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REPORT

September

2016

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# Sequence



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# The Swedish Economy in 2016

*This text will try to reproduce a general overview of the Swedish economy in its current state and what kind of possibilities and challenges it faces now and in the near future. The key features discussed will be the development in GDP, unemployment and inflation. With these measures the reader will get an insight into the Swedish economy and how it is performing on a global level.*

## A boom in the Swedish economy

The strong development in Sweden is in part a result of the global economic recovery since the financial crisis in 08. By glancing at Figure 1, one can notice a positive trend in the GDP growth rate the last three years, reaching a growth rate of 4 percent in January 2016. However, our own forecasts suggest that the GDP growth will decline for the upcoming three years.

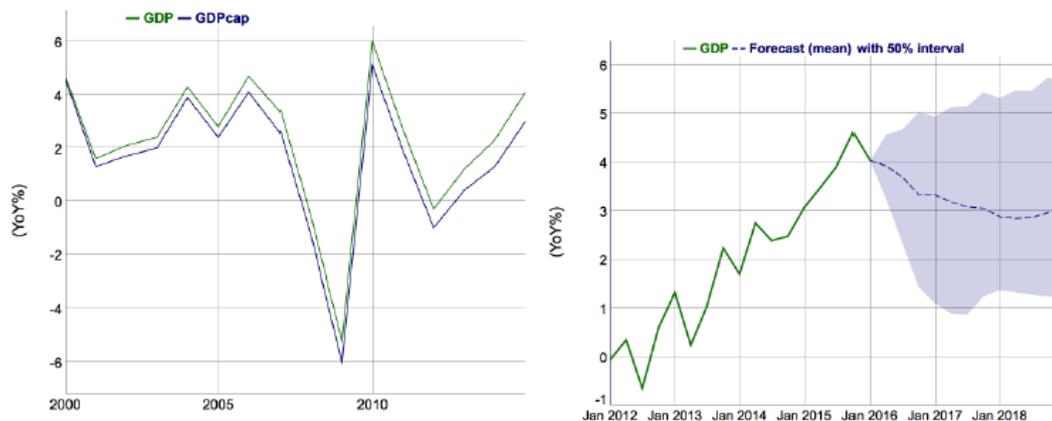


Figure 1: *GDP and GDP per capita, 2000 - 2015*      Figure 2: *GDP forecast, 2016Q1 - 2019Q1*

	2016	2017	2018
GDP	3.22	3.09	3.10

Table 1: Average forecast in 2016, 2017 and 2018.

Noticable is that it seems to be more likely that the GDP growth is lower than 4 percent in the future than in the upcoming quarters.

Low interest rates has been a stimulus for the domestic demand and at the same time kept the exchange rate of the Swedish Krona at a favorable rate for the exporting industries. Swedish exports, which largely consist of investment goods, are benefitted by the stronger investment cycle in the OECD-countries that seems to keep growing this year and the next. The growth in exports will, however, probably not reach the same rate as in 2015.

Both fiscal and monetary policies will drive domestic demand this year as well as the next. Government expenditures are expected to increase by around 4 percent during 2016, which in a historical perspective is a very high number. The surge in expenditures is mainly due to increasing costs for refugee immigration, but also the increasing number of young and senior citizens in the population that drives the need of publicly financed welfare services. In its latest forecasts, the Swedish Migration Board estimates that the influx of asylum seekers will continue to be high both this year and the next. This contributes to the rapid increase in public consumption also next year, but the uncertainty of the scope of refugee immigration is very great.



The increasingly strong economy in Sweden entails the need for businesses to keep investing. The demographic development additionally reinforces the already great need for public investment and investment in housing. These investments will keep adding growth in Sweden the coming years. A strong labor market also has a hand in rising household incomes, which is expected to increase consumption this year and the next with about the same rate as in 2015.

Investments in housing has been on the rise the last couple of years and measured as a share of GDP it has now reached its peak in over 20 years. From a level around 2 percent before the Millennium to its current level around 5 percent. Due to a shortage in both labor and attractive land the growth in housing investments is slowing down. However, there still is a pent-up demand for housing and the strong population growth means that the demand for housing continues to grow rapidly. In other words, the rise in investments have not been enough to remedy the housing shortage. Policies that further drives supply and more efficient use of the existing housing stock are required to achieve balance in the housing stock.

The market for Swedish exports continues to witness a rather weak demand in the beginning of 2016. The reason is the low commodity prices, slowing down the investment in the commodity sectors which is affecting the export of investment goods. The estimation is still that the investments in Swedish business environment will gradually start to grow at a faster pace but will remain below the level of historic average since 1981. Despite the weak export development in general, there are some positive exceptions. Exports of motor vehicles and IT related services, which grew strongly last year, are expected to continue to perform good. Exports in whole are estimated to increase by at least 4 percent this year and by at least 3 percent in 2017. The import of foreign goods increased by over 5 percent, compared to the last year. The strong development is mostly attributable to a higher demand for transport equipment, electrical appliances and consumer electronics. The household consumption abroad is expected to grow strongly in 2015 and peak at 7 percent.

Overall, these factors suggest that GDP should continue to grow relatively quickly this year and the next. Though, expressed as GDP per capita, the development is not particularly strong. Next year the rise in GDP per capita is estimated to a mere 0,9 percent and subsequent years the growth will be even more feeble. One of the reasons is the rapidly growing population some of the refugees gets a residence permit and now are included in the population. In many perspectives, it is deemed to take a long time for most of the them to get a job and thereby contribute to production. This would hold back the development of GDP per capita. However, if the integration of the refugee immigrants proves to be successful, Sweden will have a great opportunity to expand and diversify the labor force. In turn, this would probably lead to a rise in the GDP per capita.



## Main tendencies in the Swedish labour market

The latest data provided by National Institute of Economic Research (Sweden) demonstrates several positive tendencies in the Swedish labour market. The number of the employed has increased by 0,5 percent in the fourth quarter of 2015. Similarly, there has been an increase in the labour force. The unemployment rate, in its turn, stays steady at the previous year’s level of 7,1 percent. These economic indicators give a rather optimistic picture of the situation in the labour market in the foreseeable future.

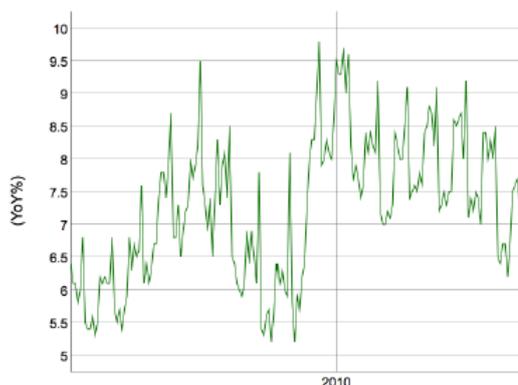


Figure 3: Unemployment rate, 2001 - 2015

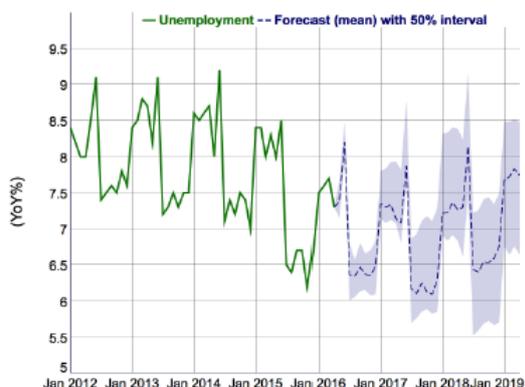


Figure 4: Unemployment forecast, 2016M4 - 2019M4

	2016	2017	2018
Unemployment	6.50	6.52	6.55

Table 2: Average forecast in 2016, 2017 and 2018.

The employment rate of the age group 15 to 74 is currently at approximately 67 percent and there is a sufficient ground to assume that it will continue to rise during upcoming periods. One of the reasons for this is the high amount of jobs vacancies in the market. The number of jobs available has increased in the fourth quarter of 2015 and is at a considerably higher level than the historic average. Simultaneously, the number of dismissals remains to be comparatively small. Rapid increase in employment is detected mainly in the public sector. The higher demand for staff in the public sector is mainly caused by the large number of refugees and the old and young people becoming a bigger share of the Swedish population. Furthermore, employment is also increasing in both the construction and service industries.

The labour force has grown strongly in recent years as a result of the increase in the population of working age and the increased immigration. In the next few years the working age population is expected to grow by approximately 1 percent per year. The relatively low rate may be explained by the long processing times at the Swedish Migration Board that hinder the new arrivals to enter the labour market directly. Additionally, before new arrivals can commit to the labour market, they may need some time to establish to the society as they may lack the required level of language proficiency or relevant education and professional skill-set. These factors contributes to unemployment rate around 16 percent among immigrants. Overall unemployment rate declined to 7,1 percent in February this year.



### Swedish prices, wages and inflation

Inflation over the past five years has been lagging and prices for all major aggregates in the consumer price index (CPI) has been weaker than their structural growth rates. The structural growth rate is the long-term development in the aggregates of the CPI that is consistent with the Swedish inflation target of 2 percent. From our forecast we can see that it is likely that the inflation rate will become higher than 0.5 percent for the next two years. However, it is harder to tell how the inflation rate will evolve in the longer run.



Figure 5: CPI and CPIF rates, 2000 - 2015

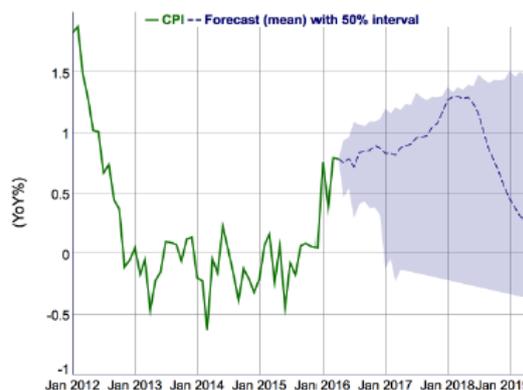


Figure 6: CPI forecast, 2016M4 - 2019M4

	2016	2017	2018
CPI	0.90	1.18	0.47

Table 3: Average forecast in 2016, 2017 and 2018.

There are a series of explanations to the low inflation rate in recent years. A major factor is the weak economic activity abroad which has led to unsatisfactory development in global market prices and thus Swedish import prices. Weak demand period has also resulted in lower wage increases and difficulties for the companies to transfer cost increases to the consumers.

The CPIF-inflation (CPI with fixed interest rate) can sometimes be more convenient to use as it is unaffected by the direct effects of changes in the interest rate. During the course of 2015 the CPIF-inflation rose, partly because of the sharp weakening of the Swedish krona during 2014 and the beginning of 2015. This effect was however offset by declining energy prices that continued to suppress the average price trend. The low interest rate also managed to keep rent increases at a minimum. For the full year of 2015 CPIF increased with a mere 0,9 percent. Noticable, in January 2016 the CPIF-inflation amounted to 1,6 percent, though the increase was mainly due to temporary factors. The CPIF-inflation is expected to remain low for the remainder of 2016. The previous depreciation of the Swedish krona contributes less to rising prices, while the currency appreciates yet again and the global price trend continues to be weak.

Wages in Sweden is another important factor that affects inflation and this year comprehensive wage negotiations are well under way. Collective agreements for nearly 3 million workers will be renegotiated this year. Large wage agreements expires before the summer in many industries such as manufacturing, retail, construction, transport and the municipal sector. The different unions has made demands of wage increases between 2,8 percent up to 3,3 percent whereas the employers has called for increases below 1 percent in a year.



The resource utilization can be somewhat strained onwards. Increased competition for skilled labor coinciding with a strained resource utilization is normally followed by higher wage growth. Wages are therefore expected to gradually rise faster this year and the next. Rising employer contributions is expected to drive up the total labor costs, i.e. the sum of salary and employer contributions. During 2015-2017 the total labor costs is expected to increase by around 3,8 percent on average per year. This increase can be explained partly by the reduction in youth employer contributions that began to taper off last year and expires completely June 1 this year and partly due to the special payroll tax for individuals aged 65 and over increases this year. This will affect the profitability for businesses in general since wage growth will be slightly higher because of the strained labor market. In addition, the Swedish Krona appreciates gradually, resulting in increases in export prices and thus lower margins for the exporting industries.

However, the rising wage growth is expected to get a limited effect on inflation in the near term as it is considered to advance with a lag in prices. Because of the removal of reduction in employer contributions for young people, total labor costs will rise in the industries which are hiring relatively many youths. For instance, young people are overrepresented in consumer related industries, such as retail and restaurant, this provides a greater contribution to consumer prices than would otherwise have been the case. The retail sector, is very pleased with its profitability, which suggests that they, to some extent, can handle increasing costs without increasing prices. Continued low inflation expectations among businesses also suggests that the price trend in goods and services for 2016 will be lower than the structural growth rate.

Low prices in crude oil and electricity continues to contribute to lower energy prices in CPI, although the grid tariffs rise sharply. The decline in the price of crude oil also indirectly adds to lower consumer prices through reduced production costs on many goods and services. Preliminary results from this years lease negotiations indicate that rent increases in 2016 will be very low, probably the lowest in 10 years. Changes in taxes and subsidies will contribute to an increase in CPIF-inflation by 0,3 percentage points this year.

Overall, in 2017 the inflation rate seems to keep on rising. Due to the more strained resource utilization in the labor market, wage growth increases. This will increase production costs and also the possibilities to transfer these costs to the consumers. Meanwhile, the direct contribution from energy prices to CPI are estimated to be slightly positive for the first time in five years.

However, there are a number of factors that help to dampen this rise in the inflation rate. The weak global price trend of manufactured goods, in conjunction with a stronger currency, has a dampening effect on prices through a poor development import prices. The low levels of interest suggests that rent increases will be relatively minor also in 2017. Thus, as mentioned above, it is hard to tell whether the inflation rate will rise, stagnate or even decline in the long-term.



# The Dutch Economy and the Brexit

## Short Introduction

In 2015, the Netherlands had a GDP of \$832.6 billion with a real growth rate of 1.9% (CIA, 2016). Services, agriculture and industry represent respectively 79.6%, 1.6% and 18.8% of the 2015 GDP (CIA, 2106). The country had a labour force of 2015 was of 7.884 million with an unemployment rate of 6.9%. The main export partners of the Netherlands are Germany 24.5%, Belgium 11.1% and the UK 9.3% and the main import partners are: Germany 14.7%, China 14.5% and Belgium 8.2% (CIA, 2016). To continue with, the country's financial sector is dominated by four major banks which own 90% of the banking assets. Not only the Netherlands is one of the largest economy in Europe, it also has a relatively stable GDP growth rate throughout the past twenty years. (Trading Economics, 2016).

As member state of the European Union, the country benefits from no import restrictions as well as no tariffs for trade between member states. Nevertheless, the UK, one of the main business partner of the Netherlands, is now out of the EU. Will this decision impact the Netherlands's economy? If yes will this have positive or negative consequences? These questions will be briefly discussed in this paper.

## A potential disaster

To start with, Reuters points out that the Brexit would reduce the Dutch economy by 1.2% by 2030.

According to the CPB Netherlands Bureau for Economic Policy Analysis, "the Dutch economy is more connected to the economy of the United Kingdom (UK) via trade than to that of the European Union (EU) as a whole". With the UK leaving, the Netherlands will therefore be exposed to a considerable trade gap. The size of the effect being uncertain, we can however confidently affirm that uncertainty will grow for the Dutch exporters. There is a risk of new tariffs being imposed when trading with the UK and also a risk of the UK creating import restrictions. This should impact negatively the trade balance of the Netherlands and its real GDP growth rate for the years to come unless the UK manages the renegotiations of trade agreements with the EU with success. Moreover, the research points out that the sectors of 'chemicals, plastics and rubber', 'electronic equipment', 'motor vehicles and parts', 'food processing industry' and 'metals and minerals', which together form 12% of the Dutch GDP, could suffer from production losses of more or less 5%.

To continue with, the Netherlands will be the most negatively impacted country of the EU by the Brexit according to Global Counsel 2015 report.



# Exposure metrics



	Exports to the UK % of GDP, 2013	FDI stock in the UK % of GDP, 2013	Regulatory policy alignment subjective	Residents in the UK % popltn, 2013	UK bank links <sup>(a)</sup> % of GDP, 2014	Trade liberalising alignment subjective	Net budget contribtn. % of GNI, 2013	Output gap % potential, 2015	EU perception % negative, 2014	Overall Score <sup>(b)</sup>
Austria	1.3%	0.8%	No	0.2%	6%	Swing	0.4%	-1.1%	36%	7
Belgium	6.8%	4.9%	No	0.1%	21%	Swing	0.4%	-1.2%	22%	13
Bulgaria	1.9%	0.0%	No	0.7%	8%	Swing	-3.9%		18%	7
Croatia	1.2%	0.0%	No		6%	Swing	-0.1%		19%	4
Cyprus	7.1%	23.0%	No	4.0%	77%	Swing	-0.2%	-2.8%	38%	23
Czech Rep.	3.9%	0.0%	Swing	0.4%	3%	Swing	-2.4%		22%	14
Denmark	3.2%	1.9%	Yes	0.4%	12%	Yes	0.5%	-1.2%	18%	15
Estonia	1.5%	0.0%	Swing		1%	Swing	-4.3%	-0.6%	7%	9
Finland	1.8%	0.8%	Swing		16%	Swing	0.3%	-3.2%	17%	11
France	2.0%	4.3%	No	0.2%	25%	No	0.4%	-2.8%	23%	9
Germany	2.8%	2.4%	Swing	0.2%	19%	Swing	0.5%	0.0%	20%	13
Greece	1.7%	0.3%	No	0.4%	24%	Swing	-2.9%	-6.7%	44%	16
Hungary	3.7%	0.4%	No	0.7%	4%	Swing	-5.3%	0.0%	18%	9
Ireland	11.8%	7.5%	Yes	7.1%	174%	Swing	-0.2%	-1.4%	16%	25
Italy	1.4%	0.6%	No	0.2%	10%	No	0.2%	-4.2%	28%	5
Latvia	3.6%	0.0%	Swing	4.4%	3%	Swing	-3.4%		11%	13
Lithuania	3.4%	0.0%	Swing	5.3%	1%	Swing	-4.5%		6%	13
Luxembourg	4.1%	142.1%	No		365%	Swing	0.2%	-0.1%	16%	12
Malta	7.8%	11.8%	No		67%	Swing	-1.3%	0.3%	8%	16
Netherlands	7.6%	27.6%	Yes	0.4%	63%	Yes	0.4%	-4.0%	26%	28
Poland	2.8%	0.1%	No	1.9%	4%	No	-3.3%		6%	8
Portugal	2.6%	0.3%	No	1.3%	21%	Swing	-2.7%	-3.1%	25%	17
Romania	1.5%	0.0%	No	0.6%	2%	No	-3.0%		9%	5
Slovakia	3.2%	0.0%	Swing	1.0%	2%	Swing	-1.8%	-1.7%	19%	12
Slovenia	1.2%	0.0%	No		2%	Swing	-1.2%	-0.9%	17%	4
Spain	2.5%	6.0%	No	0.2%	8%	Swing	-0.3%	-3.5%	21%	12
Sweden	2.5%	2.2%	Yes	0.4%	14%	Yes	0.5%	-0.5%	22%	16

<sup>(a)</sup> This is the sum of UK bank liabilities and bank claims in the member state.  
<sup>(b)</sup> Each channel is given a weight of 1 (moderate), 2 (significant) or 3 (severe), according to the grading in page 8. These are multiplied with scores from this table of 1 (medium), 2 (high) or zero corresponding to each channel. As the output gap and EU perception both relate to uncertainty an average score is used.

medium high n/a

Sources: ONS, Bank of England, IMF, European Commission, EU Barometer Survey autumn 2014, CEIC, GC calculations

Furthermore, the Global Counsel mentions that “Dutch firms have direct investments worth €177 billion in the UK, earning over €9 billion in 2013, equivalent to almost 1.5% of Dutch GDP” (ONS, IMF WEO, GC calculations). Added to this, the Netherlands exported €7 billion in services as well as €42 billion in goods creating a surplus of €6.8 billion. (Global Counsel, 2015) (ONS Pink Book, 2014). It is also important to mention that some of the Netherlands largest companies are well established in the UK such as Unilever, Shell or Phillips. The Brexit may mean a delocalization of these headquarters to another country. Lastly, the report points out that the Netherlands has bank loans from Britain adding up to €236 billion in 2014 pointing out again the dependence of Dutch economy on the UK.

The loss of such an ally that the UK is/was will have dramatic consequences on the Dutch exports and its finance industry negatively impacting the Dutch growth. The question which needs to be raised now is: For how long will the Netherlands suffer from the Brexit?

It should also be mentioned that the Netherlands will be indirectly affected by the EU’s loss due to the growing tensions and uncertainty within the European Union itself. The exit of the UK opens the possibility for the more member state exits in the coming years (Reuters, 2016). To illustrate this, the anti EU right wing party of the



Netherlands already talked about a “Nexit” referendum (Financial Times, 2016). This increased uncertainty could negatively affect foreign direct investment flows within the EU, affecting vicariously the Netherlands itself.

### **Damage Control:**

Oneself could easily draw conclusion on the effect the Brexit has on the Dutch economy. However, there are a few important points to mention which jeopardize the negative impact of the Brexit.

To start with, the actual exit of the UK will not happen before the next two years (CPB Netherlands Bureau for Economic Policy Analysis, 2016). As a result of this, one could expect the member state of the EU, including to the Netherlands, to anticipate the withdrawal of the UK, partially reducing its negative impact on the economy.

To continue with, it is very likely that the UK will negotiate trade agreements with the EU. The UK will need to ensure the fact it has similar trade regulations with the rest of the member states from tariffs to importation restrictions. The more similar the regulations are, the lesser the impact on the economy of the UK and the member states.

Other assumptions found in the CPB Netherlands Bureau for Economic Policy Analysis are that, as the UK would be less interesting for investors, there would be a redistribution of investments within the EU, potentially benefitting the Netherlands. Lastly it should be mentioned that not all the Dutch industries will be directly affected by such an exit.

To conclude, the Netherlands will be negatively affected by the Brexit. To begin with, the country will face issues regarding its exportation, its financial services and its multinationals. Moreover, the Dutch economy may suffer from growing uncertainty regarding the European Union itself. However, it is important to point out that the actual withdrawal from the UK itself will only occur in two years. During these two years, the member states of the EU will have plenty of time to anticipate and adapt their strategy. Further, the UK will also have the opportunity to negotiate trading agreements with the EU, which will help to control the damages in the long run.

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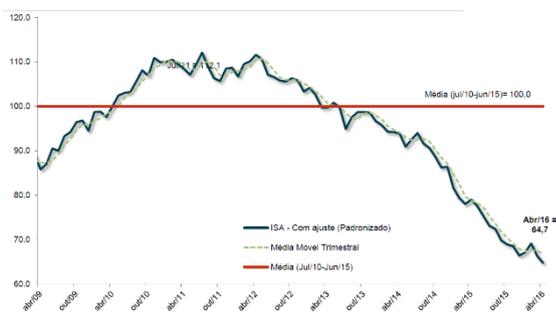
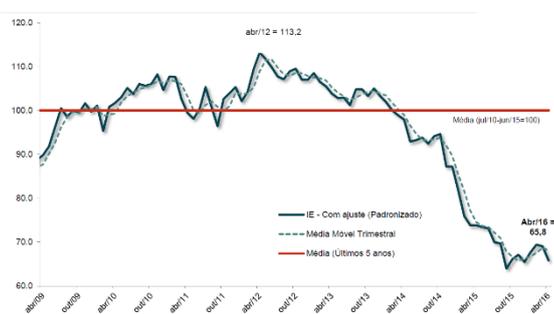


# The current retail trust reaches historical low levels

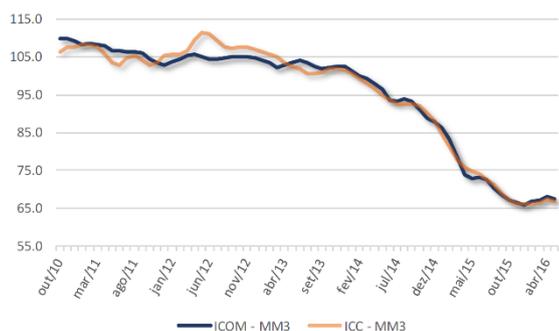
The strong economic recession and the political uncertainty bring many consequences to Brazilians. Among them, we can name the unemployment rate at 10.9% in the first quarter of 2016, affecting 11.1 million people according to IBGE (Brazilian Institute of Geography and Statistics); the indebtedness, where 44.54% of the families are in debt in February, according to the Central Bank; and the high interest rate kept in April by Copom (Monetary Policy Committee) at its highest level in 9 years, at 14.25% a year. Through this data, we can see a worrying instability that has been directly affecting the consumer confidence and, consequently, the retail business performance.

The greatest reflection of this unfavorable macroeconomics was the Consumer Confidence Index (CCI), which reached the lowest level since its onset in 2005. The CCI is a weekly survey designed to capture the sentiment of consumers about the general state of economy and their personal finances. The expressive default rates, the weakened marketplace and the high levels of family indebtedness are the main reasons for such distrust.

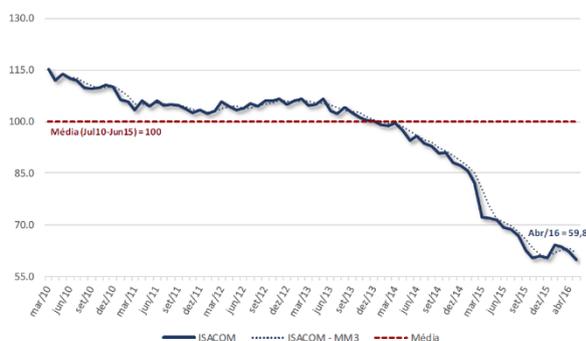
Moreover, the CCI is divided into 2 confidence sub-indicators: the Present Situation Index (ISA-CCI) and the Expectations Index (IE-CCI) related to the next months. In both of them, the consumers' evaluation was worse, and the ISA also reached its lowest historical level..

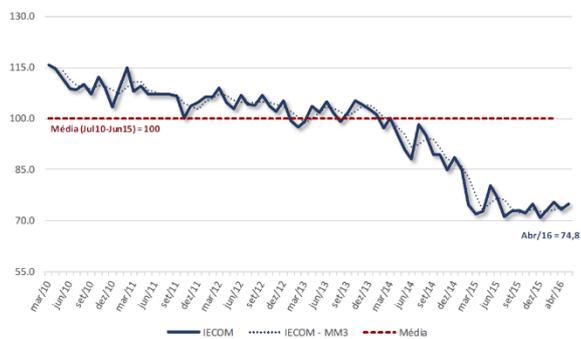


The bad scenario of retail sales reduces not only the consumer confidence, but also that of the entrepreneurship community. The Trade Confidence Index (TCI), survey to monitor and anticipate the economic trends in the industry, reached its second drop and the third lowest level since 2010, due to unfavorable demand, credit scarcity and the reduced industry confidence..



Just like the CCI, the TCI is also divided into 2 sub-indicators. The Present Situation Index (ISA-TCI) has reached its minimum level. However, the Expectation Index (IE-TCI) has had an increase, influenced by the measurement of the degree of optimism on the evolution of the business situation in the six months forecast.





Both indexes have shown startling results regarding the Present Situation; they reached historical minimum levels. Retail, which is directly affected, shows a quite dangerous situation, since it tends to drop with the loss of consumer confidence. This scenario is complicated to Brazil, since the family consumption represents 63% of the GDP, and when it dropped 4% in 2015, the GDP dropped 3.8%.

Regarding the future perspective, there are divergences between the Consumer Confidence Index and the Trade Confidence Index. Consumers are more pessimistic, because

they have suffered with an economic and political scenario that seems difficult to be solved quickly. On the other hand, the entrepreneurs believe that with the suspension of the president, the political uncertainty will reduce and the new government will take measures for the recovery of the economy and the stabilization the Brazilian macroeconomic policy.

However, the future is uncertain, since the current crisis is getting worse with a combination of corruption scandals, unemployment, and uncertain inflation rates among entrepreneurs and consumers. These facts show how the corrosion of the government credibility led to such a high downturn in almost all sectors, and the economy continues to drop towards the worst performance in the last decade.



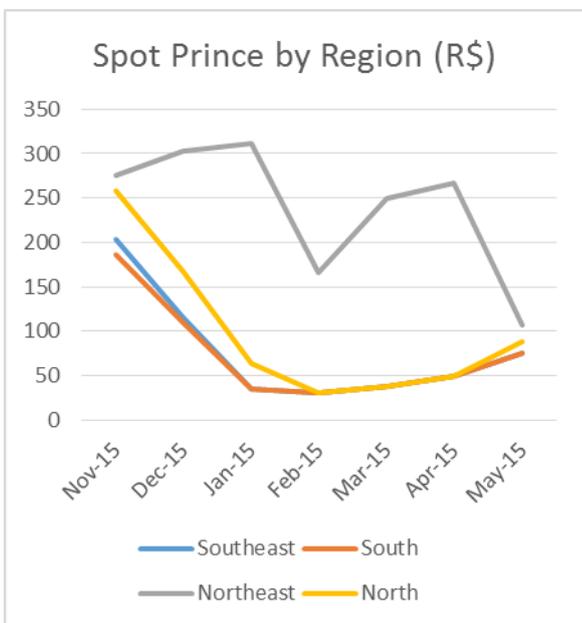
# Energy Market Overview in Brazil

Brazil has a very wide and complex electricity market, because of its great territorial extension and its unique characteristics created by high government intervention. Investments in infrastructure expansion and improvement of distribution efficiency offer good return opportunities, while it presents challenges around regulated prices and also higher costs given by a not friendly credit scenario.

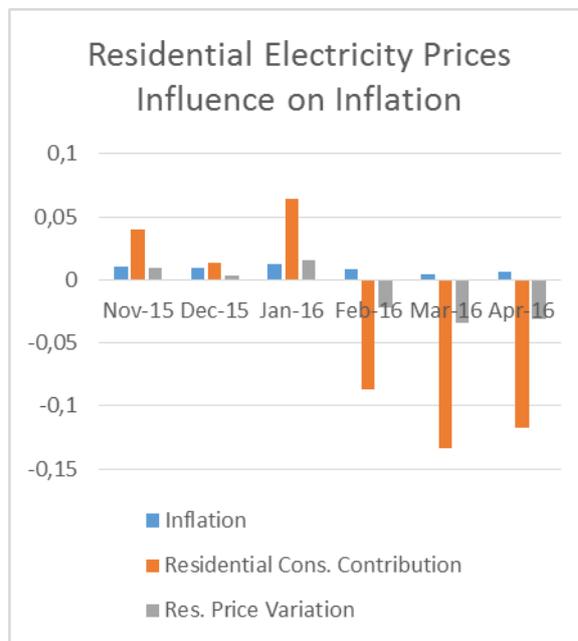
The SIN (Interconnected National System) composes the companies that generate, transfer and distribute energy in the country. ANEEL (Electric Energy National Agency) is the regulatory agency and has other institutions that provide support, including EPE (Energy Research Company) and the ONS (National Operator of the Electric System).

The electricity prices in the short term market are determined by the CCEE (Chamber of Electricity Commercialization). A weekly price, called Difference Liquidation Price (PLD), is calculated to beacon the spot market operations. It takes into consideration the marginal costs of operation and the conditions of all hydroelectric and thermal electric plants in the ONS. The marginal cost of operation is the service cost of the system using the current infrastructure. The marginal cost of expansion is the service cost of the system inserting new projects. This model of price formation, that is not based on supply and demand, can bring additional costs and more risks to the system operation.

It's important to reiterate the contribution of the electricity prices to inflation. According to IBGE (Brazilian Institute of Geography and Statistic), in April of 2016, there was a drop in prices of residential electricity of 3.11%, resulting in a negative contribution to the national inflation of -0.12 percentage points. Nevertheless, in the last few months, the prices in the Northeast region have been presenting higher volatilities than in other regions that have been relatively constant.



Source: CCEE

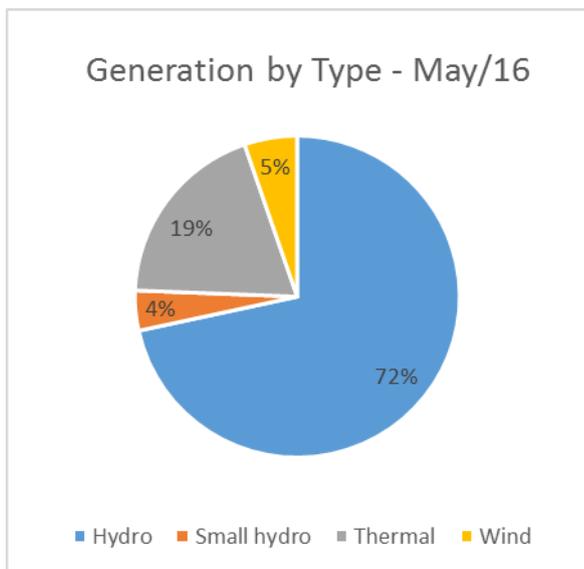


Source: IBGE



### Generation

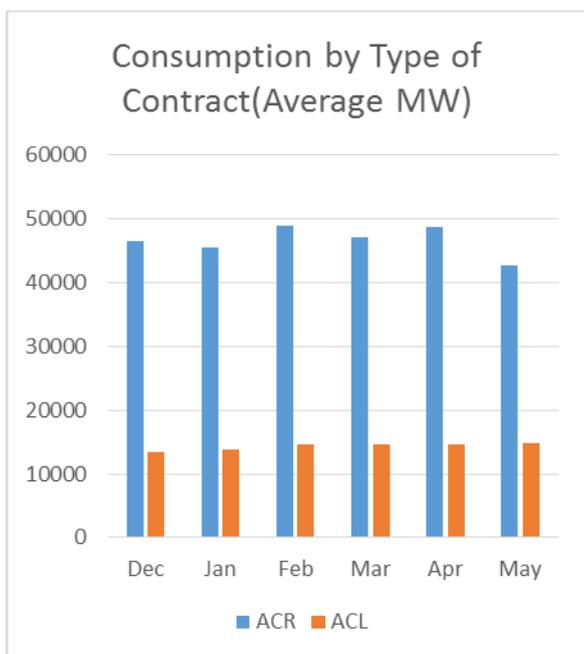
The generation in Brazil is mainly hydroelectric and thermal electric. The chart below shows the distribution by energy sources in March 2016.



Source: CCEE

Due to representing almost 80% of the total generation, it's clear the strong influence of the hydroelectric source in the energy configuration of the country and how water reservoir levels can change the prices. During periods with less rain, more thermal plants have to be turned on, raising the electricity prices.

There are two main ways of supplying electricity. Through the Regulated Contract Environment (an auction) or the Free Contract Environment. In the regulated case, the parts bid for pre-determined quantities or availability of energy. In the free case, prices and quantities are defined between the interested parts. The figure below presents the variations of electricity consumed by type of contract.



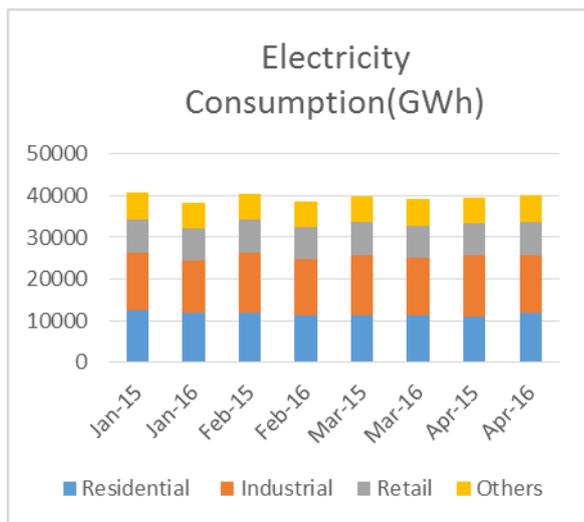
Source: CCEE



In the last available energy auction, in December of 2016, the BTG group obtained the largest contract, consisting of 8.864.448 MWh at 148,47 R\$ by MWh, generating a total revenue of more than R\$ 1.3 billion.

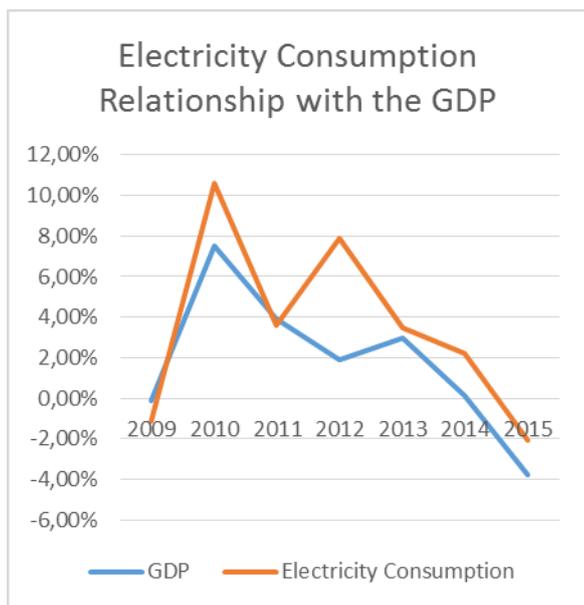
### Demand

The demand of electricity has been declining continuously in the last months, accumulating a loss of 2.9% since January in comparison with the same period last year. The main cause is the deterioration of the economy that has been suffering significant drops in productivity, income and a high inflation, not to mention the back to back retraction in the GDP in 2015 and the expected in 2016. The electricity consumption in Brazil is largely dependent on the industrial activity as well as most developed countries in the world. The most important industry sectors in terms of consumption that have been declining are the textile, automobile and steel.

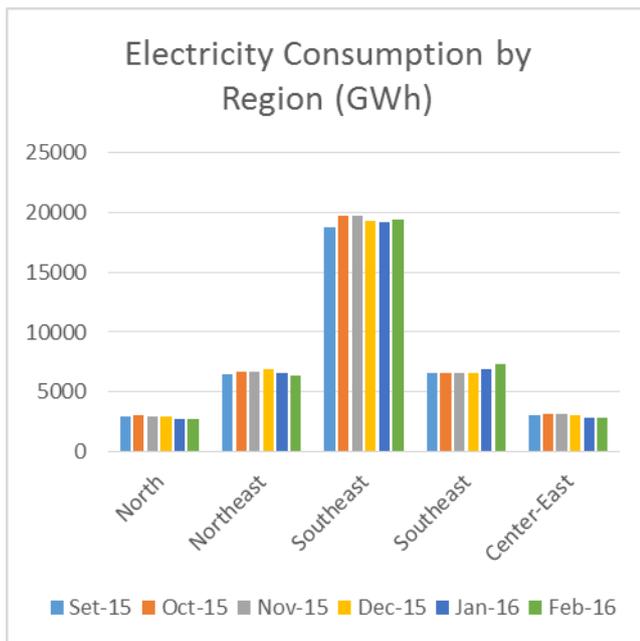


Source: EPE

Although the crisis is serious, the total demand for electricity remains almost constant, with a more incisive drop in the beginning of this year, even with the rise in temperatures during the summer. On April there was the first positive variation in relation to the same period of 2015, pushed mainly by the uncharacteristic high temperatures.



One of the signs that the economy is in decline is the successive drop in electricity consumption. Because of that, it is highly probable that in 2016, with forecast of another drop in the GDP, the utilities and energy will suffer again.



Because the Southeast is the region with highest electricity consumption and with the average temperatures there being higher around 3 Celsius degrees than last year, the demand rose, while in the South the demand has stagnated.

Scenario in the Main Companies (1Q2016 vs 1Q2015)

### **CTEEP**

The Companhia de Transmissão de Energia Elétrica Paulista is the largest transmission company in the country, responsible for the transmission of electricity in 26% of the country, the company had higher EBITDA (+36.3%), EBITDA margin (+12.4 p.p) and debt (+0.7%). Because its clients are more concentrated in the Southeast region, even with expansion to other regions where there is opportunity to more costumers, there has been a drop in market share. Its market share is declining from 29% in 2011 to 26% nowadays. The net revenue could be higher if it wasn't by the investment in new plants and network improvements.

Some reasons for the good results:

- High inflation influencing operation and maintenance services.
- Reduction in the network's unavailability, the main driver of losses
- Higher returns from financial assets of infrastructure projects.

In the same way that the company had higher revenues because of the inflation rate, its costs also rose due to bad execution in projects (+28.1%), higher human resources spending (+8.3%), while it had a reduction in legal battles spending due to lower labor regulation costs (-64.3%).

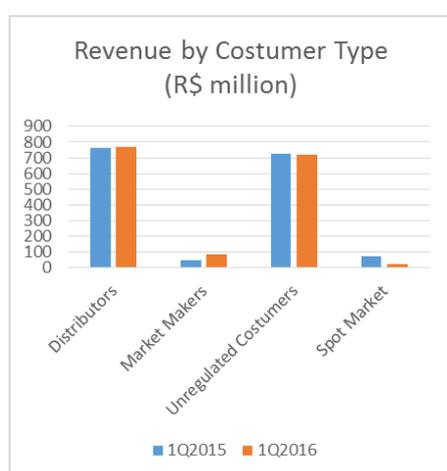


## Tractebel

Tractebel is the largest private company in energy generation in the country, with a total capacity of more than 8.7 GW and market capitalization of about R\$ 24 billion. The distribution of its total capacity is 12.4% from thermal plants, 83.3% from hydro plants and 4.3% of other renewables.

In the beginning of 2015, a period with low rainfall, the thermal plants had to be started up to compensate the losses with the hydro plants. That scenario has reversed since then, coming to a drop in total generation of 8.1% in the first quarter of 2106. The average sales price rose 5.9%, lower than the inflation due to lower prices of new contracts.

The volume of sales dropped 4.4%, justified by the bad economic cycle, where the number of terminated contracts was higher than new ones. The costs of electricity sales and services fell 1.5%, or R\$ 14.3 million below 1Q2015 numbers, influenced by the reduction of R\$ 17.3 million in materials and services, R\$ 76.6 million received from a legal battle with a contractor, even with a rise of R\$ 59.6 million in the transaction costs in the spot market.



Source: Tractebel 1Q2016 Earnings Release

## CPFL

CPFL is largest private integrated company in the sector, which means, considering generation and distribution. It has 12.4% of market share in national distribution and is the third largest company in generation. Most of its business are in the states of São Paulo and Rio Grande do Sul.

In distribution, the company had a reduction in sales in the regulated environment on 1Q2016 of 6.4%, having for example, a drop of 10.5% in sales to the industrial sector, due to its declining activity. The generation capacity had a slight rise of 0.4% because of a new wind power plant, totalizing 3.128 GW of capacity.

The company had lower revenues in distribution (-R\$917 million), renewable generation (-R\$ 39 million), and thermal generation (-R\$ 45 million), in a total of less 1.7% in operating revenue. (-R\$ 124 million). The company achieved a reduction of 29.7% in electricity costs, due to the fall of 32.4% (R\$ 1 billion) and 8.1% (R\$ 362 million) in purchased energy costs and system usage charges respectively. Operating costs increased by 9% (R\$ 94 million). Net income was R\$ 232 million, an increase of 63.3%.

One of the main cost of energy is the GSF (Generation Scaling Factor). It is a factor that represents the total ratio of the total generation of hydroelectric power plants and the physical guarantee of the MRE. The MRE is the Energy Reallocation Mechanism. It is a financial mechanism to share hydrological risks of the plants in the National Interconnected System.



## ELETRORBRAS

Eletrobras is a company of mixed capital controlled by the federal government, providing services in generation, transmission and distribution. It has 32% of the generation capacity in the country, 47.1% of the transmission lines and covers 30.5% of total electricity distribution. It is responsible for about 40% of national hydroelectric generation.

Because of falling spot prices and unbundling of its subsidiaries, there was a decrease in net generation of 23.2% compared to 2015. The energy traded volume increased 1.7%.

The transmission revenue increased by 8.1% due to the start of operation of new investments. In the distribution sector, the revenue fell 29.7%, mainly due to the deconsolidation of the subsidiary CELG.

The company have been showing poor financial results, with a reduction of 248% in EBITDA in relation to 1T2015, generating a net loss of R\$ 3,897 billion. The main factors for this result were the R\$ 2,949 billion for the payment of compulsory loans and the loss of R\$ 1,167 billion of the subsidiary distributors.

Compulsory loans were created in 1962 to expand and improve the Brazilian electrical system. Since 1976, the collection was restricted to the "bills" collected by the distributors with the industrial consumers with monthly consumption up 2MWh. The credit of these loans to consumers is carried by Eletrobras and can be converted into company stocks.

Some factors are important to understand the current situation of the company, such as the Provisional Measure 579. On 11 September 2012 it was edited to allow a reduction of 20.2% on average in electricity tariffs. The government intended thereby boost the economy by eliminating charges, anticipating extensions of concessions and allocation of resources.

Several generating companies questioned the terms of extension of concessions and compensation mechanisms. Only 60% of the expected volume of generation was adhered to the agreement, which led to sub contract the distributors who had to purchase energy in the spot market (which had high prices due to the lack of rain).

To pay compensations, the government issued debt of R\$ 8 billion with market interest and spent R\$ 4 billion of the treasury after a bailout of R\$ 1.2 billion to the distribution companies. Publicly traded companies went to court questioning the compensation values, but Eletrobras, being of state control, had to suffer serious losses.

To worsen the situation, in 2015 the president of Eletronuclear, a subsidiary of Eletrobras responsible for the operation of nuclear power plants in the country, was arrested for receiving bribes. Thus, in addition to losses already mentioned by stoppage in the construction work of the Angra 3 plant, the company's shares ceased to be traded on the New York Stock Exchange, due to repeated delays in the release of financial results.



Multiples (TTM)								
	EBITDA Margin	EPS (Year Ending)	ROI	ROE	ROA	Debt/Equity	$\beta$	P/E
AES Tiete	33.46	0.28	14.42	27.47	10.18	86.11	0.22	13.33
Eletrobras	-44.78	1.96	-15.95	-40.83	-13.24	124.72	0.95	7.06
Tractebel	47.83	0.69	12.15	23.17	13.37	54.81	0.3	16.02
CPFL	18.95	0.42	3.48	12.85	2.58	254.49	1.58	21.26
CTEEP	39.04	0.58	7.83	9.63	7.25	15.32	0.24	19.23
Equatorial	14.94	3.06	11.99	26.3	8.58	82.4	0.2	10.81
CESP	22.08	0.31	-0.57	-384	-0.52	10.7	0.63	39.35
Eletropaulo	11.64	0.28	0.98	3.12	0.66	133.03	1.12	14.72
Light	10.84	0.54	-0.8	-2.28	-0.58	144.41	1.13	16.87
Cemig	10.19	0.3	3.62	7.86	2.6	80.08	1.96	7.45
Energias do Brasil	21.07	1.08	15.33	26.8	9.98	90.01	0.49	4.16
Copel	16.19	1.06	4.06	6.34	3.29	54.39	1.8	7.99



# Public finance and impeachment

Public finance is an extremely important matter on a global scale. This text aims to summarize the late events on the Brazilian economy that triggered the impeachment of the actual president and steadily impact on the Brazilian's daily life.

Since its independence in 1822, Brazil, governed by D. Pedro I, deals with the matter of public debt. At this time, the country experienced deep economic crisis, because the main exportation product in 1820 was the sugar, which was slumped at the time. The government was forced to get a loan in England to indemnify Portugal due to the independence and to finance local wars. Since then there were many other protagonists and facts that influenced Brazilian economical history. In the 1980s the contemporary history of the public debts started, through a deal closed with the IMF. The deal set some conditions to be followed by the Brazilian government and the main one determined the creation of an index to better control the loans at the time.

In July of 1994 the newly implemented “Plano Real” was responsible for stabilizing the economy. Before 1994, the inflation in Brazil was hasty and chronic, with its index going over 1000%, unbelievable to any outlander. With “Plano Real” the Brazilian currency changed to “Real” and many measures were taken, like expenses cut, revenue recovery, austerity measures, public banks' role reform and multiple privatizations. Measures that allowed the country to live a long period of stability. The same matter has lately come in question again, especially with the impeachment against the actual president of Brazil.

The fiscal responsibility law (Lei de Responsabilidade Fiscal – LRF), created in 2000 during the administration of the actual president Fernando Henrique Cardoso, is a law that imposed the control of expenses of many government agencies. It conditions the public expenses to the capacity of collecting tributes of federal entities. It was made necessary due to Brazil's history of doing many big constructions, when getting closer to end a mandate, leaving the debts for his successor. The law was responsible for growing reliability from outlander investors and for a cycle that brought social developments in Brazil.

However, due to big and badly planned development programs, expensive construction works and corruption scandals that financed political campaigns and secured monopolies over public services, like revealed by the investigation “Lava Jato” (Operation Car wash), has the primary deficit grown again in the last years, as showed at figure 1. Another important graphic is presented at figure 2, where the recent growing history with public pay cheques and hiring expenses are shown.

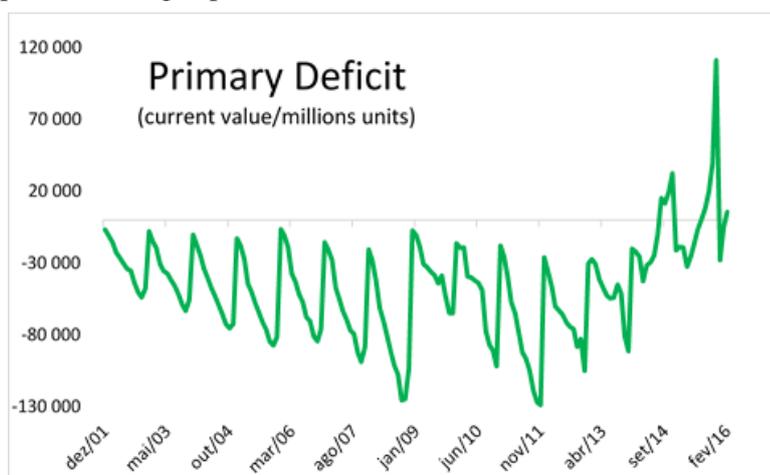


Figure 1 – Brazilian's Primary Deficit (Source: Banco Central Brasileiro)



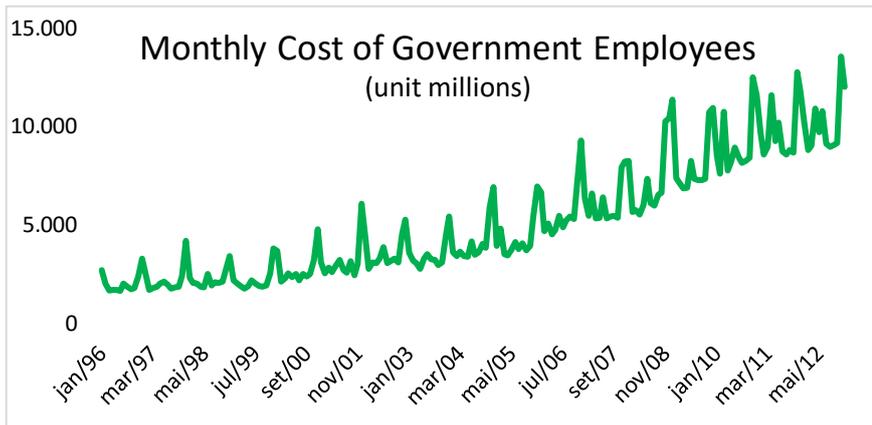


Figure 2 – Monthly cost of government employees (Source: Banco Central Brasileiro)

With revenues that don't grow at the same rate as the costs do, have the federal securities' costs increased along the years, as represented at figure 3:

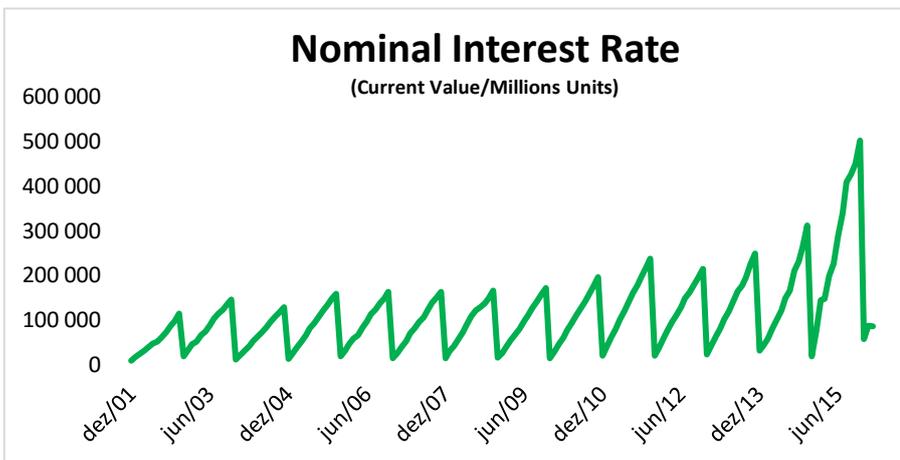
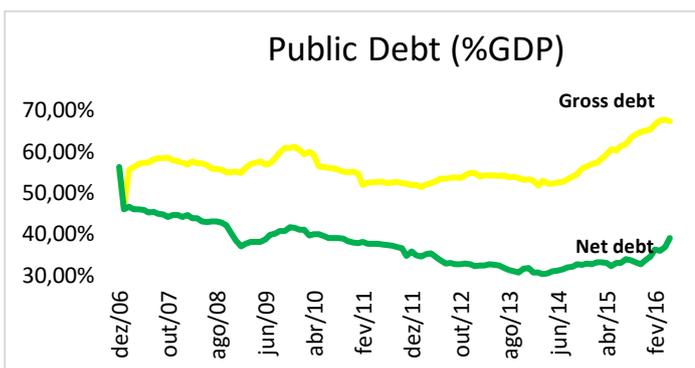


Figure 3 – Nominal Interest Rate (Source: Banco Central Brasileiro)

Under this adverse scenario we saw risk companies such as Fitch, Moody's and Standard & Poor's issue warnings about the recession in Brazil and an huge drop of position on lists comparing countries and its risk of investment. As result a grave economic crisis took place in Brazil.

Aiming not to be categorized by the "Lei de Responsabilidade Fiscal" (Fiscal responsibility law) of the year 2000 the Federal Government has created the "Contabilidade Criativa" (creativity accounting), converting expenses and debt operations in revenue to increase federal debts. The most famous maneuver was the capital contribution conversion to Petrobras – US\$24,9 billion – in a revenue of US\$10,3 billion to the National Treasury. Those measures were adopted by the government in a way of hiding the expansion of deficit, public debts and expenses. Figure 4 shows the growing discrepancy between gross and net debts.

Figure 4 – Public Debt (Source: Banco Central Brasileiro)



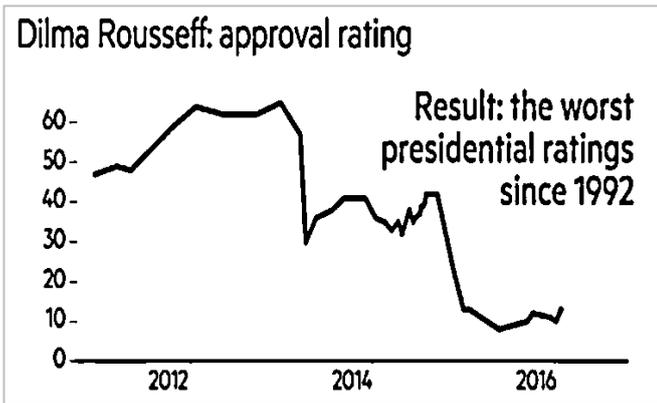


Figure 5 – President’s approval rating (Source: Data Folha)

To fill the primary results of 2013 has the government postponed payments related to a specific month or assignment using funds from state banks to cover budget gaps. In June of 2014 the budget gaps covering had reached a peak when state banks have covered expenses with social programs created by the government. The impeachment process over the president Dilma Rousseff comes from a complaint from that time and was also influenced by the slump in the president’s reputation that since 2013 has been suffering drops and causing a

migration from important allies of the Working Party (PT) to the opposition, reinforcing the impeachment process over the president. The climate was really propitious to the parliamentary acceptance of the process at the beginning of this year. Nowadays Brazil suffers of a severe economic crisis resulted of the political crisis, which has increased the unemployment rate up to 10%, the inflation rate to levels saw the last time two decades ago and a high currency depreciation. Experts believe that outlander investors would slowly come back to Brazil with the president exits. However, no one predicts how the US\$100 billion deficit would be pay by the next president.

