

**UNIVERSIDAD DEL CEMA
Buenos Aires
Argentina**

Serie
DOCUMENTOS DE TRABAJO

Área: Contabilidad y Economía

**EFFECTS OF HETERODOX POPULIST
POLICIES IN THE PRIVATE SECTOR. THE
ARGENTINE EXPERIENCE (2004-2016)**

Diego G. Fano, Victor A. Lucero, Antonio Marin

**Noviembre 2018
Nro. 668**

**www.cema.edu.ar/publicaciones/doc_trabajo.html
UCEMA: Av. Córdoba 374, C1054AAP Buenos Aires, Argentina
ISSN 1668-4575 (impreso), ISSN 1668-4583 (en línea)
Editor: Jorge M. Streb; asistente editorial: Valeria Dowding jae@cema.edu.ar**

Effects of heterodox populist policies in the private sector. The Argentine experience (2004-2016)

Fano, Diego G.; Lucero, Victor A.; Marin, Antonio.*

CESyDE (Sectoral and Business Performance Studies Centre) - CEMA University

Abstract

This study describes the effects of heterodox fiscal and monetary policies pursued by Argentina, associated with existing populist governments since 2004. Argentina's fiscal policy was characterized by increased public expenditures and the tax burden. The further expansion of public expenditure led to fiscal deficits that were financed by money creation, thereby triggering an inflationary process that, up to date, could not be controlled. In turn, the loss of value of the local currency led to a process of exodus of capital, which tried to be contained using exchange controls and restrictions, popularly known as "cepo cambiario" (dollar exchange clamp). The side effect of it was a significant overvaluation of the real exchange rate. In order to study the effects of these measures in private companies, the financial statements of 148 companies (that make public offer of shares in the stock market, with public financial statements) were analyzed, belonging to the sectors of construction, agriculture, food and oil industries, as well as 25 banks and financial institutions. It was observed that, in general, government policies significantly affected the profitability levels and investment rates for private companies, deteriorating margins and discouraging investment. In turn, banks and financial enterprises accompanied the rise of inflation with rising interest rates and declining loans to the productive and real estate sector, shifting its portfolio to finance short-term consumption. The results of this study can confirm the harmful effects of populist and heterodox policies over the real economy, especially related to the long-term effects associated with the loss of the investment.

Resumen

El presente estudio describe los efectos de las políticas heterodoxas llevadas a cabo por la Argentina en lo fiscal y lo monetario, ello asociado a gobiernos de corte populista existentes desde el año 2004. La política fiscal argentina se caracterizó por el incremento del gasto público y de la presión fiscal. La mayor expansión del gasto dio lugar a déficits fiscales que fueron financiados mediante emisión monetaria, desencadenando ello un proceso inflacionario que, hasta la fecha, no pudo ser controlado. A su vez, la pérdida del valor de la moneda local dio lugar a un proceso de fuga de capitales, que intentó ser contenido mediante un régimen de control de cambios, denominado autóctonamente "*cepo cambiario*". El efecto secundario del mismo fue un importante atraso del tipo de cambio real. A fin de estudiar los efectos de estas medidas en las empresas privadas, se analizaron los estados contables de 148 empresas que realizan oferta pública de acciones y publican sus estados contables en la bolsa de valores, pertenecientes a los sectores de la construcción, agropecuario, alimenticio y petrolero, como también 25 entidades financieras. Fue posible observar que, en general, las medidas gubernamentales adoptadas afectaron significativamente los niveles de rentabilidad e inversión de las empresas productoras, deteriorando sus márgenes y desincentivando la inversión. A su vez, en sistema financiero acompañó el aumento de la inflación con la suba de las tasas de interés y la disminución de préstamos al sector productivo y a la inversión inmobiliaria, desplazando su cartera de créditos a la financiación del consumo a corto plazo. Los resultados del presente estudio permiten confirmar los nocivos efectos que las medidas económicas de corte populista generan en la economía real, en especial en los efectos a largo plazo asociados al deterioro de la inversión.

* The points of view of the authors do not necessarily represent the position of the University.

Introduction

Since 2005, Argentina has experienced heterodox policies within the framework of populist governments. For over ten years, populist programs were carried out aiming income redistribution, based on a large increase in public spending (especially through transfers to low-income sectors as well as subsidies to various consumption), increasing the state's share in the economy by 60%. According to these policies, during the 2000-2006 period, state activities accounted for 26.5% of Argentina's economy¹, while in 2015 this share raised up to 46.2%².

The expansion of public spending was financed in many different ways. On the one hand, there was a notable increase in the tax burden by imposing new taxes and export duties (increasing tax rates as well as reducing the amount of tax deductions), although ultimately all this proved to be insufficient. Second, by the end of 2008, the Argentinian government nationalized pension funds, transferring those existing assets to the national social security administration, allowing it just to temporarily oxygenate the government finances, in order to continue increasing the populist spending. But when the genuine tax resources and stocks of assets held by the national treasury were exhausted, the Argentinian government started with the monetary issue, forcing the central bank to take non-transferable treasure bonds in exchange for pesos, that were used to cover the growing fiscal deficit. This led to an increasing inflationary process, with high devaluation pressure on the exchange rate, which led to the creation of a heterodox control on the exchange market (called indigenously as "*cepo al dolar*" or "dollar exchange clamp"), based on the mistaken belief of being able to control the inflation through exchange rate appreciation.

The consequences for the "*Dollar exchange clamp*" were not desired. It was not possible to control inflation levels, but for the worse, capital flows were interrupted (limited only to foreign exchange earnings generated due to exports) and thus investment levels of the private enterprises fell down dramatically.

While the Peronist party government ended in December 2015, the new government of the "*Cambiamos*" party failed to resolve the structural problems of the past administration, leading to higher levels of fiscal deficit and inflation. Only few achievements were made by the new government, like the suppression of the "*dollar exchange clamp*" at the beginning of 2016. But regarding fiscal deficit, a gradual program for fiscal adjustment failed by the end of 2017 after only two years, forcing the Argentinian government to turn to the IMF as lender of last resort. By these days, Argentina is facing a bleak economic situation with uncertain future.

All these government measures generated powerful effects on private companies participating in the Argentinian economy, affecting its profitability and ability to pay, resulting in few winners and many losers. The objective of this research is to describe and analyze the behavior of the main private

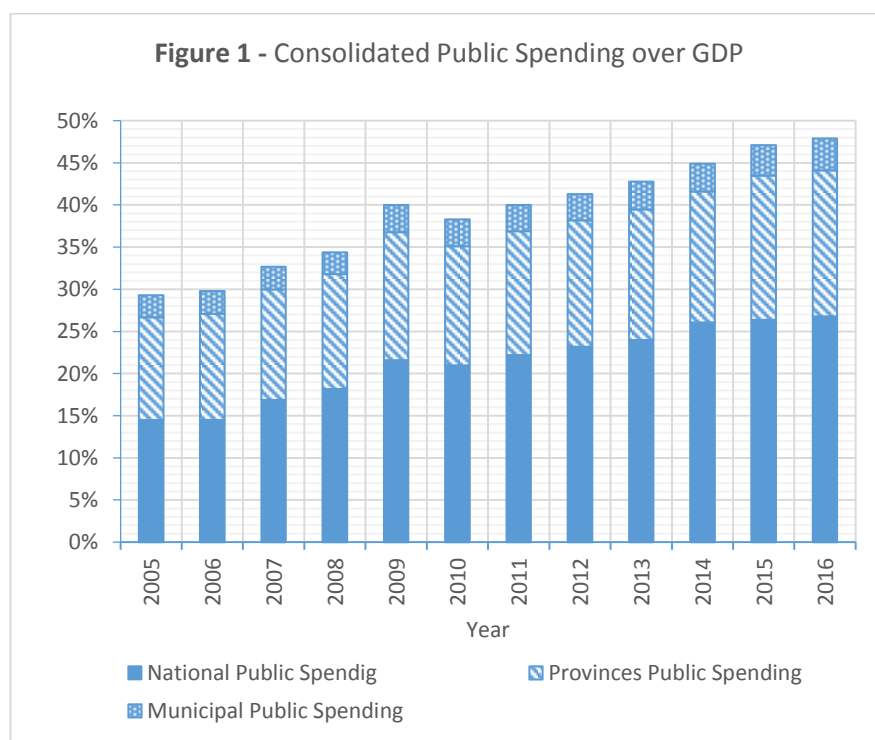
¹Argañaraz, N. y cols. (2014) "El fisco argentino - Nacional, Provincial y Municipal – se lleva entre un 47% y un 60% de los ingresos de familias asalariadas en conceptos de impuestos" - Informe Económico N°279 – Instituto Argentino de Análisis Fiscal ISSN 2250-7329

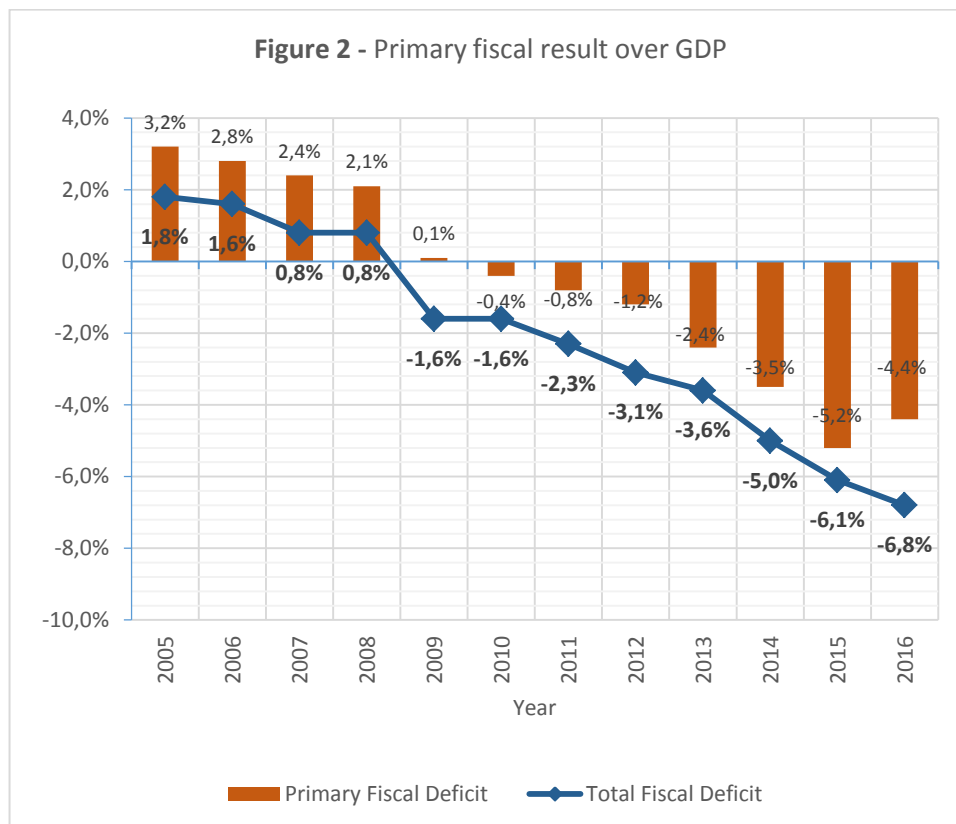
² According to Fiscal Management and Revenue Analysis and National Institute of Statistics and Census (Dirección de Análisis Fiscal y de Ingresos e Instituto Nacional de Estadísticas y Censos - INDEC)

business sectors of Argentina's economy, as regards their levels of profitability, indebtedness and investment rates, and how these variables were affected by major fiscal and monetary policies in Argentina between 2005 and 2016.

Argentina's fiscal and monetary policy between 2005 and 2016

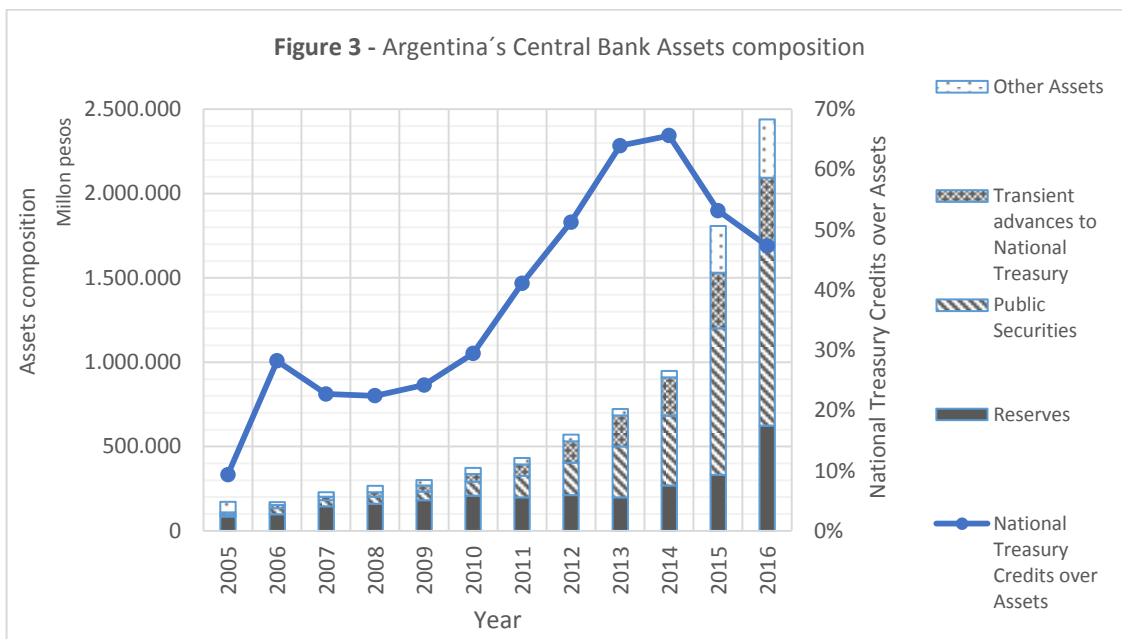
Argentina's fiscal policy between 2005 and 2016 was characterized by a significant and sustained increase in consolidated public spending, which in relative terms to GDP evolved from 26.9% in 2004 to reach 47.3% in 2016. The remarkable expansion of public spending decreased the fiscal surplus (2.1% of GDP) that kept Argentina in 2004, starting in 2009 a series of fiscal deficit that reached its peak of 7.2% over GDP in 2015. The evolution of public spending and tax consolidated results are shown in Figures 1 and 2.



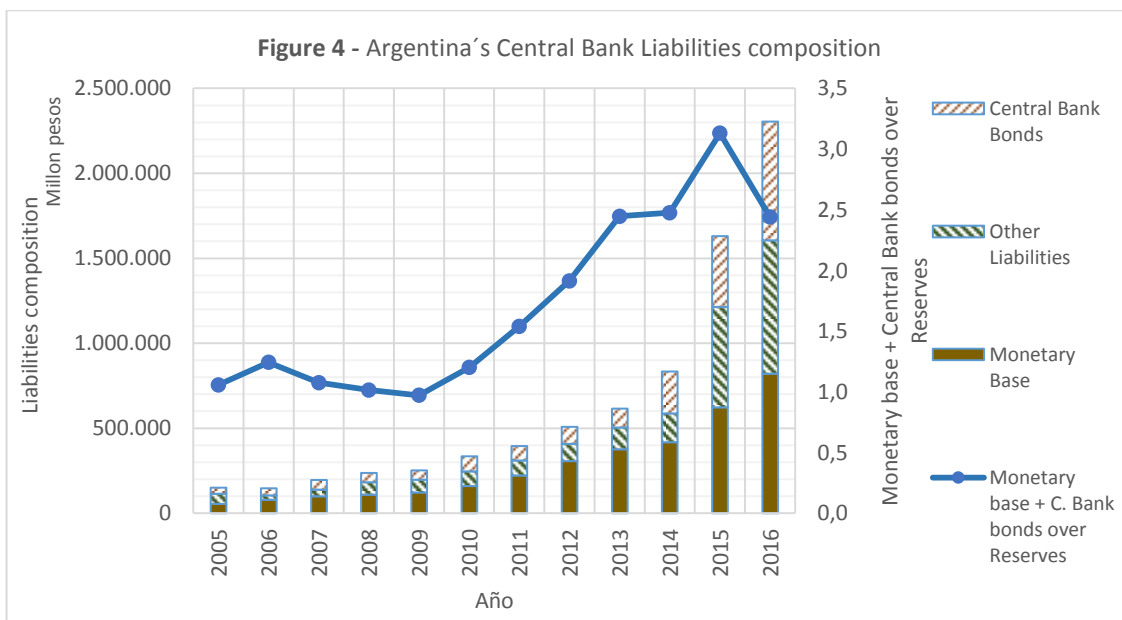


Figures 1 and 2 sources: own elaborated based on Ministry of Economy and INDEC official statistics.

Argentine growing fiscal deficit was mainly financed by money creation, instrumented through temporary loans to the national treasury and placement of nontransferable treasury bonds to the Argentine central bank. Such total loans with the national treasury, which in 2005 amounted to \$ 15.9 billion and represented 9.3% of total assets of the central bank, grew to \$ 1.15 trillion pesos in the year 2016, participating 47.3% of the active central bank. In addition, the strongly expansionary monetary policy (product of financing fiscal deficit) increased the monetary base from \$ 54.7 billion in 2005 to \$ 821.6 billion in 2016, resulting in a significant inflation, that was attempted to be controlled (unsuccessfully) by reabsorption local currency using Central Bank bonds and securities with very high interest rates. Figures 3 and 4 illustrate the composition of assets and liabilities of BCRA respectively.



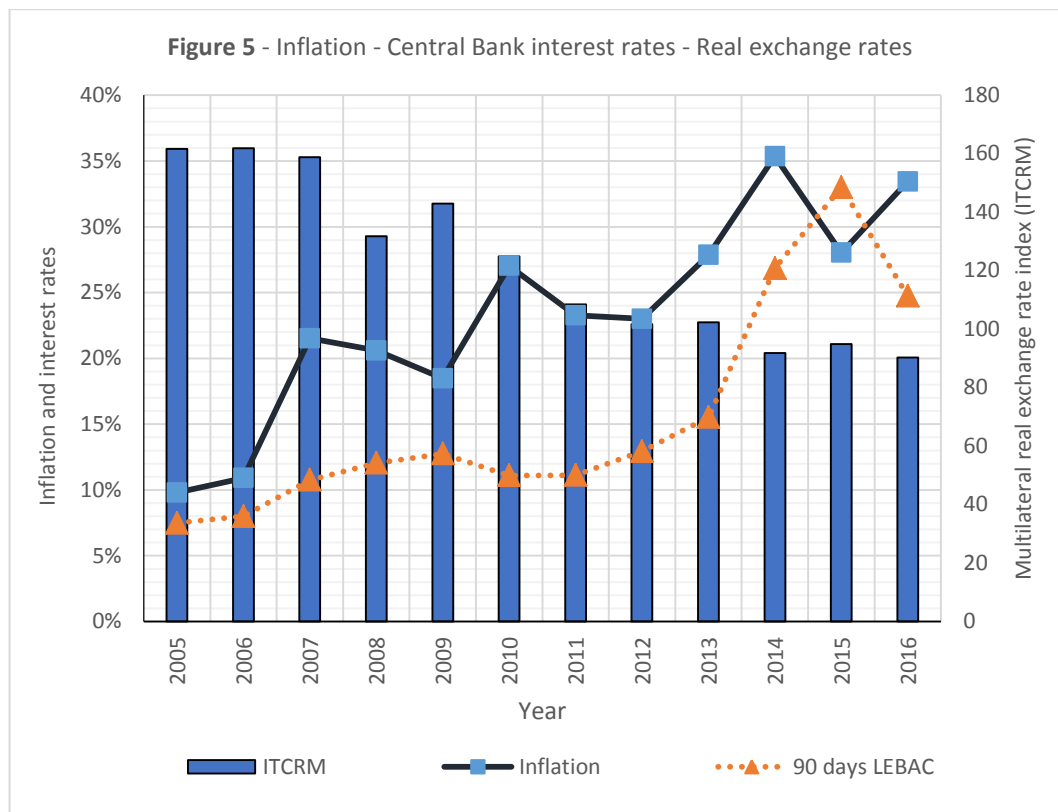
Source: own elaborated based on Argentina's Central Bank financial statements.



Source: own elaborated based on Argentina's Central Bank financial statements.

Since 2007, the inflationary process that was consequence of monetary expansion was not measured objectively anymore by the Argentinian National Institute of Statistics and Censuses (INDEC), with the consequent loss of reliable measurements of this phenomenon until the arrival of a new Government and the reconstruction of public statistics in 2016. Therefore, for data processing on this paper, alternative measurements of inflation were used, like those carried out by the Province of San Luis and the City of Buenos Aires.

While inflation rates were rising, the Argentine government tried to find a brake to this process by fixing dollar exchange rates, although it could not avoid a gradual but persistent devaluation process of lesser magnitude to inflation, leading to a significant overvaluation on real exchange rate since 2011 due to the appreciation of local currency. The evolution of inflation³, Central Bank bond rates (90 days LEBAC)⁴ and multilateral real exchange rate index (ITCRM) are shown in figure 5.



Source: own elaborated based on Argentina's Central Bank financial statements, INDEC, Province of San Luis and City of Buenos Aires statistics institutes.

Since 2004, Argentina's fiscal and monetary policy was intimately linked with many political events tending to sustain the growing level of public spending, which were associated to a populist government. As of 2004, mobile export duties were established for oil industry, with the aim of collecting a large part of the oil rent, but triggering a progressive deterioration of the Argentinian oil production capacity⁵, until those export duties were suppressed by 2015. Additionally, in order to sustain the growing fiscal deficit, the implementation of export duties on agricultural products were

³ According to INDEC until 2006, statistics of the Province of San Luis since 2007 and average measurements of the City of Buenos Aires and San Luis Province since 2012.

⁴ See http://www.bcra.gov.ar/PublicacionesEstadisticas/Principales_variables.asp

⁵ See, Fano, D y otros (2017), "Efectos de las regulaciones en el mercado petrolero argentino entre 2004 y 2015" – Cema Working Papers: Serie Documentos de Trabajo 624, Universidad del CEMA. ISSN 1668-4575 (impreso), ISSN 1668-4583 (en línea)

added, trying in the same way to appropriate part of the income of said sector⁶. These export duties increased from 13.5% in 2001 to 35% in 2007, when an attempt to establish analogue mobile export duties in 2008 triggered a complex strike in the agricultural sector, that last for 8 months during that year. Having failed that government attempt to appropriate a major part of the agricultural industry rent, towards the end of 2008, Argentina nationalized the retirement and pension funds, transferring the existing assets therein to the national social security administration.

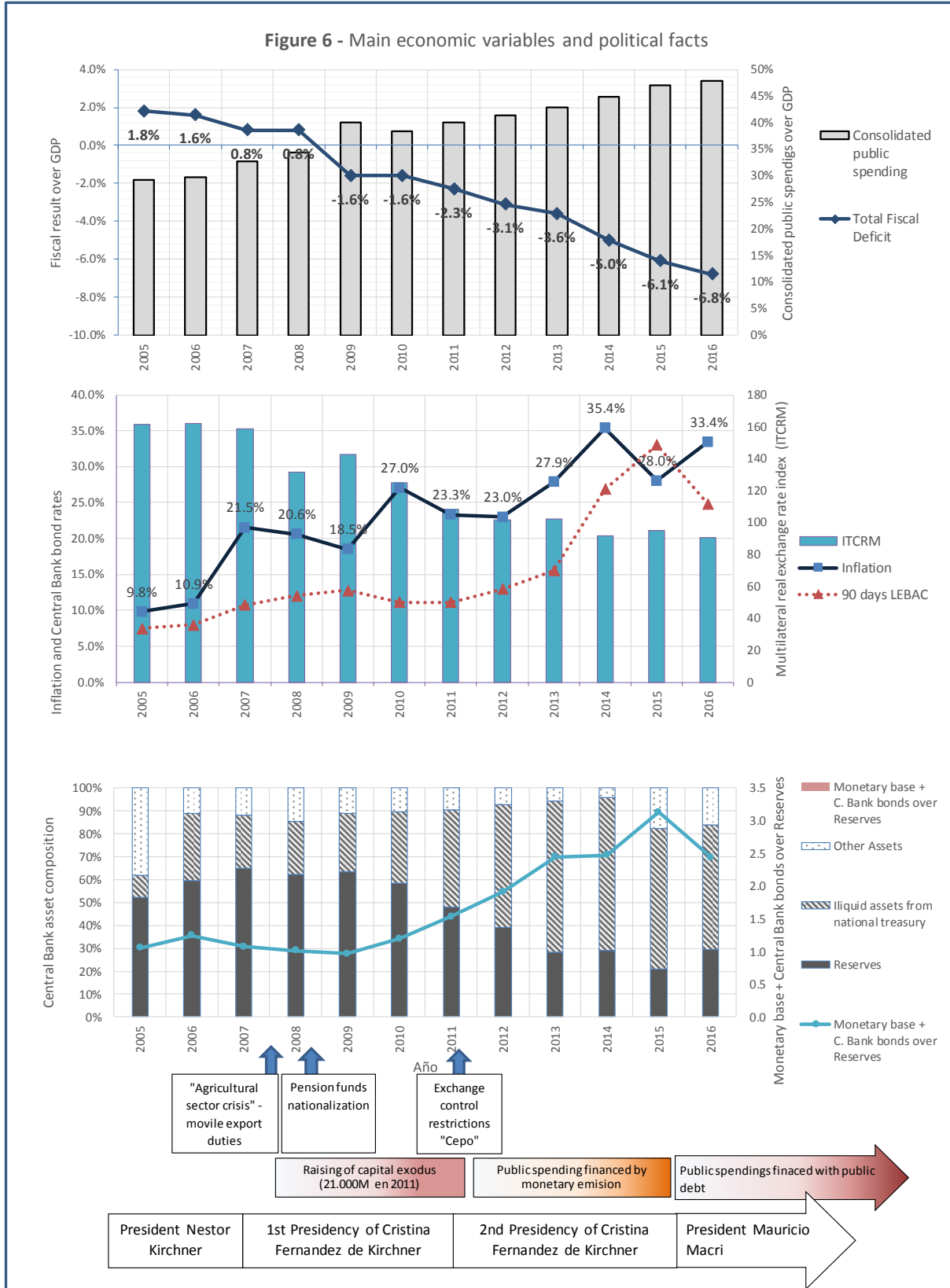
Once all resources from the oil sector, agriculture and pension funds were exhausted, the Argentine government accelerated the monetary creation, forcing since 2010 the Central Bank to take non-transferable treasury bonds, in exchange for pesos that were used to cover the growing fiscal deficit (as shown in figure 3). All this led to an increase in the amount of money, with the consequent loss of the value of the currency and the acceleration of the inflationary process, which increased the devaluating pressure on the local currency and raised up the capital exodus, which exceeded USD 21 billion during 2011. Facing this economic reality and showing some heterodox creativity, a hard control regime over the dollar exchange market was implemented in 2011 (known locally as the "dollar exchange clamp"), which barely reduced the loss of reserves that the central bank owned, and worst, generated a parallel exchange market.

Although the government of the "Justicialist" party ended in December 2015, the new government of the "Cambiamos" alliance failed to resolve the structural problems of the last administration, leading to higher levels of fiscal deficit and inflation. Among its few achievements, the end of the exchange control regime at the beginning of 2016 stands out, which implied a devaluation process that unified the official and parallel exchange markets. But far from ceasing with populist policies, the new government decided a gradual plan to cut the fiscal deficit, which required continuing financing needs. These cash needs were now covered by external indebtedness, associated with a risky monetary policy aiming to absorb surplus of local currency through central bank bonds with exorbitant interest rates, all to avoid a greater devaluation pressure, but creating a monetary time bomb.

By mid-2018, Argentina was forced to apply to the IMF as a lender of last resort, after exhausting the possibility of continuing with the placement of public securities and facing an incipient exchange rate crisis.

In order to summarize, the main economic variables and political facts can be synopsized in the figure that is shown below.

⁶See, Fano, D y otros (2018), "Los efectos de la inestabilidad económica y política en el mercado agropecuario argentino. La alocaación de los factores de producción capital y trabajo entre los años 2004 y 2016". Revista Enfoques N°4 – Editorial Lay Ley – Thomson Reuters - Abril de 2018



Sectorial performance – data and analysis

For this paper, the performance of enterprises belonging to five large sectors of the private Argentine economy was evaluated. Those sectors are: construction industry, food industry, oil industry, agricultural industry and the banking and financial industry.

For such purposes, the financial statements corresponding to those companies that belong to the Argentine stock exchange market were analyzed. The companies selected for analysis, and their corresponding sectors, are detailed in each following table, indicating the total number of companies surveyed and the number of financial statements analyzed between 2005 and 2016.

Table 1. CONSTRUCTION SECTOR. List of selected companies

Aceros cuyanos S.A.	Emprendimientos Recoletas S.A	Nuevo Puerto Santa Fe S.A.
Acindar Ind.Argentina de Aceros S.A.	Euromayor S.A.	Panamerican Mall S.A.
Aluar Aluminio Argentino S.A.I.C	Ferrum S.A.	Petroquímica Comodoro Rivadavia S.A.
Arcos del Gourmet S.A.	Fideicomiso Nueva Quilmes	Pico y Cabildo S.A.
Benito Roggio e Hijos S.A.	Gama S.A.	POLLEDO SAIC
Canfot S.A.	Holcim - Juan Minetti	Prear Pretensados
Caputo S.A	IMPECO SA	Quality Invest S.A
CDSA S.A.	INFA S.A.	Raghsa S.A.
Cerámica San Lorenzo	IRSA- Alto Palermo S.A	ROGIRO ACEROS S.A
Colorín Ind.de Materiales Sinteticos S.A.	José Cartellone	S.E.S S.A
Cía de Servicios de la Construcción S.A	La Preferida de Olavarría S.A	Sehos S.A.
Continental Urbana S.A.	Loma Negra Cía Ind.Argentina S.A.	Shopping Neuquén S.A
Desarrollos Caballitos S.A	Malteria del Puerto S.A.	SURPAT S.A.
Disal S.A.	Marina Río Luján S.A.	TGLT S.A.
Dycasa S.A.	Milicic S.A.	Urbanizadora del Sur S.A
Eclesur S.A.	Nuevo Continente	
Total companies: 47	Total financial statements processed: 373	

Table 2. FOOD INDUSTRY SECTOR. List of selected companies

Alica S.A.	Emulgrain S.A.	Molinos Fenix S.A.
Alimesa S.A.	Estirenos S.A.	Molinos Rio De La Plata S.A.
Arcor S.A.I.C.	Franquicias Azucareras S.A.	Nieto Senetiner S.A.
Arla Foods S.A.	Frigorífico Rydhans S.A.	Panificación Argentina S.A.
Bodegas Esmeralda S.A.	Frutos De Cuyo	Quick Food S.A.
Cachay S.A	Glucovil Argentina S.A.	Sacaan De Argentina S.A.
Carlisa S.A	La Campagnola S.A.C.I	Sáenz Briones S.A.
Cía Alimenticia Los Andes S.A.	Ledesma S.A.	Sancor Cooperativas Unidas Limitada
Compañía Industrial Cervecera	Mardi S.A.	Sodecar S.A.
Dulciora S.A.	Mastellone Hermanos S.A.	Virgilio Manera S.A.I.C.F.
Dulcor S.A	Mead Johnson Nutrition Argentina S.A.	
Emprendimientos Joralfa S.A.	Molino Guglielmetti S.A.	
Total companies: 34	Total financial statements processed: 207	

Table 3. OIL INDUSTRY SECTOR. List of selected companies

Axion Energy Argentina S.A	Oleoducto Transandino (Argentina) S.A.	Petroquímica Comodoro Rivadavia S.A.
CAPEX SA	Oleoductos del Valle S.A.	Petroquímica Cuyo S.A.I.C.
Carbochlor S.A.(Ex. Sol Petroleo S.A.)	Operadora de Estaciones de Servicios S.	Pluspetrol Energy S.A.
Compañía Geneal de Combustibles S.A.	Pan American Energy LLC	Refinería del Norte S.A.
Compañía Mega S.A.	Petrobras Argentina S.A.	Roch S.A.
Eg3 Red S.A.	Petroken Petroquímica Ensenada S.A.	Terminales Maritimas Patagonicas S.A.
Evangelista S.A.	Petrolera del Conosur S.A.	YPF S.A.
Gasoducto del Pacífico (Argentina) S.A.	Petrolera Entre Lomas S.A.	YPF Servicios Petroleros S.A.
Medanito S.A.	Petrolera Pampa S.A.	YPF Tecnología S.A.
Oiltanking Ebytem S.A.	Petromix S.A.	YSUR Petrolera Argentina S.A.
Total companies: 30	Total financial statements processed: 258	

Table 4. AGRICULTURAL INDUSTRY SECTOR. List of selected companies

Adricar S.A.	Inversiones Ganaderas S.A.	Emulgrain S.A.
Agrofina S.A.	La Biznaga S.A.	Nieto Senetiner S.A.
Agropecuaria Anta S.A. (Ex Cervera)	Ledesma S.A.	Renova S.A.
Agropecuaria Cervera S.A.	Liag Argentina S.A.	Viña Cobos S.A.
Agro-Uranga S.A.	Los Grobos Agropecuaria S.A.	Virgilio Manera S.A.C.I.F.
American export S.A.	Molino Guglielmetti S.A.	MSU S.A.
Cactus Argentina S.A.	Molinos Juan Semino S.A.	Molinos Fenix S.A.
Cánepa Hermanos S.A.I.C.	Morixe Hermanos S.A.C.I.	El Aguila Cereales S.A.
Carnes Pampeanas S.A.	Norclas S.A.	Citrusalta S.A.
Cresud S.A.C.I.F.	Rincon de Anta S.A.	Sudamerica Vinos S.A.
Exportaciones Agroindustriales Arg. S.A.	Frigorífico Bermejo S.A.	Instituto Rosenbusch S.A.
Glucovil Argentina S.A.	Inversora Juramento S.A.	
Gregorio, Numo y Noel Werthein S.A.	Bodega Ruca Malen S.A.U.	
Total companies: 37	Total financial statements processed: 213	

Table 5. BANKING AND FINANCIAL SERVICES SECTOR. List of selected companies

Banco Bica S.A.	Banco Galicia S.A	Banco Patagonia S.A.
Banco CMF S.A.	Banco HCBC	Banco Piano S.A.
Banco Columbia S.A	Banco Hipotecario S.A.	Banco Saenz S.A.
Banco Comafi S.A.	Banco ICBC	Banco Santander Rio S.A.
Banco Credicoop	Banco Interfinanzas S.A.	Banco Supervielle S.A.
Banco de servicios financieros S.A.	Banco Itaú S.A.	Banco VOII S.A.
Banco del Sol S.A.	Banco Macro S.A.	BNP Paribas
Banco Finansur S.A.	Banco Mariva SA	
Banco Frances S.A	Banco Meridian S.A.	
Total companies: 25	Total financial statements processed: 243	

For those selected companies from each sector, their available financial statements for the years 2005 to 2016 were studied. For such purposes, income statements, balance sheets and cash flow statements were processed in order to obtain ratios for economic performance, indebtedness, investment levels and distribution of dividends.

Profitability ratios

Return on assets (R.O.A). It measures the asset ability to generate profits without considering the available sources of financing (debt) as well as the tax burden represented by the income tax, thus obtaining a measure of the allocation convenience of assets to a specific activity.

$$R.O.A = \frac{\sum_{i=1}^n \text{Income generated by Assets } i}{\sum_{i=1}^n \text{Average Assets } i}$$

It is remarkable that, during the 2005 – 2016 analysis interval, the inflation levels that occurred in the Argentine economy were significant. Therefore, in order to obtain a more reasonable measurement of the real return on assets, the nominal ROA obtained was discounted using the inflation for each year.

Likewise, in order to inquire about the composition of the ROA, it was decomposed according to the DuPont⁷ formula, calculating the Sales Margin and Total Assets Turnover, as explained below.

Sales Margin (SMg). In order to know the relationship between accrued income and the costs and expenses that allow it to be obtained, the Return on Assets was decomposed in its first factor of analysis, according to the following equation.

$$SMg = \frac{\sum_{i=1}^n \text{Operative Income } i}{\sum_{i=1}^n \text{Total Sales } i}$$

Total Assets Turnover (TAT). The second factor of the Dupont formula, which measures the speed of the business, was calculated according to:

$$TAT = \frac{\sum_{i=1}^n \text{Total Sales } i}{\sum_{i=1}^n \text{Average Assets } i}$$

Note: for agricultural enterprises, those revenues obtained from agricultural production were included with total sales.

Return on Equity (R.O.E). It measures the company ability to generate net profits to shareholders equity.

$$R.O.E = \frac{\sum_{i=1}^n \text{Net Income } i}{\sum_{i=1}^n \text{Average Shareholder Equity } i}$$

As it was pointed out, the inflation levels that occurred in the Argentine economy were significant during the 2005 – 2016 analysis interval. Therefore, in order to obtain a more reasonable measurement of the real return on equity, the nominal ROE obtained was discounted using the inflation for each year.

⁷See, Telias, A. y cols. "Contabilidad para Gerenciar". Ed. Temas-UADE, Buenos Aires (2007).

Capital expenditure ratios

CAPEX / Sales ratio (CS). The investment intensity on fixed assets was evaluated by relating the CAPEX flows destined to fixed assets (cash flows spent to buy, maintain or improve productive assets such as buildings, equipment, vehicles or intangible assets) to the total sales of each analyzed company.

$$CAPEX\ sales\ ratio\ (CS) = \frac{\sum_{i=1}^n CAPEX\ i}{\sum_{i=1}^n Total\ Sales\ i}$$

Debt and of cash flows to investors ratios

Debt/Equity ratio (DE). The indebtedness level was determined by relating the total liabilities with the total equity, according to:

$$DE = \frac{\sum_{i=1}^n Total\ Liabilities\ i}{\sum_{i=1}^n Total\ Shareholder\ Equity\ i}$$

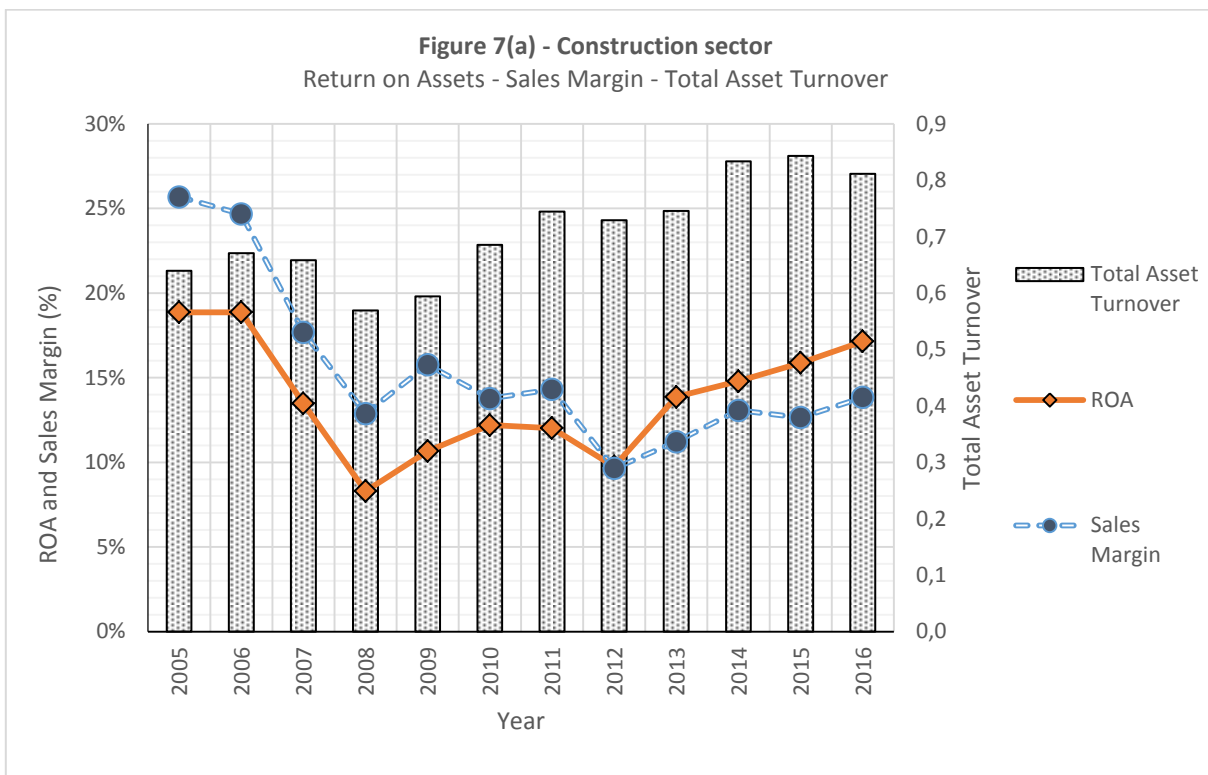
Cash flows towards shareholders on sales (CFtoS). In order to assess the payout capacity (for paying dividends or requiring cash from investors) the net cash flow to shareholders was related with the total sales, according to the following equation:

$$CFtoS = \frac{\sum_{i=1}^n Net\ cash\ flow\ to\ shareholders\ i}{\sum_{i=1}^n Sales\ i}$$

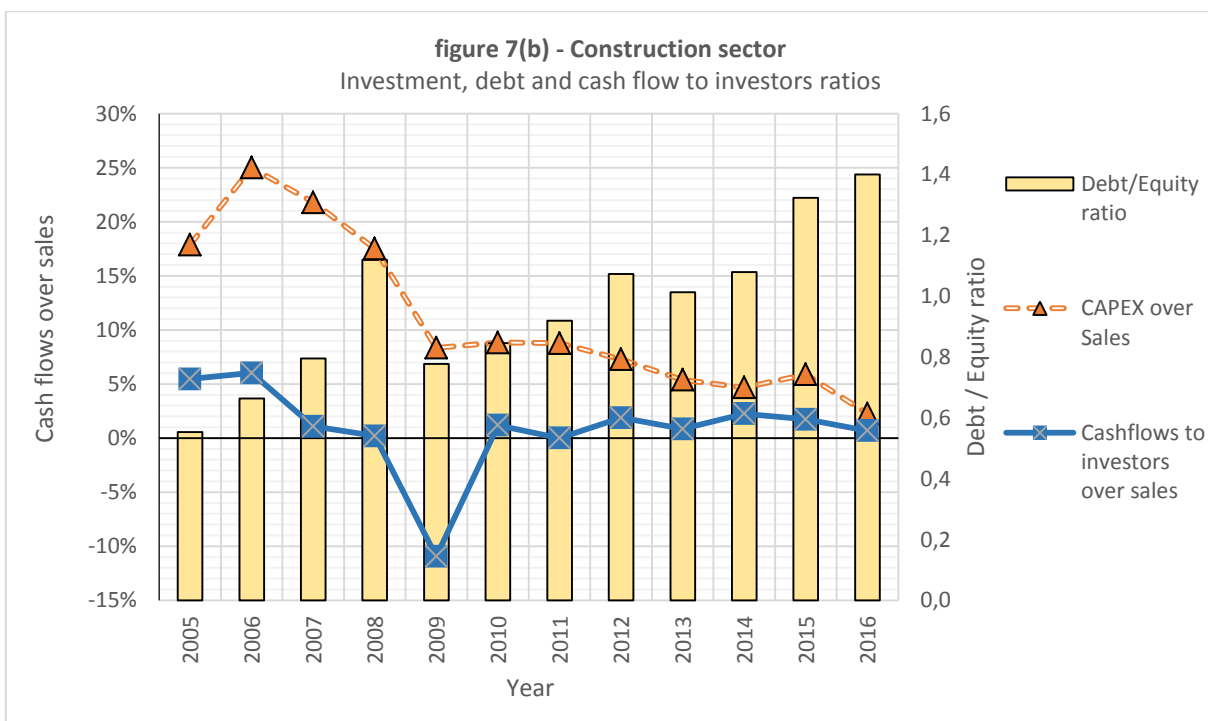
Sectoral performance – Results and discussion

Real economy sectors

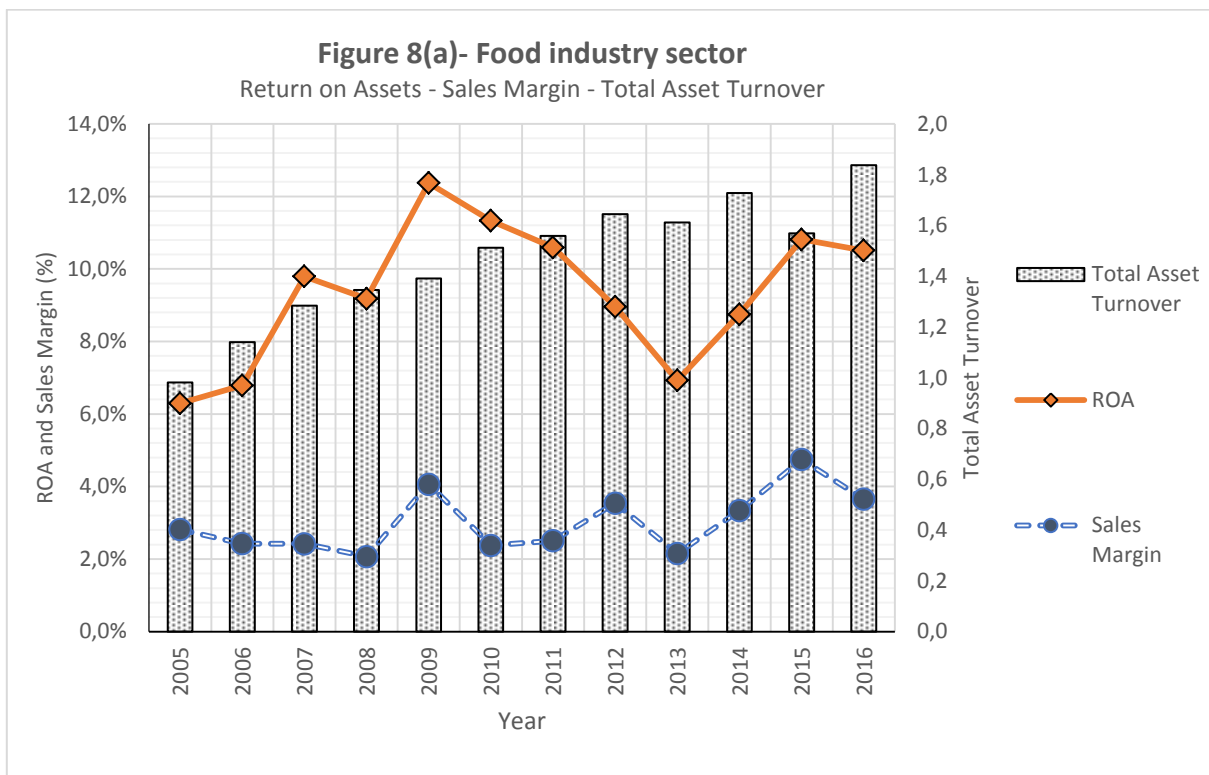
In the first place, the performance of the enterprises corresponding to the real economy of production of goods and services was analyzed, observing the sectoral average indicators that are shown below in their respective graphs.



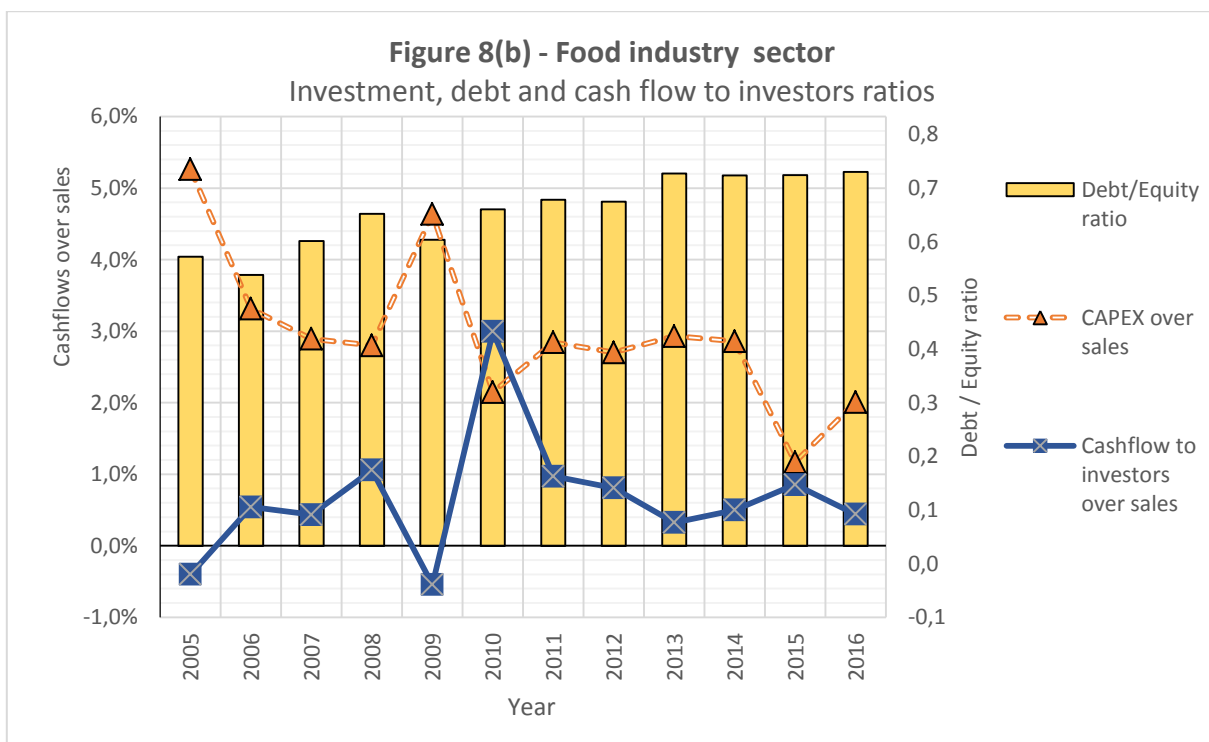
Source: own elaborated based on financial statements according to Table 1



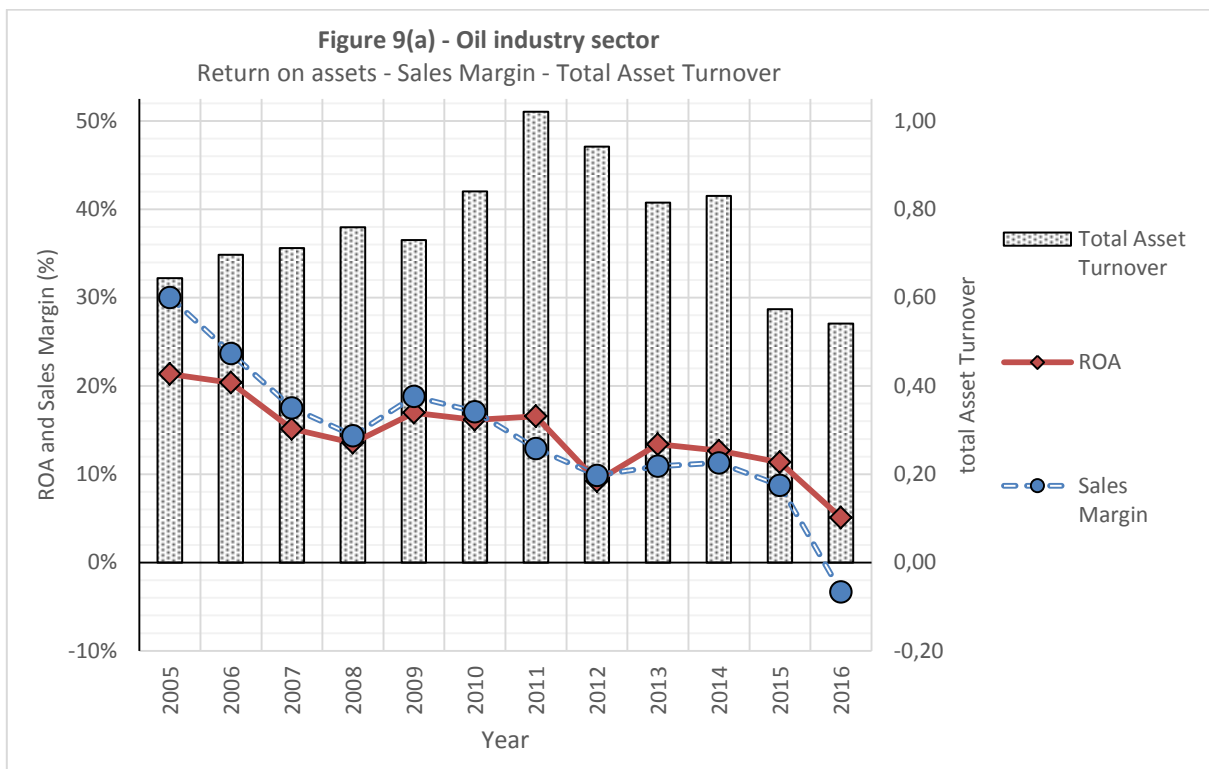
Source: own elaborated based on financial statements according to Table 1



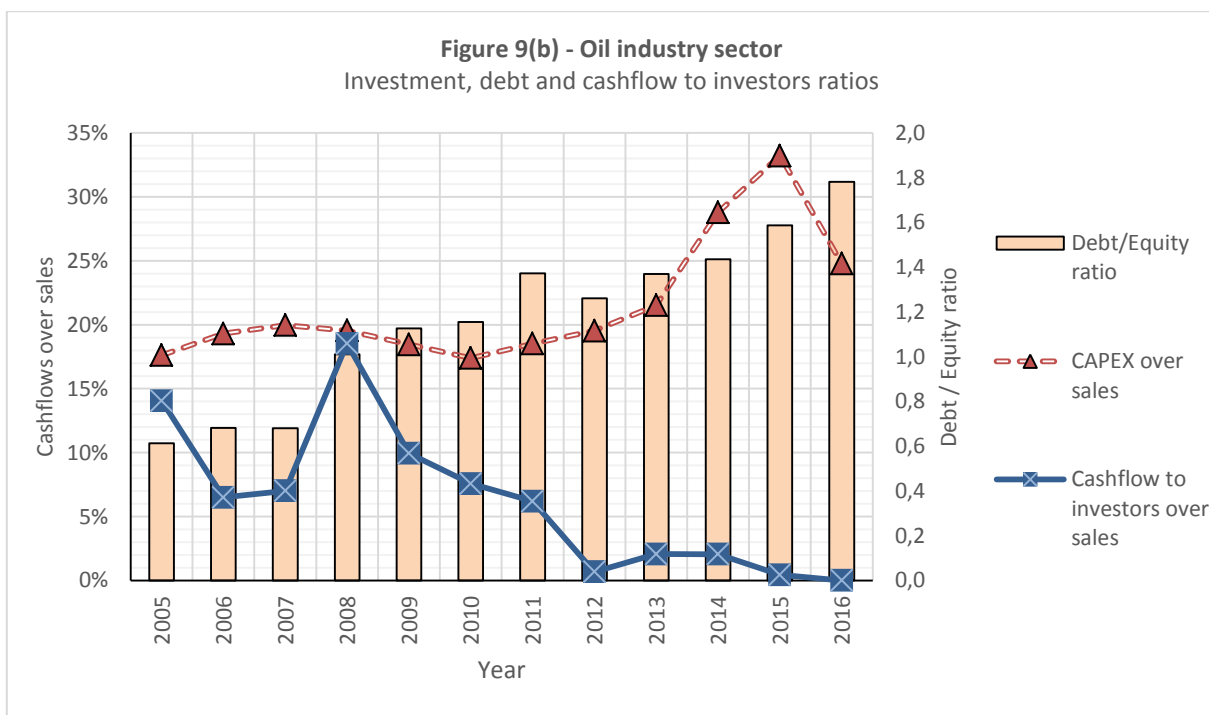
Source: own elaborated based on financial statements according to Table 2



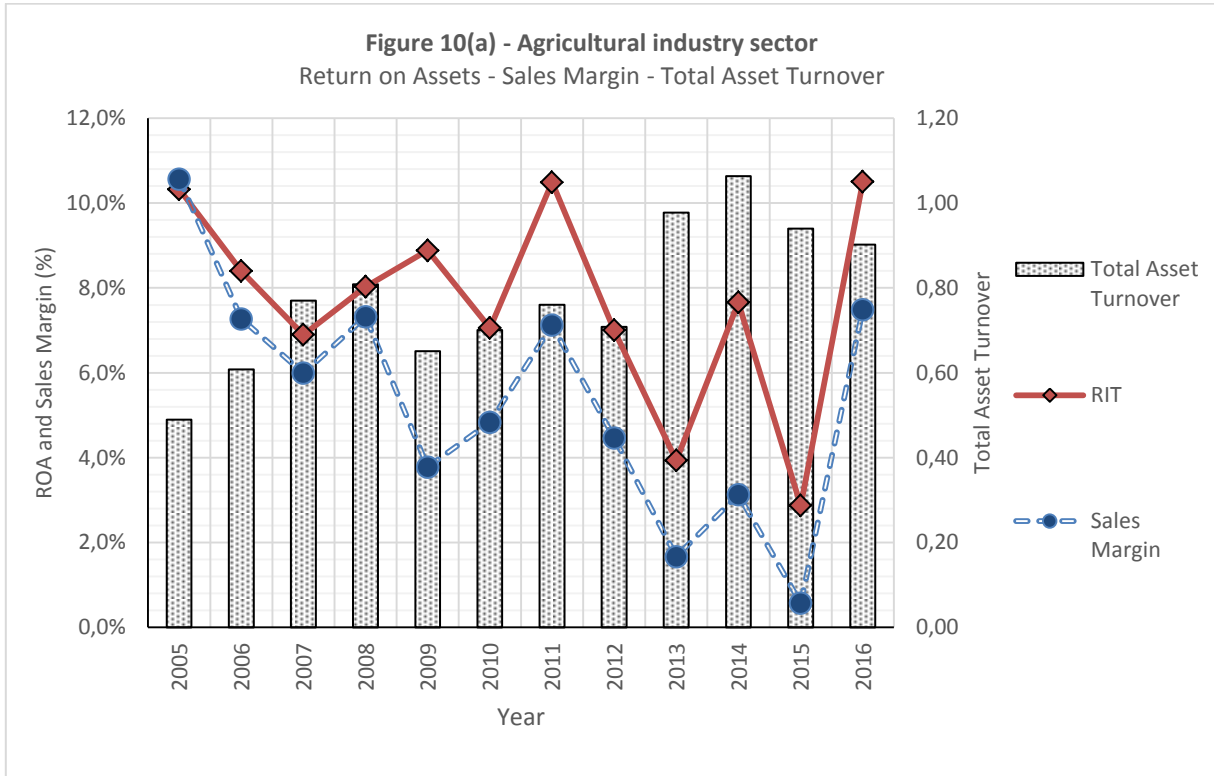
Source: own elaborated based on financial statements according to Table 2



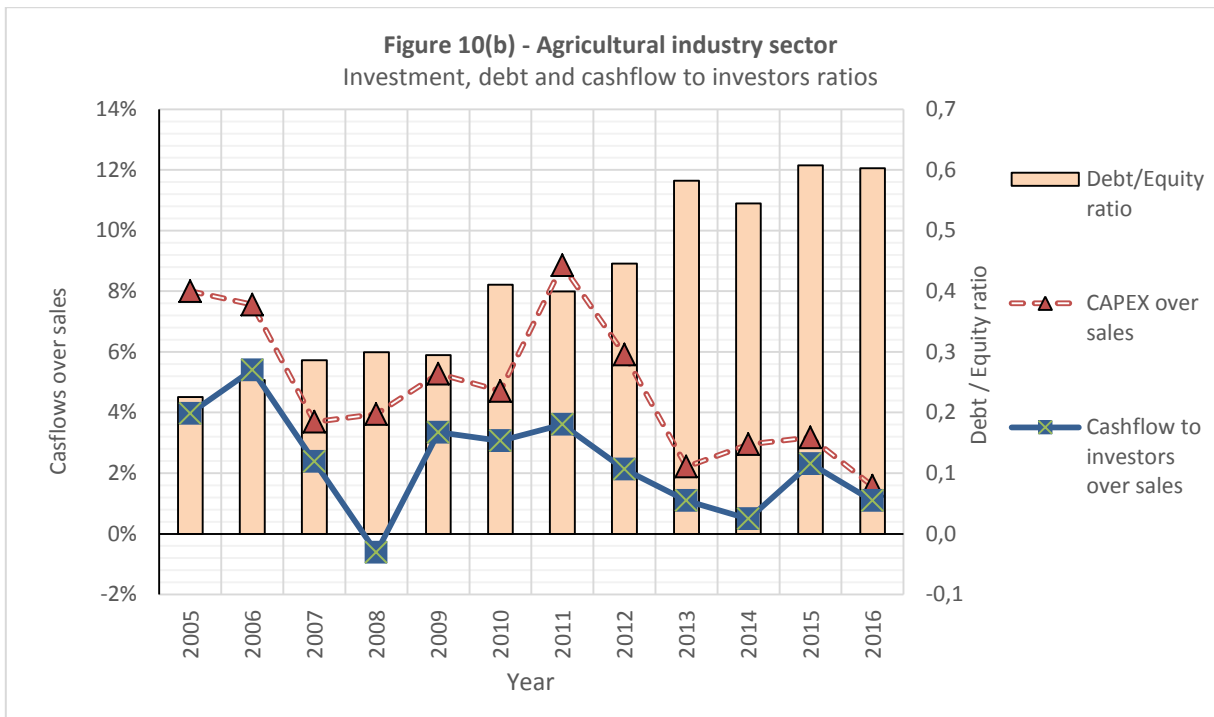
Source: own elaborated based on financial statements according to Table 3



Source: own elaborated based on financial statements according to Table 3



Source: own elaborated based on financial statements according to Table 4



Source: own elaborated based on financial statements according to Table 4

According to the information presented in the above figures 7 to 10, corresponding to the four sectors of the real economy that were analyzed in this paper, it was possible to observe the following:

1) Construction Industry Sector:

- a) The construction sector experienced a general deterioration in its primary margin (sales margin), with an increase in the volume of sales (total asset turnover), which mitigated the fall in the overall performance of the activity.
- b) Sales margin fall occurred simultaneously with a general decrease on capital expenditures in fixed assets (related to total sales that were generated), showing also lower dividends distribution and a sustained growth of debt ratios. It's remarkable that the debt/equity ratio doubled towards 2016 in relation to the year 2006
- c) The greatest economic and financial deterioration of this activity was observed as of 2008, coinciding with the acceleration of the inflationary process, an increase in financing interest rates and a significant reduction in the proportion of mortgage loans over the banking system. However, the economic deterioration was partially offset by the increase in the volume of the segment, associated with the expansion of public expenditure for infrastructure.

2) Food Industry Sector

- a) The food industry sector managed to preserve its primary margin, with a significant increase in volume in this segment that allowed a slight improvement in the overall performance of the activity.
- b) The levels of cash flows to shareholders remained essentially constant, showing to be one of the real economy sectors with higher surplus. However, there was a sustained reduction in investment levels (CAPEX over total sales), falling towards 2015 and 2016 to less than half compared to 2005. Lastly, the average debt to equity ratio of the sector suffered a slight increase, remaining towards 2016 below 0.8.
- c) In terms of economic analysis, the food industry sector would have been the least affected by fiscal and monetary policy decisions. However, the progressive reduction in investment levels would have accompanied the acceleration of the inflationary process and the increase in interest rates.

3) Oil Industry Sector

- a) The oil industry was characterized by a sustained loss of its sales margins, due to export duties imposed since 2004, that established fixed internal prices for oil, being those oil prices independent of the international values. These fixed prices in dollars, added to the exchange

rate lag that occurred as of 2007, deteriorated in a sustained way the primary margins and the profitability of the oil industry, as showed by the ROA ratio evolution.

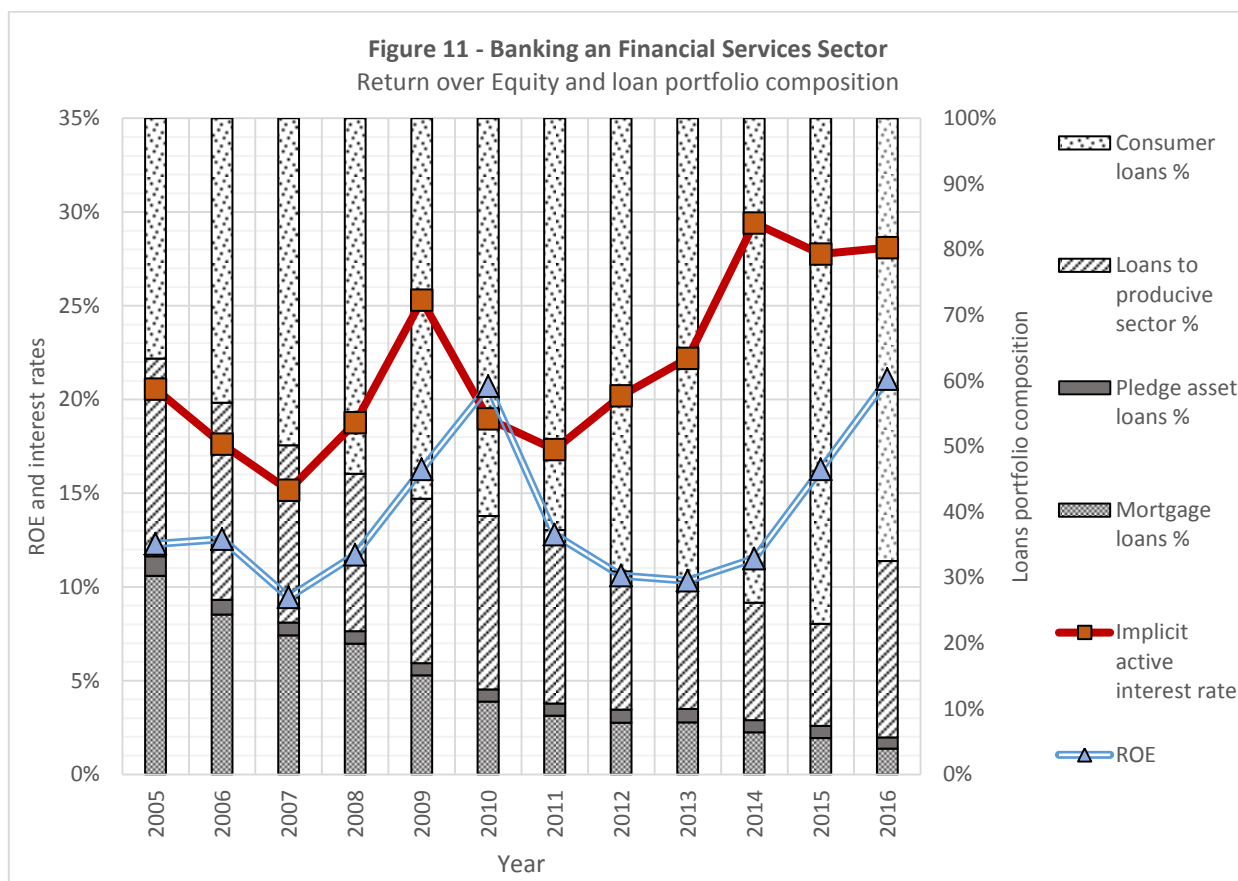
- b) Since 2008, the fall in profitability was accompanied by a reduction in cash flow to investor ratio, falling to a minimum level from 2012 to the present.
- c) Beginning in 2005, the increase in the international price of oil led to a significant gap with respect to the local price, which discouraged investment in fixed assets, leading to a slow process of disinvestment and reduction of local production of oil. Only since 2014, with the change in the scheme of mobile export duties and the fall in the price gap, the oil industry once again increased its investment levels, far from being able to recover the levels of profitability that would make this industry attractive.

4) Agricultural industry sector

- a) The Argentine agricultural sector deserves special attention because of its relevance within the Argentine economy and private activity. In economic terms, the profitability of the sector was affected in the last 10 years by various fiscal and monetary policy, showing in general a sustained loss of primary margins since 2010, as a result of the implementation of export duties and the fall in the rate of real change. However, the reduction in margins on sales was partially offset by the increase in agricultural production, which fairly mitigated the fall in the performance of this activity. Only from the year 2016, with the partial elimination of export duties and the recompositing of the real exchange rate (after the unification of the exchange market and the exit from the "dollar exchange clamp"), the sales margins and profitability levels achieved an important recovery.
- b) The financial situation of the agricultural sector was characterized by an increase in its levels of indebtedness, which tripled after ten years. Also, the cashflow to investors was significantly reduced, highlighting the year 2008 in which a strike took place on this sector, that paralyzed the activity for almost 9 months, requiring investors financing.
- c) Investment levels were also reduced after ten years of various hostile government measures applied to this sector, having allocated on investment less than 3% of the total revenues generated since 2013.

Bank and Financial sectors

In a second place, after analyzed the performance of the real economy sectors, leading indicators of the banking and financial services sector were evaluated, observing the average ratios shown below.



Source: own elaborated based on financial statements according to Table 5

Table 6 - Banking an Finances Services Sector - Loan portfolio composition

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Financial sector loans	2,2%	3,5%	3,4%	3,3%	2,3%	2,2%	3,4%	2,9%	2,8%	1,7%	1,6%	2,6%
Non financial public sector loans	39,5%	18,4%	8,0%	7,2%	2,3%	1,0%	0,6%	0,7%	0,6%	0,5%	0,4%	0,6%
Non financial private sector loans (NFPS)	58,3%	78,1%	88,6%	89,5%	95,4%	96,8%	96,0%	96,4%	96,6%	97,9%	98,0%	96,8%
<u>NFPS loans composition</u>												
Mortgage loans	10,2%	11,0%	10,8%	10,8%	8,4%	6,1%	4,8%	4,0%	3,9%	3,4%	3,0%	2,3%
Pledge assets loans	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%	1,0%
Loans to productive sector	10,2%	13,5%	13,8%	13,0%	13,9%	14,5%	14,2%	10,8%	9,5%	9,5%	8,4%	15,9%
Consumer loans (Credit cards + personal loans)	12,4%	19,5%	25,5%	29,3%	32,1%	33,2%	33,7%	35,2%	34,7%	39,2%	41,6%	39,9%
Other private sector loans	24,5%	33,2%	37,6%	35,4%	39,9%	42,0%	42,3%	45,4%	47,5%	44,8%	44,1%	37,6%

Source: own elaborated based on financial statements according to Table 5

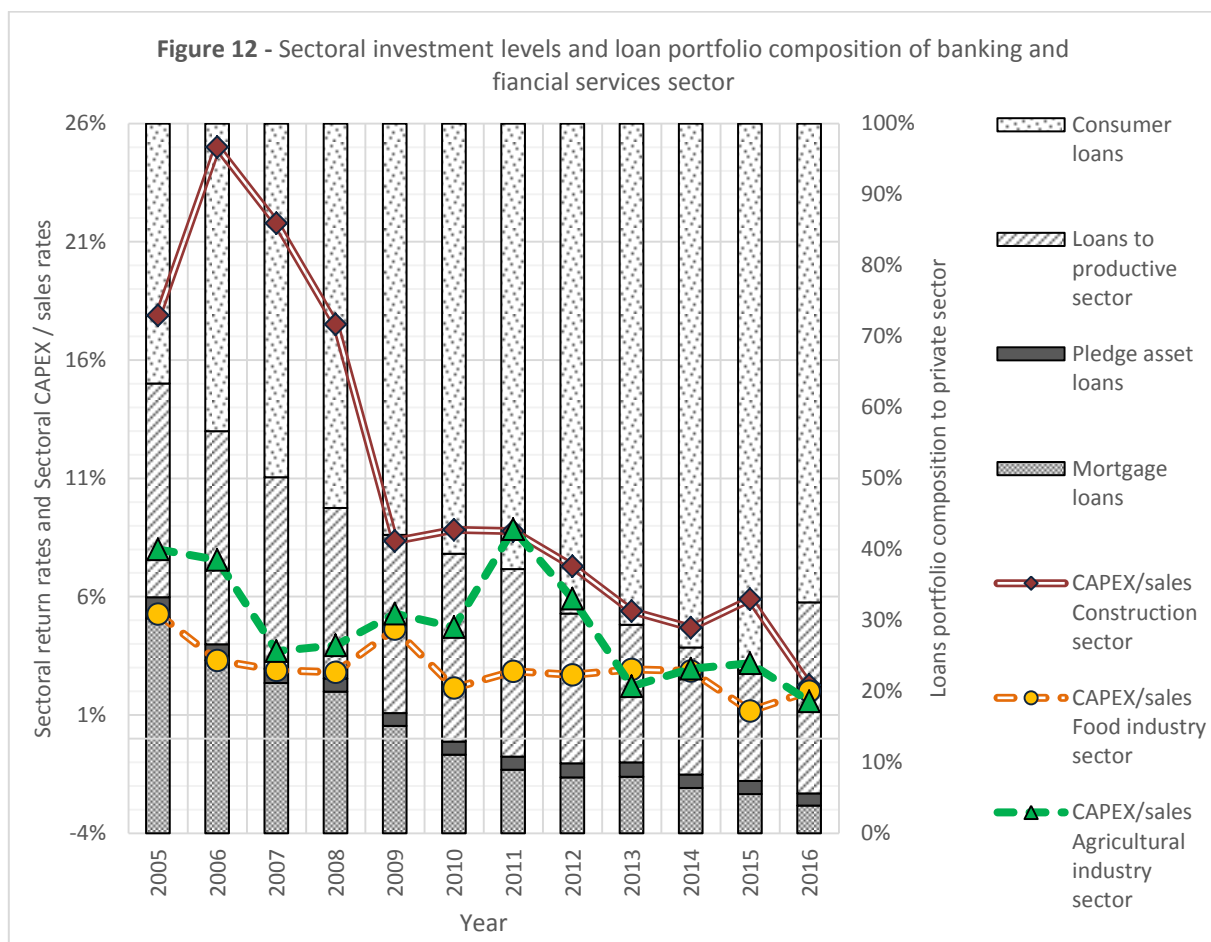
Figure 11 shows the evolution of the ROE (Return on Equity, that was calculated by the sectoral average ROE, discounted with inflation of each year, as a measure of net profitability of the banking industry), the implicit active interest rate and the portfolio distribution of loans to non-financial private sector.

It is possible to observe the growth in the share of consumer loans within the total portfolio to the non-financial private sector, while lending to the productive sectors and mortgages suffered a significant decline in participation. Table 5 shows the percentage composition of total loans portfolio to the non-financial private sector.

It is important to note that the increase in the share of consumer loans occurred alongside the rise of inflation, and also observed an important increase in the implicit active interest rates. Finally, the level of profitability of the financial sector had a similar evolution to those implicit lending rates.

Sectors of the real economy versus financial sector

Ultimately, the performance of the sectors of the real economy was compared with the main ratios of the banking and financial services sector. The main observations are displayed in the graphs reproduced below.

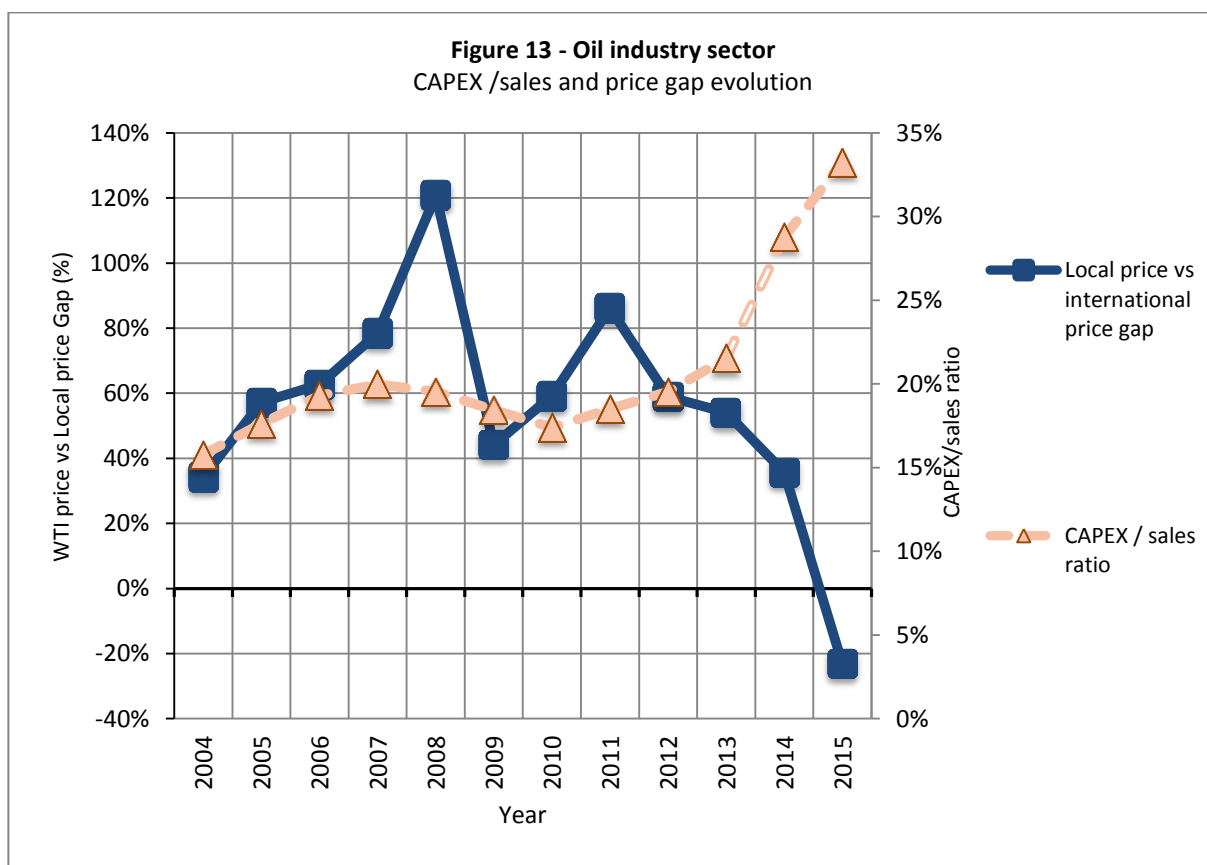


Source: own elaborated based on financial statements according to Tables 1 to 5

Figure 12 shows the evolution of the investment levels carried out by the agricultural industry, food industry and construction sector, being possible to observe that, for these three sectors, investment levels were markedly decreasing as interest rates raised up and the loans to the productive sector were

reduced. The biggest drop in investment rates is observed over the construction sector, marked it in line with the significant fall in the mortgages share over the financial institutions portfolio.

The oil sector, unlike other sectors of the real economy analyzed, showed that investment levels would have related to the gap in price between the local oil prices (set by fiscal policy implemented mobile export duties from 2004) and the international oil price⁸. Figure 13 shows investment rates and price gap evolution, observing that with higher price gaps, CAPEX over sales ratios were below 20%. Since local prices have been recently increased (since 2014, the year from which investment was encouraged through subsidies to the sector), investment ratios seemed to react, raising up strongly.



Source: extracted from Fano, D et al (2017) "Effects of regulations in the Argentine oil market between 2004 and 2015"⁸.

⁸Fano, Diego G; Oubiña, Gabriel and Mei, Adam, "Efectos de las regulaciones en el Mercado petrolero argentino entre 2004 y 2015" CEMA Working Papers: Working Paper Series. 624, University of CEMA. ISSN 1668-4575 (Print) 1668-4583 ISSN (online) - December 2017.

Conclusions

Since 2004, Argentina has implemented various **heterodox measures associated with populist governments**. They consisted of an **extraordinary increase in public spending**, which was funded in principle by **increasing the tax pressure over the private sector**. However, the increase in spending far exceeded the possibilities of financing through genuine collection, resulting in **large fiscal deficits** since 2009, which were partially covered through the use of pension funds and, ultimately, using monetary creation.

The **strongly expansive monetary policy** (due to the fiscal deficit), led to accelerating **inflation and a process of capital exodus**, which tried to be controlled by a **rigid exchange control regime**, which in turn caused a significant overvaluation in the real exchange rate.

The phenomenon of accelerating inflation was accompanied by **higher interest rates**, first settled by the central bank through bonds issued by it, as in lending rates of private banks. Both, Inflation and higher borrowing costs **reduced investment levels of the real economy sectors**, noting that the Argentine financial system loan portfolio progressively turned towards consumption loans.

In this context marked by high inflation rates and expensive cost of credit, **the productive private sector** was significantly **affected, both in its primary margins and in its levels of profitability**, experiencing simultaneously a **significant drop in investment levels** and a general **increase on the debt/equity ratio** of the private companies, all of them reflected in their financial statements.

According to the present study, the **agricultural and construction sectors would have been the most affected** as a result of populist policies, especially after the establishment of the exchange control regime. The oil sector was also the victim of fiscal policies, which were aimed at appropriating most of the oil income, added to the dollar exchange rate lag that has occurred since 2011, that led Argentina to lose its capacity for self-supply of oil and gas.

From those sectors of the real economy that were analyzed in this paper, **the food industry was the only that managed to slightly improve its profitability, due to the increased volume**, but falling significantly in their levels of investment. Finally, the **banking and financial services sector was perhaps the only winner** of this populist period, having taken advantage of the increase in consumption and their financing needs as well as the high interest rates.

References

- Argañaraz, N. y cols. *“El fisco argentino - Nacional, Provincial y Municipal – se lleva entre un 47% y un 60% de los ingresos de familias asalariadas en conceptos de impuestos” - Informe Económico N°279 – Instituto Argentino de Análisis Fiscal ISSN 2250-7329 (2014)*
- Dirección General de Estadísticas y Censos, Ciudad Autónoma de Buenos Aires en: <http://www.estadisticaciudad.gob.ar/eyc/>
- Dirección Provincial de Estadísticas y Censos, Provincia de San Luis en: <http://www.estadistica.sanluis.gov.ar/>
- Instituto Nacional de Estadísticas y Censos (INDEC) – Agregados Macroeconómicos – Series históricas, en https://www.indec.gob.ar/nivel4_default.asp?id_tema_1=3&id_tema_2=9&id_tema_3=47
- Ewing, B. and Thompson, B. – *Dynamic cyclical comovements of oil prices with industrial production, consumer prices, unemployment and stock prices*. Energy policy, Vol 35, Issue 11, pp 5535-5540 (2007)
- Fano, D.G.; Oubiña G.; Di Giorgio, S.; Marín E., *“Efecto de regímenes de anticipos de impuestos en capacidad de pago y rentabilidad de empresas del sector de construcción,”* CEMA Working Papers: Serie Documentos de Trabajo. 635, Universidad del CEMA. (2018)
- Fano, D.G y Gibson, V.E., *“Los efectos de la inestabilidad económica y política en el mercado agropecuario argentino. La alocación de los factores de producción capital y trabajo entre los años 2004 y 2016”*. Revista Enfoques N°4 – Editorial Lay Ley – Thomson Reuters – (2018)
- Fano, D.G; Oubiña, G; Mei, A., *“Efectos de las regulaciones en el mercado petrolero argentino entre 2004 y 2015”* – Cema Working Papers: Serie Documentos de Trabajo 624, Universidad del CEMA. ISSN 1668-4575 (impreso), ISSN 1668-4583 (en línea) (2017)
- Fondo Monetario Internacional. *Perspectivas de la economía mundial, Crecimiento dispar, Factores a corto y largo plazo* (2015), p.38. <https://www.imf.org/external/spanish/pubs/ft/weo/2015/01/pdf/texts.pdf>
- García, N.; Calvetti, D.; Cano, M. *Petróleo y Gas. Balance de la década, perspectivas y desafíos del Sector en Argentina*. Argentina: KPMG, 2016. 16 p.
- Hamilton, J – *Understanding crude oil prices*. The National Bureau of Economic Research, Working Paper No.14492 (2008)
- Instituto Nacional de Estadísticas y Censos (INDEC) – Agregados Macroeconómicos – Series históricas, en https://www.indec.gob.ar/nivel4_default.asp?id_tema_1=3&id_tema_2=9&id_tema_3=47
- Kislev, Y and W.Peterson (1996), *The Economics of Agriculture – Volume 2. Chapter 10 - Economies of scale in agriculture: a reexamination of the evidence*. The University of Chicago Press.
- Ley N° 25.063, con las modificaciones introducidas por las Leyes Nro. 25.123 (B.O. 28/7/99) , 25.239 (B.O. 31/12/99), Ley N°25.360 (B.O. 12/12/2000) y Ley N°27.260 (B.O. 22/7/2016). *Impuesto a la ganancia mínima presunta*

- MacDonald, J.M., R.Hoppe and D.Banker (2004), *The evolution of structural change in the U.S.Farm sector*. USDA Research Paper – International Agricultural Trade Research Consortium (IATRC), Philadelphia June 6, 2004.
- Schmitt, G.(1986), *Farms, households, and productivity of resource use in agriculture*. Euro. R.agr.Eco. 16 (1989) 257 – 284.
- Soliman, I., Ewaida O. (2008). *Impact of technological changes and economic liberalization on agricultural labor employment and productivity*. Egyptian association for political economy, statistics and legislation. Zagazig, Egypt. https://mpr.ub.uni-muenchen.de/31165/1/MPRA_paper_31165.pdf
- Stigler, G.(1983[1958]) *The economies of scale*. In: Stigler, G.(1983), *The Organization of Industry*. The University of Chicago Press.
- Telias, A. y cols. “*Contabilidad para Gerenciar*”. Ed. Temas-UADE, Buenos Aires (2007).
- Vásquez Pacheco, F. “*El impuesto a la renta y su influencia en la liquidez de las micro y pequeñas empresas industriales de Chimbote, 2014*”, Revista In Crescendo Vol.6, Núm. 2(2015) ISSN: 2307-5260 (2014)