Letter 13 - 2015

Searching for a new equilibrium

We are a public equity fund that uses the bottom-up approach to analyze corporate fundamentals. However, we believe a holistic vision is paramount as is an understanding of a company's history. Corporate and sector sustainability are also relevant. This letter provides information about a number of sectors that benefited from both a buoyant economy and favorable government policies. We are deeply concerned about the size of the correction that such sectors could face in the coming period of economic recession that is widely expected.

It is undeniable that Brazil's economy has benefitted greatly from favorable international tailwinds since 2004. The country's terms of trade improved substantially due to Chinese and global growth, which was vigorous until the 2008 financial crisis.

Political stability also played a major role. The maintenance of the economic tripod (fiscal responsibility, inflation targeting and a floating exchange rate) at the start of the Lula administration mitigated a risk that had been haunting investors for years: the Workers' Party (PT) government appeared less populist and more favorable towards the private sector than previously feared.

The second FHC administration and the first Lula administration also had the good sense to implement a series of macroeconomic and microeconomic reforms that paved the way for institutional stability, economic growth and the economic stability so craved by the country. See below a timeline of these measures:

a) Adoption of a floating exchange rate and inflation targets;

b) Fiscal responsibility law;

c) Creation of payroll-secured loans

d) New bankruptcy law

e) Adoption during the Lula administration of measures that propelled civil construction, such as enhancement of the deed of trust instrument for the real estate sector and creation of a new tax regime, known as RET4 that benefited the usage of SPVs, by segregating its assets and liabilities from other projects owned by the holding company.

Coupled with these reforms was a greater formalization of the economy made possible by the implementation of measures combating tax evasion, such as tax substitution and electronically issued invoices. This led to economic development and a windfall in tax revenues for the government, in addition to a period of strong gains in wages driven by demographic bonus benefit.

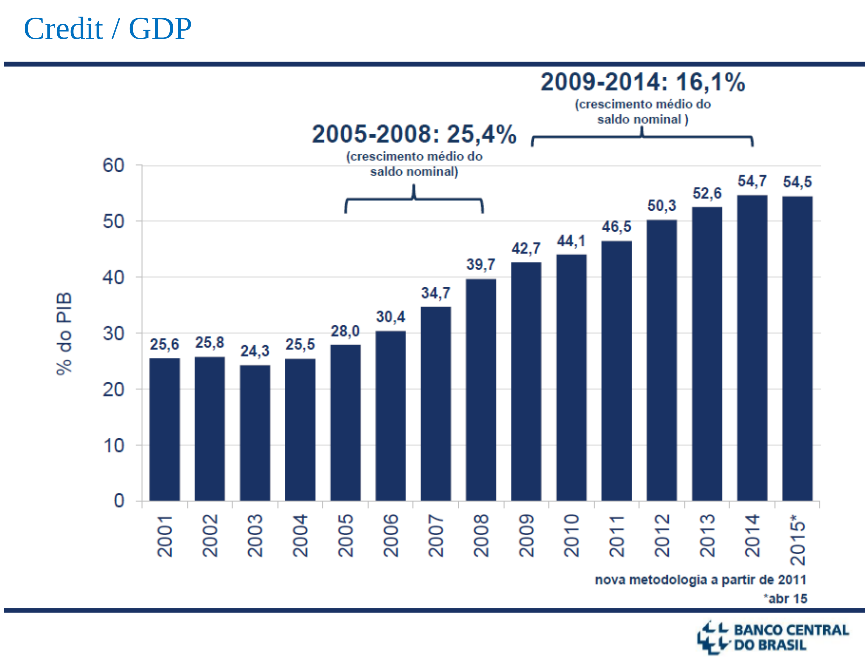
These measures alone would have been sufficient to substantially boost spending power, but Brazilian consumers received a further extraordinary catalyst: an unprecedented credit boom, addressed in greater detail below.

Following Lula's second term in office and in response to the 2008 financial crisis, the Brazilian government began intervening more actively in the country's economy by alleviating the tax burden for certain sectors, increasing BNDES subsidies and implementing a range of new social programs such as MCMV (*Minha Casa Minha Vida* - a subsidized popular housing program) and FIES (Student Financing). In addition to undermining Brazil's public finances, these measures also further inflated the "bubbles" in certain sectors benefitting from them.

The following pages illustrate some of the sectors which, despite already suffering an impact to an extent, are still performing much better than in the past or in comparison with other countries. Our analysis begins with the financial sector and the consumer credit boom, and progresses to the real estate and automobile sectors. Last but not least, we present our vision of the higher education sector.

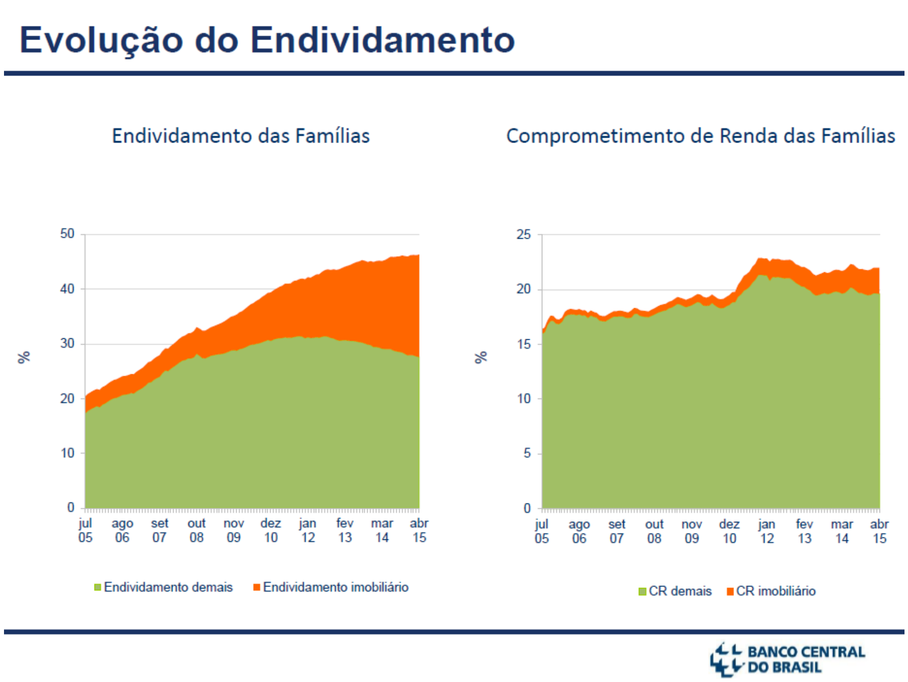
Brazil's credit boom

The consumer credit sector has stood out in the last 12 years for the size of its credit boom. There is widespread concern about the potential direct risks posed by this boom, including to the domestic banking system. However, much less attention is being paid to the secondary effects that the credit boom and the consequent increase in consumption power provided for Brazilian families.



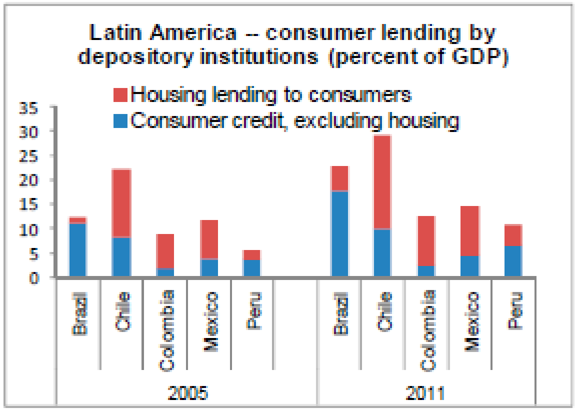
Source: Brazilian Central Bank

As mentioned in the introduction, in the 2000s the population reaped the rewards of sound economic fundamentals laid down in the 1990s, and the economy was also boosted by rampant international growth.



Source: Brazilian Central Bank

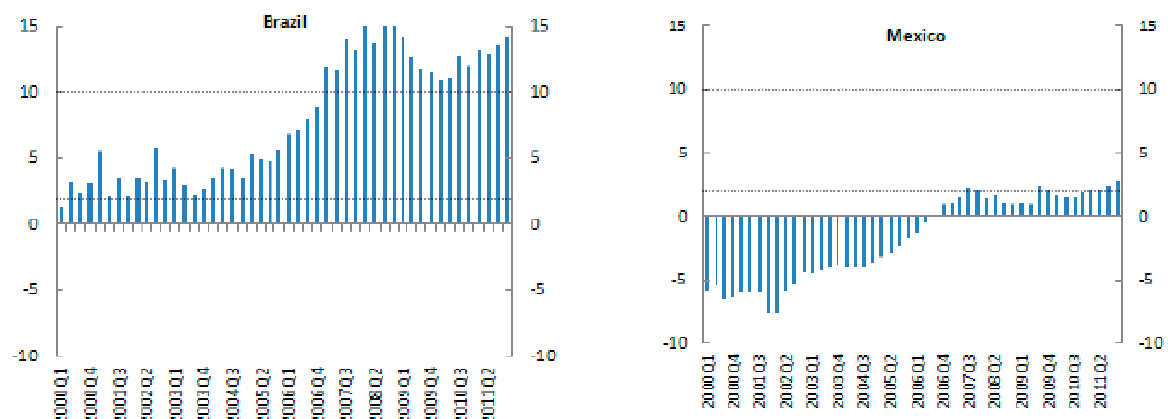
With a more stable economy, public finances and inflation on a tight leash, and a series of critical microeconomic reforms, the domestic financial system began expanding at breakneck speed. Starting with a reasonable indebtedness level to per capita income in 2005, figures more than doubled by 2011 achieving the highest consumer credit level of the region, as can be seen in the graphs below taken from the article published in 2012 by the IMF, “Credit Growth in Latin America: Financial Development or Credit Boom?”.



Source: International Monetary Fund - IMF

In a section of the article, the authors use a health indicator of the credit boom and compare the gap between the quarterly credit growth rate and its normalized long-run trend. An indicator ranging between a difference of 2% and 10% has good predictive power for a future financial crisis. Brazil achieved more than 10 years of growth above 2% and at least 5 years of growth above 10%. For the purpose of comparison, we are presenting Mexico's performance during the same period.

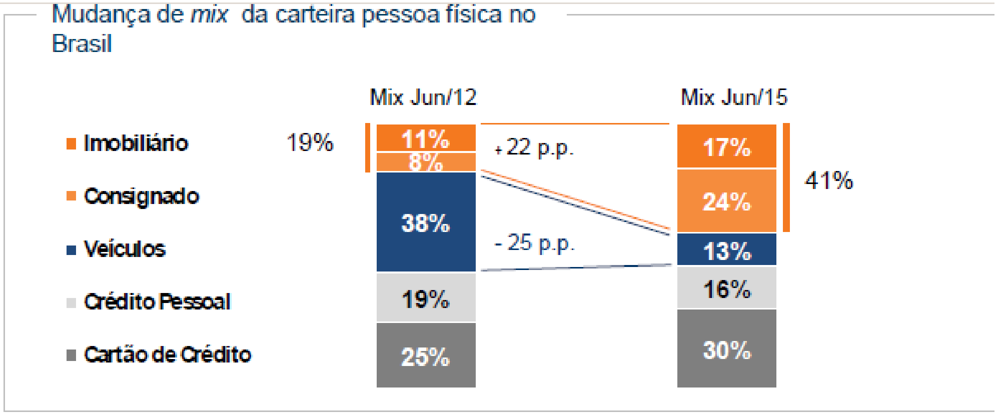
Figure 10: Credit-to-GDP gaps, 2000-2011
(Percentage points)



Source: International Financial Statistics, World Economic Outlook

NB: The graph presents quarterly credit-to-GDP gap percentages and their long run trends, using a smoothing parameter (lambda) in the HP-filtering of 400,000. For further information see the original document or Drehmann et al. (2011).

Our studies into Brazil's banking sector focus substantially on an assessment of the sustainability of this consumer leverage level and the potential impacts of default on listed banks. In short, we believe that over the last 3 years privately owned banks have moved to enhance their debt portfolio profiles, focusing on awarding credit facilities with sound collateral. Payroll-secured loans and mortgages expanded exponentially and took over the market share of personal unsecured loans ("clean") and facilities with more fragile collateral, such as vehicle financing, as evidenced in a recent graph extracted from a presentation of Banco Itaú.

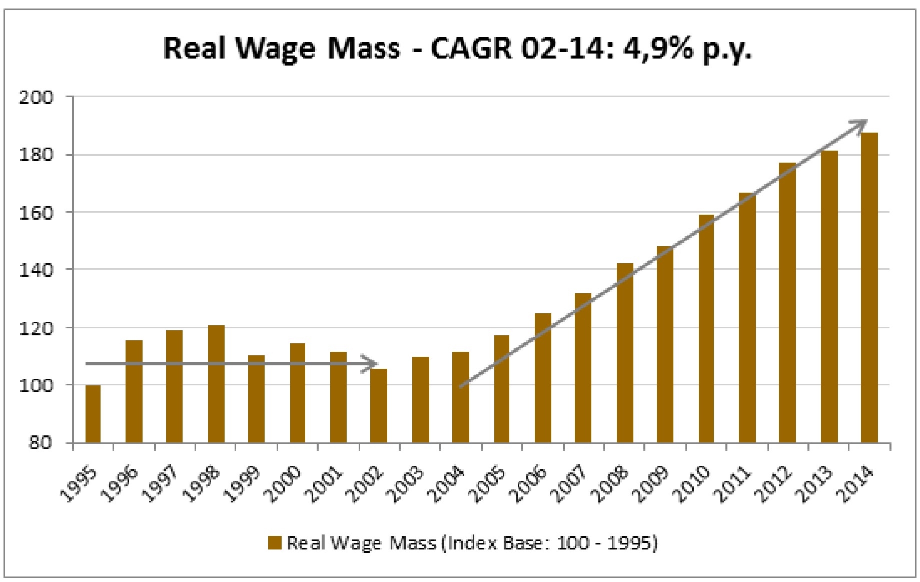


Source: Itaú

This letter does not address the risk posed by an increase in delinquencies, because, despite the fact we think this is going to happen, we believe that both Itaú and Bradesco are trading at a valuation which can absorb any such losses.

We intend to draw attention to how this rapid growth in credit is contributing to elevating the consumption capacity of the Brazilian population. In addition to external tailwinds driving employment and income growth, Brazil's economy benefited from a one-off, extremely rapid credit boom which, whilst possibly bypassing major stress, will unlikely continue to expand at the rates witnessed between 2004 and 2012.

Each of the sectors analyzed below present a number of specific measures that highly contributed to the credit expansion over the last 10 years. However, we should not lose sight of the fact that the growth in wages (shown in the graph below), leveraged by the credit expansion, unlocked a pent up demand of a huge section of the Brazilian population, the "New Middle Class" - which had been historically excluded, acquiring spending power for the first time.



Source: IBGE, PME (Former Methodology 1994-2002 / New Methodology 2002-2014)

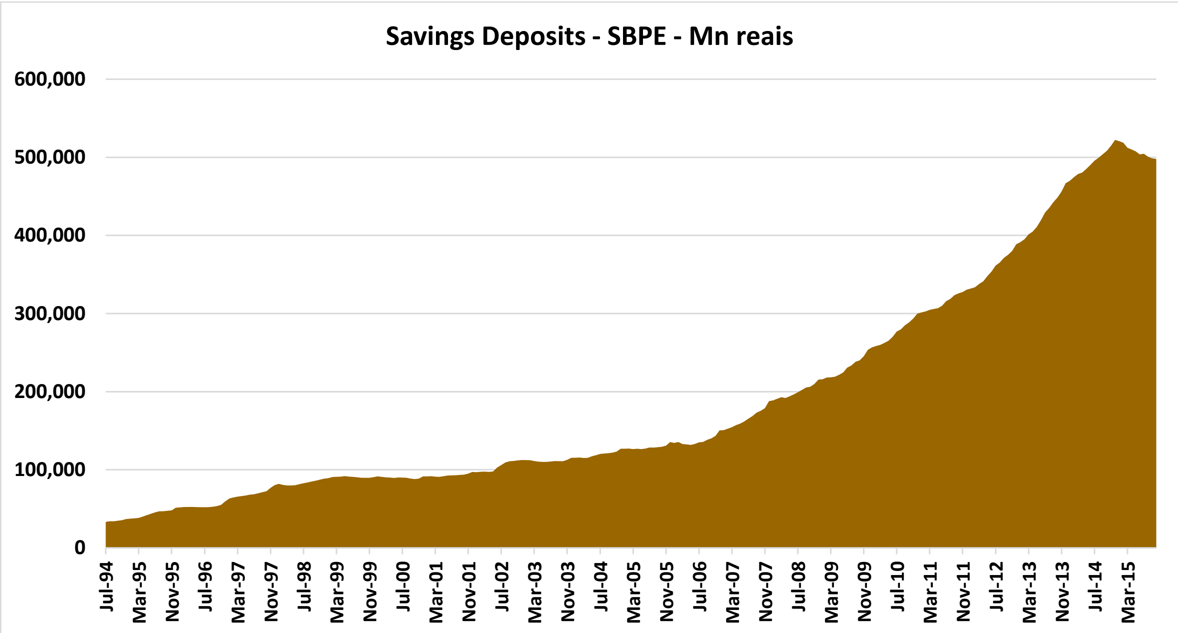
There are many figures that can be used to demonstrate that the consumption gaps still justify the growth in demand recently experienced in several sectors, such as the housing shortage, the low number of automobiles per capita, logistics dependent on highways and trucks and low penetration of university graduates in the population. However, as we will demonstrate below, it appears that these drivers have resulted in unsustainable growth, and without the tailwinds of the last 10 years future growth may tend to be much more modest.

Real estate sector

Brazil's real estate sector has been booming since 2004. This growth was founded on the economic stability achieved in the first Lula administration and a number of microeconomic measures which facilitated access to real estate financing. Such measures include the deed of trust instrument, created in 1997 and legally ratified by Law 10931 in 2004, which introduced article 1.1368-A into the Civil Code; tax incentives for real estate developers operating on a new tax regime, known as RET4 that benefited the usage of SPVs, by segregating its assets and liabilities from other projects owned by the holding company and greater penalties for banks that did not comply with the credit requirement for the sector (interest rate reduced from TR+6% to just 80% of the TR).

Since 1966 at least 65% of saving accounts' funds had to be allocated to the real estate sector (rural sector, in the case of certain banks like Banco do Brasil). However, until 2004 most of this requirement was performed by using FCVS credits (Salary Variation Offsetting Fund), created back in 1968, shortly after the creation of the BNH (National Housing Bank). The FCVS was originally used to guarantee the borrower his/her capacity to repay their debt and was used by financial institutions as a liquidity buffer for any unsecured debtors. It transpires that the countless subsidies awarded by the Government and the rampant inflation in the 1980s led this fund to a colossal deficit and the banks had to assume part of the debt over a very long term. After PROER (bank bailout program after the hyperinflationary period) in 1995, the surviving banks still had a highly material FCVS balance on their books, which was taken in account in the calculation of their minimum lending requirement and released these banks from the obligation to provide additional real estate financing.

As can be seen in the graph below, at a time when savings were rising, the government accelerated the amortization of these FCVS credits through measures adopted in 2002, 2004 and 2006, in order to redirect funding to the real estate sector. The banks were accordingly obliged to allocate more funding to the real estate sector, which grew spectacularly as a result, amid falling interest rates and economic stability, which enabled banks to lengthen the offered loan terms securely, thereby making property much more affordable. The rises in Brazilian wages and stagnation in the real estate sector for nearly two decades also explain the impulse in the real estate sector in this period.



Source: ABECIP

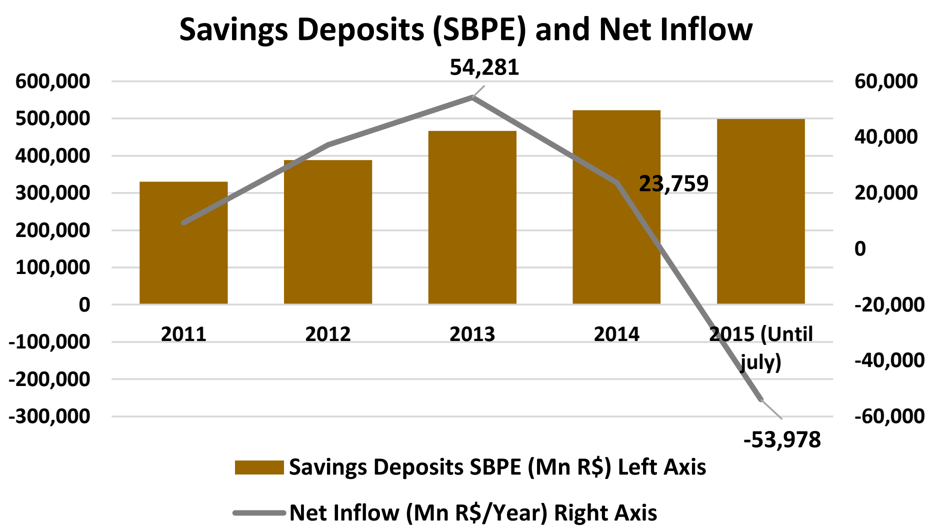
Worth mentioning that 21 real estate developers[1] went public on the São Paulo Stock Exchange (Bovespa) between 2005 and 2008, capitalizing on investor appetite for real estate, driven by booming economy.

[1] (2005 – Cyrela, 2006 – Gafisa, Rossi, Klabin Segall, Brascan, Abyara, Company 2007 – Helbor, Trisul, Tenda, MRV, EZtec, Inpar, Agra, CR2, JHSF, Even, Tecnisa, Camargo Correa Investimentos Imobiliários, Rodobens and PDG)

As part of the fiscal stimulus program introduced after the 2008 financial crisis by the Brazilian government, a new social program was launched in 2009 that provided subsidies for popular housing, which became known as MCMV (Minha Casa, Minha Vida). The targets were ambitious and in just over 5 years of the program 3.9 million homes were contracted and 2.7 million delivered. For the poorest participants, the subsidies accounted for as much as 95% of the property's value. As a result, this sector, which already enjoyed the lowest financing rates, as it used FGTS funds, experienced an even greater upturn in demand.

The current situation

The banks are currently meeting the level of allocation of saving accounts' funds required for the real estate segment. In recent months CEF (Caixa Econômica Federal), the system's main agent, has also been issuing LCIs (Realty Credit Bills) at higher rates than it is financing housing , which represent additional subsidies without any economic justification for CEF. With the new economic situation and a highly leveraged balance sheet, CEF abruptly revised its strategy, sharply increasing borrowing rates for the sector and reducing the portion of the property's value which can be financed. As the saving accounts' are experiencing outflows, as can be seen in the graph below, banks are increasingly restricting real estate credit for the SFH (financial housing system for properties worth up to R$ 750 thousand). The solution would be these real estate developers to provide direct financing to their clients and/or drastically reduce new launches, which is now beginning to occur at the leading companies in the sectors.



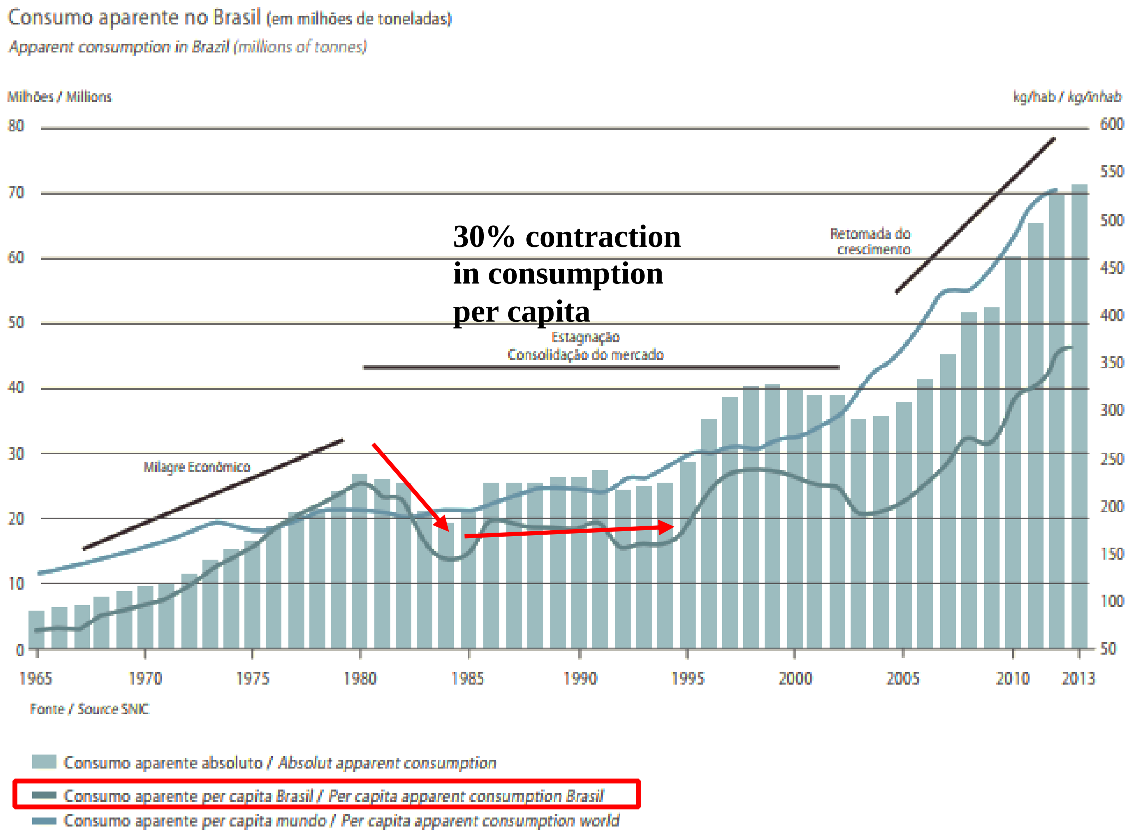
Source: ABECIP

In the low-income segment, the Government is temporarily tightening MCMV expenditure, especially in the segment which receives the highest subsidies, Range 1 (for families earning between 0 and 3 minimum salaries). In addition, the government is clearly postponing the announcement of the 3rd MCMV program due to fiscal restrictions plaguing the government.

Although demand is still holding firm in segments 2 and 3 of the MCMV program (for families earning between 4 and 10 salaries and properties worth up to R$ 190 thousand), in our opinion demand will deteriorate considerably due to the forecasted rise in unemployment. The funding for this segment has not been tightened yet, as the funds come directly from the FGTS and not the savings accounts' reserve. The Chamber of Deputies has recently approved draft legislation increasing the FGTS remuneration rate, which will substantially increase the funding cost for the segment and drastically cut demand. With the benefit of hindsight, the fate of the BNH (National Housing Bank) is cause for concern because such populist policies in the real estate sector do not normally have a happy ending.

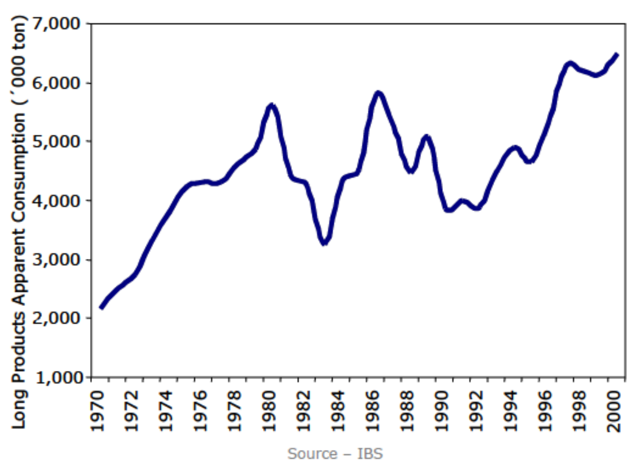
In a nutshell, after the boom in real estate in recent years, we are now expecting quite difficult years ahead.

A number of items used in civil construction, such as cement and long steel, are still experiencing demand greater than long-term historic trends. The consumption of these products after the Economic Miracle in the 1970s demonstrates that the favorable economic situation and government stimuli can raise the sales of these products to way beyond sustainable levels. From 1983, cement sales per capita contracted by 30% over the average in the previous 6 years and remained at this level for nearly 10 years. Consumption per capita of both products expanded by 90% and 114% between 2003 and 2014 respectively. If history repeats itself, the bottom of the abyss is much deeper than many people believe.



Source: SNIC

Performance of apparent consumption of long steel in Brazil.



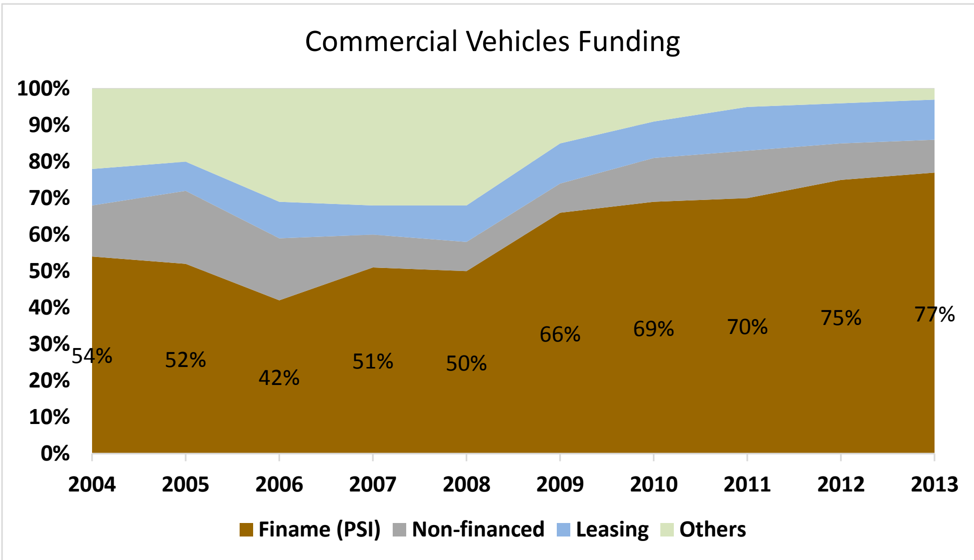
Source: IBS (Now

Automobile sales

The automobile sector was one of the sectors which most benefited from the credit expansion and more favorable government policies. Traditionally a formidable lobby, the sector moved swiftly in the 2008 financial crisis to "put together a number of beneficial government measures such as the reduction in the IPI tax for cars and interest rates heavily subsidized by BNDES in the PSI program (Investment Sustaining Program), which embraces the acquisition of buses and trucks, amongst other items.

A long-standing object of desire for Brazilians, cars became much more affordable as a result of lower interest rates, greater economic stability and higher wages. Between 2004 and 2013 car sales consequently rose at an annual rate of 10.3%. This led to annual average growth in the number of vehicles of 7.0%, much greater than the average of 3.8% in the 1990s.

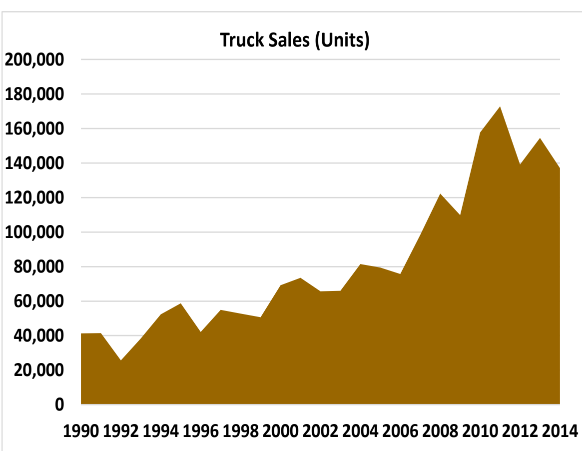
Even more impressive was the upturn in truck sales driven by government incentives after the 2008 financial crisis, with financing offering interest rates ranging from 2.5% to 10% for up to 100% of the item's value. The PSI accounted for practically 80% of truck sales in 2013 and 2014.

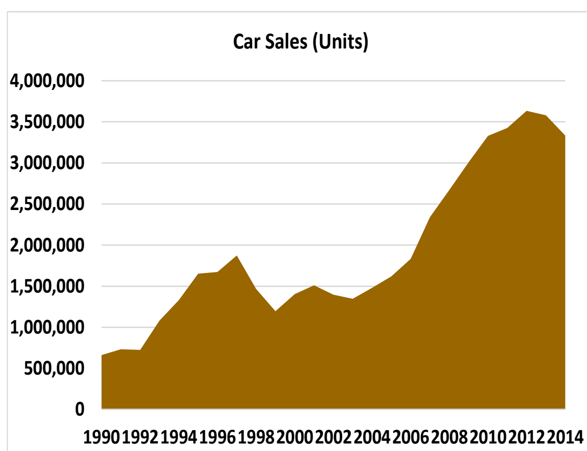


Source: Randon (Prada Consultoria)

Another one-off driver of demand for trucks was the loss of market share by the railway sector in Brazil. Despite the fact Brazil has a minimal railway infrastructure, it has managed to lose market share to highway transportation in recent years.

These factors led to an unsustainable growth in sales. Sales in 2011 outperformed the record level before the 2008 financial crisis by 28%. According to our estimates, the fleet after 2008 expanded at a rate of 5.9% for an average GDP growth of 2.1%.

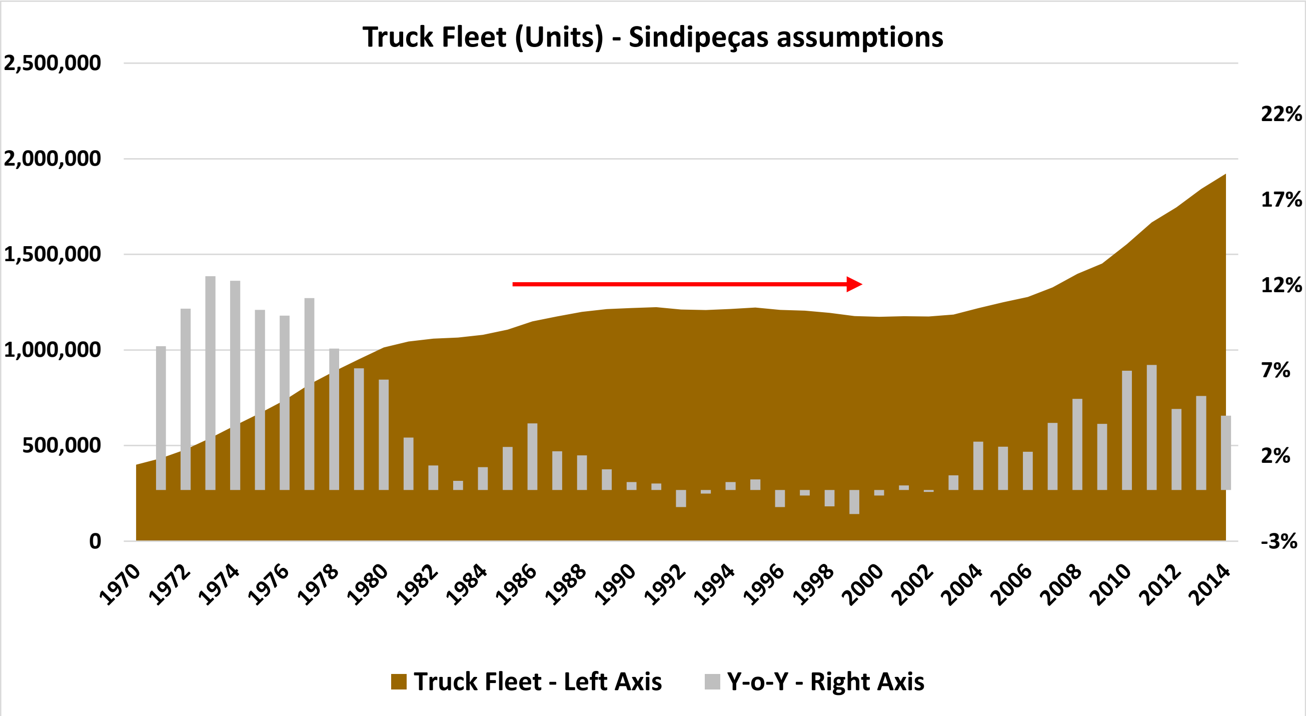




Source: ANFAVEA

In addition to believing that this is completely unsustainable, the recent formation of inventory means that sales will probably be lower than the long run trend over the years ahead. This is coupled with the current recession, in which the number of trucks in circulation on toll roads (according to figures from the ABCR- Brazilian Association of Highway Concession Operators) contracted by 5.7% in the first half of 2015 compared with the same period of 2014.

Interestingly, the graph below shows how the fleet of trucks was stagnated, even began dipping throughout the 1990s. As sales derive from this fleet growth plus the volume of scrapped vehicles, the constant maintenance thereof in a future recession would represent a sharp downturn in sales of new trucks compared with recent years. We estimate that 55 thousand vehicles would have to be sold a year to maintain the current fleet stable. This represents a downturn of 60% on last year's sales or a third of the peak volume witnessed in 2011.

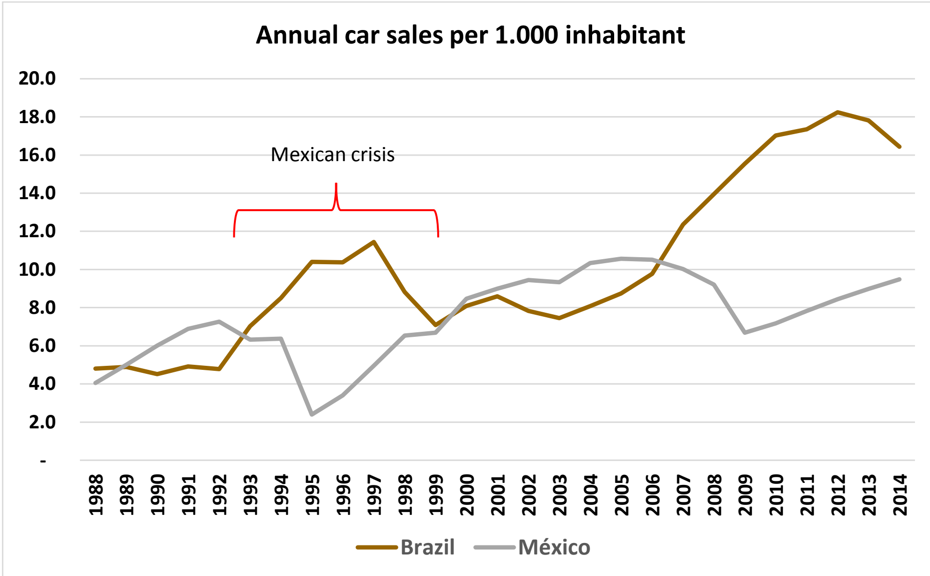


Source: Studio Investimentos Sindipeças assumptions

The performance of the light vehicle segment was similar, but with fewer government incentives in recent years. Lower IPI tax rates have been in force since the end of 2008, which led to a modest upturn in purchases and renewal of the fleet.
A comparison of light vehicle sales in Brazil and Mexico in the last 25 years is worthwhile. In recent years, Brazil has managed to triple the number of vehicles sold versus the average in the three-year period 2000-2003, with Mexico managing an increase of just 26%.

Adjusting for population, last year Mexico sold 1.15 million vehicles to a population of around 120 million people. Using a simple rule of three, the 200 million people in Brazil would have acquired 1.9 million vehicles in the same metric[2]. It should be noted that the size of the Brazilian fleet (according to Sindipeças) is just 11% greater than the Mexican fleet (according to INGI), a level much smaller than the population difference. In 2014, 3.3 million vehicles were sold in Brazil. This year sales have shrunk to 2.5 million according to the worst (or realistic) projections with further reductions likely. Note that Mexico's current economic situation is much healthier than Brazil's and for several years our sales levels were above average, meaning the country has a relatively new fleet of vehicles.

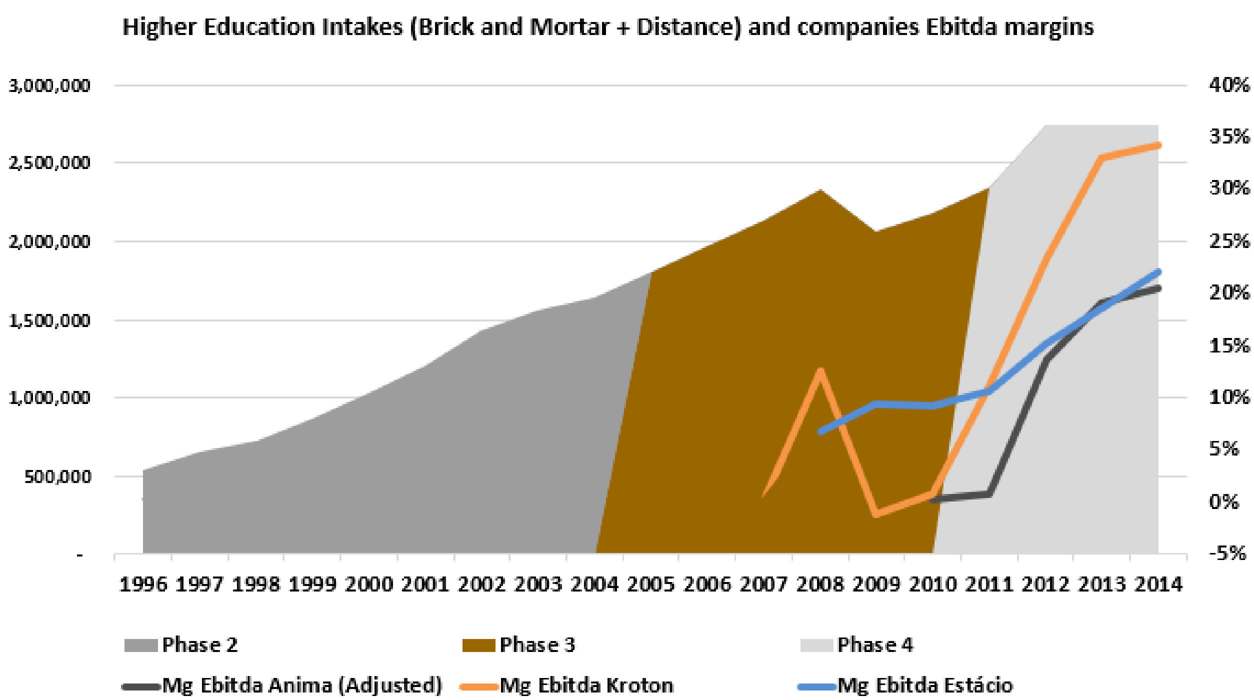
[2] Population data from IMF. Data about Mexican vehicles from AMIA (Associacón Mexicana de la Industria Automotriz). Data about Brazilian vehicles from ANFAVEA (National Association of Vehicle Manufacturers).



Source: ANFAVEA, AMIA and FMI.

Higher Education

In our analysis, we like to breakdown the Brazilian higher education sector ("HE") in 4 stages. The first stage, started in 1996, with the creation of the LDB (National Education Foundations and Guidelines Law), which allowed Higher Education Institutions (HEIs) to make a profit. This was a landmark for the sector and brought about major changes to the structure of HEIs, resulting in enrollment growth, new campuses, the emergence of financial players and a comprehensive professionalization of the sector.



Source: INEP, Ãnima, Estácio and Kroton.

Stage one is the period between 1996 and 2004. In this period the number of courses and private universities in the country rose sharply. After the sector had been opened up to private investment, the number of private institutions leapt from 711 to 1789 according to data from the Higher Education Census.

As a consequence of this expansion of supply, the number of students entering higher education rose by an average annual rate of 15.0% in the aforesaid period.

Stage two, between 2004-2010, was marked by two key events:

i) A booming economy in Brazil led to the ascension of the B and C classes - which hitherto could not afford private higher education and did not have the academic qualifications to enter public higher education institutions, given the huge demand for a very limited number of seats. This development made it possible to meet this demand for the first time.

ii) Expansion of distance learning (DL) In 2004 there were around 25 thousand students entering DL courses. By 2010 the number had risen to 380 thousand new students. DL was fundamental for attracting a different type of public, from an older age range, and people who did not have the time to attend daily lectures at universities.

The annual average rate of growth in the number of students entering the sector in stage two was 4.8% according to the census.

During stage two the main private Brazilian groups began going public in order to secure funding to expedite their growth, either organically or via acquisitions. This movement was spearheaded by Anhanguera, Estácio and Kroton. Anima and Ser Educacional subsequently followed the same path.

As can be seen in the graph above and without undermining the excellent operational performance of the companies in recent years, all companies benefited from the boom experienced by the sector and saw their margins expand spectacularly.

Stage three, between 2011 and 2014, continued benefiting from the drivers experienced in stage two, but also benefited from a new element that was fundamental to securing additional growth: the new FIES[3]. Comprehensively overhauled by the government in 2010, FIES began to be used - initially by major educational groups, but subsequently by most private schools - as an important tool for capturing and retaining potential dropouts.

The average annual rate of growth in students in stage three was 7.9%[4].

In 2010 FIES had around 75 thousand new contracts signed and in 2014 this number advanced to 732 thousand new contracts.

Despite the fact around 75% of HE entrants are concentrated at private higher education institutions, the government has been expanding its role by way of social inclusion programs like Prouni[5] and FIES. According to our calculations for 2014, if we include public higher education students, students receiving Prouni grants and new FIES contracts, the government accounted for more than 60% of higher education places that year.

It appeared that stage four would come when some structural change affected FIES or the Brazilian economy on a general basis. In relation to FIES, we believed that this change would come when the program's default rate started to rise, when students began repaying their loans. Despite the important role it plays in social inclusion, FIES created a reversed natural selection, since universities began sending to the fund those students who began to show signs that they would not be able afford the tuition fees. Sooner or later default rates will deteriorate. According to our estimates, this default will be modest in 2015 and begin to concern the government and the market in 2016, when a large number of students will begin repaying their loans.

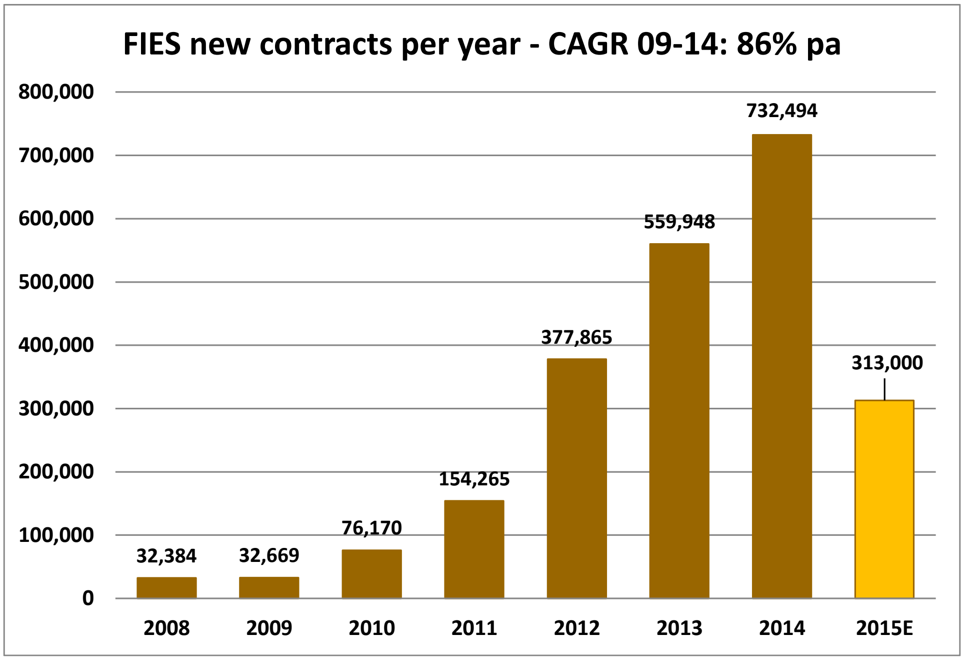
In respect of Brazil's economy, the risk still existed of Brazil reversing the positive cycle achieved in the last decade, which could lead to contraction in the number of entrants in the sector as a consequence of higher unemployment and lower disposable income of the population.

[3] FIES: Student aid program, subsidized by the federal government, with the objective of financing students enrolling in private universities.

[4] These calculations use figures up to 2013, as the 2014 census figures have not yet been published.

[5] Prouni: federal government program, granting full scholarship in privately owned universities for low-income students.

Although default has yet to rear its ugly head, the government announced sweeping changes to the program at the end of 2014 as part of its fiscal adjustment package. FIES is eating into public finances, and if the rate of growth continued, government expenditure in 2015 could exceed R$ 20 billion reais for the program. Other measures were announced throughout 2015, such as a reduction to the number of seats available for financing, a price restatement ceiling for monthly tuition fees, higher interest rates for student loans and greater contributions by students - previously 100% of the course cost could be financed, which is no longer the case. For 2015 the government expects to finance 313 thousand new students, a contraction of nearly 60% over the 732 thousand students financed in 2014.



Source: MEC

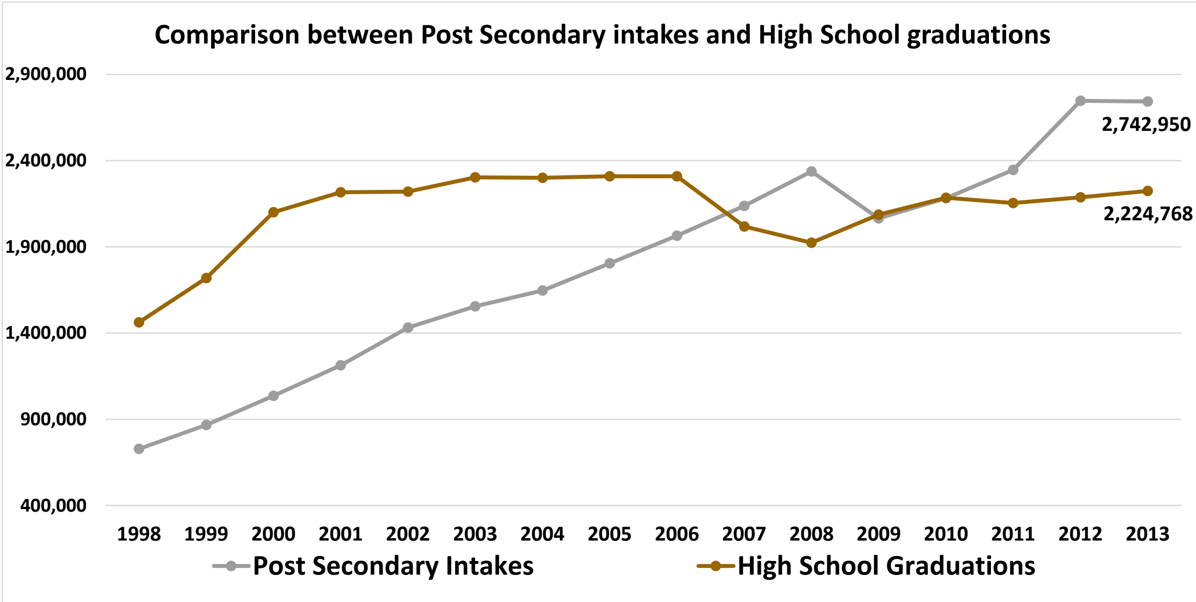
Meanwhile, Brazil's economy began deteriorating rapidly over the course of the year and due to higher unemployment we believe the sector will face major difficulties in the years ahead.

Note that the risk of default in the program is still imminent and there is little public data available about this indicator.

Therefore, in our opinion, 2015 will see the higher education sector enter a new stage, the fourth stage since the sector's transformation in 1996, which unlike the previous three stages will see a downturn in the number of entrants and, above all, in profits.

The overwhelming challenge is trying to estimate the recurrent level of demand in an economic downturn and FIES at a level lower than in previous years. As described earlier in this letter, FIES and the economic boom, along with distance learning and the expansion in the number of private seats, led to huge demand being met for the first time by young people who already had high school qualifications but for several reasons did not enter higher education previously and who ended up taking advantage of the opportunity to resume their studies.

The graph below demonstrates this intriguing achievement, leading us to question whether there is still a bubble in the sector, driven by a decade of favorable drivers. The brown line denotes the number of high school graduates - including EYA (education for young people and adults). The gray line denotes the number of students entering higher education.



Source: INEP

Since 2011 higher education has received more students than high school education has managed to graduate. We believe that even during the period 2007 to 2010, when the number of higher education entrants was nearly the same as the number of high school graduates, there was a bubble, as it is hard to believe that all high school graduates will go on to university.

However, this phenomenon observed in Brazil can be easily justified: all the unmet demand accumulated over the years was met during this short window of government incentives.

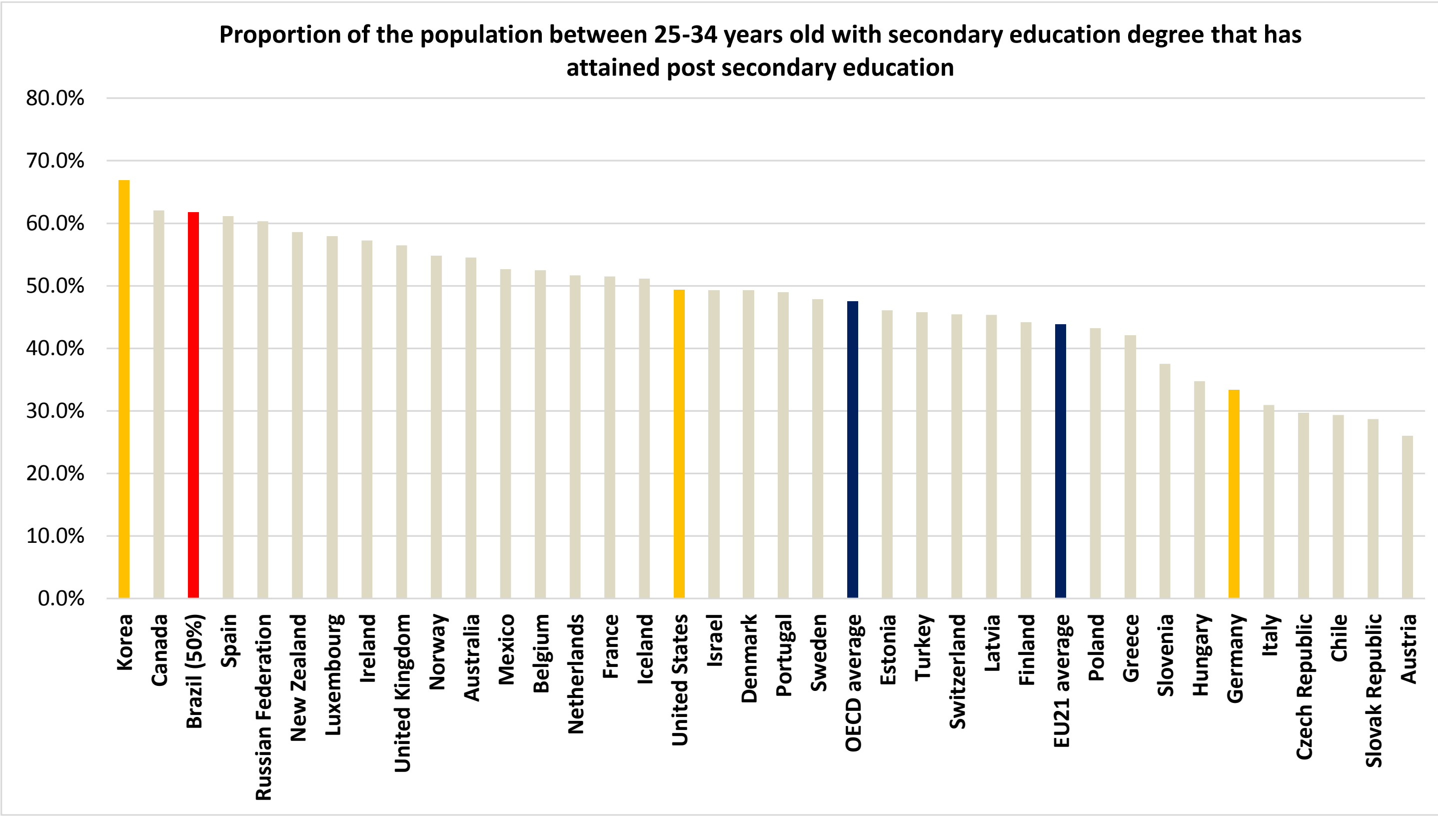
The financial market, guided by the rhetoric of the listed companies, has always relied on the huge number of people with high school qualifications but no higher education course as a virtually inexhaustible demand. We are slightly more skeptical in relation to this point. This inventory has indeed been fundamental to driving the sector over the last decade, but the question is whether this inventory will continue to drive demand with the reduction in incentives/disposable income.

If the 2.75 million entrants observed in 2013 were recurrent and we assumed a graduation rate in higher education of 50% (i.e. half of those starting courses manage to complete them), in line with the number reported by the publicly traded higher education institutions, 1.375 million young people would graduate from university in the year.

As can be seen in the graph above, the number of high school graduates levelled out at 2.2 million students 3 years ago, tending towards a slight decrease due to demographic reasons. If we assume 1.375 million people will graduate from university and 2.2 million from high school in the year, in the long run 62% of all high school graduates will also earn a university qualification.

Does this figure seem low?

The graph below consolidates OECD data for 2012, against the percentage of the population with a high school qualification between 25 and 34 years of age who have a higher education qualification. The bar in red denotes this percentage for Brazil considering a graduation rate of 50%.



Source: Studio Investimentos and OECD

In South Korea, the country with the highest rate of people in higher education in the world, 66.9% of young people with high school qualifications between 25 and 34 have a university degree. In the USA, a country which also has widespread access to student financing loans, this figure is 49.3%. The average in OECD countries is 47.5%. In countries with a high penetration of technical education, like Germany, which could serve as an example for Brazil, this figure is as high as 33.4%.

Another matter warranting special attention is the unusual situation verified over all the last 5 years. When we calculated the base of students with FIES in the listed higher education institutions, we found that they recorded greater growth in number of students than the total base of the companies' students. This means that the number of students effectively paying (without government subsidies) diminishes year after year at these institutions.

A closer analysis of the figures published by companies to estimate the dropout rate of FIES students shows that this rate is very low (15%-25%) by Brazilian standards. Based on this finding, dropout rates of students without public financing are extremely high, approximately 70-80% depending on the institution assessed.

Without addressing the merit of how many FIES students could be effectively paying their own tuition fees, we reached the worrying conclusion that a class in the 3rd year of university has practically 90% of students with FIES or PROUNI. The information disclosed by companies that "only" 40%-50% of their students are FIES students is therefore much less comforting than initially thought.

Conclusion

We would like to emphasize that, as asset managers, we are always obliged to incur some level of risk; projecting variables with a highly uncertain future, passing through economic booms with skepticism and realism and maybe even more importantly, identifying good opportunities in difficult times.

We believe that one of the most important exercises of discipline for a diligent investor is not losing sight of the historic perspective of a segment or company, under pain of perpetuating extreme short-term levels, which are not sustainable or recurrent.

Seeing the big picture without yielding to the temptation of short-term noise is highly important for investors to be properly aware of the risk of permanently losing capital that they are incurring or, inversely, excessively depressed conditions which could turn around rapidly.

Throughout this letter we seek to draw attention to extremely important sectors of the Brazilian economy, which we still believe are undergoing a process of adjustment due to the transition from the tailwinds to headwinds.

We cannot overlook the fact that share prices not only tend to foretell the more predictable events, but also tend to exaggerate extreme scenarios. This could also occur for the sectors addressed above.

We are already starting to identify in today's Brazilian stock market a number of highly attractive investment opportunities, even amid a scenario which is not demonstrating imminent signs of recovery.