

Inflation fell in the quarter ended in May, with an emphasis on a moderation in the prices of agricultural goods, neutralized in part by increases in construction costs. The evolution of consumer prices reflected, in particular, the cooling of the pressures in the segment of market prices, notably in food groups and, indicating exhaustion of the impact of annual increases in school fees, education. It should be noted that the rate of consumer inflation accumulated in twelve months continues on the rise, but with the prospect of reversal in the second half of 2011.

2.1 General indices

Table 2.1 – General price indices

	% monthly change				
	2011				
	Jan	Feb	Mar	Apr	May
IGP-DI	0.98	0.96	0.61	0.50	0.01
IPA	0.96	1.23	0.60	0.24	-0.63
IPC-Br	1.27	0.49	0.71	0.95	0.51
INCC	0.41	0.28	0.43	1.06	2.94

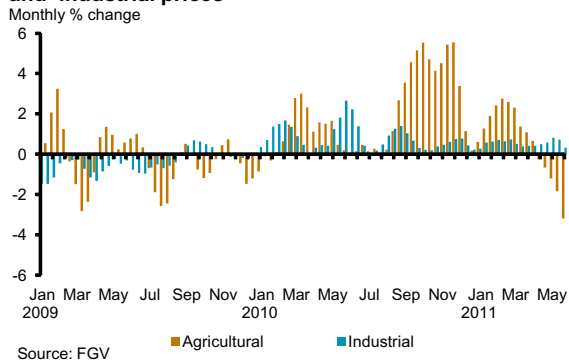
Source: FGV

The General Price Index – Domestic Supply (IGP-DI), from the FGV, varied 1.12% in the quarter ended May, against 2.33% in that ended in February, due to the impact of the sharper downturns in consumer and producer prices, in relation to the increase in price variation in the construction. Considering a twelve-month period, the IGP-DI increased 9.14% in May, the lowest rate since October 2010, compared to 11.12% in February, a slowing associated in large part to the trajectory of the Broad Producer Price Index (IPA).

The IPA increase reached 0.22% in the quarter ended May, up from 2.42% in the end of February, due in particular to decrease of a reduction of 2.79% in farm prices, especially in soybean, cotton, rice, oranges, cattle and poultry. Industrial prices rose 1.33%, highlighting the rises in items such as metallic minerals, of 12.13%, coal, of 5.88%, and pharmaceuticals, of 4.42%, and related decreases in food and beverages products of 2.00%, and metallurgy of 0.77%. The accumulated change of the Broad Producer Price Index – Domestic Supply – (IPA-DI) in 12 months reached 10.30% in May, compared to 13.69% in February.

The Consumer Price Index (CPI) rose 2.18% in the quarter ended May, compared to 2.51% in the quarter ending in

Figure 2.1 – IPA-10, IPA-M and IPA-DI – Agricultural and industrial prices

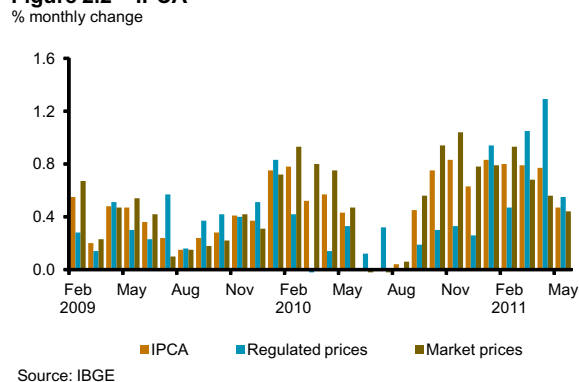


February. Considering 12-month periods, rates showed increases of 6.02% and 6.37% in February and May, respectively.

The National Cost of Construction Index (INCC) recorded changes of respective 4.48% and 1.37% in the periods under consideration. When viewing periods of twelve months, the INCC increased of 7.44% in February and 8.52% in May.

2.2 Consumer price indices

Figure 2.2 – IPCA



The National Consumer Price Index (IPCA), released by the IBGE, increased 2.04% in the quarter ended May, up from 2.28% in the quarter that ended in February. The segmentation of the IPCA shows that the quarterly performance of the indicator reflected a lower variation, 2.52% to 1.69%, in market prices – favored by a more moderate rise in food prices. On the other hand, there was an increase from 1.68% to 2.91% in the variation of regulated prices, highlighting the contributions of items such as water and sewer rate, electricity, airfare, gasoline, medicine and urban buses.

Table 2.2 – Consumer prices

	% monthly change				
	2010		2011		
	Jan	Feb	Mar	Apr	May
IPCA	0.83	0.80	0.79	0.77	0.47
Non regulated prices	0.79	0.93	0.68	0.56	0.44
Tradables	0.43	-0.02	0.27	0.60	0.36
Nontradables	1.10	1.78	1.05	0.52	0.50
Services	0.87	2.28	0.85	0.54	0.59
Regulated prices	0.94	0.47	1.05	1.29	0.55

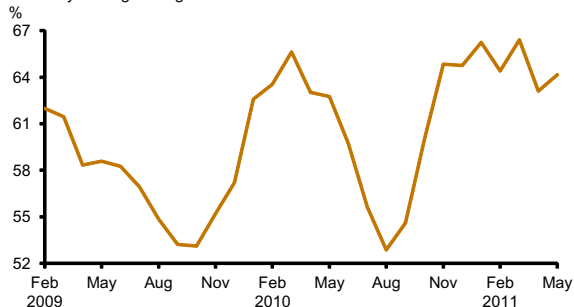
Sources: IBGE, Banco Central and FGV

The trajectory of market prices reflected the impacts of reductions of 3.55% to 2.08% in the variation in prices of non-tradable goods and services which reflected mainly the seasonal price segments in perishable foodstuffs and education, and 1.36% to 1.23% related to tradable prices.

Considered twelve month periods, the IPCA registered a variation of 6.55% in May, compared to 6.01% in February, a result of a decrease from 7.17% to 6.80% in the variation of market prices, and increased from 3.29% to 5.96% in regulated prices. It should be noted that the trend of market prices shows a reduction in prices of durable goods and the recent deceleration in the prices of non-durables, contrasting with the higher variation from 8.39% to 8.54%, of services prices, which reflected, in particular, the contributions of respective increases of 10.33% and 8.72% in domestic help and educational services.

The diffusion index reached an average of 64.15% for the quarter ended in May (62.76% in the same period last year), compared to 64.41% in the quarter that ended in February.

Figure 2.3 – IPCA
% of items with increase
Quarterly moving average
%



Source: IBGE

Table 2.3 – IPCA

	Weights 2011	% monthly change					
		Jan	Feb	Mar	Apr	May	Year
IPCA	100.00	0.83	0.80	0.79	0.77	0.47	3.71
Market prices	70.94	0.78	0.93	0.68	0.56	0.44	2.99
Regulated prices	29.06	0.94	0.47	1.05	1.29	0.55	4.37
Main items							
Gasoline	4.18	0.62	0.50	1.97	6.26	0.85	10.50
Urban bus	3.90	4.13	1.30	0.95	0.22	0.79	7.56
Pipeline gas	0.10	6.21	1.13	0.07	0.00	-0.12	7.36
Water and sewage	1.58	0.07	0.42	0.66	1.00	2.32	4.54
Medicine	2.77	-0.06	-0.22	0.15	2.41	1.20	3.50
Tolls	1.27	0.00	1.69	0.67	0.02	0.83	3.24
Natural gas vehicle	0.10	-1.95	-0.36	1.25	1.35	2.74	3.00
Health plans	3.45	0.59	0.59	0.59	0.59	0.59	2.99
Electricity	3.12	-0.38	0.09	0.34	0.94	0.87	1.87
Diesel fuel	0.08	0.71	0.65	0.37	0.07	-0.03	1.78
Bottled cooking gas	1.14	0.12	0.03	0.29	0.08	0.21	0.73
Electricity	0.12	0.15	0.02	0.00	0.00	0.00	0.17

Source: IBGE

Table 2.4 – Consumer prices and core inflation

	% monthly change				
	2011				
	Jan	Feb	Mar	Apr	May
IPCA	0.83	0.80	0.79	0.77	0.47
Exclusion	0.76	0.96	0.70	0.52	0.54
Smoothed trimmed means	0.54	0.40	0.49	0.60	0.64
Double-weighted	0.80	0.70	0.70	0.68	0.59
IPC-Br	1.27	0.49	0.71	0.95	0.51
Core IPC-Br	0.41	0.32	0.43	0.55	0.48

Sources: IBGE, Banco Central and FGV

2.3 Regulated prices

Regulated prices increased 2.91% in the quarter ended in May, accounting for 0.84 p.p. of the variation of 2.04% registered by the IPCA in the period, with an emphasis on pressure exerted by a readjustment in the items of gasoline, medicine, urban bus fares and air fares. Additionally, electricity rates increased 2.16%, with increases in Recife of 7.20%; Salvador of 8.31%; Porto Alegre of 4.02% and Belo Horizonte of 4.58%. In turn, the prices of interstate bus fares fell 2.11%.

The variation in regulated prices reached 4.37% in the first five months of the year, compared to 1.59% in the same period last year, while, in twelve-month periods they totaled 5.96% in May, compared to 3.29% in February.

2.4 Inflation core

The core by exclusion⁵ ranged 1.77% for the quarter ended May, against 2.34% in that ended in February. Twelve-month variation reached 6.30% in May, up from 5.92% in February. Core inflation calculated by smoothed trimmed means⁶ registered respective increases of 1.74% and 1.47% in the quarters considered, accumulating in twelve months from 5.86% in May and 5.70% in February. The double-weighted core⁷ increased 1.98% in the quarter ended in May, compared to 2.23% from the quarter that ended in February, while considered variations in the twelve months increased 6.68% in May, up from 6.07% in February.

The core inflation of CPI from the FGV, calculated by the method of smoothed trimmed means, increased 1.47% in the quarter ended May, up from 1.29% in that ended in February. In twelve-month periods, the indicator recorded increases of 5.13% in May and 5.02% in February.

2.5 Market expectations

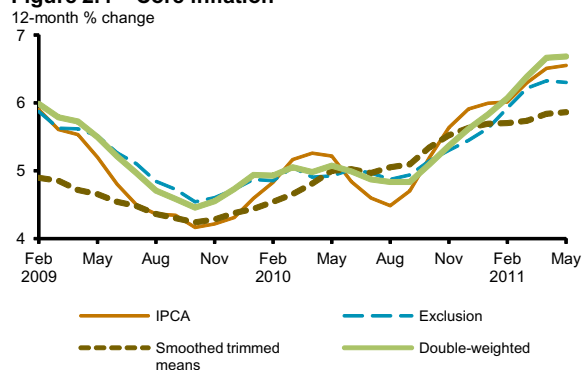
According to the Research Focus – Market Report dated June 3, the medians of projections related to the IPCA

5/ Calculated from the exclusion of ten items of household food subgroup (tubers, roots and vegetables, cereals, legumes and oilseeds, fruits and vegetables, fruits, meats, fish, sugars and derivatives, milk and dairy products, poultry and eggs, and oils and fats) and household items and vehicle fuels.

6/ The criterion used to calculate this indicator excludes items whose monthly variation is located in the distribution above the 80th percentile or below the 20th percentile, besides smoothing over twelve months the fluctuations of items whose variations are concentrated in a few periods of the year.

7/ The criterion used for the calculation of this indicator is the reweighting of the original weights – based on the importance of each item to the IPCA basket – by their respective degrees of relative volatility, a procedure that reduces the importance of the more volatile components.

Figure 2.4 – Core inflation



Sources: IBGE and BCB

annual variations for 2011 and 2012 reached 6.2% and 5.1%, respectively, compared to 6% and 5%, at the end of March. The median of inflation expectations for the twelve months ahead – smoothed – stood at 5.04% against 5.34% in March 31.

The median relating to the variation of the General Price Index – Market (IGP-M) for 2011 shifted from 6.9% at the end of March, to 6.7% in June 3, and referring to the IPA-DI from 7.4% to 6.7%. In the same period, the median of the variation for 2012 in the IGP-M increased from 4.9% to 5.0%, and that relative to the IPA-DI from 4.8% to 4.7%.

The 2011 median, of expectations related to the evolution of prices administered or regulated by contracts was 5% on June 3, versus 4.6% at the end of March. For 2012, projections remained at 4.5%.

The median of the exchange rate projected by the market for the end of 2011 went from R\$1.70/US\$ at the end of March to R\$1.61/US\$ on June 3, whereas for the end of 2012 it was revised from R\$1.75/US\$ to R\$1.70/US\$. The median of forecasts for the average exchange rates in 2011 and 2010 dropped in the same order from R\$1.67/US\$ and R\$1.73/US\$ on March 31, to R\$1.61/US\$ and \$1.67/US\$ on June 3.

2.6 Conclusion

The performance of consumer prices in recent months reflected, in part, the seasonal exhaustion of pressures related to the education group and the deceleration of prices, especially in the food group. It is noteworthy, however, that the twelve-month cumulative inflation should remain at a high level, but with a declining trend to in the year's second half.

Demand and Cost Pressures on the Prices of Services in the IPCA

The evolution of the prices of services, in an environment of increasing real wages and relative rigidity of short-term supply of services, is among the major determinants of headline inflation. In this context, this box aims to illustrate the underlying factors of the recent trajectory consumer prices, by analyzing the trajectory of indicators that identify demand and cost pressures on the service sector.

An analysis of cost pressures in the sector of services takes into account the evolution of productivity and real wage¹ indices, estimated on the basis of the methodology presented in the box “Real Wages and Productivity: Recent Changes,” from the Regional Bulletin of April 2011². It should be noted that the service segments included in the analysis corresponded to 23.7% of the basket that composes the Extended National Consumer Price Index (IPCA). Therefore, the sample does not include all services covered by the index, particularly: (i) services listed in the group regulated and managed by contract, such as public transportation, and (ii) services in which wages are of minimal relevance to the composition of costs, like rents.

Figure 1 shows the evolution of indicators of productivity and real wages, emphasizing the more pronounced detachment between the two trajectories as from the beginning of 2010. Considering 2007 as the basis, the real wage index reached 117.6 in the first quarter of 2011, 13.1 p.p. higher than the productivity index level.

Figure 1 – Brazil – Services (IPCA basket)
2007 = 100



1/ In order to calculate productivity and real wage indicators, the segment “Other Services” of the Quarterly National Accounts was utilized. It covers business services, mercantile health/education, and household and associative services, housing and food, maintenance and repair and domestic services.

2/ Data utilized in this box refer to the Monthly Employment Survey (PME) of the Metropolitan Region of Curitiba (RMC), thus increasing the scope of indicators of employed population and average productivity from 39% to 42% of national GDP, according to data of Gross Domestic Product of Municipalities, estimated by the IBGE for 2008.

Figure 2 – Real wages

2007 = 100



Sources: IBGE (PME) and MTE

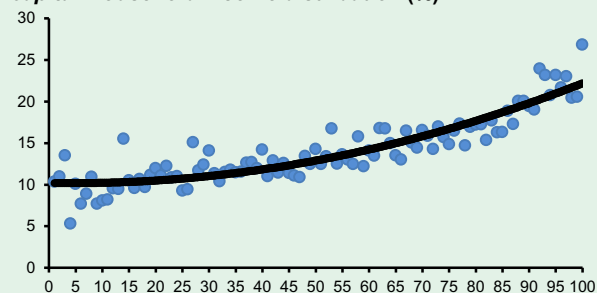
This detachment, which can be attributed to an environment of certain supply rigidity, is primarily associated with the evolution of real wages in the segment. Incidentally, according to Figure 2, real wages, after maintaining a relative stability in the period from 2003 to 2006, began to grow at rates similar to that of the minimum wage, registering³ respective real increases of 5% and 6.7% in 2009; 6.6% and 7.7% in 2010; and 4.3% and 3.8% in 2011.

On the demand side, the analysis of pressures in the segment of services is conducted by comparing the supply of these two modalities of services included in the IPCA basket and the potential demand for such services.

The supply indicator corresponds to the aggregation of the Gross Added Value (GAV) of the subsectors other services and real estate activities and rents from the quarterly national accounts. The indicator of potential demand for services (PDS) assumes the usual conditions of utility maximizing by agents subject to a budget constraint, with the participation of good i in the basket of consumption of a family k as a function of price, income and the square of the income (QUAIDS model)⁴, with θ representing the participation, p , prices; and, w , income:

$$(1) \quad \theta_i^k = f(p_{i,j}, w^k, (w^2)^k)$$

Figure 3 – Participation of services in the consumption of households as a percentile of “per capita” household income distribution (%)



Source: IBGE (POF-2008)

Figure 3 shows, in the coordinate axis, the percentages of households ranked according to per capita household labor income and, in the ordinate axis, the share of expenditures on services in total household expenditures. According to data from the 2008 IBGE Household Budget Survey (POF), it may be observed an increased participation of expenditures on services by households with higher income levels, particularly with regard to personal services (maid, hairdresser, among others), education and health. It should be also noted that, according to this simulation, the demand for services seems to be more sensitive to income increase of higher income households.

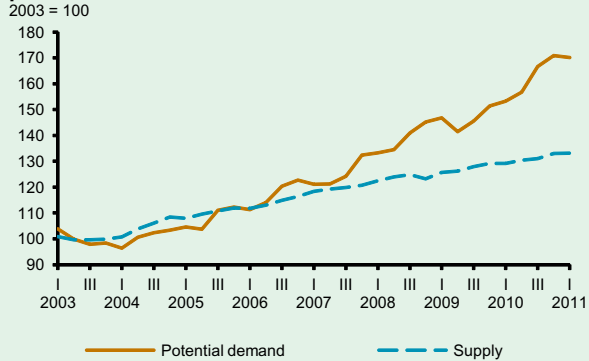
3/ Taken into account the average of quarters ended in March of year t and December of year $t-1$.

4/ QUAIDS Model: Blundell, R.; Pashardes, P., Weber, G. What do we learn about consumer demand patterns from micro data? The American Economic Review, 83 (3), p. 570-597, June 1993

Therefore, the estimated weight of the service sector in the household budget allows the association of consumption of services with household per capita income, which was segmented into deciles. Assuming, for the sake of simplicity, that changes in relative prices in the period under analysis have not caused significant changes in consumer behavior, the PDS is given by the expression (2), and specifies the share of services $\theta = f(w_t^k)$ as a function of average per capita income of the k-th percentile in the quarter t:

$$(2) \quad DPS_t = \sum_{k=1}^{10} \theta w_t^k$$

Figure 4 – Services (IPCA basket) – Demand pressures



Based on the above assumptions, the evolution of “potential” supply and demand for the segment of services included in the IPCA is illustrated by Figure 4. It should be noted that service supply, after registering similar growth rates until the third quarter of 2007, expanded at an average quarterly rate of 0.8% until the fourth quarter of 2010, while the PDS expanded at an average quarterly rate of 2.5%. This mismatch is consistent with changes in household consumption patterns due to upward mobility of population, and confirms the hypothesis of supply rigidity.

Summing up, this box helps to understand the recent dynamics of consumer prices and to analyze the trajectory of indicators that identify demand and cost pressures on the sector of services. In the period under analysis, indicators suggest productivity gains lower than real wage increases, which may be partly explained by the fact that the trajectory of the sector wages accompanied that of the minimum wage, which increased by 76.5% in real terms in the period. Additionally, the analysis suggests that demand pressures observed since the end of 2007 may have contributed to the separation between the trajectory of service and headline indices.