FINANCIALISATION AND INVESTMENT IN BRAZIL IN 1995-2017

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Abstract: There is an extensive literature relating the process of financialisation with investment decisions. In general, there are two main channels in which financialisation affect negatively productive investment: (i) firms applying available domestic funds in financial assets when they offer larger short-term returns instead of productive investments; (ii) pressure exerted by the shareholders on the companies' managers in obtaining greater short-term returns and dividends payments. Taking in account the findings of the international literature on financialisation, this paper aims to analyse the relationship between financialisation and investment in Brazil since the implementation of the Real Plan, i.e. in 1995-2017 period, a period marked by strong macroeconomic instability. In particular the main questions that this work addresses are: (i) What are the main determinants of investment in Brazil? (ii) Has financialisation led to a greater distribution of profits and dividends to the detriment of investment in Brazil? (iii) Is there a crowding out process in which firms' financial revenues compete with returns related to productive investment?

Key-words: financialisation; investment; Brazilian economy

Area AKB: Macroeconomia e política econômica

1. INTRODUCTION

There is an extensive literature relating the process of financialisation with investment decisions. In general, there are two main channels in which financialisation affect negatively productive investment: (i) firms applying available domestic funds in financial assets when they offer larger short-term returns instead of productive investments; (ii) pressure exerted by the shareholders on the companies' managers in obtaining greater short-term returns and dividends payments. However, there are few studies related to financialisation and investment in Brazil, although some studies show that the Brazilian economy has characteristics of a financialised economy (Bruno et al., 2015).

During the last years, the Brazilian economy has been characterized by having a low rate of accumulation - about 15% to 21.5% of GDP in the period 1995-2017. Its behaviour followed the economic cycle, either by increasing the growth of some components of demand (such as household consumption), or contributing to the economic slowdown as of 2014-2015. This abrupt reversal of the investment can be related somehow to the process of financialisation of the Brazilian economy, since firms may be adopting strategies based on the shareholder value orientation, in the meaning that they are accumulating fewer profits to reinvest in their real productive activities and obtaining more profitability derived from financial income. According to Miranda (2013), there are strong evidences that the Brazilian companies can be considered financialised, due to a

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type of governance closer to the Anglo-Saxon model that seeks short-term results and convergence to the maximization of shareholder value.

This paper aims to analyse the relationship between financialisation and investment in Brazil since the implementation of the Real Plan, i.e. in 1995-2017 period, a period marked by strong macroeconomic instability. In particular the main questions that this work addresses are: (i) What are the main determinants of investment in Brazil? (ii) Has financialisation led to a greater distribution of profits and dividends to the detriment of investment in Brazil? (iii) Is there a crowding out process in which firms' financial revenues compete with returns related to productive investment?

The paper is divided in five sections, including this introduction. The second section presents a brief review of the literature on the relationship between financialisation and investment. Section three analyses the macroeconomic context and characteristics of financialisation in Brazil in the period analysed here. Section four focuses on the relationship between financialisation and investment in Brazil in the 1995-2016 period, with the use of some accounting indicators built based on Economatica database[1]. Finally, in section five are presented the main conclusions of this paper.

2. RELATIONSHIP BETWEEN FINANCIALISATION AND INVESTMENT

The concept of financialisation[2] is broad, with no single formal definition and is referred to financial activities. The more general concept of financialisation can be found in Epstein (2005, p.3), which defines the phenomenon as "increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies". Stockhammer (2004) refers to the participation of "rentiers" in the income of non-financial companies and to the income obtained mainly through the payment of interest and dividends. Van Treek (2009) denotes financialisation as the growth of shareholder value, focusing on microeconomic aspects and their implications in the process of capital accumulation and economic growth. Liang (2010) puts forward the concept of global financialisation as the growth of power or influence of financial interests and institutions throughout the world. Krippner (2005) states that financialisation is a new pattern of accumulation in which financial channels are increasingly influenced by the determination of the profits of non-financial corporations to the detriment of traditional channels such as trade and commodity production. And, Braga's pioneering work (1985) relates financialisation to a systemic norm of wealth, since it produces a structural dynamic articulated according to the principles of the 'financial logic' of capital reproduction.

French Regulationist School proposed the term of 'financial-led capitalism', referring to a new regime of accumulation, which has spread throughout the world as a result of the adoption of neoliberal policies that encompass a set of policies related to financial liberalization, labour market flexibility and the shrinkage of developmental state, etc. (Boyer, 2000). This new regime of accumulation developed in the light 1970 and 1980 financial globalization led to 'finance-led capitalism' imposed the view of maximizing shareholder value, geared by short-term financial gains, expanding the service sector expansion along with a process of deindustrialization and job insecurity.

[1] We have used accounting data from all listed companies during the period of the survey.
[2] For a comprehensive review, see van der Zuan (2014).

More importantly, the shareholder value approach provides a connection between financialisation and fixed capital investment. Specifically, the shareholder value become the norm of capitalism changes, spreading new policies and practices within firms, that prioritise shareholder short-term maximization that overlap with other elements such as productive investment (Aglietta, 2000).

There is a wide literature that seeks to establish the relationship between financialisation and fixed capital investment. This studies are refereed particularly to the United States of America (USA) and state that there has been a substantial expansion in financial investments of non-financial firms replacing fixed investments (or 'crowding out'), and there has been an increase in firm's payments to financial markets. This trend can be related to the dominant corporate governance ideology, based on shareholder value orientation, whose main goal is 'downsize and distribute' (Lazonick and O'Sullivan, 2000), that focus in short-term financial returns at the expense of fixed capital growth (Stockhammer, 2004). Thus, by favouring the dividends pay-out, firms reduce retained earnings and contributed to decrease or to stagnate investments. In this perspective, nonfinancial companies are more related to assets grouping rather than capital accumulation ventures. Summing up, financialised firm are characterised by shifting from managerial priorities to short-term shareholders' interests.

According to Davis (2017a), the empirical literature on financialisation addresses a broad set of changes in the behaviour of nonfinancial firms, ranging from dividend payments growth, differentiating between income from fixed assets and financial activities, including financial derivatives earnings. A broad and recent review on the relationship between financialisation and investment, suggests that there is robust and negative relationship between financialisation and fixed capital investment, although other studies are less conclusive, arguing that the investment rates of USA firms also shows positive relationship between financial assets and investment (Davis, 2017b), or argue that there is an unstated relationship between USA decline of accumulation rates and financialisation (Kliman and Williams, 2014).

Orhangazi (2007) highlights two main channels in which financialisation negatively affect productive investment. The first is related to the allocation of internal funds available for investments in financial assets when they offer larger short-term returns (besides being reversible unlike fixed assets). The second channel is related to the shareholder pressure exerted on firm's managers to obtain greater short-term returns and dividends payments, forcing them to prefer financial investment. Another incentive factor for short-term financial assets investment is modern firm management policy, in which managers have fixed salaries along with payments linked to the firms' performance, along with shareholders pursuing short-term yields, through imposing high stock prices and greater dividends payments. At the same time, the emergence of institutional investors, operating on a large scale and demanding high returns pushed managers to increase dividend payments.

Thus, nonfinancial firm's managers were subjected to internal and external pressures to achieve short-term results and higher dividend payments. This movement creates two different constraints on real productive investment. First, assuming that domestic resource funds are cheaper or safer than external financing, financial payments reduces the available funds to finance investment through the fall of internal resources. Second, the time horizon of non-financial firm's managements is shortened, making more difficult to finance long-term investment projects, including research and development spending.

There are few studies analysing the relationship between financialisation and productive investment in Brazil. Miranda (2013) analyses, between 1995 and 2012, the impact of financialisation on the Brazilian economy and on non-financial public companies, and its effect on fragility, showing than an increase in shareholder wealth distribution had negative effects on gross fixed capital formation. Therefore, companies that increased short-term results over the long-term converged to the Anglo-Saxon model of corporate governance. This shows that there is a dominance of rentier logic on the accumulation process of these companies, which can be considered financialised. It was also noted that the search for short-term results and convergence to the shareholder value maximization increased the fragility of these companies and the economy, since the former increased the indebtedness in its capital structure without, necessarily, allocate these resources on productive activities. In this context, firms increased the dividend pay-out and share repurchase in order to raise the company's market value as well as the shareholder value. This policy was increasingly financed by financial activities and indebtedness, which increased the fragility of these companies and the instability of the economy.

3. MACROECONOMIC ENVIRONMENT AND CHARACTERISTICS OF FINANCIALISATION IN BRAZIL

3.1. An overall analysis of the macroeconomic context[3]

Brazil, as other Latin American countries, implemented liberal reforms and economic openness during the 1990s based in the Washington Consensus.[4] The economic openness, in terms import tax reduction, and the privatization of state-owned firms (particularly in the steel sector) began during Collor de Melo's government (1991-1992). In Itamar Franco's government (1992-1994) price stabilization was achieved (1994) with the implementation of the Real Plan and a stabilization program that used the exchange rate as a price anchor and took place the de-indexation of the economy.[5]

In the 1990s, Brazil also liberalized its capital account. In the first years of the 1990, was allowed the acquisition of equities of domestic firms by foreign institutional investors, through a special fund, and the special non-resident bank account was modified (CC5), operated by foreign financial institutions that, in practice permitted that both residents and non-residents could send abroad domestic monetary resources freely. The reintegration of Brazil, and other Latin American countries, to the international financial market was stimulated by the Brady Plan that renegotiated the external debt, reducing

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[3] The section is based on Paula (2011, ch.3), Paula et al (2016), Ferrari-Filho and Paula (2015), Paula and Pires (2017) and Prates et al (2018).

[4] The Washington Consensus related the stimulation of economic growth with liberalizing reforms, notably macroeconomic discipline, trade openness, and market-friendly microeconomic policies. The capital account liberalization was not included in the original WC, added to the multilateral institutions proposal if the World Bank (Williamson, 2000).

[5] The Brazilian inflation was an inertial phenomenon. Prices were adjusted on a daily basis and the contracts adjusted by former inflation (a mechanism known as "*correção monetária*"). The Real Plan, in March 1994, introduced the Real Unit of Value (Unidade Real de Valor in Portuguese –URV), as the new standard of monetary value, whilst the cruzeiro real (CZR) continue to be used as legal tender. The URV, an average index of three representative inflation indexes in Brazil, was designed to be a unit of account linked to the USA dollar, aimed to stimulate the economic system and find a sustainable price standard, and also at aimed to recover the notion of a stable unit of account in the economy. In July, 1994, the Real Plan, converted the URV into legal tender, creating a new currency –the 'real', see Ferrari-Filho and Paula (2003).

both interest payments and lengthening the terms of debt. In the 2000s were simplified the norms related to foreign exchange operations (Paula, 2011, ch.4).

Summing up, the 1990 decade was marked by economic openness (trade and financial), state-owned firms privatisation, and price stabilization. But in this period the international market also spread contagious effects from the Mexican, Asian, and Russian crises, under a context of high external vulnerability. There were important structural changes in the Brazilian economy, namely economic openness, price stabilization, external debt renegotiation and economic reinsertion of Brazil to the international financial market, etcetera, which altogether had a disappointing economic performance, that also need to be explained in the light of the 1992 and 2002 Brazilian crises, which reached a 2.5% average GDP growth of the 1990, very close to the 1980s (2.3%) and very low with 1950-1970 annual average growth (7.1%).[6]

The Real Plan (1994-1999) was successful in bringing inflation down fast, due to the combination of desindexation, exchange rate appreciation, and a huge reduction in import taxes, as well import tariff reduction in August 1994 (imports of more than 4,000 products had a 20% ceiling). In addition 'provisional measure'[7] that created the new currency, the 'real', which initiated with a 1:1 parity to the U.S. dollar, (without knowing if the parity was fixed), led in practice the exchange rate to float until September 1994, and it was combined with a tight monetary policy, whose main effect was a quick increase of capital inflows and consequently a sharp appreciation of the exchange rate. In September 1994 was adopted a non-official band that pegged exchange rate between R$ 0.83 and R$ 0.86 and the Real exchange rate appreciated by 30% between July and December 1994. In order to reduce upward pressure on the exchange rate due to capital inflows, minimize sterilization cost of these capitals inflows, and give some freedom degrees to the monetary policy (which operated on a semi-fixed exchange rate) the Ministry of Finance imposed a financial transaction tax (IOF) that ranged between 5% to 9% in the Foreign Funds on Securities (October 1994), increasing the minimum maturity requirements for capital inflows.

As referred above the Real Plan brought inflation down fast due to the combination of exchange rate appreciation, high interest rates and a huge reduction in import taxes, which increased the Brazilian economic performance (GDP growth reached 5.3% in 1994) due to higher domestic consumption level. The tight monetary policy – including high real interest rates and higher reserves requirements on banking deposits, need to be understand due to the government's fear of a 'consumer bubble', as the one occurred in the former stabilization plan (the 1986 Cruzado Plan), and the need to attract capital inflows to generate capital account surpluses to cover the current account deficits.

The combination of demand expansion (in spite of the high interest rate), tight monetary policy, and the overvalued exchange rate, created immediate difficulties for Brazil's external sector. From 1995 to 1998, the trade balance accumulated a deficit of US$ 22.3 billion that combined with the deficit of service and income investment (that rose from US 14.7 billion in 1994 to US$ 20 billion in 1996) caused a sharp increase in the current account deficit (increased from 0.2% to 2.4% in terms of GDP between 1994-1995, reaching 4.0% in 1998). In this context, high domestic interest rates vis-à-vis external interest rates were functional to attract short term capital flows but the Brazilian

[6] Data of this section is from IPEADATA and Central Bank of Brazil website.

[7] The provisional measure ('*medida provisória*') is a legal act in Brazil through which the President of Brazil can enact laws without approval by the National Congress it has to fulfill two requirements to be used: urgency and relevance of the matter to be regulated.

economy became highly fragile to short-term changes in the international situation, specifically to speculative attacks on the domestic currency (Paula and Alves, Jr, 2000).

In 1999, after the crisis of the semi-fixed exchange rate regime that was the Real Plan main pillar, the government modified the economic policy structure, imposing a floating exchange rate regime and an inflation target system, which became the new anchor of prices. The new macroeconomic policy regime, under conditions of financial liberalization enhancement, is inspired in 'The New Consensus on Macroeconomics', whose main economic policy focus is price stabilization.

In the first years of the 2000, the Brazilian economy suffered from a number of international shocks (the USA economic slow-down, and the Turkish and Argentine crises) and the 2002 confidence crisis in the light of the election of a leftist government, causing sudden stop in the foreign capitals, and consequently a steady and abrupt exchange rate devaluation.

Lula da Silva's first government term (2003-2006), following a confidence crisis in 2002 with a massive speculative attack against the Brazilian currency, can be characterized by the continuity of the tripod of macroeconomic policies adopted after the 1999 currency crisis, which was the inflation targeting, on the basis of primary surplus targets and a (dirty) floating exchange rate regime. Under this framework, both fiscal and monetary policies continued to have and orthodox stance, featured by a wide primary surplus and the maintenance of a high real interest rate (albeit with a decreasing path), while the currency appreciated gradually.

In the beginning of 2003, the economy was favoured the benign international environment (commodities boom prices and high liquidity in the international financial market) that resulted in a high economic growth (4.7% on average between 2004 and 2008) free of external constraint. At the end of 2008 Brazilian economy was hit by the Global Financial Crisis (GFC), which caused immediate and deep impacts; but was relatively short, showing recovering signals by middle of 2009, due to the combination of expansionary fiscal and monetary policies and policies oriented to mitigate the liquidity crisis in the banking sector.

Amid a positive external environment since 2004 (positive terms trade and growing capital flows), high interest rate stimulated speculative operations through portfolio investment and foreign exchange (FX) derivatives. These operations along with the current account surplus resulted in a significant currency appreciation. The interventions of the monetary authority in the FX market in 2005 did not curb the Real exchange rate appreciation, but increased FX reserves. The so called precautionary demand for reserves contributed to the decrease of net public external debt and improved the country's external liquidity. Moreover, in this period bank credit to the private sector recorded a significant growth, stimulating among other factors the payroll-deductibility of credit operations, which reduced bank risk and, consequently, the cost of loans to households.

The 2008 financial crisis effect impacted the economy through terms of trade and capital flows. Indeed, Lula da Silva's response to the GFC, although late, was an important shift from previous crisis episodes, where central government pursued pro-cyclical policies, usually within the framework of the IMF stabilization programs, hoping to steady financial investors humours, and unfolded a broad variety of countercyclical economic measures (Barbosa, 2010; Paula et al., 2015) to, first, avoid the spread of the credit crunch, for which the *Banco Central do Brasil* (BCB, Central Bank of Brazil) adopted a series of liquidity-enhancing measures; second, the BCB intervened in the FX markets; third, the state-owned banks were encouraged to expand their credit operations to compensate for the private bank credits deceleration of credit supply; and fourth, the Ministry of Finance undertook fiscal measures to stimulate aggregate demand. This countercyclical reaction was possible, to a large extent, due to the policy space created by the shift towards a net creditor position in foreign currency of the Brazilian government, thereby the currency devaluation favoured public finance.

As a result of these countercyclical economic policies, after experiencing a recession in 2009 (GDP grew by - 0.2%), the Brazilian economy expanded 7.6% in 2010; and more important international capital flows were restored. But, the problems associated with periods of prosperity reappeared, including the tendency for the *real* to appreciate due to the new surge of capital inflows.

In the context the Brazilian economy took place a new "twin boom" (commodities and capital inflows), on the account a huge short-term capital inflows, boosted by the high differential between the internal and external interest rates. As the BCB resumed the exchange rate policy adopted before the crisis, Brazil's currency recorded a huge appreciation in 2009, followed by the imposition of capital flows regulations by the Ministry of Finance, which started with a tiny financial transaction tax on foreign portfolio investments (October 2009). Soon, these regulations were strengthened with the first measure targeting FX derivatives operations and administrative controls. Moreover, the BCB adopted macro prudential regulations to curb the domestic credit boom (Prates and Paula, 2017).

During, 2007-2010, the main macroeconomic results were the growth of GDP by an average of 4.5% per year, pushed up by higher investment spending, private consumption and exports. This was accomplished with an average annual inflation of 5.1%; while unemployment dropped from 9.3% to 6.7%. But, the external sector position deteriorated significantly; the trade surplus dropped almost 27%, while the balance of payments' current account deficit reached more than 2% of GDP, since 2010.

In late 2010 and in 2011, the first year of Dilma Rouseff's term, the central government faced the dilemma of having a moderate economic growth and address inflationary pressures. In this context, immediately after Dilma Rouseff took office, the BCB increased the interest rate to avoid inflationary pressures caused by robust economic growth in 2010 and, at the same time, fiscal policy stance became more conservative (at the end of the 2010 the interest rate and the primary fiscal surplus increased to 11.75% and 3.1% of GDP, respectively). Despite these changes in monetary and fiscal policies, in 2011 the Brazilian economy grew by 3.9%. In mid-2011, was introduced what the government labelled the 'New Macroeconomic Matrix'. This encompasses a set of countercyclical measures to boost growth in the context (while the euro was worsening) and increase the Brazilian industry competitiveness, damaged by years of currency appreciation and the greater competition in the external markets after the GFC.

The regulatory toolkit on spot and derivatives' FX markets was further broadened as the previous measures had only mitigated the currency appreciation trend underlying the deterioration in competitiveness of Brazil's manufacturing sector in both external and domestic markets. It was completed by a gradual reduction of SELIC interest rate[8], that is the BCB's policy rate. Yet, as precondition for these changes, fiscal policy was tightened in the first half of 2011. The interplay of the new FX regulations, the monetary

[8] The *Sistema Especial de Liquidação e Custodia* (SELIC) (Special Clearance and Escrow System) is the Central Bank of Brazil's system for performing open market operations in execution of monetary policy. The SELIC rate is the Bank's overnight rate.

policy loosening and the global investor higher risk aversion the Brazilian currency was depreciated as was intended.

In this occasion, unlike the post-subprime crisis, the economic measures failed to sustain economic activity and the Brazilian economy experienced a poor performance in 2012, since GDP increased only 1.9%.

In addition to the changes in interest and the exchange rate, the government launched a wide range of instruments that favoured the domestic manufacturing sector and seek to dampen inflationary pressures in face of the currency depreciation, In this context a nominal freeze of public tariffs was imposed (energy and gasoline), the state-owned banks reduce bank spreads and tax exemptions; without changing (in the first year) the overall fiscal policy stance (Paula and Pires, 2017; Mello and Rossi, 2017).

In April 2013, due to higher inflation rates, the BCB restarted to rise gradual and continuously the policy rate, and removed regulations on FX operations due to the Federal Reserve signalling that its quantitative easing policy would to be stopped ('tapering'). At the same time, the Brazilian government further enlarged tax exemptions, and tried to intensify investment in infra-structure. Moreover, 'Lava-jato'[9] operation was launched in the context of the oil prices decline and Petrobras reduction of its investments spending, which had a strong impact on overall investment (Mello and Rossi, 2017).

Compared with the policies launched to neutralize the GFC contagion effect, the countercyclical fiscal policies implemented during 2012-2014 (tax exemptions instead of public expenditures) it was extremely limited, with small aggregate impact on production and employment (Paula et al, 2015). The same holds for public investment, which was significantly higher during 2006-2010.

At the end Dilma Rousseff first government term, the main macroeconomic results were a drop GDP drop in growth rate from 3% in 2013 to 0.5% in 2014; and average annual inflation of 6.2% ; and an accumulated current account deficit around USD 279.1 billion; and, surprisingly, the average unemployment rate dropped to 4.8% in 2014. Since middle of 2014 the Brazilian economy reversed, affected by a set of factors where are included, the terms of trade deterioration (mainly because of the decline in commodities price), a hydric crisis took place, and interest rate rose sharply, and since 2015 there was a fiscal adjustment and huge exchange rate devaluation. As a result the average GDP growth in 2015-2016 was -3.6% p.a., while unemployment rate came down (from 12.4% in December 2013 to 8.0% in February 2016).

In 2015, after Dilma Rousseff re-election, the central government shifted its economic policy towards a more orthodox policy stance, becoming very important fiscal adjustments in the side of public expenditures, which was implemented to regain agents' confidence as a pre-condition for economic recovery. For this purpose, the Brazilian government committed itself to a primary fiscal surplus of 1.2% of GDP, along with a set of measures to reduce public expenditures (mainly the budget contingency), monitored prices were re-adjusted (energy and oil), and BCB further increased its policy rate from 10.92% to 14.14% p.a. from October 2014 to August 2015. Due to the 2015 strong devaluation, the BCB intervened in the FX market to reduce exchange rate volatility and offered exchange rate hedging to private agents, with the use of swap operations (Paula and Pires, 2017). The efforts of fiscal adjustment failed as fiscal revenues dropped dramatically in 2015, and the Ministry of Finance had to revise its fiscal targets. In the

[9] In March, 2014, was launched the '*Lava-jato'* operation (Car Wash) the Federal Police of Brazil and the Court to deal with corruption allegation in the state-controlled oil company Petrobras.

light of the recession and increasing interest payments, the public nominal deficit increased even more in 2015. Net public debt over GDP, which had recorded its lowest level during the period under analysis in 2013 with 30.5%, again grew steeply (to 46% of GDP in 2016), while gross debt increased even more, from 51.5% to 69.6% over GDP in the same period.

At the beginning of 2016, Nelson Barbosa, the new Finance Minister, announced the strategy of fiscal consolidation which, among other things, was be able to reverse the upward trend of public spending, which contradictorily compromised the capacity of the Brazilian State to implement public policies in the long term (Paula and Pires, 2017). As for 2016, the spread of political crisis paralyzed the government's actions, making impossible the adoption of any economic policy agenda until the impeachment of President Roussef in 2016.

From the start of President Roussef's impeachment in May 2017, Michel Temer began his tenure as president of Brazil, with Henrique Meirelles (former president of the BCB between 2003 and 2011) as the Finance Minister. In the new government substantial changes in the economic policy took place, the economic tripod was reinforced, along with a conservative monetary policy (to rescue the BCB's credibility), a floating exchange rate was imposed with little BCB interference in foreign exchange market, and public spending ceiling was imposed through 'Constitutional Amendment number 95' (which set a maximum readjustment of public spending based on the headline consumer price index - IPCA of the previous year), creating a straitjacket for countercyclical fiscal policies implementations. In addition, a set of neoliberal reforms were adopted, aimed at reducing the role of the State in the economy, which included labour reform (increased outsourcing of labour), limited BNDES's role in the long-term financing in the economy, and social security reforms are in the process of being approved.

3.2. Some characteristics of Brazil financialisation period

During the period of high inflation in Brazil (1981-1994), there was a strong financialisation process in the Brazilian economy, characterizing a monetary regime that Bruno et al (2015) labelled as a 'financialisation regime led inflationary gains', derived from the generalized indexation of contracts based on public indebtedness, very functional in high inflation environment. In this context, the rentier accumulation can occur due to 'indexed money' (high liquidity financial assets that function as quasi-money). Indeed, the existence of 'indexed money', short-term domestic-denominated financial assets, most of them indexed to the overnight rate of interest, managed the maintenance of savings in the domestic financial sector, avoiding the dollarization of the economy but, at the same time, could unfold a process of hyperinflation in the light of a financial assets 'flight risk' (Belluzzo and Almeida 1990).

The 1994 monetary stabilization program of the Real Plan led to a process of financialisation through interest-rate gains, replacing the previous monetary regime, that encompasses interest income and other financial gains from assets derived from public and private indebtedness, which operated at the same time as the process of financialisation through expansion of the consumer credit supply, expansion of private pension funds, insurance and new financial services. The 'financialisation regime led interest rate gains' differs from the 'financialisation regime led dividends gains' that dominate the financialisation of the USA economy (see the second section), where the main source of agents' financial revenues does not stem from dividends, but from revenues derived from investments in public and private bonds, partly indexed to interest rates, which was maintained at very high levels.

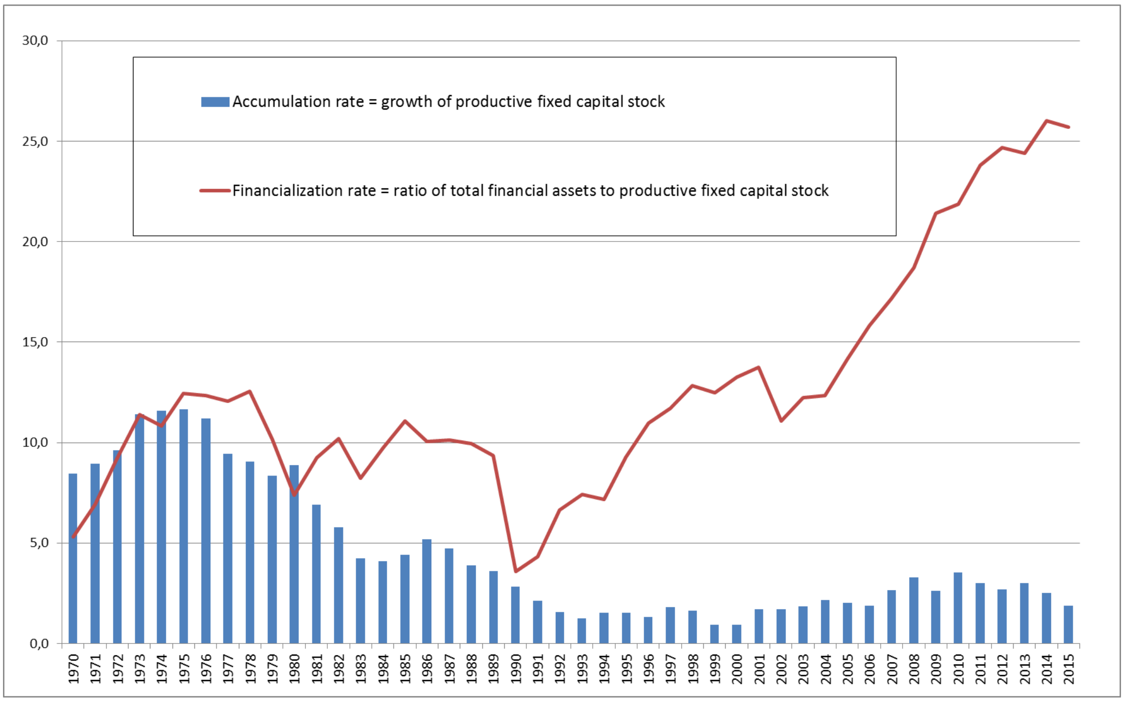
Since the early 1990 the financialisation process have been stimulated by the capital account liberalisation, which set off speculation from both resident and non-resident. Indeed, Kaltenbrunner and Painceira (2017) argue that one of Brazil financialisation features is what they label ‘subordinated financial integration’, that links financialisation with cross-border capital flows and shape a subordinated agents’ relations with the financial markets due to carry-trade operations that explore interest rates differentials derived from very high Brazil domestic interest rates compared to developed economies (for instance the US federal funds interest rates).

Under the ‘financialisation regime led interest rate gains’, until 2015, the government sought to reconcile the interests of rentist accumulation with redistributive social policies, favouring social segments, whose income derives from interest and other financial gains (Paula and Bruno, 2017). Thus, financialisation was stimulated by two interrelated factors, which are an extremely high real interest rate and the permanence of an ‘overnight circuit’ in the Brazilian economy, inherited from the period of high inflation, which was maintained high in the post-Real period, where the applications of economic agents are channelled, especially in times of high uncertainty. In fact, the real interest rate (discounted by the IPCA) was on average 5% p.a. during 2007 and 2016 (it peaked to an average p.a of 12.5% between 2002 and 2006); on the other hand, short-term financial operations indexed to the SELIC rate (including Treasury Financial Bills, ‘*Letras Financeiras do Tesouro’*) and repo transactions (‘*compromissadas*’) increased from 35.4% of GDP in December 2006 to 40.7% of GDP in April 2015 (Salto and Ribeiro, 2015). The increase and greater importance of financial wealth combining high liquidity with profitability, to which most of agents' applications (households, firms, financial institutions, pension funds, etcetera) concentrate part of their financial resources, is one of the most important feature of financialisation in Brazil.

As can be seen in Figure 1, since 1991 there has been a strong increase in the rate of financialisation, measured by the ratio total financial assets over productive fixed capital stock, reaching a peak level in 2014 of more than 25%. At the same time the growth rate of the stock of fixed capital shrank and remained on average at low levels, especially when compared to the 1970, a decade marked by high economic growth. It should be highlight that the increase in the rate of financialisation since beginning of the 1990 followed the process of capital account liberalization in Brazil, according to the analysis of Kaltenbrunner and Painceira (2017). Compared to the former decades there is a sort of structural break in the series of the capital accumulation.

In the period analysed in the next section (1994-2017) the investment rates expands between 2006 and 2013, but at significantly lower level than in the former decades. In the next section we analyse the relation between financialisation and investment in 1994-2017.

Figure 1: Finance-rentist accumulation versus fixed capital accumulation - percentage (1970-2015)



Source: Bruno and Caffé (2015) with data from IBGE (Brazilian Institute of Geography and Statistics) 2018

4. FINANCIALISATION AND INVESTMENT IN BRAZIL

This section is divided in two parts: we start with the analysis of the overall investment in the period that range 1991 and 2017, and in the sequence we focus on the relationship between financialisation and investment of the Brazilian firms.

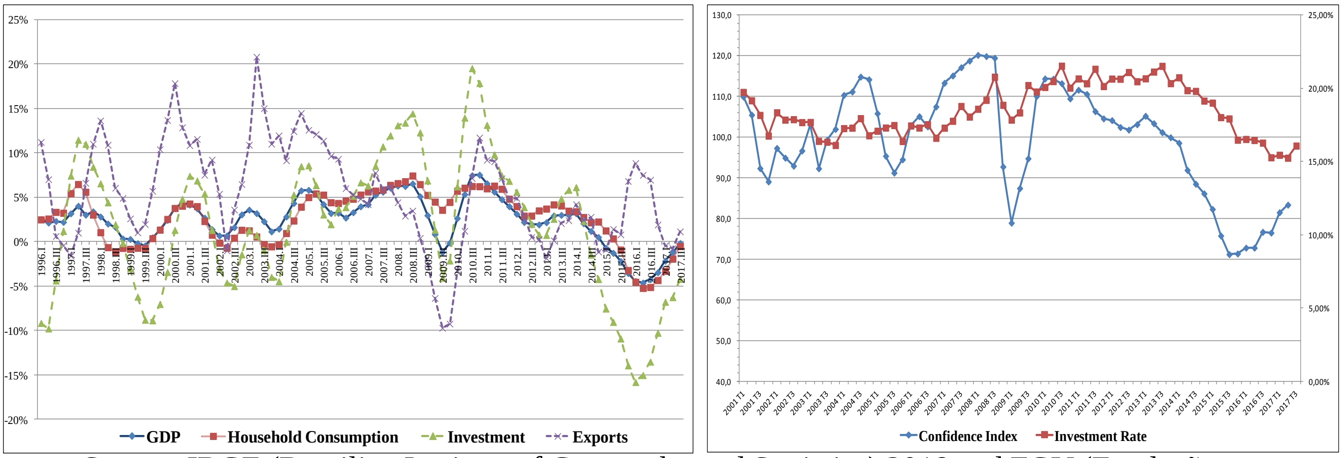
4.1. Brazil 1994-2017: An overview of investment

The Brazilian economy, since the 1994 Real Plan, has been highly volatile, with short economic cycles until 2002. From 3003 it presented a more solid trajectory of growth that was followed by a slowdown. The rate of investment played a central role in the economic performance of these periods, especially since 2006. In fact, during 2004 and 2013 the economic boom was led household consumption that pulled investment spending, and during the cyclical reversal (since 2014) the deterioration of business expectations, in conjunction with other factors (deindustrialization, currency overvaluation, increase in the economic agents’ leverage and fall in firms' profitability) contributed to the economic slowdown.

Looking at the evolution of agents' expectations over the period analysed (Figure 2), measured by the confidence investment index (based on FGV database), it can be anticipated that investment in both boom and downturn periods, influences investment decisions and economic growth.

The investment rate (investments with respect to gross domestic product, GDP) shows four trends. First, between 1996 and 2000, the investment rate has a very volatile behaviour, it trend is not defined through 2000 and 2006. In the subsequent period (2006 - 2013) there growth tendency of the investment rate reached a peak (21.5 %); while in the third quarter of 2013, is shows a decreasing trend, reaching the lowest rate in the second quarter of 2017 (15.2%).

Figure 2: GDP Growth Rate evolution from the demand side (left) and Investment Rate and Confidence Index of Investment** (right)



Source: IBGE (Brazilian Institute of Geography and Statistics) 2018 and FGV (Fundação Getúlio Vargas) 2018

Note: (*) Accumulated rate of the last four quarters (compared to the same period the previous year); (**) Investment Expectation Indexes - aggregation of respective indices of capital goods and construction material (industry), engineering services (services sector) and civil construction sector, by economic weights on the left axis and investment rate on the right axis.

Among the movements of the investment rate, it should be highlighted the strong downturn that began at the end of 2013, after a robust growth cycle. As pointed out before, several factors may have contributed to the cyclical economic reversal and to the inversion of the investment trajectory, including the worsening of economic agents expectations. In fact, as illustrated in Figure 2, there is a process of worsening expectations since 2010 that intensified in 2013 that can be related to political factors ("*lava-jato*" operation and President Dilma Roussef's impeachment, among others) and a recessive cycle.

This drop in investment rate can also be associated with deterioration of the firms' safety margins that resulted of the increased financial leverage if the economic boom period, accompanied by higher agents' expectations, which led to higher share of the financial commitments over their profits. According to CEMEC[10] (2016), the behaviour of firms' cash generation of firms (EBITDA - earnings before interest, taxes, depreciation and amortization) and financial expenses in the companies' net operating revenues shows opposite trends, the with former showing an downward trend, while the latter has an upward trend.

At the same time, there was a robust growth of the credit supply, especially by the state-owned National Development Bank (BNDES[11]) that was the main source of investment finance during the period, reaching the peak in 2013 and presenting a significant falls from 2014, as BNDES disbursement volume fall to the level of 2008. Therefore, there is a pro-cyclical movement of supply of credit, with expansion during periods of economic growth, and contraction when the economic activity slows down,

[10] Study Center of Capital Market (CEMEC) of the Brazilian Institute of Capital Market (IBMEC)

[11] The Brazilian Development Bank (BNDES), is a state-owned federal bank, and the main financing agent for development in Brazil. It plays a fundamental role in stimulating the expansion of industry and infrastructure in the country

showing some evidence that the credit supply has an important influence in the behaviour of the private investment in the Brazilian economy.

The slowdown of the operational performance of Brazilian firms can be directly related to economic recession scenarios, mainly due to demand factors; and can also be related to higher financial costs, because of the higher interest rate and the 2015 currency devaluation, which led to higher shares companies foreign currency debts between 2015 and 2016 (CEMEC, 2016).

The company's performance turned worse due to different factors already pointed out, which in turn had also negatively effects in investments decisions. Historically, self-financing, or retained earnings, has been the major source private investment finance in Brazil, in addition to BNDES loans. Therefore, the business profitability deterioration can have affected the investment through two different channels, first, by the deterioration of entrepreneurs' expectations and, second, by the reduction of firms' own resources to carry out the planned investments.

Since 2014, the fall of firms' profitability is partly related to the fall in aggregate demand, causing companies to have smaller ability to pass on cost to prices and also because of financial losses that occurred due the worsening of the financing conditions of the Brazilian economy and the rising in interest rates. The increase in interest rates meant that financial expenses grew faster than operating costs, contributing to the decline in the net profitability of companies. In addition to the increase in indebtedness, the impact of the exchange devaluation on the external debt of the companies also affected net profit margins, albeit heterogeneously among the sectors.

As highlighted by IEDI (2016), the fall in profitability was an important component in the process of economic downturn. This process was exacerbated by the worsening in the economic environment that combined retraction of domestic demand and low level of utilization of installed capacity with dynamism still insufficient of the external market, making hard the recovery of productive investment. In addition, the study shows that companies have made less and less long-term investments, especially in fixed assets, and have sought to maintain an appreciable volume of financial investments and cash on hand.

4.2. Financialisation and investment of the Brazilian firms

As seen in section 2, financialisation according to the shareholder value approach, can affect fixed capital investment through two channels. In periods of greater uncertainty, companies tend to choose to invest more in financial assets and less in fixed assets, taking place a trade-off between both assets, given the difference in assets reversibility and maturity. The other channel is related to companies management change to a pattern related to shareholder wealth maximization.

In the Brazilian case, under a macroeconomic environment characterized by high interest rates and a very volatile exchange rate, non-financial companies had incentives to allocate their resources to financial assets, especially in periods of high uncertainty and high interest rates.

In order to analyse the evolution of the share of financial assets in companies' investment portfolio, Figure 3 shows the evolution of the share of financial revenues in the companies' operating income. Between 1995 and 2016, this ratio varied between 4% (1995) and 13% (2016), showing a significant growth, but still presenting low levels. The main contributions of the financial revenues in the company's performance occurred in years of high uncertainty and high interest rates, particularly in 1998, 2002 and 2015-2016.

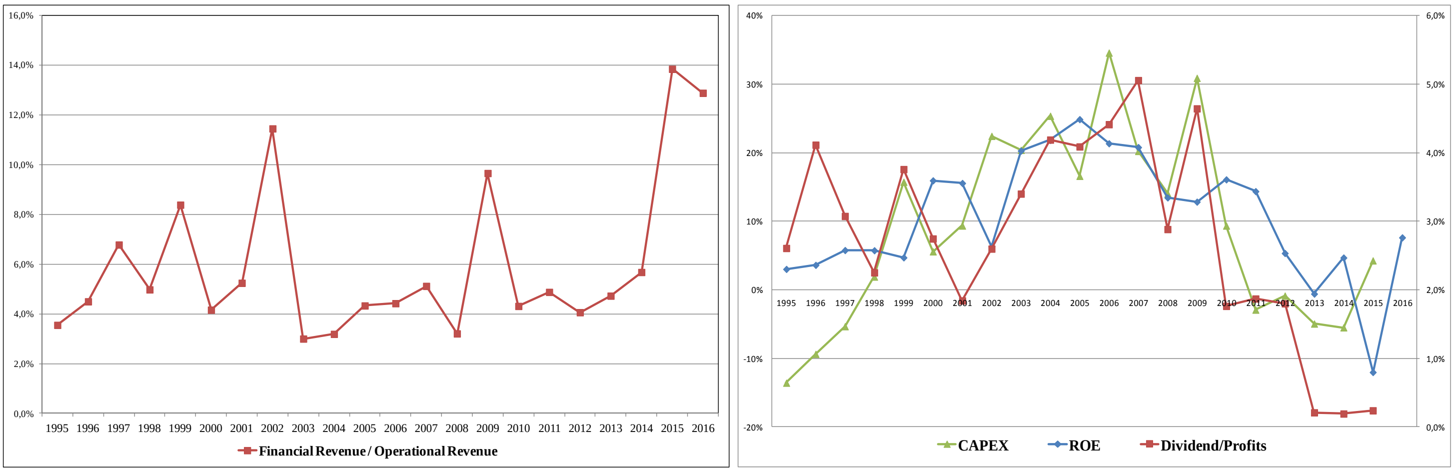
In addition, to prove the progress of the financialisation process it is necessary to evaluate a broader set of indicators, such as the share of financial income and operating revenues over the total assets of non-financial companies listed on the stock exchange market in 1995-2016 period. The variables show divergent trends, the turnover of the operational assets (operating revenues/total assets) has a downward trend since 2005, while the ratio financial revenue over total assets shows an oscillatory and upward trend in 2005-2015; which can depict financialisation trend of the Brazilian companies.

However, it should be highlighted that the share of financial revenues over total assets is still very low, compared to the share of operating revenues, although one could expect that in most cases operating revenues should be the main source of earnings of a productive firm.

Figure 3 also shows the evolution of the growth rate of investment expenditures (CAPEX), return on equities (ROE) and the ratio 'distributed dividends over gross profit'. The data show some similarity in the movement of the three variables, which contradicts the financialisation hypothesis, mainly a greater distribution of dividends can have negative impact on investment. Still, the investment expenditures seem to respond to the changes if profitability, while dividends pay-outs follows this latter variable.

In this way, according to the indicators used, cannot be concluded categorically that a financialisation process is taking place in the Brazilian firms through the shareholder value channel since dividends payments are not been distributed at the expenses of investments. Furthermore, there is some trend showing a greater importance of financial revenues (with exception of 2003 and 2004), but still has small share in the firms' return, with greater importance in periods of interest rates peaks and exchange rate volatility, that corresponds periods of greater macroeconomic instability. In other words, firms seem to extract some advantages of periods of instability by the channel of interest gains.

Figure 3: Financial revenues and operating revenues over total assets (right) and growth rate of expenditures with capital goods (CAPEX), distributed dividends over gross profit and return on equities (ROE) (left)



Source: Authors' elaboration with data from Economática (2018)

5. CONCLUSIONS

Brazil' monetary regime is characterised by some authors a regime of "financialisation led interest rate gains" because of the existence of an overnight circuit in Brazil combined with high real interest rates. In this paper we analysed the relationship between financialisation and investment in Brazil after 1994, and according to the literature on financialisation there are two main channels in which financialisation can negatively affect productive investment: by directing available domestic funds towards investments in financial assets when they offer larger short-term returns; and by the pressure exerted by shareholders on companies managers to obtain greater short-term returns and dividends payments.

We first showed that since 1990 the reduction of the accumulation rate was followed by a gradual and sharp increase in the financialisation rate, hence there is some evidence that financialisation is underway in Brazil after the process of capital account liberalization. However once analysed the accounting indicators of the big set of Brazilian firms although financial revenues have some importance in the firms' return, there is no clear evidence that dividends payments are been done at the expenses of the productive investments, at the least in the period analysed in this work.

So, can be conclude that firms financialisation is still an ongoing process in Brazil but not consolidated yet. But, what does explain the high level of financialisation ratio in Brazil? The existence of vast amount of financial wealth combining high liquidity and high yield, in which a great part of the economic agents (households, firms, financial institutions, pension funds, etc.) allocate a big share of their financial resources, is one of the most important feature of financialisation in Brazil.

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