

# Infrastructure and Energy sustain investments in the 2009-2012 period

By **Fernando Pimentel Puga** and  
**Gilberto Rodrigues Borça Junior**  
Economists in APE

**Forecasts for the  
two sectors have  
already surpassed  
the pre-crisis  
scenario**

The worsening of the global financial crisis in September 2008 led to a severe deterioration of economic conditions across the globe. There was a severe downturn in credit and trade, followed by a significant reduction in industrial activity, asset prices, and employment. The pronounced deceleration of economic activity was restrained particularly by massive government intervention, by anti-cyclic monetary and fiscal policies, as well as by bank and company bail-out operations.

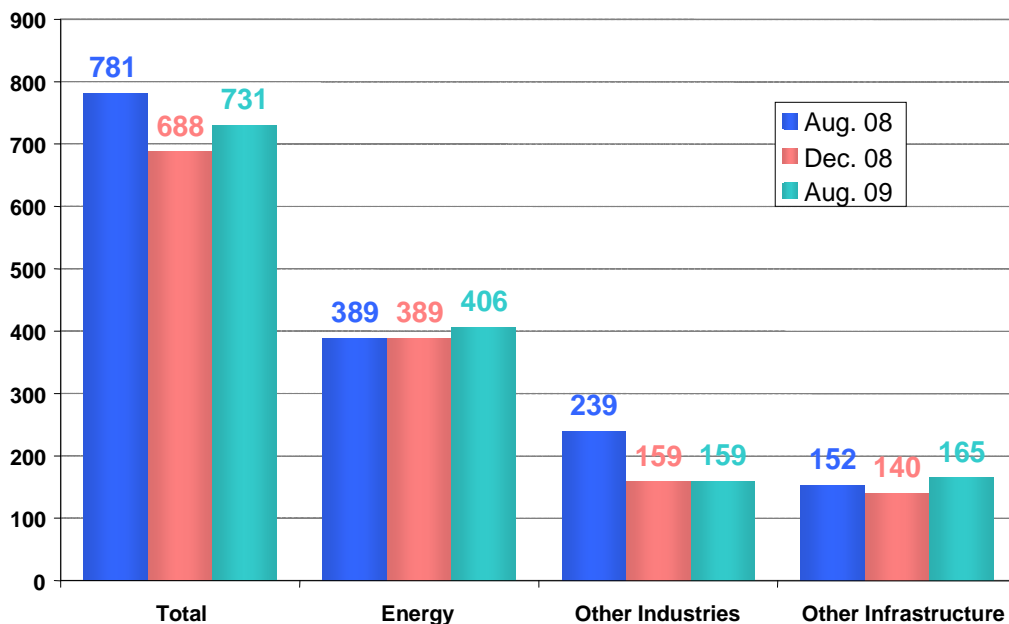
In Brazil, the effects of the crisis were

less intense. The Brazilian finance system proved to be solid, and public banks sustained credit. Even so, the performance of industrial activity was affected by reduced foreign demand, especially in more export-driven sectors. At the same time, the deteriorating expectation led to an accumulated decrease of 20.7% in gross fixed capital formation (GFCF) between 4Q08 and 1Q09.

About one year after the beginning of the crisis, there are some strong signs that the worst is over, including: US banks resuming the issuance of shares, the sustained growth of the Chinese

Brazilian Economic Insights is a publication by the Economic Research Division (APE) of the Brazilian Development Bank. The opinions in this publication are the responsibility of the authors and do not necessarily reflect the point of view of the BNDES' management.

**Chart 1: Investment Perspectives 2009-2012**  
**Mapped Investments – Aug. 08, Dec. 08 and July 09 (R\$ billion)**



Source: GT Investimento BNDES

economy, and the first signs of recovery in European and Japanese economic indicators. In the Brazilian scenario, the government's anti-cyclic measures to sustain investments, together with the resilience of the labor market – which maintained total payroll at high levels – point towards the recovery of economic activity.

In such a scenario, what is the Brazilian economy's expected growth cycle in the near future? At this moment, this is not an easy question to answer. It must be considered that, during the months leading up to the Lehman Brothers' bankruptcy, the Brazilian growth rate was over 6.0% per

year, in the longest cycle of continued growth since the 1970s – almost 12 consecutive quarters.

Surely, this severe global financial crisis will lead to a strong structural reduction in the world's economic growth rate. Even China, which has led the world's economic performance over the last few years, will face a period of reduced growth.

Considering such an international scenario, this issue of Brazilian Economic Insights analyses the behavior of a key variable in the return to growth of the Brazilian economy: investment. Our goal is to discuss changes that occurred in the 2009-2012 investment perspectives

throughout the most intense period of the crisis. We have compared data from three distinct moments: August, 2008 - “pre-crisis”; December, 2008 – “the crisis peak”; and August, 2009 – “worst is over”. This study was based on information and assessments put together by the BNDES’ Investment Monitoring Group (*GT Investimento BNDES*).

### **Investment in three moments of the global financial crisis**

Investment mapping carried out by the BNDES traditionally comprises 13 sectors, two in the energy field, six in industry and six in infrastructure. The BNDES chose such sectors not only according to the relevance

of each one in the GFCF, but also to the Bank’s level of knowledge

regarding current and prospective projects. In energy, the following has been considered: i) oil & gas; and ii) electric power. In the industry, there are: i) mining; ii) iron and steel; iii) pulp and paper; iv) chemical/petrochemical; v) vehicles; and vi) IT/ software. In the infrastructure area, there are: i) telecommunications; ii) sanitation; iii) roads; iv) railroads; and v) ports.

As shown in Chart 1, in August 2008, the month before the worsening of the global financial crisis, there was an expectation that these 13 sectors would invest R\$ 781 billion during the 2009-2012 period. From such amount, the focus points were the R\$ 389 billion investment in the energy

sector, followed by R\$ 239 billion in industry, and R\$ 152 billions in infrastructure.

Chart 1 also shows that, in the first moment, the global financial crisis led to an abrupt turnaround in investment perspectives for 2009-2012. In December 2008, the BNDES’ mapping identified a global amount of R\$ 688 billion, with a 12% reduction compared to August. The review in industry was significant, with a drop of 34% in the investment amount. The infrastructure sector had a lower reduction, of only 8%. In the energy sector, the crisis impact was nil.

During 1H09, there was a substantial improvement in investment perspectives for the group of sectors chosen for analysis.

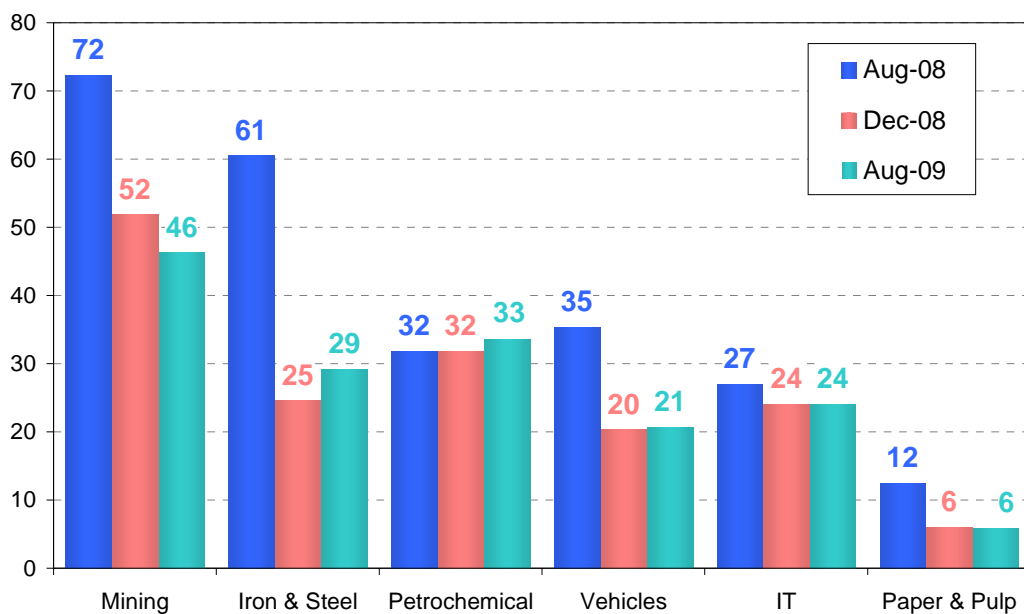
### **Mapping shows general growth of 6% in investments in relation to December 2008**

This was evident in the August 2009 mapping, when the

projection considered R\$ 731 billion, an increase of 6% compared to the December 2008 survey. This most recent mapping revealed a recovery of near 50% of the losses incurred over the months following the worsening of the crisis. With this, the current forecast is only 6% below that made in August 2008.

Per sector, the August 2009 research revealed an increase in energy and infrastructure investments compared to the December 2008 scenario. However, the drop in investments for industry remained the same. Such behavior indicates that the sector was not only the most affected by the financial crisis, but it should take longer to return to pre-crisis investment levels.

**Chart 2: Industry Investment Perspectives 2009-2012**  
(R\$ billion)



Source: BNDES/GT Investimento.

### A view of investment perspectives per sector

The stability of investment perspectives in Brazil towards the global crisis is surprising and requires a more detailed analysis. The contrast between the two groups' performance immediately calls attention. The first group includes industry (excluding oil and gas), which basically comprises all sectors affected by the crisis. The second group consists of energy and infrastructure. In such sectors, the recent investment expectations are even better than those in August 2008, before the crisis. Below, both groups are analyzed, in an attempt to understand the differences between them.

#### ■ Industry

The downturn in industry investment perspectives corroborates the reasoning that what affected Brazil in the financial crisis was the reduction in global demand. In Brazilian Economic Insights #66, we observed that the drop in exports was accountable for half of the decrease in industrial production in the six months following the worsening of the crisis. Chart 2 shows a similar effect in investments.

Expectations decreased mainly in export-driven sectors: mining; iron and steel; vehicles; and pulp and paper industries. Such sectors were impacted by the fall in commodity prices, and, in the case of the automotive segment, by the severe downturn in Latin American demand,

mainly in Argentina and Mexico. The pulp and paper industry was the segment where the impact of the crisis was particularly severe. Apart from the drop in foreign demand, the leading companies in the sector suffered significant financial losses due to excessive exposure to exchange rate derivatives.

In the IT sector, there was a lower reduction in investment expectation, while in the petrochemical sector perspectives remained the same. On the one hand, the impact of the drop in exports on industrial production was less significant in these two sectors. On the other hand, the dynamics in such sectors are more strongly determined by internal market performance. In the IT sector, investment strength is linked to the cycle of telecommunication investments in Brazil. In the petrochemical sector, in its turn, projects basically aim at reducing the Brazilian dependence on imports, instead of expanding foreign sales.

There was no recovery in the investment perspectives for industry in the August 2009 mapping mainly because of projects adjourned in a specific sector – mining. By contrast, the investment perspectives for the iron and steel, petrochemical, and vehicles industries improved.

The return to investments in these sectors followed the internal market's unexpected performance, mainly in the vehicles, and iron and steel segments. On the one hand, the growth in domestic demand, sustained throughout the crisis, surprised many companies. On the other hand, the government adopted anti-cyclic policies, such as tax exemption for vehicles and

home appliances, generating a strong effect in the vehicles, and iron and steel sectors.

Improvement in the investment scenario, however, is still trivial compared to the recovery of industrial activity in these two sectors. In the vehicles sector, a sales record in the domestic market is expected for 2009, although exports are still affected by the crisis. In the iron and steel sector, companies are turning blast-furnaces back on, and a quick recovery in the level of installed capacity use is expected. This sector is also receiving new purchase orders from foreign companies.

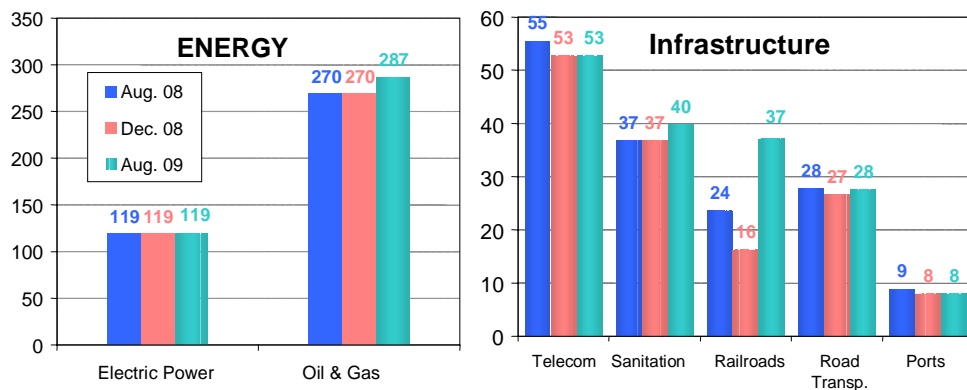
#### ■ **Energy and Infrastructure**

The minor impact of the crisis on energy and infrastructure perspectives can be explained by the characteristics and determining factors of investment in such sectors. In these areas, projects normally require considerable funding and provide long-term yields, mainly in the oil and gas (with the exploration of the pre-salt layer), electric power, and railroad sectors. There are also high sunk costs (non recoverable) and indivisibility in current projects, which make investment decisions less volatile in these sectors.

Investment stability in these sectors may also be explained by government actions. The development of the energy and infrastructure areas has a significant effect on the growth and improvement of the economy's competitiveness, as well as an important social impact. Due to such characteristics, public policies give special attention to these sectors.

Mapping shows that the public sector

**Chart 3: 2009-2012 Energy and Infrastructure Investment Perspectives – R\$ billion**



Source: BNDES/GT Investimento.

had strong influence over planned investments in electric power, telecommunications, sanitation, roads, railroads, and ports. A large part of mapped projects is related to goals established by bids, concession agreements, and authorization for the exploration of public services by the private sector. In these agreements, companies must comply with service expansion targets set by the government, which result in heavy investments.

Chart 3 shows the three investment perspectives for the energy and infrastructure sectors. In the August 2009 mapping, the improvement in the energy sector is linked to the oil sector. Such a change is due to Petrobras' 2009-2013 Business Plan, released in January 2009, which incorporated investments in oil exploration of the pre-salt layer.

In the infrastructure area, improvement in expectations is due to the public sector's

capacity to influence investments. In the sanitation area, public funding had been provided for project performance and development. The significant increase expected in investment in railroads is mainly related to the plan to implement the High-Speed Rail (HSR) service between Rio de Janeiro, São Paulo and Campinas. In the road segment, as an anti-cyclic policy, concession agreements from Federal and São Paulo state governments have been brought forward.

## Conclusion

This study was based on the BNDES' Investment Monitoring Group surveys during the most severe period of the global crisis, between August 2008 and August 2009. It provides information on the investment perspectives in Industry, Infrastructure and Energy, concerning three distinct moments: "pre crisis" (August,

2008), “the crisis peak” (December, 2008), and “the worst is over” (August, 2009). Mapping showed that the global economic deterioration led to an abrupt fall in the investment perspectives for the Brazilian economy by the end of 2008, with a highly concentrated impact on specific industrial sectors. The export sector suffered the most intense impact, corroborating the reasoning that the drop in foreign demand was one of the main channels for the crisis to reach the Brazilian economy.

The existence of a substantial investment cycle in energy and infrastructure sustained a considerable share of investments planned for the economy. This strong cycle can be explained by the existence of large-scope projects with long-term yields,

which rely on decisions less affected by the

crisis. It could also be attributed to the way the public sector acted in such segments. A large part of the projects is the result of service concession agreements, in which companies must comply with service expansion targets set by the government, which result in heavier investments. The government’s decision to provide the BNDES with R\$ 100 billion in new resources in January 2009 was an important measure to improve expectations regarding the scope of investment.

August 2009 mapping showed an improvement in the investment expectations in energy and infrastructure. Recent investment perspectives in these

sectors are now higher than in mapping conducted prior to the crisis. However, the effects of the worsening of the international scenario can still be seen in industry. In most of the surveyed sectors, there was an increase in investment forecasts, with the adoption of anti-cyclic measures by the government. However, the investment reassessment was insignificant compared to the recovery in the production figures of these sectors.

It can be concluded that the drop in investment in industry shown in the August 2009 mapping reflects the uncertainties surrounding the concept of leaving the global financial crisis behind. In fact, in the most recent mapping, companies expressed fear of a second slowdown in the world economy.

## **In industry, recovery depends on concerted revitalization of the world’s economy**

In short, the study shows that Brazilian investment has a considerable capacity to resist major global financial crisis. Such strength is due not only to the ongoing large-scope projects, but also to the public sector’s immediate action, adopting credit and fiscal policies that counterbalanced the impacts of the external crisis. Recent changes in investment expectations confirm the diagnosis that the worst of the crisis is over, with increasing investments in the energy and infrastructure sectors and improvements in most of the industry sectors. The return to the investment level recorded prior to the crisis in industry, however, should take some time and requires consolidation of the global economy’s recovery process.



If you wish to receive the following editions of  
this publication send an e-mail to  
*[visao.do.desenvolvimento@bndes.gov.br](mailto:visao.do.desenvolvimento@bndes.gov.br)*.