the monetary policy, the mature economies continued accommodative stance, and in some cases, unconventional monetary policies. In particular, in relation to accommodative stance, the European Central Bank (ECB) reduced the benchmark interest rate in early November and early December. In relation to the last *Report*, twelve-month consumer inflation rose in the euro area and the UK, remained stable in the United States and fell in Japan. In the United States, core consumer inflation has increased, although still at moderate level. In developing countries, in general, the bias of monetary policy is expansionary.

Brent oil prices remained at a level higher than US$100/ barrel. This price level is consistent with stability of global demand, coupled with political instability in producing countries and lags in the process of resuming production. The geopolitical complexities surrounding the oil industry tends to accentuate the price volatility, which reflects also the low predictability of some components of demand and the fact that global supply growth depends on investment projects of long maturation and high risk. It should be noted that the influence of international oil prices on domestic inflation is not transmitted exclusively through the local price of gasoline, but also via the production chain of the petrochemical industry and the expectations channel.

Among other commodities, there was a significant decline in international prices since the release of the latest *Report* – particularly with regard to agricultural and metal commodities. At the cutoff date of December 9, the commodity price index of the Commodity Research Bureau (CRB), based on twenty two commodities, accumulated decrease of 10.4% since September 9, and 16.4% since the peak of this year (April 8). Similarly, there was further decline in international food prices during the period. The food price index calculated by the Food and Agriculture Organization (FAO) of the United Nations, decreased 6.7%

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

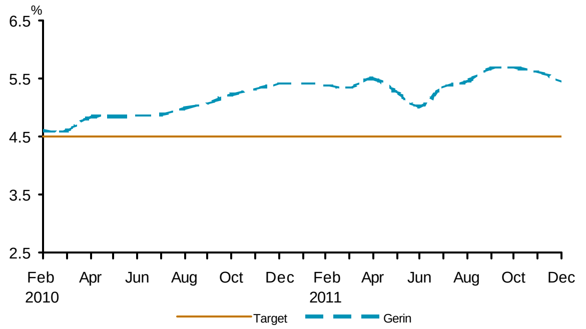


Figure 6.2 – Dispersion of inflation expectations for 2012

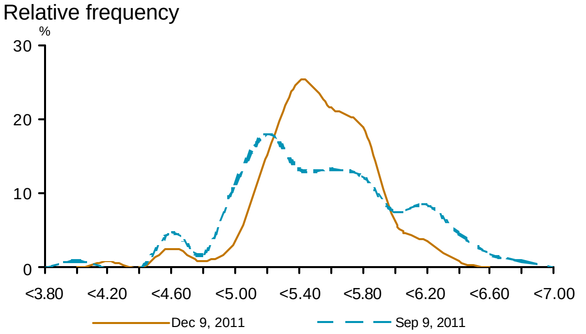


Figure 6.3 – Median market expectations by segment for 2012 IPCA-inflation

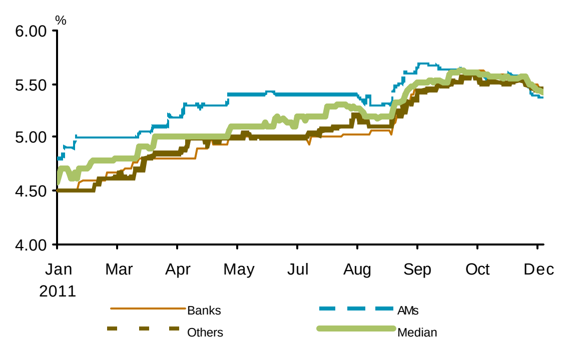
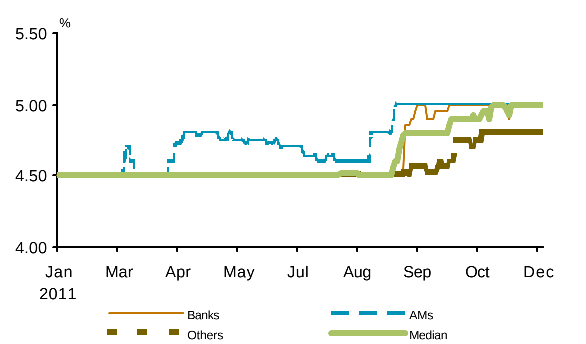


Figure 6.4 – Median market expectations by segment for 2013 IPCA-inflation



between August and November. The behavior of commodity and asset prices still embodies great uncertainty, in the context of high volatility in financial and currency markets.

The median of market expectations for the 2011 GDP growth rate declined since the release of the previous *Report*, from 3.56% at September 9 to 2.97% at December 9. For 2012, the projected growth rate fell from 3.80% to 3.40%. In this period, the median expectation for inflation in 2011 moved from 6.45% to 6.50%, and in 2012, from 5.40% to 5.42% and from 4.80% to 5.00% for 2013. Twelve-month ahead inflation expectations fell from 5.67% to 5.45%, as illustrated in Figure 6.1. Since the release of the previous *Report*, there was a reduction in dispersion around the central tendency measures of inflation expectations for 2012 as illustrated in Figure 6.2. The standard deviations of these projections fell from 0.50% to 0.35%.

In the specific case of banks, asset managers (AMs) and other institutions (nonfinancial companies, brokers, consulting companies and professional entities), the median inflation expectations for 2011, at the cutoff date of December 9, were 6.50%, 6.51% and 6.50%, respectively, against 6.45%, 6.45% and 6.44%, in the previous *Report*. For 2012, according to Figure 6.3, the figures are 5.43%, 5.37% and 5.44% respectively, against 5.30%, 5.60% and 5.29% in the September *Report*. Then for 2013 (Figure 6.4), the figures are 5.00%, 5.00% and 4.80%, respectively, compared to 4.85%, 5.00% and 4.52% in September.

6.2 Main scenario: associated risks and monetary policy implementation

The projections used by the 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 them, make up the main prospective scenario based on which the Committee makes policy decisions.

On the whole, the prospective scenario envisages, on the external side, a prolonged period of low growth in global activity, with a high probability of recession in specific cases, particularly for mature economies, as well as a relatively benign dynamics of commodity prices.

On the domestic side, the central scenario envisages a moderate pace of domestic economic activity in the short run, with the prospect of acceleration during the following year, as well as the revised trajectory for the primary surplus of the public sector, incorporated in the last *Inflation Report*. In the central scenario, the effects of complexity surrounding the international environment compound with the moderation of domestic economic activity observed in this semester. On the other hand, the central scenario also considers the effects of monetary policy action recently implemented that, moreover, are delayed and cumulative.

In sum, generally, inflation projections for 2012 were reduced and the balance of risks for inflation gathered favorable signs since the publication of the last *Report*.

On the external front, in general, there is further evidence to support the view that external developments are of great complexity and are transmitted to the Brazilian economy through many channels. Since the last *Report*, the situation has become dimmer, as shown, for instance, in the new round of widespread and significant growth projection reductions for the major economic blocs and the deteriorating financial conditions in some of the major economies in the euro area. From another perspective, this fourth quarter, the mounting pessimism concerning the pace of global economic growth, as reflected in agent's confidence deterioration and other factors, has helped to reduce or contain the price of commodities, particularly agricultural and metallic. It is also important to highlight that, since the last *Report*, there has been continuing high levels of volatility and risk aversion in international financial markets, with downward repercussions for the price of domestic assets.

The central scenario considered by the Copom includes the hypothesis of slow growth for global activity for a prolonged period of time. The Committee believes that there are continuing high chances that the restrictions to which several mature economies are now exposed can extend over a longer than anticipated period of time. For this effect, among other factors, contribute the fact that, in these economies, unemployment rates are quite high; asset prices have suffered substantial losses; the credit market remains fragile; business and consumer confidence has deteriorated; combined with an environment of limited scope for using monetary policy and of fiscal restraint.

The Copom assesses that, since the last *Report*, the risks to global financial stability have risen due to, among others, the exposure of international banks to the sovereign debt of countries with fiscal unbalances, especially in the euro area. The Committee considers that there are still risks of rupture in international markets, given the severity and complexity of the situation involving the euro area and the difficulty of achieving political consensus regarding the measures to be taken and their implementation. However, the Committee continues to work with the central scenario detailed in the last Inflation *Report*, that is, without the occurrence of extreme events.

The Committee evaluates that the developments in mature economies are transmitted directly to emerging economies' aggregate demand in intensity proportional to, among other factors, the importance of trade. In fact, both in emerging economies of Asia and Latin America, despite the resilience of domestic demand, the pace of activity moderated due to the weakening of foreign demand and of foreign trade. There are also signals that transmission through the expectations channel, which affects mostly investment, has been occurring in the real economy. For the next few quarters, measures of expectations and confidence, leading indicators and financial markets interest rates, especially in the bonds market, suggest weakness in the pace of global economic activity, although mostly for mature economies than for emerging economies.

With regard specifically to the Brazilian economy, the Committee understands that the effects of the complexity surrounding the international environment are compounded with the moderation of domestic economic activity observed this semester, which is already mirrored, for instance, in the retreat of growth projections for the Brazilian economy this year and in the upcoming year. In other words, the current moderation process – a result of monetary policy actions implemented since late 2010 until July this year – tends to be boosted by the weakness of the global economy. Actually, in this context, exports are directly and negatively affected by the global economic slowdown, resulting in a lower trade volume. In this regard, it should be noted that the world trade volume tends to fluctuate more intensely than the global GDP, that is, moments of reduced global growth tend to be accompanied by proportionally larger decreases in world trade volume, and vice versa. In turn, both the credit and the confidence channels tend to reduce the pace of growth of domestic investment and consumption.

From another perspective, the deterioration of the external environment also affects commodity prices dynamics in international markets. The second half of 2010 and the first quarter of 2011 registered a commodity prices surge, with major impact on domestic inflation. The improvement, earlier this year, in the international economic outlook, along with the ample global liquidity, made global commodity prices, on that occasion, one of the main inflation risk factors on the domestic front. The picture, however, has changed over the year. In general, commodities prices have shown reduction since April, although with different behavior among segments. Therefore, in contrast to the beginning of the year, the recent behavior of these prices points to a more benign scenario. Anyway, given the volatile nature of these prices and their dependence, in the case of agricultural commodities, on weather conditions, one cannot completely rule out inflationary pressures, albeit with less intensity, from this source. Finally, it should be noted that the evaluation of the effects of changes in commodity prices on domestic inflation should also consider, among other factors, the behavior of the price of domestic assets.

Still on prices, the Committee evaluates that purchase of external goods tends to continue to diminish domestic inflationary pressures through two channels. First, these products compete with goods that are produced domestically, imposing greater discipline to the price setting process. Second, they reduce demand for domestic input markets, contributing to the weakening of cost pressures and, by consequence, of its pass-through to consumer prices. Additionally, in this respect, cost pressures not offset by efficiency gains contribute to the reduction in the competitiveness of domestic firms in the international goods and services markets, in a global environment with historically high levels of spare capacity.

In terms of the balance of risks, the Copom assesses that the international scenario entails a disinflationary bias in the relevant horizon, that is, it renders the balance of risks for inflation more favorable.

On the domestic side, in comparison to the last *Report,* the Copom considers there are lower risks that the rise in the twelve-month inflation be transmitted to the prospective scenario. On the other hand, the Committee sees a persistent narrow margin of idle capacity in the labor market and a mismatch, in specific segments, between supply and demand growth rates. Still regarding factor markets, it should be noted that the level of capacity utilization has moderately retreated and is below the long-term level, helping to open the output gap and contain price pressures. The revision of the fiscal policy scenario incorporated in the September *Report* also appears as a factor of restraint.

Twelve-month inflation started to decline this quarter and the central scenario envisages this will continue. The

Committee assesses that, by itself, this reversal in the previous trend will contribute to improve economic agent's expectations, especially price setters, on the dynamics of inflation in coming quarters. Additionally, the Committee believes that this improvement in sentiment will be increased by the process, now underway, of reassessment of the pace of domestic and foreign economic activity, in this and the following semesters. Therefore, over the direct, inertial, impact of the decline of past inflation over future inflation, one adds the indirect impact from the improvement in expectations.

The Copom assesses that an important, but decreasing, source of risk for consumer price dynamics comes from wage dynamics. In this context, the risk for price dynamics is the possibility of wage bargaining giving excessive weight to past inflation at the expense of future inflation, which, it should be noted, is already reducing and tends to be markedly lower than past inflation, in accordance with projections presented in the next section. In addition, the Committee judges that the planned increases in the minimum wage in the coming years can impact directly and/or indirectly the dynamics of the other wages and of consumer prices.

Still on the labor market – which responds to monetary policy actions with the greatest lag – on the one hand, it shows signs of moderation, on the other hand, it shows narrow margin of idle capacity. A crucial aspect in such situations is the possibility that the level of activity in the labor market leads to real wage increases at rates that are not compatible with productivity growth. This risk factor could be worsened by the presence, in the economy, of mechanisms favoring inflation persistence. At this point, it should be noted that the theory, which is backed by international experience, shows that wage moderation is key to obtaining a macroeconomic environment with price stability.

Regarding the capital factor, after the pronounced drop caused by the 2008/2009 crisis, the investment rate – the share of GFCF in GDP – has recovered vigorously, although it remains slightly below the levels observed before the international crisis. Considering flows accumulated in four quarters, the investment rate in the third quarter of 2011 reached 19.3%. The combination of less pronounced growth in aggregate demand, the competition from imported goods and the rebound in investment has led initially to more stable readings of industrial capacity utilization levels, after the pronounced growth during 2009 and the beginning of 2010. In a second moment, during this year, the industrial capacity utilization levels have shown a mild declining trend.

The Copom sees as relevant, although decreasing, the risks from the persistent mismatch, in specific segments, between supply and demand growth rates. The Committee considers that there is ongoing moderation of domestic demand expansion, in an environment favorable for the evolution of domestic economic activity. This assessment is underpinned by signs that, while indicating cooling, point to the fact that the expansion of credit supply tends to persist for both individuals and corporate, and by the fact that consumers' confidence, notwithstanding the accommodation at the margin, stands at high levels. Other elements offer noteworthy support for demand, such as government transfers and the strength of the labor market, as reflected in historically low unemployment rates and in wage growth, despite some accommodation at the margin.

Recent monetary policy actions will also contribute to the strengthening of domestic demand, since the effects of monetary policy are cumulative and operate with lags[1]. In other words, monetary policy actions take certain time to impact inflation and activity, and the impacts from a sequence of actions will overlap in time. It is plausible to state that some immediate impact could materialize, for instance, through the expectations channel. In general, however, the diverse channels through which monetary policy operates will impact economic activity and inflation with different lags, and with the maximum effect occurring some quarters after policy implementation. These lags are considered in the conduct of monetary policy, in part, to avoid undue fluctuations in economic activity.

The Committee assesses that there are important mechanisms making the Brazilian inflation downward rigid. In particular, the presence of regular and almost automatic mechanisms of price adjustment, either de jure and/or de facto, has contributed to the persistence of inflationary pressures coming from the past. It is well known by literature and international experience that the existence, even informally, of price indexation mechanisms reduces the sensitivity of inflation to demand conditions. Overall, indexation mechanisms tend to prevent the economy from disinflating during downturns and thus increase the "starting point" of the inflation rate, thus raising the inflation risks for the prospective scenario and increasing the costs of disinflation. In this context, indexation mechanisms pose risks that are particularly important in circumstances such as the

1/ See Box "The Lags in the Transmission of Monetary Policy to Prices" in the June 2009 *Inflation Report* and Box "Monetary Policy and Transmission Mechanism Lags" in the September 2007 *Inflation Report*.

present one, when twelve-month inflation rate is still above the target path, despite the downward trend.

The Committee assesses that, in contrast to earlier this year, the behavior of wholesale prices in the third to the fourth quarter, especially in the case of agricultural products, may have pushed consumer inflation slightly. In twelve months, however, the variation in wholesale prices fell in a relevant way, among others, due to moderation in agricultural prices. On the other hand, in a broader perspective, wholesale prices remain a risk factor for inflation in the medium term. In fact, in twelve months, the industrial price inflation shows some resistance. This tends to negatively impact consumer inflation in the shorter term – due to the supply chain – and longer term, given the practice of indexing important consumer price to the general price indices.

Regarding fiscal policy, the Copom understands that the generation of primary surpluses in line with the assumptions considered for inflation projections of the next section, besides contributing to the reduction in the mismatches between supply and demand growth rates, will strengthen the trend of reducing the public debt-to-GDP ratio. It is important to highlight that the Copom reaffirms that its main scenario is conditioned to the materialization of the trajectories regarding fiscal variables. In this sense, since early this year, significant decisions have been made and implemented, which support the vision of an ongoing fiscal consolidation process.

The Copom considers that, regardless of marginal improvement, another source of risk lies in the behavior of inflation expectations – because of the high levels of twelve month inflation since the end of 2010.

According to the Copom, the dynamics of the credit market also deserve attention, be it for its potential impact on aggregate demand or for the macroprudential risks that it may represent. The Copom highlights that its main scenario for inflation also considers moderation in credit expansion. In this regard, the Committee considers opportune the introduction of initiatives with the aim of moderating the concession of subsidies regarding credit operations.

In terms of the balance of risks, the Copom evaluates that the moderation in factor markets, the recent revision in the fiscal policy scenario, incorporated in the September *Report*, among other domestic developments, render the balance of risks for inflation more favorable.

In sum, the Copom reaffirms its view that the twelve-month inflation peaked in the last quarter, and it begins to retreat in the current quarter, therefore, moving towards the targets path. The Committee recognizes an economic environment in which a much above-than-usual uncertainty level prevails, and evaluates that since the last meeting, the inflation prospective scenario has shown favorable signs. The Copom notes that, according to the main scenario, the inflation rate stands around the target in 2012 and identifies decreasing risks to the materialization of a scenario in which inflation timely converges to the midpoint target.

In this context, continuing the process of monetary conditions adjustment, the Copom unanimously decided to decrease the Selic target from 12.00% to 11.50% and 11.00% without bias, in the October and November meetings, respectively.

Domestic demand is still robust, especially household consumption, largely due to the effects of stimulus factors, such as income and transfers growth and credit expansion. This scenario tends to prevail in the upcoming quarters, when the domestic demand will be impacted by the effects of the monetary policy actions recently implemented which, in short, are lagged and cumulative. On the other hand, recent initiatives reinforce a scenario for restrained public sector expenditures. Another important factor to curb aggregate demand is the substantial deterioration in the international scenario. These elements and the quasi fiscal developments are an important part of the context in which future monetary policy decisions will be taken, aiming to ensure the timely convergence of inflation to the targets path.

The Copom believes that by promptly mitigating the effects from a more restrictive global environment, moderate adjustments in the level of the basic rate are consistent with the scenario of inflation convergence to the target in 2012.

6.3 Inflation forecasts

According to traditionally adopted procedures, and taking into account the available information up to the cutoff date of December 9, 2011, the baseline scenario assumes that the exchange rate remains unchanged over the forecast horizon at R$1.80/US$, and the target for the Selic rate stays at 11.00% p.a. – the level set by the November Copom meeting – against R$1.65/US$ and 12.00% p.a. considered in the September 2011 *Inflation Report*. The projection for the change in the set of regulated and monitored prices, in the baseline scenario, is of 6.2% in 2011 and 4.0% in 2012, against 5.0% and 4.4%, respectively, considered in the last *Report*. This projection is based on the hypotheses, for the accumulated over 2011, of an increase of 6.6% in prices for gasoline, 1.9% in prices for bottled gas, and 4.1% for electricity rates; and of stability on fixed telephone rates. For the accumulated over 2012, this projection is based on the hypotheses of stability on prices for gasoline and bottled gas, and increases of 2.7% and 2.3% in fixed telephone and electricity rates, respectively. Regarding items for which more information is available, price changes were estimated individually. For the remaining items, 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 these models, the projection for the change in the set of regulated and monitored prices in the baseline scenario, for 2013, is of 4.5%, against 4.4% considered in the September 2011 *Report*.

The market scenario, in turn, incorporates data from the expectations survey carried out by Gerin with a representative group of institutions up to the cutoff date. In this scenario, average exchange rate expectations increased in comparison to the values released in the September 2011 *Inflation Report*. For the last quarter of 2011, it moved from R$1.60/US$ to R$1.79/US$, and for the last quarter of 2012, it moved from R$1.65/US$ to R$1.75/US$. For the fourth quarter of 2013, survey expectations project an average exchange rate of R$1.75/US$. In what regards the evolution of the average Selic rate, the expectations for 2011 and 2012 decreased in comparison to the values presented in the last *Report*. For the last quarter of 2011, the average Selic rate moved from 11.44% p.a. to 11.37% p.a., and for the last quarter of 2012, from 11.00% p.a. to 9.50% p.a. For the fourth quarter of 2013, survey expectations project an average Selic rate of 10.35% p.a. This trajectory of the Selic rate is consistent with twelve-month pre-DI swap spreads of -43 basis point (b.p.), -168 b.p. and 19 b.p., with respect to the current target for the Selic rate (11.00% p.a.), in the last quarter of 2011, 2012 and 2013, respectively. Additionally, the market scenario assumes changes of 6.3% for the group of regulated and monitored prices in 2011, and of 3.9% and 4.5% in 2012 and 2013, respectively.

With regard to fiscal policy, the projections consider the accomplishment of the primary surplus target, roughly 3.15% of GDP (R$127.9 billion), without adjustments, in 2011. Moreover, the generation of a primary surplus target of around 3.10% of GDP in 2012 and 2013 is considered as working hypothesis, without adjustments.

The projections presented in this *Report* incorporate the estimated effects of the changes in the weighting structure of the IPCA, to apply since January 2012.

It is also considered the hypothesis that the current deterioration in the international scenario has an impact on the Brazilian economy equivalent to one quarter of the impact observed during the international crisis of 2008/2009[2].

Based on the above assumptions and using the information set until the cutoff date (December 9, 2011), projections were constructed for the four-quarter IPCA inflation, consistent with the interest and exchange rate paths characterizing the baseline and market scenarios.

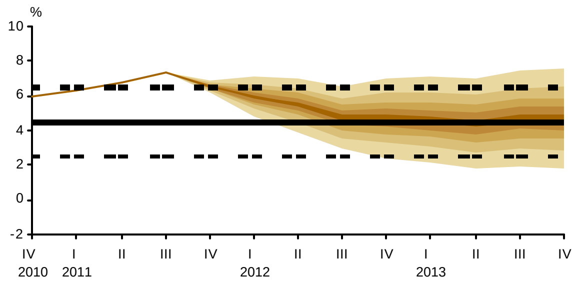
The central projection associated with the baseline scenario shows inflation of 6.5% in 2011, 0.1 p.p. higher than the projection presented in the September 2011 *Report*, and of 4.7% in 2012, the same value presented in the September 2011 *Report*. As can be seen on Figure 6.5, in the baseline scenario, the projection for twelve-month inflation stays above the central target level of 4.5% determined by the National Monetary Council (CMN) until the second quarter of 2012, and moves towards the central target level in the succeeding quarters. According to data shown on Table 6.1, the projection for twelve-month inflation starts at 6.5% in the fourth quarter of 2011, decreases to 5.9% and 5.5% in the first and second quarters of 2012, respectively, moves to 4.7% in the third quarter, ending the year at this level. Still according to the baseline scenario, the projections for the first two quarters of 2013 stay in 4.6% and 4.4%, respectively, moving to 4.7% in the two succeeding quarters.

It is worth to mention that the estimated probability that inflation will breach the upper tolerance level of the target in 2011, according to the baseline scenario, is of 54%. For 2012, this probability is close to 10%.

In the market scenario, the inflation projection of 6.5% for 2011 is equal to the respective baseline scenario projection and also 0.1 p.p. higher than the projection presented in the last *Report*. Yet the inflation projection of 4.8% for 2012 is 0.2 p.p. lower than the projection presented in the September 2011 *Report*. As it can be seen on Figure 6.6 and Table 6.2, projections for twelve-month inflation follow a similar pattern to that observed in the baseline scenario until the third

Figure 6.5 – Projected IPCA-inflation with interest rate constant at 11.0% p.a. (baseline scenario)

Inflation fan chart



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

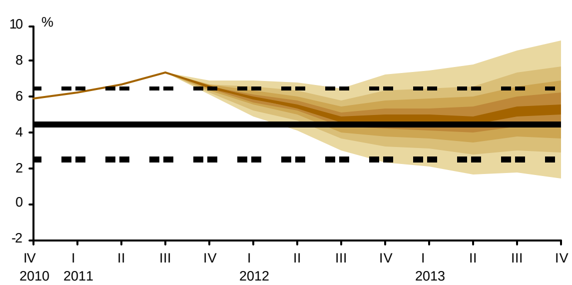
Table 6.1 – Projected IPCA-inflation with interest rate constant at 11.0% p.a. (baseline scenario)

Year	Q	Probability Interval 50%	30%	10%				Central projection
2011	4	6.4	6.4	6.5	6.6	6.6	6.7	6.5
2012	1	5.5	5.7	5.8	6.0	6.2	6.4	5.9
2012	2	4.9	5.1	5.4	5.6	5.9	6.1	5.5
2012	3	4.0	4.3	4.6	4.9	5.1	5.5	4.7
2012	4	3.8	4.2	4.5	4.9	5.3	5.7	4.7
2013	1	3.6	4.0	4.4	4.8	5.2	5.6	4.6
2013	2	3.3	3.8	4.2	4.6	5.0	5.5	4.4
2013	3	3.6	4.1	4.5	4.9	5.4	5.9	4.7
2013	4	3.5	4.0	4.5	4.9	5.4	5.9	4.7

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

Figure 6.6 – Projected IPCA-inflation with market interest and exchange rates expectations

Inflation fan chart



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

2/ Regarding the international crisis, see Box "Effects of the International Economic Deceleration in the Brazilian Economy", in page 99 of this *Report* (only in Portuguese version).

Table 6.2 – Projected IPCA-inflation with market interest and exchange rates expectations [1/]

Year Q	Probability Interval 50%	30%	10%		30%	50%	Central projection
2011 4	6.4	6.4	6.5	6.6	6.6	6.7	6.5
2012 1	5.5	5.7	5.9	6.0	6.2	6.3	5.9
2012 2	5.0	5.2	5.4	5.6	5.8	6.0	5.5
2012 3	4.0	4.3	4.6	4.9	5.1	5.4	4.7
2012 4	3.8	4.2	4.6	5.0	5.3	5.8	4.8
2013 1	3.7	4.2	4.6	5.0	5.4	5.9	4.8
2013 2	3.5	4.0	4.5	4.9	5.4	6.0	4.7
2013 3	3.8	4.4	4.9	5.5	6.0	6.6	5.2
2013 4	3.7	4.4	5.0	5.6	6.2	6.9	5.3

Note: accumulated inflation in 12 months (% p.a.).
1/ According to Gerin.

Table 6.3 – September 2011 *Inflation Report* projections

Period	Baseline scenario	Market scenario
2011 III	7.2	7.2
2011 IV	6.4	6.4
2012 I	5.7	5.7
2012 II	5.2	5.2
2012 III	4.7	4.8
2012 IV	4.7	5.0
2013 I	4.7	5.1
2013 II	4.5	5.0
2013 III	4.5	5.1

quarter of 2012. Indeed, in the market scenario, the projection starts at 6.5% in the fourth quarter of 2011, decreases to 5.9% and to 5.5% in the first and second quarters of 2012, respectively, moves to 4.7% in the third quarter, and ends the year at 4.8%. For 2013, the projection starts at 4.8% in the first quarter, decreases to 4.7% in the second, and moves to 5.2% and 5.3% in the last two quarters of 2013, respectively.

Still according to the market scenario, the estimated probability that inflation will breach the upper tolerance level of the target in 2011 is of 55%. For 2012, this probability is close to 12%.

The projected dynamics for both baseline and market scenarios are similar in 2012. This is partially due to the presence of lags on the effect of the difference between their respective interest rate paths on inflation, in virtue of the monetary policy transmission mechanism. Indeed, the different interest rate paths cause the projection paths to start gradually moving apart in the fourth quarter of 2012. For 2013, the effects of the differences between the interest rate paths cause the projections of both scenarios to keep moving apart.

The comparison of the trajectories shown in this *Report* with those released in the previous one – the latter shown on Table 6.3 – shows that there was an increase in inflation projections in the last quarter of 2011 and in the first two quarters of 2012, stabilizing in the two succeeding quarters, in the baseline scenario. In this scenario, the increase in projections for 2011 reflects, in general, higher inflation rates in recent months when compared to the corresponding projections presented in the last *Report*. For 2012, the movement reflects, to some extent, exchange rate and interest rate paths different from the ones considered in the September 2011 *Report*, and, in the opposite direction, the estimated effects of the international crisis of 2011/2012 and of the changes in the weighting structure of the IPCA. With regard to the first two quarters of 2013, inflation projections stayed relatively stable, showing a slight increase in the third quarter, which also reflects, to some extent, the different interest rate paths. In the market scenario, the increase in projections for 2011 and for the first two quarters of 2012, and the decrease in projections for the succeeding quarters, with respect to the values presented in the September 2011 *Report*, reflect, to some extent, the same factors. In this scenario, the projections for the first and second quarters of 2013 decreased with respect to values presented in the last *Report*, whereas the projection for the

Figure 6.7 – Projections and target path for twelve-month cummulative inflation

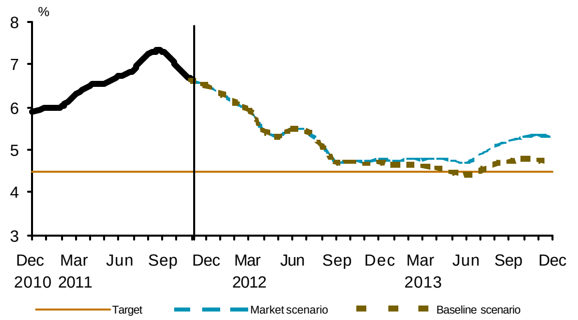
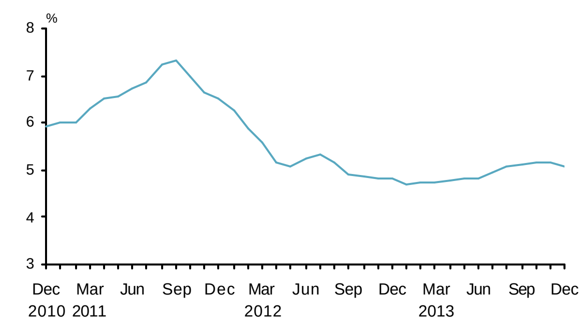


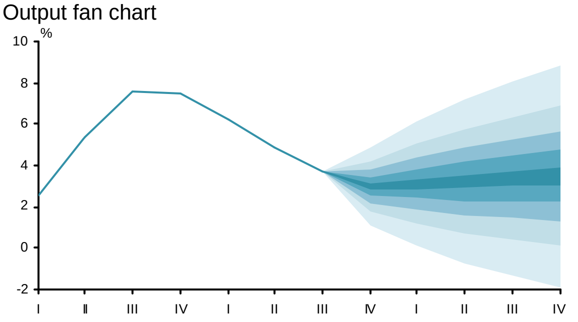
Figure 6.8 – Inflation forecast: VAR models



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

Figure 6.9 – Projected GDP growth with interest rate constant at 11.0% p.a. (baseline scenario)

Output fan chart



third quarter of 2013 slightly increased, due to the same factors.

Figure 6.7 shows the path of twelve-month inflation, according to the baseline and market scenarios, up to the fourth quarter of 2013, as well as the targets trajectory. The figures are actual twelve-month inflation until November 2011 and, from then on, projections according to the corresponding scenario are used to compose the twelve-month values. The projections fluctuate above the central target level along 2011. In both scenarios, the trajectory indicates a decrease in the twelve-month inflation since the fourth quarter of 2011, movement that extends up to the third quarter of 2012, staying above the central target level. From the last quarter of 2012, in the market scenario, the trajectory remains above the central target level until the end of the forecast horizon. In the baseline scenario, from the last quarter of 2012, the projection of the twelve-month inflation also remains above the central target level, until the end of the forecast horizon, except for the second quarter of 2013, when it stays below the central target level.

The average forecast generated by the Vector Autoregressive (VAR) models for twelve-month inflation is presented in Figure 6.8. Up to November 2011, the values refer to actual twelve-month inflation and, from then on, to forecasts. When compared to the projections presented in the previous *Report*, as occurs with the projections generated in the baseline and market scenarios, there is an increase in the VAR models forecasts for twelve-month inflation in 2011. The 2012 forecasts increase during the first semester in comparison to those presented in the previous *Report*, but this trend is reverted in the third quarter, ending the year at a lower level, reflecting, among others, the estimated effects of the changes in the weighting structure of the IPCA. Still with respect to the September 2011 *Report*, the forecasts decrease along the first semester of 2013, and end the third quarter at the same level. The VAR models forecasts, in comparison to 2011, decrease in the first quarter of 2012, revert this movement in the second quarter, but stay below the inflation projected for 2011 in the succeeding quarters, converging to the unconditional mean of inflation by the end of the forecast horizon.

Figure 6.9 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 output gap –, the forecast errors associated with these projections are considerably higher than the errors related to inflation projections. According to this scenario, the GDP growth projected for 2011 is 3.0%, value 0.5 p.p. lower than the one presented in the September 2011 *Inflation Report*. This revision reflects, to some extent, the observed effects of policy actions implemented between the end of 2010 and mid-2011. For 2012, the Committee projects a growth rate of 3.5%, which incorporates acceleration of activity between next year's first and second halves.