Minsky Goes Global - Finance and the Political Economy of Forging Ahead and Falling Behind:

The Cases of Brazil and China

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Introduction[1]:

Leonardo Burlamaqui and Matheus Vianna

From the 1950's to the 1980's the Brazilian economy grew at an annual average rate of 8%. It was only superseded by Japan. In 1950 China was unplugging from Western imperialism and beginning its journey towards Communism under Mao. Before the Chinese Communist Party flipped to the Deng era by introducing key economic and institutional reforms, the economy's average growth rate was estimated as less than 5% per year between 1950 and 1960[2]. From 1960-1978 it climbed discretely to an average of 5.3% according to the Congressional Research Service. After Deng's reforms, growth speeded up aggressively reaching Japanese golden year's levels and managed to stay there for most of the last thirty years.

In fact, in China 2014 marks the first time since 1998, when the economy was buffeted by the Asian financial crisis, that growth has slipped below the Communist party's annual gross domestic product target, which was set at "around" 7.5 %. The only other year when the official growth has been below the target since the government began publicly announcing annual figures in 1985 was in 1989[3]. On the poverty alleviation front, China's policies where equally successful. They took millions out of the poverty line yearly, and where famously praised by the World Bank[4].

Meanwhile, since the mid-eighties Brazil virtually ceased to sustain growth rates at more than 6%. The debt crisis coupled with quasi hyperinflation in the eighties led to the so-called lost decade in the nineties, which implied rates of growth, on an average of 1.5 %. The stabilization period, associated to Fernando Henrique Cardoso's tenures as Finance Minister and President, spanning from 1993 to 2002, delivered an equally dismal 2.8% average growth rate. The correlation between these numbers and the introduction in Brazilian policy-making of a significant process of liberalization in the context of the Washington Consensus doctrines (Verengo: 2011, 17-18), starting in the late 1980's should be noted.

With Lula's election, many analysts and forecasters foreshadowed a reversal in development strategy, one that would reverse several of the liberalization policies of the previous decade. That did not happen. As it turned out, the break with previous policies was considerably less marked than expected, and in many respects Lula's administration represented a continuation of the liberalizing policies of the 1990s. The economic performance as measured by the real GDP growth showed improvement, with a rate of growth of 4.1 percent per year on average, but this reflected mostly a global phenomenon with emphasis to the rise of China itself (Verengo: 2011, 18).

What happened? Comparing these facts and numbers poses a big question for anyone interested in growth, development strategies, macro-policies, global trends and political economy as a whole. The policy-institutional compact espoused by Brazil in the nineties clearly did not work well. Neither for development nor for reversing inequality since the redistribution that took place was mostly from the established (old) middle class towards the high-end of a previously poor stratum of society that gained the rubric of "new middle class". Wealth was barely touched and the rich even got a little richer thanks to a flood of interest-based income received from the Treasury.

Likewise, the brief experience with poverty alleviation by means of social expending under Lula's administration did little to reverse inequality. It was successful as a starting point, but required sustained growth to really make a durable impact. It is now in full reversal mode after the economy entered a deep recession since 2015, where it contracted around 8% between 2015 and the third quarter of 2017.

In contradistinction, China's structural transformation is revealing itself to be the most spectacular development spurt in history. As admitted by the otherwise liberal-conservative newspaper The Economist, "Firms around the world face ever more intense competition from their Chinese rivals. China is not the first country to industrialize, but none has ever made the leap so rapidly and on such a monumental scale. Little more than a decade ago, Chinese boom towns churned out zips, socks and cigarette lighters. Today the country is at the global frontier of new technology in everything, from mobile payments to driverless cars".

Summing up, while China was vigorously forging ahead in the development ladder, Brazil was, also actively, falling behind. Again: what happened?

In this brief book, we are not aiming at to give a full response to that utterly complex question. This would require a whole research agenda on its own. But we want to venture the hypothesis that the way financial systems are structured and governed, and how they link- or do not link- with investment, industrial and innovation policies should be the starting point for addressing the question.

The first two chapters briefly attempt to provide an analytical framework for the rest of the study. The first by exploring key ideas of Keynes, Minsky and Godley on the subject and how they link, and the second by briefly discussing the current mismatch between the fully-fledged financial markets' globalization in place and the rachitic corpus of global governance institutions created to supervise and regulate them. A conclusion that emerges from both these explorations is that in the absence of effective global financial governance institutions, domestic policy space must be strengthened, especially and not surprisingly, in the financial realm.

We then move to the third and fourth chapters, which should be read as case-studies constructed in the light of the previous pair, and where both, financial structures and governance mechanisms in Brazil and China are scrutinized to shed light to the question we posed to ourselves. Those two chapters are the most robust part of the book, and are the focus of this research. The fifth chapter concludes the book by way of comparing the two cases and attempting to extract some lessons, having China mostly as the teacher, and Brazil as the potential student.

1. Finance and Investment: A Keynes-Minsky-Godley Theoretical Framework:

Felipe Rezende

Introduction

This chapter aims at to briefly discuss Keynes' investment theory of the business cycle and Minsky's financial theory of investment. We then incorporate Godley's financial balances approach and Minsky's financial instability hypothesis to analyze the current crisis that was driven by unsustainable corporate sector deficit spending. The next chapters adopts this Keynes-Minsky-Godley's approach which will guide us in analyzing both, Brazil's current crisis and its "falling behind" along with China's "forging ahead" in the global economic and financial landscape.

Keynes' Investment Theory of The Business Cycle and Minsky's Instability Theory

While Keynes' investment theory of the business cycle is well known to require further exposition, Chapter 17 of Keynes's General Theory (Keynes 1964) details his approach to money, by incorporating Keynes' liquidity preference theory of asset prices – enabling us to look at the marginal efficiency of capital (or the investment decision determining the marginal efficiency of capital), as applying to every possible investment decision[5]. We can then analyze at the micro level the individual decisions to invest in the production of capital goods, individual decisions to use these capital goods to provide employment, and individual decisions in terms of financial investments. Thus, every decision to use current income to produce future income can be applied to every type of speculative activity (broadly defined in terms of spot-forward prices).

If we can conceive these returns for every kind of activity we can also analyze these returns in terms of their own-rates of own-interest (Kregel, 1996, 1999, 2010), in which each particular investment decision produces an interest rate (or a rate of return) in terms of itself[6].

Different types of commodities or different types of investments will have different own-rates of own-return determined by different factors. These own-rates of own-interest are distinguished by three different components: q – c + l. Some assets produce a physical return q of productive goods measured in terms of themselves, while most assets held through time have a wastage or carrying cost (c) and some assets have a liquidity premium l. The total return of every asset, measured in terms of itself, is given by those three particular factors, i.e. by

$$q - c + l = \left(\frac{F_w - S_w}{S_w} \right)$$

"They are defined as the forward price of…wheat in terms of wheat less the spot price as a proportion to the spot price" (Kregel, 1996, p.275).

In general, investment in capital goods (physically productive assets) will generate a (q-c) return, while liquid assets, such as money, have relative low carrying costs and most of their return comes from l - the greatest liquidity premium is attached to money[7]. We need to adjust these returns by a, which is the expected appreciation (or depreciation) of any asset relative to what is taken as the unit of account (or unit of comparison/measurement), i.e. money[8]. This is the equivalent of the forward discount or premium. Thus, we can look at the returns of all the different investment decisions in terms of the total return as a way of representing the spot-forward price framework[9].

In equilibrium the demand price of all assets will be such that the total returns will be equalized as measured by $q – c + l \pm a$. This can be used to calculate the marginal efficiency of every asset, money included. Hence, the marginal efficiency of capital applies not only to existing capital stocks, but to all individual investment decisions. As it is well known, there will be no tendency towards market clearing equilibrium; instead, the tendency in a monetary economy is that the system tries to produce equilibrium towards equalization of the total expected rates of return.

If there are in the system some rates of return that are greater than any other rates of return – it means that $q – c + l + a > i$ (where i is the marginal efficiency of money or return on money), and then individuals will choose to invest their money into those assets which provide the highest rates of return. Equilibrium would occur when the relative advantages of all types of investments had reached equality between the return on money and the rate of return for every other asset in the economy[10].

This framework can be applied in terms of different investment projects, in which the own-rates of own-return will be different across different types of investments, and will be brought to equality by the spot-forward premium represented by a factor[11] [Kregel, 1996, 2009b]. If output is expanding, it can do so through adjustments of a factors, which create backwardation (changes in the spot price relative to the futures price create the possibility to invest today at the spot price to be able to sell at positive forward price)[12].

This process comes to a stop when those a factor stops moving, meaning that the spot-futures prices no longer create backwardation.

So, to undertake investments in assets that have (q-c) returns relative to money, it is necessary to create a position of backwardation in which the futures price is below the expected spot price. This is the required condition for increasing investments so that the entrepreneur can produce goods today (by making investment today) at a cost that is less than what is expected to earn in the future.

From this perspective, there is nothing to stop investment decisions from producing full employment. What is required is that a factor is increasing, so that futures prices are increasing relative to spot prices. In this context, there is no problem of scarcity, because if the system is always equating relative returns then investors are going to be investing in these returns until they are driven down to zero[13].

However, in a monetary economy there is something that blocks this process. “For it may be that it is the greatest of the own-rates of interest [usually money] which rules the roost” (Keynes 1964, p.223) It is the existence of money (or an asset whose liquidity premium is greater than its carrying costs) that blocks this process. The own-rate on money l sets the standard return in a monetary economy; it is likely that the rate of returns on all other assets will come into equality with the return on money before the economy achieves the full employment level[14]. When money is in a position of backwardation, the rate of return on money does not fall as fast as the rate of return of other assets[15].

Keynes and user costs: An overlooked contribution

For Keynes (1964), firms will invest in productive assets, as long as the expected rate of return on the capital asset exceeds the costs of acquiring them. The marginal efficiency of capital involves forward-looking investment decisions in terms of two general factors: the demand price and the supply price of capital goods. The demand price is the present value of the discounted expected future cash flows (net proceeds) of an investment project. To find the present values, we discount the future cash flows, net of running expenses, at the opportunity cost of capital with respect to equal-risk (or comparable risk characteristics) alternatives.

The net present value (NPV) method is the present value of future cash flows (Ct) discounted by the appropriate market interest rate minus the initial cost of the investment (C0). To calculate the NPV, it is necessary to forecast cash flows and to estimate the opportunity cost of capital over the investment project life. This means that not only investors have to formulate expectations about future cash flows, but also that they have to form expectations about future interest rates. As Keynes put it, "it is by reason of the existence of durable capital equipment that the economic future is linked to the present". (Keynes 1964, p.146) This is a system in which expectations of future conditions determine present decisions[16].

In the General Theory, the supply price represents a major innovation in Keynes' theory of investment. Keynes introduced the notion of user cost, which includes the expectations of future conditions, as the component of the supply price. What determines the supply price is the marginal prime cost plus the user cost. The prime costs of using a commodity today is the sum of the factor costs (F), which in this case is the current market value, plus the user cost (U) – the benefit which will be sacrificed by its current use so that P = F + U. Thus, the decision to use an asset today means that the cost of using it is, in fact, foregoing the ability to profit from holding the commodity and selling it at a future date.

If an entrepreneur expects the price in which he or she can sell the output to rise, then it is rational not to operate the plant today. If the entrepreneur decides to operate the plant today and prices in fact rise, then the entrepreneur incurs losses. Thus, expectations are introduced in the supply price because the investor always must take into account the potential profit or loss that s/he can make, by deciding to operate the plant or not. These decisions (to invest and operate the plant) are going to determine the level of employment and output today (Kregel 1996, 1998, 1999, 2010).

In other words, the decision to operate a plant today precludes the possibility of holding the plant idle and starting its operation at some future date[17]. The decision to use (or operate, or consume) an asset or money today precludes the option to do it at some future date, and the cost of this decision will be determined by the gain or loss that an investor could have made by having refrained from using the commodity today. If an investor decides to sell the commodity today relative to selling it tomorrow, it will produce a loss (gain) once the investor could have held the commodity and have sold it at a higher (lower) futures price rather than selling it today at a lower (higher) price. In other words, the prime cost of using the commodity is given by the factor cost plus the user costs (option premium), therefore:

$$\begin{cases} P = F + U & if\ S_0 < E[S_0] \rightarrow U = price\ of\ a\ call\ option \\ P = F - U & if\ S_0 > E[S_0] \rightarrow U = price\ of\ a\ put\ option \end{cases}$$

If spot prices are expected to be higher in the future, user costs will be positive being equivalent to a call option written at a strike price equals to the spot price prevailing when the decision to use (or sell) the commodity is taken. On the other hand, if spot prices are expected to be lower in the future, user costs will be negative being equivalent to a put option written at a strike price equals to the spot price prevailing when the decision to use (or sell) the commodity is taken.

While Minsky incorporated in Keynes' model a financial theory of investment, Minsky pointed out that in a modern capitalist economy, firms' financing decisions involve internal (retained earnings plus depreciation) and external funds (equity and bond issuance; short and long-term borrowing - bank debt).

Minsky: Destabilizing Effects of Stability and Declining Margins of Safety

In Minsky's work, Keynes' theory was extended: the investment theory of the cycle was supplemented by a financial theory of investment to demonstrate that, in a modern capitalist economy, investment decisions have to be financed, and the liability structure created due to those investment decisions will generate endogenous destabilizing forces. His theory of the business cycle, grounded on his financial theory of investment, shows that a capitalist economy is inherently unstable due to the interconnectedness of balance sheets of economics units and cash flows. From this perspective, while the financial system in a capitalist economy plays a key role to provide the financing to business to promote the real capital development of the economy, it also plays a key role creating destabilizing forces.

Central to Minsky's financial instability hypothesis was that periods of economic stability and economic progress lead to dynamic internal changes characterized by hedge, speculative, and Ponzi financial positions (see Minsky 1975, 1982, 1986). Minsky (1986) focused on the destabilizing effects of stability and declining margins of safety. The purchase of assets through the issuance of debt is core to his financial instability theory. He pointed out that periods of growth and tranquility validates expectations and existing financial structures, which change the dynamics of human behavior leading to endogenous instability, increasing risk appetite, mispricing of risky positions, and the erosion of margins of safety and liquid positions. That is, over periods of prolonged expansion fragility rises, exposing the economy to the possibility of a crisis. This rise in financial fragility has the potential to lead to a slowdown in economic growth, stagnation or even a recession.

Minsky argues that continued success encourages and enables more investment, which creates more income through the traditional spending multiplier and profits - as shown by Kalecki-Levy's profit equation - but it also increases the magnitude of risk underpricing.

Minsky argues that during economic expansions, market participants show greater tolerance for risk and forget the lessons of the past crises, so firms gradually move from safe financial positions to riskier positions.

For instance, during an expansion led by an investment boom, profits tend to increase. The profit boom affects behavior and allows firms to meet outstanding financial commitments. During this phase of the expansion both, firms and lenders are willing to expand their balance sheets by increasing leverage.

This is a rational response of economic units to increasing profit opportunities, and it represents a voluntary decline in the margins of safety. As the expansion of credit growth continues, investment goes up, because firms are more optimistic about future economic conditions. As the economic expansion proceeds fueled by the expansion of credit growth, the economy gets increasingly unstable.

This process is self-fulfilling in both directions, that is, firms' investment increases aggregate profits, inducing them to invest even more creating a positive feedback loop. On the other hand, if firms become pessimistic about future economic conditions, they will cut back investment, which decreases income and profits, so firms cut investment even more.

Minsky's view of the capitalist system puts at the forefront of the conceptual framework the interconnectedness of balance sheets and cash flows, and the creation of endogenous instability. In modern economies, private endogenous liquidity grows during booms, and these IOUs represent future financial commitments that must be met as they fall due. This means that economic units must generate enough cash flows over time to validate their debt commitments.

In this regard, Kregel (2014), building on Minsky has suggested a framework that focuses on macroeconomic and microeconomic aspects to financial fragility and provision for liquidity, so that economic units can meet their near-term obligations. At the macro level, Minsky-Kalecki-Levy's profits equation and Godley's sectoral balances approach provide an alternative approach to understanding what determines stability and provide insight into the dynamics of the adjustment process. Government spending can be seen as an injection of monetary instruments into the non-government sector providing that, which is necessary to pay taxes along with desired net savings of that currency. This is the so-called “vertical relationship” between the government and non-government sectors (Mosler and Forstater 1999; Wray 1998).

At the micro level, Minsky’s categorization of debt units - hedge, speculative and Ponzi – along with his Financial Instability Hypothesis shed light on the endemic financial fragility, the relationship between stability and destabilizing forces underlying capitalist debt structures, and boom-bust cycles of market economies. In this framework, at the macro level, government deficits create cash, and are needed to provide liquidity to indebted economic units, while at the micro level cash flows can be generated by operating, financing and investment activities.

As an example, business firms issue IOUs to finance the acquisition of capital assets, and banks purchase firms’ liabilities by issuing their own IOUs (e.g., demand deposits). These IOUs represent future financial commitments that must be met as they fall due. For business firms, the use of productive capital and investment assets usually generates cash flows. For households, their main sources of cash inflows are wage and salaries from employment, investments such as rents, dividends, bonds, mutual funds, etc.).

Economic units can also sell assets to finance their operations. This requires an orderly and liquid secondary market in continuous balance between buyers and sellers to avoid that falling prices trigger a debt deflation process. This reduction in the value of assets relative to liability commitments results in insolvency of economic units.

Thus, in Minsky’s framework, declining margins of safety and rising risky positions are a normal outcome of capitalist market processes, so the analysis of current and the estimation expected cash flows of an economic unit, financial instruments used to generate cash - and the balance sheet and cash flow interconnectedness among bank and non-bank financial institutions - are crucial for the identification of robust financial structures, potential Ponzi structures, and significant systemic risks (Minsky 1975: 152). In this environment, financial institutions are tempted to adopt leveraged-growth strategies to expand their balance sheets increasing interest, credit, and liquidity risks, triggering internal dynamic changes that result in increasing fragility and instability in the economy.

It means that the detailed analysis of cash flows provides a better indication of financial fragility and instability. It shows how cash is generated, and how reliable those sources of cash are under different economic scenarios, exposing whether flows of cash are due to income producing activities, flows from portfolio holdings, or flows from the sale of assets or the issuance of new liabilities (Minsky 1972: 147). It measures the sources and amounts of cash money into and out of financial institutions, helping identify sustainable, unsustainable practices, and Ponzi schemes.

Godley’s basic macroeconomic accounting identity

Following national income accounting, in a closed system the surplus of one sector must be mirrored by another sector running a deficit. That is, following account identities and stock-flow consistency, we find that the surplus of the non-government sector equals the deficit of the government sector. Moreover, government deficit spending adds to the non-government sector’s net financial assets, where the nongovernment financial balance equals the domestic private sector financial balance, plus the balance of the rest of the world, that is, flows accumulate to stocks changing net financial wealth.

It follows that if the non-government sector desires to run surpluses, the government sector must run a budget deficit. It is also useful to distinguish between currency issuer (the federal government) and currency users (that is, the nongovernment sector which is comprised of the domestic private sector and the external sector). If the government sector runs a deficit, then the nongovernment sector accumulates net savings.

In this regard, Godley's three-sector balance approach grounded on accounting identity, shows the interaction between the government sector, the domestic private sector- households and firms-, and the foreign sector[18]. In the aggregate, if one sector runs a surplus at least one sector must run a deficit. The sum of all balances, that is the private sector, the government sector, and the foreign sector must be equal to zero. We get

Domestic Sector Balance + Government Sector Balance + External Sector Balance = 0.

By rearranging terms:

Domestic Sector Balance = - Government Sector Balance - External Sector Balance

Or

Domestic Sector Balance = Government budget deficits + Current account balance

When the government sector spends and generates deficit, it creates private sector surplus, all else equal, while a government surplus destroys nongovernment sector's net nominal wealth. So that the private sector can continuously run surpluses, then either the government or the foreign sector must run a deficit, that is from the identity we get the following:

Domestic Private Sector Surplus = Public Sector Deficit + Current Account Surplus

Conclusion

Building on Keynes' investment theory of the cycle, Minsky's work suggests that the structure of the economy becomes more fragile over a period of tranquility and prosperity. That is, endogenous processes breed financial and economic instability. While Minsky adopted Keynes' "investment theory of the cycle", he added a financial theory of investment, with a detailed exposition of the theory in his book John Maynard Keynes (1975), which put at the forefront the interrelation between investment decisions and the financial structure designed to allow economic units to take positions in assets by issuing debt. In this regard, debt accumulation is at the core of Minsky's instability theory. His financial theory of investment incorporated Kalecki's approach, in which aggregate profits are created, mostly by the autonomous components of demand.

Additionally, Godley's three balances approach, which explores the interlinkages between the government sector, the private sector, and the external sector sheds light on the identification of financial fragility at the macro level, in which, to accumulate financial wealth, the private sector (firms and households) needs to spend less than its income. This can be accomplished through a combination of government budget deficits and current account surpluses.

This framework will be used to analyze Brazil's financial evolution and current crisis in chapter 3, and China's financial evolution and successful financial governance both, during and after the global financial crisis in chapter 4. Yet, before proceeding to these empirical analysis, we must briefly contextualize both cases under a bigger umbrella: globalization and the way it impacted finance and financial instability.

2. Globalization, Global Governance and Finance

Leonardo Burlamaqui

Globalization and (the lack of) Global Governance

From an economic point of view, Globalization can be defined as a process associated with increasing economic openness, growing economic interdependence and deepening economic integration among countries in the world economy. Globalization itself is not a new phenomenon, but it entered a new phase since the mid-eighties (Nayyar: 2002, Scholte: 2005, Weinstein ed: 2005, Frieden: 2006). This new phase is deeply rooted in a technological revolution, as the previous phase was (Bell: 2001, Freeman and Louçã: 2005, Reinert:2007). It exhibits as its main elements a huge expansion of markets (and especially of financial markets), challenges to the State sovereignty, to established institutions and to social values, the rise of new social actors and political movements and an increased level of "global instability" (Underhill and Zhang, eds: 2003, Underhill, ed: 1997, Michie and Smith, eds: 1999, Gilpin:2000). It also provides the potential for a much diverse cluster of learning and economic opportunities for countries, corporations (and individuals) that can position themselves strategically towards those changes.

This "new" global landscape includes actors empowered by globalization like new international organizations, global corporations, global private financial institutions and civil society associations. It’s also shaped by the proliferation of semi-official and non-official rule-setting bodies (like IOSCO, The World Federation of Exchanges, The International Swaps and Derivatives Association [ISDA], and the, now (in)famous, Credit Rating Agencies), international treaties and regional agreements (such as The Trans-Pacific Partnership, the Chiang–Mai Initiative, International Arbitration Tribunals and Bi-Lateral Trade Treaties). The main challenges to the State is to increase, or even maintain, domestic policy space in face of these new global “entities”, but also from new global issues, such as vastly increased cross-border financial flows (and growing financial instability), a deepening knowledge divide, cross-border tax evasion, spurts of mass migration, environmental degradation, spiking terrorism, and religious fundamentalism (Woods, ed: 2000, Kaletsky: 2010).

Not surprisingly, globalization has sparked off one of the most heated debates among academics and policy-makers during the last couple of decades. One side sees globalization as a homogenizing force across economies, and it is therefore imperative for local economies to adopt certain global norms. Global regulatory changes such as the replacement of the General Agreement on Tariffs and Trade (GATT) system with the World Trade Organization (WTO) system, the spread of the BIS (Bank of International Settlements) capital adequacy ratio, the introduction of OECD (Organization for Economic Cooperation and Development) guidelines on corporate governance were all based on the perception that globalization requires uniform standards across countries (IMF: 1999, Friedman: 2007).

In contrast, another position sustains that it is not realistic to attempt to draw the picture of globalization and policy implications simply on the basis of the perceived general trends. What is needed is to analyze both commonalities and diversities of globalization at the same time. It is also often the case that diversity is more important than commonality in understanding the reality and especially drawing policy implications for individual countries (Shin ED: 2007.)[19].From an economic policy perspective, the Keynesian approach that “whole is greater than the sum of its parts" was largely replaced by the Neo-liberal view that only individual incentives can produce efficient results; a doctrine dubbed as the "Washington Consensus" which had as its central assumption the superiority of market-based over governance-based solutions and a strong bias against state-intervention.

From a Global Governance perspective, both the United Nations and the Bretton Woods institutions, which are now more than seventy years old, have largely been sidelined by the aforementioned "semi-official" bodies and the post-financial crisis institutions, such as the Financial Stability Board and the G20. On the other hand, both the world economy and global geo-politics have changed almost beyond recognition since 1945, compelling researchers, policy-makers and activists to break new ground, both in analysis and strategies (Kaletsky: 2010, Rodrik: 2011, Krugman:2012, Turner: 2012).

The relationship between globalization and global governance is, therefore, unbalanced. It seems adequate to say that it has become clear since the Asian and Russian crises, in 1997-99, and very much confirmed by the current situation we are facing, that what we have in place right now is to quote Rodrik, "global markets without global governance", a statement that was certainly reinforced by the collapse of the Doha round in July of 2006 and made crystal clear by the 2008 global financial crisis. In the realm of global economic governance institutions, the vacuum is continuing to be especially vexatious in the area of finance.

Globalization and Finance

As Schumpeter, Keynes and Minsky showed us, economic development relies on credit (finance) and innovation. However, financial issues are perceived as both complex and far removed from our daily lives. Indeed, they are often intricate, but belong to the core of our daily affairs. To reassert the centrality of finance in capitalist economies and of financial governance, we will briefly return to Minsky's "Wall Street Paradigm" in macrofinance whose core assumption, as the previous chapter indicated, is that capitalism should be understood essentially as a financial system, and markets analyzed first and foremost as webs of credit and debit contracts (Minsky: 1978, 1982, 1986). The way to flesh out that vision is to look at every economic unit – firms, households, governments and even countries – as though it were a bank daily balancing cash inflow against cash out flow (Mehrling: 1998). From that point of view, categories such as production, consumption, trade and investment are first of all flows of money, assets and liabilities, exchanged between different economic agents. To put it as Keynes did, money and finance are the most real aspects of capitalism, the ones from everything else springs.

Credit is central. It allows these units to acquire assets which expected cash-flows will exceed their cash commitments. But that may not happen, and liquidity crunches will result. Insolvencies and bankruptcies are the possible "worst case outcomes" of that failure to achieve. Financial fragility is the route towards those possible outcomes. "Fragile finance" refers to profiles of economic units (or of the whole economy) where cash commitments are relatively heavy compared to cash flows, so that there is danger of widespread failure to meet commitments and, consequentially, of breakdowns. Financial fragility surfaces as an endogenous feature of capitalist economies, springing from the connections between indebtedness and uncertainty.

The central implication of this perspective for global - as well as for domestic -finance is that left to its own devices, the inherent herd behavior built in systems based on expectations about an unknown future, produces a financial system that operates to amplify, rather than to reduce its propensity towards both financial fragility and financial instability. Ii one sentence: financial globalization turns finance even more unstable than when it was merely "international". Globalization has made countries financially more vulnerable, as the incidence of financial crises doubled in developed countries and quintupled in developing countries during 1973–2008, compared with the period of 1945–71 (Shin: 2007, BIS: 2017).

Here financial governance and financial regulation enter the scene. To “stabilize an unstable economy” (Minsky: 1986), domestic governments and global governance institutions would be the prime candidates to act as global prudential supervisors and systemic regulators, overseeing global capital flows, structuring pools of global liquidity and as rule enforcers for both creditors and debtors, apart from their function of setting standards. When credit markets froze after the Lehman Brother’s collapse on September 15, 2008, this perspective appeared to qualify for a “come back” (Skidelsky: 2009).

However, the issue is far from settled. The post-crisis, policy responses and subsequent evolution of western capitalism are taking an almost reverse course from the one springing from that Keynes-Minsky paradigm, and do not confirm what, at the beginning of the crisis, seemed to be the demise of the Washington Consensus: light financial re-regulation, anti-government campaigns, a strong faith in “corporate responsibility” and an obsession with balanced budgets and “austerity” are still largely in place (Krugman: 2012, Stiglitz : 2012, but see Blinder: 2013 for a less pessimistic analysis).

The focal point here is the resilience of that “free markets work better” approach. The “emergent markets” financial crisis that shook the world during 1997-2002 (Asia, Russia, Latin America and Turkey) opened a window for thinking about a “new financial architecture” (cf. Eichengreen: 1999, Eatwell and Taylor: 2000, Blustein: 2001). As soon as the debate moved to consider instruments like reintroducing capital controls or building a “world financial authority”, it ended in the relevant for a, and was kept almost only inside a few academic departments (mostly outside Economics) and a few engaged NGOs.

Unfortunately, this seems to be happening again: representatives of the G20 financial market regulatory and supervisory agencies have been drawing up a set of best practice standards and austerity packages which adoption is, again, being encouraged through peer pressure or through conditions attached to IMF lending programmes[20]. Indeed, the credit worthiness of individual countries' liabilities is increasingly judged by the quality of individual countries' regulatory and supervisory systems as measured by their adherence to these international standards. It has become crucially important for developing countries to be seen, to be adhering to these standards as a minimum condition for attracting and retaining international capital flows. The Bank of International Settlements and the Basel Committee gained much more preeminence with new Basel III accord, but its adequacy in terms of regulating liquidity or leverage is far from established (Cornford: 2011) .

Additionally, various "global standards" are being proposed by a whole gamut of unofficial bodies that include the International Accounting Standards Board, the International Federation of Accountants, the International Organization of Securities Commissions, the International Association of Insurance Supervisors and the World Federation of Exchanges (Helleiner, Pagilary and Zimmermann: 2010).

There are several problems with this emerging financial patchwork. The Bretton Woods twins have lost power and influence and, in fact, were never "Global" institutions but rather creditor's watchdogs. They were not meant to ensure stability of the financial system, only of the exchange rate system in support of "free" trade. Their move into financial stability is just mandate creep. As for the expanding unofficial bodies – for example: the International Association of Insurance Supervisors and International Federation of Stock Exchanges -, they exacerbate the democratic deficit in global financial governance: by and large "standards setting" bodies, these organizations are opaque, and accountable only to themselves. Their ultimate goal is to impose a one size fits all set of rules which most likely will have deleterious effects in developing countries (Burlamaqui: 2007).

In that “new” financial landscape, business was reshaped by a reckless massive borrowing, which is still largely unseen, unregulated and little understood[21]. Because of the lack of transparency, policy makers still cannot see whether these volatile new debt and private equity instruments are in safe hands, or how they will behave in a crisis when everyone is heading for the exits (Partnoy and Eisinger: 2013, Blinder: 2013).

In the international taxation front, it is estimated that for every $1 poor nations receive in foreign aid, an estimated $10 in illicit money flows abroad, usually to the West (Baker et Alii: 2011). With such large amounts of capital draining from weak economies there is little hope of success, even for a well-crafted development strategy. To sum up: despite the post-global financial crisis initiatives, the evidence suggests we are still facing a global financial governance vacuum. Worst: it seems to be growing, not shrinking. In that scenario, Brazil and Latin-America in general have become marginal players, or non-players at all. In the case of Brazil, regression is the appropriate rubric. Although incensed as one of the BRICS best and brightest until 2012, or even 2014, the country is now in economic, political and institutional crisis and, from a global perspective, in complete withdrawal.

However, if we turn to Asia, although the vacuum is also visible there, some promising initiatives are taking place. The damage caused by the Asian financial crisis of 1997-98 made the countries in that region acutely aware of the need to promote regional financial cooperation to prevent resurgence of a crisis, and to attain stable economic growth. Since then, Japan has been vigorously promoting regional financial cooperation together with the other ASEAN+3 countries. More recently, with the rapid increase in economic interdependency in East Asia, regional financial cooperation is becoming more important. Initiatives under the ASEAN+3 Framework include the Chiang Mai Initiative (CMI), the Economic Review and Policy Dialogue (ERPD), the Asian Bond Markets Initiative (ABMI), and the ASEAN+3 Research Group. Even more recently, the Asian Infrastructure Bank and the One Belt One Road initiatives are bound to profoundly reshape not only the whole region, but the globe. Those are evolving in a fast pace, and have yet to be properly understood, discussed and developed, but they could well become the seeds of a more effective, transparent, and badly needed global financial architecture (Cf. Underhill and Zhao, eds: 2003, Ramo: 2004).

Yet, one thing seems to have become clear: the role of the state becomes more important and strategic – not less- with the progress of globalization, both in an offensive and in a defensive sense. Offensively, given the fact that in that governance-less global landscape, the state is the best candidate to forge globally oriented strategies which advance national interests, national security and technological upgrading. Defensively, in the sense that it is the only institution capable to act to preserve financial stability, employment opportunities and social integrity. As we will see in the next two chapters, the way globalization, and especially financial globalization and state action interact is key to explain the fortune of nations: if they manage to forge ahead or fall behind.

3. Enduring Financial Fragility, Policy Mayhem and The Brazilian Crisis

Felipe Rezende

This chapter attempts to demonstrate the existence of endogenously generated instability in the Brazilian economy, which has created frequent and systemic financial crises. Brazil's current crisis was not born out of misguided policies, although they played a part. The country's problem is systemic. The reliance on external finance for development creates financial instability and frequent crises. That is, the mainstream approach, based on the economics of scarcity, assumes that developing countries need to attract foreign capital inflows to finance investment, sustained by the false belief that development requires external finance. Not only there is no theoretical support and empirical evidence to support this view, but the application of this policy has contributed to net negative transfer of resources and has created financial instability and frequent crises.

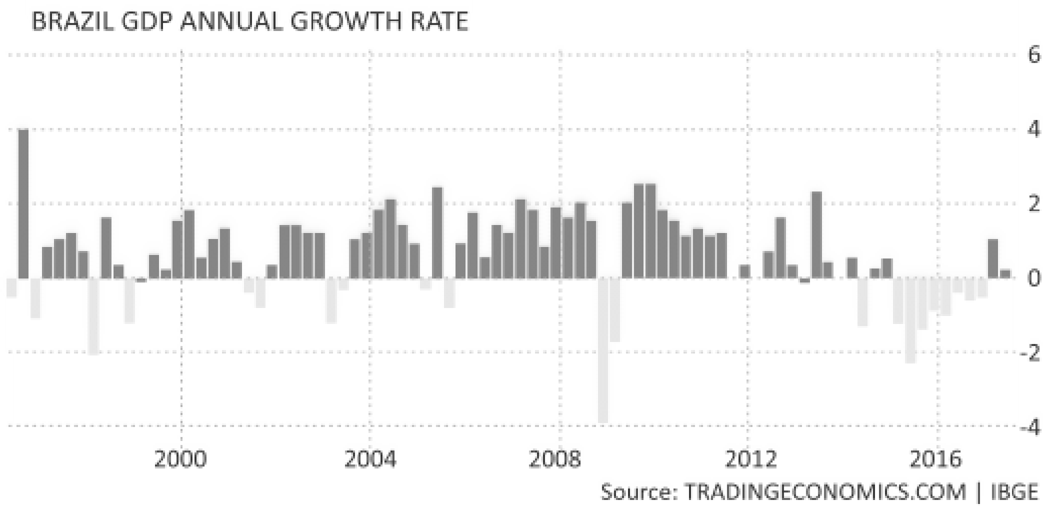
The aim is to provide an alternative interpretation of the Brazilian crisis, as a result of endogenous process which created destabilizing forces, reducing margins of safety and increasing financial fragility. As Minsky put it "stability is destabilizing". The success of traditional stabilization policies over substantial periods has created endemic financial fragility and rising external private indebtedness, causing the deterioration of current account and the fiscal balance. The pursuit of structural stabilization policies, in an attempt to produce a fiscal surplus, causes further deterioration of fiscal deficits and government debt followed by the collapse of economic activity. To break this cycle requires monetary sovereignty and domestic demand led development.

Brazil’s Growth and Financial Evolution

Over the past three decades the Brazilian economy has shown a sharp decline in real GDP, followed by a quick recovery (figure 1). Though each crisis had its idiosyncratic features – see, for example, Kregel 1999 and more recently De Paula et al (2015) - Brazil’s current crisis has challenged economists to explain its causes and how to deal with its consequences (Safatle 2015, De Paula et al 2015).

As an example, a growing consensus has emerged in Brazil blaming Rousseff’s “new economic matrix” policies for the country’s worst financial crisis since the Great Depression (Romero 2016). After a modest growth in 2014, Brazil’s economy contracted by 3.8% in 2015, and is expected to shrink by 4 % in 2016. Though Brazil is already dealing with its worst economic downturn in 25 years, the economy is headed towards the worst economic downturn since the Great Depression, that is, Brazil has not experienced two consecutive years of GDP contraction since the Great Depression.

Figure 1. GDP annual real growth (% p.y): 1996-2016



Note: Although the original source of the figure says it is annual growth rates, the data shows us quarterly growth rates

This is not the first time the Brazilian economy has experienced a boom and bust cycle. Its recent experience shows that the "Brazilian miracle" of the 1960-1970s was followed by a bust in the 1980s, and the introduction of the real plan in 1994 ended with the financial crisis of 1999 (Kregel 1999). The 2000s led to a unique economic environment conducive to Brazilian economic expansion and improvement in economic conditions for most people (Kregel 2009).

Furthermore, Brazil navigated smoothly the 2007-2008 global financial crisis by implementing a series of countercyclical policies (Barbosa 2008; De Paula et al 2015; Ferrari-Filho et al 2014, Silva and Harris 2012; Rezende 2015), but the country's policy response to the Euro crisis has been criticized for being too late, poorly designed, and too small to bring about economic growth (De Paula et al 2015).

Prior to the economic crisis of 2007-2008 the Brazilian economy experienced extremely favorable external conditions, such as increasing global demand for emerging market exports and rising financial flows to emerging markets (Kregel 2009). Some critics of the Brazilian government argued that the boom in commodity prices, buoyant external demand, and massive foreign flows into Brazil's economy was solely due to external tailwinds, which fueled the positive economic performance during the last decade. This group tended to overlook domestic policies designed to expand social protection and foster effective demand.

Brazilian economic policymakers, by contrast, proudly pointed to government policies as the major cause for the boosted growth. The truth is, as we will show, somewhere in the middle of those extreme positions. Notwithstanding, policy-makers and economists have rightly pointed to the robustness of Brazil's financial system and its resilience to the global financial crisis by focusing on conditions that existed in the U.S. financial system prior to the "subprime" crisis. However, it is our contention that they overlooked the importance of the destabilizing effects of stability on financial structures, the development of new sources of instability and the need to continuously redesign the regulatory structure to meet its objectives of financial stability and providing finance for development.

To be sure, the positive economic performance was driven by both, domestic and external factors. Under Lula's administration, the Brazilian economy grew generating jobs, raising real incomes (minimum wage increases, income transfer programs), reducing poverty and income inequality[22]. Prior to the crisis, banks (public and private) have roughly doubled their lending as a share of GDP, increasing consumer loans (Rezende 2015a). Moreover, following the global financial crisis, public investment increased (PAC I and II, long term investment funding via BNDES), and housing financing increased (My House, My Life) to meet Brazil's investment needs and to act as a counter cyclical tool to offset the decline in private demand (Rezende 2015).

Even though the administration moved in the right direction in an attempt to shift its development strategy to domestic demand-led growth, it committed a strategic error by intervening in the economy with government initiatives that were too small, poorly designed, followed by ad hoc decisions in an attempt to fine-tune the economy and generate improvements in the nation's economic outlook, partly due to the belief that it lacked the financial resources to foster sufficient domestic demand.

The New Global Financial Structure and it's Impacts on the Brazilian Economy

It has already been suggested that the conditions that prevailed prior to the 2007-2008 GFC, which benefited developing economies, were characterized as a bubble and the positive conditions[23] experienced by developing economies are unlikely to return. Kregel (2009) wrote:

> "the evolution of developing countries in the New Millennium as a "bubble", for if the US economy was experiencing a financial bubble the counterpart of that bubble was the extremely beneficial conditions in developing countries and in particular in Latin American emerging markets… we cannot foresee a return to the extremely positive conditions experience by developing countries in the recent past virtually all of the positive performance that led to achieving the Brazilian dream of meeting the target of the BRICs appear to be linked to a financial model and financial flows that is not likely to be reestablished. The degree of leverage that had become normal in developed country financial institutions will not return, the leverage generated by financial derivatives will now be couched in much stronger margin requirements. This will not only mean lower asset prices but lower global demand for emerging market exports and thus reduced financial flows to emerging markets including the BRICs… there is general similarity across all BRIC economies for they all depend on expanding demand through increasing global trade and global imbalance financed by global financial flows". (Kregel 2009:353)

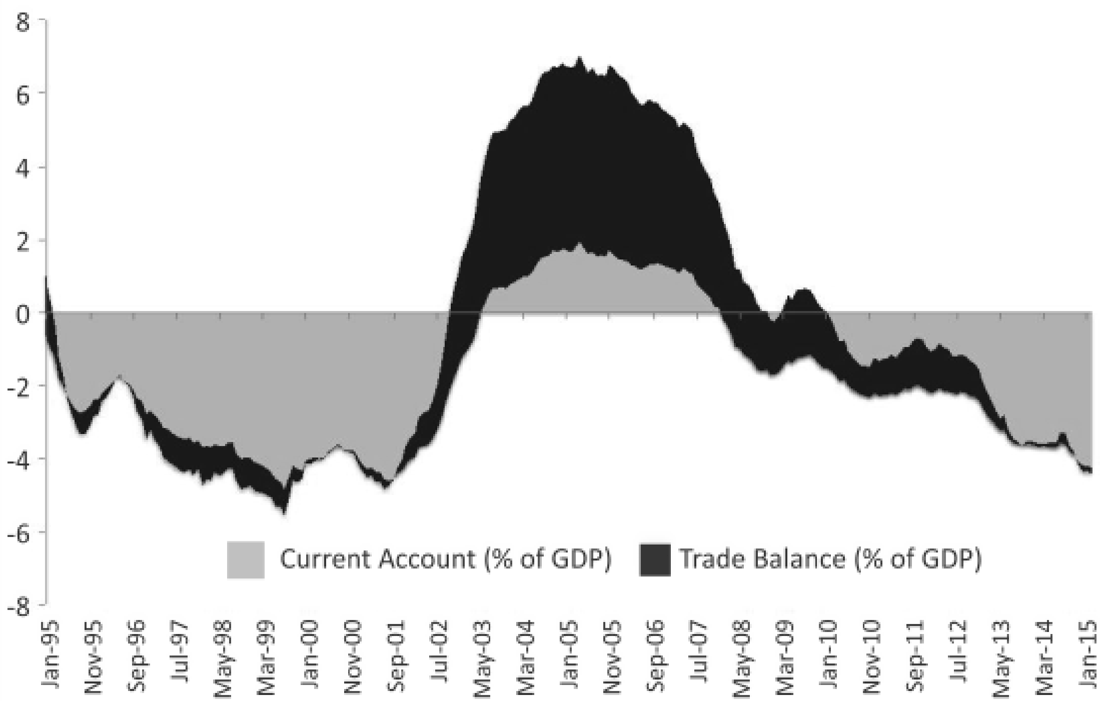
This view was also present in a report released by UNCTAD:

> "Prior to the Great Recession, exports from developing and transition economies grew rapidly owing to buoyant consumer demand in the developed countries, mainly the United States.

This seemed to justify the adoption of an export-oriented growth model. But the expansion of the world economy, though favorable for many developing countries, was built on unsustainable global demand and financing patterns. Thus, reverting to pre-crisis growth strategies cannot be an option. Rather, in order to adjust to what now appears to be a structural shift in the world economy, many developing, and transition economies, are obliged to review their development strategies that have been overly dependent on exports for growth". (UNCTAD, Trade and Development Report, 2013, p.1-2)

The bubble period showed a remarkable turnabout of the current account balance, from a deficit to a surplus position (figure 2).

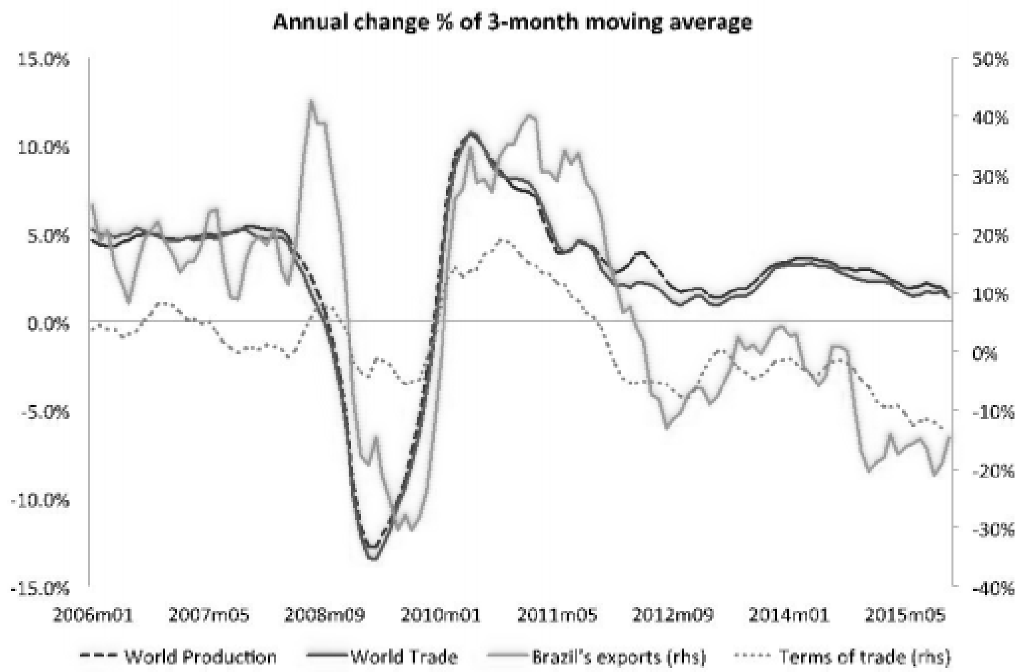
Figure 2. Current account and trade balance (% of GDP)



Source: IBGE

The consequences of the crisis were clear. Global financial markets and U.S. households started deleveraging, thus producing a new global structure impacting global trade, industrial production, and finance (figure 3).

Figure 3. World Trade and Industrial Production

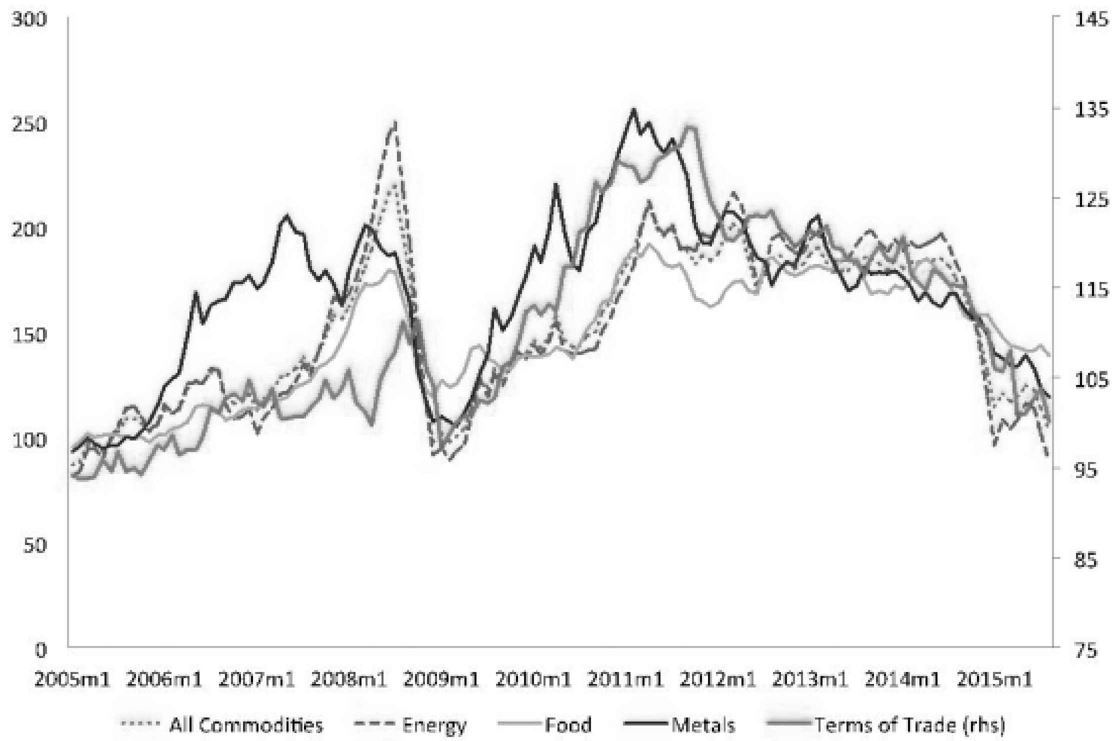


Source: CPB Netherlands, Brazilian Central Bank (BCB), Funcex

The 2007-2008 global financial crisis, and its immediate impact on the financial and real sectors, triggered policy responses to deal with its consequences. Although the policy response produced a quick increase in world trade, a production which contributed significantly to Brazil's export growth and terms of trade during this time period (figure 3) since 2010, there has been a sharp decline in world trade and production and a reversal of Brazil's terms of trade (figure 4).

Thus, the contribution of net exports to economic growth declined substantially since 2011 (figure 3). Moreover, while the commodity price boom improved the terms of trade (figure 4), the sharp decline in global commodity prices has slowed output growth among commodity-dependent economies (IMF WEO 2015).

Figure 4. Commodity Price Indices (2005 = 100) and terms of trade



Source: IMF, WEO, Oct. 2015, Funcex

Despite Brazil's relative success dealing with the immediate consequences of the crisis, since the aftermath of the 2007-2008 global financial crisis emerging-market economies, and Brazil in particular, have underperformed. With the Chinese slowdown, resource exporters, including Brazil, faced the consequences of declining commodity prices. The pre-crisis development strategy supported by export-led growth and the excessive reliance on external finance reached its limits. The combination of a slowdown of a powerful driver of global growth, changed external conditions, and failure to implement policies to support domestic demand growth contributed to end Brazil's boom with a bust.

The impacts of the crisis in Brazil, in particular, were substantial. The country moved from a current account surplus equals to 1.25 percent of GDP in 2006 to a deficit equals to 3.6 percent of GDP in 2013 being the third-largest deficit economy (after the US and UK) in the world, according to a recent IMF report (table 1).

Table 1. Global imbalance

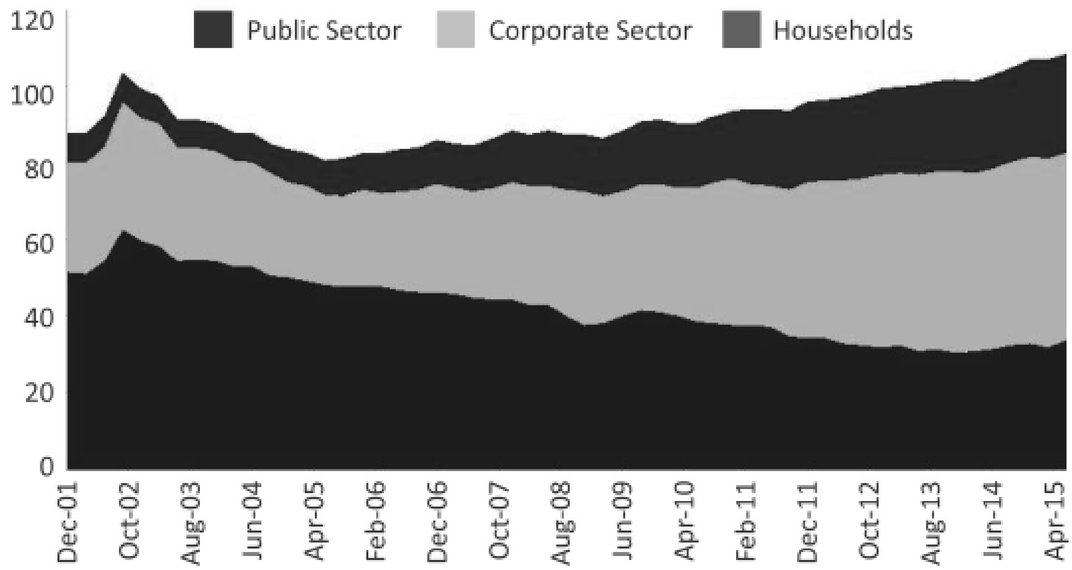
Largest Deficit and Surplus Economies, 2006 and 2013

2006				2013			
	Billions of U.S. Dollars	Percent of GDP	Percent of World GDP		Billions of U.S. Dollars	Percent of GDP	Percent of World GDP
1. Largest Deficit Economies							
United States	807	5.8	1.60	United States	400	2.4	0.54
Spain	111	9.0	0.22	United Kingdom	114	4.5	0.15
United Kingdom	71	2.8	0.14	Brazil	81	3.6	0.11
Australia	45	5.8	0.09	Turkey	65	7.9	0.09
Turkey	32	6.0	0.06	Canada	59	3.2	0.08
Greece	30	11.3	0.06	Australia	49	3.2	0.07
Italy	28	1.5	0.06	France	37	1.3	0.05
Portugal	22	10.7	0.04	India	32	1.7	0.04
South Africa	14	5.3	0.03	Indonesia	28	3.3	0.04
Poland	13	3.8	0.03	Mexico	26	2.1	0.03
Total	**1,172**		**2.3**	**Total**	**891**		**1.2**
2. Largest Surplus Economies							
China	232	8.3	0.46	Germany	274	7.5	0.37
Germany	182	6.3	0.36	China	183	1.9	0.25
Japan	175	4.0	0.35	Saudi Arabia	133	17.7	0.18
Saudi Arabia	99	26.3	0.20	Switzerland	104	16.0	0.14
Russia	92	9.3	0.18	Netherlands	83	10.4	0.11
Netherlands	63	9.3	0.13	Korea	80	6.1	0.11
Switzerland	58	14.2	0.11	Kuwait	72	38.9	0.10
Norway	56	16.4	0.11	United Arab Emirates	65	16.1	0.09
Kuwait	45	44.6	0.09	Qatar	63	30.9	0.08
Singapore	37	25.0	0.07	Taiwan Province of China	58	11.8	0.08
Total	**1,039**		**2.1**	**Total**	**1,113**		**1.5**

Source: IMF WEO, October 2014, p.118

Meanwhile, the underlying force from the demand side was sustained by a sharp increase in private credit (figure 5), which ultimately, led the private sector from a surplus position to a deficit, that is, total private expenditure exceeded private disposable income, which implied a rapid buildup in indebtedness of the private sector. In particular, the Brazilian economy experienced rising private sector leverage relative to the growth of government securities (figure 5). As it is well known, growth strategies based on private sector deficits are unsustainable (Minsky 1975, 1982, 1986).

Figure 5. Net Public and Private Sector debt as a percentage of GDP



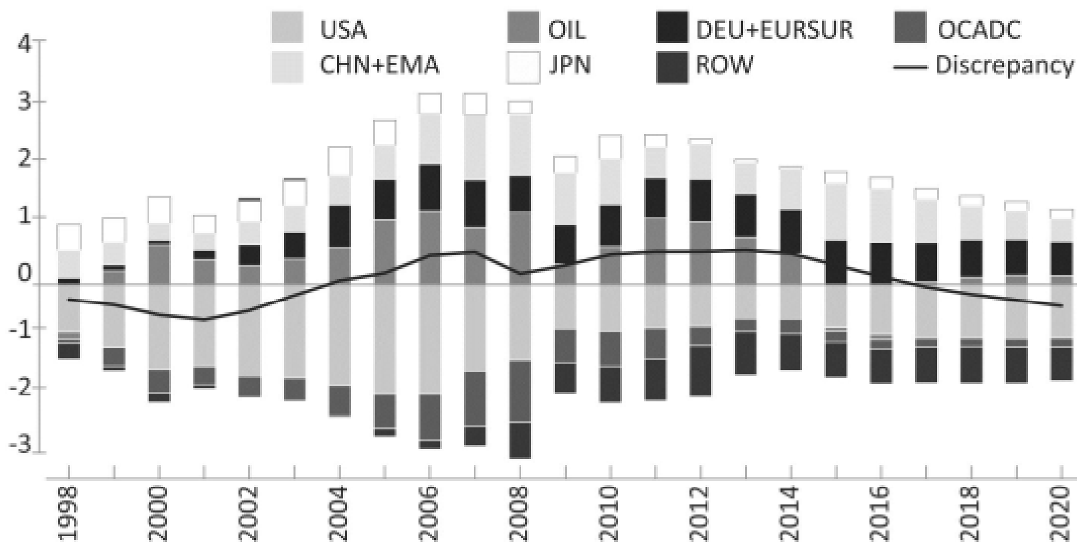
Source: BIS, BCB, author's own elaboration

To sum up, key policy makers failed to see what was already fairly visible. U.S. demand, financed by the deregulated US financial system and shadow banking institutions, made trade the engine of global growth, and the rest of the world responded by adopting policies of export-led growth.

The exceptionally positive performance of the Brazilian economy during the New Millennium characterized by high growth rates, external surplus balance, rising foreign direct investment flows, rising employment levels, and improving debt burdens of the public sector were the counterpart of deregulated developed country financial systems, which drove asset prices up, such as commodity prices improving developing country terms of trade, allowed rising private sector debt thus supporting the demand for imported goods, and generated a positive carry trade resulting in short term capital flows to emerging markets (Kregel 2009, p.5).

However, following the Great Recession, the combination of substantial U.S. private sector deleveraging and shrinking the U.S. current account deficit led to a sharp decline in the demand for emerging market exports due to structural changes in international markets (figure 6). As an export led growth strategy requires at least one nation to run current account deficits, the absence of robust external demand (figure 6) and the conditions that prevailed before the 2007-2008 global financial crisis, required a shift in Brazil's development strategy towards the domestic market to fill the spending gap.

Figure 6. Global current account balances (% of world GDP)



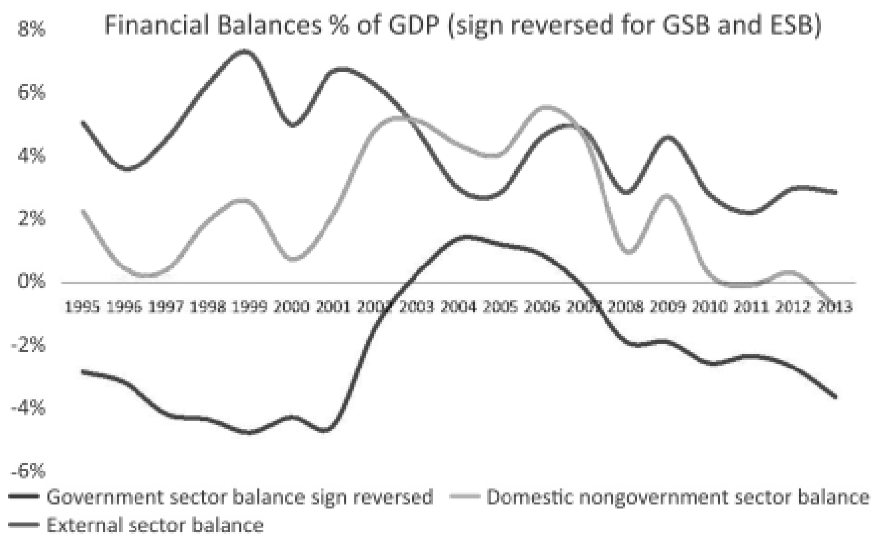
Source: IMF WEO, October 2015

Sectoral Financial Balances in the Brazilian Economy

We can distinguish the beginning of the new millennium for Brazil's economy between two periods: one characterized by the U.S. financial bubble that contributed to the creation of current account surpluses in emerging economies until the onset of the GFC, and the other initiated in 2007 characterized by a persistent deterioration of Brazil's current account deficits.

During the bubble phase, the domestic private sector ran an average surplus balance equals to 4.8% of GDP from 2002 to 2006, as a result of the combination of current account surpluses (average 0.5% of GDP) and government fiscal deficits (4.3% of GDP). It allowed the net acquisition of financial assets by the domestic private sector to exceed the net issuance of liabilities, which translated into rising net financial wealth in the private sector (figure 7). This period was marked by a significant expansion of real incomes, credit growth, domestic demand and GDP growth, and declining unemployment rates to historical low levels (see Arestis et al 2008).

Figure 7. Financial Balances % of GDP



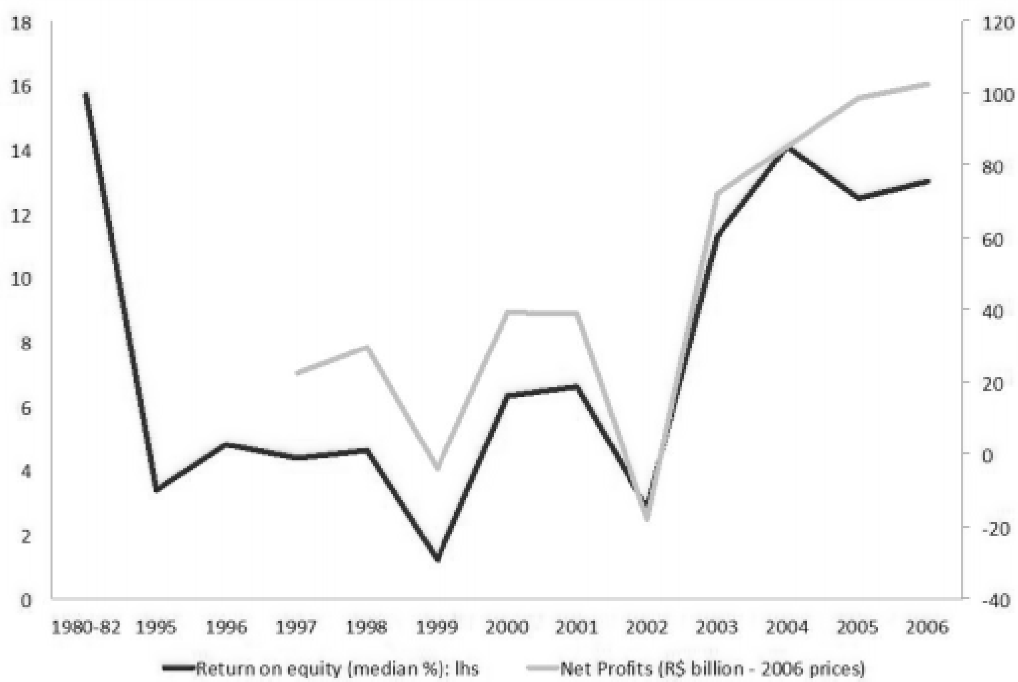
Source: IBGE, CEI, author's own elaboration

Following rapid economic growth in the years preceding the 2007-2008 global financial crisis, there was a sharp increase in aggregate profits. That is, as the economy experienced an investment boom, profits increased along with investment, which influenced expectations and encouraged more investment.

During that period net profits sharply increased (figure 8), and have been on an upward trend causing a wave of optimism about future sales and profits thus stimulating investment in new capital goods, that is, profits were the main driver of the surplus in the non-financial companies' sector balance.

For instance, the median return on equity (ROE) for the 500 largest companies increased to 12.7%, on average, during the 2003-2006 period, while profits jumped to R$ 90 billion. This increase in realized profits and growing profit expectations influenced investment decisions. It is worth it noting that the median (ROE) for the 500 largest companies during 1995-2002 was equals to, on average, 4.3%. The ROE almost tripled compared to the 1995-2002 average.

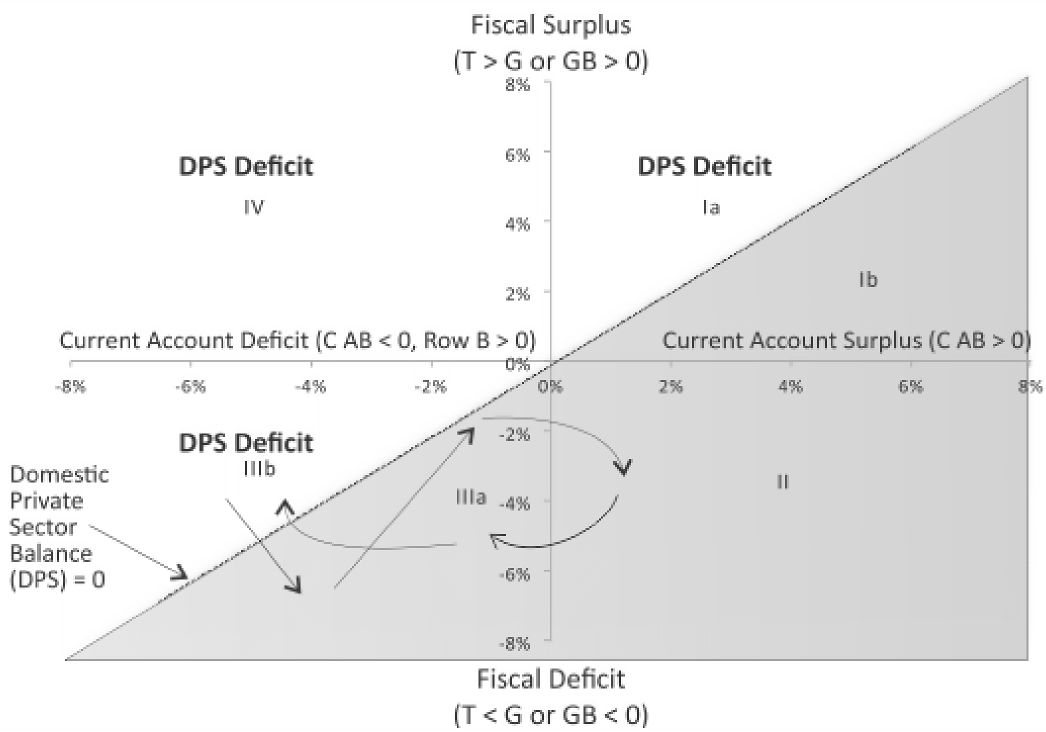
Figure 8. Net profits and profitability



Source: Campelo Jr., 2007

However, as discussed in the previous section, the conditions that prevailed prior to the 2007-2008 GFC, which benefited developing economies, were characterized as a bubble and the positive conditions[24] experienced by developing economies are unlikely to return (Kregel 2009, p.5). Given changes in the global trade structure, rising domestic private sector (foreign and domestic currency) debt, and declining budget deficits, from 2007 to 2013, the domestic private sector ran an average financial balance equals to 1.2% of GDP, the external sector an average deficit equals to 2.1% of GDP, and the government sector posted an average deficit equals to 3.3% of GDP. We can use the sectoral financial balances (figure 9) to analyze the following scenarios, using a device suggested by Robert Parenteau (Kregel 2009).

Figure 9. Sectoral Financial Balances - % of GDP (1995-2013)



Source: IBGE, CEI, Authors’ own elaboration

The bubble phase allowed the Brazilian economy to run unprecedented current account surpluses and the government sector ran a fiscal deficit. Thus, the domestic private sector balance was in a surplus position. This situation is depicted in quadrant II in the figure 9.

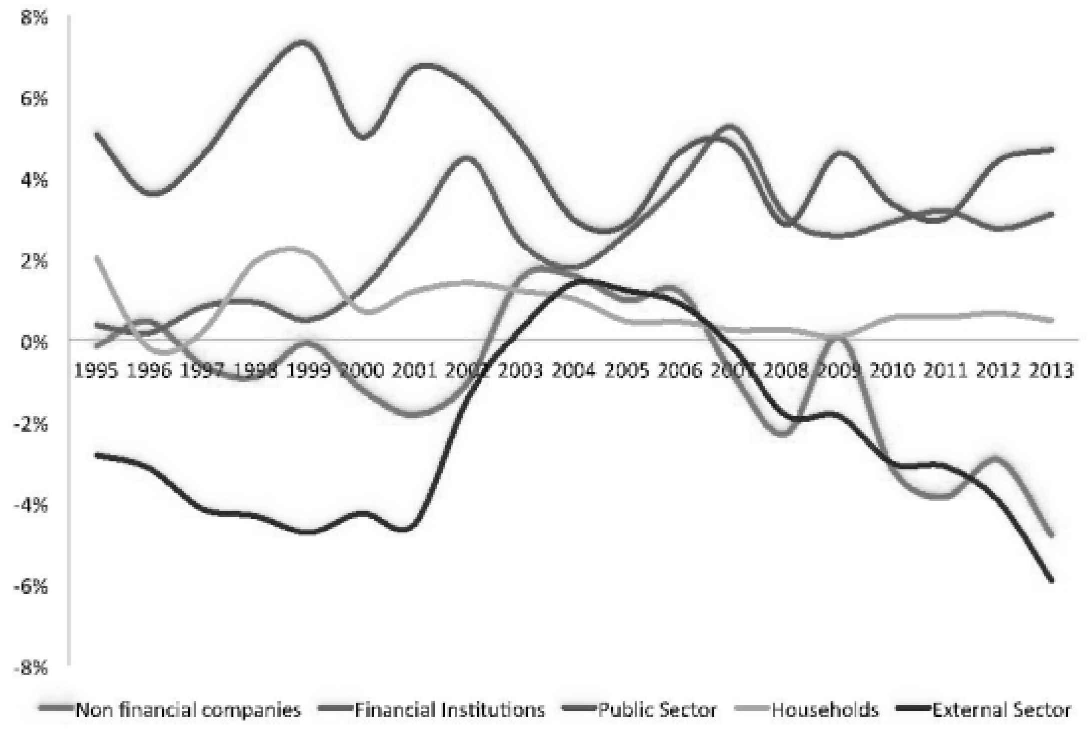
However, the financial instability created by the reliance of external finance generated negative net transfers, which removed profits and income from the private sector (Kregel 1999, 2004). After the global financial crisis there was a sharp reversal of the current account balance into a deficit, which reduced the domestic private sector balance' the surplus (quadrant IIIa). This brings us to the second period, which has been characterized by a reversal of favorable conditions since the onset of the 2007-2008 GFC, that is, Brazil has been experiencing since 2007 deteriorating current account deficits, increasing to 3.6% of GDP in 2013 from 0.2% in 2007. We are now on Quadrant IIIb on figure 9.

With the deterioration of current account deficits to 3.6% of GDP in 2013, from a surplus of 1.25% in 2006 and the rigidity of the fiscal balance, that was equals to 2.9% in 2013, then this means that the private sector was running a deficit, which is depicted in quadrant IIIb. That is, the net issuance of liabilities exceeds the acquisition of financial assets by the domestic private sector, so the private sector was dissaving. This is an unstable financial profile that Minsky characterized as Ponzi, in which net debt outstanding grows. For this financing regime to remain viable it requires rising asset prices and it can persist, as long as lenders are willing to refinance principal and interest payments.

However, a reversal of the necessary conditions to support Ponzi units leads to the sale of assets by economic units to raise cash and meet their outstanding commitments, which can trigger a Fisher-type debt deflation process. If the private sector's desire to net save increases, then fiscal deficits increase, to allow it to accumulate net financial assets. This requires a countercyclical movement of the federal budget to support cash flows, and central bank intervention to stabilize the price of financial assets.

The disaggregation of the private sector among households and firms shows that, in 2007 the corporate sector turned into a deficit and since then, except for 2009 when its balance was equals to 0.1% of GDP, its balance position deteriorated to a deficit equals to 2.9% of GDP in 2013 – that is, fixed investment and investment in inventories have exceeded internally, generated funds generated by firms (figure 10).

Figure 10. Financial Balances by institutional sector as a percentage of GDP

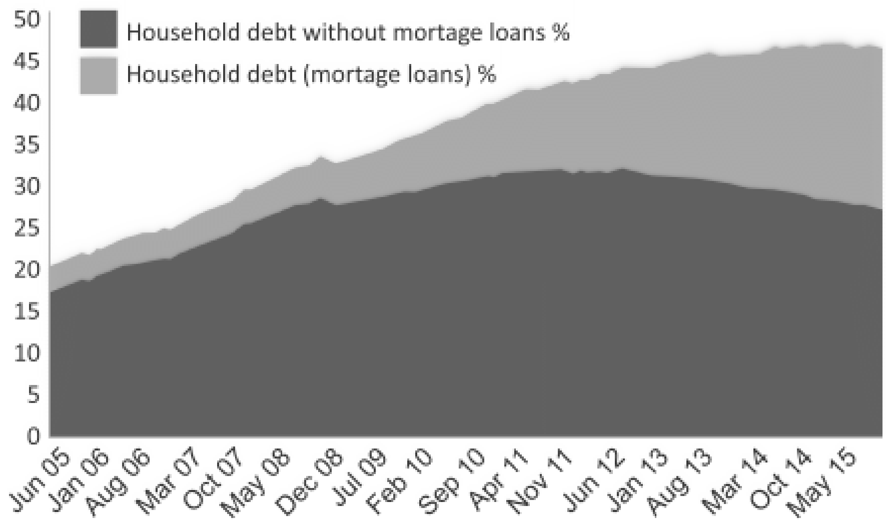


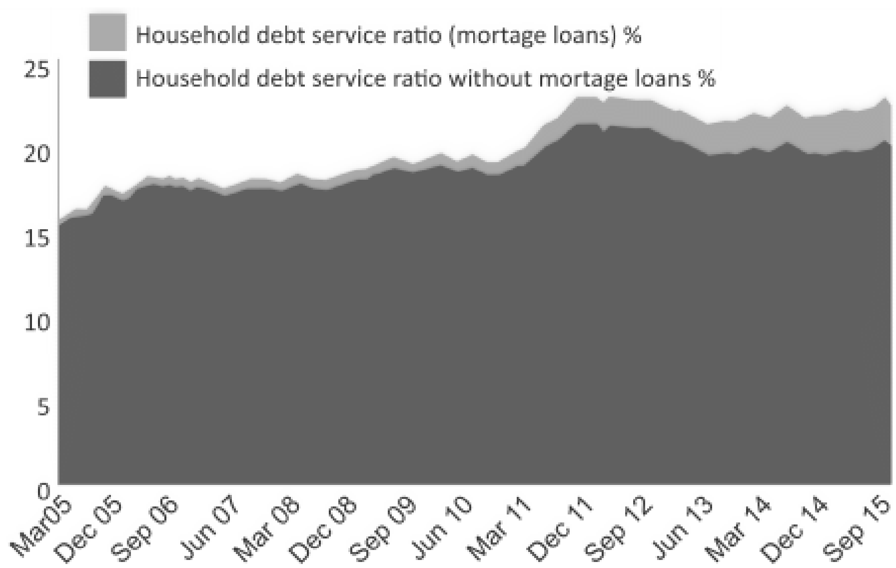
Source: IBGE, CEI, authors' own elaboration

Though the household sector has accumulated record debt-to-income burdens (figure 11), to some extent this household debt was sustained by a small positive balance (figure 10) – i.e., the household sector generated a surplus, spending less than its income[25].

While the household sector has continually spent less than its income – households' sector surpluses – in contrast, the corporate sector is a net debtor since 2007, receiving less income than it spends. The corporate sector balance declined from 1.2% of GDP in 2006 to -2.9% of GDP in 2013. These are significant amounts. This sharp reversal in the corporate sector balance in this period influenced the motor for the expansion of the Brazilian Economy, which was driven by unsustainable corporate sector deficit spending (figure 12).

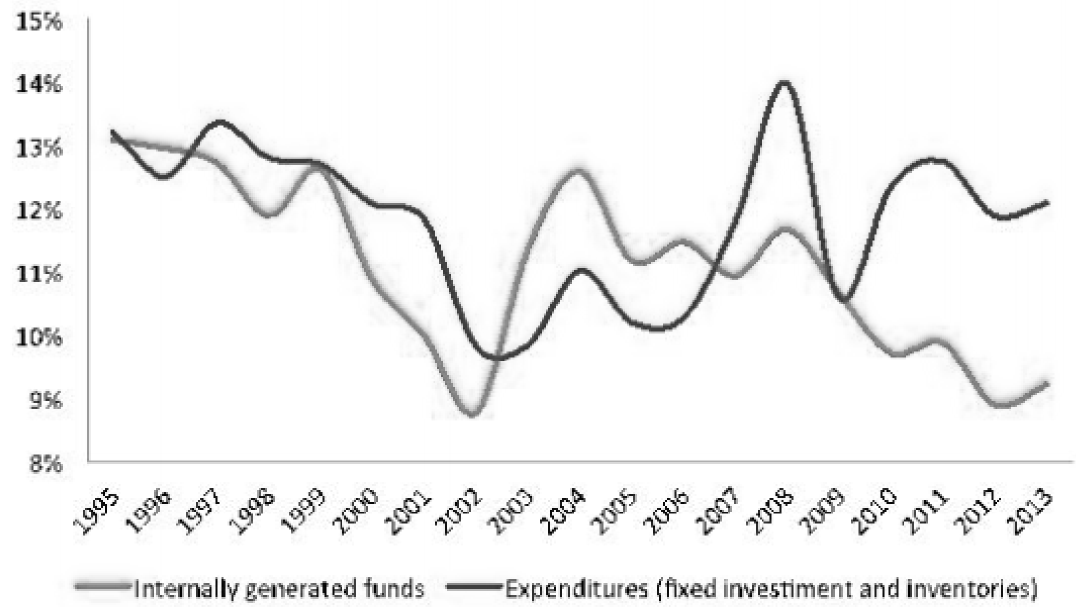
Figure 11 and 11A. Household indebtedness and debt service ratios





Source: BCB

Figure 12. Corporate sector balance as % of GDP

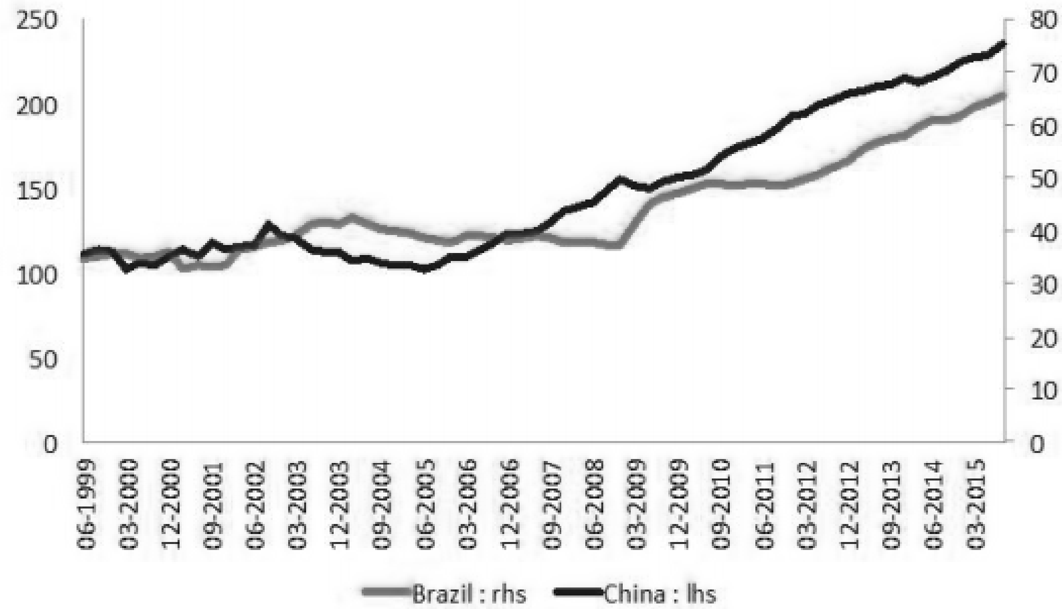


Source: IBGE, CEI, authors' own elaboration

While there was a significant decline in internally generated funds available to corporations, its expenditures remained at a very high level, exceeding internally generated funds, the use of borrowed funds increased, suggesting a change in firms' investment behavior. That is, the non-financial sector balance deficit in recent years was the result of new fixed capital investment exceeding undistributed earnings. It is apparent that an increase new fixed capital investment is inversely correlated with the non-financial sector balance.

As this happens, the net flow of credit into the corporate sector increased, and the level of debt to GDP was rising all the time (figure 13). Because since 2007 firms have been running large deficits (except for 2009 due to a small decline in current account deficits and increase in the budget deficit position), its indebtedness sharply increased[26] (figure 13 and 14).

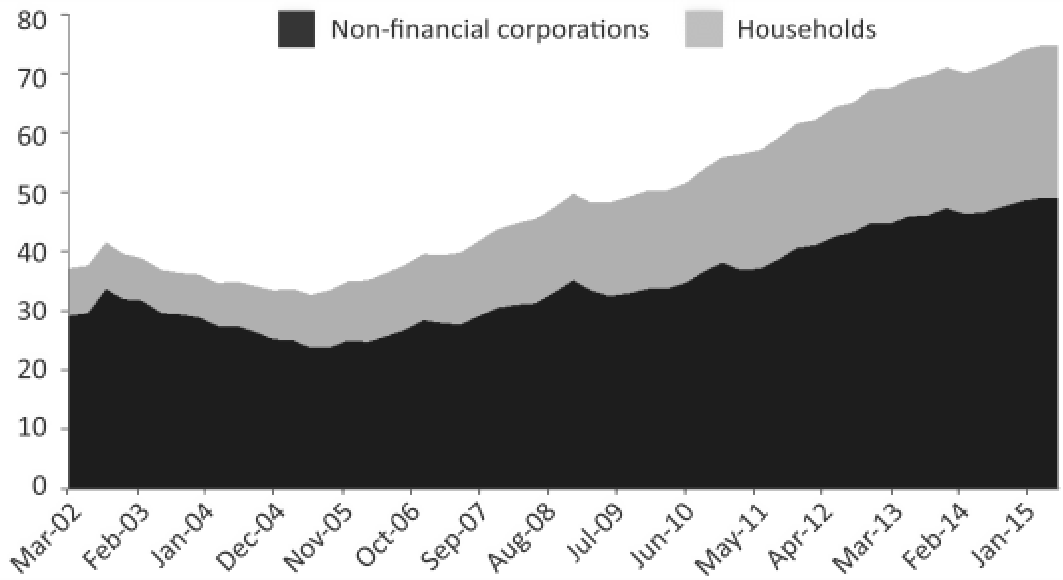
Figure 13. Non-financial private sector debt as % of GDP



Source: BIS, authors' own elaboration

This means that while internally generated funds declined, the corporate sector was borrowing at an increasing pace (figure 13 and 14). Though the conventional analysis stress that non-financial corporations' indebtedness should not be a cause of concern, since it is not high by international standards, and it showed an improvement in their debt profile, they overlook the impacts of rising debt levels firms' debt servicing capacity.

Figure 14. Private sector debt as % of GDP

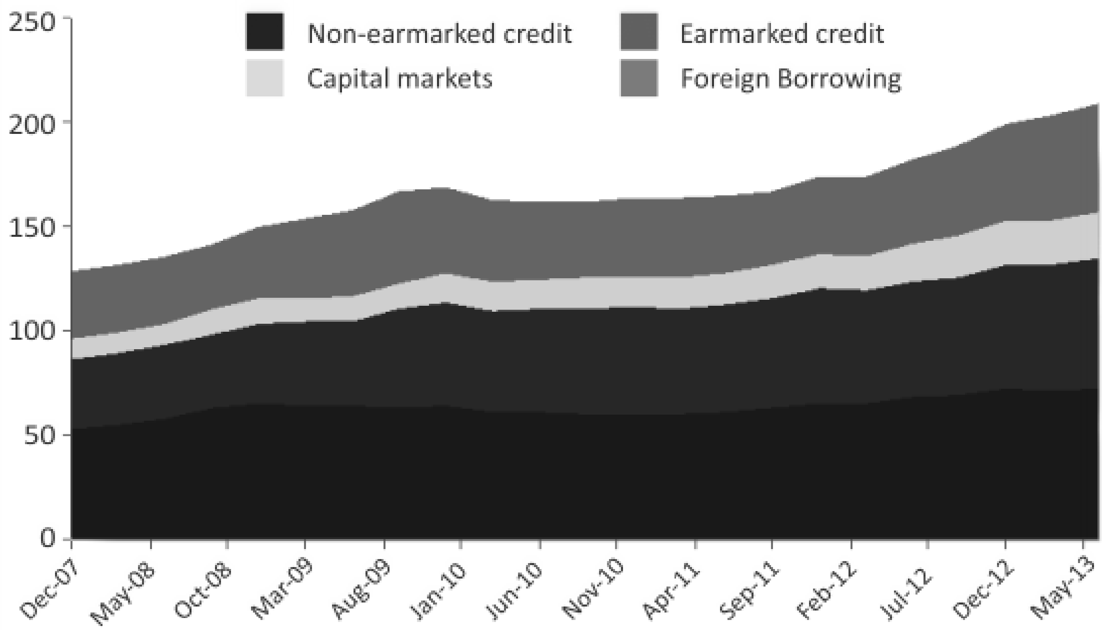


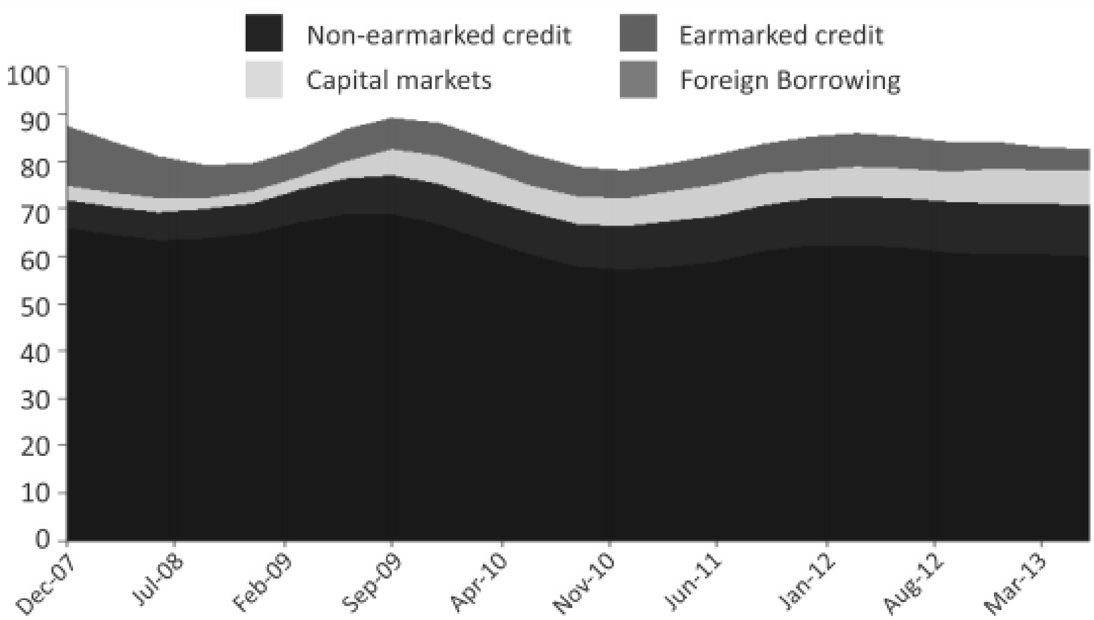
Source: BIS

For instance, non-financial companies' indebtedness relative to gross operating surplus increased to 209% in June 2013, from 128% in 2007, while the debt service ratio slightly declined from 87.5% in 2007 to 82.75% in June 2013 (figure 15). As this happened, non-financial companies have lengthened their debt maturity and lowered the average interest rate paid by increasing their reliance on subsidized government credit (mostly due to loans extended by Brazil's national development bank -BNDES) and foreign borrowing. In Brazil, earmarked rates are lower than market rates (bank loans and domestically issued bonds - figure 16).

While non-financial companies' debt has been increasing at unsustainable levels, debt-service ratios remained somewhat stable due to the reliance on BNDES borrowing and low cost foreign debt. Though Brazilian companies increased their reliance on local bond markets, the high level of local rates (figure 16) compared to low rates in international markets and BNDES' lending rates have encouraged non-financial companies to borrow funds abroad, and to take more BNDES debt (Bastos et al 2015).

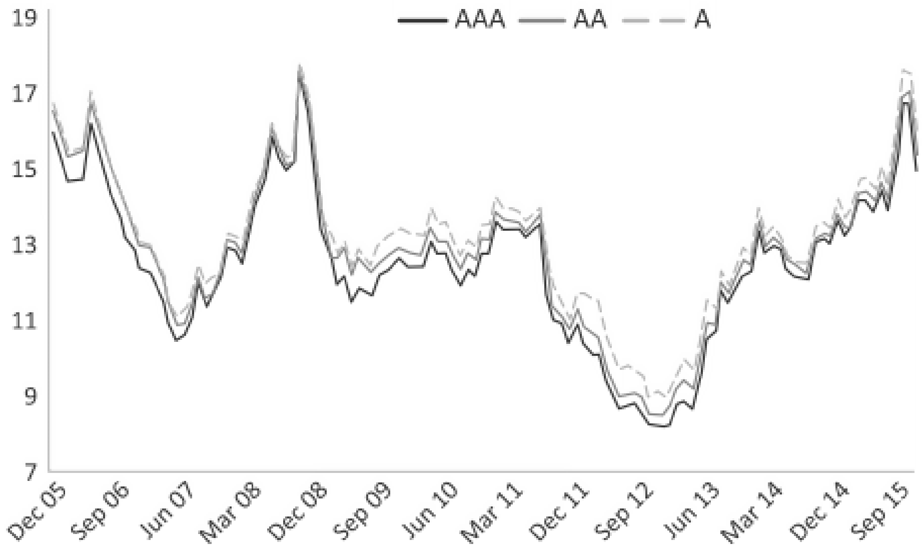
Figure 15 and 15A. Corporate indebtedness as share of gross operating surplus and debt service ratio[27]

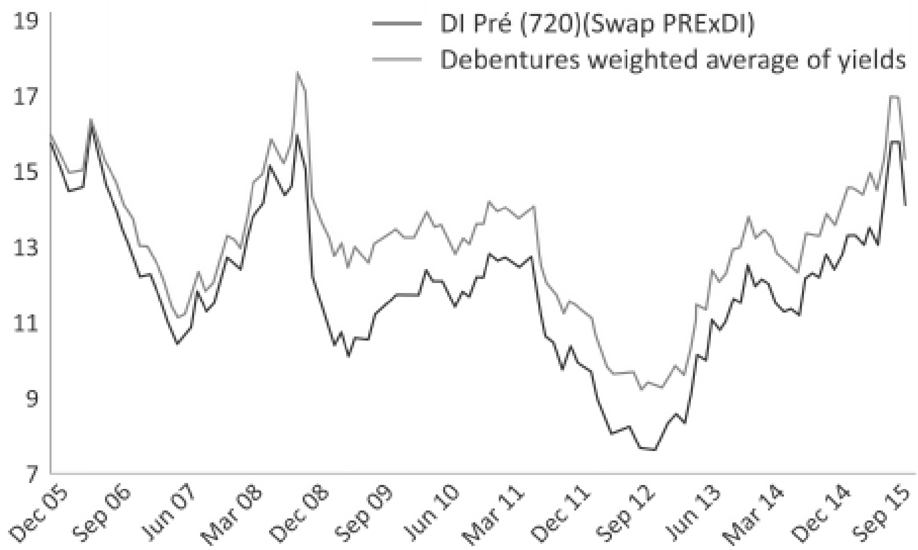




Source: BCB, REF September 2013

Figure 16 and 16A. Debentures nominal yield by rating and Swap Pré-DI- (2-YR) (% p.y)

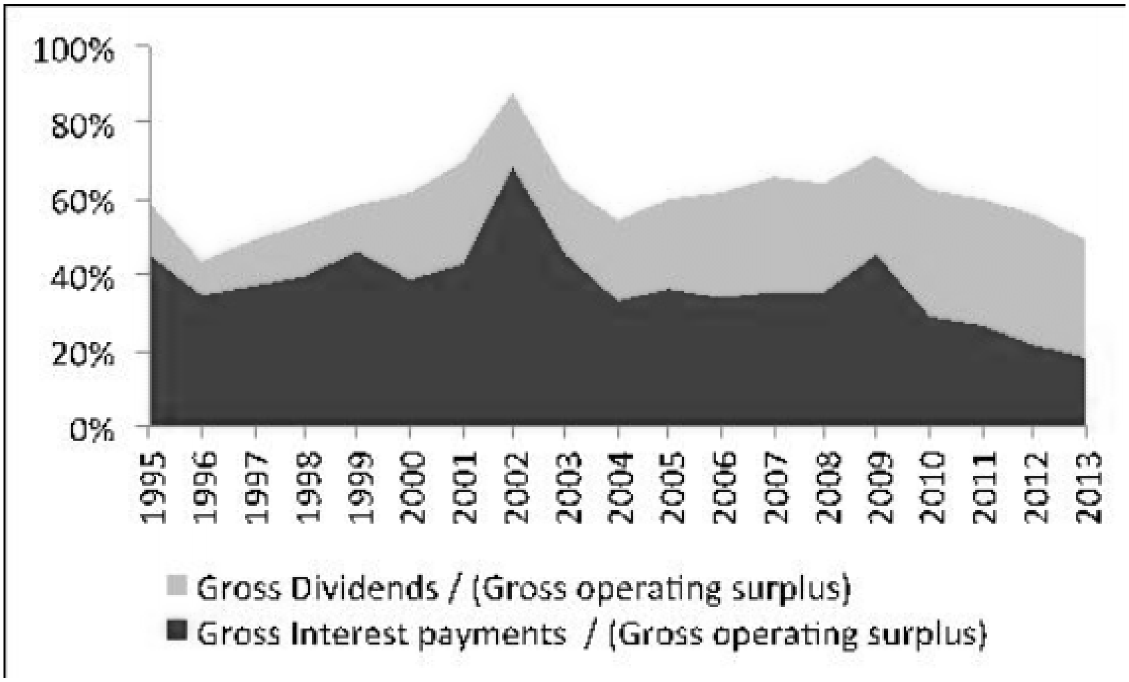




Source: CEMEC 2015, author's own elaboration

To sum up, the private sector's deficit is entirely due to firms' expenditures that greatly exceed their incomes. While lower borrowing costs attracted companies to increase their reliance on foreign borrowing and BNDES financing – contributing to lower their interest expenses– companies raised their dividends payments (figure 17 and 18). Though corporate earnings have been much lower than they have been in the past, income payments on assets, particularly through dividend payments, relative to gross operating surplus have sharply increased (figure 18).

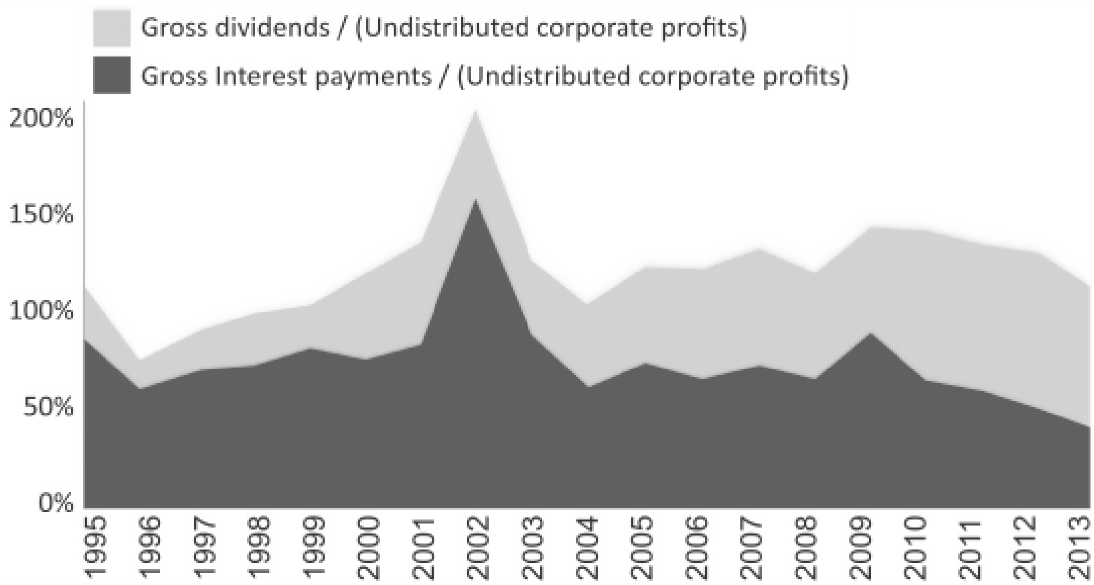
Figure 17. Non-financial companies' gross dividends and interest payments as a share of gross operating surplus

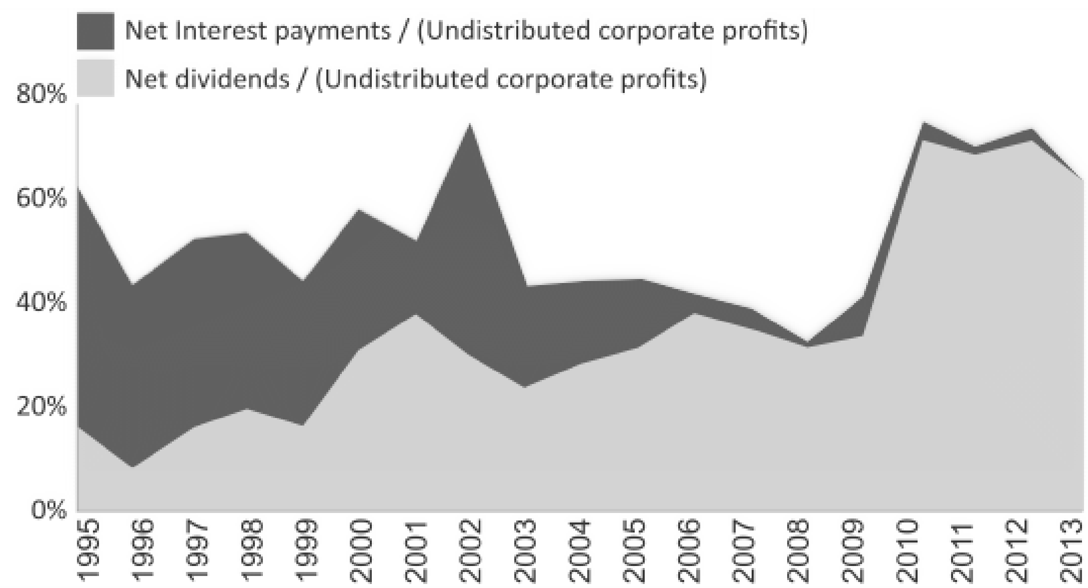


Source: IBGE, CEI, authors' own elaboration

Dividends absorbed, on average, 68% of undistributed corporate profits earnings during 2010-2013 (figure 18). As this happens, and aggregate corporate profits declined, this translated into a sharp decline in retained earnings. This reduction in corporate funding affected firms' investment in productive capabilities - with unsurprising results. Moreover, this increase in dividend payments to other sectors had a weak impact on the economy[28].

Figure 18 and 18A. Non-financial companies' gross dividends and interest payments as a share of undistributed corporate profits

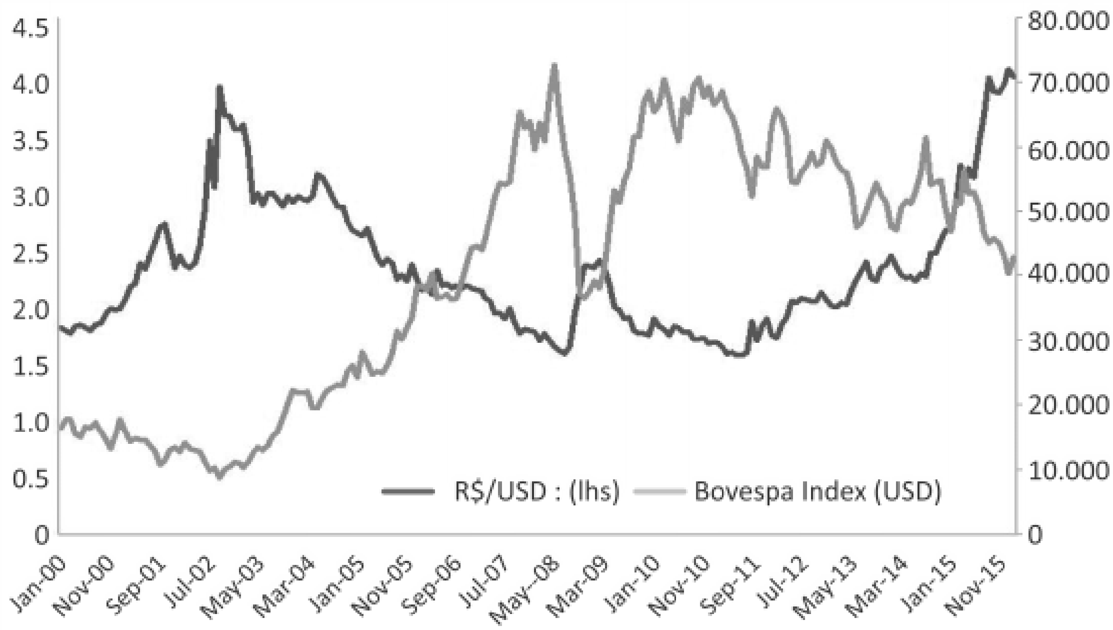




Source: IBGE, CEI, author's own elaboration

Relatively high aggregate dividend payments contributed to lower undistributed earnings to record lows in 2012. While low stock market values (figure 19) have contributed to lower wealth positions, companies increased dividends paid by to other sectors (figure 18).

Figure 19. Ibovespa in USD and BRL/USD exchange rate

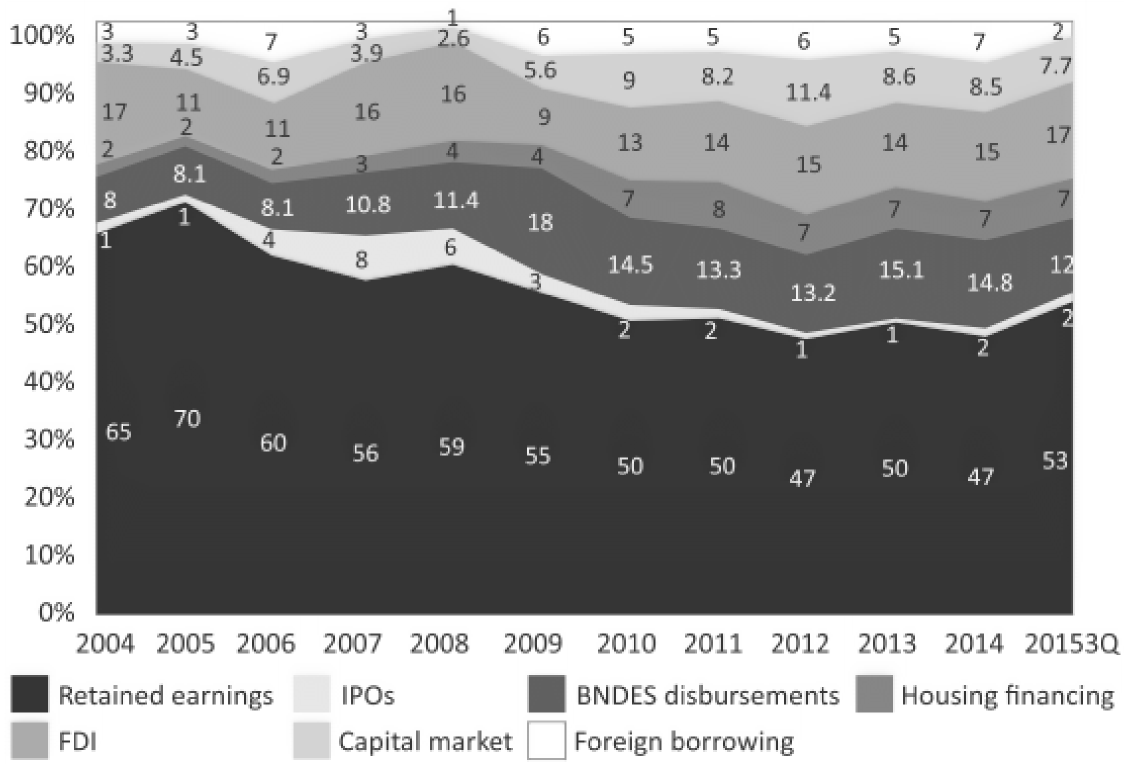


Source: BCB

Though during the boom years, a large share of investment was financed by enterprise internally generated funds, compared to the use of external funds. As the expansion got underway, firms were willing to increase the use of external funds to finance investment, which led to riskier financial profiles and declining cushions of safety.

With the deterioration of the current account balance removing profits, via the Minsky-Kalecki-Levy's profit equation, financial positions moved to riskier financial profiles. The combination between declining internally-generated funds and rising local and foreign borrowings changed the composition of investment financing and deteriorated financial profiles. Just like in Minsky's model, it is apparent the increase in the use of external funds (over indebtedness), and the sharp decrease in the share of internally-generated funds in financing investment (figure 20).

Figure 20. Non-financial companies and households' investment financing % of total



Source: CEMEC 2016

Though it is evident that BNDES' loans to firms contributed to reducing their lending costs, the sharp increase in BNDES' balance sheet has led to growing criticism of its policies (see Rezende 2015). In particular, it has been argued that its lending to corporations at subsidized rates did not translate into higher investment rates. Much of this discussion is misplaced, while BNDES' lending contributed to lower firms' interest payments, despite their rising leverage, its policies work primarily by reducing the supply price of capital by reducing firms' borrowing costs.

The development bank does not have tools to influence the demand price of capital. In this regard, for this policy to be successful in increasing investment, it requires rising the demand price of capital - that is, the present value of the discounted expected future cash flows (net proceeds) of an investment project relative - to the supply price. The appropriate policy response should have stimulated the demand price (by increasing it) and the supply price (by reducing it). That is, it requires a coordinated policy action between the Treasury and BNDES, in which fiscal policy influences the demand price of capital (by increasing it), while BNDES influences the supply price (by reducing it). This means that policy should be designed to supporting domestic demand and reducing firms' lending costs.

While BNDES' policies prevented firms that were still in the speculative stage from shifting to Ponzi positions and contributed to lower the supply price of capital, as already discussed by Keynes, in this situation reducing the supply price alone is insufficient to bring about an increase in investment without proper fiscal policy. This implicitly required the policy coordination with the Treasury to stimulate investment. This is aggravated by the decline, in recent years, in the demand price of capital, which was falling faster than the supply price[29].

This does not mean that BNDES's policies were mistaken. Without such policies, investment would likely be even lower. However, while the government implemented policies to reduce investment costs – Rousseff's "new economic matrix" – not surprisingly, it did little to offset the decline in corporate profits and the decline in gross fixed capital formation. This government response attempted to stimulate investment by reducing the supply price of capital, but this policy failed to prevent a sharp decline of investment because the demand price of capital – that is, expected future cash flows (net proceeds) of an investment project – was falling faster than the supply price.

International Dimensions of Financial Fragility: External Capital Flows as a Flawed Basis for Development Policy

The reliance on external finance and the persistence with the adoption of "Washington Consensus" and structural adjustment policies to deal with macroeconomic imbalances have added another layer of financial fragility and instability in the Brazilian economy.

It has already been suggested that Minsky's analysis of financial fragility can be applied to developing countries that rely on international financial markets (Kregel 2004, p. 7).

As discussed in the previous section, Brazilian firms have sharply increased borrowings in local markets and abroad. The accumulation of net financial wealth by the foreign sector - created annually through current account deficits – added another layer of financial fragility. In Minsky's framework, endogenous processes lead to changes in cash flow commitments and balance sheet structures of economic units, which translates into declining margins of safety, causing a shift in their financial profiles from hedge to speculative and Ponzi positions.

While the accumulation of international reserves by emerging economies has received much attention as a strategy of self-insurance against balance of payment crisis (Carvalho 2009), the role played by public banks, and BNDES in particular financing capital goods, thus reducing firms' reliance on foreign capital, has been overlooked. The IMF report noted that "The National Development Bank of Brazil (BNDES) provided substantial funding to Brazilian companies through loans and equity injections after the global crisis. This is likely to have contributed to lower bond issuance amongst Brazilians [Non-Financial Companies] NFCs than it would otherwise have been the case." (Bastos et al 2015, ft, 6).

In this regard, Brazil's public banks have countered financial instability dampening the effects of procyclical behavior of private sector bank lending during the past financial crisis (Barbosa 2010; Rezende 2015). There is also another impact that has received less attention, that is, lending in domestic currency avoids currency mismatch in funding domestic investment. In fact, among the lessons we can draw from Brazil's 1980's debt crisis and the Asian Crisis in 1997 (Kregel, 1998a, 1998b, 1999) is to reduce foreign currency exposure. Because domestic firms borrowed in foreign currency, they became exposed to increases in foreign interest rates and domestic currency depreciation relative to the borrowed currency. For instance,

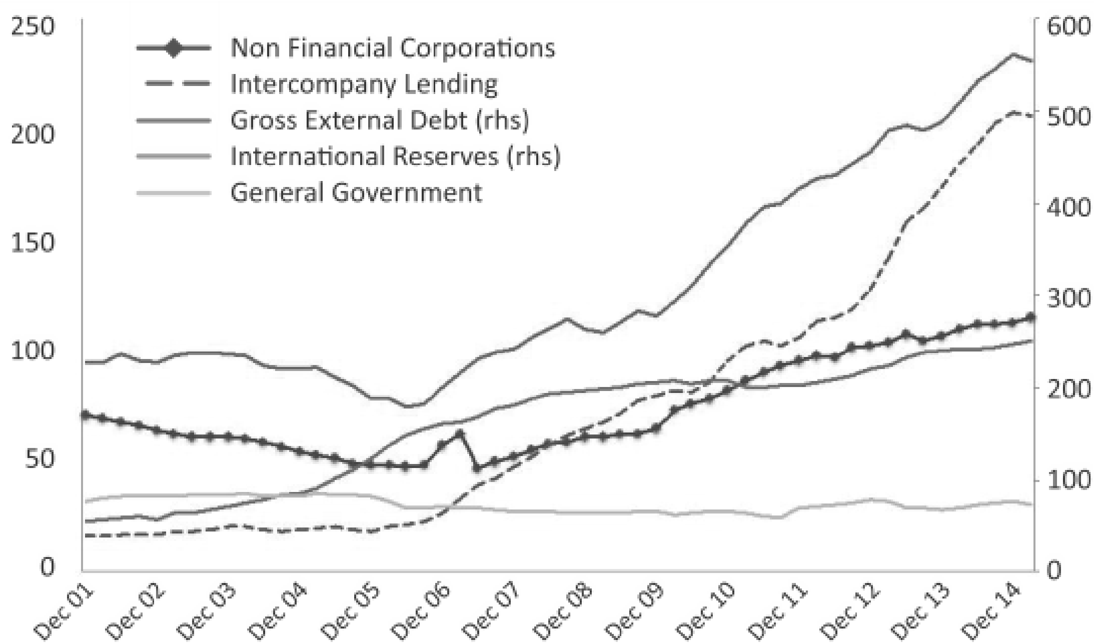
> "A rapid increase in external financing (much of which was not used for import substitution at all), such as the one that occurred in the 1970s, places a heavy burden on a country's balance of payments that can only be financed by increased foreign borrowing. This appears to have been the case in Latin America in the 1970s, as increased borrowing was used to meet increasing debt service in a sort of Ponzi scheme. The process remained sustainable until the October 1979 Volcker surprise in U.S. monetary policy that increased the interest payments on foreign borrowing, and caused an appreciation of the dollar that increased the domestic burden of dollar denominated loans and, at a stroke, drove most countries to insolvency… the policy [external financing] became untenable in the face of the insolvency created by the large external claims and the failure to recognize this insolvency through default. The reforms that were introduced in a number of highly indebted economies in Latin America at the end of the 1980s were thus promoted by the industrial countries to avoid default that would have rendered the developed country lending banks insolvent, given that their exposure to Latin America was a multiple of their capital. After attempts to generate external surpluses sufficient to meet external obligations and avoid default led to a sharp decline in growth and placed political stability in jeopardy, the Brady Plan sought a combination of debt relief and the creation of conditions that would allow the indebted countries to return to international capital markets to borrow the funds needed to meet the remaining debt service". (Kregel 2008: 8-9)

Financing domestic development through external financial flows has led to increased fragility and persistent financial crisis, in which debt denominated in foreign currency created currency mismatch that - combined with rising U.S. interest rates and exchange rate depreciation - increased the debt service and the burden of foreign currency loans. These put the country in a "Ponzi" position, which resulted in a Minsky-Fisher type debt-deflation process. These countries were also subject to reversals of capital flows and decline in domestic activity.

Moreover, even in the absence of such factors, there is no reason to believe that access to international capital markets will necessarily be accompanied by an increase in investment in fixed capital assets to allow the real development of the economy if the liabilities issued by the private sector in capital markets are not being used for the acquisition of productive assets.

Even though Brazil's accumulation of reserves provides another cushion of safety to stabilize external financing – the country is a net foreign creditor (excluding intercompany lending) and its export earnings have covered a significant portion of its debt servicing needs over the past five years (Rezende 2015a) - this margin of safety has been declining due to increasing external obligations, in particular by nonfinancial companies (figure 21).

Figure 21. Brazil's external debt and international reserves (US$ billion)

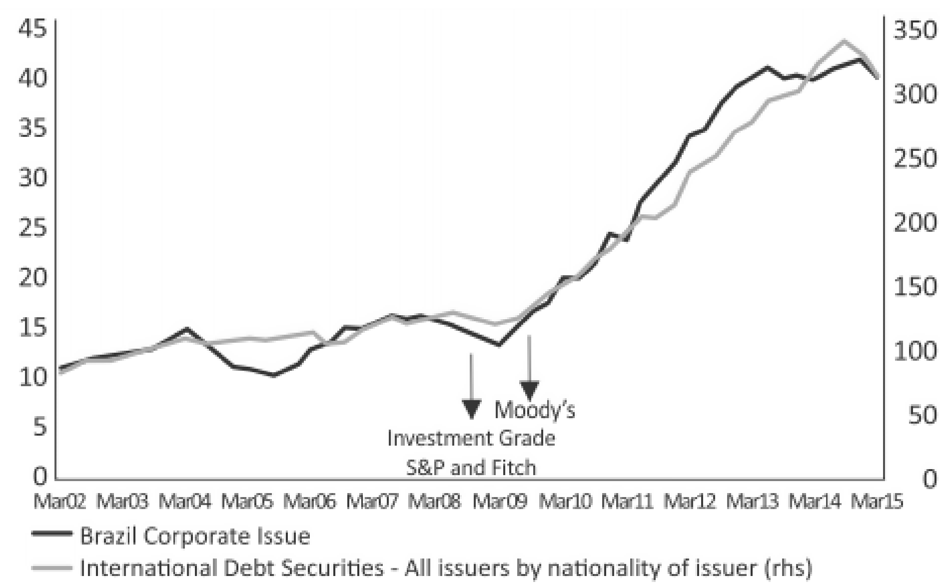


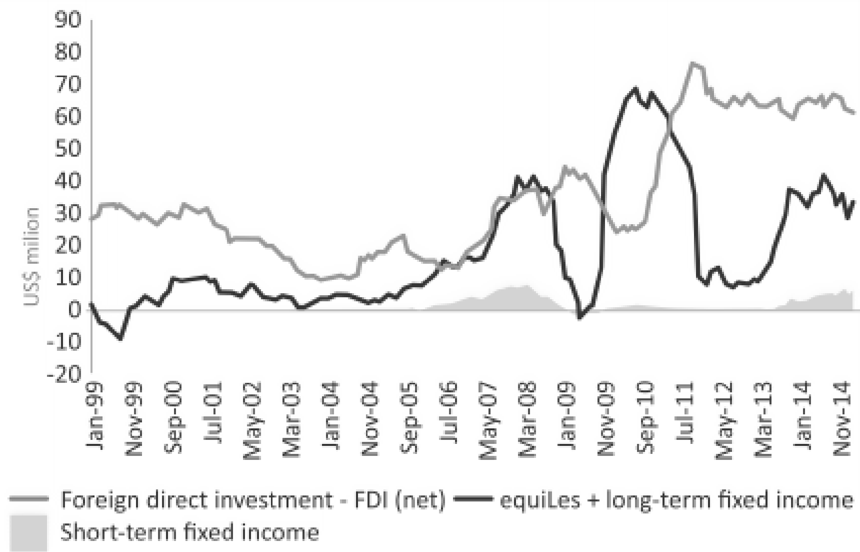
Source: Central Bank of Brazil

For example, following Brazil's upgrade to investment grade status by Standard & Poor's and Fitch in 2008, low interest rates in global financial centers since the aftermath of the 2007-2008 global financial crisis have pulled Brazilian non-financial companies to tap international markets (figure 22 and 23).

During this period, Brazilian corporate issuers have sharply increased their external borrowing through foreign subsidiaries (see Bastos et al. 2015; Avdjiev et al., 2014), in which investment-grade corporate bonds witnessed strong issuance (figure 23). Moreover, low or negative bond risk premium in advanced economies have pushed investors' demand for higher-yielding assets (Shin 2013; Turner 2014).

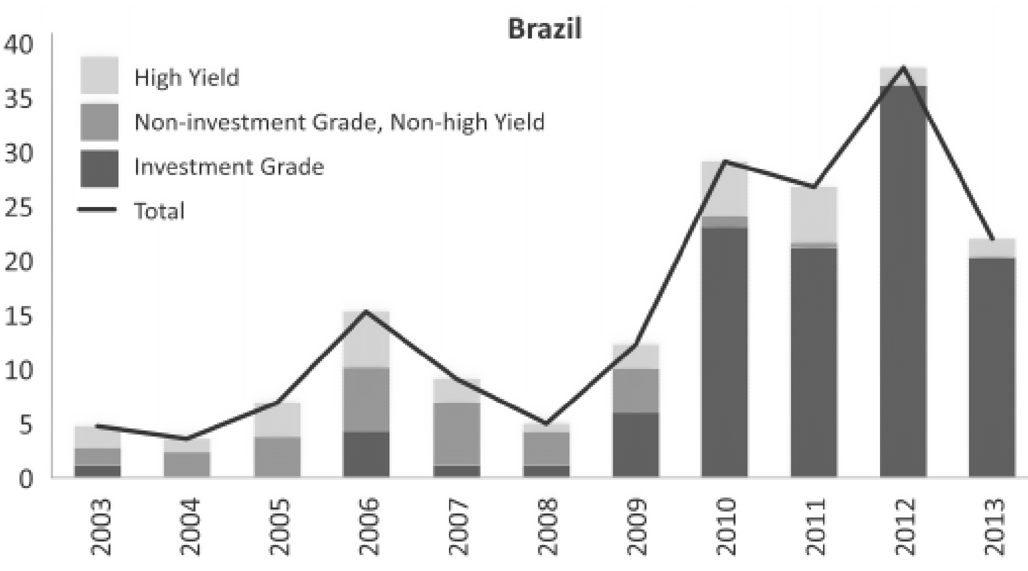
Figure 22 and 22A. Brazil: International debt securities outstanding (in billions of US dollars) and Foreign Direct Investment and Company Equity in Brazil, 1999–2015 (in billions of U.S. dollars)





Source: BIS securities statistics table 12A and 12D; Banco Central do Brasil

Figure 23. Non-financial companies' debt issuance by issuer's rating grade (US$ billion)



Source: Bastos et al 2015

Corporate bond issuance through foreign subsidiaries boosted intercompany loans and foreign direct investment. This point has been recognized in a recent International Monetary Fund (IMF) report, which has pointed out that

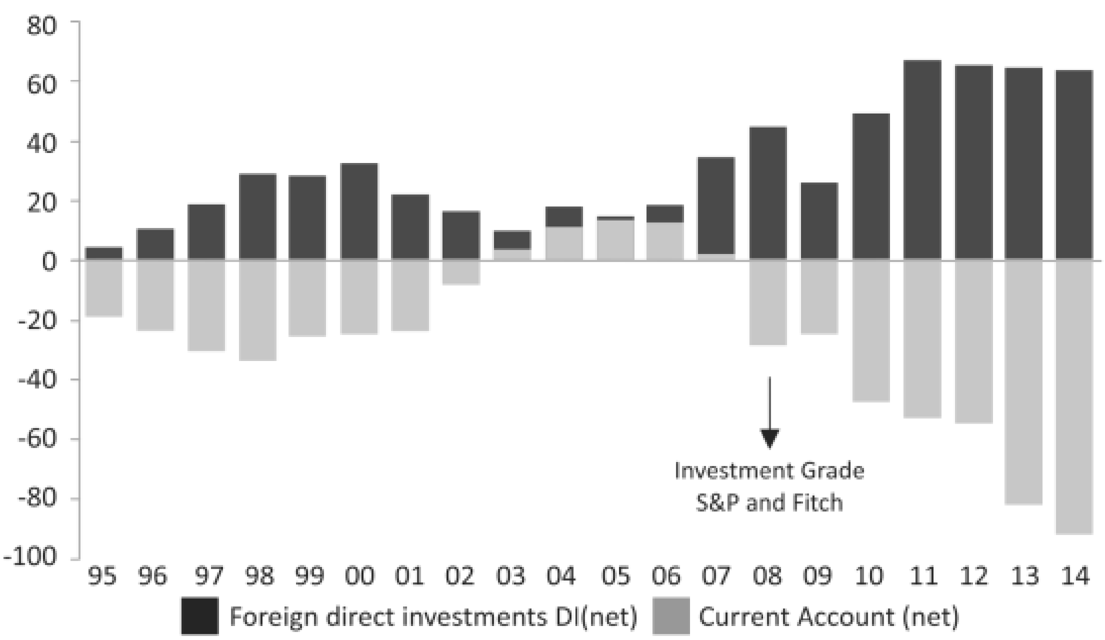
> "intercompany loans accounted for some 60 percent of total FDI in 2014. Interestingly, about 60 percent of total intercompany loans is made up of loans to Brazilian foreign investors, extended by their own subsidiaries. A likely cause for such loans is the large offshore debt security issuance by foreign incorporated subsidiaries of Brazilian parent companies… The striking correlation between offshore issuance by non-financial corporations and intercompany loans to Brazilian foreign investors suggests that the majority of offshore issuance indeed returns to Brazil in the form of FDI (an inflow of intercompany loans resulting from such offshore issuance can be regarded as carrying a risk profile more similar to portfolio debt than other types of FDI inflows)." (IMF 2015a, 48)

Contrary to the conventional belief that FDI is the least risky form of foreign borrowing, FDI flows carries significant risks and creates structural instability into the system, because it "is not an unconditional gift; it is financing provided against the expectation of profit earnings and the eventual repatriation or relocation of the investment" (Kregel 1996, 58). FDI flows are a source of financial fragility, and have the potential to turn into Ponzi schemes causing an endogenous deterioration of the current account balance and disruptions in the foreign exchange market, thus threatening exchange rate and macroeconomic stability.

Interestingly, even though non-financial companies sharply increased dollar denominated bond issuance abroad since 2008, a recent study by the (IMF) has shown "that stepped-up bond issuance was mostly aimed at re-financing, rather than funding investment projects, as firms extended the average duration of their debt while securing lower fixed-rates, reducing roll-over and interest rate risks. The shift towards safer maturity structures has come at the expense of a leveraging-up in foreign-currency-denominated financial debt" (Bastos et al 2015).

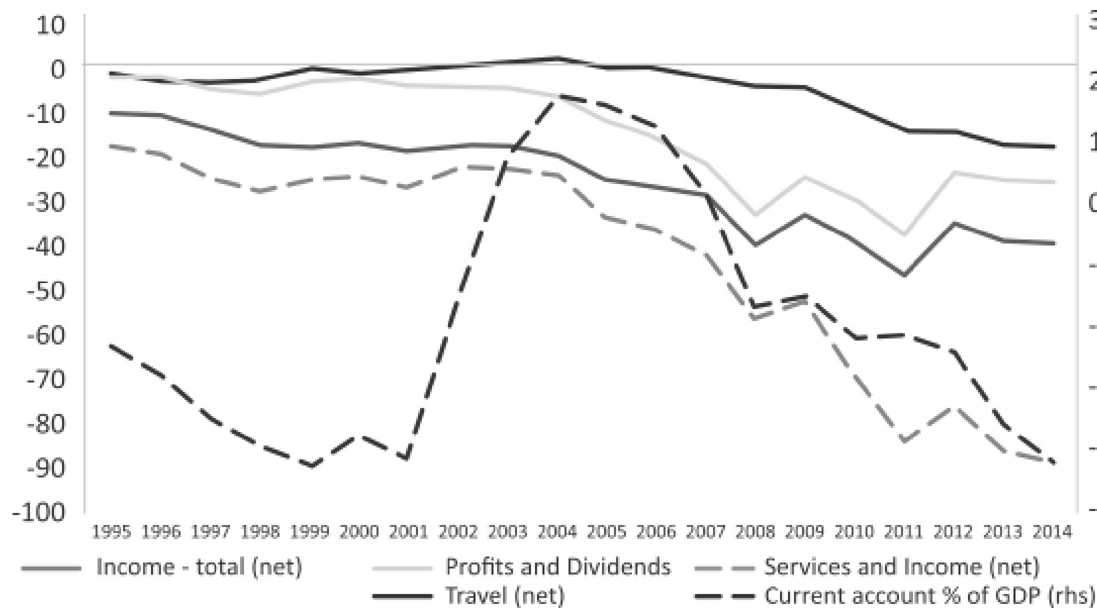
The foreign sector accumulated private domestic debt by persistent current account deficits, that is, it accumulated net financial wealth, which then causes subsequent portfolio adjustments. Because foreign direct investment inflows[30] create future commitments in the form of debt service causing deterioration in the current account balance, increasing capital flows have contributed to foreign imbalances, increasing the deficit on the services balance, and thus rising current account deficits. Not surprisingly, the reliance on external financing has created a deficit on the factor services balance of the current account (figure 24 and 25).

Figure 24. Foreign Direct Investment and Current Account (US$ billion)



Source: BCB

Figure 25. Factor services account balance (US$ billion) and current account balance



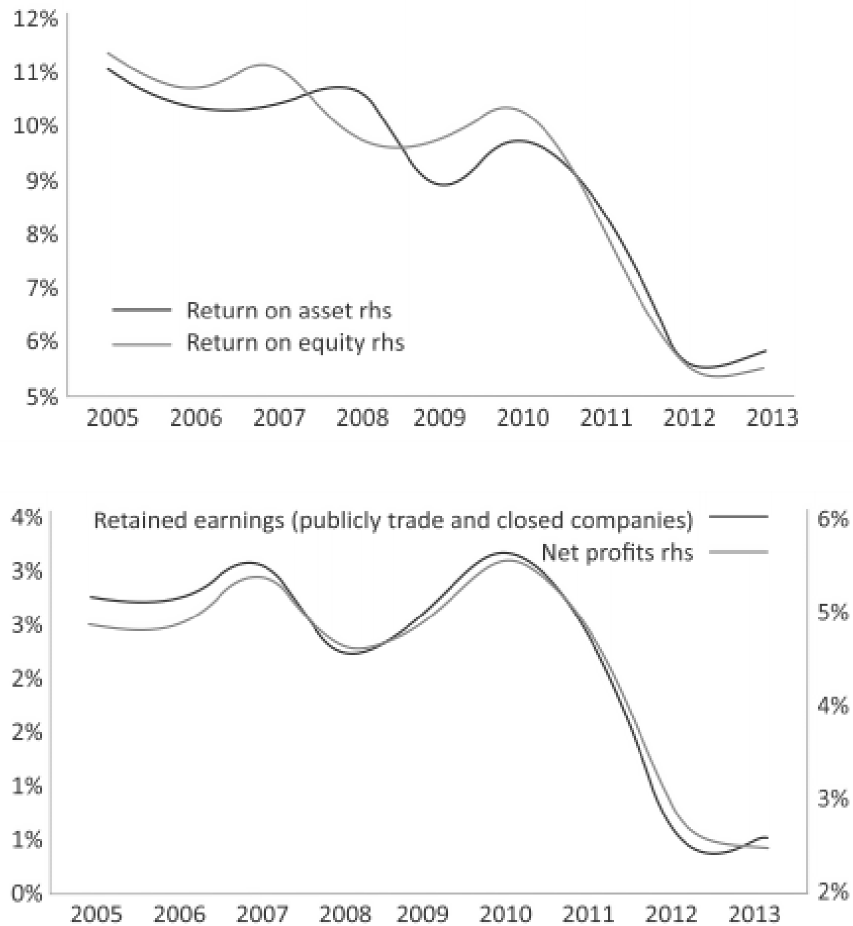
Source: BCB

FDI growth has been linked to increasing remittances of profits and dividends, and debt service on intercompany loans, which are draining profits out of the domestic economy. The factor services account balance has shown deterioration, as the accumulation of current account deficits (figure 25) require rising net capital inflows, thus being equivalent to a Ponzi investment scheme (see for instance, Kregel 1996, 2004). A reversal of international factors such as negative real short-term interest rates in advanced economies and investor's risk appetite for emerging market assets created a potentially disruptive force in emerging market economies.

Declining Profits and Investment Behavior

While in a Keynes-Minsky-Godley approach, the sectoral balances approach shed light on understanding all financial flows within the economy, Minsky-Kalecki-Levy's Profits equation, shows the macroeconomic origins of aggregate profits[31]. This brings us to the question of why have businesses not invested more. Brazilian companies faced declining aggregate profits and return on assets (figure 26).

Figure 26 and 26A. Publicly traded and closed companies profits and profitability

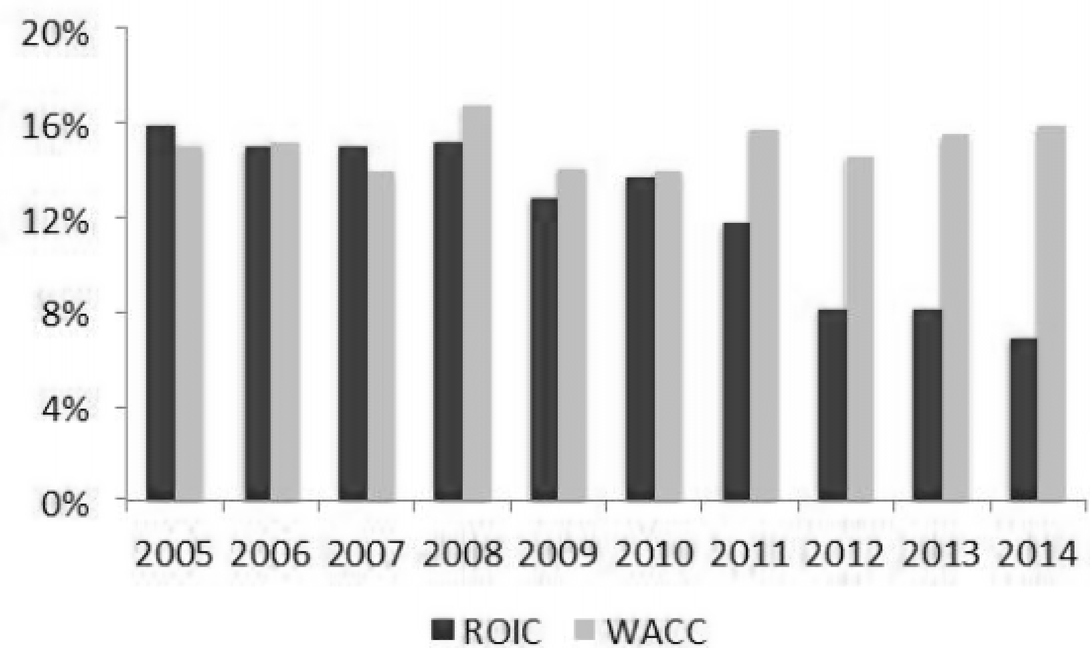


Source: CEMEC, author’s own elaboration

During economic expansions, high profits and retained earnings can finance new investment boosting economic activity. As this happens, at the macroeconomic level, rising current account deficits put a downward pressure on aggregate profits. This is aggregated by capacity effects, given by the “Domar problem”, that is, the additional capacity created by a constant level of net investment further increases the demand gap to fully mobilize resources. The combination of rising current account deficits, slowdown in investment growth and budget deficits took a toll on corporate profitability.

In particular, rising current account deficits put a downward trend on profits, decreasing it by a substantial amount (figure 26). During this period worker's saving was positive (average of 0.3% of GDP from 2007-2013), which also put a downward pressure on profits. Falling profits caused the sharp decline on returns on assets, which given leverage ratios, reduced ROE (figure 26). Hence corporate earnings (and profitability) are much lower than they have ever been in the past. Declining aggregate profits influenced profitability indicators, such as the return on invested capital (figure 27).

Figure 27. Return in invested capital and weighed average cost of capital



Source: CEMEC 2015a, author's own elaboration

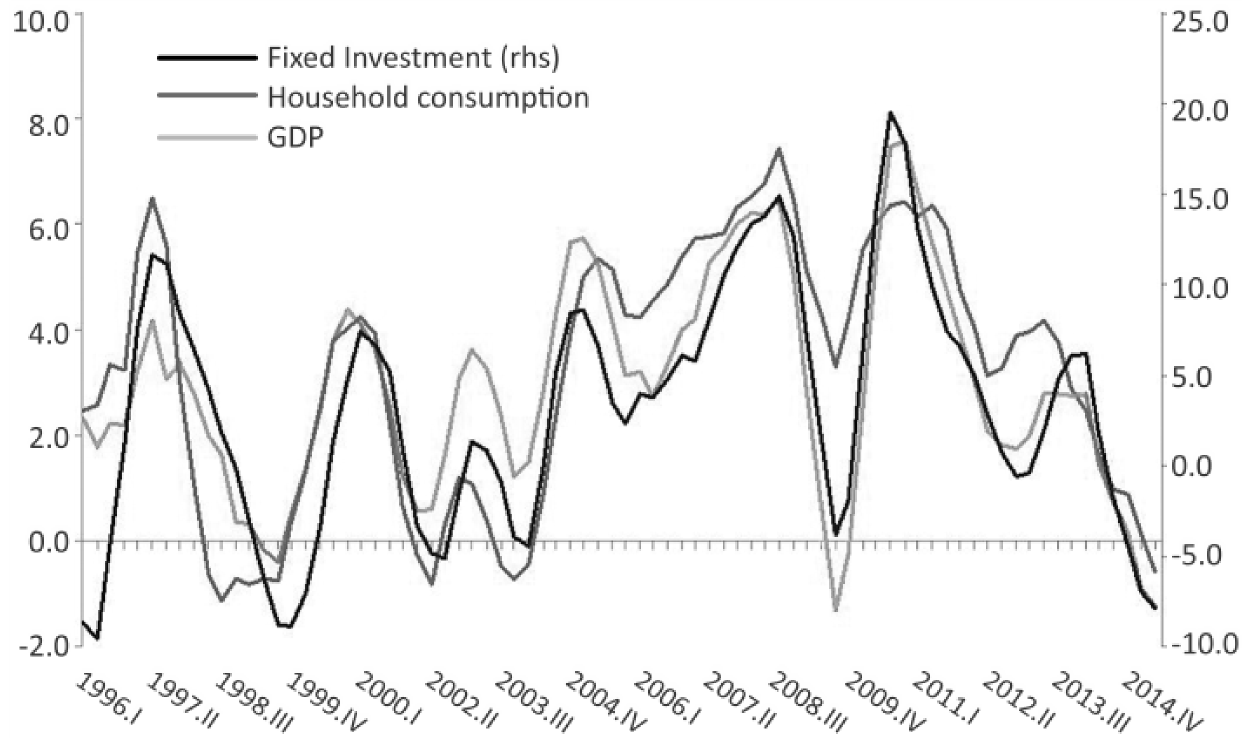
The drive for profits makes economic units to work, increase and maintain their profitability through a combination of rising leverage and return on assets. The rapid expansion of private credit over the past 10 years was a double-edged sword: it contributed to support demand and returns on equity, but it deteriorated firms' cushions of safety. Because aggregate profits and margins have been compressing and returns declining, investment grew at a slower pace along with declining profit expectations and increased risk perception.

While Keynes investment theory suggested that investment will proceed if the marginal efficiency of capital is greater than the interest rate, the recent experience in Brazil shows declining aggregate profits and profitability and increasing leverage among non-financial companies and households, resulted in deterioration of confidence (figure 28). Falling profits and falling business confidence put a downward pressure on investment growth (figure 29). While economists and market pundits have raised the question of why Brazil's economic performance deteriorated in the aftermath of the 2007-2008 global financial crisis (figure 30 and 31), this happened because aggregate profits and returns collapsed during that period, while there was a debt overhang.

Figure 28. Confidence Index (FGV) – seasonally adjusted

Source: BCB

Figure 29. Business cycle: fixed investment and GDP growth (four-quarter moving average of year-over-year change)

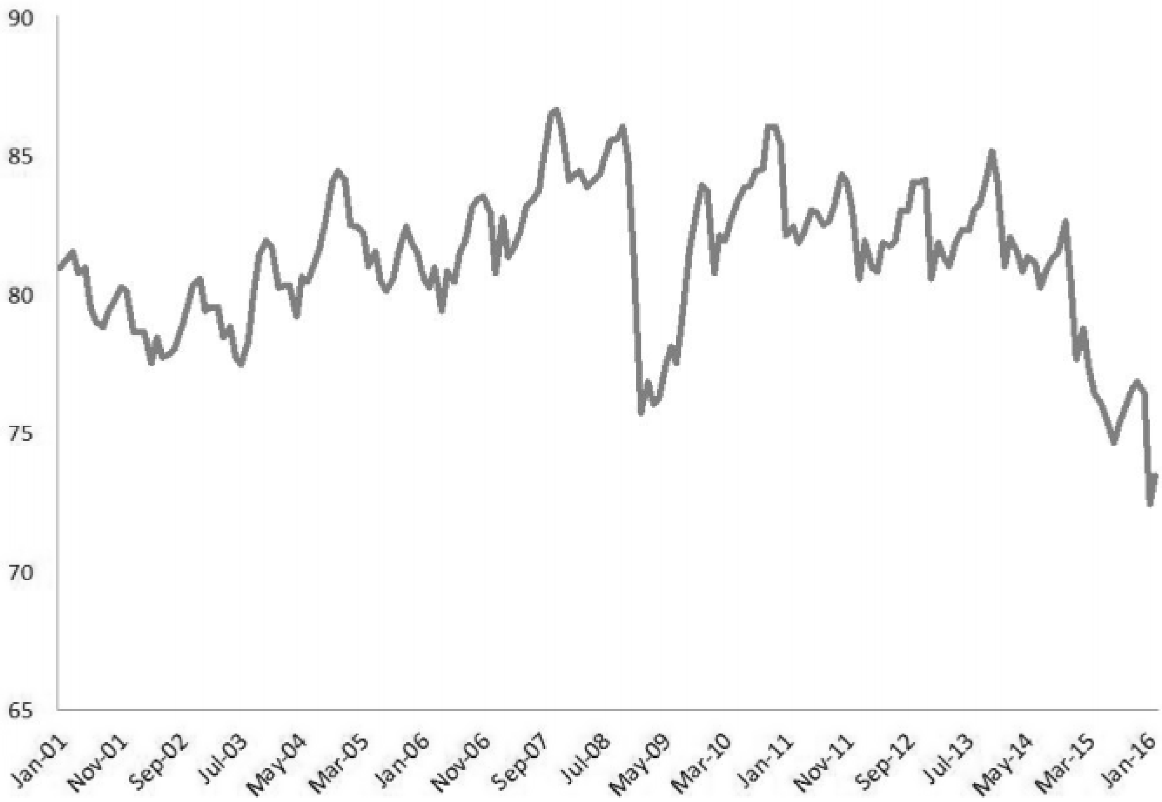


Source: IBGE

Figure 30. Industrial production index – s.a. (2002=100)

Source: BCB

Figure 31. Capacity utilization – manufacturing industry (FGV) - %



Source: BCB

While the conventional argument has pointed to falling commodity prices and fiscal expansion as the cause of Brazil's 2014-15 recession (Bresser 2015), it was the failure to sustain aggregate profits and expected future profitability along with declining cushions of safety that have sharply reduced the return on assets, which pushed the demand price of capital below the supply price, thus reducing investment.

With the collapse in commodity prices in 2014 and a widespread corruption case that affected public and private investments, they finally knocked off the economy and drove the country into a major recession in 2015. That is, Keynes-Minsky's investment theory of the cycle seems to fit the Brazilian economy.

This is a Minsky's crisis, in which during economic expansions market participants show greater tolerance for risk and forget the lessons of past crises, so economic units gradually move from safe financial positions to riskier positions and declining cushions of safety.

The dynamics of Brazil’s current crisis can be summarized as follows: the Brazilian experience shows that while the household sector balance was in a surplus (spending less than its income), firms ran increasingly large deficits (except for 2009 when the government adopted stimulus measures, which generated large enough government deficits that more than offset the current account deficit). The business sector as a whole is in deficit, so the private sector's deficit is entirely due to firms’ expenditures that greatly exceed incomes.

However, an expansion fueled by private sector deficit spending lead to the over indebtedness of the private sector. In Brazil, the combination between growing current account deficits along with the over-indebtedness of the business sector have generated record private sector deficits. Though the private sector deficit as a whole was not in deficit until 2011, as the household sector, as a whole, was not in deficit during the entire period. That is, the private sector’s deficit spending was entirely due to firms’ expenditures that greatly exceed their incomes. This increase in nonfinancial corporate sector indebtedness was, in turn, accommodated by domestic bank credit and bond issuance in the domestic and foreign markets.

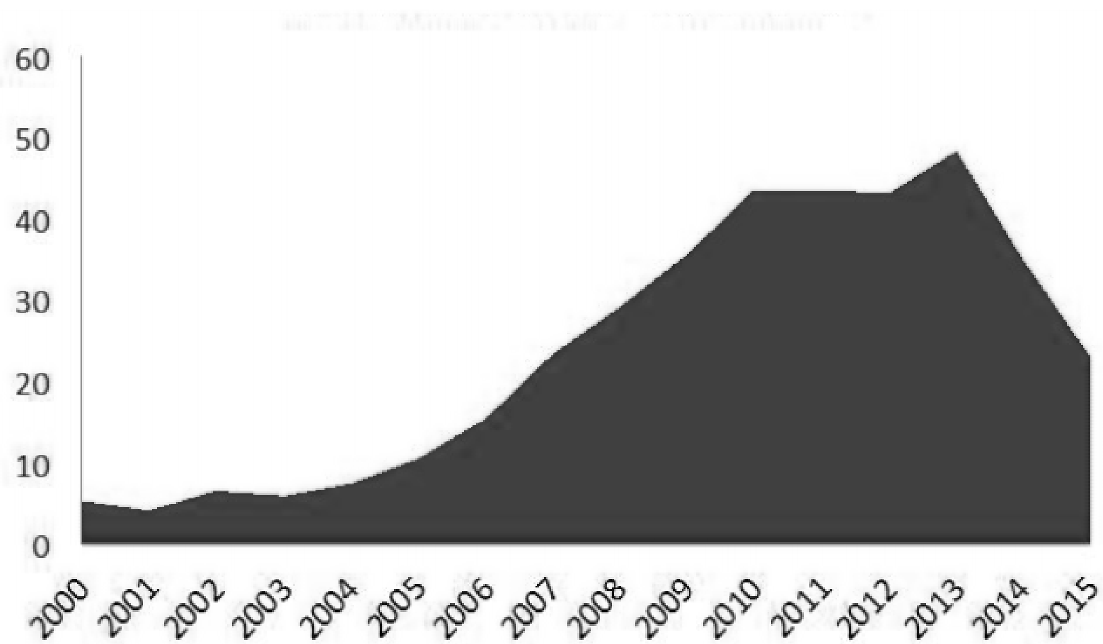
Following Brazil’s upgrade to investment grade status by Standard & Poor’s and Fitch in 2008, low interest rates in global financial centers since the aftermath of the 2007-2008 global financial crisis have pulled Brazilian non-financial companies to tap international markets. During that period, augmented by the perception that the nation was one of the most promising economies, Brazilian corporate issuers have sharply increased their external borrowing.

That is, the increase in non-financial corporate indebtedness was accommodated by domestic credit expansion, and debt denominated in foreign currencies including a strong inflow of foreign direct investment – which reinforced the tendency to generate current account deficits through profit and dividends remittances and the debt service.

The surge in capital inflows along with the accumulation of international debt by non-financial companies during the boom years, worsened the tendency towards the deterioration in the foreign account caused by the outflows created on the factor service account – represented by debt service and profit and dividends remittances. Alongside the business sector deficit spending for a long period of time, the combination between the deterioration of trade and the current account balances and the reliance on external funding added another layer of endemic economic instability. In this regard, there was a self-reinforcing cumulative process which continued to reinforce the tendency towards deterioration in the external accounts, and it was similar to a Ponzi scheme.

As this happens, investment started to grow at a slower pace, both the trade balance and the current account balance deteriorated, workers' saving remained positive – and with Brazil's oil company faced with lower oil prices, rising debt, and a massive corruption scandal – Petrobras, which was a major public investment driver, cut its investments in 2014 and 2015 (figure 32) generating ripple effects throughout the economy. These forces put a downward pressure on aggregate profits. Along with it, firms experienced declining returns on assets and attempted to increase their return on equity by using borrowed funds.

Figure 32. Petrobras CAPEX – USD billion



Source: Petrobras

The Failure of Structural Adjustment Policies

With the Brazilian policy response to the 2007-2008 Global Financial Crisis, Lula's second term (2006-2010) introduced a more flexible primary budget surplus target to respond to the state of the economy. During that period, private debt accelerated relative to GDP along with the shift from a surplus balance to a private sector deficit, so that the underlying structural weaknesses in the Brazilian economy – the over-indebtedness of the business sector, and in particular, private external debt, accumulated through capital inflows.

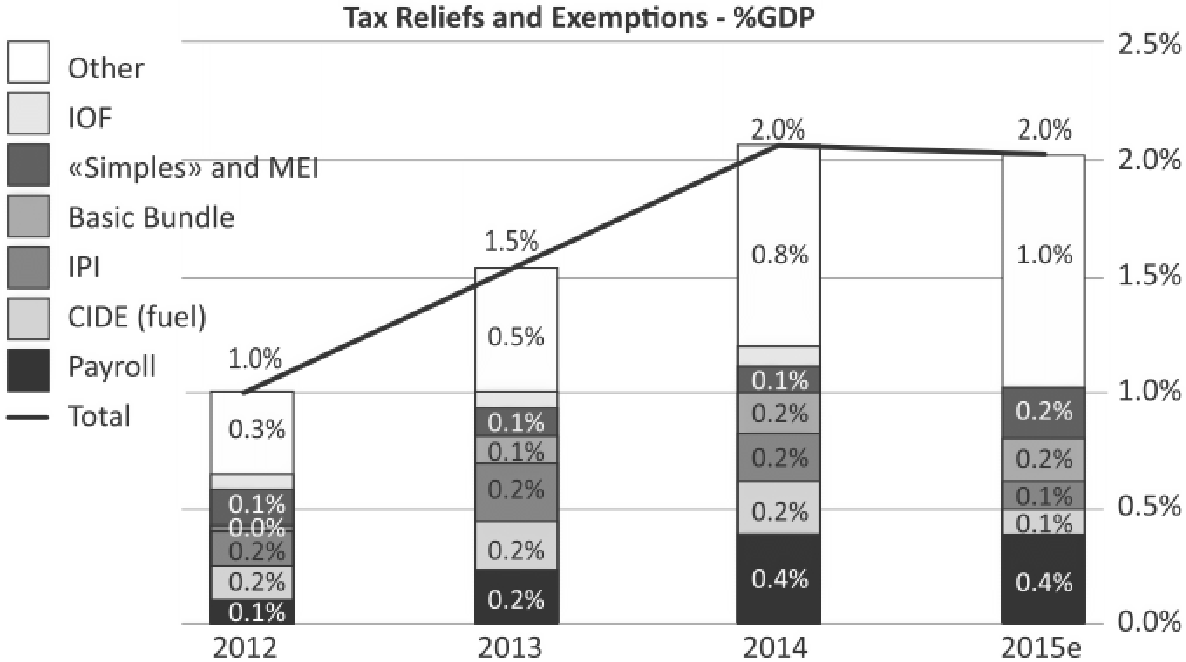
As Brazil navigated relatively smoothly through the 2007-2008 Global Financial Crisis, which led to a fast recovery in 2010, the central bank diagnosed an overheating economy and initiated a series of interest rate hikes from 8.75% in April 2010 to 12.50% in July 2011, and also led to an early withdrawal of policy stimulus in 2011. The government proposed a R$ 50 billion spending cuts and the monetary authority introduced a series of macro prudential measures to curb credit growth and dampen risk in the financial system (see Da Silva and Harris 2012).

As a result, Brazil's economic growth was sharply reduced in 2011 and 2012. Rousseff's first term was characterized by the so-called, "New Economic Matrix", a policy initiative[32] aimed at reducing real interest rates, Brazil's tax burden, and promoting exchange rate depreciation to improve the competitiveness of the Brazilian economy and lift economic growth. This policy aimed at reducing investment costs and support profit margins.

Rousseff's first term from 2010-2014 was marked by an attempt to replace the neoliberal macroeconomic policy "tripod", that is, floating exchange rate, primary surplus targets, and inflation targeting, which was established during former president Fernando Henrique Cardoso's second term to get assistance from the International Monetary Fund (IMF) to deal with Brazil's 1998-99 currency crisis[33]. This macroeconomic policy framework was reinforced during former president Luiz Inácio Lula da Silva's first term from 2002-2006 (see Arestis et al 2008).

The Brazilian federal government also announced an ambitious investment program based on public private partnerships and concessions to the private sector in key areas, such as logistics, energy, and oil and gas. Moreover, to reduce Brazil's well-known high tax burden, stimulate economic activity, and keep inflation under control, former Finance Minister Guido Mantega introduced a series of tax cuts (figure 33). The government authorized the Treasury to provide loans to its public banks to allow them to support the investment program.

Figure 33. Tax Reliefs and Exemptions (% of GDP)



Source: The Ministry of Finance, 2016a

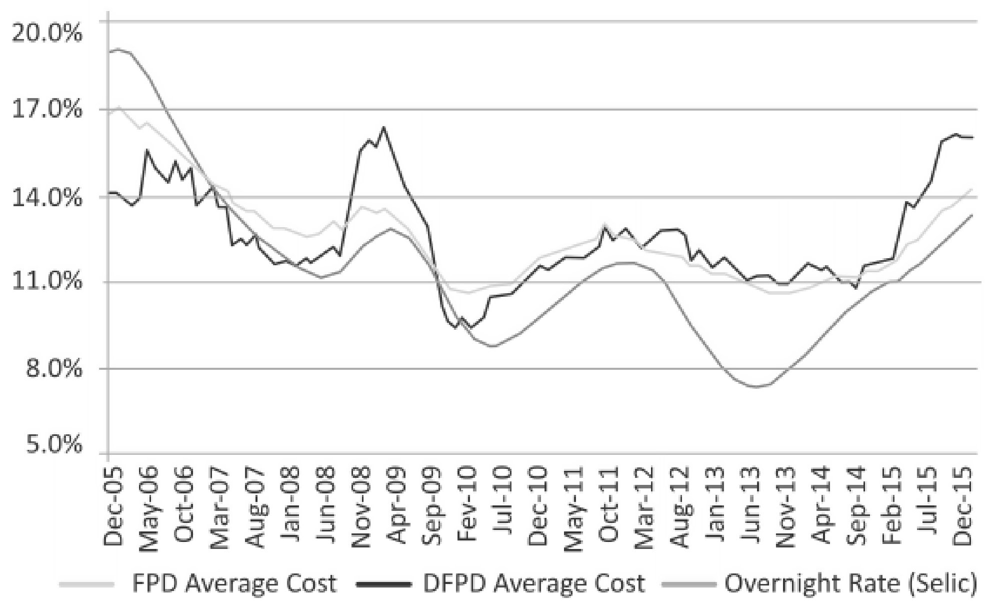
Though ad hoc tax breaks caused fiscal revenues to decline, they were too small and poorly designed to influence the demand price of capital, stabilize aggregate profits, and promoting a substantial economic growth. By reducing the policy interest rate and using public banks as a policy tool, it was believed that Brazil would initiate a new phase of economic growth.

However, those measures failed in reversing the negative trend in fixed investment spending growth. Though there have been attempts to explain the causes of this dismal performance of fixed investment spending, as discussed in the previous sections, the conventional analysis overlooks the impacts of declining aggregate profits, rising indebtedness of the private sector, and falling demand price of capital assets relative to the supply price.

Though the government response attempted to stimulate investment by reducing the supply price of capital, not surprisingly, this policy failed to prevent a sharp decline of investment because the demand price of capital – that is, expected future cash flows (net proceeds) of an investment project – was falling faster than the supply price.

With the exchange rate devaluation since 2011, aggravated by the US Federal Reserve's “taper tantrum” in May 2013, it was followed by monetary policy tightening in Brazil (figure 34), in an attempt to stabilize the exchange rate, control inflation, and curb capital outflows.

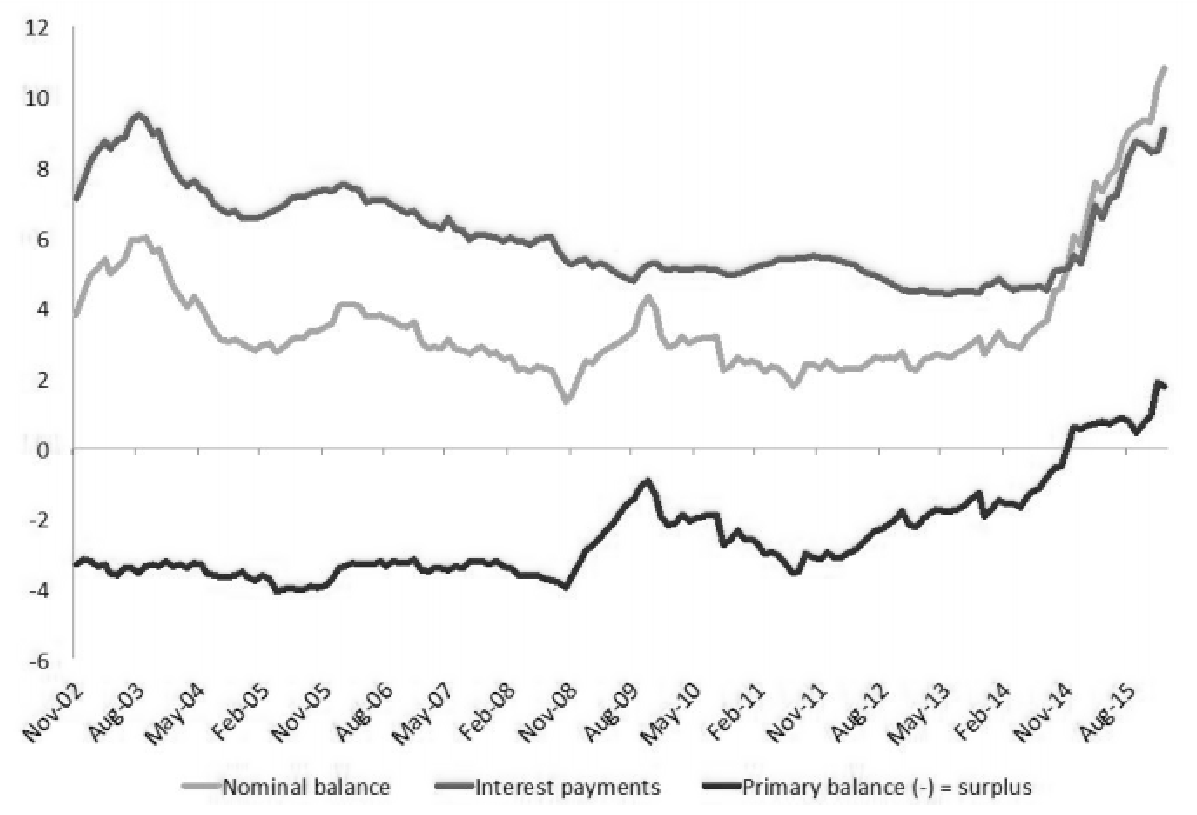
Figure 34. Average Selic rate (% p.y) and average cost of domestic (DFPD) and federal public debt (FPD)



Source: Ministry of Finance 2016

The current administration faced fierce attacks in the previous election cycle from anti-Worker's Party groups and right-wing media arguing that the current crisis is a failure of government due to its actions and interventions, not the normal operation of the free market. With the introduction of policy stimulus through ad hoc tax breaks for selected sectors seen as a failure to boost economic activity and the deterioration of the fiscal balance (figure 35) - which posted a public sector primary budget deficit in 2014 after fifteen years of primary fiscal surpluses - opponents argued that the government intervention was the problem. It provided the basis for the opposition to demand the return of the old neoliberal macroeconomic policy tripod and fiscal austerity policies.

Figure 35. Government balance % of GDP (accumulated in 12 months)



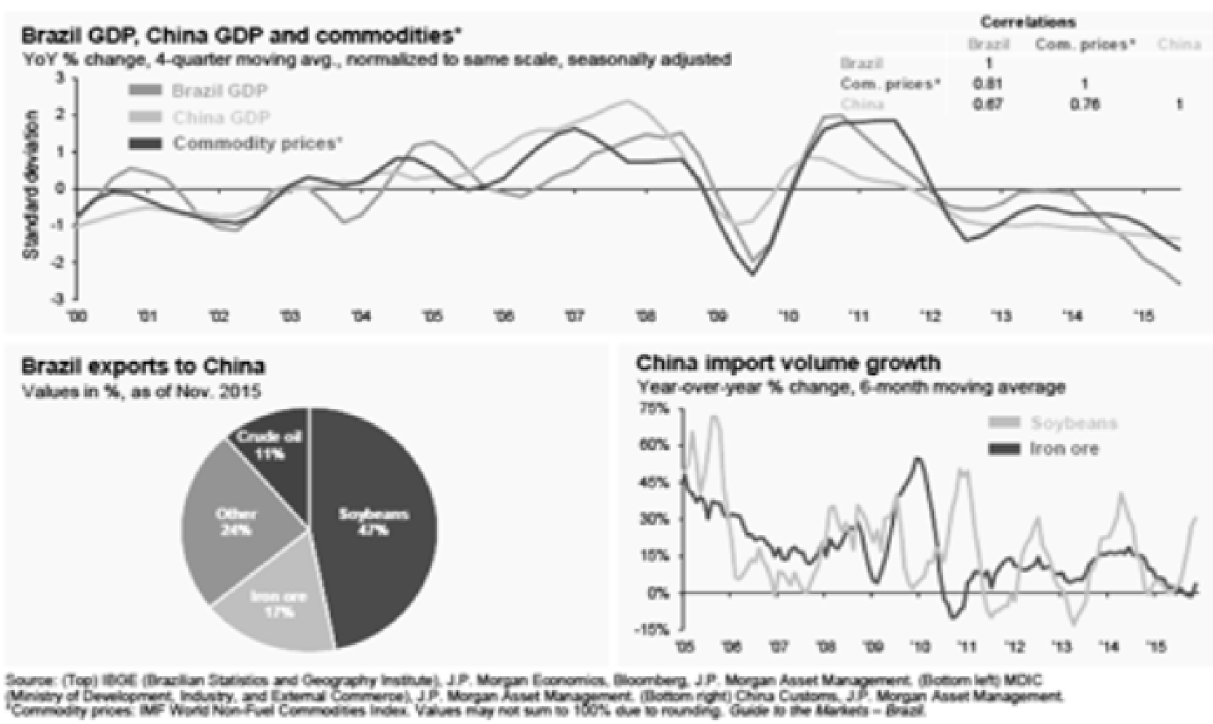
Source: BCB

Following a narrow election victory in 2014, the Rousseff administration moved sharply in the direction of fiscal austerity, causing policy to drift back to the “normal” neoliberal proscriptions despite the success of earlier progressive policies. The tight election reflected the perception of a downward trend of the nation’s economic outlook augmented by news that Brazil’s economy has fallen into recession in the first and second quarters of 2014. This outcome did not look like the election the Workers’ Party expected. Brazil’s unemployment rate has hit record lows, real incomes have increased, bank credit has roughly doubled since 2002, it has accumulated US$ 376 billion of reserves as of October 2014, and it has lifted the external constraint. The poverty rate and income inequality have sharply declined due to government policy and social inclusion programs, it has lifted 36 million out of extreme poverty since 2002.

Moreover, the resilience and stability of Brazil's economic and financial systems have received attention, as they navigated relatively smoothly through the 2007-2008 global financial crisis.

So, what happened? The reason is obvious, in the aftermath of the global financial meltdown, policy makers misdiagnosed the magnitude of the crisis, the changing circumstances around it, and ended up withdrawing stimulus policies too early. This was aggravated by the failure to make an effective transition to promote domestic demand strategies and the collapse in commodity prices, which affected commodity-producing countries (figure 36). With the slowdown of global demand – particularly from China – the end of the commodity price cycle, negative terms of trade effects, changes in global financing conditions, the Brazilian economy entered in a recession spiral. In particular in 2014 and 2015, it was the collapse in business investment spending that pushed the Brazilian economy into its worst recession in 25 years.

Figure 36. Brazil GDP, China GDP and commodity prices



Source: JP Morgan 2016

The perceived failure of stimulus measures opened space for critics, such as the main centre-right opposition party, to blame Ms. Rousseff's administration as being excessively interventionist leading the Brazilian economy to perform poorly during the past four years. It fueled Mr. Neves campaign to convince anti-Rousseff voters he could get Brazil's economy back on track.

Conclusion: Policy Mayhem - A Minskyan Crisis Coupled with an Austerian Policy Response

The Brazilian current crisis provides an impeccable fit to Minsky's theory. The traditional response to a Minsky crisis involves government deficits to allow the non-government sector to net save. That is, if the private sector desire to net save increases, then fiscal deficits increase as well, to allow it to accumulate net financial assets. The sharp increase in budget deficits in 2015 comes as no surprise. Rezende (2015a) simulated

> "a scenario in which we have rising government deficits to offset current account deficits to allow the domestic private sector balance to generate financial surpluses. In this case, in the presence of current account deficits equals to 4% of GDP, to allow the private sector to net save 2% of GDP, it would require government deficits equals to 6% of GDP. If the private sector is going to save 5% of GDP (equals to the 2002-2007 average pre-crisis) and a current account deficit equals to 4% of GDP, then we must have an overall government budget in deficit equals to 9% of GDP. Given the current state of affairs, government deficits of this magnitude might be politically unfeasible right now". (Rezende 2015a)

In 2015, Brazil's budget deficit increased from 2.0% in 2008 to 10.3% in 2015. Though government deficits support incomes (cash flow, and portfolio effects) and stabilizes profits, the bad composition of government budget, meaning that almost the entire deficit was due to interest payments, did little to sustain employment. With the primary budget balance swung to deficit, and credit rating agencies' decision to downgrade to Brazil's sovereign debt to junk status, all together put Ms. Rousseff under growing pressure to cut public spending.

While Brazil's credit rating cut to junk increased firms' funding costs making international financial obligations costlier for local firms, these circumstances were exacerbated by a reversal of favorable external conditions and a deterioration of domestic factors, including a premature withdrawal of stimulus that led to poor performance by the Brazilian economy and created an opening for critics of Brazilian economic policy who characterized it as too interventionist. This affected the Brazilian political process and led to a change in Brazilian policy in the direction of austerity. The response was based on the traditional approach (structural adjustment policies) grounded on the "Washington Consensus". To constrain domestic demand and keep imports down through the imposition of fiscal austerity and tight monetary policy. By reducing the domestic absorption, it undermines domestic activity and creates unemployment. The result was obvious, fiscal deficits and government debt kept rising and incomes, employment, and production collapsed.

As discussed in the previous section, the Brazilian economy is trapped in a vicious dynamic cycle moving. This is the result of endogenous process, which combined with the reliance on external financing, high interest rates designed to attract international investors and fight inflation, led to an overvalued currency damaging the competitiveness of domestic industries and its export capacity. The reliance on capital flows not only failed to increase productive investment (Bastos et al 2015), but produced rising external private indebtedness and chronic current account deficits. The more successful in attracting capital flows and generating returns, the more fragile the current account position will be (chronic current account deficits). That is, as the economy grows, it exposes the limits to external finance and the endemic financial fragility created by the success of domestic stabilization policies, and it produces a structural influence on the composition of payment flows and the country's export capacity.

As this happens, the economy tends to move towards current account deficits, which will generate an "external drag"—that removes profits of firms—causing a recession. It has already been suggested that the limits to external finance is given by the Domar's condition (Kregel 2004, 2009), that is, capital flows should increase at a rate at least equals to the rate of interest paid on the foreign lending. The Domar's condition is similar to a Ponzi scheme, which is inherently unstable. In this regard, Brazil's current crisis points to the "Washington Consensus" shaky foundation, which is, as already mentioned, the reliance on capital flows as a source of development finance, leading to the real appreciation of the currency, rising foreign capital inflows and external private indebtedness, chronic current account deficits, and increased exchange rate volatility.

Note that the movement is aggravated by the attempt to impose structural adjustment policies, which resembles a "Washington Consensus" crisis forcing a substantial decline in real wages and increase in unemployment (figure 37). Even though Brazil's current crisis is not a financial sector crisis, Brazilian security prices were impacted, generating rising interest rates on Brazilian debt and the collapse in the value of Brazilian debt in investors' portfolios.

A Minskyan policy response would have required the central bank's action to support asset prices, and the Treasury to forge aggressive fiscal policies to stimulate demand and contain unemployment. Yet, the central bank decided not to act. Only the Treasury intervened occasionally and mostly to stabilize securities prices (see Ministry of Finance 2016).

That means, the Brazilian policy response took the opposite turn. Both Dilma Rousseff's second term (initiated on January 1st, 2015) and Michel Temer's ascent to the presidency (on August 31, 2016) provide ample evidence for that conclusion. Dilma's term began with a crucial policy and a

Political mistake. The President-elect decision to appoint an extremely conservative private banker, Joaquim Levy, a top executive of Bradesco, Brazil's second largest bank, and a Chicago-trained economist, to run the Ministry of Finance. Levy immediately implemented an "Austerian" set of policies based on the assumption – completely mistaken, from a Minskyan perspective – that Brazil needed a balanced budget in the public sector, and

Figure 37. Unit Labor cost (ULC-US$ - June/1994=100) and the unemployment rate

Source: BCB

once this happened it would restore private entrepreneur's confidence, investment would resume, and economic growth would return.

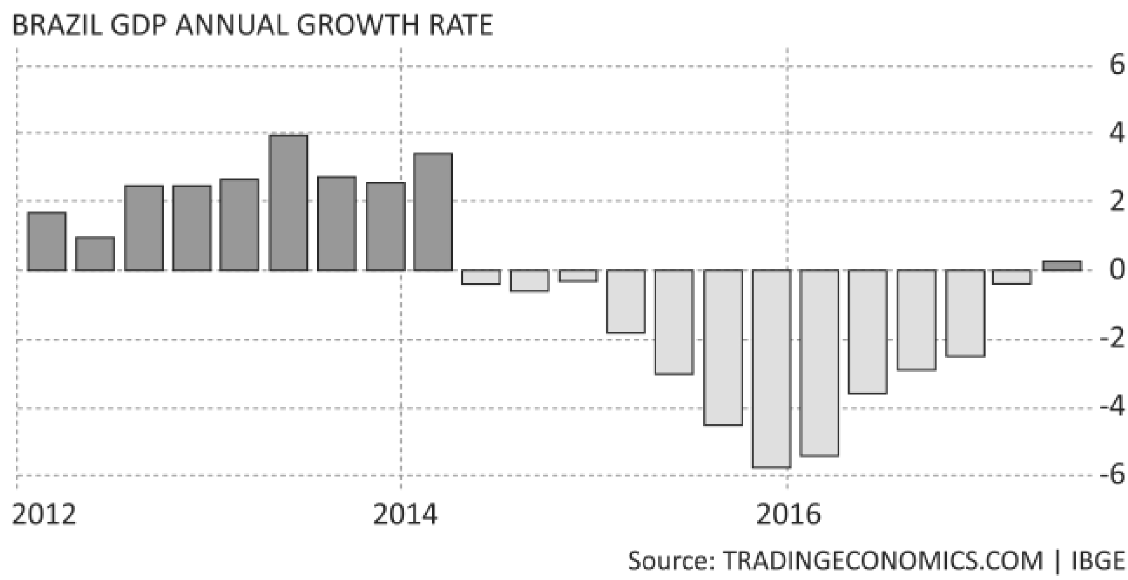
The overnight cost of bank reserves in the interbank market (SELIC) was set at 14.25 percent. The exchange rate to the US dollar remained around R$ 3.1, clearly overvalued/ It did not help exports, and, given the SELIC and our open capital account, added volatility to money managers' expectations. Fiscal space for implementing recovery policies, according to mainstream economists, was practically nonexistent, with fiscal deficits reaching 10.3 percent of GDP and the gross public debt ratio at 66.2 percent of GDP[34]. Unemployment has been growing rapidly – at 10.5% now - and the outlook for 2017 is not promising, to say the least, with the International Monetary Fund (IMF 2016) projecting, best case scenario, a 1% GDP growth.

The outcome of "Levy's plan" was a disaster (see figure 38). Confidence did not come back, economic contraction and both, public and private revenue stream rapidly dried out. The result was, in theoretical terms, a combination of a classic Keynesian case of faltering effective demand with a Minskyan situation of indebtedness paired with rapidly declining cash-flows. In practice, this translated as the biggest recession Brazil had ever had in fifty years. Brazilian real GDP has contracted 3.6 percent in 2015, and is estimated to have contracted another 2.6 in 2016. Meanwhile, annual inflation reached 10.7 percent in 2015—way above the Central Bank of Brazil's target rate of 4.5 percent, or even the 6.5 percent ceiling of its policy band (IPEA 2016). In addition, these Austerian measures were against everything the workers party had campaigned for. Summing up: Financial governance for development became a curse phrase in Brazil. Only curbing inflation and balancing budget mattered. Public debt hysteria took over.

Moreover, on top of this financial governance failure leading to an economic collapse – and reinforcing it – the government was thrown into the biggest political crisis since 1964. In the beginning of 2014, corruption scandals were uncovered and exploded in the press. The worst of those scandals involved the largest firm in the country: Petrobras, the oil company of which the federal government is the largest stockholder. The corruption scandals had a negative impact on the Brazilian economy through direct and indirect channels.

The direct impact was the dramatic reduction of investments by Petrobras in infrastructure works, due to the wholesale indictment or conviction of practically all business leaders in the heavy construction industry.

Figure 38 - Brazil Annual Growth Rate: 2012-16



Note: Although the original source of the figure says it is annual growth rates, the data shows us quarterly growth rates

The indirect impact was that the accumulation of accusations against sitting and former members of the government weakened Dilma Rousseff's hold on power, despite her reelection. But Rousseff's political losses suffered because of the corruption scandals were not her only problem. The change in her policy stance—announcing an austerity package after spending the whole electoral campaign declaring her opposition to it—weakened her position even with her own political base. The basis for an institutional take-over by a very conservative opposition took place. President Dilma was impeached on August 31st, 2016.

Michel Temer, the former vice-president, very weak, extremely unpopular and now indicted in even bigger scandals than those which lead to Rousseff's impeachment, took over the post, bringing with him an even more (old) Washington Consensus-oriented set of policy-makers than Levy's team. The new Finance Minister Henrique Meirelles espoused Joaquim Levy's confidence fairy-tale narrative and the public debt hysteria. The country got more of the same. As of November 2017, growth still missing, inflation being curbed by the collapse of investment, consumption, and employment, not by policy corrections, the local states are all broke (contrary to the federal government, they do not create money, therefore they do go bankrupt), unemployment remains high and violence is spiraling both, North and South of Brazil. According to the World Bank, 2.5 million of Brazilians will cross back the line of poverty this year (cf. O Globo: 2/13/2017).

The three years collapse we are going through have served no positive purpose at all. But there is another side to it: the country reinforced itself as a "rentier's heaven". For those with sizable financial assets, the 100% safe treasury bonds paying an 8.5 APR (or more, depending on when they were bought) make life very easy. They are the top 5 % of the population, and have tremendous economic and political leverage. This is where we are. No developmental prospects are in sight.

Summing up, Brazil displays a case where a largely successful development strategy created a fragile financial structure which needed profound corrections to stay in course. However, the policy and institutional compact adopted, the Real plan which ended hyperinflation and tamed external financial fragility, turned to be a straitjacket for development afterwards. The combination of an overvalued exchange rate with an open capital account and extremely high domestic interest rates brought price stability, but also created asset price inflation-cum-volatility. Development, not surprisingly from the theoretical perspective discussed above, crumbled. The Brazilian economy was dragged into its route of falling behind. However, if we turn to China, a diametrically opposite picture unfolds.

4. Chinese Financial Development : The Emergence of a State-Led Model of Globally Oriented Financial Governance

Leonardo Burlamaqui

Introduction

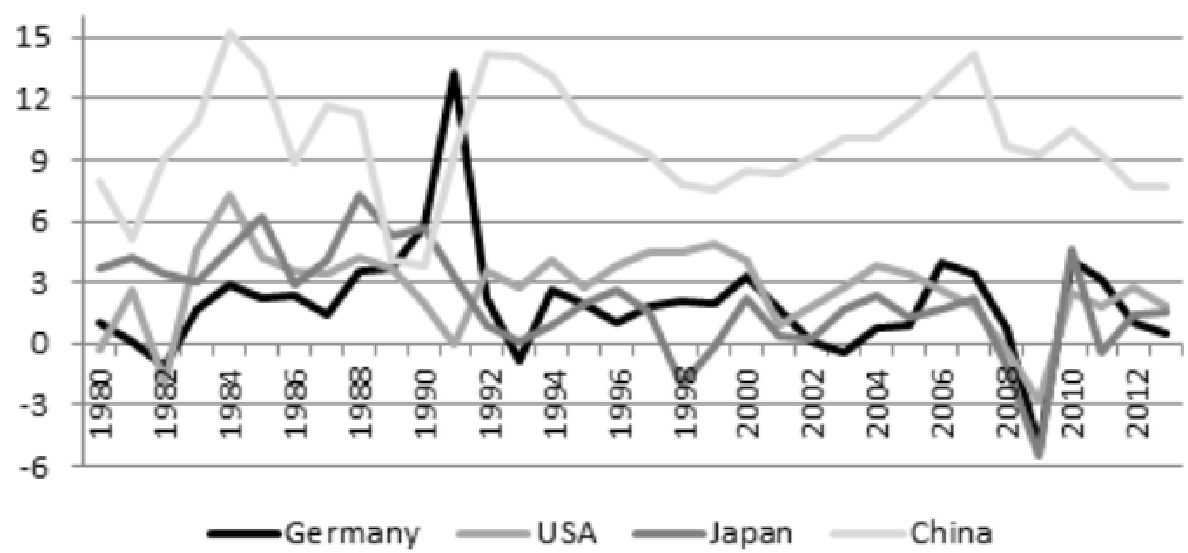
Chinese financial governance and development provide a stark contrast with Brazil's. In the ongoing debate on China and globalization, a very common question is the following: "Will China be a winner or a loser in the evolving global landscape?" The response is often… ultimately a loser, and a host of reasons are offered to back it. The one party institutional setting, the lack of democracy, the way the financial system is organized (Walter and Howie: 2012), the failure to properly liberalize the exchange rate regime and so on. I depart from a very different perspective by suggesting a radically different question: how did China manage to become a "winner" so fast, and at so many fronts? (For a similar approach, see Lee: 2012).

In 1976 China barely managed to cover the costs of sending its highest-ranking dignitary to speak at the UN (Walter and Howie: 2012, p). By 2016, it had become the second largest national economy, the largest exporter, the largest manufacturer, the possessor of the world's largest current account surplus[35], and the holder of the biggest amount of foreign reserves (World Bank: 2012, p 25, Tselichtchev: 2012, Bergsten et Alii: 2010: p 9-10). The country also exhibits the fastest rate of growth of the past two decades, an extremely fast rate of technological upgrading (Gallagher and Porzecanski: 2010, chapter 4) and one of the most successful set of policies for poverty alleviation, which allows it to take millions out of the poverty line every year. In one sentence: China became an economic superpower. It did not “catch-up with the “west”. It leapfrogged it.[36] (And let’s recall that the country is already a nuclear superpower and has veto power at the UN Security Council) [37].

China’s Leapfrogging Under Globalization

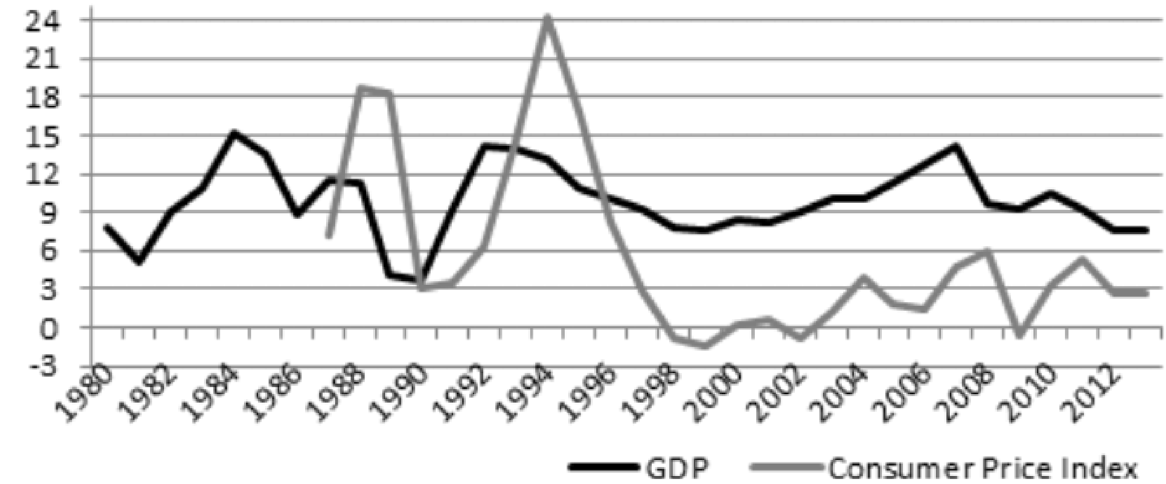
To flesh it out, let’s look at the same basic indicators.

Figure 39 - GDP growth compared: (Source: International Financial Statistics/IMF)



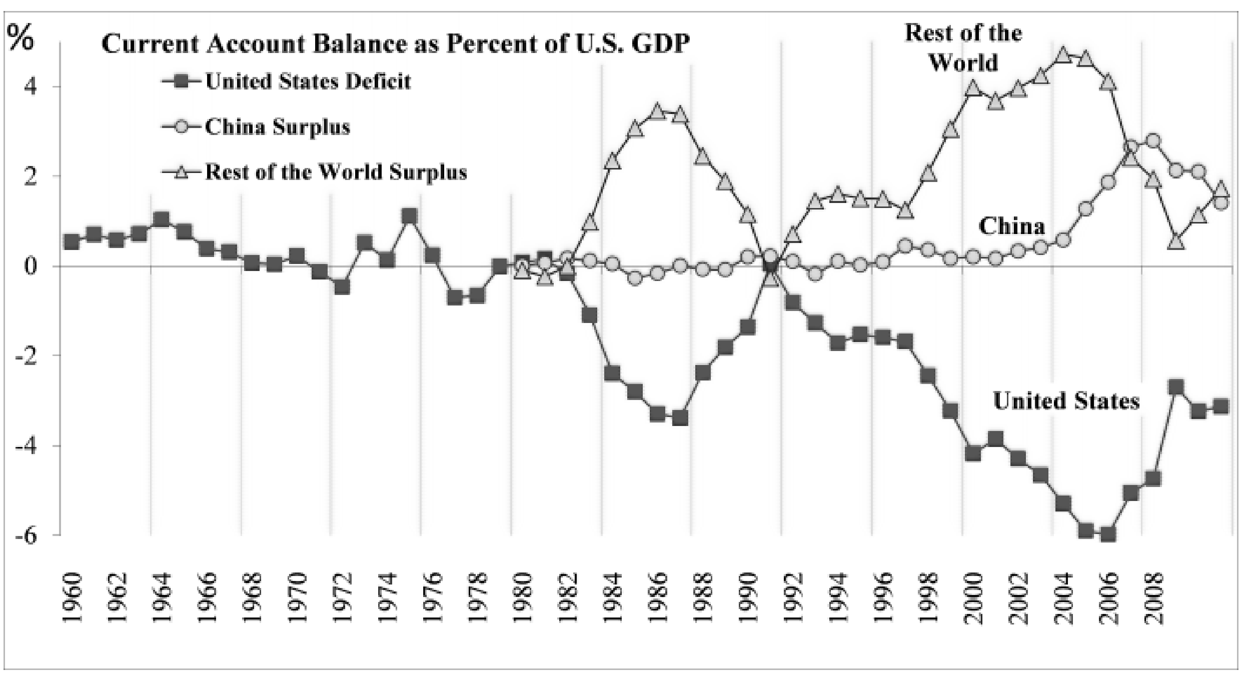
The most telling fact here is that China is clearly in “a league of its own” in terms of sustainable growth rates.

Figure 40 - Chinese growth and inflation (Source: International Financial Statistics/IMF)



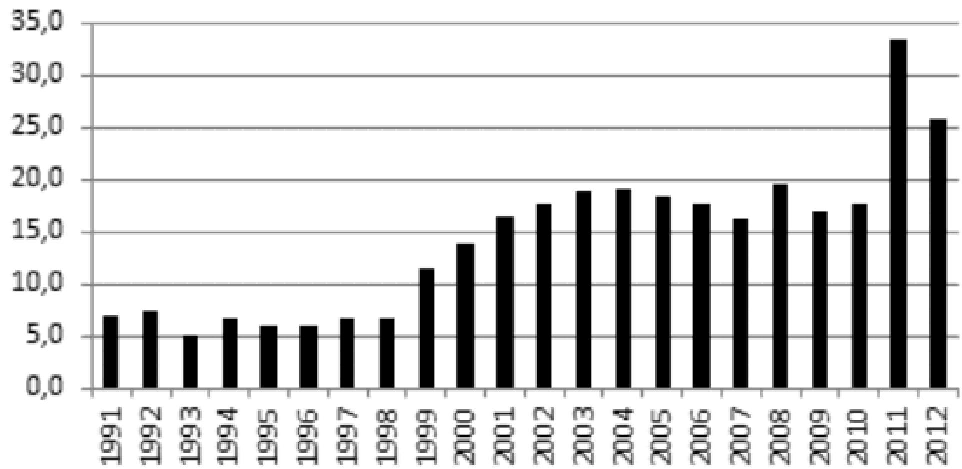
Growth slowed in 2012, but inflation is now at a “comfortable” level permitting new stimulus, should the country need it.

Figure 41 - Current account balance compared (Source: Keidel:2011)



China’s surplus gives the country ample room for maneuver in the planned “rebalancing”. It’s also worth it noticing that just a look at the graph suggests that “rebalancing China” is not likely to solve the U.S current account problem.

Figure 42 - Debt to GDP (Source: Wray: 2013)



Even after all the stimulus packages Chinese Debt to GDP ratio sits at a very low level. This is another indication of the substantial “policy space” for expansion of spending if necessary. (Compare with Germany at 80%, the US at 102%, or Japan at 220%). What shows up is quite a healthy pack of economic indicators, especially in a recession-prone/ debt-escalating world economy.

To answer the question of how all this happened is beyond the purpose of this study, but that is the “factual background” which I think is appropriate to use when discussing China’s financial landscape, and the kind of financial system which is likely to emerge from its successive waves of reform. The reason for that is the following: looking at China as a “big success case” (although obviously not lacking problems) invites searching for lessons instead of preaching for emulation (especially of Anglo-American practices and institutions).

A Theoretical Excursus

Rezende outlined our theoretical perspective in chapter 2, above. There is no usefulness in reloading it here. What I will do is simply add a few remarks to his framework to help shape my analysis of the Chinese case. From a theoretical perspective, China's achievements take us further from Keynes, Minsky and Godley. It requires the introduction of the core elements of Schumpeter's theory of economic development, his analysis of competition as creative destruction, his conception of "Socialism", developed in Capitalism, Socialism and Democracy, and key insights of the literature on the "Asian Developmental State" Economics". A few examples include the centrality credit availability for innovation and development, the key role of the State in steering and governing the development process, the strategic role of development banks to provide the necessary funding for it, as well as the functionality of financial repression to avoid "financial casinos". In one sentence, the most important feature of the "China Model" is centrality of a fully developed "Entrepreneurial State" (See Schumpeter: 1918, and Henderson: 1943 previous mentions of the concept, Ebner: 2009 for its use in connecting Schumpeter's ideas with East Asia's development strategies, Mazzucato: 2013 for relaunching the concept, and Burlamaqui 2017 b for linking Schumpeter's perspective on State activism and public entrepreneurship to China).

Furthermore, the "China case" turns key assumptions of mainstream economics on their head by providing crystal clear evidence that comprehensive privatization and even absolute security of property rights are not necessary conditions for markets to work efficiently (Guthrie: 2006, 9-10). In addition to that, and a much "polemical" subject, it suggests that representative democracy western style is not a necessary condition for a capitalist revolution[38]. (Tsai: 2007, but for a different – although not rigorously argued – view, see Acemoglu and Robinson: 2012).

Against the previous empirical background, and theoretical questions just raised, the objective of the following analysis is to access Chinese financial development, and its implications, both for China itself and for the global economy, particularly the developing world. More specifically, it will be concerned with:

(1) Identifying and characterizing the main attributes of the institutions, and the behavior of the Chinese State-Led model of financial governance, analyzing the coherence and assessing their strength and weakness;

(2) Analyzing the implications of Chinese financial development in a global context;

(3) Assessing the ongoing evolution of Chinese financial development from the perspective of its "fitness", "learning opportunities", and the strategic questions it poses for financial governance for development strategies.

There are two assumptions in setting out these objectives. First, contrary to the still dominant doctrine of "financial liberalization" as the most adequate financial requisite for development under 'free markets' (and in synch with convergence to "international standards"), it will suggest that this is not an empirically proven assertion, nor it is a necessary condition for economic development (Rodrik: 2011, chapters 5-6). In fact, the evidence runs against the proposition: it shows that financial liberalization tends to do more harm than good to development strategies (Kregel: 2001, Reinhart and Rogoff: 2011, Chapter 1, and Rezende's analysis in the previous chapter). Second, there is not such a thing as an "optimal model of financial development" to the world as a whole. The efficient attributes of a particular financial system depend on their appropriate match with the prevailing path of economic development.

The first assumption is a product of the economic theories which feature uncertainty, information asymmetry and the importance of the institutional context as key elements of economic performance (Schumpeter: 1942, Keynes: 1936, Minsky: 1982, 1986, 1996, Stiglitz et Alii: 2010). Uncertainty, information incompleteness and asymmetry are intrinsic to capitalist economies, pervasive in financial markets and especially salient the age of proliferating financial innovations. The model of free, arm's-length banking-cum-securitization tends to be infused with much higher uncertainty and, therefore, much less awareness of proper risk-taking, and risk management than relationship banking.

In contradistinction, theories of endogenous financial evolution suggest that inadequately-fettered financial activities are prone to result in speculative volatilities and under-investment for the productive sector of the economy (Kregel:2008). That said, however, the indicated theories do not deny, all together, the importance of major elements of the dominant doctrine – the emphases on competition, transparency, prudent practices, etc. What is suggested is that the economic importance of these elements is not fixed, but is rather determined by the nature of the financial system as a whole, which encompasses these elements and the whole institutional framework in which it is embedded (Krippner: 2011). Therefore, a main theme to be explored is the importance of institutional articulation among the different elements of the financial system, which is achieved by proper financial governance.

The second assumption is based on the Schumpeterian insight that, even when it functions smoothly, the model of the financial system which is in line with the principles of the mainstream view of the market can at best achieve efficiency, but only in the sense of an efficient allocation of given resources and well-known outcomes, namely the perfectly competitive equilibrium model that lives in Economics textbooks, and only there (Schumpeter: 1942, chapters 7-8). But if we envisage economic development as turmoil, creative destruction paired with radical uncertainty and financial instability, then "efficiency" itself – and the best practices – becomes not only something which has to be achieved through several "recipes", but also as "moving targets".

This is not news for economic historians who have long argued that subsuming finance under the needs of industry has been crucial to modern economic development in the advanced countries (Gerschenkron: 1962;Sylla and Toniollo: 1991, Amsden: 1989, Kim and Vogel: 2011), nor to a whole host of studies of East Asian industrialization, which underlines that the system of relationship banking which sometimes dismissively termed “crony capitalism”, and deviates from the requirements of allocative efficiency in the directions of pursuing productive efficiency, turned out to be superior in promoting economic development (Amsden: 1989,Wade: 1990,Woo:1991, Burlamaqui, Tavares and Torres:1991, Hellman, Murdock and Stiglitz: 1996, Chang: 1998, 2003, Kregel: 2001,Gao: 2001).

Therefore, the main focus of the study will be on the role of banks and the broader financial sector in Chinese economic development [39], particularly since the early-1990s, and in the 1998-2001 and 2008-09 State policy’s “crisis management” and subsequent economic performance. The goal is to analyze the coherence of the banking and regulatory systems in their relationship with the productive sector of the economy which will then be assessed in terms of macroeconomic stability and long-term economic development. Lastly, the study will try to explore some elements of the Chinese experience in a comparative perspective.

To conclude this brief theoretical excursus, let me venture two bold hypotheses which should be read as propositions to invite further debate and discussion. The first is that from a “macrofinancial” perspective, China’s should be pictured as Schumpeter plus Minsky on Steroids. Or, to be more precise, of what Minsky characterized, echoing Hilferding and Schumpeter, as a (reinvigorated) form of Finance Capitalism; a financial system dominated by universal banks with close ties with commerce and especially industry, and geared towards finance for development (Schumpeter: 1911, Minsky: 1992 and Wray: 2010 for a discussion of Minsky’s analysis)[40].

A universal bank model combines commercial banking and investment banking functions in a financial institution that provides both, short term lending and long-term funding of the operations of firms. It issues liabilities, including demand deposits to households, and buys the stocks and bonds of firms. It might also provide a variety of other financial services, including mortgage lending, retail brokering, and insurance[41].

If accessed through its finance-investment behavior, China's "Big 4" banks[42] plus China's Development Bank – and their SIV's ramifications- are, I submit, the newest incarnation of the Hilferding-Schumpeter- Minsky model. The especially "Minskyian" traces in the model are the pervasiveness of speculative finance and the buildup of situations of "financial fragility"[43] , but also, and that is crucial, going beyond Hilferding and Minsky, and entering Schumpeterian terrain, the presence of a formidable Entrepreneurial State and a substantial degree of socialization of investment (see Burlamaqui: 2018, Chapter 6 for a full elaboration of this point).

An institution that combines the functions of macro-strategist (managing interest and exchange rates, capital flows along with prices' and financial stability); venture capitalist in chief (forging and funding industrial, innovation and technology policies) and creative destruction management (stimulating the creative part of the process in order to speed productivity enhancement and innovation diffusion and acting as a buffer to its destructive dimension) clearly "qualifies" as entrepreneurial.

The presence of this state structure, and what looks like the awareness, by financial regulators, of Minsky's mantra that "stability is destabilizing" provides a plausible explanation for the fact that although situations of fragile finance periodically emerge, they do not degenerate into Ponzi. Rather than that, as we will see below (section 3), they are contained by "proactive financial regulation" and fixed by banking recapitalization and restructuring.

The second bold hypothesis for discussion is that analyzed as a whole, China fits surprisingly well Schumpeter broad – and unconventional - description of Socialism (Schumpeter: 1942: chapters 16-17), and provides concrete illustration of his arguments that "Socialism" can work and can beat "Capitalism" on the grounds of economic efficiency[44]. Schumpeter begins his analysis with a well-known rhetorical question: Can Socialism work? His answer is “of course it can” (1942: 167). However, Schumpeter’s definition of socialism is not focused on nationalization of the means of production, nor on the eradication of private property, but rather on their socialization, which involves essentially the redesign of the frontiers and modes of interaction between the private and public spheres[45]. In his own words:

“By socialist society we shall designate an institutional pattern in which the control over means of production and over production itself is vested with a central authority—or, as we may say, in which, as a matter of principle, the economic affairs of society belong to the public and not to the private sphere” (1942: 168).”

The core concept in the definition is control by a central authority. Translating it to China, the Communist Party is a perfect fit. Regarding the day-to-day operations of that system, “regulated managerial freedom” should be the norm:

“There may also be a supervising and checking authority—a kind of cour des comptes that could conceivably even have the right to veto particular decisions. As regards the second point, some freedom of action must be left, and almost any amount of freedom might be left, to the "men on the spot," say, the managers of the individual industries or plants. For the moment, I will make the bold assumption that the rational amount of freedom is experimentally found and actually granted, so that efficiency suffers neither from the unbridled ambitions of subordinates, nor from the piling up on the desk of the minister of reports and unanswered questions” (Schumpeter: 1942,168).

Again, in China the chain of command from the Party’s Standing Committee to the Politburo to the regulatory authorities grants the veto power, but it also allows a huge degree of both, entrepreneurial and managerial “freedom”[46].

Thirdly, the innovative process could be coordinated, considering timing and locational considerations. In the process of creative destruction, creation could be performed in a coordinated manner and destruction by means of exit policies:

> “...the planning of progress, in particular the systematic co-ordination and the orderly distribution in time of new ventures in all lines, would be incomparably more effective in the prevention of bursts ... and of depressive reactions ... than any automatic or manipulative variations of the interest rate or the supply of credit can be... And the process of discarding the obsolete, that in capitalism – specially in competitive capitalism – means paralysis and losses that are in part functionless, could be reduced to what discarding the obsolete actually conveys to the layman’s mind within a comprehensive plan providing in advance for the shifting to other uses of the non-obsolete complements of the obsolete plants or pieces of equipment.” (Ibid., p. 200, my italics).

Fourthly, the relation between technological change and employment could be also rationalized by co-ordination policies, so that it would be possible to "re-direct the men to other employments which, if planning lives up to its possibilities at all might in each case be waiting for them" (ibid, p. 201).

Finally, the resistance to changes could be "strongly discouraged", and consequently the promotion of innovations would be operated in a quicker and more rational way.

There’s no space for further elaboration of these points here, but the reader is invited to evaluate China’s growth path and its innovation pace under these analytical lenses[47]. As mentioned before, this seems to me a rather useful frame to apply to contemporary China. Nonetheless, there is a big absence in Schumpeter’s grand vision: Globalization. China’s structural transformation was/is linked with a huge expansion of the “global dimension” and, especially, a strong pressure towards financial globalization. Let’s take a closer look at the main contours of these processes.

China’s Recent Financial Evolution and Crisis Management

Although much “talk” about China’s financial evolution has been going on in the press and in the blogosphere, there is surprisingly little material around that could be qualified as “robust”[48]. The best accounts in describing the Chinese financial evolution and reforms were Walter and Howie’s (2012)[49] , Cousin (2007, reissued in 2011) and more recently Sheng and Chow (2016) and Naughton and Tsai (2015). I will draw on their descriptions, although not necessarily in their analysis or conclusions[50] in the next subsection.

The only comprehensive analysis of China’s most important policy bank, China’s Development Bank, is Sanderson and Forsythe (2013). It will be the basis of my discussion in subsection 3.2. The best analysis of the response to the crisis and its aftermath is Nicholas Lardy’s “Sustaining China’s Economic Growth After the Global Financial Crisis” (2011), which will be a basic source for sub-section 3.3. In addition, works by Pettis (2013), Tselichtchev (2013) and papers by Kregel, Wray, Keidel, Naughton and Lo will be used to help compose an analytical narrative. It will not be a deeply detailed picture, but I hope it will highlight the most relevant elements.

2.1. The Banking System and the Reforms 1992-2005

The first fact to register when looking at the Chinese financial sector is that the state and policy banks are by large and far the biggest players:

Table 2 - Relative holdings of financial assets in China, FY2010 (RMB trillion)

RMB trillion	2006	2007	2008	2009	2010	2010 US$ trillion
PBOC	12,86	16,91	20,70	22,75	25,93	3,90
Banks	43,95	52,60	62,39	79,51	95,30	14,40
Securities companies*	1,60	4,98	1,19	2,03	1,97	0,30
Insurance companies*	1,97	2,90	3,34	4,06	5,05	0,80
	60,38	77,39	87,62	108,35	128,25	19,40

Note: *Includes brokerages and fund management companies.

Note: *Includes brokerages and fund management companies.

Source: Walter and Howie table Kindle Location806.

The framework of China’s current financial system was set in the early 1990s. The process of establishing a legal framework for these reforms gathered momentum with the passage by the National People’s Congress (NPC) of a central bank law, a commercial bank law and a company law. China created the so-called policy banks in the mid-1990s, for agriculture, foreign trade and domestic infrastructure, as a way of relieving commercial banks of the burden of making government policy-directed loans- which continued on a large scale though (Keidel:2007, p.1). Walter and Howie summarize it as follows:

> “In 1994, various laws were passed that created the basis for an independent central bank and set the biggest state banks—Bank of China (BOC), China Construction Bank (CCB), Industrial and Commercial Bank of China (ICBC), and Agricultural Bank of China (ABC)[51] —on a path to become fully commercialized or, at least, more independent in their risk judgments and with strengthened balance heets that did not put the economic and political systems at risk” (2012, 5)[52].

To which they add:

> “Reform was strengthened as a result of the lessons learned from the Asian Financial Crisis (AFC) in late 1997. Zhu Rongji,

> then premier, seized the moment to push a thorough recapitalization and repositioning of banks that the world at the time rightly viewed as more than technically bankrupt" (ibid).

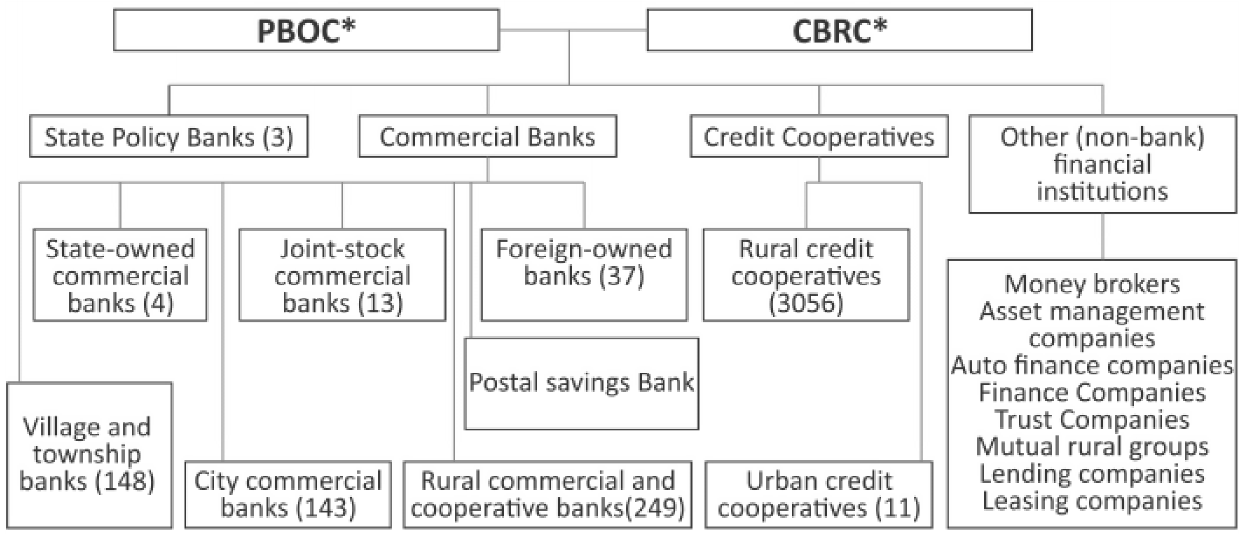
As for financial regulation, the Chinese system is lean and quite straightforward. The financial sector is regulated by one bank - the People's Bank of China (PBOC), which is the central bank[53] or - and three commissions: the regulatory commissions for banking, securities and insurance. The banking sector is principally under the supervision of the People's Bank of China and the China Banking Regulatory Commission (Cousin: 2011, p.21).

The PBOC is responsible for the formulation and implementation of monetary policy, and its goal is to ensure the stability of the financial system. It has many major functions: issuing local currency, administering its circulation, implementing monetary policy through administrative and market-driven mechanisms, managing China's foreign exchanges and gold reserves (through the State Administration for Foreign Exchange, SAFE), regulating the interbank market, fighting money laundering and managing the credit registry and the payment system[54] (ibid).

The PBOC is an administration with ministerial rank, which works under the leadership of the State Council. This means that the power over final decisions and approval lies with the State Council, rather than with the central bank itself, or, to state it more clearly, there is no Central Bank independence in China, but institutional coordination with other policy agencies under a "pilot agency" which is the Politburo under the Chinese Communist Party.

The China Banking Regulatory Commission (CBRC) was established in March 2003 with the aim to increase the independence of the central bank and, especially, making the regulatory function of financial institutions more robust. The CBRC is the supervisor of financial institutions under the leadership of the State Council.

Figure 43 – The structure of the Chinese Banking and Regulatory Systems



Note: *PBOC People´s Bank of China, CBRC China Banking Regulatory Commission.

Source: CBRC/2010.

In fact, the CBRC turned to be a key player in the guidance of the financial system through reform and recapitalization after the Asian Crisis and, even more, in preventing China’s financial system from diving into the kind of “casino capitalism” that was thriving in the US and all over Europe since the

eighties[55] (See Figure 45 for a more detailed set of regulatory measures for the period 2007-2012). Lardy affirms this very clearly:

> “Most obviously, since China's financial regulatory agencies had steadfastly refused to permit the creation of complex derivative products in the domestic market and severely limited financial institutions' exposure to foreign sources of these products, Chinese financial institutions had little exposure to toxic financial assets” (2011, Locations 452-454).

This holds completely for the US subprime crisis, but it was the result of a learning process. If we step back and reset to 1997, the reality we meet is that the Asian Financial Crisis hit the Chinese banking system hard. The immediate results were a strong decline in asset quality, and simultaneously a spike in their non-performing loans. In 1998, more than half of all the loans issued by the Industrial & Commercial Bank of China, the country's biggest lender, were unrecoverable. For the whole banking system, 45% of loans made before 2000 ran bad (Cousin: 2011, p 9). "The legacy of years of poor and often corrupt management of the state banks was now more than just a drain on the treasury (Cousin: 2011, p.12). It was a lethal threat to the entire economy" McGregor: 2010, Kindle Locations 993-996). With the system in crisis, Premier Zhu Rongji turned to what McGregor labelled "his Leninist toolkit to bend the banks to his will". The party apparatus in Beijing, in tandem with its Central Organization Department, seized the power to hire and fire senior executives in banks and other state enterprises, no matter where they were in the country (McGregor: 2010, Kindle Location 1001).

To most observers, the government's regulatory system remained intact on the surface. The local banks and regional regulatory authorities were outwardly undisturbed. However, the Politburo created a parallel policy toolkit, 'a powerful yet mostly invisible party body for monitoring financial institutions and their executives'. The actions were bold, and the results quickly showed up. Between 2000 and 2003[56], the government's (more properly, its new regulatory compact) "moved"[57] over US$ 400 billion away from the "Big 4" balance sheets to clean them (Walter and Howie: 2012, 5).

Largely mimicking the Resolution Trust Corporation of the U.S. savings-and-loan experience in the eighties, the equivalent of four "bad banks", were created. One for each of the Big 4 state banks, to which the bad loans were then transferred. It then recapitalized each bank, allowing them to write off the bad loans, and raised nearly US$50 billion of new capital, largely taken from foreign reserves, and by listing their shares in Hong Kong and Shanghai in 2005 and 2006 (Walter and Howie: 2012, 5-6)[58]. The next strategic move in that direction was to offer and sell shares to foreign "household" financial players. In 2005, the Bank of America paid US$ 2.5 billion to China Construction Bank for 9% participation and Temasek, Singapore's Sovereign Wealth Fund paid US$ 1.5 billion for a 5 % interest in the same bank. Several other IPO’s followed, a few of them ranking among the biggest since 2005 (See Table 3).

Table 3- Chinese biggest IPO's 2005- 20010. Source: Dialogic

Company	Sector	Year	US$ billions
Agricultural Bank of China	Finance	2010	22.1
Indl & Commercial Bank of China	Finance	2006	21.9
AIA (Hong Kong)	Insurance	2010	20.5
Visa (US)	Finance	2008	19.7
General Motors (US)	Automotive	2010	18.1
Bank of China	Finance	2006	11.2
Dai-ichi Life Insurance (Japan)	Insurance	2010	11.1
Rosneft (Russia)	Oil & Gas	2006	10.7
Glencore International (Switzerland)	Mining	2011	10.0
China Construction Bank	Finance	2005	9.2
Electricité de France (France)	Utility and Energy	2005	9.0
VIB Group (Russia)	Finance	2007	8.0
Banco Santander (Brazil)	Finance	2009	7.5
China State Construction Engineering Corporation	Construction	2009	7.3
Iberdrola Renovables (Spain)	Utility and Energy	2007	6.6

The idea was to infuse, into the banking reform, an endorsement from the “international financial community” and maybe, some learning on corporate financial governance[59]. Politically, it did not work so well. There was a huge attack from the “nationalist camp” in the party denouncing the “sale to foreigners of Chinese valuable assets”. The political environment shifted, and the impact on the financial system was to stall the reforms (Walter and Howie: 2012, 19). In fact, a move towards partially “internationalizing”, and also raising their profile, some selected SOEs by opening their capital and listing them in the Hong Kong Stock Exchange was already in place since the early nineties. Sinopec, PetroChina, China Mobile and the Industrial and Commercial Bank of China, and many others, went through this process. If it was a concerted effort towards a more “liberal path” or a strategy to populate the Fortune 500 with Chinese names is debatable. What is not, is that now China has 44 companies listed there – a huge success.

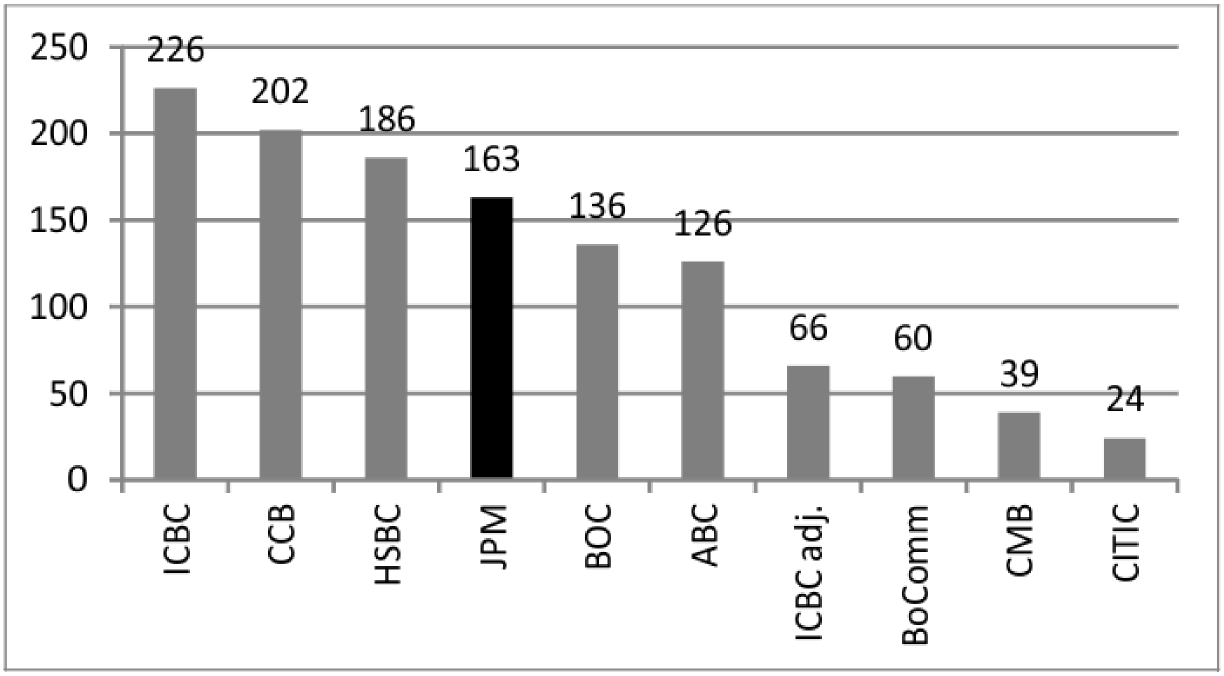
From a “financial regulation” perspective, the “nationalist attack” served a purpose: to legitimate pushing the brakes on a process that could potentially have allowed a much larger presence of western financial institutions in China. More explicitly, to have created the conditions for the maintenance of a high degree of financial repression, which was definitively not a bad institutional environment to operate on the eve of the financial disaster that came after the collapse of Lehman Brothers in September of 2008.

In the summer of 2008, a small group of foreign “financial experts” headed to China to give financial advice, Wang Qishan, the vice-premier in charge of China’s financial sector, quickly made it clear that China had little to learn from the visitors about its financial system. His message concisely: “You have your way. We have our way. And our way is right!” (Mc Gregor: 2010, Kindle Locations 51-52).

Chen Yuan, the celebrated chair of China’s Development Bank seemed to be thinking along these lines when he declared, in July 2009, “[We] should not bring that American stuff and use it in China. Rather, we should develop around our own needs and build our own banking system” (Yuan quoted by Walter and Howie: 2012, 27).

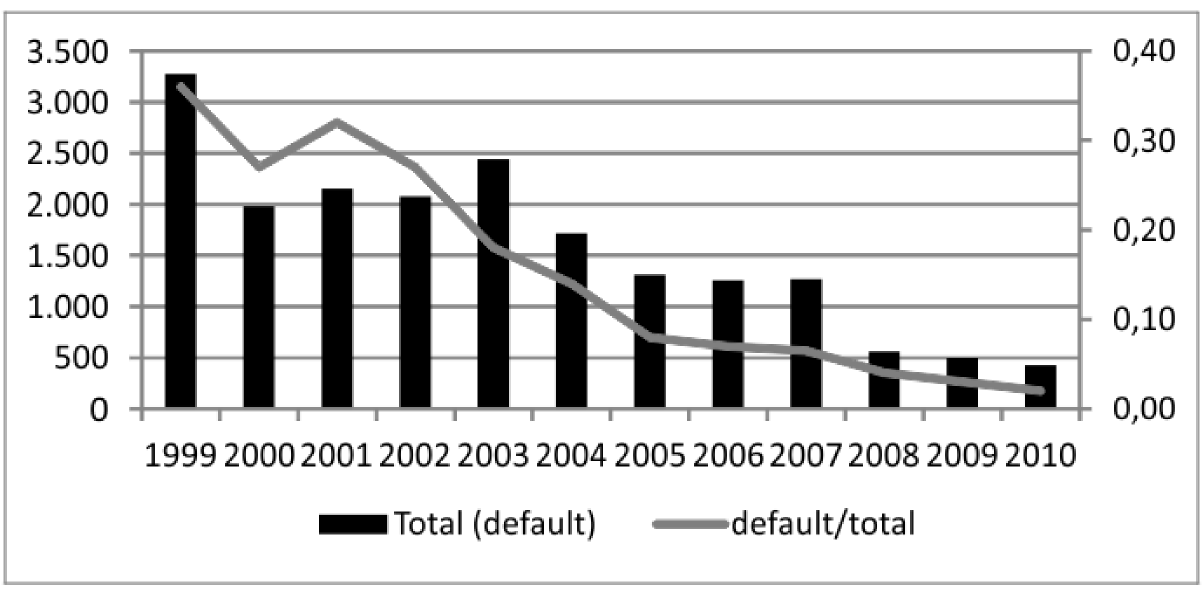
They had a point. If we look at Chinese Banks’s capitalization (compared to JP Morgan), as well as their NPL ratios, the pictures speak for themselves.

Figure 44- Chinese Bank’s Capitalization compared with J P Morgan (JPM) in 2010



Source: Walter and Howie, Location 1069

Figure 45 – Non Performing Loans of Top Chinese Banks: 1999-2010



Source: Walter and Howie, Location 1114

China’s Development Bank: The most strategic player

> “In one decade, China’s Development Bank (CDB) has become the financial enabler of both, China’s global expansion and domestic boom” (Sanderson and Forsythe: 2013, introduction).

With that strong statement, the authors begin their analysis of what claims to be “the core of China’s state capitalism” … “A system of government-controlled banks and companies that many development countries see as an alternative to a freer market-focused system” (Ibid). Founded in 1994, with “global operations” springing from Asia to Africa and Latin-America (more on that in section 4 below), and with total assets of almost 1 trillion dollars and a non-performing loan ratio of 0.4 % at the end of 2001, CDB is in fact the “pilot agency” of China’s aggressive financial diversification in the last ten to fifteen years. In 2011 CDB had a loan portfolio of around US$ 884 Billion, and “a business presence in 116 economies around the globe (Yuan: 2012, Chairman’s message for the 2011 CDB Annual Report http://www.cdb.com.cn/english/Column.asp).

According to Sanderson and Forsythe, CDB’s hallmark financial innovation was the system of local government finance, which transformed China’s landscape in just over a decade. To understand this innovation, we must recall the reversal of one of the core principles of the Communist Revolution: the redistribution of land from rich property owners to landless peasants. Between 1996 and 1997, as the Asian crisis started the spending on infrastructure in China doubled, and in 2002 it rose nearly three times.

This massive urbanization was a sensible response to collapsing “global demand”, an event that would be repeated in 2008-09. However, it came with a serious downside, requiring a re-appropriation of land by the state as a condition to create “development zones” where bullet trains, sports complexes, shopping malls, apartment blocks and all kinds of urban facilities were produced/erected at a very fast pace. This re-appropriation of land was the equivalent to a vast enclosure movement, where millions of peasants were obliged to leave their lands to give way to urban expansion[60]. Of course, this growth spurt of urban construction required finance and funding in large scale, but there was still a problem to solve.

In 1994, China's premier Zu Ronjin cut local governments off from direct borrowing due to spiraling inflation. In the words of Chen Yuan, "While our national government enjoys virtually unlimited credit, the initiators of urbanization projects, local governments, have little" (http://www.cdb.com.cn/english/NewsInfo.asp and Sanderson and Forsythe: 2013). CDB, which is funded by treasury bonds typically bought by China's commercial banks, could give seed money to local governments to start the projects. However, more credit would be needed to provide for the full funding of the projects, and along with it, the requirement of robust collateral.

Here enters Yuan's vision which yielded CDB's innovation. Yuan knew that urbanization would vastly increase land's prices and land was, now, in the hands of local governments, which meant the local governments were sitting into a potential "gold mine". The innovation was the local-government financing vehicle (LGFV), a public SIV. A company set up by local governments to allow them to spend beyond the limits of their budgets (Sanderson and Forsythe: 2013). They would get additional money from CDB, but trough LGFVs, giving land as collateral, which value was bound to increase around the investments made possible by the bank's strategy. Higher land prices would mean more local government income; hence, more room for loans – and spending.

This was a self-fulfilling strategy, a type of financial operation already devised by Soros (1987) who pointed out that the willingness of a bank to finance an investment project has a direct impact on its viability and thus, on its returns, and therefore, on its price (Kregel : 2007). It was also a Schumpeterian one where credit allowed investment to occur, raised the collateral's value and, as the investment matured, generated the cash-flows to repay the loan. The "Wuhu Model", as it was labeled[61], worked. As the authors recount it: “[this system] managed to transform a sleepy city into a bustling metropolis that today is home to one of China’s most prominent car makers, Chery, just happens to be owned by one of the first LGFVs”.

Furthermore, the model’s success in Wuhu was replicated across the country, with CDB lending money to LGFVs in Shanghai (home to former president Jiang Zemin), Tianjin (home to Premier Wen Jiabao) and Suzhou. The system spread across the country, and came into its own in 2008 when it helped shield China from the worst effects of the global financial crisis. Now, every province in China has set such companies to finance infrastructure investments. (Sanderson and Forsythe: 2013, 9-12).

At this point, the reader should be wondering the obvious: is this not precisely the type of financial behavior that produced the sub-prime crisis in the US – a leveraged lending binge backed by the assumption that real estate prices would never collapse? If so, why so much enthusiasm about it? My answer to that question is no, and for several reasons. First, all the players involved were public entities. The loans were made by public banks to local governments and guaranteed by both, the People’s Bank of China (PBOC- the central bank) and the Ministry of Finance (MOF). Secondly, under those circumstances, what we have is a State-sponsored – bank -funded expansion, which could last for a very long time. And it did: The non-performing- loan rates consistently declined for the top Chinese banks between 1999 and 2010 (Recall Figure 45 above).

Thirdly, in the worst-case scenario, the banks could become filled with “bad loans”, they would never face credit freeze or a “let the market do its job” the way it happened in the Lehman Brothers – difficult to understand - decision[62]. They would have been recapitalized again. However, that scenario never materialized. Fourthly, there was no “destructive lending” in the process: no “NINJA” loans, no synthetic layers of leverage over leverage (derivatives such as stock options, CDO’s and CDS’s) pilling over the loans to enhance trader’s gains, and no betting against a “client”, Goldman Sachs- ABACUS- Paulson style.

Finally, and most importantly, as Walter and Howie disapprovingly point out, the Party treats its banks as basic utilities that provide unlimited capital to the cherished state-owned enterprises (2012:27). Zhou Xiaochuan, a PBOC's Director has framed the purpose of the banking system in a more positive way when stating what could have happened without the previous banking reforms-cum-recapitalization: "…China's financial system would be a drag on its economic growth, making it impossible for the system to service the economy and support development" (2009, quoted by Cousin 2011, my italics.). To me, in face of the "Ponzification" of the bulk of the U.S and European financial systems in the last three decades, the Chinese authorities' way of handling the banks seems just right.

However, Walter and Howie suggest a picture that seems darker than what it is actually happening. According to Lardy, one of the most important conclusions of his book is that:

> "…the stimulus program did not advantage state-owned companies at the expense of private firms and, more importantly, did not alter the long-term trend of China's reform, in which private firms have increasingly become the most important driver of economic growth. Of particular note (.…) contrary to the often-repeated assertion, bank loans in 2009–10 did not flow primarily to state-owned companies and that the access of both private firms and household businesses to bank credit improved considerably" (2011: Kindle Locations 205-207).

Financial Regulation and Crisis Management: 2008-2012

> "China's policy response to the global financial and economic crisis was early, large, and well designed. Although Chinese financial institutions had little exposure to the toxic financial assets that brought down many large Western investment banks and other financial firms, China's leadership recognized that the

> country's high dependence on exports meant that it was acutely vulnerable to a global economic recession” (Lardy: 2011, Kindle Locations 260-262).

In anticipation of a global slowdown, Lardy recounts, the central bank initiated a policy of monetary easing in September 2008. The State Council, China's cabinet, followed up a few weeks later by rolling out a RMB4 trillion ($586 billion) stimulus program… In contrast, the American Recovery and Reinvestment Act of 2009 was not passed by the Congress and signed into law by the President Barack Obama until mid-February 2009 (Lardy: 2011, Kindle Locations 270-271)[63].

Table 4 - Chronology of Major Policy and Regulatory Changes: 2007 – 11

Date	Policy/Regulatory Change
January/2007	people's bank of China (PBC) increases required reserve ratio due to fears of an overheated economy
March/2007	First of five increases in benchmark interest rates in 2007
September/2007	Down payment for investment properties increased to 40 percent. Interest rate penalty for mortgages on investment properties raised to 10 percent premium over benchmark lending rate. Property ownership tax-exemption period lengthened to five years.
Late 2007 September/2008	Quantitative limits put on bank landing PBC begins monetary easing as part of stimulus effort. State Council unveils RMB4 trillion stimulus plan. Mortgage loan discount from benchmark interest rate increased. Minimum down payment for all mortgages cut to 20 percent.
January/2009	Property ownership tax-exemption period shortened to two years.
Mid-2009	PBC strengthens guidance and other policies to slow bank lending. China Banking Regulatory Commission (CBRC) strengthens requirements for bank inclusion of subordinated debt.
December/2009	40 percent down payment for mortgages on investment properties reinstated
January/2010	CRBC announces tightening measures to slow growth of lending, including mandatory loan quotas for some banks. First of six increases of required reserve ratio in 2010.
April/2010	State Council raises down payment for investment properties to 50 percent, reintroduces pen alty interest rates for mortgages on investment property, limits property purchases by foreign investors, and suspends mortgage lending to nonresidents.
Late 2010	PBC shifts to a tighter monetary policy stance, increases the benchmark rate and reserve requirement.
January 2011	Down payment for mortgages on investment properties increased to 60 percent. Property tax pilot program begins in Shanghai and Chongqing. First of six increases of required reserve ratio in the first half of 2011.
February/2011	First of four increases in benchmark interest rates in the first half of 2011.

Source: Lardy, 2011: Location 321.

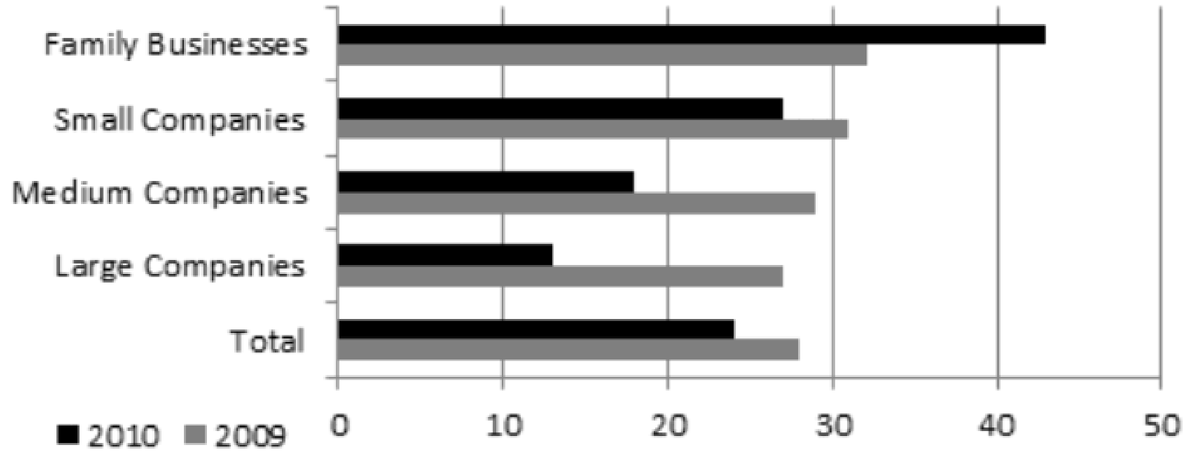
As we can see, China's response to the crisis was much broader than the stimulus program. Targeted and nuanced regulatory measures preceded the program, complemented it and provided a follow up, swiftly changing course whenever it was needed. That is what I referred to as “proactive financial regulation”.

Nonetheless, it is well known that the Chinese public financial sector played a crucial role in the State counter-cyclical policy. As already mentioned, the Chinese “stimulus package” was double of the US as a percentage of GDP – around 15%). The unprecedented scale of expansion in bank credits in 2008 and 2009 is a telling indication of the nature and role of the sector.

There have been concerns both, inside and outside China that this prominently expansionary behavior of Chinese banks could result in severe disruptions to macroeconomic stability and in rampant inflation. Indeed, signs of speculative bubbles in properties and in the stock market were already evident amid the credit expansion (Walter and Howie: 2012, chapters 1-3and 8). It is well known that the State had to reign in from the second half of 2009 to raise capital and reserve requirement ratios, and to put a brake on the funding of speculation.

However, as Lardy, Sanderson and Forsythe and Keidel point to, the credit expansion seems to be more deep-rooted than just a product of temporary State counter-cyclical policy. It rather reflects the expansionary instinct of the banks[64], particularly because expansion was already rather rampant well before being boosted by State policy from 2008 (Sanderson and Forsythe: 2013, Keidel: 2011). But note, by recalling Lardy’s opening quote to this section that contrary to the often-repeated assertion, bank loans in 2009–10 did not flow primarily to state-owned companies, and that the access of both, private firms and household businesses to bank credit improved considerably. Figure 46 provides a concrete measure of that statement.

Figure 46 - Bank lending to businesses by type of borrower, 2009-10.



Source: Lardy, 2011, location 881.

Conceptually, the expansionary path of the Chinese financial sector appears to fit, as I suggested above, Minsky's financial instability hypothesis. The inclination of the sector towards asset price inflation, along with funding productive investment, could led to a Ponzi type of financial expansion in the near future. On the other hand, however, the State's corrective action also reflects a "Minskyian policy prescription": It is the closest validation I can see nowadays of both, "big government" and "big lender of last resort", and a quite efficient regulator whenever needed. This suggests that it is very much aware of such danger. Nevertheless, the State had to balance this concern with its broader consideration of sustaining economic growth, particularly over the recession-hit years. Fragile finance structures are bound to emerge.

This explains why its corrective policy has emphasized prudent banking and the selective allocation of financial resources, rather than curbing credit expansion all together. Given the complexities involved in the interaction between the market players and the State policy-institutional regime in the evolving Chinese financial sector, it remains a formidable task for the State (particularly the banking regulator) to maintain this fine balance.

In any case, either examining China's domestic record, or analyzing it from a comparative perspective, it is crystal clear that the Chinese financial sector has done so far, a very good job in fostering economic growth during the crisis (Sanderson and Forsythe: 2013 passim, Yongding, Y. 2012, Tselichtchev: 2013, Chapter 8). Financial resources have been mainly channeled to productive uses, particularly in the form of infrastructural investment. What seems of general concern, however, is whether economic growth on the back of unrestrained (or, less-than-prudent) credit expansion is sustainable over the long term. Put another way, long term, should China resume its pursuit of converging to "international standards"? Or should it rather turn to pursue an alternative model? And if it does follow the second trajectory, what will the alternative model be and how will it impact Chinese economic development? For the outside world, the further questions are: should China follow the second trajectory, how will it impact the world economy and what kind of example will it set for the rest of the developing world? (Lo et alii: 2011, and especially Pettis: 2013).

That China might turn to pursue, and affirm, an alternative model for its banks and its financial system is not wishful thinking of the "nationalistic camp" in the party, but rather a real possibility indeed – as we have seen from the statements of some of their top ranking financial officers - a very likely scenario. This is evident in the trajectory of financial development it has travelled so far. As already mentioned, the discernible turning point was the 1997-98 East Asian financial crisis. Prior to the crisis, in the years 1993-97, the main thrust of state strategy for financial development was a unidirectional pursuit of the three-pronged policies of liberalization (of the financial-sector structures and activities), corporatization (of financial institutions particularly the banks) and internationalization (of both, the structural and the institutional conditions of the financial sector) – evidently with an objective of eventual convergence to "international standards".

The East Asian crisis prompted the Chinese leadership to deviate from this pursuit. Instead, it has increasingly turned to assign multiple objectives for the banking system: to promote macroeconomic stability and long-term economic development (and social responsibility), in addition to the standard emphasis on financial resilience or profit-making cum risk-control of the banks. By extension, the financial sector is also designated with these multiple objectives, not least because of the predominance of the banking system in the sector (Sanderson and Forsythe: 2013, Walter and Howie: 2012).

The result seems to be a nuanced approach to financial development. Initially, in the years 1998, the policy emphasis was to help the big state-owned banks clean up the mess with their balance sheets – while at the same time enhancing their commercial orientation and strengthening the regulatory framework. What was peculiar is that the measures adopted for this end were characteristic of a strategy of “growing out of debts”, i.e., state capital injection and, more important, state-driven fast economic growth to reduce the proportion of poor quality banks assets. In the event, the target of cleaning up balance sheets and, thereby, avoiding bank failures and financial crises was successfully achieved (Lo: 2011, Keidel: 2011).

The corporatization of state banks also made fast progress, culminating in their public listing in overseas stock markets. Meanwhile, controlled liberalization has resulted in a sufficiently diverse sectorial structure, and the provisions of China’s admission to the World Trade Organization in 2001 formally subjected the sector to international competition. Yet, all none of these developments led from a transition from the traditional style of relationship banking towards arm’s-length banking. The opposite has been the case, evident in the increasing concentration of bank lending with large-scale, mostly state-controlled enterprises. The 2008-09 credit expansion can thus be seen as a re-run of the State’s strategy to promote the improvement in financial resilience and economic growth proceeding hand in hand, but this time it is the banks that take the lead.

It thus appears that, amid the outbreak of the worldwide financial crisis in 2008, the Chinese State leadership has clearly downgraded the doctrine that financial resilience – understood as profit-maximization-cum-risk-minimization of banks – is itself a necessary (and often sufficient) condition for the best contribution of finance to macroeconomic stability and economic development. The belief is rather that financial resilience is often, but not always, the major goal. It needs to be complemented and/or balanced by something else in normal circumstances, and be modified in times of crisis such as that of 2008-09. One central aspect of the “something else” is the close relationship between the banks and the large-scale enterprises, which is consistent with the prevailing path of Chinese economic development characterized by rapid capital-deepening.

This relationship has also proved to be instrumental in the overseas expansion of Chinese enterprises, such as their massively expanding productive investment in many parts of the developing world which have been carried out on the back of the supports of Chinese banks. The outside world is thus likely to witness, in the years to come, the acceleration of expansion of this nexus of Chinese industry and finance in the world market. Given these circumstances, the best practices of banking in China and, by extension, in China-related business in the world market, might well be set by Chinese banks (and the Chinese regulatory framework) and by international financial institutions.

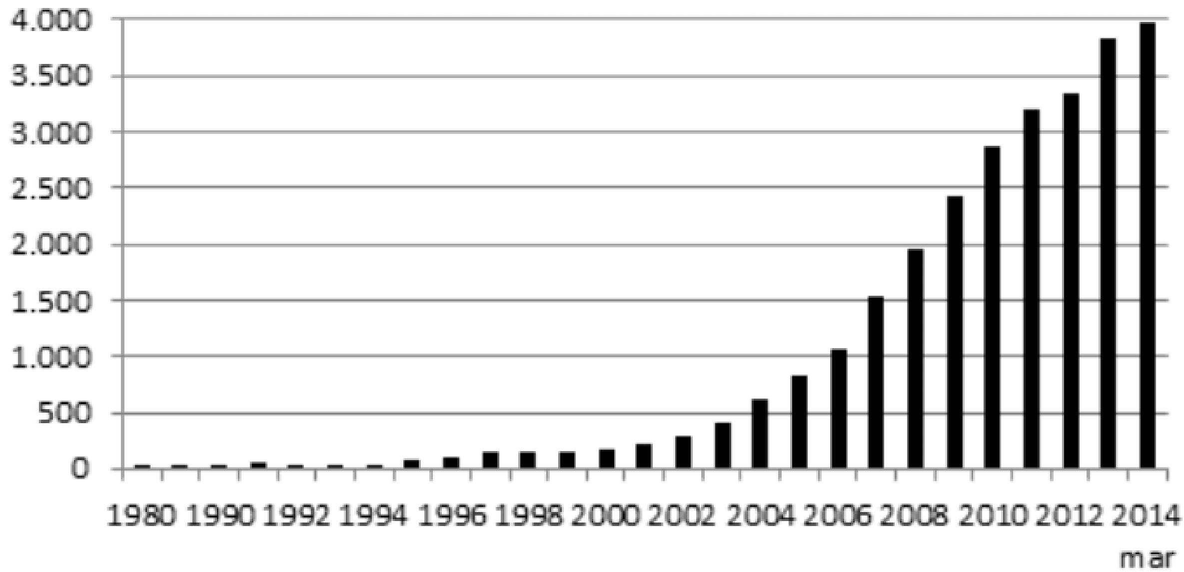
Summing up, the rising prominence of the Chinese economy and the expansion of its “state-led model of financial governance” in the world stage is bound to have far-reaching ramifications for the re-shaping international financial architecture in the future.

Going Global

The fact that China has amassed more than U$ 3 Trillion in foreign reserves already places the country in a very special position in the global financial landscape. Having between 50 and 60% of them in US Treasuries makes China a major player in the US financial treasuries market.

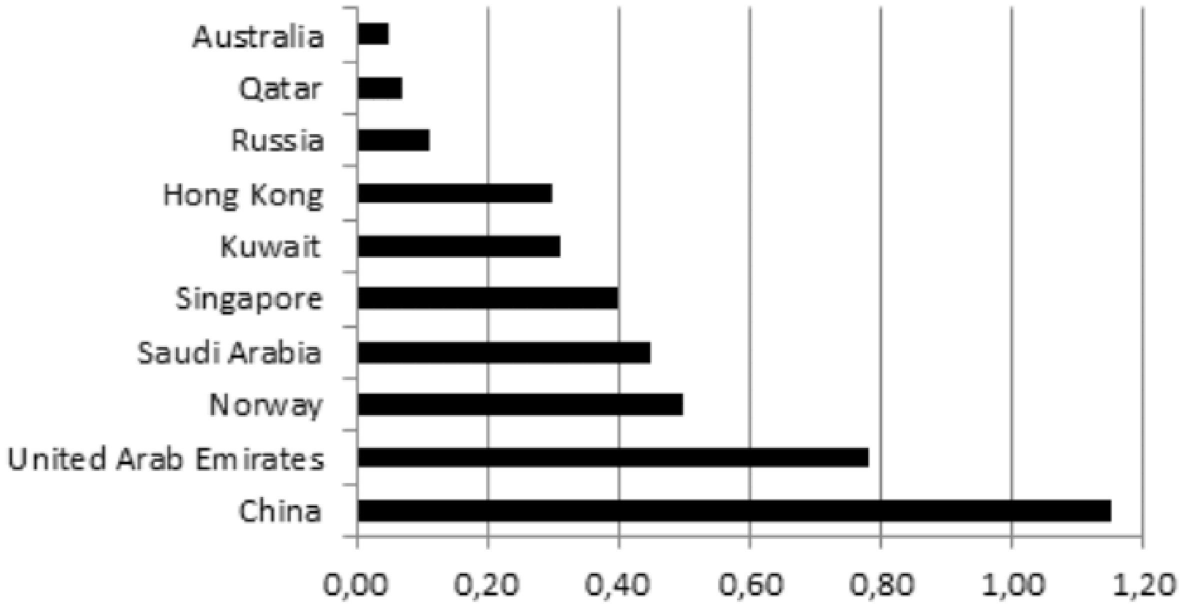
But this is just the tip of the iceberg (a big one, no doubt). Today, and not surprisingly, China’s Sovereign Wealth Fund (SWF) is the world’s biggest (See Figure 48 on the next page).

Figure 47 - China’s foreign exchange reserves



Source: China’s statistical yearbook/ 2015. http://www.chinability.com/Reserves.htm

Figure 48 - Largest Sovereign Wealth Funds (US$ Billion).



Source: Sovereign Wealth Fund Institute

Furthermore, China's policy banks are crucial players as well. By carrying out the goals of the state, China's banks, and especially CDB among them, are helping further China's goal of securing energy supplies through the deal. Since much of the proceeds of the loans are used to buy Chinese goods and services, from Huawei phones to CITIC-built railroads, China wins twice, and CDB helps foster another Chinese goal, pushing its top companies to "go out" (Sanderson and Forsythe: 2012, p. 131).

Africa: Investment plus Loans

Aided by Chinese demand for its exports and raw materials, Africa has experienced its best decade and a half of economic growth since independence from colonialism[65]. CDB is at the core of that "reversal of fortunes" helping change failed development policies by stimulating manufacturing and building the infrastructure that most African countries require to climb the developmental ladder (Sanderson and Forsythe, p 86). CIC (China's sovereign wealth fund) is another big player on those endeavors. Let’s examine a few of China’s “strategic” inroads in the continent.

First, the establishment of special economic zones, promised by President Hu Jintao in 2006 and shortly after, namely Nigeria, Mauritius, Egypt, Algeria, Ethiopia and Zambia. Second, the creation, in 2007, of the China-Africa Development Fund (CADF) as a private equity arm of CDB to “boost investment in Africa by Chinese firms and to offshore some of China’s manufacturing. The fund itself says its model is “investment + loan”. In February 2012, the fund signed an agreement with Xinjiang Goldwind Science & Technology, a wind turbine manufacturer, to develop the African market. In 2010, CDB gave the company a $ 6 billion credit line for international expansion (Sanderson and Forsythe: pp. 98-99). It also formed a venture with carmaker Chery Auto, to set up factories in Africa.

A national phone and Internet network in Ethiopia built by ZTE and Huawei in agreement with the local state-owned provider, and Chinese help service. A $ 3 billion loan to Ghana, the biggest loan in the country’s history, which will allow for contracts for a host of Chinese contractors just after Ghana starts to tap new offshore oil fields. Plus, leather, glass and cement factories on the outskirts of Addis Ababa. The idea here is to promote regional integration. According to Chi Jianxin, the head of the fund, “the manufacturing industry should not be confined to its local market; it should integrate or incorporate a regional dimension in terms of marketing base”.

Finally, In July 2012, while the US was showing the first signs of a more consistent recovery – yet to be confirmed – and Europe was diving deeper in the “Eurozone crisis” President Hu Jintao pledged $ 20 billion in new loans to Africa for infrastructure and manufacturing, and with much fewer strings attached than the WB and the IMF had done before. In an interview with Sanderson and Forsythe in Beijing, in 2012, Stiglitz stated that: “I think China has learned from the mistakes at the World Bank and the IMF, and I think the conditionalities often were counterproductive and were an important ingredient in the deindustrialization” (2012, p. 103).

In other words, in Africa China is already a major player with whom it will be extremely difficult to compete, especially on the availability of finance. However, in different places, the state-led model of financial governance shows up with different features as well.

Loans-for-Oil Worldwide

A loan-for-oil generally combines a loan agreement and an oil-sale agreement that involves two countries' state-owned banks and oil companies. Let's start with Venezuela. According to the same authors, "CDB's loans to Venezuela amount to about $ 1,400 for every man, woman, and child in the country, dwarfing those of any other institution. What is more, they add, the scores of Chinese companies coming into Venezuela are almost without exception big recipients of CDB loans, with at least ten Chinese companies having secured more than $ 96 billion in combined loans or lines of credit from CDB to finance their global expansion and operations inside China (2012, p 128).

The head of the Inter-American Development Bank, Luis Moreno, was blunt when commenting that strategy: CDB has been "very savvy" in the way it set up its loans with Venezuela. The repayment guarantees are codified in Venezuelan law. "To my knowledge, he adds, the Chinese are the only ones doing this". "I don't know of any other development bank that can do the kinds of things they are doing because it is both, development and it is strategic for China (Moreno quoted in Sanderson and Forsythe: 2012.p 131).

Table 5: CDB and contracts in Venezuela

Company	Contract purpose	Amount ($M)	CDB Customer?
Sinohydro Group	Power plans	295	Yes
China CAMC Engineering Co.	Infrastructure, Agriculture	1677	Yes
XCMG Construction Machinery Co.	Construction Equipment	761	Yes
China Railway Group	Railroads	7500	Yes
CNTIC Trading Co.	Medical supplies	927	No
Second China Railway Construction Bureau Group Co.	Railroads	392,8	No

Source: Sanderson and Forsythe, location 3320.

Venezuela may be their hub, but CDB's operations are expanding everywhere. In 2009, Petrobras secured a $ 10 billion loan from the bank as part of its global fundraising efforts to help pay for the development of offshore oil deposits. The 10-year loan has an interest rate of LIBOR plus 2.8 percent, and it is tied to shipments of 150,000 barrels of oil a day in the first year of repayment, and 200,000 barrels a day in the following years to a subsidiary of Sinopec (Sanderson and Forsythe: 2012.p 136). And there is one more thing: The loan also has a stipulation that Brazil will spend $ 3 billion to buy Chinese oil equipment.

In fact, Chinese lending in Latin America is continuously gaining momentum. It has taken off from almost nothing prior to 2008 to the point where, in 2010, its loan commitments were more than those of the World Bank, Inter-American Development Bank, and the US Export-Import Bank combined (Gallagher et alii: 2012, p. 5). CDB seems confident about the soundness of its oil-for-loans program. So confident it lent Ecuador, in 2010, $ 1 billion in a four-year loan at 6 percent interest, two years after the Country defaulted on $ 3.2 billion of bonds. Chinese lending to Venezuela and Ecuador is filling in for the sovereign debt markets. "Chinese financing is often the 'lender of last resort.' It is not a cheap one, but due to the concern the international financial community has over Venezuela and Ecuador, and the large risk premiums they would charge, Chinese lending is an attractive option” (Tissot quoted by Gallagher et alii: 2012, p. 8).

The loan-for-oil model seems to be broader. It’s being used around the globe, “from Russia, to Ghana, to Brazil, as a means for China to secure energy supplies and for its state-owned infrastructure companies to win contracts”. In sum, Chinese banks maintain some oversight over their loans by attaching either purchase requirements or oil sale agreements. Most Chinese loans require the borrowers to use a portion for Chinese technology or construction Gallagher et alii: 2012, p. 17).

Table 6: China Development Bank's Global Energy Loans

Country	Project	Amount ($ Bn)	Date
Venezuela	Dual loan facility/BANDES	20.60	2010
Brazil	Petrobras	10.00	2010
Russia	Pipelines/Rosneft	15.00	2009
Russia	Pipelines/Transneft	10.00	2009
Ecuador	Oil for loans	1.00	2010
Ecuador	Oil for loans	2.00	2011
Venezuela	Oil for loans/BANDES	8.00	2008-9
Turkmenistan	Oil for loans/Turkmengaz	4.00	2009
Venezuela	Oil for loans/BANDES	4.00	2011
Myanmar	Gas pipeline	2.40	2010
Venezuela	PDVSA/CNPC	4.00	2011
Venezuela	Oil for loans/BANDES	4.00	2012

Source: Erica Downs, Bloomberg Bulletin: 2012.

In other words, there are still some “strings attached”. The big difference in relation to the “international agencies” seems to be that the money is secured by winning business for Chinese companies, rather than setting policy conditions on the borrowing country (Sanderson and Forsythe: 2012, p. 139).

Funding Chinese Global Player

The most strategic role of the Chinese Entrepreneurial State refers to promoting Chinese business on a global scale, forging homegrown global players. China's 12th five-year plan for 2011 to 2015 was launched in March 2011. The plan highlights the importance of the "magic seven" industries: (1) energy saving and environmental protection, (2) next-generation information technology, (3) biotechnology, (4) high-end manufacturing, (5) new energy, (6) new materials and (7) clean-energy vehicles. The plan's objective is to "shape" those industries to raise their share from 3 to 15 percent of the economy by 2020 [66]. No wonder that, before the Plan's announcement, China's banks were already pouring money to fund the long-term projects supposed to turn that scenario into reality.

In fact, Chinese companies have started to win first place in global markets. Huawei has overtaken Sweden's Ericsson to become the world's largest telecoms-equipment-maker. Huawei is becoming an increasingly powerful global player, capable of going head-to-head with the best in intensely competitive markets. It follows Haier, which is already the leading white-goods-maker; now Lenovo is challenging Hewlett-Packard as the world's biggest PC-maker. Much more will follow (The Economist/ Leader: August 2012). The article also raises a key issue from the perspective of "western competitors": "Western governments are also suspicious of the subsidies, low-interest loans and generous export credits lavished on favored champions". The article is right. The financial arsenal behind China's emerging global players is formidable, and should not be downplayed at all.

In 2010, China invested some $ 51.1 billion into clean energy, the largest investment by any country in the world. However, in 2006, four years before that record, two Chinese companies were already on the list of top-ten solar cell producers. In 2010, six made the list, according to a BNEF report[67].

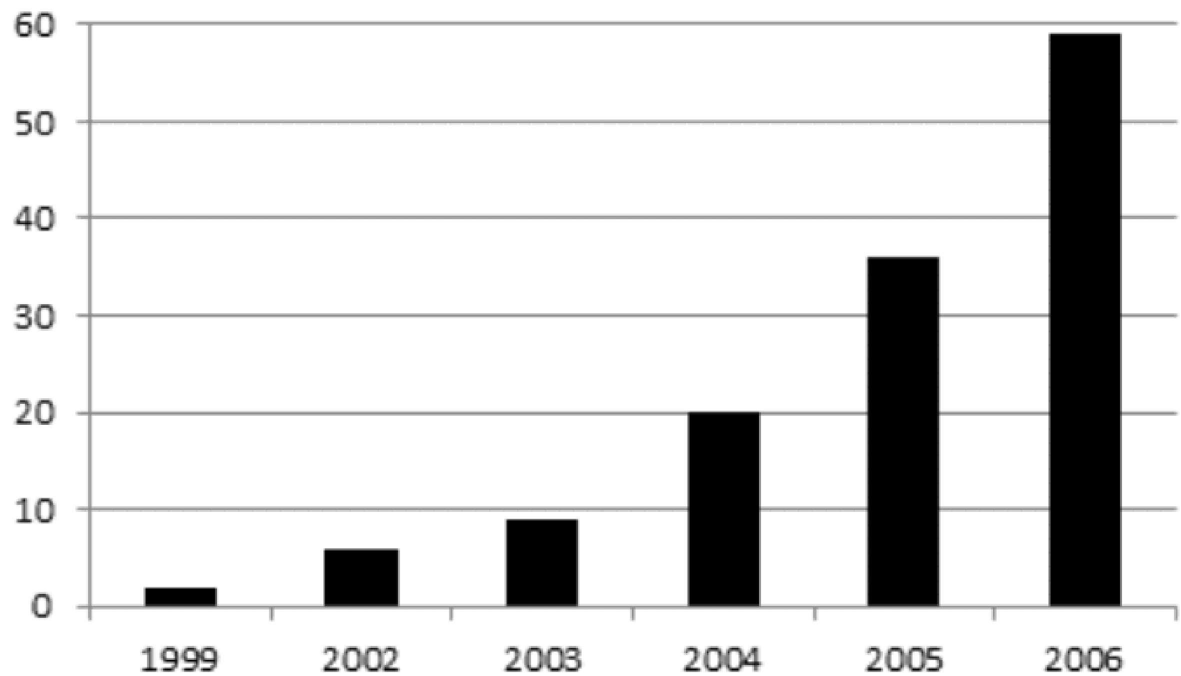
Among them is Yingli, founded in 1998, and one of the biggest beneficiaries of CDB loans in the solar industry, borrowing at least $ 1.7 billion in dollar-denominated loans from CDB, from 2008 through early 2012[68]. In 2009, Yingli opened offices in New York and San Francisco; by the year's end, it held 27 percent of the California market. China simply took over (or leapfrogged). In 2011, the country supplied some 72 percent of global crystalline-silicon module production, the most popular type of solar module that converts light to energy (Sanderson and Forsythe: p. 150, my emphasis.). A clear and stunning case of Leapfrogging.

In fact, 2010 saw an explosion of loans to renewable energy, mostly from CDB. The bank lent $ 14.7 billion to clean energy and other energy-saving projects. The European Investment Bank lent € 8 billion for clean energy projects in 2010, BNDES lent $ 3.16 billion and the US Federal Financing Bank $ 2.12 billion. In all, since 2010, CDB – alone- has made available at least $ 47.3 billion in credit lines to support Chinese solar and wind companies (BNEF: October 2011).

Let's return to telecom and to Huawei. A private firm founded in 1987 with just 21,000 Yuan, a bit more than $5,000 at the time. Huawei at first struggled to win customers even in China. Last year (2012), as mentioned, it surpassed Ericsson to become the world's largest telecoms-equipment-maker. Now it is a $32-billion business empire with 140,000 employees, and customers in 140 countries, and 65% of its revenue comes from outside China. In Europe it is involved in over half of the superfast 4G telecoms networks that have been announced, and it became a strong competitor in mobile phones. In Africa, Huawei's cheap, but effective equipment, helped make the continent's mobile-telecoms revolution possible (The Economist, "Huawei: The Company that Spooked the World: August 2012).

How did this happen? I do not mean to provide a full answer here, but public funding and, ultimately, China's entrepreneurial state were key players in backing up that success. On December 27, 2004, in Beijing, Huawei and CDB signed a $ 10 billion agreement for overseas markets, the first of many CDB credit lines to their customers across the developing world which would allow the gaining of significant market share. It was also the beginning of CDB's support of Chinese firms to "go global." In April 2005, Huawei and CDB signed a risk-sharing "win-win" agreement, and agreed to share information on clients and projects after the loan had been dispensed. In December 2005, Vodafone Group, then the world's largest mobile phone company, named Huawei its first Chinese-approved supplier of network equipment. Huawei's road to global domination had begun [69] (Sanderson and Forsythe, p. 160).

Figure 49: Huawei's Overseas Sales after CDB Loan



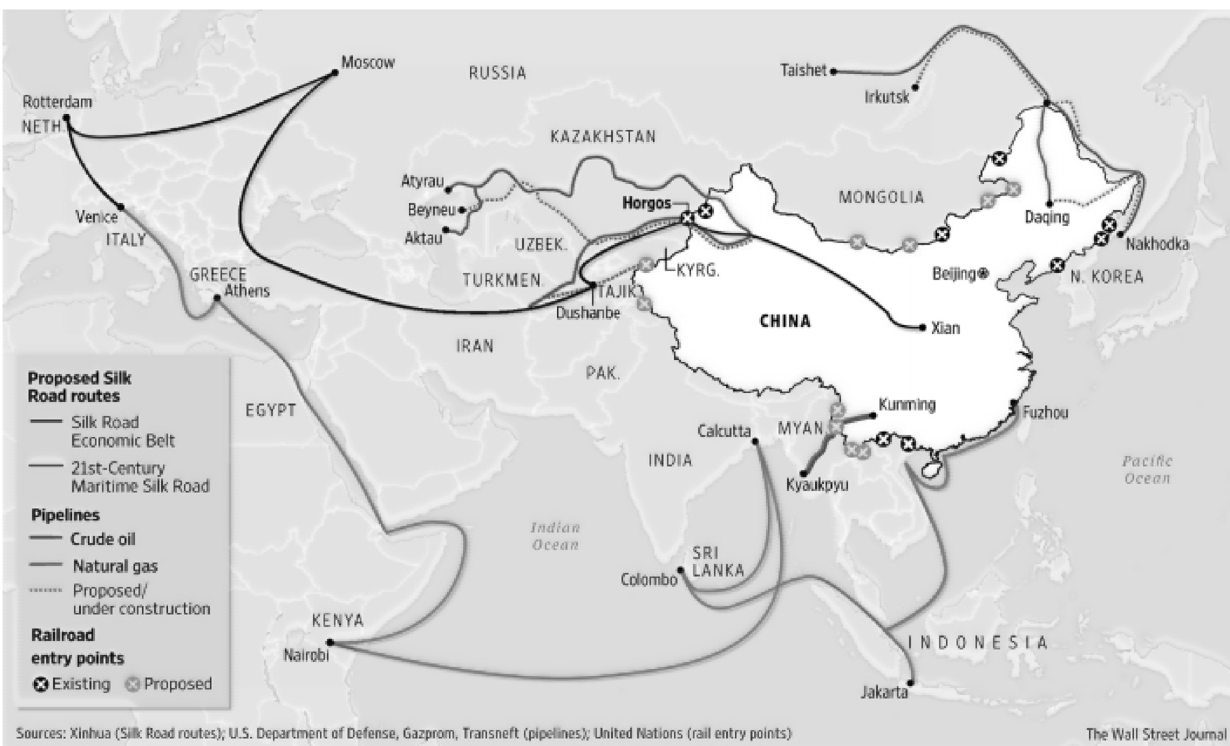
Source: Sanderson and Forsythe, p. 162.

Going Global 2.0: One Belt One Road

Within its global strategy, the apex of that State-guided strategy, at the time of writing this chapter,[70] is the "one belt, one road"

(OBOR). Launched in 2013, OBOR has two parts. There is a land-based “belt” from China to Europe, evoking old Silk Road trade paths, then a “road” referring to ancient maritime routes. OBOR will span 65 countries (see map), and China has so far invested over $900bn in projects ranging from highways in Pakistan to railway lines in Thailand. In May 2017, more than a hundred world leaders gathered in Beijing for un update on the strategy. The host, president Xi, labeled OBOR the “project of the century” and reaffirmed the estimated $ 5 trillion in infrastructure spending spread across Asia, the Middle East, Europe, and Africa. The Financial Times (FT) stamped “President Xi Jinping Positions China at Center of New Economic Order” as headline, adding “President Xi of China delivered a sweeping vision of a new economic global order on Sunday, positioning his country as an alternative to an inward-looking United States under President Trump” (Financial Times, August, 3 2017).

Figure 50: One Belt, One Road map



At the same gathering, China’s prime minister pledged more than $100 billion from Chinese development banks for the next round of infrastructure renewal. The next gathering, in Beijing, will take place in 2019. Public entrepreneurship and public funding on that scale is unheard of. However, as I tried to show in the previous section, that is precisely what Schumpeter had in mind when he wondered if "Socialism" could work. China incarnates, in fact, both Minsky and Schumpeter on steroids. Or, I must add, the Chinese state should be seen as the materialization of Hubert Henderson wishes, expressed in 1943, one year after Capitalism, Socialism and Democracy was published. In a little noticed exchange with Keynes, his co-author, Henderson, wrote:

> "What I really suggest is that the state should assume the role of Entrepreneur–in-Chief, directing the flow of productive resources to the employments in which can best serve human needs" (1943:233).

The required amendments here are: … best serve China's interests and needs on a global scale.

Conclusion: The China Model - State Capacity, Public Leadership and Structural Transformation

> *A context of deliberately created stability achieved by risk-spreading mechanisms ¼ can facilitate industrial deepening, export expansion, and political compromises to share adjustment costs. ... Unassisted entrepreneurs may not have either the foresight or the access to capital to follow long-term prospects. Their decisions may lock in the country into a specialization in industries with inferior prospects" (Wade: 1990)*

Wade's model was "the other China": Taiwan. Continental China ridded along, but went much farther, leapfrogging the island. Given the arguments discussed so far, and despite the current (sometimes enraged) neo-liberal statements that continue to view State action and bureaucracies as always ineffective (or at best irrelevant), the reason seems to remain with Karl Polanyi, for whom “The road to free markets was opened and kept by an enormous increase in continuous, centrally organized and controlled interventionism” (1992 [1944]: p.127) and with Max Weber , whose statement that “Capitalism and bureaucracy found each other and belong intimately together” is as true today as when it was written, in the beginning of the last century (1968: p.1395, n. 14]).

China’s compressed “case-study” provides us, I trust, with sufficient empirical evidence to validate the claims about the effectiveness of a properly developed Entrepreneurial State as a vehicle for carrying out structural transformation in a superior fashion than “markets alone”[71].In the conceptual framework conceived by Keynes, Minsky, and Schumpeter, where, technology, finance and competition are always pushing towards unexpected outcomes and unpredictable possibilities, let me submit that entrepreneurial states and government policies crafted to forge and assist structural transformation are a permanent necessity dictated by the market's behavior rather than by its failures.

Consequently, their making must be based upon a correct understanding of the characteristics that, under this framework, define the actually existing capitalist economy: finance as its “headquarters”, competition as creative destruction, endogenous technological progress, entrepreneurial strategies conceived to differentiate each firm from its competitors and monopolize market opportunities, irreversible decisions, “crucial decisions”, in G. Shackle’s catch phrase, and multiple types of uncertainties.

Additionally, the perception of economic progress under capitalist conditions as turmoil where new and old assets, firms, and sectors coexist and compete, allows the introduction of the concepts of sunrise and sunset industries, as well as potential and effective conflicts between them. On the other hand, the perception of the economic environment as a darwinian-lamarkian arena where survival does not necessarily belong to those with better technologies or productivity potential, but rather to those with best adaptation skills, legitimizes sector-based and selective financial, technological and industrial policies[72] , and the need for collective entrepreneurial action to forge and produce the future competitiveness of the system as a whole, a task that each separate sector has no means to anticipate or even map. Under this framework, policies designed to manage the creative destruction process, aiming at investment co-ordination, innovation diffusion, and conflict management become not only economically rational, and business-friendly, but badly needed. The overall desired policy result is to decrease the system's inescapable elements of financial and technological instability and uncertainty.

Using CDB's strategy, Sanderson and Forsythe provide us with a sharp explanation of the "financial big picture":

> "...it is the volume of CDB lines of credit— the security that financing is available if needed— that gives Chinese. . . . companies a leg up over their global competitors, allowing them to focus on increasing their scale above all else and spawning trade litigation in the United States and Europe. More crucially, though, they provide the guarantee that makes commercial banks feel safer lending to the companies, thus bringing in billions of Yuan of more loans"

To which they aptly add:

> "The United States simply do not have a government-owned bank of equivalent scale or assets" (p.153).

From a macrofinancial perspective, it's precisely the features and intricacies of that globally oriented public financial governance model that we must dissect to learn. Chinas' model offers a rich pool of lessons for any country struggling with the tensions among untamed globalization, poorly constructed global governance structures and mechanisms, and the need for domestic policy space as a country[73].

If this chapter was successful in its line of reasoning, the reader should now recognize two key outcomes: a) Finance affects all economic spheres and it is a crucial “lever” for economic development and structural transformation. That is the main point of the “Schumpeter-Keynes-Minsky” approach. b) China is building a robust and comprehensive global strategy within a state-led model of globally oriented financial governance, backed by public policy and development banks and a substantial degree of “socialization of investment”. Holding them together immediately led to the question: what are the implications of this emerging financial Behemoth for Brazil? That brings us to the closing chapter of the book.

5. Implications and Policy Recommendations for Brazil

Leonardo Burlamaqui, Felipe Rezende and Matheus Vianna

Misguided Policymaking in Brazil and Some Suggested Alternatives

As of 2017 China became the second major investor in the global economy. Chinese global investments have risen at a compound rate of 16% from 2011 to 2014. The volume of foreign direct investment from China reached US$ 183.2 billion, surpassing the foreign direct investment into China which amounted to US$ 126.0 billion in 2016. In 2015 Chinese firms executed 579 mergers and acquisitions abroad, covering 62 countries and regions with transaction value of US$ 54.44 billion, out of which US$ 37.28 billion were financed by sources within China. In 2016 Chinese companies spent US$ 227 billion on acquiring foreign companies, outbound mergers, and acquisitions have grown 33% per year in the past five years (Financial Times: 08/18/2017). Summing up: China is going global, big time.

In contrast, Brazilian real GDP contracted 3.6 percent in 2015 and another 2.6 in 2016. Meanwhile, annual inflation reached 10.7 percent in 2015—way above the Central Bank of Brazil's target rate of 4.5 percent, or even the 6.5 percent ceiling of its policy band (IPEA report: 2016). At the time of this writing, growth did not return, inflation is being curbed by the collapse of investment, consumption, and employment, not by proper policy corrections, local states are all broke (contrary to the federal government, they do not create money, therefore they do go bankrupt), unemployment remains high and violence is spiraling both, North and South of Brazil. According to the World Bank, 2.5 million of Brazilians will cross back the line of poverty this year (cf. O Globo: 2/13/2017).

The only crisis response by Brazilian policymakers so far is fiscal austerity. Despite overwhelming evidence that austerity policies failed where they were implemented, it is startling that our establishment continues to propose contractionary measures to pave the way for economic growth, despite its failure for almost three years and so much contrasting evidence coming from countries as China, which explicitly repudiated those policies. In Brazil, there is a virtual, blind, consensus towards fiscal tightening. The most likely scenario is that Brazil will continue to run current account deficits in the foreseeable future (the post crisis average was 2% of GDP).

If policymakers narrow the nominal budget deficit to zero in the next administration, then the private sector must run a deficit equals to 2% of GDP (equals to the current account deficit). The private sector deficit (spending more than its income) is dangerous to macroeconomic stability and unsustainable. If the domestic private sector wants to run a surplus (spending less than its income) then the government balance must be above the current account deficit.

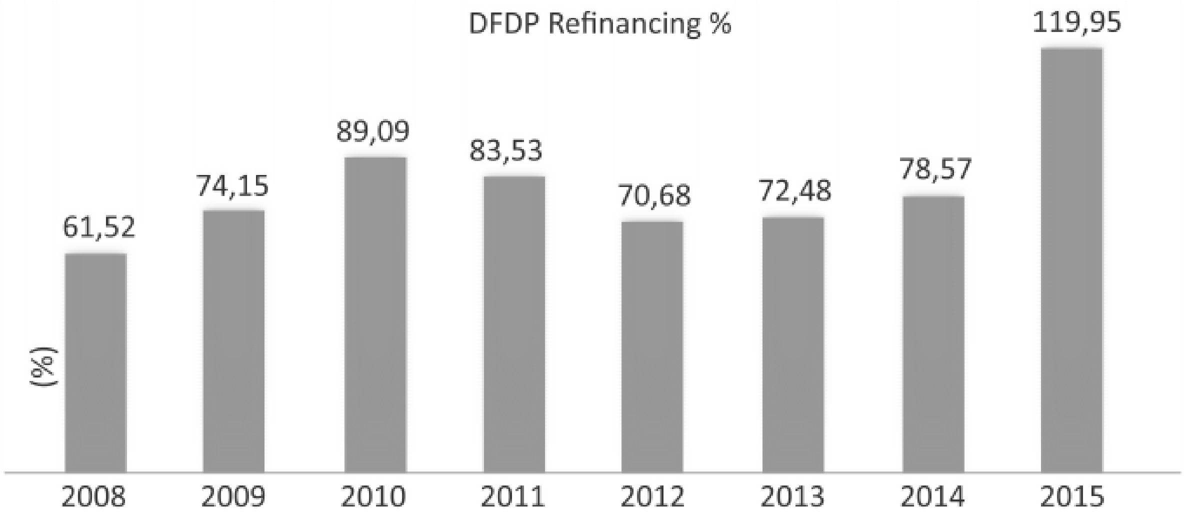
The policies proposed by fiscal hawks fail to recognize the obvious facts: fiscal austerity always throws stagnant economies into recessions, or deepens them. It does not improve the situation of indebted households and business, it worsens them. Moreover, there is no solid theoretical reason, or empirical evidence, to believe that cutting public spending will automatically increase private spending. To be sure, an attempt to impose further fiscal austerity at this point will lead to further declines in output, employment, and private spending, thus amplifying the direct effects of government cutbacks and limiting the ability of businesses and households to generate strong cash flows to service their financial obligations, stimulate production and create employment.

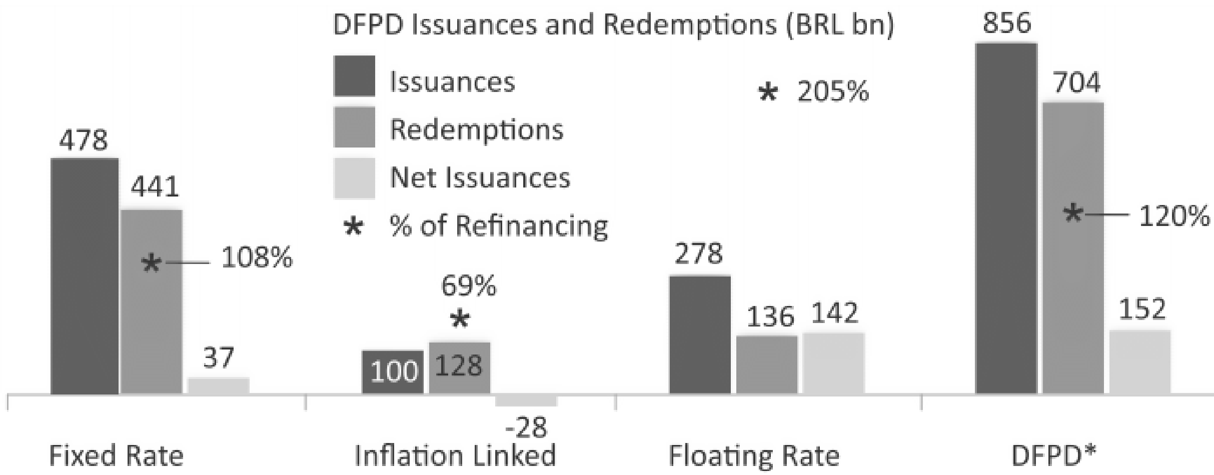
The theoretical framework exposed in chapter 1 makes clear that one sector's financial position cannot be viewed in isolation. Policymakers must understand the links between public sector deficits, domestic private sector surpluses, and current account deficits. This is not to say that we should run fiscal deficits forever, nor that they cannot be inflationary but following fiscal rules blindly – especially with the economy in tatters -without determining the impacts on the private sector, balance is disastrous to growth and to financial stability.

Much of the concern about public finance in Brazil centers around reducing the public debt burden and debt sustainability. However, a sovereign government, which issues its non-convertible currency, is not subject to the same constraints that business, local states, and households face (Rezende 2009). The Brazilian government issues its own currency, the Real, and has the power to levy and collect taxes denominated on its liability. As in the case of other sovereign countries, it can always service its debt denominated in its currency.

However, Brazilian policymakers feared the news of a credit rating downgrade, mainly on an election year. They have been operating under the wrong paradigm. Counter to the deficit hysteria view, affordability is not an issue, because the federal government can always meet their debt obligations denominated in their own currency. Ratings agencies are still clueless on their assessment of default risks of sovereign currency issuing governments. Contrary to the conventional view and despite credit downgrades, the demand for government securities to finance growing public debt in 2015 was the highest in 8 years (figure 51 and 51A).

Figure 51 and 51A. Domestic federal public debt (DFPD) refinancing; issuances and redemptions in 2015



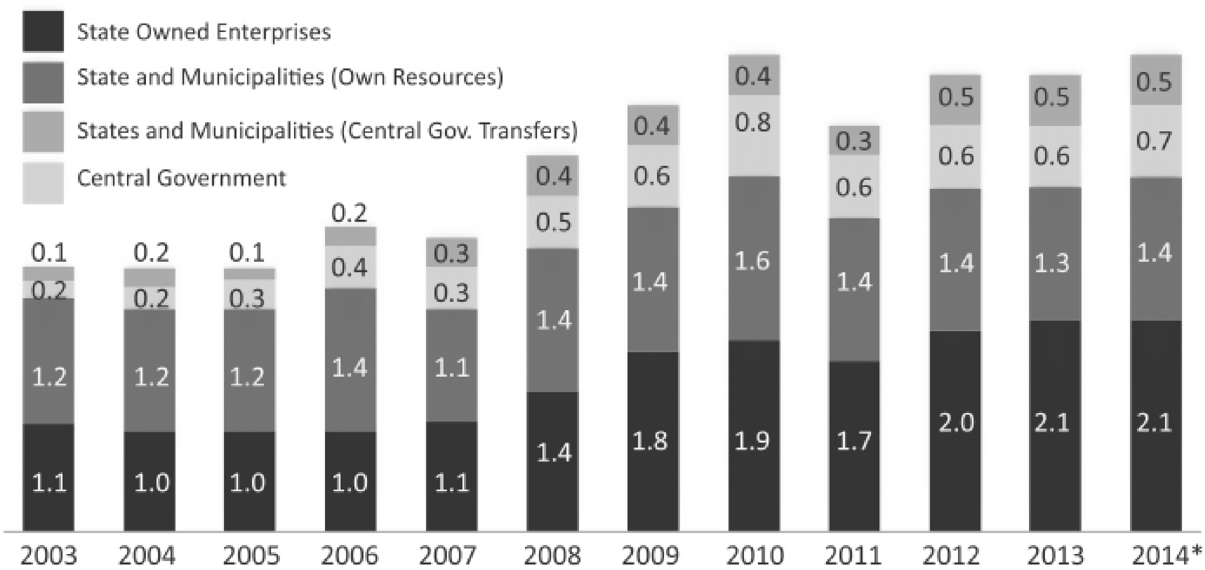


Source: Ministry of Finance 2016

Recent CRAs warnings and downgrades on Brazil's sovereign credit rating miss the point that Brazil, in contrast to countries under the European union, has monetary sovereignty. It is the sole issuer of a nonconvertible currency (the Real). It cannot be forced by currency users to default on its domestic debt denominated in local currency.

In other words, there is nothing but misguided ideas preventing Brazil from flipping its policies towards an effective development strategy, based on domestic demand rather than depending upon foreign demand and finance. Brazil's federal public investment is unusually low, given Brazil's infrastructure bottlenecks and investment needs (figure 52 and 53).

Figure 52. Public Investment (% of GDP)

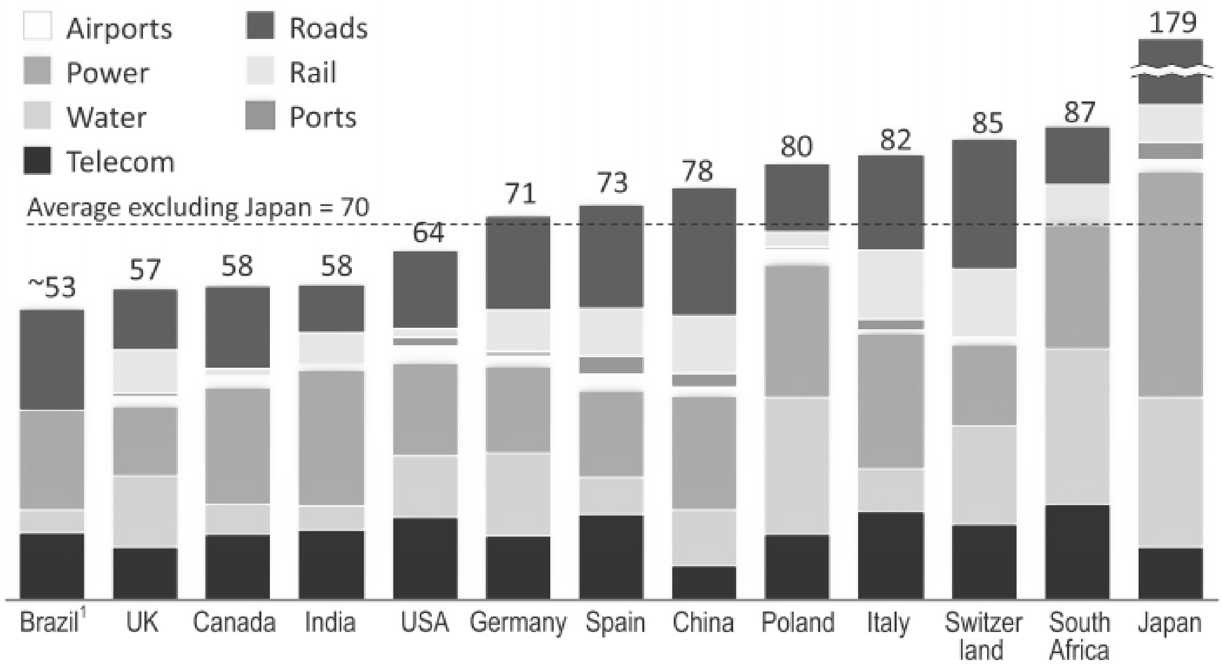


Source: Ministry of Finance 2016a.

There is ample policy space to promote private and public infrastructure investment, in which public banks – specially the national development bank – and private domestic capital markets should play a major role financing the supply side of this program.

It is well known that government spending can contribute to productivity by lowering private sector costs and through investment in key areas such as infrastructure, health and education, and research and development. China is the world's poster country that Brazil needs to shift its policy to mobilize domestic resources and adopt an investment-oriented growth strategy. There is ample space for policy to promote infrastructure investment. As an example, the world economic forum ranks Brazil's infrastructure 114th out of 148 countries (WEF 2013). In fact, the IMF, until very recently a well-known crusader of austerity, is calling for an infrastructure push by developing economies (see IMF 2015a). It seems Brazilian policymakers will be, like in the tales of betrayed husbands, the last to notice it.

Figure 53. Total infrastructure stock (% of GDP)



1 For Brazil, road data contains all of transport. Brazil stock revised significantly upwards to 46-54% from an earlier published version based on longer time series showing 2-3x higher investment rates in the 1970s and 1980s compared to the 1990s and 2000s. The estimate shown is based on data provided courtesy of Dr. Armando Castelar.

Source: McKinsey 2013, p. 13

Consistently with the new IMF prescriptions, it is crucial to increase government-sponsored infrastructure investment projects as the current rate of federal investment in infrastructure is small, compared to Brazil's investment needs. Brazil is well known for its high tax burden. It should use the fiscal leverage of the federal government to increase government deficit on both fronts, that is, increasing federal government investment in infrastructure and tax cuts for households and firms by simplifying its tax system, and providing tax cuts on production, employment, and income. Public investment can close Brazil's housing gap, through the expansion of the government program "My home, My life".

Furthermore, a “Development-oriented” financial governance strategy should implement a national job guarantee program to foster job creation for those willing to work[74]. In this program, no worker would get paid less than the minimum wage, and those able and willing to work would be employed, thus reducing the social costs of unemployment and poverty. Contrary to the conventional belief that a job guarantee program would be inflationary, it can be designed to ensure that the deficit spending is at the right level to ensure and maintain employment – and, as a result, consumption- by setting a wage anchor. The program can be designed not only to provide the job training, but also to increase labor force qualification and the productivity of unemployed workers, which works as an increase in the labor supply. Among its benefits, it reaches social targets by mobilizing resources for additional social services to be provided by the community with gender, racial, and regional effects.

This government initiative should be targeted directly to those unemployed workers “at the bottom” of the income distribution, leading to improvement of dignity of those who have been denied the opportunity for social inclusion. Moreover, the percentage of the population living in poverty or extreme poverty would be significantly reduced.

Rather than an obsessive concern over budget deficits, the current debate should recognize the global failure of “Austerity Alone”, about what could be done differently and where to learn from.

Lessons from China

A comprehensive analysis of opportunities and challenges brought to Brazil by China’s emergence was carried out by Accioly, Pinto and Cintra, quite a few years ago (IPEA 2011). Their main point is stated very clearly: “to give up the future for the sake of the present could turn to be extremely dangerous” (Accioly, Pinto and Cintra: 2011, p 348). We could not agree more. The problem, from the perspective of

China’s state-led model of financial governance, is that there is nothing in the Brazilian landscape that resembles the availability of funding, institutional coordination and entrepreneurialism we see in the Chinese public financial system. If we compare BNDES assets of U$ 320 billion with CDB’S 1.7 Trillion, we start to get the picture. Adding to that CDB’s global strategy, and the multiple sources of funding from the other Chinese policy banks, it worsens the challenge.

A way to see the unfolding of this bottleneck is to consider the regressive specialization of Brazilian trade with China. Despite the jump of Brazilian exports to China from a little over U$ 1 billion in 2000 to more than 30 billion in 2010 (Accioly, Pinto and Cintra: 2011, p 317), its “quality” or technological content is very low: commodities and low-tech manufactures.

On top of that, China became Brazil’s number one export’s destiny. The other side of the argument is that Chinese imports are flooding Brazilian markets, and medium and high technology content imports are increasing their percentage in the import’s basket: from 16% in 2000 to 44% in 2009 (Accioly, Pinto and Cintra: 2011, p 323). The resulting threat is not only de-industrialization – which will occur in some sectors for sure – but the loss of technological capabilities, which equals to mortgaging the Country’s future.

This clearly does not point to a successful upgrading of Brazilian competitiveness, rather the opposite. It suggests that Brazil is dangerously close to, if not already in, a “technological trap”. In that sense, while China is clearly leapfrogging its major partners in the sense of designing, and achieving a long-term strategy of structural change and social inclusiveness[75], Brazil is falling behind.

What must be done? Or more appropriately, what can be done? That’s precisely the “trillion-dollar question” for Brazil. There are no easy answers, and to produce a comprehensive one is obviously beyond the scope of this study. What we will try do, as a way of conclusion, is to provide some elements that, in our perspective, should frame the discussion on how to properly address the question.

The late Antonio Castro used to say that China's ascendancy was a "tectonic movement" for the global economy (Castro: 2011p 99-100). He was absolutely right.

China is the Asian developmental model on steroids. By now, China has shown it has the institutional, financial, and intellectual capabilities to outcompete everybody else – it is already "number 2", and that happened in less than three decades[76]. It has "geography" and challenges coming from both internal and external fronts pushing it to move fast. It is acquiring the technological capabilities to move from "made in China" towards "created in China" (Castro: ibid). It has become a heavyweight global player, and it has a domestic market of - potentially – 1.3 billion consumers. In one sentence: China's ascend raised the bar. It inaugurated a whole "new game" in terms of building strategy and capabilities for economic performance and competitiveness.

In that sense, to the question "how should a country like Brazil face competition with China", the quick answer should be: avoid it. Do your best to search/discover/ build the ways and sectors in which collaboration and integration could replace competition. We believe that was Castro's response as well: "Só faz sentido reforçar aquilo em que temos chance de correr mais rápido do que eles [chineses]... o resto tem que ser redirecionado ou desaparecer" (2011: p.99). Among the industries/sectors that Brazil has a chance, commodities and food are the easiest candidates, and are already being exploited.

On the food side, there are great prospects for exports, if we consider the Chinese "rebalancing policies" underway, which are bound to increase the wages/income of the vast majority of the population (Accioly, Pinto and Cintra: 2011, Lardy: 2011, Pettis: 2013). On the commodities front, there is the Pre-Salt Programme, which is potentially a unique opportunity for technological upgrading and spill-over effects for many other sectors, and should generate – over time- a sizable stream of revenue for the Brazilian state which could become a strategic source of funding for "competitiveness policies" (Kregel: 2009)[77] .

From an “economic ideology” perspective, Brazil has some advantages as well. Policymaking in the country used to be quite pragmatic and there is ample space for discussion, proposals and implementation of industrial policy, comprehensive financial regulation, management of capital flows and other still largely “forbidden measures” in most of the other large economies around. The public debate on those issues must resume. Furthermore, our domestic market is a quite big one (for both, consumer and capital goods). This means that if the economy grows at a 4 to 6% annual rate, Brazil can, at the same time, produce for the domestic market, export and absorb a hefty basket of imported goods (that is precisely what China does in a much larger scale – the scale of a 10-12% growth rate – and what South Korea, Taiwan and Singapore did not so long ago). Fiscal revenue would obviously grow accordingly, and generate another potential source of funding. Finally, Brazil does not need to become protectionist. It needs to become way more strategic from a “state capacity and policymaking capabilities” point of view.

However, and far from downplaying their importance, those are not the core economic problems we face. Let us suggest that, from our Schumpeter-Keynes-Minsky theoretical lenses, they are twofold: a) Vision. Brazil does not have a clear vision – in fact it does not have any vision- for designing its long-term competitiveness agenda, b) Finance-Investment. More precisely, the lack of both, supply and demand for long term funding. It seems worth it repeating a thought we just touched upon: there is nothing in the Brazilian landscape that resembles the availability of funding, institutional coordination and entrepreneurialism we see in the Chinese public financial system. It almost goes without saying that this holds even more truth for the clear majority of Brazilian corporations and for the private financial system.

Since the late eighties, it’s not usual for Brazil to grow at 4-6% annually, and specially to maintain that pace. Why? Without getting into the “exchange rate/interest rate debate”, which can partially explain it – and was already scrutinized by, among others, Rossi and his colleagues at Unicamp- let’s look at the Achilles heel of the matter. It is common knowledge that Brazil has a low investment/GDP ratio. From the analytical perspective outlined in the first chapter, what the country lacks is not "savings", but finance, more precisely, long term funding availability and a clear and comprehensive investment strategy (which means a state equipped with a vision, a strategy and policy space to implement them).

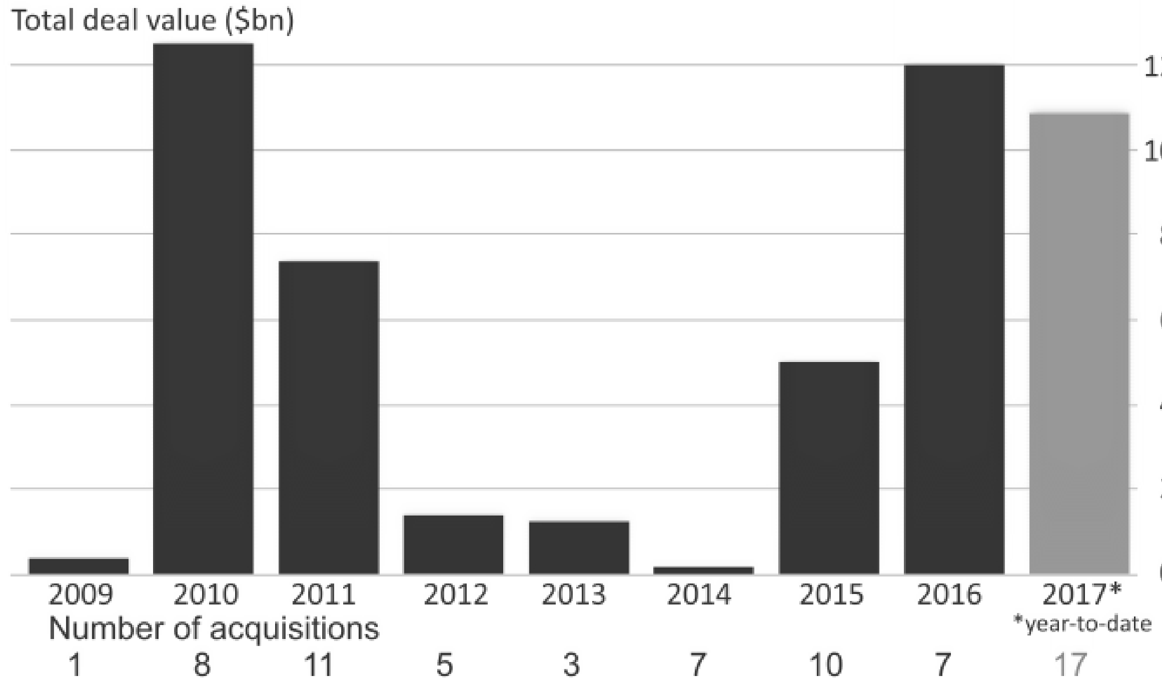
Brazil has neither one. BNDES, which provides the bulk of long term funding for development, has a loan portfolio of roughly US$ 220 billion, but includes development projects, architectural renovation for landmark buildings, movies, art and culture and what more one can think of. It does not do innovation – or it does very little of it. Let's compare that with the US$ 1.7 Trillion loan portfolio of CDB, which is just one of China's sources of long term funding for development and innovation (although the most strategic funder as Burlamaqui showed in chapter four). Summing-up, no long-term vision for a (robust) competitiveness strategy depresses animal spirits (which means scarce innovation). No long-term funding availability equals in low investment. Low investment results in low growth, high unemployment and, most likely, increased inequality. End of story.

In that sense, Brazil needs a thorough restructuring of its incentives' structure for funding innovation and development, including the private and the public financial systems. Furthermore, the public financial system dedicated to innovation (the best example is FINEP) should expand and become much bigger. To give just one idea, the planning ministry, in coordination with science and technology agencies, universities and the patent office, could establish venture capital agencies - with private and public banks' advice, but public control (The U.S Department of Defense and Army both have them. See Block and Keller: 2011). That would expand the "supply of funding". Easier said than done for sure, but it is an area to reflect upon.

To act on the "demand side" for long term funding, let us point to two areas.

The first is the "other Achilles heel" of Brazil's economy: infrastructure. The country just lost 600.000 tons of soybeans exports contracts to…. China due to “infrastructure gridlock” (Aprosoja: 23/3/2013). The delays - 57 days in Paranaguá, and up to 32 days in Santos port - and the general obsolescence[78] of roads, railways and ports were the main causes. A program of overall infrastructure renewal is urgent. It could create the opportunity for a burst of technological innovation and creative imitation – look at China – and not addressing the issue will cost the country dearly: the loss of areas where we have an established competitive advantage[79]. In fact, Chinese banks and corporations have perceived that, and began to exploit that opportunity. Over the past two years, there has been a surge of interest by China’s biggest companies in Brazil. Chinese companies buying assets in Brazil range from China Three Gorges Corporation (CTG), the builder of the dam of the same name, and energy transmission specialist State Grid Corp of China to trading company Cofco, and aviation-to-finance conglomerate HNA. Technology companies such as Baidu are actively committed to invest in Latin America’s largest economy. Deals involving Chinese companies have exceeded $10bn in 2015 and are bound to escalate in the next three years, according to Dialogic (Financial Timers: 11/13/2017).

Figure 54 - Chinese Acquisitions in Brazil: 2009-2017



Source: Dealogic © FT

But, so far, this is happening without any clear long-term strategy coming from the Brazilian government.

The second area that we want to mention refers to "forging the future". A broad, but strategically conceived, Brazil-China partnership for establishing joint cooperation initiatives (instead of free-trade agreements) in the areas of Biotech/Biomedical/Bio-fuels. An initiative like that could provide a host of opportunities for technological upgrading and monopolization of market opportunities – the goal of Schumpeterian competition – and for strategic collaboration. The smart use of the Amazon's, the most diverse and largely unexplored flora in the world, has the potential to create a unique competitive advantage for Brazil, and this is a feasible goal. Singapore's Biomedical Sciences Initiative, currently under way is already showing the path (Pereira: 2008).

Properly coordinated and subject to bilateral cooperation, the exploitation of these science based sectors could turn into a major – and difficult to imitate - cluster of radical innovations, maybe one or two general purpose technologies, and a host of productivity-enhancing investments.

However, to achieve that sort of endeavor, key “institutional pre-conditions” should be in place:

- The recognition of crucial role of knowledge governance-based institutional coordination, which, once in place, should open the institutional space for sharp reduction in the number of ministries and the creation of a knowledge-governance pilot agency to help forge and oversee that structural transformation strategy;

- A proactive role of the public sector and the creative – and comprehensive – use of public resources, funding, administrative guidance and deal making power to craft structural change and push for radical innovation;

- A commitment to “manage change” – to manage creative destruction, instead of relying on the “market” to perform the magic[80].

- Awareness of focused nature of the strategy: not targeting everything, but a very specific set of niches and, then, heavily pushing for their rapid transformation.

That is certainly a challenging agenda for both policy and institutional design, but we submit that the pay-off should be very high.

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NOTES

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[2] And starting from a very low base.

[3] In 2010 the annual growth rate stood at 10.4%. The effect of the global recession showed, in 2008, as a mere annual blip with the growth rate dropping to 9.6% compared to 14.2% during the previous year.

[4] China's success in reducing poverty over the last three decades has been remarkable, and is well recognized globally. The number of poor in China living on less than $1.25 per day fell from 835 million in 1981 to 208 million in 2005 (WB: 2013" China: Poverty Alleviation through Community Participation"

[5] Wray (1992) has shown how the theory of liquidity preference and the endogenous money approach may be integrated.

[6] Keynes presents the own-rate of own-return as follows: "For there is a definite quantity of (e.g.) wheat to be delivered a year hence which has the same exchange value to-day as 100 quarters of wheat for 'spot' delivery. If the former quantity is 105 quarters, we may say that the wheat-rate of interest is 5 per cent per annum; and if jt is 95 quarters, that it is minus 5 per cent per annum. Thus, for every durable commodity we have a rate of interest in terms of itself; —a wheat-rate of interest, a copper-rate of interest, a house-rate of interest, even a steel-plant-rate of interest." (Keynes, 1964 p.222)

[7] For a steel plant the value of l is going to be zero and the q is going to be dominant, for holding commodities, then the value of q is going to be zero and the c factor is going to be dominant, and the l factor is going to be zero. In the case of money (or an asset in which l is greater than its carrying costs), the q factor is going to be zero, the carrying costs is going to be almost zero and its liquidity premium is going to be dominant (money has a return that is determined by its liquidity premium, or its user cost). The rate of return on money does not fall when there is an increase in the demand for money. If an individual engages in a spot-

forward transaction in terms of wheat, its carrying costs are the primary determinant of its return. The return of holding wheat over time produces no real income and requires storage, insurance and so on, i.e. carrying costs c are negative.

[8] Since we take money as our unit of measurement/ comparison, this means that a factor on money is going to be set at zero (this also shows the importance of money as the unit of account in the decision-making system independently of its role in the transaction process).

[9] Kregel (1996) has argued that we can think about these returns as being the futures price relative to the spot price for every asset, so that the framework of spot-forward prices is always explicitly present in this argument.

[10] In the absence of an asset like money (liquidity greater than it is carrying costs and zero elasticity of production, and substitution), equilibrium would be reached where all rate of returns would converge to zero, a point in which capital no longer is kept scarce.

[11] This same argument was also used in the Tract on the Monetary Reform and it was applied in The General Theory as the operation own-rates of own-interest will determine the level of output (see Kregel 2010).

[12] As Keynes put it, "let us suppose (as a mere hypothesis at this stage of the argument) that there is some asset (e.g. money) of which the rate of interest is fixed (or declines more slowly as output increases than does any other commodity's rate of interest); how is the position adjusted? Since $a1 + q1$, $a2 - c2$ and $l3$ are necessarily equal, and since $l3$ by hypothesis is either fixed or falling more slowly than $q1$ or $- c2$, it follows that $a1$ and $a2$ must be rising. In other words, the present money-price of every commodity other than money tends to fall relatively to its expected future price. Hence, if $q1$ and $- c2$ continue to fall, a point comes at which it is not profitable to produce any of the commodities, unless the cost of production at some future date is expected to rise above the present cost by an amount which will cover the cost of carrying a stock produced now to the date of the prospective higher price." (Keynes, 1964, p.228)

[13] Keynes emphasized that capital has a return because it is scarce and not because it is physically productive. In a monetary system it makes no difference whether investment is productive or nonproductive in the physical sense.

[14] It should be clear that, "If by money we mean the standard of value, it is clear that it is not necessarily the money-rate of interest which makes the trouble… the same difficulties will ensue if there continues to exist any asset of which the own-rate of interest is reluctant to decline as output increases." (Keynes 1964, p.229) If it was not because of the special characteristics of money, production would proceed until the economy reached full employment because it would always be possible to redirect employment to produce more asset that requires labor. But the problem is that there is an asset (i.e. money) that does not require labor in its production, so that when the demand for it is higher than the demand for other things, labor cannot be put to work. "Unemployment exists because men want the moon" (Keynes 1964, p.235)

[15] Keynes restates the process of convergence as follows: "We should have said that it is that asset's rate of interest which declines most slowly as the stock of assets in general increases, which eventually knocks out the profitable production of each of the others, —except in the contingency, just mentioned, of a special relationship between the present and prospective costs of production. As output increases, own-rates of interest decline to levels at which one asset after another fall below the standard of profitable production; —until, finally, one or more own-rates of interest remain at a level which is above that of the marginal efficiency of any asset whatever." (Keynes 1964, p.229)

[16] The use of NPV method still poses some problems such as the fact that future cash flows cannot be predicted even when it is possible to generate objective probabilities, i.e. the net proceeds of an investment are not perfectly known. Second, choosing the appropriate discount rate involves predicting changes in the future path of interest rates considering the riskiness of each individual project [Kregel 1999]. Third, as Kregel (1999) and many finance theorists have argued the NPV method ignores the value of management flexibility (or embedded options in investment projects). For instance, it does not take into account decisions to postpone (or defer) a project, decisions to expand, or decisions to abandon a project. It becomes then necessary to deal with future possible investments (options) embedded in investment projects.

[17] As Kregel (1999) noted, this idea goes back to the short period theory of prices which was determined by the expectation of the price that the investor will get for the commodities that s/he will buy or sell today at the future date, so that if an investor is a holder of commodities or excess stocks, the decision that has to be made is whether s/he is going to sell today (s/he would be using them) and buy doing that s/he would preclude the ability to sell them tomorrow (or at some future date). The argument behind the impact of prices on excess stocks was determined by individual expectations of the movements of prices. If the spot price is $100 and if the price tomorrow increases to $110, the investor has implicitly taken a loss implied by the decision to sell the commodity at $100, rather than holding today and sell it tomorrow. Thus, the cost of using the commodity today would be present value of the loss that the investor incurred from selling today rather than selling tomorrow at a higher price. [Kregel, 1999]

[18] From national accounting identities, gross domestic product (Y) equals the sum of consumption expenditures (C), investment (I), government purchases (G) and net exports (X - M) that is Y = C + I + G + (X - M). We know that S = I + G - T + CA, rearranging the terms we get: that S - I = G - T + CA where (S – I) the private sector balance equals the government balance plus the current account balance.

[19] Jang-Sup Shin (ed). 2007.Global Challenges and Local Responses: The East Asian Experience (Kindle Locations 240-244). Kindle Edition

[20] This time, Europe is – somewhat ironically - the major victim.

[21] “Be Afraid. That’s the takeaway for both investors and taxpayers in the 307-page Senate report detailing last year’s $6.2 billion trading fiasco at JPMorgan Chase. The financial system, thanks to dissembling traders and bumbling regulators, is at greater risk than you know” (G. Morgenson, NYT, 3/16/13).

[22] For further details see, as an example, Barbosa (2008) and Arestis, De Paula and Ferrari-Filho (2008).

[23] Improved external accounts and a surge in capital inflows contributed to the appreciation of the exchange rate and domestic asset prices.

[24] Improved external accounts and a surge in capital inflows contributed to the appreciation of the exchange rate, which harmed the competitiveness of domestic industries and its export capacity, and domestic asset prices contributing to a consumption boom.

[25] Even though the government has been trying to reduce indexing in the economy, they introduced a formula, through the enactment of law 12.382/11, to readjust the minimum wage in Brazil that depends on prior-year inflation plus the level of GDP growth from the last two years. To be sure, it allowed real incomes to go up by doing this, but it also reintroduced an inertial component to changes in the price level in Brazil.

[26] For the sake of comparison, non-financial private sector debt growth in Brazil increased at a rate similar to debt growth in China, which is already dealing with the consequences of an asset price bubble fueled by credit.

[27] It includes bank loans, bonds, and foreign borrowings

[28] Article 202 of law no. 6,404/76 – known as “The Brazilian Corporation Law”, requires the payment of mandatory dividends, which should be at least equals to 25.0% of a company’s net income. Note that the Provisional Measure 627/2013, enacted into law no. 12.973/2014 on May 14, 2014, among other things, mandated that “under the new law, dividends from profits generated between January 1, 2008, and December 31, 2013, that are greater than the amount calculated using the Tax Balance Sheet are not subject to tax. In the original version of PM 627, this rule was limited to dividends paid on November 12, 2013, if the company made an election to apply the new law from January 1, 2014. The new law removes this limitation.” (PWC 2014, p.2). This suggests that while corporate profits are subject to taxation, dividends based on earnings are tax exempt.

[29] This will be discussed in more detail in the following sections.

[30] Note that “There has been a long-standing difference between nationality-based and residency-based foreign bond placements in Brazil. However, the difference between the two measures has widened substantially after 2009, which coincided

with the post-global crisis environment of ample liquidity. The growing wedge between residency and nationality criteria since 2010 has coincided with stepped up efforts from the Brazilian government to mitigate currency appreciation pressures through capital control measures (figure A5). In particular, between early 2011 and early 2012, the government progressively increased the maturity of the debt issued abroad, subject to foreign exchange taxation. Because foreign subsidiaries are non-resident from a balance of payments perspective, they would not be subject to the tax unless the proceeds were repatriated. Interestingly, issuance through Cayman Islands has increased after the tax tightening, and reduced after the tax loosening between 2010 and 2012. In addition, FDI intercompany loans (one possible repatriation channel of the proceeds from foreign issuance) have increased after tax loosening as well, while portfolio and FDI-equity stabilized." (Bastos et al 2015, p. 15)

[31] In aggregate, we get the following:

$$P = I + Govdef + NX + Cp - Sw$$

Where P equals aggregate profits; I = investment; Govdef = the budget deficit; NX = the current account surplus; Cp = spending out of profits; Sw = saving out of wages

While Kalecki-Levy profit equation shows how profits are generated at the macro level (that is, firms cannot increase aggregate profits by slashing wages), at the micro level firms compete for profit flows. By decomposing firms' return on equity formula, then we get the following:

The return on equity (ROE) equals return on assets (ROA) times leverage, where ROA = Profits / Total Assets; and Leverage equals (Assets / Equity), that is, total assets divided by shareholders' equity. The return on asset is useful to analyze how effectively firms are converting their investments into profits. If we expand the return on assets formula we get the following:

In Keynes's model, profit seeking behavior drive capitalists to undertake investment and production with a view for profits. This means that the production activity is organized and directed by firms, according to their profit expectations, and their decision-making is based upon the uncertain future behavior of markets. That is, the process of aggregation in The General Theory takes place considering the factors that are determined by (q-c), i.e. decisions to invest in instrumental capital goods, non-instrumental capital goods such as investment in housing, buildings and so on. That is, to induce investment the demand price must exceed the supply price of capital.

[32] See Mantega (2013) for more details. While the conventional belief points to state-based intervention and rising gross public debt as the cause of Brazil's current crisis (Romero 2015), they overlook the growth of financial fragility in the Brazilian economy.

[33] The establishment of a target for the primary fiscal surplus would bring about a decline of gross public debt in relation to GDP to build investors' confidence in the government ability to meet the debt service.

[34] Note that the same ratio is 227% in Japan, 175% in Greece, 132% in Italy, 129% in Portugal, 105% in Singapore, and 101% in both the United States and Belgium. That indicates that the proclaimed inexistence of fiscal-policy space, except for debt reduction, in Brazil is completely unaware of international data and ignorant of International comparisons (Source: The Economist's Intelligence unit).

[35] Direct investment overseas by Chinese companies has increased from just $5.5bn in 2004 to $56.5bn in 2009. About 70 per cent of the money invested in 2010 went to other parts of Asia. Latin America came in second place with 15 per cent ("The China Cycle" FT. 09.13.2010.)

[36] For a discussion, from an evolutionary perspective, of the pertinence of using that concept instead of "catch-up", see Burlamaqui: 2011.

[37] And this whole scale structural transformation went beyond dry economic statistics: when deplaning in Beijing for the 2008 Olympic games, McGregor recounts, the New York Times architecture writer, Nicolai Ouroussoff, compared arriving at the city's new airport 'to the epiphany that Adolf Loos, the Viennese architect, experienced in New York more than a century ago. He had crossed the threshold into the future.' (2010: Locations 529-531).

[38] Maybe needless to say, the questions "is it capitalism?" and "if so, what kind of capitalism best describes the Chinese system?" It remains largely unanswered.

[39] But especially banks, since – in contrast to most western countries today - China's banking system is its financial system. This is not to say that there are no other types of financial institutions or "shadow banking system" in China, but to affirm that they never had any relevance in financing development and – at least until very recently (2010 on) – they did not play any noticeable destabilizing role. Nevertheless, according to Wray (2013: 11): "Moving forward, the rise of shadow banking raises important issues that need to be addressed regarding regulation and supervision of financial institutions, including the decision whether to "level up" or to "level down" (tighten rules on shadow banks, or relax them on traditional banks)".

[40] Minsky treated these as "phases of capitalism" instead of varieties. According to him, that phase of finance capitalism collapsed in the Great Depression. What emerged afterwards was new stage of capitalism: managerial welfare-state capitalism (Minsky 1992, Wray 2010). I do not agree with that taxonomy. It is very much US-rooted. A state-led variety of "Finance capitalism" resurfaced in Asia and was a key feature of the "Asian miracles". China is the latest example of that pattern.

[41] From the nineteen centuries to WWII, Germany had in its own Big 4's. The "4 Ds": Deutsche, Dresdner, Darmstader and Disconto (Hilferding: 1910, Landes: 1969: chapter 5).

[42] The "big four" state-owned commercial banks are the Bank of China, the China Construction Bank, the Industrial and Commercial Bank of China and the Agricultural Bank of China, all of which are now the largest banks in the world.

[43] Which were not in Hilferding's model.

[44] I'm well aware that this discussion goes much beyond the scope and purposes of this study. Nonetheless, I believe it has a potentially fertile departure point for a future line of inquire on China.

[45] This discussion elaborates on material from Burlamaqui: 2000.

[46] "In China, it is very important to display the political power of the Communist Party… Management can solve a majority of problems, but not all of them" Li Lihui, the president of the Bank of China quoted by McGregor, 2010: Locations 1127-1129.

[47] A good example of what I have in mind is given by McGregor (2010): "Most foreigners dealing with large Chinese state companies in the early days of economic reform – he writes- felt much like the Japanese executives from the giant Mitsubishi conglomerate negotiating to build a power plant for Baoshan Steel... The Japanese were aggrieved when the Chinese side got the better of them during the talks and they were forced into concessions. 'Yes, you win the negotiations,' the Mitsubishi executives exclaimed. 'But it was your national team fighting our company team!' Chen Jinhua, a titan of state industry who recounted this story in his biography, said the Japanese were right. 'We had invited many capable experts from China's electrical power system to join our negotiating team, but Mitsubishi, as a single company, had been unable to do so,' Chen wrote. 'This example showed the superiority of our wide socialist co-operation." McGregor, Richard (2010 Locations 1155-1161).

[48] I am obviously excluding works in Chinese, once I am not versed in the language.

[49] But let me warn the reader that the book although valuable as a source of information, is quite disorganized in laying it out. There is plenty of repetition and the main themes keep exiting the narrative just to come back in later chapters. Caveat emptor.

[50] The sub tile of the book is “The Fragile Foundation of China’s Extraordinary Rise”, which is a statemnt of analysis produced in this report will not endorse.

[51] They are known as “the Big 4”.

[52] It is quite puzzling that the China’s Development Bank, also founded in 1994 and possibly the most strategic player in the Chinese financial landscape, as we will see in the next section, is never properly discussed in their book.

[53] Founded in 1948.

[54] From the mid-1990s to the mid-2000s, the PBOC has progressively delegated its previous supervisory functions for parts of the financial system to other bodies: The China Securities Regulatory Commission (CSRC) and the China Insurance Regulatory Commission (CIRC) (Cousin: 2011, pp. 21-2).

[55] When the savings-and-loan fiasco erupted in the US.

[56] 2003 marks the beginning of the Jintao/Jiabao leadership.

[57] More precisely, provided the conditions for them to write-off their non-performing loans.

[58] The book does not extend the description into what precisely happened in that episode from a “balance sheet perspective”, but what seemed to have happened was that the Central bank bought bonds from the “treasury”, issuing money at the same time. The banks “sold” their bad loans to the central bank and with the money infused by the treasury, recapitalized and “cleaned” their balance sheets. Note that all the players are public entities, and all of them coordinated by the Communist Party. That means it is a “closed circuit” where there are neither hazard decisions nor “friendly fire”: no one gets cut off by “market forces”, “bond vigilantes” or “bets” by their Citibank or Goldman-like advisor-investment bank against loans or project’s ability to generate cash-flow.

[59] Let’s recall this was before the first signs of the 2007-8 financial “big bang”. Interestingly, most of the “learned public opinion” sees Zhu as a big reformer/privatizer. Big reformer he was, privatizer, only if we add the suffix “Chinese style”: The IPO’s never gave foreign buyers any stake holding in the business they were acquiring. They remained minor stockholders (Here, I’m totally in agreement with McGregor’s interpretation [2010, chapters 1-2]).

[60] They received compensation, but well below their market value and especially to their "expected future value" once urbanization was in place. Of course, if we stay within this somewhat Marxist way of looking at the picture, the same stroke also helped produce a sizable labor force, Marx's "industrial reserve army", available to sell its labor force in the new factories for a very modest price by any international standard.

[61] Because it started in the city of Wuhu.

[62] And note that after Lehman, there were many mergers and acquisitions as well as restructurings and an ocean of cash and guarantees injected by the FED and the Treasury in the US "too big to fail" banks, insurance and corporations. After Lehman, no other big institution closed in the US, supposedly the "land of the market" (See Blinder: 2013 for an excellent discussion of these issues). From that perspective China's preemptive policy action of recapitalizing the banks when they need it, and then making sure that finance and funding would be there when needed was not surprising at all: as mentioned before, Big Government plus Big Bank plus industrial policy. Very much in line with a Keynes-Minsky-Schumpeter approach to "policy in hard times".

[63] Concerning the comparison between the US and the Chinese stimulus package, Lardy gives such a clear and concise explanation, that it is worth it quoting it at length: "the US stimulus package compared with China's suffered in two respects. First, relative to the size of the respective economies the US stimulus was much smaller. Second, while the Chinese program consisted overwhelmingly of increased expenditures, about a third of the US stimulus consisted of tax cuts. But much of the increased income received by US households, as a result of these tax cuts, was used to pay down debt rather than to finance additional consumption expenditures. While this was rational from the point of view of heavily indebted individual households, paying down debt did nothing to increase aggregate demand. These differences in the timing, size, and design of the two stimulus programs contributed to the markedly different economic outcomes in the two countries in 2009—a sharp absolute decline in real output in the United States but only a modest growth slowdown in China" (Lardy: 2011, Kindle Locations 271-279).

[64] As already mentioned, government policies were implemented within close coordination, with and under close supervision of the Communist Party (McGregor: 2010 chapter 2).

[65] For a broader analysis and discussion of China's strategy for Africa, see Carmody and Owusu in Leão, Pinto and Acioly (eds): 2011.

[66] For a thorough analysis of the plan, see "China 2030 - Building a Modern, Harmonious, and Creative High-Income Society". The World Bank and Development Research Center of the State Council, the People's Republic of China, 2012.

[67] BNEF: Bloomberg New Energy Finance.

[68] When fiscal deficits were ballooning and the credit for long term projects from private finance were basically frozen in most of the "North".

[69] At that point, a high official of Alcatel-Lucent remembers telling his boss, the Chairman, that "We won't die at the hands of Huawei; if we die, it will be at the hands of China Development Bank."

[70] Summer 2017

[71] Something (structural transformation by markets alone) which, by the way, never happened in history. That makes the comparison irrelevant, and I am only referring to it because it is so much embedded in economics fairy tales encyclopedia.

[72] To either encourage or discourage investments according, for instance, to sunrise and sunset industry criteria.

[73] What should we learn? What's transferable? How can we compete? Where is there room for collaboration?

[74] See Minsky 1965, Tcherneva and Wray 2007, Wray 2007, Mitchell and Wray 2005 for a detailed exposition of Minsky's proposal for the employer of last resort program)

[75] Slow inclusiveness if looked from a 30-year's perspective, very rapid if seen from what happened in the last decade – especially during the crisis. See Lardy: 2011, chapters 1 and 2.

[76] Although the country is following the lead of Japan, South Korea, Taiwan and Singapore, its speed and scope have no historical precedents.

[77] However, the way the whole program has been managed, it would have to go through a radical change. The way we have it right now points towards a fifteen-year regression in terms of industrial policy, rather than a strategic industrial upgrading tied to a cluster selective innovation policies.

[78] Physical, logistic and administrative.

[79] The international business press is already firing the shots: "Brazil: Humbled heavyweight": Financial Times, March 25th, 2013.

[80] For a further development of those themes from an essentially analytical perspective, see Burlamaqui: 2012 and 2018 chapters 1 and 6.

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Introduction[1]:

Leonardo Burlamaqui and Matheus Vianna

From the 1950's to the 1980's the Brazilian economy grew at an annual average rate of 8%. It was only superseded by Japan. In 1950 China was unplugging from Western imperialism and beginning its journey towards Communism under Mao. Before the Chinese Communist Party flipped to the Deng era by introducing key economic and institutional reforms, the economy's average growth rate was estimated as less than 5% per year between 1950 and 1960[2]. From 1960-1978 it climbed discretely to an average of 5.3% according to the Congressional Research Service. After Deng's reforms, growth speeded up aggressively reaching Japanese golden year's levels and managed to stay there for most of the last thirty years.

In fact, in China 2014 marks the first time since 1998, when the economy was buffeted by the Asian financial crisis, that growth has slipped below the Communist party's annual gross domestic product target, which was set at “around” 7.5 %. The only other year when the official growth has been below the target since the government began publicly announcing annual figures in 1985 was in 1989[3]. On the poverty alleviation front, China’s policies where equally successful. They took millions out of the poverty line yearly, and where famously praised by the World Bank[4].

Meanwhile, since the mid-eighties Brazil virtually ceased to sustain growth rates at more than 6%. The debt crisis coupled with quasi hyperinflation in the eighties led to the so-called lost decade in the nineties, which implied rates of growth, on an average of 1.5 %. The stabilization period, associated to Fernando Henrique Cardoso’s tenures as Finance Minister and President, spanning from 1993 to 2002, delivered an equally dismal 2.8% average growth rate. The correlation between these numbers and the introduction in Brazilian policy-making of a significant process of liberalization in the context of the Washington Consensus doctrines (Verengo: 2011, 17-18), starting in the late 1980’s should be noted.

With Lula’s election, many analysts and forecasters foreshadowed a reversal in development strategy, one that would reverse several of the liberalization policies of the previous decade. That did not happen. As it turned out, the break with previous policies was considerably less marked than expected, and in many respects Lula’s administration represented a continuation of the liberalizing policies of the 1990s. The economic performance as measured by the real GDP growth showed improvement, with a rate of growth of 4.1 percent per year on average, but this reflected mostly a global phenomenon with emphasis to the rise of China itself (Verengo: 2011, 18).

What happened? Comparing these facts and numbers poses a big question for anyone interested in growth, development strategies, macro-policies, global trends and political economy as a whole. The policy-institutional compact espoused by Brazil in the nineties clearly did not work well. Neither for development nor for reversing inequality since the redistribution that took place was mostly from the established (old) middle class towards the high-end of a previously poor stratum of society that gained the rubric of “new middle class”. Wealth was barely touched and the rich even got a little richer thanks to a flood of interest-based income received from the Treasury.

Likewise, the brief experience with poverty alleviation by means of social expending under Lula's administration did little to reverse inequality. It was successful as a starting point, but required sustained growth to really make a durable impact. It is now in full reversal mode after the economy entered a deep recession since 2015, where it contracted around 8% between 2015 and the third quarter of 2017.

In contradistinction, China's structural transformation is revealing itself to be the most spectacular development spurt in history. As admitted by the otherwise liberal-conservative newspaper The Economist, "Firms around the world face ever more intense competition from their Chinese rivals. China is not the first country to industrialize, but none has ever made the leap so rapidly and on such a monumental scale. Little more than a decade ago, Chinese boom towns churned out zips, socks and cigarette lighters. Today the country is at the global frontier of new technology in everything, from mobile payments to driverless cars".

Summing up, while China was vigorously forging ahead in the development ladder, Brazil was, also actively, falling behind. Again: what happened?

In this brief book, we are not aiming at to give a full response to that utterly complex question. This would require a whole research agenda on its own. But we want to venture the hypothesis that the way financial systems are structured and governed, and how they link- or do not link- with investment, industrial and innovation policies should be the starting point for addressing the question.

The first two chapters briefly attempt to provide an analytical framework for the rest of the study. The first by exploring key ideas of Keynes, Minsky and Godley on the subject and how they link, and the second by briefly discussing the current mismatch between the fully-fledged financial markets' globalization in place and the rachitic corpus of global governance institutions created to supervise and regulate them. A conclusion that emerges from both these explorations is that in the absence of effective global financial governance institutions, domestic policy space must be strengthened, especially and not surprisingly, in the financial realm.

We then move to the third and fourth chapters, which should be read as case-studies constructed in the light of the previous pair, and where both, financial structures and governance mechanisms in Brazil and China are scrutinized to shed light to the question we posed to ourselves. Those two chapters are the most robust part of the book, and are the focus of this research. The fifth chapter concludes the book by way of comparing the two cases and attempting to extract some lessons, having China mostly as the teacher, and Brazil as the potential student.

1. Finance and Investment: A Keynes-Minsky-Godley Theoretical Framework:

Felipe Rezende

Introduction

This chapter aims at to briefly discuss Keynes' investment theory of the business cycle and Minsky's financial theory of investment. We then incorporate Godley's financial balances approach and Minsky's financial instability hypothesis to analyze the current crisis that was driven by unsustainable corporate sector deficit spending. The next chapters adopts this Keynes-Minsky-Godley's approach which will guide us in analyzing both, Brazil's current crisis and its "falling behind" along with China's "forging ahead" in the global economic and financial landscape.

Keynes' Investment Theory of The Business Cycle and Minsky's Instability Theory

While Keynes' investment theory of the business cycle is well known to require further exposition, Chapter 17 of Keynes's *General Theory* (Keynes 1964) details his approach to money, by incorporating Keynes' liquidity preference theory of asset prices – enabling us to look at the marginal efficiency of capital (or the investment decision determining the marginal efficiency of capital), as applying to every possible investment decision[5]. We can then analyze at the micro level the individual decisions to invest in the production of capital goods, individual decisions to use these capital goods to provide employment, and individual decisions in terms of financial investments. Thus, every decision to use current income to produce future income can be applied to every type of speculative activity (broadly defined in terms of spot-forward prices).

If we can conceive these returns for every kind of activity we can also analyze these returns in terms of their own-rates of own-interest (Kregel, 1996, 1999, 2010), in which each particular investment decision produces an interest rate (or a rate of return) in terms of itself[6].

Different types of commodities or different types of investments will have different own-rates of own-return determined by different factors. These own-rates of own-interest are distinguished by three different components: $q - c + l$. Some assets produce a physical return q of productive goods measured in terms of themselves, while most assets held through time have a wastage or carrying cost (c) and some assets have a liquidity premium l. The total return of every asset, measured in terms of itself, is given by those three particular factors, i.e. by . "They are defined as the forward price of… wheat in terms of wheat less the spot price as a proportion to the spot price" (Kregel, 1996, p.275).

In general, investment in capital goods (physically productive assets) will generate a (q-c) return, while liquid assets, such as money, have relative low carrying costs and most of their return comes from l - the greatest liquidity premium is attached to money[7]. We need to adjust these returns by a, which is the expected appreciation (or depreciation) of any asset relative to what is taken as the unit of account (or unit of comparison/measurement), i.e. money[8]. This is the equivalent of the forward discount or premium. Thus, we can look at the returns of all the different investment decisions in terms of the total return as a way of representing the spot-forward price framework[9].

In equilibrium the demand price of all assets will be such that the total returns will be equalized as measured by $q - c + l \pm a$. This can be used to calculate the marginal efficiency of every asset, money included. Hence, the marginal efficiency of capital applies not only to existing capital stocks, but to all individual investment decisions. As it is well known, there will be no tendency towards market clearing equilibrium; instead, the tendency in a monetary economy is that the system tries to produce equilibrium towards equalization of the total expected rates of return.

If there are in the system some rates of return that are greater than any other rates of return – it means that $q - c + l + a > i$ (where i is the marginal efficiency of money or return on money), and then individuals will choose to invest their money into those assets which provide the highest rates of return. Equilibrium would occur when the relative advantages of all types of investments had reached equality between the return on money and the rate of return for every other asset in the economy[10].

This framework can be applied in terms of different investment projects, in which the own-rates of own-return will be different across different types of investments, and will be brought to equality by the spot-forward premium represented by a factor[11] [Kregel, 1996, 2009b]. If output is expanding, it can do so through adjustments of a factors, which create backwardation (changes in the spot price relative to the futures price create the possibility to invest today at the spot price to be able to sell at positive forward price) [12].

This process comes to a stop when those *a* factor stops moving, meaning that the spot-futures prices no longer create backwardation. So, to undertake investments in assets that have (q-c) returns relative to money, it is necessary to create a position of backwardation in which the futures price is below the expected spot price. This is the required condition for increasing investments so that the entrepreneur can produce goods today (by making investment today) at a cost that is less than what is expected to earn in the future.

From this perspective, there is nothing to stop investment decisions from producing full employment. What is required is that a factor is increasing, so that futures prices are increasing relative to spot prices. In this context, there is no problem of scarcity, because if the system is always equating relative returns then investors are going to be investing in these returns until they are driven down to zero[13].

However, in a monetary economy there is something that blocks this process. "For it may be that it is the greatest of the own-rates of interest [usually money] which rules the roost" (Keynes 1964, p.223) It is the existence of money (or an asset whose liquidity premium is greater than its carrying costs) that blocks this process. The own-rate on money l sets the standard return in a monetary economy; it is likely that the rate of returns on all other assets will come into equality with the return on money before the economy achieves the full employment level[14]. When money is in a position of backwardation, the rate of return on money does not fall as fast as the rate of return of other assets[15].

Keynes and user costs: An overlooked contribution

For Keynes (1964), firms will invest in productive assets, as long as the expected rate of return on the capital asset exceeds the costs of acquiring them. The marginal efficiency of capital involves forward-looking investment decisions in terms of two general factors: the demand price and the supply price of capital goods. The demand price is the present value of the discounted expected future cash flows (net proceeds) of an investment project. To find the present values, we discount the future cash flows, net of running expenses, at the opportunity cost of capital with respect to equal-risk (or comparable risk characteristics) alternatives.

The net present value (NPV) method is the present value of future cash flows (C_t) discounted by the appropriate market interest rate minus the initial cost of the investment (C_0). To calculate the NPV, it is necessary to forecast cash flows and to estimate the opportunity cost of capital over the investment project life. This means that not only investors have to formulate expectations about future cash flows, but also that they have to form expectations about future interest rates. As Keynes put it, "it is by reason of the existence of durable capital equipment that the economic future is linked to the present". (Keynes 1964, p.146) This is a system in which expectations of future conditions determine present decisions[16].

In *the General Theory*, the supply price represents a major innovation in Keynes' theory of investment. Keynes introduced the notion of user cost, which includes the expectations of future conditions, as the component of the supply price. What determines the supply price is the marginal prime cost plus the user cost. The prime costs of using a commodity today is the sum of the factor costs (F), which in this case is the current market value, plus the user cost (U) – the benefit which will be sacrificed by its current use so that P = F + U. Thus, the decision to use an asset today means that the cost of using it is, in fact, foregoing the ability to profit from holding the commodity and selling it at a future date.

If an entrepreneur expects the price in which he or she can sell the output to rise, then it is rational not to operate the plant today. If the entrepreneur decides to operate the plant today and prices in fact rise, then the entrepreneur incurs losses. Thus, expectations are introduced in the supply price because the investor always must take into account the potential profit or loss that s/he can make, by deciding to operate the plant or not. These decisions (to invest and operate the plant) are going to determine the level of employment and output today (Kregel 1996, 1998, 1999, 2010).

In other words, the decision to operate a plant today precludes the possibility of holding the plant idle and starting its operation at some future date[17]. The decision to use (or operate, or consume) an asset or money today precludes the option to do it at some future date, and the cost of this decision will be determined by the gain or loss that an investor could have made by having refrained from using the commodity today. If an investor decides to sell the commodity today relative to selling it tomorrow, it will produce a loss (gain) once the investor could have held the commodity and have sold it at a higher (lower) futures price rather than selling it today at a lower (higher) price. In other words, the prime cost of using the commodity is given by the factor cost plus the user costs (option premium), therefore:

If spot prices are expected to be higher in the future, user costs will be positive being equivalent to a call option written at a strike price equals to the spot price prevailing when the decision to use (or sell) the commodity is taken. On the other hand, if spot prices are expected to be lower in the future, user costs will be negative being equivalent to a put option written at a strike price equals to the spot price prevailing when the decision to use (or sell) the commodity is taken.

While Minsky incorporated in Keynes' model a financial theory of investment, Minsky pointed out that in a modern capitalist economy, firms' financing decisions involve internal (retained earnings plus depreciation) and external funds (equity and bond issuance; short and long-term borrowing - bank debt).

Minsky: Destabilizing Effects of Stability and Declining Margins of Safety

In Minsky's work, Keynes' theory was extended: the *investment theory of the cycle* was supplemented by a financial *theory of investment* to demonstrate that, in a modern capitalist economy, investment decisions have to be financed, and the liability structure created due to those investment decisions will generate endogenous destabilizing forces. His theory of the business cycle, grounded on his financial theory of investment, shows that a capitalist economy is inherently unstable due to the interconnectedness of balance sheets of economics units and cash flows. From this perspective, while the financial system in a capitalist economy plays a key role to provide the financing to business to promote the real capital development of the economy, it also plays a key role creating destabilizing forces.

Central to Minsky's financial instability hypothesis was that periods of economic stability and economic progress lead to dynamic internal changes characterized by hedge, speculative, and Ponzi financial positions (see Minsky 1975, 1982, 1986). Minsky (1986) focused on the destabilizing effects of stability and declining margins of safety. The purchase of assets through the issuance of debt is core to his financial instability theory. He pointed out that periods of growth and tranquility validates expectations and existing financial structures, which change the dynamics of human behavior leading to endogenous instability, increasing risk appetite, mispricing of risky positions, and the erosion of margins of safety and liquid positions. That is, over periods of prolonged expansion fragility rises, exposing the economy to the possibility of a crisis. This rise in financial fragility has the potential to lead to a slowdown in economic growth, stagnation or even a recession.

Minsky argues that continued success encourages and enables more investment, which creates more income through the traditional spending multiplier and profits - as shown by Kalecki-Levy's profit equation - but it also increases the magnitude of risk underpricing. Minsky argues that during economic expansions, market participants show greater tolerance for risk and forget the lessons of the past crises, so firms gradually move from safe financial positions to riskier positions.

For instance, during an expansion led by an investment boom, profits tend to increase. The profit boom affects behavior and allows firms to meet outstanding financial commitments. During this phase of the expansion both, firms and lenders are willing to expand their balance sheets by increasing leverage.

This is a rational response of economic units to increasing profit opportunities, and it represents a voluntary decline in the margins of safety. As the expansion of credit growth continues, investment goes up, because firms are more optimistic about future economic conditions. As the economic expansion proceeds fueled by the expansion of credit growth, the economy gets increasingly unstable.

This process is self-fulfilling in both directions, that is, firms' investment increases aggregate profits, inducing them to invest even more creating a positive feedback loop. On the other hand, if firms become pessimistic about future economic conditions, they will cut back investment, which decreases income and profits, so firms cut investment even more.

Minsky's view of the capitalist system puts at the forefront of the conceptual framework the interconnectedness of balance sheets and cash flows, and the creation of endogenous instability. In modern economies, private endogenous liquidity grows during booms, and these IOUs represent future financial commitments that must be met as they fall due. This means that economic units must generate enough cash flows over time to validate their debt commitments.

In this regard, Kregel (2014), building on Minsky has suggested a framework that focuses on macroeconomic and microeconomic aspects to financial fragility and provision for liquidity, so that economic units can meet their near-term obligations. At the macro level, Minsky-Kalecki-Levy's profits equation and Godley's sectoral balances approach provide an alternative approach to understanding what determines stability and provide insight into the dynamics of the adjustment process. Government spending can be seen as an injection of monetary instruments into the non-government sector providing that, which is necessary to pay taxes along with desired net savings of that currency. This is the so-called "vertical relationship" between the government and non-government sectors (Mosler and Forstater 1999; Wray 1998).

At the micro level, Minsky's categorization of debt units - hedge, speculative and Ponzi – along with his *Financial Instability Hypothesis* shed light on the endemic financial fragility, the relationship between stability and destabilizing forces underlying capitalist debt structures, and boom-bust cycles of market economies. In this framework, at the macro level, government deficits create cash, and are needed to provide liquidity to indebted economic units, while at the micro level cash flows can be generated by operating, financing and investment activities.

As an example, business firms issue IOUs to finance the acquisition of capital assets, and banks purchase firms' liabilities by issuing their own IOUs (e.g., demand deposits). These IOUs represent future financial commitments that must be met as they fall due. For business firms, the use of productive capital and investment assets usually generates cash flows. For households, their main sources of cash inflows are wage and salaries from employment, investments such as rents, dividends, bonds, mutual funds, etc.).

Economic units can also sell assets to finance their operations. This requires an orderly and liquid secondary market in continuous balance between buyers and sellers to avoid that falling prices trigger a debt deflation process. This reduction in the value of assets relative to liability commitments results in insolvency of economic units.

Thus, in Minsky's framework, declining margins of safety and rising risky positions are a normal outcome of capitalist market processes, so the analysis of current and the estimation expected cash flows of an economic unit, financial instruments used to generate cash - and the balance sheet and cash flow interconnectedness among bank and non-bank financial institutions - are crucial for the identification of robust financial structures, potential Ponzi structures, and significant systemic risks (Minsky 1975: 152). In this environment, financial institutions are tempted to adopt leveraged-growth strategies to expand their balance sheets increasing interest, credit, and liquidity risks, triggering internal dynamic changes that result in increasing fragility and instability in the economy.

It means that the detailed analysis of cash flows provides a better indication of financial fragility and instability. It shows how cash is generated, and how reliable those sources of cash are under different economic scenarios, exposing whether flows of cash are due to income producing activities, flows from portfolio holdings, or flows from the sale of assets or the issuance of new liabilities (Minsky 1972: 147). It measures the sources and amounts of cash money into and out of financial institutions, helping identify sustainable, unsustainable practices, and Ponzi schemes.

Godley's basic macroeconomic accounting identity

Following national income accounting, in a closed system the surplus of one sector must be mirrored by another sector running a deficit. That is, following account identities and stock-flow consistency, we find that the surplus of the non-government sector equals the deficit of the government sector. Moreover, government deficit spending adds to the non-government sector's net financial assets, where the nongovernment financial balance equals the domestic private sector financial balance, plus the balance of the rest of the world, that is, flows accumulate to stocks changing net financial wealth.

It follows that if the non-government sector desires to run surpluses, the government sector must run a budget deficit. It is also useful to distinguish between currency issuer (the federal government) and currency users (that is, the nongovernment sector which is comprised of the domestic private sector and the external sector). If the government sector runs a deficit, then the nongovernment sector accumulates net savings.

In this regard, Godley's three-sector balance approach grounded on accounting identity, shows the interaction between the government sector, the domestic private sector- households and firms-, and the foreign sector[18]. In the aggregate, if one sector runs a surplus at least one sector *must* run a deficit. The sum of all balances, that is the private sector, the government sector, and the foreign sector must be equal to zero. We get

Domestic Sector Balance + Government Sector Balance + External Sector Balance = 0.

By rearranging terms:

Domestic Sector Balance = - Government Sector Balance - External Sector Balance

Or

Domestic Sector Balance = Government budget deficits + Current account balance

When the government sector spends and generates deficit, it creates private sector surplus, all else equal, while a government surplus destroys nongovernment sector's net nominal wealth. So that the private sector can continuously run surpluses, then either the government or the foreign sector must run a deficit, that is from the identity we get the following:

Domestic Private Sector Surplus = Public Sector Deficit + Current Account Surplus

Conclusion

Building on Keynes' investment theory of the cycle, Minsky's work suggests that the structure of the economy becomes more fragile over a period of tranquility and prosperity. That is, endogenous processes breed financial and economic instability. While Minsky adopted Keynes' "investment theory of the cycle", he added a financial theory of investment, with a detailed exposition of the theory in his book *John Maynard Keynes* (1975), which put at the forefront the interrelation between investment decisions and the financial structure designed to allow economic units to take positions in assets by issuing debt. In this regard, debt accumulation is at the core of Minsky's instability theory. His financial theory of investment incorporated Kalecki's approach, in which aggregate profits are created, mostly by the autonomous components of demand.

Additionally, Godley's three balances approach, which explores the interlinkages between the government sector, the private sector, and the external sector sheds light on the identification of financial fragility at the macro level, in which, to accumulate financial wealth, the private sector (firms and households) needs to spend less than its income. This can be accomplished through a combination of government budget deficits and current account surpluses.

This framework will be used to analyze Brazil's financial evolution and current crisis in chapter 3, and China's financial evolution and successful financial governance both, during and after the global financial crisis in chapter 4. Yet, before proceeding to these empirical analysis, we must briefly contextualize both cases under a bigger umbrella: globalization and the way it impacted finance and financial instability.

2. Globalization, Global Governance and Finance

Leonardo Burlamaqui

Globalization and (the lack of) Global Governance

From an economic point of view, Globalization can be defined as a process associated with increasing economic openness, growing economic interdependence and deepening economic integration among countries in the world economy. Globalization itself is not a new phenomenon, but it entered a new phase since the mid-eighties (Nayyar: 2002, Scholte: 2005, Weinstein ed: 2005, Frieden: 2006). This new phase is deeply rooted in a technological revolution, as the previous phase was (Bell: 2001, Freeman and Louçã: 2005, Reinert:2007). It exhibits as its main elements a huge expansion of markets (and especially of financial markets), challenges to the State sovereignty, to established institutions and to social values, the rise of new social actors and political movements and an increased level of "global instability" (Underhill and Zhang, eds: 2003, Underhill, ed: 1997, Michie and Smith, eds: 1999, Gilpin:2000). It also provides the potential for a much diverse cluster of learning and economic opportunities for countries, corporations (and individuals) that can position themselves strategically towards those changes.

This "new" global landscape includes actors empowered by globalization like new international organizations, global corporations, global private financial institutions and civil society associations. It's also shaped by the proliferation of semi-official and non-official rule-setting bodies (like IOSCO, The World Federation of Exchanges, The International Swaps and Derivatives Association [ISDA], and the, now (in)famous, Credit Rating Agencies), international treaties and regional agreements (such as The Trans-Pacific Partnership, the Chiang–Mai Initiative, International Arbitration Tribunals and Bi-Lateral Trade Treaties). The main challenges to the State is to increase, or even maintain, domestic policy space in face of these new global "entities", but also from new global issues, such as vastly increased cross-border financial flows (and growing financial instability), a deepening knowledge divide, cross-border tax evasion, spurts of mass migration, environmental degradation, spiking terrorism, and religious fundamentalism (Woods, ed: 2000, Kaletsky: 2010).

Not surprisingly, globalization has sparked off one of the most heated debates among academics and policy-makers during the last couple of decades. One side sees globalization as a homogenizing force across economies, and it is therefore imperative for local economies to adopt certain global norms. Global regulatory changes such as the replacement of the General Agreement on Tariffs and Trade (GATT) system with the World Trade Organization (WTO) system, the spread of the BIS (Bank of International Settlements) capital adequacy ratio, the introduction of OECD (Organization for Economic Cooperation and Development) guidelines on corporate governance were all based on the perception that globalization requires uniform standards across countries (IMF: 1999, Friedman: 2007).

In contrast, another position sustains that it is not realistic to attempt to draw the picture of globalization and policy implications simply on the basis of the perceived general trends. What is needed is to analyze both commonalities and diversities of globalization at the same time. It is also often the case that diversity is more important than commonality in understanding the reality and especially drawing policy implications for individual countries (Shin ED: 2007.)[19].From an economic policy perspective, the Keynesian approach that "whole is greater than the sum of its parts" was largely replaced by the Neo-liberal view that only individual incentives can produce efficient results; a doctrine dubbed as the "Washington Consensus" which had as its central assumption the superiority of market-based over governance-based solutions and a strong bias against state-intervention.

From a Global Governance perspective, both the United Nations and the Bretton Woods institutions, which are now more than seventy years old, have largely been sidelined by the aforementioned “semi-official” bodies and the post-financial crisis institutions, such as the Financial Stability Board and the G20. On the other hand, both the world economy and global geo-politics have changed almost beyond recognition since 1945, compelling researchers, policy-makers and activists to break new ground, both in analysis and strategies (Kaletsky: 2010, Rodrik: 2011, Krugman:2012, Turner: 2012).

The relationship between globalization and global governance is, therefore, unbalanced. It seems adequate to say that it has become clear since the Asian and Russian crises, in 1997-99, and very much confirmed by the current situation we are facing, that what we have in place right now is to quote Rodrik, *“global markets without global governance”*, a statement that was certainly reinforced by the collapse of the Doha round in July of 2006 and made crystal clear by the 2008 global financial crisis. In the realm of global economic governance institutions, the vacuum is continuing to be especially vexatious in the area of finance.

Globalization and Finance

As Schumpeter, Keynes and Minsky showed us, economic development relies on credit (finance) and innovation. However, financial issues are perceived as both complex and far removed from our daily lives. Indeed, they are often intricate, but belong to the core of our daily affairs. To reassert the centrality of finance in capitalist economies and of financial governance, we will briefly return to Minsky’s “Wall Street Paradigm” in macrofinance whose core assumption, as the previous chapter indicated, is that capitalism should be understood essentially as a financial system, and markets analyzed first and foremost as webs of credit and debit contracts (Minsky: 1978, 1982, 1986). The way to flesh out that vision is to look at every economic unit – firms, households, governments and even countries – as though it were a bank daily balancing cash inflow against cash out flow (Mehrling: 1998). From that point of view, categories such as production, consumption, trade and investment are first of all flows of money, assets and liabilities, exchanged between different economic agents. To put it as Keynes did, money and finance are the most real aspects of capitalism, the ones from everything else springs.

Credit is central. It allows these units to acquire assets which expected cash-flows will exceed their cash commitments. But that may not happen, and liquidity crunches will result. Insolvencies and bankruptcies are the possible "worst case outcomes" of that failure to achieve. Financial fragility is the route towards those possible outcomes. "Fragile finance" refers to profiles of economic units (or of the whole economy) where cash commitments are relatively heavy compared to cash flows, so that there is danger of widespread failure to meet commitments and, consequentially, of breakdowns. Financial fragility surfaces as an endogenous feature of capitalist economies, springing from the connections between indebtedness and uncertainty.

The central implication of this perspective for global - as well as for domestic -finance is that left to its own devices, the inherent herd behavior built in systems based on expectations about an unknown future, produces a financial system that operates to amplify, rather than to reduce its propensity towards both financial fragility and financial instability. Ii one sentence: financial globalization turns finance even more unstable than when it was merely "international". Globalization has made countries financially more vulnerable, as the incidence of financial crises doubled in developed countries and quintupled in developing countries during 1973–2008, compared with the period of 1945–71 (Shin: 2007, BIS: 2017).

Here financial governance and financial regulation enter the scene. To "stabilize an unstable economy" (Minsky: 1986), domestic governments and global governance institutions would be the prime candidates to act as global prudential supervisors and systemic regulators, overseeing global capital flows, structuring pools of global liquidity and as rule enforcers for both creditors and debtors, apart from their function of setting standards. When credit markets froze after the Lehman Brother's collapse on September 15, 2008, this perspective appeared to qualify for a "come back" (Skidelsky: 2009).

However, the issue is far from settled. The post-crisis, policy responses and subsequent evolution of western capitalism are taking an almost reverse course from the one springing from that Keynes-Minsky paradigm, and do not confirm what, at the beginning of the crisis, seemed to be the demise of the Washington Consensus: light financial re-regulation, anti-government campaigns, a strong faith in "corporate responsibility" and an obsession with balanced budgets and "austerity" are still largely in place (Krugman: 2012, Stiglitz : 2012, but see Blinder: 2013 for a less pessimistic analysis).

The focal point here is the resilience of that "free markets work better" approach. The "emergent markets" financial crisis that shook the world during 1997-2002 (Asia, Russia, Latin America and Turkey) opened a window for thinking about a "new financial architecture" (cf. Eichengreen: 1999, Eatwell and Taylor: 2000, Blustein: 2001). As soon as the debate moved to consider instruments like reintroducing capital controls or building a "world financial authority", it ended in the relevant for a, and was kept almost only inside a few academic departments (mostly outside Economics) and a few engaged NGOs.

Unfortunately, this seems to be happening again: representatives of the G20 financial market regulatory and supervisory agencies have been drawing up a set of best practice standards and austerity packages which adoption is, again, being encouraged through peer pressure or through conditions attached to IMF lending programmes[20]. Indeed, the credit worthiness of individual countries' liabilities is increasingly judged by the quality of individual countries' regulatory and supervisory systems as measured by their adherence to these international standards. It has become crucially important for developing countries to be seen, to be adhering to these standards as a minimum condition for attracting and retaining international capital flows. The Bank of International Settlements and the Basel Committee gained much more preeminence with new Basel III accord, but its adequacy in terms of regulating liquidity or leverage is far from established (Cornford: 2011) .

Additionally, various "global standards" are being proposed by a whole gamut of unofficial bodies that include the International Accounting Standards Board, the International Federation of Accountants, the

International Organization of Securities Commissions, the International Association of Insurance Supervisors and the World Federation of Exchanges (Helleiner, Pagilary and Zimmermann: 2010).

There are several problems with this emerging financial patchwork. The Bretton Woods twins have lost power and influence and, in fact, were never "Global" institutions but rather creditor's watchdogs. They were not meant to ensure stability of the financial system, only of the exchange rate system in support of "free" trade. Their move into financial stability is just mandate creep. As for the expanding unofficial bodies – for example: the International Association of Insurance Supervisors and International Federation of Stock Exchanges -, they exacerbate the democratic deficit in global financial governance: by and large "standards setting" bodies, these organizations are opaque, and accountable only to themselves. Their ultimate goal is to impose a one size fits all set of rules which most likely will have deleterious effects in developing countries (Burlamaqui: 2007).

In that "new" financial landscape, business was reshaped by a reckless massive borrowing, which is still largely unseen, unregulated and little understood[21]. Because of the lack of transparency, policy makers still cannot see whether these volatile new debt and private equity instruments are in safe hands, or how they will behave in a crisis when everyone is heading for the exits (Partnoy and Eisinger: 2013, Blinder: 2013).

In the international taxation front, it is estimated that for every $1 poor nations receive in foreign aid, an estimated $10 in illicit money flows abroad, usually to the West (Baker et Alii: 2011). With such large amounts of capital draining from weak economies there is little hope of success, even for a well-crafted development strategy. To sum up: despite the post-global financial crisis initiatives, the evidence suggests we are still facing a global financial governance vacuum. Worst: it seems to be growing, not shrinking. In that scenario, Brazil and Latin-America in general have become marginal players, or non-players at all. In the case of Brazil, *regression* is the appropriate rubric. Although incensed as one of the BRICS best and brightest until 2012, or even 2014, the country is now in economic, political and institutional crisis and, from a global perspective, in complete withdrawal.

However, if we turn to Asia, although the vacuum is also visible there, some promising initiatives are taking place. The damage caused by the Asian financial crisis of 1997-98 made the countries in that region acutely aware of the need to promote regional financial cooperation to prevent resurgence of a crisis, and to attain stable economic growth. Since then, Japan has been vigorously promoting regional financial cooperation together with the other ASEAN+3 countries. More recently, with the rapid increase in economic interdependency in East Asia, regional financial cooperation is becoming more important. Initiatives under the ASEAN+3 Framework include the Chiang Mai Initiative (CMI), the Economic Review and Policy Dialogue (ERPD), the Asian Bond Markets Initiative (ABMI), and the ASEAN+3 Research Group. Even more recently, the Asian Infrastructure Bank and the One Belt One Road initiatives are bound to profoundly reshape not only the whole region, but the globe. Those are evolving in a fast pace, and have yet to be properly understood, discussed and developed, but they could well become the seeds of a more effective, transparent, and badly needed global financial architecture (Cf. Underhill and Zhao, eds: 2003, Ramo: 2004).

Yet, one thing seems to have become clear: the role of the state becomes more important and strategic – not less- with the progress of globalization, both in an offensive and in a defensive sense. Offensively, given the fact that in that *governance-less* global landscape, the state is the best candidate to forge globally oriented strategies which advance national interests, national security and technological upgrading. Defensively, in the sense that it is the only institution capable to act to preserve financial stability, employment opportunities and social integrity. As we will see in the next two chapters, the way globalization, and especially financial globalization and state action interact is key to explain the fortune of nations: if they manage to forge ahead or fall behind.

3. Enduring Financial Fragility, Policy Mayhem and The Brazilian Crisis

Felipe Rezende

This chapter attempts to demonstrate the existence of endogenously generated instability in the Brazilian economy, which has created frequent and systemic financial crises. Brazil's current crisis was not born out of misguided policies, although they played a part. The country's problem is systemic. The reliance on external finance for development creates financial instability and frequent crises. That is, the mainstream approach, based on the economics of scarcity, assumes that developing countries need to attract foreign capital inflows to finance investment, sustained by the false belief that development requires external finance. Not only there is no theoretical support and empirical evidence to support this view, but the application of this policy has contributed to net negative transfer of resources and has created financial instability and frequent crises.

The aim is to provide an alternative interpretation of the Brazilian crisis, as a result of endogenous process which created destabilizing forces, reducing margins of safety and increasing financial fragility. As Minsky put it "stability is destabilizing". The success of traditional stabilization policies over substantial periods has created endemic financial fragility and rising external private indebtedness, causing the deterioration of current account and the fiscal balance. The pursuit of structural stabilization policies, in an attempt to produce a fiscal surplus, causes further deterioration of fiscal deficits and government debt followed by the collapse of economic activity. To break this cycle requires monetary sovereignty and domestic demand led development.

Brazil's Growth and Financial Evolution

Over the past three decades the Brazilian economy has shown a sharp decline in real GDP, followed by a quick recovery (figure 1). Though each crisis had its idiosyncratic features – see, for example, Kregel 1999 and more recently De Paula et al (2015) - Brazil's current crisis has challenged economists to explain its causes and how to deal with its consequences (Safatle 2015, De Paula et al 2015).

As an example, a growing consensus has emerged in Brazil blaming Rousseff's "new economic matrix" policies for the country's worst financial crisis since the Great Depression (Romero 2016). After a modest growth in 2014, Brazil's economy contracted by 3.8% in 2015, and is expected to shrink by 4 % in 2016. Though Brazil is already dealing with its worst economic downturn in 25 years, the economy is headed towards the worst economic downturn since the Great Depression, that is, Brazil has not experienced two consecutive years of GDP contraction since the Great Depression.

Figure 1. GDP annual real growth (% p.y): 1996-2016

Note: Although the original source of the figure says it is annual growth rates, the data shows us quarterly growth rates

This is not the first time the Brazilian economy has experienced a boom and bust cycle. Its recent experience shows that the "Brazilian miracle" of the 1960-1970s was followed by a bust in the 1980s, and the introduction of the real plan in 1994 ended with the financial crisis of 1999 (Kregel 1999). The 2000s led to a unique economic environment conducive to Brazilian economic expansion and improvement in economic conditions for most people (Kregel 2009).

Furthermore, Brazil navigated smoothly the 2007-2008 global financial crisis by implementing a series of countercyclical policies (Barbosa 2008; De Paula et al 2015; Ferrari-Filho et al 2014, Silva and Harris 2012; Rezende 2015), but the country's policy response to the Euro crisis has been criticized for being too late, poorly designed, and too small to bring about economic growth (De Paula et al 2015).

Prior to the economic crisis of 2007-2008 the Brazilian economy experienced extremely favorable external conditions, such as increasing global demand for emerging market exports and rising financial flows to emerging markets (Kregel 2009). Some critics of the Brazilian government argued that the boom in commodity prices, buoyant external demand, and massive foreign flows into Brazil's economy was solely due to external tailwinds, which fueled the positive economic performance during the last decade. This group tended to overlook domestic policies designed to expand social protection and foster effective demand.

Brazilian economic policymakers, by contrast, proudly pointed to government policies as the major cause for the boosted growth. The truth is, as we will show, somewhere in the middle of those extreme positions. Notwithstanding, policy-makers and economists have rightly pointed to the robustness of Brazil's financial system and its resilience to the global financial crisis by focusing on conditions that existed in the U.S. financial system prior to the "subprime" crisis. However, it is our contention that they overlooked the importance of the destabilizing effects of stability on financial structures, the development of new sources of instability and the need to continuously redesign the regulatory structure to meet its objectives of financial stability and providing finance for development.

To be sure, the positive economic performance was driven by both, domestic and external factors. Under Lula's administration, the Brazilian economy grew generating jobs, raising real incomes (minimum wage increases, income transfer programs), reducing poverty and income inequality[22]. Prior to the crisis, banks (public and private) have roughly doubled their lending as a share of GDP, increasing consumer loans (Rezende 2015a). Moreover, following the global financial crisis, public investment increased (PAC I and II, long term investment funding via BNDES), and housing financing increased (My House, My Life) to meet Brazil's investment needs and to act as a counter cyclical tool to offset the decline in private demand (Rezende 2015).

Even though the administration moved in the right direction in an attempt to shift its development strategy to domestic demand-led growth, it committed a strategic error by intervening in the economy with government initiatives that were too small, poorly designed, followed by ad hoc decisions in an attempt to fine-tune the economy and generate improvements in the nation's economic outlook, partly due to the belief that it lacked the financial resources to foster sufficient domestic demand.

It has already been suggested that the conditions that prevailed prior to the 2007-2008 GFC, which benefited developing economies, were characterized as a bubble and the positive conditions[23] experienced by developing economies are unlikely to return. Kregel (2009) wrote:

> "the evolution of developing countries in the New Millennium as a "bubble", for if the US economy was experiencing a financial bubble the counterpart of that bubble was the extremely beneficial conditions in developing countries and in particular in Latin American emerging markets…we cannot foresee a return to the extremely positive conditions experience by developing countries in the recent past virtually all of the positive performance that led to achieving the Brazilian dream of meeting the target of the BRICs appear to be linked to a financial model and financial flows that is not likely to be reestablished. The degree of leverage that had become normal in developed country financial institutions will not return, the leverage generated by financial derivatives will now be couched in much stronger margin requirements. This will not only mean lower asset prices but lower global demand for emerging market exports and thus reduced financial flows to emerging markets including the BRICs…there is general similarity across all BRIC economies for they all depend on expanding demand through increasing global trade and global imbalance financed by global financial flows". (Kregel 2009:353)

This view was also present in a report released by UNCTAD:

> "Prior to the Great Recession, exports from developing and transition economies grew rapidly owing to buoyant consumer demand in the developed countries, mainly the United States. This seemed to justify the adoption of an export-oriented growth model. But the expansion of the world economy, though favorable for many developing countries, was built on unsustainable global

> demand and financing patterns. Thus, reverting to pre-crisis growth strategies cannot be an option. Rather, in order to adjust to what now appears to be a structural shift in the world economy, many developing, and transition economies, are obliged to review their development strategies that have been overly dependent on exports for growth". (UNCTAD, Trade and Development Report, 2013, p.1-2)

The bubble period showed a remarkable turnabout of the current account balance, from a deficit to a surplus position (figure 2).

Figure 2. Current account and trade balance (% of GDP)

Source: IBGE

The consequences of the crisis were clear. Global financial markets and U.S. households started deleveraging, thus producing a new global structure impacting global trade, industrial production, and finance (figure 3).

Figure 3. World Trade and Industrial Production

Source: CPB Netherlands, Brazilian Central Bank (BCB), Funcex

The 2007-2008 global financial crisis, and its immediate impact on the financial and real sectors, triggered policy responses to deal with its consequences. Although the policy response produced a quick increase in world trade, a production which contributed significantly to Brazil's export growth and terms of trade during this time period (figure 3) since 2010, there has been a sharp decline in world trade and production and a reversal of Brazil's terms of trade (figure 4).

Thus, the contribution of net exports to economic growth declined substantially since 2011 (figure 3). Moreover, while the commodity price boom improved the terms of trade (figure 4), the sharp decline in global commodity prices has slowed output growth among commodity-dependent economies (IMF WEO 2015).

Figure 4. Commodity Price Indices (2005 = 100) and terms of trade

Source: IMF, WEO, Oct. 2015, Funcex

Despite Brazil's relative success dealing with the immediate consequences of the crisis, since the aftermath of the 2007-2008 global financial crisis emerging-market economies, and Brazil in particular, have underperformed. With the Chinese slowdown, resource exporters, including Brazil, faced the consequences of declining commodity prices. The pre-crisis development strategy supported by export-led growth and the excessive reliance on external finance reached its limits. The combination of a slowdown of a powerful driver of global growth, changed external conditions, and failure to implement policies to support domestic demand growth contributed to end Brazil's boom with a bust.

The impacts of the crisis in Brazil, in particular, were substantial. The country moved from a current account surplus equals to 1.25 percent of GDP in 2006 to a deficit equals to 3.6 percent of GDP in 2013 being the third-largest deficit economy (after the US and UK) in the world, according to a recent IMF report (table 1).

Table 1. Global imbalance

Source: IMF WEO, October 2014, p.118

Meanwhile, the underlying force from the demand side was sustained by a sharp increase in private credit (figure 5), which ultimately, led the private sector from a surplus position to a deficit, that is, total private expenditure exceeded private disposable income, which implied a rapid buildup in indebtedness of the private sector. In particular, the Brazilian economy experienced rising private sector leverage relative to the growth of government securities (figure 5). As it is well known, growth strategies based on private sector deficits are unsustainable (Minsky 1975, 1982, 1986).

Figure 5. Net Public and Private Sector debt as a percentage of GDP

Source: BIS, BCB, author's own elaboration

To sum up, key policy makers failed to see what was already fairly visible. U.S. demand, financed by the deregulated US financial system and shadow banking institutions, made trade the engine of global growth, and the rest of the world responded by adopting policies of export-led growth.

The exceptionally positive performance of the Brazilian economy during the New Millennium characterized by high growth rates, external surplus balance, rising foreign direct investment flows, rising employment levels, and improving debt burdens of the public sector were the counterpart of deregulated developed country financial systems, which drove asset prices up, such as commodity prices improving developing country terms of trade, allowed rising private sector debt thus supporting the demand for imported goods, and generated a positive carry trade resulting in short term capital flows to emerging markets (Kregel 2009, p.5).

However, following the Great Recession, the combination of substantial U.S. private sector deleveraging and shrinking the U.S. current account deficit led to a sharp decline in the demand for emerging market exports due to structural changes in international markets (figure 6). As an export led growth strategy requires at least one nation to run current account deficits, the absence of robust external demand (figure 6) and the conditions that prevailed before the 2007-2008 global financial crisis, required a shift in Brazil's development strategy towards the domestic market to fill the spending gap.

Figure 6. Global current account balances (% of world GDP)

Source: IMF WEO, October 2015

Sectoral Financial Balances in the Brazilian Economy

We can distinguish the beginning of the new millennium for Brazil's economy between two periods: one characterized by the U.S. financial bubble that contributed to the creation of current account surpluses in emerging economies until the onset of the GFC, and the other initiated in 2007 characterized by a persistent deterioration of Brazil's current account deficits.

During the bubble phase, the domestic private sector ran an average surplus balance equals to 4.8% of GDP from 2002 to 2006, as a result of the combination of current account surpluses (average 0.5% of GDP) and government fiscal deficits (4.3% of GDP). It allowed the net acquisition of financial assets by the domestic private sector to exceed the net issuance of liabilities, which translated into rising net financial wealth in the private sector (figure 7). This period was marked by a significant expansion of real incomes, credit growth, domestic demand and GDP growth, and declining unemployment rates to historical low levels (see Arestis et al 2008).

Figure 7. Financial Balances % of GDP

Source: IBGE, CEI, author's own elaboration

Following rapid economic growth in the years preceding the 2007-2008 global financial crisis, there was a sharp increase in aggregate profits. That is, as the economy experienced an investment boom, profits increased along with investment, which influenced expectations and encouraged more investment.

During that period net profits sharply increased (figure 8), and have been on an upward trend causing a wave of optimism about future sales and profits thus stimulating investment in new capital goods, that is, profits were the main driver of the surplus in the non-financial companies' sector balance.

For instance, the median return on equity (ROE) for the 500 largest companies increased to 12.7%, on average, during the 2003-2006 period, while profits jumped to R$ 90 billion. This increase in realized profits and growing profit expectations influenced investment decisions. It is worth it noting that the median (ROE) for the 500 largest companies during 1995-2002 was equals to, on average, 4.3%. The ROE almost tripled compared to the 1995-2002 average.

Figure 8. Net profits and profitability

Source: Campelo Jr., 2007

However, as discussed in the previous section, the conditions that prevailed prior to the 2007-2008 GFC, which benefited developing economies, were characterized as a bubble and the positive conditions[24] experienced by developing economies are unlikely to return (Kregel 2009, p.5). Given changes in the global trade structure, rising domestic private sector (foreign and domestic currency) debt, and declining budget deficits, from 2007 to 2013, the domestic private sector ran an average financial balance equals to 1.2% of GDP, the external sector an average deficit equals to 2.1% of GDP, and the government sector posted an average deficit equals to 3.3% of GDP. We can use the sectoral financial balances (figure 9) to analyze the following scenarios, using a device suggested by Robert Parenteau (Kregel 2009).

Figure 9. Sectoral Financial Balances - % of GDP (1995-2013)

Source: IBGE, CEI, Authors' own elaboration

The bubble phase allowed the Brazilian economy to run unprecedented current account surpluses and the government sector ran a fiscal deficit. Thus, the domestic private sector balance was in a surplus position. This situation is depicted in quadrant II in the figure 9.

However, the financial instability created by the reliance of external finance generated negative net transfers, which removed profits and income from the private sector (Kregel 1999, 2004). After the global financial crisis there was a sharp reversal of the current account balance into a deficit, which reduced the domestic private sector balance' the surplus (quadrant IIIa). This brings us to the second period, which has been characterized by a reversal of favorable conditions since the onset of the 2007-2008 GFC, that is, Brazil has been experiencing since 2007 deteriorating current account deficits, increasing to 3.6% of GDP in 2013 from 0.2% in 2007. We are now on Quadrant IIIb on figure 9.

With the deterioration of current account deficits to 3.6% of GDP in 2013, from a surplus of 1.25% in 2006 and the rigidity of the fiscal balance, that was equals to 2.9% in 2013, then this means that the private sector was running a deficit, which is depicted in quadrant IIIb. That is, the net issuance of liabilities exceeds the acquisition of financial assets by the domestic private sector, so the private sector was dissaving. This is an unstable financial profile that Minsky characterized as Ponzi, in which net debt outstanding grows. For this financing regime to remain viable it requires rising asset prices and it can persist, as long as lenders are willing to refinance principal and interest payments.

However, a reversal of the necessary conditions to support Ponzi units leads to the sale of assets by economic units to raise cash and meet their outstanding commitments, which can trigger a Fisher-type debt deflation process. If the private sector's desire to net save increases, then fiscal deficits increase, to allow it to accumulate net financial assets. This requires a countercyclical movement of the federal budget to support cash flows, and central bank intervention to stabilize the price of financial assets.

The disaggregation of the private sector among households and firms shows that, in 2007 the corporate sector turned into a deficit and since then, except for 2009 when its balance was equals to 0.1% of GDP, its balance position deteriorated to a deficit equals to 2.9% of GDP in 2013 – that is, fixed investment and investment in inventories have exceeded internally, generated funds generated by firms (figure 10).

Figure 10. Financial Balances by institutional sector as a percentage of GDP

Source: IBGE, CEI, authors' own elaboration

Though the household sector has accumulated record debt-to-income burdens (figure 11), to some extent this household debt was sustained by a small positive balance (figure 10) – i.e., the household sector generated a surplus, spending less than its income[25].

While the household sector has continually spent less than its income – households' sector surpluses – in contrast, the corporate sector is a net debtor since 2007, receiving less income than it spends. The corporate sector balance declined from 1.2% of GDP in 2006 to -2.9% of GDP in 2013. These are significant amounts. This sharp reversal in the corporate sector balance in this period influenced the motor for the expansion of the

Brazilian Economy, which was driven by unsustainable corporate sector deficit spending (figure 12).

Figure 11 and 11A. Household indebtedness and debt service ratios

Source: BCB

Figure 12. Corporate sector balance as % of GDP

Source: IBGE, CEI, authors' own elaboration

While there was a significant decline in internally generated funds available to corporations, its expenditures remained at a very high level, exceeding internally generated funds, the use of borrowed funds increased, suggesting a change in firms' investment behavior. That is, the non-financial sector balance deficit in recent years was the result of new fixed capital investment exceeding undistributed earnings. It is apparent that an increase new fixed capital investment is inversely correlated with the non-financial sector balance.

As this happens, the net flow of credit into the corporate sector increased, and the level of debt to GDP was rising all the time (figure 13). Because since 2007 firms have been running large deficits (except for 2009 due to a small decline in current account deficits and increase in the budget deficit position), its indebtedness sharply increased[26] (figure 13 and 14).

Figure 13. Non-financial private sector debt as % of GDP

Source: BIS, authors' own elaboration

This means that while internally generated funds declined, the corporate sector was borrowing at an increasing pace (figure 13 and 14). Though the conventional analysis stress that non-financial corporations' indebtedness should not be a cause of concern, since it is not high by international standards, and it showed an improvement in their debt profile, they overlook the impacts of rising debt levels firms' debt servicing capacity.

Figure 14. Private sector debt as % of GDP

Source: BIS

For instance, non-financial companies' indebtedness relative to gross operating surplus increased to 209% in June 2013, from 128% in 2007, while the debt service ratio slightly declined from 87.5% in 2007 to 82.75% in June 2013 (figure 15). As this happened, non-financial companies have lengthened their debt maturity and lowered the average interest rate paid by increasing their reliance on subsidized government credit (mostly due to loans extended by Brazil's national development bank -BNDES) and foreign borrowing. In Brazil, earmarked rates are lower than market rates (bank loans and domestically issued bonds - figure 16).

While non-financial companies' debt has been increasing at unsustainable levels, debt-service ratios remained somewhat stable due to the reliance on BNDES borrowing and low cost foreign debt. Though Brazilian companies increased their reliance on local bond markets, the high level of local rates (figure 16) compared to low rates in international markets and BNDES' lending rates have encouraged non-financial companies to borrow funds abroad, and to take more BNDES debt (Bastos et al 2015).

Figure 15 and 15A. Corporate indebtedness as share of gross operating surplus and debt service ratio[27]

Source: BCB, REF September 2013

Figure 16 and 16A. Debentures nominal yield by rating and Swap Pré-DI-(2-YR) (% p.y)

Source: CEMEC 2015, author's own elaboration

To sum up, the private sector's deficit is entirely due to firms' expenditures that greatly exceed their incomes. While lower borrowing costs attracted companies to increase their reliance on foreign borrowing and BNDES financing – contributing to lower their interest expenses– companies raised their dividends payments (figure 17 and 18). Though corporate earnings have been much lower than they have been in the past, income payments on assets, particularly through dividend payments, relative to gross operating surplus have sharply increased (figure 18).

Figure 17. Non-financial companies' gross dividends and interest payments as a share of gross operating surplus

Source: IBGE, CEI, authors' own elaboration

Dividends absorbed, on average, 68% of undistributed corporate profits earnings during 2010-2013 (figure 18). As this happens, and aggregate corporate profits declined, this translated into a sharp decline in retained earnings. This reduction in corporate funding affected firms' investment in productive capabilities - with unsurprising results. Moreover, this increase in dividend payments to other sectors had a weak impact on the economy[28].

Figure 18 and 18A. Non-financial companies' gross dividends and interest payments as a share of undistributed corporate profits

Source: IBGE, CEI, author's own elaboration

Relatively high aggregate dividend payments contributed to lower undistributed earnings to record lows in 2012. While low stock market values (figure 19) have contributed to lower wealth positions, companies increased dividends paid by to other sectors (figure 18).

Figure 19. Ibovespa in USD and BRL/USD exchange rate

Source: BCB

Though during the boom years, a large share of investment was financed by enterprise internally generated funds, compared to the use of external funds. As the expansion got underway, firms were willing to increase the use of external funds to finance investment, which led to riskier financial profiles and declining cushions of safety.

With the deterioration of the current account balance removing profits, via the Minsky-Kalecki-Levy's profit equation, financial positions moved to riskier financial profiles. The combination between declining internally-generated funds and rising local and foreign borrowings changed the composition of investment financing and deteriorated financial profiles. Just like in Minsky's model, it is apparent the increase in the use of external funds (over indebtedness), and the sharp decrease in the share of internally-generated funds in financing investment (figure 20).

Figure 20. Non-financial companies and households' investment financing % of total

Source: CEMEC 2016

Though it is evident that BNDES' loans to firms contributed to reducing their lending costs, the sharp increase in BNDES' balance sheet has led to growing criticism of its policies (see Rezende 2015). In particular, it has been argued that its lending to corporations at subsidized rates did not translate into higher investment rates. Much of this discussion is misplaced, while BNDES' lending contributed to lower firms' interest payments, despite their rising leverage, its policies work primarily by reducing the supply price of capital by reducing firms' borrowing costs.

The development bank does not have tools to influence the demand price of capital. In this regard, for this policy to be successful in increasing investment, it requires rising the demand price of capital - that is, the present value of the discounted expected future cash flows (net proceeds) of an investment project relative - to the supply price. The appropriate policy response should have stimulated the demand price (by increasing it) and the supply price (by reducing it). That is, it requires a coordinated policy action between the Treasury and BNDES, in which fiscal policy influences the demand price of capital (by increasing it), while BNDES influences the supply price (by reducing it). This means that policy should be designed to supporting domestic demand and reducing firms' lending costs.

While BNDES' policies prevented firms that were still in the speculative stage from shifting to Ponzi positions and contributed to lower the supply price of capital, as already discussed by Keynes, in this situation reducing the supply price alone is insufficient to bring about an increase in investment without proper fiscal policy. This implicitly required the policy coordination with the Treasury to stimulate investment. This is aggravated by the decline, in recent years, in the demand price of capital, which was falling faster than the supply price[29].

This does not mean that BNDES's policies were mistaken. Without such policies, investment would likely be even lower. However, while the government implemented policies to reduce investment costs – Rousseff's "new economic matrix" – not surprisingly, it did little to offset the decline in corporate profits and the decline in gross fixed capital formation. This government response attempted to stimulate investment by reducing the supply price of capital, but this policy failed to prevent a sharp decline of investment because the demand price of capital – that is, expected future cash flows (net proceeds) of an investment project – was falling faster than the supply price.

International Dimensions of Financial Fragility: External Capital Flows as a Flawed Basis for Development Policy

The reliance on external finance and the persistence with the adoption of "Washington Consensus" and structural adjustment policies to deal with macroeconomic imbalances have added another layer of financial fragility and instability in the Brazilian economy.

It has already been suggested that Minsky's analysis of financial fragility can be applied to developing countries that rely on international financial markets (Kregel 2004, p. 7).

As discussed in the previous section, Brazilian firms have sharply increased borrowings in local markets and abroad. The accumulation of net financial wealth by the foreign sector - created annually through current account deficits – added another layer of financial fragility. In Minsky's framework, endogenous processes lead to changes in cash flow commitments and balance sheet structures of economic units, which translates into declining margins of safety, causing a shift in their financial profiles from hedge to speculative and Ponzi positions.

While the accumulation of international reserves by emerging economies has received much attention as a strategy of self-insurance against balance of payment crisis (Carvalho 2009), the role played by public banks, and BNDES in particular financing capital goods, thus reducing firms' reliance on foreign capital, has been overlooked. The IMF report noted that "The National Development Bank of Brazil (BNDES) provided substantial funding to Brazilian companies through loans and equity injections after the global crisis. This is likely to have contributed to lower bond issuance amongst Brazilians [Non-Financial Companies] NFCs than it would otherwise have been the case." (Bastos et al 2015, ft, 6).

In this regard, Brazil's public banks have countered financial instability dampening the effects of procyclical behavior of private sector bank lending during the past financial crisis (Barbosa 2010; Rezende 2015). There is also another impact that has received less attention, that is, lending in domestic currency avoids currency mismatch in funding domestic investment. In fact, among the lessons we can draw from Brazil's 1980's debt crisis and the Asian Crisis in 1997 (Kregel, 1998a, 1998b, 1999) is to reduce foreign currency exposure. Because domestic firms borrowed in foreign currency, they became exposed to increases in foreign interest rates and domestic currency depreciation relative to the borrowed currency. For instance,

> "A rapid increase in external financing (much of which was not used for import substitution at all), such as the one that occurred in the 1970s, places a heavy burden on a country's balance of payments that can only be financed by increased foreign borrowing. This appears to have been the case in Latin America in the 1970s, as increased borrowing was used to meet increasing debt service in a sort of Ponzi scheme. The process remained sustainable until the October 1979 Volcker surprise in U.S. monetary policy that increased the interest payments on foreign borrowing, and caused an appreciation of the dollar that increased the domestic burden of dollar denominated loans and, at a stroke, drove most countries to insolvency… the policy [external financing] became untenable in the face of the insolvency created by the large external claims and the failure to recognize this insolvency through default. The reforms that were introduced in a number of highly indebted economies in Latin America at the end of the 1980s were thus promoted by the industrial countries to avoid default that would have rendered the developed country lending banks insolvent, given that their exposure to Latin America was a multiple of their capital. After attempts to generate external surpluses sufficient to meet external obligations and avoid default led to a sharp decline in growth and placed political

> stability in jeopardy, the Brady Plan sought a combination of debt relief and the creation of conditions that would allow the indebted countries to return to international capital markets to borrow the funds needed to meet the remaining debt service". (Kregel 2008: 8-9)

Financing domestic development through external financial flows has led to increased fragility and persistent financial crisis, in which debt denominated in foreign currency created currency mismatch that - combined with rising U.S. interest rates and exchange rate depreciation - increased the debt service and the burden of foreign currency loans. These put the country in a "Ponzi" position, which resulted in a Minsky-Fisher type debt-deflation process. These countries were also subject to reversals of capital flows and decline in domestic activity.

Moreover, even in the absence of such factors, there is no reason to believe that access to international capital markets will necessarily be accompanied by an increase in investment in fixed capital assets to allow the real development of the economy if the liabilities issued by the private sector in capital markets are not being used for the acquisition of productive assets.

Even though Brazil's accumulation of reserves provides another cushion of safety to stabilize external financing – the country is a net foreign creditor (excluding intercompany lending) and its export earnings have covered a significant portion of its debt servicing needs over the past five years (Rezende 2015a) - this margin of safety has been declining due to increasing external obligations, in particular by nonfinancial companies (figure 21).

Figure 21. Brazil's external debt and international reserves (US$ billion)

Source: Central Bank of Brazil

For example, following Brazil's upgrade to investment grade status by Standard & Poor's and Fitch in 2008, low interest rates in global financial centers since the aftermath of the 2007-2008 global financial crisis have pulled Brazilian non-financial companies to tap international markets (figure 22 and 23).

During this period, Brazilian corporate issuers have sharply increased their external borrowing through foreign subsidiaries (see Bastos et al. 2015; Avdjiev et al., 2014), in which investment-grade corporate bonds witnessed strong issuance (figure 23). Moreover, low or negative bond risk premium in advanced economies have pushed investors' demand for higher-yielding assets (Shin 2013; Turner 2014).

Figure 22 and 22A. Brazil: International debt securities outstanding (in billions of US dollars) and Foreign Direct Investment and Company Equity in Brazil, 1999–2015 (in billions of U.S. dollars)

Source: BIS securities statistics table 12A and 12D; Banco Central do Brasil

Figure 23. Non-financial companies' debt issuance by issuer's rating grade (US$ billion)

Source: Bastos et al 2015

Corporate bond issuance through foreign subsidiaries boosted intercompany loans and foreign direct investment. This point has been recognized in a recent International Monetary Fund (IMF) report, which has pointed out that

> "intercompany loans accounted for some 60 percent of total FDI in 2014. Interestingly, about 60 percent of total intercompany loans is made up of loans to Brazilian foreign investors, extended by their own subsidiaries. A likely cause for such loans is the large offshore debt security issuance by foreign incorporated subsidiaries of Brazilian parent companies…The striking correlation between offshore issuance by non-financial corporations and intercompany loans to Brazilian foreign investors suggests that the majority of offshore issuance indeed returns to Brazil in the form of FDI (an inflow of intercompany loans resulting from such offshore issuance can be regarded as carrying a risk profile more similar to portfolio debt than other types of FDI inflows)." (IMF 2015a, 48)

Contrary to the conventional belief that FDI is the least risky form of foreign borrowing, FDI flows carries significant risks and creates structural instability into the system, because it “is not an unconditional gift; it is financing provided against the expectation of profit earnings and the eventual repatriation or relocation of the investment” (Kregel 1996, 58). FDI flows are a source of financial fragility, and have the potential to turn into Ponzi schemes causing an endogenous deterioration of the current account balance and disruptions in the foreign exchange market, thus threatening exchange rate and macroeconomic stability.

Interestingly, even though non-financial companies sharply increased dollar denominated bond issuance abroad since 2008, a recent study by the (IMF) has shown “that stepped-up bond issuance was mostly aimed at re-financing, rather than funding investment projects, as firms extended the average duration of their debt while securing lower fixed-rates, reducing roll-over and interest rate risks. The shift towards safer maturity structures has come at the expense of a leveraging-up in foreign-currency-denominated financial debt” (Bastos et al 2015).

The foreign sector accumulated private domestic debt by persistent current account deficits, that is, it accumulated net financial wealth, which then causes subsequent portfolio adjustments. Because foreign direct investment inflows[30] create future commitments in the form of debt service causing deterioration in the current account balance, increasing capital flows have contributed to foreign imbalances, increasing the deficit on the services balance, and thus rising current account deficits. Not surprisingly, the reliance on external financing has created a deficit on the factor services balance of the current account (figure 24 and 25).

Figure 24. Foreign Direct Investment and Current Account (US$ billion)

Source: BCB

Figure 25. Factor services account balance (US$ billion) and current account balance

Source: BCB

FDI growth has been linked to increasing remittances of profits and dividends, and debt service on intercompany loans, which are draining profits out of the domestic economy. The factor services account balance has shown deterioration, as the accumulation of current account deficits (figure 25) require rising net capital inflows, thus being equivalent to a Ponzi investment scheme (see for instance, Kregel 1996, 2004). A reversal of international factors such as negative real short-term interest rates in advanced economies and investor's risk appetite for emerging market assets created a potentially disruptive force in emerging market economies.

Declining Profits and Investment Behavior

While in a Keynes-Minsky-Godley approach, the sectoral balances approach shed light on understanding all financial flows within the economy, Minsky-Kalecki-Levy's Profits equation, shows the macroeconomic origins of aggregate profits[31]. This brings us to the question of why have businesses not invested more. Brazilian companies faced declining aggregate profits and return on assets (figure 26).

Figure 26 and 26A. Publicly traded and closed companies profits and profitability

Source: CEMEC, author's own elaboration

During economic expansions, high profits and retained earnings can finance new investment boosting economic activity. As this happens, at the macroeconomic level, rising current account deficits put a downward pressure on aggregate profits. This is aggregated by capacity effects, given by the "Domar problem", that is, the additional capacity created by a constant level of net investment further increases the demand gap to fully mobilize resources. The combination of rising current account deficits, slowdown in investment growth and budget deficits took a toll on corporate profitability.

In particular, rising current account deficits put a downward trend on profits, decreasing it by a substantial amount (figure 26). During this period worker's saving was positive (average of 0.3% of GDP from 2007-2013), which also put a downward pressure on profits. Falling profits caused the sharp decline on returns on assets, which given leverage ratios, reduced ROE (figure 26). Hence corporate earnings (and profitability) are much lower than they have ever been in the past. Declining aggregate profits influenced profitability indicators, such as the return on invested capital (figure 27).

Figure 27. Return in invested capital and weighed average cost of capital

Source: CEMEC 2015a, author's own elaboration

The drive for profits makes economic units to work, increase and maintain their profitability through a combination of rising leverage and return on assets. The rapid expansion of private credit over the past 10 years was a double-edged sword: it contributed to support demand and returns on equity, but it deteriorated firms' cushions of safety. Because aggregate profits and margins have been compressing and returns declining, investment grew at a slower pace along with declining profit expectations and increased risk perception.

While Keynes investment theory suggested that investment will proceed if the marginal efficiency of capital is greater than the interest rate, the recent experience in Brazil shows declining aggregate profits and profitability and increasing leverage among non-financial companies and households, resulted in deterioration of confidence (figure 28). Falling profits and falling business confidence put a downward pressure on investment growth (figure 29). While economists and market pundits have raised the question of why Brazil's economic performance deteriorated in the aftermath of the 2007-2008 global financial crisis (figure 30 and 31), this happened because aggregate profits and returns collapsed during that period, while there was a debt overhang.

Figure 28. Confidence Index (FGV) – seasonally adjusted

Source: BCB

Figure 29. Business cycle: fixed investment and GDP growth (four-quarter moving average of year-over-year change)

Source: IBGE

Figure 30. Industrial production index – s.a. (2002=100)

Source: BCB

Figure 31. Capacity utilization – manufacturing industry (FGV) - %

Source: BCB

While the conventional argument has pointed to falling commodity prices and fiscal expansion as the cause of Brazil's 2014-15 recession (Bresser 2015), it was the failure to sustain aggregate profits and expected future profitability along with declining cushions of safety that have sharply reduced the return on assets, which pushed the demand price of capital below the supply price, thus reducing investment.

With the collapse in commodity prices in 2014 and a widespread corruption case that affected public and private investments, they finally knocked off the economy and drove the country into a major recession in 2015. That is, Keynes-Minsky's investment theory of the cycle seems to fit the Brazilian economy.

This is a Minsky's crisis, in which during economic expansions market participants show greater tolerance for risk and forget the lessons of past crises, so economic units gradually move from safe financial positions to riskier positions and declining cushions of safety.

The dynamics of Brazil's current crisis can be summarized as follows: the Brazilian experience shows that while the household sector balance was in a surplus (spending less than its income), firms ran increasingly large deficits (except for 2009 when the government adopted stimulus measures, which generated large enough government deficits that more than offset the current account deficit). The business sector as a whole is in deficit, so the private sector's deficit is entirely due to firms' expenditures that greatly exceed incomes.

However, an expansion fueled by private sector deficit spending lead to the over indebtedness of the private sector. In Brazil, the combination between growing current account deficits along with the over-indebtedness of the business sector have generated record private sector deficits. Though the private sector deficit as a whole was not in deficit until 2011, as the household sector, as a whole, was not in deficit during the entire period. That is, the private sector's deficit spending was entirely due to firms' expenditures that greatly exceed their incomes. This increase in nonfinancial corporate sector indebtedness was, in turn, accommodated by domestic bank credit and bond issuance in the domestic and foreign markets.

Following Brazil's upgrade to investment grade status by Standard & Poor's and Fitch in 2008, low interest rates in global financial centers since the aftermath of the 2007-2008 global financial crisis have pulled Brazilian non-financial companies to tap international markets. During that period, augmented by the perception that the nation was one of the most promising economies, Brazilian corporate issuers have sharply increased their external borrowing.

That is, the increase in non-financial corporate indebtedness was accommodated by domestic credit expansion, and debt denominated in foreign currencies including a strong inflow of foreign direct investment – which reinforced the tendency to generate current account deficits through profit and dividends remittances and the debt service.

The surge in capital inflows along with the accumulation of international debt by non-financial companies during the boom years, worsened the tendency towards the deterioration in the foreign account caused by the outflows created on the factor service account – represented by debt service and profit and dividends remittances. Alongside the business sector deficit spending for a long period of time, the combination between the deterioration of trade and the current account balances and the reliance on external funding added another layer of endemic economic instability. In this regard, there was a self-reinforcing cumulative process which continued to reinforce the tendency towards deterioration in the external accounts, and it was similar to a Ponzi scheme.

As this happens, investment started to grow at a slower pace, both the trade balance and the current account balance deteriorated, workers' saving remained positive – and with Brazil's oil company faced with lower oil prices, rising debt, and a massive corruption scandal – Petrobras, which was a major public investment driver, cut its investments in 2014 and 2015 (figure 32) generating ripple effects throughout the economy. These forces put a downward pressure on aggregate profits. Along with it, firms experienced declining returns on assets and attempted to increase their return on equity by using borrowed funds.

Figure 32. Petrobras CAPEX – USD billion

Source: Petrobras

The Failure of Structural Adjustment Policies

With the Brazilian policy response to the 2007-2008 Global Financial Crisis, Lula's second term (2006-2010) introduced a more flexible primary budget surplus target to respond to the state of the economy. During that period, private debt accelerated relative to GDP along with the shift from a surplus balance to a private sector deficit, so that the underlying structural weaknesses in the Brazilian economy – the over-indebtedness of the business sector, and in particular, private external debt, accumulated through capital inflows.

As Brazil navigated relatively smoothly through the 2007-2008 Global Financial Crisis, which led to a fast recovery in 2010, the central bank diagnosed an overheating economy and initiated a series of interest rate hikes from 8.75% in April 2010 to 12.50% in July 2011, and also led to an early withdrawal of policy stimulus in 2011. The government proposed a R$ 50 billion spending cuts and the monetary authority introduced a series of macro prudential measures to curb credit growth and dampen risk in the financial system (see Da Silva and Harris 2012).

As a result, Brazil's economic growth was sharply reduced in 2011 and 2012. Rousseff's first term was characterized by the so-called, "New Economic Matrix", a policy initiative[32] aimed at reducing real interest rates, Brazil's tax burden, and promoting exchange rate depreciation to improve the competitiveness of the Brazilian economy and lift economic growth. This policy aimed at reducing investment costs and support profit margins.

Rousseff's first term from 2010-2014 was marked by an attempt to replace the neoliberal macroeconomic policy "tripod", that is, floating exchange rate, primary surplus targets, and inflation targeting, which was established during former president Fernando Henrique Cardoso's second term to get assistance from the International Monetary Fund (IMF) to deal with Brazil's 1998-99 currency crisis[33]. This macroeconomic policy framework was reinforced during former president Luiz Inácio Lula da Silva's first term from 2002-2006 (see Arestis et al 2008).

The Brazilian federal government also announced an ambitious investment program based on public private partnerships and concessions to the private sector in key areas, such as logistics, energy, and oil and gas. Moreover, to reduce Brazil's well-known high tax burden, stimulate economic activity, and keep inflation under control, former Finance Minister Guido Mantega introduced a series of tax cuts (figure 33). The government authorized the Treasury to provide loans to its public banks to allow them to support the investment program.

Figure 33. Tax Reliefs and Exemptions (% of GDP)

Source: The Ministry of Finance, 2016a

Though ad hoc tax breaks caused fiscal revenues to decline, they were too small and poorly designed to influence the demand price of capital, stabilize aggregate profits, and promoting a substantial economic growth. By reducing the policy interest rate and using public banks as a policy tool, it was believed that Brazil would initiate a new phase of economic growth.

However, those measures failed in reversing the negative trend in fixed investment spending growth. Though there have been attempts to explain the causes of this dismal performance of fixed investment spending, as discussed in the previous sections, the conventional analysis overlooks the impacts of declining aggregate profits, rising indebtedness of the private sector, and falling demand price of capital assets relative to the supply price.

Though the government response attempted to stimulate investment by reducing the supply price of capital, not surprisingly, this policy failed to prevent a sharp decline of investment because the demand price of capital – that is, expected future cash flows (net proceeds) of an investment project – was falling faster than the supply price.

With the exchange rate devaluation since 2011, aggravated by the US Federal Reserve's "taper tantrum" in May 2013, it was followed by monetary policy tightening in Brazil (figure 34), in an attempt to stabilize the exchange rate, control inflation, and curb capital outflows.

Figure 34. Average Selic rate (% p.y) and average cost of domestic (DFPD) and federal public debt (FPD)

Source: Ministry of Finance 2016

The current administration faced fierce attacks in the previous election cycle from anti-Worker's Party groups and right-wing media arguing that the current crisis is a failure of government due to its actions and interventions, not the normal operation of the free market. With the introduction of policy stimulus through ad hoc tax breaks for selected sectors seen as a failure to boost economic activity and the deterioration of the fiscal balance (figure 35) - which posted a public sector primary budget deficit in 2014 after fifteen years of primary fiscal surpluses - opponents argued that the government intervention was the problem. It provided the basis for the opposition to demand the return of the old neoliberal macroeconomic policy tripod and fiscal austerity policies.

Figure 35. Government balance % of GDP (accumulated in 12 months)

Source: BCB

Following a narrow election victory in 2014, the Rousseff administration moved sharply in the direction of fiscal austerity, causing policy to drift back to the "normal" neoliberal proscriptions despite the success of earlier progressive policies. The tight election reflected the perception of a downward trend of the nation's economic outlook augmented by news that Brazil's economy has fallen into recession in the first and second quarters of 2014. This outcome did not look like the election the Workers' Party expected. Brazil's unemployment rate has hit record lows, real incomes have increased, bank credit has roughly doubled since 2002, it has accumulated US$ 376 billion of reserves as of October 2014, and it has lifted the external constraint. The poverty rate and income inequality have sharply declined due to government policy and social inclusion programs, it has lifted 36 million out of extreme poverty since 2002. Moreover, the resilience and stability of Brazil's economic and financial systems have received attention, as they navigated relatively smoothly through the 2007-2008 global financial crisis.

So, what happened? The reason is obvious, in the aftermath of the global financial meltdown, policy makers misdiagnosed the magnitude of the crisis, the changing circumstances around it, and ended up withdrawing stimulus policies too early. This was aggravated by the failure to make an effective transition to promote domestic demand strategies and the collapse in commodity prices, which affected commodity-producing countries (figure 36). With the slowdown of global demand – particularly from China – the end of the commodity price cycle, negative terms of trade effects, changes in global financing conditions, the Brazilian economy entered in a recession spiral. In particular in 2014 and 2015, it was the collapse in business investment spending that pushed the Brazilian economy into its worst recession in 25 years.

Figure 36. Brazil GDP, China GDP and commodity prices

Source: JP Morgan 2016

The perceived failure of stimulus measures opened space for critics, such as the main centre-right opposition party, to blame Ms. Rousseff's administration as being excessively interventionist leading the Brazilian economy to perform poorly during the past four years. It fueled Mr. Neves campaign to convince anti-Rousseff voters he could get Brazil's economy back on track.

Conclusion: Policy Mayhem - A Minskyan Crisis Coupled with an Austerian Policy Response

The Brazilian current crisis provides an impeccable fit to Minsky's theory. The traditional response to a Minsky crisis involves government deficits to allow the non-government sector to net save. That is, if the private sector desire to net save increases, then fiscal deficits increase as well, to allow it to accumulate net financial assets. The sharp increase in budget deficits in 2015 comes as no surprise. Rezende (2015a) simulated

> "a scenario in which we have rising government deficits to offset current account deficits to allow the domestic private sector balance to generate financial surpluses. In this case, in the presence of current account deficits equals to 4% of GDP, to allow the private sector to net save 2% of GDP, it would require government deficits equals to 6% of GDP. If the private sector is going to save 5% of GDP (equals to the 2002-2007 average pre-crisis) and a current account deficit equals to 4% of GDP, then we must have an overall government budget in deficit equals to 9% of GDP. Given the current state of affairs, government deficits of this magnitude might be politically unfeasible right now". (Rezende 2015a)

In 2015, Brazil's budget deficit increased from 2.0% in 2008 to 10.3% in 2015. Though government deficits support incomes (cash flow, and portfolio effects) and stabilizes profits, the bad composition of government budget, meaning that almost the entire deficit was due to interest payments, did little to sustain employment. With the primary budget balance swung to deficit, and credit rating agencies' decision to downgrade to Brazil's sovereign debt to junk status, all together put Ms. Rousseff under growing pressure to cut public spending.

While Brazil's credit rating cut to junk increased firms' funding costs making international financial obligations costlier for local firms, these circumstances were exacerbated by a reversal of favorable external conditions and a deterioration of domestic factors, including a premature withdrawal of stimulus that led to poor performance by the Brazilian economy and created an opening for critics of Brazilian economic policy who characterized it as too interventionist. This affected the Brazilian political process and led to a change in Brazilian policy in the direction of austerity. The response was based on the traditional approach (structural adjustment policies) grounded on the "Washington Consensus". To constrain domestic demand and keep imports down through the imposition of fiscal austerity and tight monetary policy. By reducing the domestic absorption, it undermines domestic activity and creates unemployment. The result was obvious, fiscal deficits and government debt kept rising and incomes, employment, and production collapsed.

As discussed in the previous section, the Brazilian economy is trapped in a vicious dynamic cycle moving. This is the result of endogenous process, which combined with the reliance on external financing, high interest rates designed to attract international investors and fight inflation, led to an overvalued currency damaging the competitiveness of domestic industries and its export capacity. The reliance on capital flows not only failed to increase productive investment (Bastos et al 2015), but produced rising external private indebtedness and chronic current account deficits. The more successful in attracting capital flows and generating returns, the more fragile the current account position will be (chronic current account deficits). That is, as the economy grows, it exposes the limits to external finance and the endemic financial fragility created by the success of domestic stabilization policies, and it produces a structural influence on the composition of payment flows and the country's export capacity.

As this happens, the economy tends to move towards current account deficits, which will generate an "external drag"—that removes profits of firms—causing a recession. It has already been suggested that the limits to external finance is given by the Domar's condition (Kregel 2004, 2009), that is, capital flows should increase at a rate at least equals to the rate of interest paid on the foreign lending. The Domar's condition is similar to a Ponzi scheme, which is inherently unstable. In this regard, Brazil's current crisis points to the "Washington Consensus" shaky foundation, which is, as already mentioned, the reliance on capital flows as a source of development finance, leading to the real appreciation of the currency, rising foreign capital inflows and external private indebtedness, chronic current account deficits, and increased exchange rate volatility.

Note that the movement is aggravated by the attempt to impose structural adjustment policies, which resembles a "Washington Consensus" crisis forcing a substantial decline in real wages and increase in unemployment (figure 37). Even though Brazil's current crisis is not a financial sector crisis, Brazilian security prices were impacted, generating rising interest rates on Brazilian debt and the collapse in the value of Brazilian debt in investors' portfolios.

A Minskyan policy response would have required the central bank's action to support asset prices, and the Treasury to forge aggressive fiscal policies to stimulate demand and contain unemployment. Yet, the central bank decided not to act. Only the Treasury intervened occasionally and mostly to stabilize securities prices (see Ministry of Finance 2016).

That means, the Brazilian policy response took the opposite turn. Both Dilma Rousseff's second term (initiated on January 1st, 2015) and Michel Temer's ascent to the presidency (on August 31, 2016) provide ample evidence for that conclusion. Dilma's term began with a crucial policy and a

Political mistake. The President-elect decision to appoint an extremely conservative private banker, Joaquim Levy, a top executive of Bradesco, Brazil's second largest bank, and a Chicago-trained economist, to run the Ministry of Finance. Levy immediately implemented an "Austerian" set of policies based on the assumption – completely mistaken, from a Minskyan perspective – that Brazil needed a balanced budget in the public sector, and

Figure 37. Unit Labor cost (ULC-US$ - June/1994=100) and the unemployment rate

Source: BCB

once this happened it would restore private entrepreneur's confidence, investment would resume, and economic growth would return.

The overnight cost of bank reserves in the interbank market (SELIC) was set at 14.25 percent. The exchange rate to the US dollar remained around R$ 3.1, clearly overvalued/ It did not help exports, and, given the SELIC and our open capital account, added volatility to money managers' expectations. Fiscal space for implementing recovery policies, according to mainstream economists, was practically nonexistent, with fiscal deficits reaching 10.3 percent of GDP and the gross public debt ratio at 66.2 percent of GDP[34]. Unemployment has been growing rapidly – at 10.5% now - and the outlook for 2017 is not promising, to say the least, with the International Monetary Fund (IMF 2016) projecting, best case scenario, a 1% GDP growth.

The outcome of "Levy's plan" was a disaster (see figure 38). Confidence did not come back, economic contraction and both, public and private revenue stream rapidly dried out. The result was, in theoretical terms, a combination of a classic Keynesian case of faltering effective demand with a Minskyan situation of indebtedness paired with rapidly declining cash-flows. In practice, this translated as the biggest recession Brazil had ever had in fifty years. Brazilian real GDP has contracted 3.6 percent in 2015, and is estimated to have contracted another 2.6 in 2016. Meanwhile, annual inflation reached 10.7 percent in 2015—way above the Central Bank of Brazil's target rate of 4.5 percent, or even the 6.5 percent ceiling of its policy band (IPEA 2016). In addition, these Austerian measures were against everything the workers party had campaigned for. Summing up: Financial governance for development became a curse phrase in Brazil. Only curbing inflation and balancing budget mattered. Public debt hysteria took over.

Moreover, on top of this financial governance failure leading to an economic collapse – and reinforcing it – the government was thrown into the biggest political crisis since 1964. In the beginning of 2014, corruption scandals were uncovered and exploded in the press. The worst of those scandals involved the largest firm in the country: Petrobras, the oil company of which the federal government is the largest stockholder. The corruption scandals had a negative impact on the Brazilian economy through direct and indirect channels.

The direct impact was the dramatic reduction of investments by Petrobras in infrastructure works, due to the wholesale indictment or conviction of practically all business leaders in the heavy construction industry.

Figure 38 - Brazil Annual Growth Rate: 2012-16

Note: Although the original source of the figure says it is annual growth rates, the data shows us quarterly growth rates

The indirect impact was that the accumulation of accusations against sitting and former members of the government weakened Dilma Rousseff's hold on power, despite her reelection. But Rousseff's political losses suffered because of the corruption scandals were not her only problem. The change in her policy stance—announcing an austerity package after spending the whole electoral campaign declaring her opposition to it—weakened her position even with her own political base. The basis for an institutional take-over by a very conservative opposition took place. President Dilma was impeached on August 31st, 2016.

Michel Temer, the former vice-president, very weak, extremely unpopular and now indicted in even bigger scandals than those which lead to Rousseff's impeachment, took over the post, bringing with him an even more (old) Washington Consensus-oriented set of policy-makers than Levy's team. The new Finance Minister Henrique Meirelles espoused Joaquim Levy's confidence fairy-tale narrative and the public debt hysteria. The country got more of the same. As of November 2017, growth still missing, inflation being curbed by the collapse of investment, consumption, and employment, not by policy corrections, the local states are all broke (contrary to the federal government, they do not create money, therefore they do go bankrupt), unemployment remains high and violence is spiraling both, North and South of Brazil. According to the World Bank, 2.5 million of Brazilians will cross *back* the line of poverty this year (cf. O Globo: 2/13/2017).

The three years collapse we are going through have served no positive purpose at all. But there is another side to it: the country reinforced itself as a "rentier's heaven". For those with sizable financial assets, the 100% safe treasury bonds paying an 8.5 APR (or more, depending on when they were bought) make life very easy. They are the top 5 % of the population, and have tremendous economic and political leverage. This is where we are. No developmental prospects are in sight.

Summing up, Brazil displays a case where a largely successful development strategy created a fragile financial structure which needed profound corrections to stay in course. However, the policy and institutional compact adopted, the Real plan which ended hyperinflation and tamed external financial fragility, turned to be a straitjacket for development afterwards. The combination of an overvalued exchange rate with an open capital account and extremely high domestic interest rates brought price stability, but also created asset price inflation-cum-volatility. Development, not surprisingly from the theoretical perspective discussed above, crumbled. The Brazilian economy was dragged into its route of falling behind. However, if we turn to China, a diametrically opposite picture unfolds.

4. Chinese Financial Development : The Emergence of a State-Led Model of Globally Oriented Financial Governance

Leonardo Burlamaqui

Introduction

Chinese financial governance and development provide a stark contrast with Brazil's. In the ongoing debate on China and globalization, a very common question is the following: "Will China be a winner or a loser in the evolving global landscape?" The response is often…ultimately a loser, and a host of reasons are offered to back it. The one party institutional setting, the lack of democracy, the way the financial system is organized (Walter and Howie: 2012), the failure to properly liberalize the exchange rate regime and so on. I depart from a very different perspective by suggesting a radically different question: how did China manage to become a "winner" so fast, and at so many fronts? (For a similar approach, see Lee: 2012).

In 1976 China barely managed to cover the costs of sending its highest-ranking dignitary to speak at the UN (Walter and Howie: 2012, p). By 2016, it had become the second largest national economy, the largest exporter, the largest manufacturer, the possessor of the world's largest current account surplus[35], and the holder of the biggest amount of foreign reserves (World Bank: 2012, p 25, Tselichtchev: 2012, Bergsten et Alii: 2010: p 9-10). The country also exhibits the fastest rate of growth of the past two decades, an extremely fast rate of technological upgrading (Gallagher and Porzecanski: 2010, chapter 4) and one of the most successful set of policies for poverty alleviation, which allows it to take millions out of the poverty line every year. In one sentence: China became an economic superpower. It did not "catch-up with the "west". It leapfrogged it.[36] (And let's recall that the country is already a nuclear superpower and has veto power at the UN Security Council)[37].

China's Leapfrogging Under Globalization

To flesh it out, let's look at the same basic indicators.

Figure 39 - GDP growth compared: (Source: International Financial Statistics/IMF)

The most telling fact here is that China is clearly in "a league of its own" in terms of sustainable growth rates.

Figure 40 - Chinese growth and inflation (Source: International Financial Statistics/IMF)

Growth slowed in 2012, but inflation is now at a "comfortable" level permitting new stimulus, should the country need it.

Figure 41 - Current account balance compared (Source: Keidel:2011)

China's surplus gives the country ample room for maneuver in the planned "rebalancing". It's also worth it noticing that just a look at the graph suggests that "rebalancing China" is not likely to solve the U.S current account problem.

Figure 42 - Debt to GDP (Source: Wray: 2013)

Even after all the stimulus packages Chinese Debt to GDP ratio sits at a very low level. This is another indication of the substantial "policy space" for expansion of spending if necessary. (Compare with Germany at 80%, the US at 102%, or Japan at 220%). What shows up is quite a healthy pack of economic indicators, especially in a recession-prone/ debt-escalating world economy.

To answer the question of how all this happened is beyond the purpose of this study, but that is the "factual background" which I think is appropriate to use when discussing China's financial landscape, and the kind of financial system which is likely to emerge from its successive waves of reform. The reason for that is the following: looking at China as a "big success case" (although obviously not lacking problems) invites searching for lessons instead of preaching for emulation (especially of Anglo-American practices and institutions).

A Theoretical Excursus

Rezende outlined our theoretical perspective in chapter 2, above. There is no usefulness in reloading it here. What I will do is simply add a few remarks to his framework to help shape my analysis of the Chinese case. From a theoretical perspective, China's achievements take us further from Keynes, Minsky and Godley. It requires the introduction of the core elements of Schumpeter's theory of economic development, his analysis of competition as creative destruction, his conception of "Socialism", developed in Capitalism*, Socialism and Democracy*, and key insights of the literature on the "Asian Developmental State" Economics". A few examples include the centrality credit availability for innovation and development, the key role of the State in steering and governing the development process, the strategic role of development banks to provide the necessary funding for it, as well as the functionality of financial repression to avoid "financial casinos". In one sentence, the most important feature of the "China Model" is centrality of a fully developed "Entrepreneurial State" (See Schumpeter: 1918, and Henderson: 1943 previous mentions of the concept, Ebner: 2009 for its use in connecting Schumpeter's ideas with East Asia's development strategies, Mazzucato: 2013 for relaunching the concept, and Burlamaqui 2017 b for linking Schumpeter's perspective on State activism and public entrepreneurship to China).

Furthermore, the "China case" turns key assumptions of mainstream economics on their head by providing crystal clear evidence that comprehensive privatization and even absolute security of property rights are not necessary conditions for markets to work efficiently (Guthrie: 2006, 9-10). In addition to that, and a much "polemical" subject, it suggests that representative democracy western style is not a necessary condition for a capitalist revolution[38]. (Tsai: 2007, but for a different – although not rigorously argued – view, see Acemoglu and Robinson: 2012).

Against the previous empirical background, and theoretical questions just raised, the objective of the following analysis is to access Chinese financial development, and its implications, both for China itself and for the global economy, particularly the developing world. More specifically, it will be concerned with:

(1) Identifying and characterizing the main attributes of the institutions, and the behavior of the Chinese State-Led model of financial governance, analyzing the coherence and assessing their strength and weakness;

(2) Analyzing the implications of Chinese financial development in a global context;

(3) Assessing the ongoing evolution of Chinese financial development from the perspective of its "fitness", "learning opportunities", and the strategic questions it poses for financial governance for development strategies.

There are two assumptions in setting out these objectives. First, contrary to the still dominant doctrine of "financial liberalization" as the most adequate financial requisite for development under 'free markets' (and in synch with convergence to "international standards"), it will suggest that this is not an empirically proven assertion, nor it is a necessary condition for economic development (Rodrik: 2011, chapters 5-6). In fact, the evidence runs against the proposition: it shows that financial liberalization tends to do more harm than good to development strategies (Kregel: 2001, Reinhart and Rogoff: 2011, Chapter 1, and Rezende's analysis in the previous chapter). Second, there is not such a thing as an "optimal model of financial development" to the world as a whole. The efficient attributes of a particular financial system depend on their appropriate match with the prevailing path of economic development.

The first assumption is a product of the economic theories which feature uncertainty, information asymmetry and the importance of the institutional context as key elements of economic performance (Schumpeter: 1942, Keynes: 1936, Minsky: 1982, 1986, 1996, Stiglitz et Alii: 2010). Uncertainty, information incompleteness and asymmetry are intrinsic to capitalist economies, pervasive in financial markets and especially salient the age of proliferating financial innovations. The model of free, arm's-length banking-cum-securitization tends to be infused with much higher uncertainty and, therefore, much less awareness of proper risk-taking, and risk management than relationship banking.

In contradistinction, theories of endogenous financial evolution suggest that inadequately-fettered financial activities are prone to result in speculative volatilities and under-investment for the productive sector of the economy (Kregel:2008). That said, however, the indicated theories do not deny, all together, the importance of major elements of the dominant doctrine – the emphases on competition, transparency, prudent practices, etc. What is suggested is that the economic importance of these elements is not fixed, but is rather determined by the nature of the financial system as a whole, which encompasses these elements and the whole institutional framework in which it is embedded (Krippner: 2011). Therefore, a main theme to be explored is the importance of institutional articulation among the different elements of the financial system, which is achieved by proper financial governance.

The second assumption is based on the Schumpeterian insight that, even when it functions smoothly, the model of the financial system which is in line with the principles of the mainstream view of the market can at best achieve efficiency, but only in the sense of an efficient allocation of given resources and well-known outcomes, namely the perfectly competitive equilibrium model that lives in Economics textbooks, and only there (Schumpeter: 1942, chapters 7-8). But if we envisage economic development as turmoil, creative destruction paired with radical uncertainty and financial instability, then "efficiency" itself – and the best practices – becomes not only something which has to be achieved through several "recipes", but also as "moving targets".

This is not news for economic historians who have long argued that subsuming finance under the needs of industry has been crucial to modern economic development in the advanced countries (Gerschenkron: 1962;Sylla and Toniollo: 1991, Amsden: 1989, Kim and Vogel: 2011), nor to a whole host of studies of East Asian industrialization, which underlines that the system of relationship banking which sometimes dismissively termed "crony capitalism", and deviates from the requirements of allocative efficiency in the directions of pursuing productive efficiency, turned out to be superior in promoting economic development (Amsden: 1989,Wade: 1990,Woo:1991, Burlamaqui, Tavares and Torres:1991, Hellman, Murdock and Stiglitz: 1996, Chang: 1998, 2003, Kregel: 2001,Gao: 2001).

Therefore, the main focus of the study will be on the role of banks and the broader financial sector in Chinese economic development [39], particularly since the early-1990s, and in the 1998-2001 and 2008-09 State policy's "crisis management" and subsequent economic performance. The goal is to analyze the coherence of the banking and regulatory systems in their relationship with the productive sector of the economy which will then be assessed in terms of macroeconomic stability and long-term economic development. Lastly, the study will try to explore some elements of the Chinese experience in a comparative perspective.

To conclude this brief theoretical excursus, let me venture two bold hypotheses which should be read as propositions to invite further debate and discussion. The first is that from a "macrofinancial" perspective, China's should be pictured as *Schumpeter plus Minsky on Steroids*. Or, to be more precise, of what Minsky characterized, echoing Hilferding and Schumpeter, as a (reinvigorated) form of Finance Capitalism; a financial system dominated by universal banks with close ties with commerce and especially industry, and geared towards finance for development (Schumpeter: 1911, Minsky: 1992 and Wray: 2010 for a discussion of Minsky's analysis)[40].

A universal bank model combines commercial banking and investment banking functions in a financial institution that provides both, short term lending and long-term funding of the operations of firms. It issues liabilities, including demand deposits to households, and buys the stocks and bonds of firms. It might also provide a variety of other financial services, including mortgage lending, retail brokering, and insurance[41].

If accessed through its finance-investment behavior, China's "Big 4" banks[42] plus China's Development Bank – and their SIV's ramifications- are, I submit, the newest incarnation of the Hilferding-Schumpeter- Minsky model. The especially "Minskyian" traces in the model are the pervasiveness of speculative finance and the buildup of situations of "financial fragility"[43] , but also, and that is crucial, going beyond Hilferding and Minsky, and entering Schumpeterian terrain, the presence of a formidable Entrepreneurial State and a substantial degree of socialization of investment (see Burlamaqui: 2018, Chapter 6 for a full elaboration of this point).

An institution that combines the functions of macro-strategist (managing interest and exchange rates, capital flows along with prices' and financial stability); venture capitalist in chief (forging and funding industrial, innovation and technology policies) and creative destruction management (stimulating the creative part of the process in order to speed productivity enhancement and innovation diffusion and acting as a buffer to its destructive dimension) clearly "qualifies" as entrepreneurial.

The presence of this state structure, and what looks like the awareness, by financial regulators, of Minsky's mantra that "stability is destabilizing" provides a plausible explanation for the fact that although situations of fragile finance periodically emerge, they do not degenerate into Ponzi. Rather than that, as we will see below (section 3), they are contained by "proactive financial regulation" and fixed by banking recapitalization and restructuring.

The second bold hypothesis for discussion is that analyzed as a whole, China fits surprisingly well Schumpeter broad – and unconventional - description of Socialism (Schumpeter: 1942: chapters 16-17), and provides concrete illustration of his arguments that "Socialism" can work and can beat "Capitalism" on the grounds of economic efficiency[44]. Schumpeter begins his analysis with a well-known rhetorical question: Can Socialism work? His answer is "of course it can" (1942: 167). However, Schumpeter's definition of socialism is not focused on nationalization of the means of production, nor on the eradication of private property, but rather on their socialization, which involves essentially the redesign of the frontiers and modes of interaction between the private and public spheres[45]. In his own words:

> "By socialist society we shall designate an institutional pattern in which the control over means of production and over production itself is vested with a central authority—or, as we may say, in which, as a matter of principle, the economic affairs of society belong to the public and not to the private sphere" (1942: 168)."

The core concept in the definition is control by a central authority. Translating it to China, the Communist Party is a perfect fit. Regarding the day-to-day operations of that system, “regulated managerial freedom” should be the norm:

> “There may also be a supervising and checking authority—a kind of cour des comptes that could conceivably even have the right to veto particular decisions. As regards the second point, some freedom of action must be left, and almost any amount of freedom might be left, to the "men on the spot," say, the managers of the individual industries or plants. For the moment, I will make the bold assumption that the rational amount of freedom is experimentally found and actually granted, so that efficiency suffers neither from the unbridled ambitions of subordinates, nor from the piling up on the desk of the minister of reports and unanswered questions” (Schumpeter: 1942,168).

Again, in China the chain of command from the Party’s Standing Committee to the Politburo to the regulatory authorities grants the veto power, but it also allows a huge degree of both, entrepreneurial and managerial “freedom”[46].

Thirdly, the innovative process could be coordinated, considering timing and locational considerations. In the process of creative destruction, creation could be performed in a coordinated manner and destruction by means of exit policies:

> “...the planning of progress, in particular the systematic co-ordination and the orderly distribution in time of new ventures in all lines, would be incomparably more effective in the prevention of bursts ... and of depressive reactions ... than any automatic or manipulative variations of the interest rate or the supply of credit can be... And the process of discarding the obsolete, that in capitalism – specially in competitive capitalism – means paralysis and losses that are in part functionless, could be reduced to what discarding the obsolete actually conveys to the layman’s mind within a comprehensive plan providing in advance for the shifting to other

> uses of the non-obsolete complements of the obsolete plants or pieces of equipment." (Ibid., p. 200, my italics).

Fourthly, the relation between technological change and employment could be also rationalized by co-ordination policies, so that it would be possible to "re-direct the men to other employments which, if planning lives up to its possibilities at all might in each case be waiting for them" (ibid, p. 201).

Finally, the resistance to changes could be "strongly discouraged", and consequently the promotion of innovations would be operated in a quicker and more rational way.

There's no space for further elaboration of these points here, but the reader is invited to evaluate China's growth path and its innovation pace under these analytical lenses[47]. As mentioned before, this seems to me a rather useful frame to apply to contemporary China. Nonetheless, there is a big absence in Schumpeter's grand vision: Globalization. China's structural transformation was/is linked with a huge expansion of the "global dimension" and, especially, a strong pressure towards financial globalization. Let's take a closer look at the main contours of these processes.

China's Recent Financial Evolution and Crisis Management

Although much "talk" about China's financial evolution has been going on in the press and in the blogosphere, there is surprisingly little material around that could be qualified as "robust"[48]. The best accounts in describing the Chinese financial evolution and reforms were Walter and Howie's (2012)[49] , Cousin (2007, reissued in 2011) and more recently Sheng and Chow (2016) and Naughton and Tsai (2015). I will draw on their descriptions, although not necessarily in their analysis or conclusions[50] in the next subsection.

The only comprehensive analysis of China's most important policy bank, China's Development Bank, is Sanderson and Forsythe (2013). It will be the basis of my discussion in subsection 3.2. The best analysis of the response to the crisis and its aftermath is Nicholas Lardy's "Sustaining

China's Economic Growth After the Global Financial Crisis" (2011), which will be a basic source for sub-section 3.3. In addition, works by Pettis (2013), Tselichtchev (2013) and papers by Kregel, Wray, Keidel, Naughton and Lo will be used to help compose an analytical narrative. It will not be a deeply detailed picture, but I hope it will highlight the most relevant elements.

2.1. The Banking System and the Reforms 1992-2005

The first fact to register when looking at the Chinese financial sector is that the state and policy banks are by large and far the biggest players:

Table 2 - Relative holdings of financial assets in China, FY2010 (RMB trillion)

Note: *Includes brokerages and fund management companies.

Source: Walter and Howie table Kindle Location806.

The framework of China's current financial system was set in the early 1990s. The process of establishing a legal framework for these reforms gathered momentum with the passage by the National People's Congress (NPC) of a central bank law, a commercial bank law and a company law. China created the so-called policy banks in the mid-1990s, for agriculture, foreign trade and domestic infrastructure, as a way of relieving commercial banks of the burden of making government policy-directed loans- which continued on a large scale though (Keidel:2007, p.1). Walter and Howie summarize it as follows:

> "In 1994, various laws were passed that created the basis for an independent central bank and set the biggest state banks—Bank of China (BOC), China Construction Bank (CCB), Industrial and Commercial Bank of China (ICBC), and Agricultural Bank of China (ABC)[51] —on a path to become fully commercialized or, at least, more independent in their risk judgments and with strengthened balance heets that did not put the economic and political systems at risk" (2012, 5)[52].

To which they add:

> "Reform was strengthened as a result of the lessons learned from the Asian Financial Crisis (AFC) in late 1997. Zhu Rongji, then premier, seized the moment to push a thorough recapitalization and repositioning of banks that the world at the time rightly viewed as more than technically bankrupt" (ibid).

As for financial regulation, the Chinese system is lean and quite straightforward. The financial sector is regulated by one bank - the People's Bank of China (PBOC), which is the central bank[53] or - and three commissions: the regulatory commissions for banking, securities and insurance. The banking sector is principally under the supervision of the People's Bank of China and the China Banking Regulatory Commission (Cousin: 2011, p.21).

The PBOC is responsible for the formulation and implementation of monetary policy, and its goal is to ensure the stability of the financial system. It has many major functions: issuing local currency, administering its circulation, implementing monetary policy through administrative and market-driven mechanisms, managing China's foreign exchanges and gold reserves (through the State Administration for Foreign Exchange, SAFE), regulating the interbank market, fighting money laundering and managing the credit registry and the payment system[54] (ibid).

The PBOC is an administration with ministerial rank, which works under the leadership of the State Council. This means that the power over final decisions and approval lies with the State Council, rather than with the central bank itself, or, to state it more clearly, there is no Central Bank independence in China, but institutional coordination with other policy agencies under a "pilot agency" which is the Politburo under the Chinese Communist Party.

The China Banking Regulatory Commission (CBRC) was established in March 2003 with the aim to increase the independence of the central bank and, especially, making the regulatory function of financial institutions more robust. The CBRC is the supervisor of financial institutions under the leadership of the State Council.

Figure 43 – The structure of the Chinese Banking and Regulatory Systems

Note: *PBOC People´s Bank of China, CBRC China Banking Regulatory Commission.

Source: CBRC/2010.

In fact, the CBRC turned to be a key player in the guidance of the financial system through reform and recapitalization after the Asian Crisis and, even more, in preventing China's financial system from diving into the kind of "casino capitalism" that was thriving in the US and all over Europe since the

eighties[55] (See Figure 45 for a more detailed set of regulatory measures for the period 2007-2012). Lardy affirms this very clearly:

> "Most obviously, since China's financial regulatory agencies had steadfastly refused to permit the creation of complex derivative products in the domestic market and severely limited financial institutions' exposure to foreign sources of these products, Chinese financial institutions had little exposure to toxic financial assets" (2011, Locations 452-454).

This holds completely for the US subprime crisis, but it was the result of a learning process. If we step back and reset to 1997, the reality we meet is that the Asian Financial Crisis hit the Chinese banking system hard. The immediate results were a strong decline in asset quality, and simultaneously a spike in their non-performing loans. In 1998, more than half of all the loans issued by the Industrial & Commercial Bank of China, the country's biggest lender, were unrecoverable. For the whole banking system, 45% of loans made before 2000 ran bad (Cousin: 2011, p 9). "The legacy of years of poor and often corrupt management of the state banks was now more than just a drain on the treasury (Cousin: 2011, p.12). It was a lethal threat to the entire economy" McGregor: 2010, Kindle Locations 993-996). With the system in crisis, Premier Zhu Rongji turned to what McGregor labelled "his Leninist toolkit to bend the banks to his will". The party apparatus in Beijing, in tandem with its Central Organization Department, seized the power to hire and fire senior executives in banks and other state enterprises, no matter where they were in the country (McGregor: 2010, Kindle Location 1001).

To most observers, the government's regulatory system remained intact on the surface. The local banks and regional regulatory authorities were outwardly undisturbed. However, the Politburo created a parallel policy toolkit, 'a powerful yet mostly invisible party body for monitoring financial institutions and their executives'. The actions were bold, and the results quickly showed up. Between 2000 and 2003[56], the government's (more properly, its new regulatory compact) "moved"[57] over US$ 400 billion away from the "Big 4" balance sheets to clean them (Walter and Howie: 2012, 5).

Largely mimicking the Resolution Trust Corporation of the U.S. savings-and-loan experience in the eighties, the equivalent of four "bad banks", were created. One for each of the Big 4 state banks, to which the bad loans were then transferred. It then recapitalized each bank, allowing them to write off the bad loans, and raised nearly US$50 billion of new capital, largely taken from foreign reserves, and by listing their shares in Hong Kong and Shanghai in 2005 and 2006 (Walter and Howie: 2012, 5-6)[58]. The next strategic move in that direction was to offer and sell shares to foreign "household" financial players. In 2005, the Bank of America paid US$ 2.5 billion to China Construction Bank for 9% participation and Temasek, Singapore's Sovereign Wealth Fund paid US$ 1.5 billion for a 5 % interest in the same bank. Several other IPO's followed, a few of them ranking among the biggest since 2005 (See Table 3).

Table 3- Chinese biggest IPO's 2005- 20010. Source: Dialogic

The idea was to infuse, into the banking reform, an endorsement from the "international financial community" and maybe, some learning on corporate financial governance[59]. Politically, it did not work so well. There was a huge attack from the "nationalist camp" in the party denouncing the "sale to foreigners of Chinese valuable assets". The political environment shifted, and the impact on the financial system was to stall the reforms (Walter and Howie: 2012, 19). In fact, a move towards partially "internationalizing", and also raising their profile, some selected SOEs by opening their capital and listing them in the Hong Kong Stock Exchange was already in place since the early nineties. Sinopec, PetroChina, China Mobile and the Industrial and Commercial Bank of China, and many others, went through this process. If it was a concerted effort towards a more "liberal path" or a strategy to populate the Fortune 500 with Chinese names is debatable. What is not, is that now China has 44 companies listed there – a huge success.

From a "financial regulation" perspective, the "nationalist attack" served a purpose: to legitimate pushing the brakes on a process that could potentially have allowed a much larger presence of western financial institutions in China. More explicitly, to have created the conditions for the maintenance of a high degree of financial repression, which was definitively not a bad institutional environment to operate on the eve of the financial disaster that came after the collapse of Lehman Brothers in September of 2008.

In the summer of 2008, a small group of foreign "financial experts" headed to China to give financial advice, Wang Qishan, the vice-premier in charge of China's financial sector, quickly made it clear that China had little to learn from the visitors about its financial system. His message concisely: "You have your way. We have our way. And our way is right!" (Mc Gregor: 2010, Kindle Locations 51-52).

Chen Yuan, the celebrated chair of China's Development Bank seemed to be thinking along these lines when he declared, in July 2009, "[We] should not bring that American stuff and use it in China. Rather, we should develop around our own needs and build our own banking system" (Yuan quoted by Walter and Howie: 2012, 27).

They had a point. If we look at Chinese Banks's capitalization (compared to JP Morgan), as well as their NPL ratios, the pictures speak for themselves.

Figure 44- Chinese Bank's Capitalization compared with J P Morgan (JPM) in 2010

Source: Walter and Howie, Location 1069

Figure 45 – Non Performing Loans of Top Chinese Banks: 1999-2010

Source: Walter and Howie, Location 1114

China's Development Bank: The most strategic player

> "In one decade, China's Development Bank (CDB) has become the financial enabler of both, China's global expansion and domestic boom" (Sanderson and Forsythe: 2013, introduction).

With that strong statement, the authors begin their analysis of what claims to be "the core of China's state capitalism" … "A system of government-controlled banks and companies that many development countries see as an alternative to a freer market-focused system" (Ibid). Founded in 1994, with "global operations" springing from Asia to Africa and Latin-America (more on that in section 4 below), and with total assets of almost 1 trillion dollars and a non-performing loan ratio of 0.4 % at the end of 2001, CDB is in fact the "pilot agency" of China's aggressive financial diversification in the last ten to fifteen years. In 2011 CDB had a loan portfolio of around US$ 884 Billion, and "a business presence in 116 economies around the globe (Yuan: 2012, Chairman's message for the 2011 CDB Annual Report http://www.cdb.com.cn/english/Column.asp).

According to Sanderson and Forsythe, CDB's hallmark financial innovation was the system of local government finance, which transformed China's landscape in just over a decade. To understand this innovation, we must recall the reversal of one of the core principles of the Communist Revolution: the redistribution of land from rich property owners to landless peasants. Between 1996 and 1997, as the Asian crisis started the spending on infrastructure in China doubled, and in 2002 it rose nearly three times.

This massive urbanization was a sensible response to collapsing "global demand", an event that would be repeated in 2008-09. However, it came with a serious downside, requiring a re-appropriation of land by the state as a condition to create "development zones" where bullet trains, sports complexes, shopping malls, apartment blocks and all kinds of urban facilities were produced/erected at a very fast pace. This re-appropriation of land was the equivalent to a vast enclosure movement, where millions of peasants were obliged to leave their lands to give way to urban expansion[60]. Of course, this growth spurt of urban construction required finance and funding in large scale, but there was still a problem to solve.

In 1994, China's premier Zu Ronjin cut local governments off from direct borrowing due to spiraling inflation. In the words of Chen Yuan, "While our national government enjoys virtually unlimited credit, the initiators of urbanization projects, local governments, have little" (http://www.cdb.com.cn/english/NewsInfo.asp and Sanderson and Forsythe: 2013). CDB, which is funded by treasury bonds typically bought by China's commercial banks, could give seed money to local governments to start the projects. However, more credit would be needed to provide for the full funding of the projects, and along with it, the requirement of robust collateral.

Here enters Yuan's vision which yielded CDB's innovation. Yuan knew that urbanization would vastly increase land's prices and land was, now, in the hands of local governments, which meant the local governments were sitting into a potential "gold mine". The innovation was the local-government financing vehicle (LGFV), a public SIV. A company set up by local governments to allow them to spend beyond the limits of their budgets (Sanderson and Forsythe: 2013). They would get additional money from CDB, but trough LGFVs, giving land as collateral, which value was bound to increase around the investments made possible by the bank's strategy. Higher land prices would mean more local government income; hence, more room for loans – and spending.

This was a self-fulfilling strategy, a type of financial operation already devised by Soros (1987) who pointed out that the willingness of a bank to finance an investment project has a direct impact on its viability and thus, on its returns, and therefore, on its price (Kregel : 2007). It was also a Schumpeterian one where credit allowed investment to occur, raised the collateral's value and, as the investment matured, generated the cash-flows to repay the loan. The "Wuhu Model", as it was labeled[61], worked. As the authors recount it: "[this system] managed to transform a sleepy city into a bustling metropolis that today is home to one of China's most prominent car makers, Chery, just happens to be owned by one of the first LGFVs".

Furthermore, the model's success in Wuhu was replicated across the country, with CDB lending money to LGFVs in Shanghai (home to former president Jiang Zemin), Tianjin (home to Premier Wen Jiabao) and Suzhou. The system spread across the country, and came into its own in 2008 when it helped shield China from the worst effects of the global financial crisis. Now, every province in China has set such companies to finance infrastructure investments. (Sanderson and Forsythe: 2013, 9-12).

At this point, the reader should be wondering the obvious: is this not precisely the type of financial behavior that produced the sub-prime crisis in the US – a leveraged lending binge backed by the assumption that real estate prices would never collapse? If so, why so much enthusiasm about it? My answer to that question is no, and for several reasons. First, all the players involved were public entities. The loans were made by public banks to local governments and guaranteed by both, the People's Bank of China (PBOC- the central bank) and the Ministry of Finance (MOF). Secondly, under those circumstances, what we have is a State-sponsored – bank - funded expansion, which could last for a very long time. And it did: The non-performing- loan rates consistently declined for the top Chinese banks between 1999 and 2010 (Recall Figure 45 above).

Thirdly, in the worst-case scenario, the banks could become filled with "bad loans", they would never face credit freeze or a "let the market do its job" the way it happened in the Lehman Brothers – difficult to understand - decision[62]. They would have been recapitalized again. However, that scenario never materialized. Fourthly, there was no "destructive lending" in the process: no "NINJA" loans, no synthetic layers of leverage over leverage (derivatives such as stock options, CDO's and CDS's) pilling over the loans to enhance trader's gains, and no betting against a "client", Goldman Sachs- ABACUS- Paulson style.

Finally, and most importantly, as Walter and Howie disapprovingly point out, the Party treats its banks as basic utilities that provide unlimited capital to the cherished state-owned enterprises (2012:27). Zhou Xiaochuan, a PBOC's Director has framed the purpose of the banking system in a more positive way when stating what could have happened without the previous banking reforms-cum-recapitalization: "…China's financial system would be a drag on its economic growth, making it impossible for the system to service the economy and support development" (2009, quoted by Cousin 2011, my italics.). To me, in face of the "Ponzification" of the bulk of the U.S and European financial systems in the last three decades, the Chinese authorities' way of handling the banks seems just right.

However, Walter and Howie suggest a picture that seems darker than what it is actually happening. According to Lardy, one of the most important conclusions of his book is that:

> "…the stimulus program did not advantage state-owned companies at the expense of private firms and, more importantly, did not alter the long-term trend of China's reform, in which private firms have increasingly become the most important driver of economic growth. Of particular note (….) contrary to the often-repeated assertion, bank loans in 2009–10 did not flow primarily to state-owned companies and that the access of both private firms and household businesses to bank credit improved considerably" (2011: Kindle Locations 205-207).

Financial Regulation and Crisis Management: 2008-2012

> "China's policy response to the global financial and economic crisis was early, large, and well designed. Although Chinese financial institutions had little exposure to the toxic financial assets that brought down many large Western investment banks and other financial firms, China's leadership recognized that the country's high dependence on exports meant that it was acutely vulnerable to a global economic recession" (Lardy: 2011, Kindle Locations 260-262).

In anticipation of a global slowdown, Lardy recounts, the central bank initiated a policy of monetary easing in September 2008. The State Council, China's cabinet, followed up a few weeks later by rolling out a RMB4 trillion ($586 billion) stimulus program… In contrast, the American Recovery and Reinvestment Act of 2009 was not passed by the Congress and signed into law by the President Barack Obama until mid-February 2009 (Lardy: 2011, Kindle Locations 270-271)[63].

Table 4 - Chronology of Major Policy and Regulatory Changes: 2007 – 11

Source: Lardy, 2011: Location 321.

As we can see, China's response to the crisis was much broader than the stimulus program. Targeted and nuanced regulatory measures preceded the program, complemented it and provided a follow up, swiftly changing course whenever it was needed. That is what I referred to as "proactive financial regulation".

Nonetheless, it is well known that the Chinese public financial sector played a crucial role in the State counter-cyclical policy. As already mentioned, the Chinese "stimulus package" was double of the US as a percentage of GDP – around 15%). The unprecedented scale of expansion in bank credits in 2008 and 2009 is a telling indication of the nature and role of the sector.

There have been concerns both, inside and outside China that this prominently expansionary behavior of Chinese banks could result in severe disruptions to macroeconomic stability and in rampant inflation. Indeed, signs of speculative bubbles in properties and in the stock market were already evident amid the credit expansion (Walter and Howie: 2012, chapters 1-3and 8). It is well known that the State had to reign in from the second half of 2009 to raise capital and reserve requirement ratios, and to put a brake on the funding of speculation.

However, as Lardy, Sanderson and Forsythe and Keidel point to, the credit expansion seems to be more deep-rooted than just a product of temporary State counter-cyclical policy. It rather reflects the expansionary instinct of the banks[64], particularly because expansion was already rather rampant well before being boosted by State policy from 2008 (Sanderson and Forsythe: 2013, Keidel: 2011). But note, by recalling Lardy's opening quote to this section that contrary to the often-repeated assertion, bank loans in 2009–10 did not flow primarily to state-owned companies, and that the access of both, private firms and household businesses to bank credit improved considerably. Figure 46 provides a concrete measure of that statement.

Figure 46 - Bank lending to businesses by type of borrower, 2009-10.

Source: Lardy, 2011, location 881.

Conceptually, the expansionary path of the Chinese financial sector appears to fit, as I suggested above, Minsky's financial instability hypothesis. The inclination of the sector towards asset price inflation, along with funding productive investment, could led to a Ponzi type of financial expansion in the near future. On the other hand, however, the State's corrective action also reflects a "Minskyian policy prescription": It is the closest validation I can see nowadays of both, "big government" and "big lender of last resort", and a quite efficient regulator whenever needed. This suggests that it is very much aware of such danger. Nevertheless, the State had to balance this concern with its broader consideration of sustaining economic growth, particularly over the recession-hit years. Fragile finance structures are bound to emerge.

This explains why its corrective policy has emphasized prudent banking and the selective allocation of financial resources, rather than curbing credit expansion all together. Given the complexities involved in the interaction between the market players and the State policy-institutional regime in the evolving Chinese financial sector, it remains a formidable task for the State (particularly the banking regulator) to maintain this fine balance.

In any case, either examining China's domestic record, or analyzing it from a comparative perspective, it is crystal clear that the Chinese financial sector has done so far, a very good job in fostering economic growth during the crisis (Sanderson and Forsythe: 2013 passim, Yongding, Y. 2012, Tselichtchev: 2013, Chapter 8). Financial resources have been mainly channeled to productive uses, particularly in the form of infrastructural investment. What seems of general concern, however, is whether economic growth on the back of unrestrained (or, less-than-prudent) credit expansion is sustainable over the long term. Put another way, long term, should China resume its pursuit of converging to "international standards"? Or should it rather turn to pursue an alternative model? And if it does follow the second trajectory, what will the alternative model be and how will it impact Chinese economic development? For the outside world, the further questions are: should China follow the second trajectory, how will it impact the world economy and what kind of example will it set for the rest of the developing world? (Lo et alii: 2011, and especially Pettis: 2013).

That China might turn to pursue, and affirm, an alternative model for its banks and its financial system is not wishful thinking of the “nationalistic camp” in the party, but rather a real possibility indeed – as we have seen from the statements of some of their top ranking financial officers - a very likely scenario. This is evident in the trajectory of financial development it has travelled so far. As already mentioned, the discernible turning point was the 1997-98 East Asian financial crisis. Prior to the crisis, in the years 1993-97, the main thrust of state strategy for financial development was a unidirectional pursuit of the three-pronged policies of liberalization (of the financial-sector structures and activities), corporatization (of financial institutions particularly the banks) and internationalization (of both, the structural and the institutional conditions of the financial sector) – evidently with an objective of eventual convergence to “international standards”.

The East Asian crisis prompted the Chinese leadership to deviate from this pursuit. Instead, it has increasingly turned to assign multiple objectives for the banking system: to promote macroeconomic stability and long-term economic development (and social responsibility), in addition to the standard emphasis on financial resilience or profit-making cum risk-control of the banks. By extension, the financial sector is also designated with these multiple objectives, not least because of the predominance of the banking system in the sector (Sanderson and Forsythe: 2013, Walter and Howie: 2012).

The result seems to be a nuanced approach to financial development. Initially, in the years 1998, the policy emphasis was to help the big state-owned banks clean up the mess with their balance sheets – while at the same time enhancing their commercial orientation and strengthening the regulatory framework. What was peculiar is that the measures adopted for this end were characteristic of a strategy of “growing out of debts”, i.e., state capital injection and, more important, state-driven fast economic growth to reduce the proportion of poor quality banks assets. In the event, the target of cleaning up balance sheets and, thereby, avoiding bank failures and financial crises was successfully achieved (Lo: 2011, Keidel: 2011).

The corporatization of state banks also made fast progress, culminating in their public listing in overseas stock markets. Meanwhile, controlled liberalization has resulted in a sufficiently diverse sectorial structure, and the provisions of China's admission to the World Trade Organization in 2001 formally subjected the sector to international competition. Yet, all none of these developments led from a transition from the traditional style of relationship banking towards arm's-length banking. The opposite has been the case, evident in the increasing concentration of bank lending with large-scale, mostly state-controlled enterprises. The 2008-09 credit expansion can thus be seen as a re-run of the State's strategy to promote the improvement in financial resilience and economic growth proceeding hand in hand, but this time it is the banks that take the lead.

It thus appears that, amid the outbreak of the worldwide financial crisis in 2008, the Chinese State leadership has clearly downgraded the doctrine that financial resilience – understood as profit-maximization-cum-risk-minimization of banks – is itself a necessary (and often sufficient) condition for the best contribution of finance to macroeconomic stability and economic development. The belief is rather that financial resilience is often, but not always, the major goal. It needs to be complemented and/or balanced by something else in normal circumstances, and be modified in times of crisis such as that of 2008-09. One central aspect of the "something else" is the close relationship between the banks and the large-scale enterprises, which is consistent with the prevailing path of Chinese economic development characterized by rapid capital-deepening.

This relationship has also proved to be instrumental in the overseas expansion of Chinese enterprises, such as their massively expanding productive investment in many parts of the developing world which have been carried out on the back of the supports of Chinese banks. The outside world is thus likely to witness, in the years to come, the acceleration of expansion of this nexus of Chinese industry and finance in the world market. Given these circumstances, the best practices of banking in China and, by extension, in China-related business in the world market, might well be set by Chinese banks (and the Chinese regulatory framework) and by international financial institutions.

Summing up, the rising prominence of the Chinese economy and the expansion of its "state-led model of financial governance" in the world stage is bound to have far-reaching ramifications for the re-shaping international financial architecture in the future.

Going Global

The fact that China has amassed more than U$ 3 Trillion in foreign reserves already places the country in a very special position in the global financial landscape. Having between 50 and 60% of them in US Treasuries makes China a major player in the US financial treasuries market.

But this is just the tip of the iceberg (a big one, no doubt). Today, and not surprisingly, China's Sovereign Wealth Fund (SWF) is the world's biggest (See Figure 48 on the next page).

Figure 47 - China's foreign exchange reserves

Source: China's statistical yearbook/ 2015. http://www.chinability.com/Reserves.htm

Figure 48 - Largest Sovereign Wealth Funds (US$ Billion).

Source: Sovereign Wealth Fund Institute

Furthermore, China's policy banks are crucial players as well. By carrying out the goals of the state, China's banks, and especially CDB among them, are helping further China's goal of securing energy supplies through the deal. Since much of the proceeds of the loans are used to buy Chinese goods and services, from Huawei phones to CITIC-built railroads, China wins twice, and CDB helps foster another Chinese goal, pushing its top companies to "go out" (Sanderson and Forsythe: 2012, p. 131).

Africa: Investment plus Loans

Aided by Chinese demand for its exports and raw materials, Africa has experienced its best decade and a half of economic growth since independence from colonialism[65]. CDB is at the core of that "reversal of fortunes" helping change failed development policies by stimulating manufacturing and building the infrastructure that most African countries require to climb the developmental ladder (Sanderson and Forsythe, p 86). CIC (China's sovereign wealth fund) is another big player on those endeavors. Let's examine a few of China's "strategic" inroads in the continent.

First, the establishment of special economic zones, promised by President Hu Jintao in 2006 and shortly after, namely Nigeria, Mauritius, Egypt, Algeria, Ethiopia and Zambia. Second, the creation, in 2007, of the China-Africa Development Fund (CADF) as a private equity arm of CDB to "boost investment in Africa by Chinese firms and to offshore some of China's manufacturing. The fund itself says its model is "investment + loan". In February 2012, the fund signed an agreement with Xinjiang Goldwind Science & Technology, a wind turbine manufacturer, to develop the African market. In 2010, CDB gave the company a $ 6 billion credit line for international expansion (Sanderson and Forsythe: pp. 98-99). It also formed a venture with carmaker Chery Auto, to set up factories in Africa.

A national phone and Internet network in Ethiopia built by ZTE and Huawei in agreement with the local state-owned provider, and Chinese help service. A $ 3 billion loan to Ghana, the biggest loan in the country's history, which will allow for contracts for a host of Chinese contractors just after Ghana starts to tap new offshore oil fields. Plus, leather, glass and cement factories on the outskirts of Addis Ababa. The idea here is to promote regional integration. According to Chi Jianxin, the head of the fund, "the manufacturing industry should not be confined to its local market; it should integrate or incorporate a regional dimension in terms of marketing base".

Finally, In July 2012, while the US was showing the first signs of a more consistent recovery – yet to be confirmed – and Europe was diving deeper in the "Eurozone crisis" President Hu Jintao pledged $ 20 billion in new loans to Africa for infrastructure and manufacturing, and with much fewer strings attached than the WB and the IMF had done before. In an interview with Sanderson and Forsythe in Beijing, in 2012, Stiglitz stated that: "I think China has learned from the mistakes at the World Bank and the IMF, and I think the conditionalities often were counterproductive and were an important ingredient in the deindustrialization" (2012, p. 103).

In other words, in Africa China is already a major player with whom it will be extremely difficult to compete, especially on the availability of finance. However, in different places, the state-led model of financial governance shows up with different features as well.

Loans-for-Oil Worldwide

A loan-for-oil generally combines a loan agreement and an oil-sale agreement that involves two countries' state-owned banks and oil companies. Let's start with Venezuela. According to the same authors, "CDB's loans to Venezuela amount to about $ 1,400 for every man, woman, and child in the country, dwarfing those of any other institution. What is more, they add, the scores of Chinese companies coming into Venezuela are almost without exception big recipients of CDB loans, with at least ten Chinese companies having secured more than $ 96 billion in combined loans or lines of credit from CDB to finance their global expansion and operations inside China (2012, p 128).

The head of the Inter-American Development Bank, Luis Moreno, was blunt when commenting that strategy: CDB has been "very savvy" in the way it set up its loans with Venezuela. The repayment guarantees are codified in Venezuelan law. "To my knowledge, he adds, the Chinese are the only ones doing this". "I don't know of any other development bank that can do the kinds of things they are doing because it is both, development and it is strategic for China (Moreno quoted in Sanderson and Forsythe: 2012.p 131).

Table 5: CDB and contracts in Venezuela

Source: Sanderson and Forsythe, location 3320.

Venezuela may be their hub, but CDB's operations are expanding everywhere. In 2009, Petrobras secured a $ 10 billion loan from the bank as part of its global fundraising efforts to help pay for the development of offshore oil deposits. The 10-year loan has an interest rate of LIBOR plus 2.8 percent, and it is tied to shipments of 150,000 barrels of oil a day in the first year of repayment, and 200,000 barrels a day in the following years to a subsidiary of Sinopec (Sanderson and Forsythe: 2012.p 136). And there is one more thing: The loan also has a stipulation that Brazil will spend $ 3 billion to buy Chinese oil equipment.

In fact, Chinese lending in Latin America is continuously gaining momentum. It has taken off from almost nothing prior to 2008 to the point where, in 2010, its loan commitments were more than those of the World Bank, Inter-American Development Bank, and the US Export-Import Bank combined (Gallagher et alii: 2012, p. 5). CDB seems confident about the soundness of its oil-for-loans program. So confident it lent Ecuador, in 2010, $ 1 billion in a four-year loan at 6 percent interest, two years after the Country defaulted on $ 3.2 billion of bonds. Chinese lending to Venezuela and Ecuador is filling in for the sovereign debt markets. "Chinese financing is often the 'lender of last resort.' It is not a cheap one, but due to the concern the international financial community has over Venezuela and Ecuador, and the large risk premiums they would charge, Chinese lending is an attractive option" (Tissot quoted by Gallagher et alii: 2012, p. 8).

The loan-for-oil model seems to be broader. It's being used around the globe, "from Russia, to Ghana, to Brazil, as a means for China to secure energy supplies and for its state-owned infrastructure companies to win contracts". In sum, Chinese banks maintain some oversight over their loans by attaching either purchase requirements or oil sale agreements. Most Chinese loans require the borrowers to use a portion for Chinese technology or construction Gallagher et alii: 2012, p. 17).

Table 6: China Development Bank's Global Energy Loans

Source: Erica Downs, Bloomberg Bulletin: 2012.

In other words, there are still some "strings attached". The big difference in relation to the "international agencies" seems to be that the money is secured by winning business for Chinese companies, rather than setting policy conditions on the borrowing country (Sanderson and Forsythe: 2012, p. 139).

Funding Chinese Global Player

The most strategic role of the Chinese Entrepreneurial State refers to promoting Chinese business on a global scale, forging homegrown global players. China's 12th five-year plan for 2011 to 2015 was launched in March 2011. The plan highlights the importance of the "magic seven" industries: (1) energy saving and environmental protection, (2) next-generation information technology, (3) biotechnology, (4) high-end manufacturing, (5) new energy, (6) new materials and (7) clean-energy vehicles. The plan's objective is to "shape" those industries to raise their share from 3 to 15 percent of the economy by 2020 [66]. No wonder that, before the Plan's announcement, China's banks were already pouring money to fund the long-term projects supposed to turn that scenario into reality.

In fact, Chinese companies have started to win first place in global markets. Huawei has overtaken Sweden's Ericsson to become the world's largest telecoms-equipment-maker. Huawei is becoming an increasingly powerful global player, capable of going head-to-head with the best in intensely competitive markets. It follows Haier, which is already the leading white-goods-maker; now Lenovo is challenging Hewlett-Packard as the world's biggest PC-maker. Much more will follow (The Economist/ Leader: August 2012). The article also raises a key issue from the perspective of "western competitors": "Western governments are also suspicious of the subsidies, low-interest loans and generous export credits lavished on favored champions". The article is right. The financial arsenal behind China's emerging global players is formidable, and should not be downplayed at all.

In 2010, China invested some $ 51.1 billion into clean energy, the largest investment by any country in the world. However, in 2006, four years before that record, two Chinese companies were already on the list of top-ten solar cell producers. In 2010, six made the list, according to a BNEF report[67].

Among them is Yingli, founded in 1998, and one of the biggest beneficiaries of CDB loans in the solar industry, borrowing at least $ 1.7 billion in dollar-denominated loans from CDB, from 2008 through early 2012[68]. In 2009, Yingli opened offices in New York and San Francisco; by the year's end, it held 27 percent of the California market. China simply took over (or leapfrogged). In 2011, the country supplied some 72 percent of global crystalline-silicon module production, the most popular type of solar module that converts light to energy (Sanderson and Forsythe: p. 150, my emphasis.). A clear and stunning case of Leapfrogging.

In fact, 2010 saw an explosion of loans to renewable energy, mostly from CDB. The bank lent $ 14.7 billion to clean energy and other energy-saving projects. The European Investment Bank lent € 8 billion for clean energy projects in 2010, BNDES lent $ 3.16 billion and the US Federal Financing Bank $ 2.12 billion. In all, since 2010, CDB – alone- has made available at least $ 47.3 billion in credit lines to support Chinese solar and wind companies (BNEF: October 2011).

Let's return to telecom and to Huawei. A private firm founded in 1987 with just 21,000 Yuan, a bit more than $5,000 at the time. Huawei at first struggled to win customers even in China. Last year (2012), as mentioned, it surpassed Ericsson to become the world's largest telecoms-equipment-maker. Now it is a $32-billion business empire with 140,000 employees, and customers in 140 countries, and 65% of its revenue comes from outside China. In Europe it is involved in over half of the superfast 4G telecoms networks that have been announced, and it became a strong competitor in mobile phones. In Africa, Huawei's cheap, but effective equipment, helped make the continent's mobile-telecoms revolution possible (The Economist, "Huawei: The Company that Spooked the World: August 2012).

How did this happen? I do not mean to provide a full answer here, but public funding and, ultimately, China's entrepreneurial state were key players in backing up that success. On December 27, 2004, in Beijing, Huawei and CDB signed a $ 10 billion agreement for overseas markets, the first of many CDB credit lines to their customers across the developing world which would allow the gaining of significant market share. It was also the beginning of CDB's support of Chinese firms to "go global." In April 2005, Huawei and CDB signed a risk-sharing "win-win" agreement, and agreed to share information on clients and projects after the loan had been dispensed. In December 2005, Vodafone Group, then the world's largest mobile phone company, named Huawei its first Chinese-approved supplier of network equipment. Huawei's road to global domination had begun [69] (Sanderson and Forsythe, p. 160).

Figure 49: Huawei's Overseas Sales after CDB Loan

Source: Sanderson and Forsythe, p. 162.

Going Global 2.0: One Belt One Road

Within its global strategy, the apex of that State-guided strategy, at the time of writing this chapter,[70] is the "one belt, one road" (OBOR). Launched in 2013, OBOR has two parts. There is a land-based "belt" from China to Europe, evoking old Silk Road trade paths, then a "road" referring to ancient maritime routes. OBOR will span 65 countries (see map), and China has so far invested over $900bn in projects ranging from highways in Pakistan to railway lines in Thailand. In May 2017, more than a hundred world leaders gathered in Beijing for un update on the strategy. The host, president Xi, labeled OBOR the "project of the century" and reaffirmed the estimated $ 5 trillion in infrastructure spending spread across Asia, the Middle East, Europe, and Africa. The Financial Times (FT) stamped "President Xi Jinping Positions China at Center of New Economic Order" as headline, adding "President Xi of China delivered a sweeping vision of a new economic global order on Sunday, positioning his country as an alternative to an inward-looking United States under President Trump" (Financial Times, August, 3 2017).

Figure 50: One Belt, One Road map

At the same gathering, China's prime minister pledged more than $100 billion from Chinese development banks for the next round of infrastructure renewal. The next gathering, in Beijing, will take place in 2019. Public entrepreneurship and public funding on that scale is unheard of. However, as I tried to show in the previous section, that is precisely what Schumpeter had in mind when he wondered if “Socialism” could work. China incarnates, in fact, both Minsky and Schumpeter on steroids. Or, I must add, the Chinese state should be seen as the materialization of Hubert Henderson wishes, expressed in 1943, one year after Capitalism, Socialism and Democracy was published. In a little noticed exchange with Keynes, his co-author, Henderson, wrote:

> “What I really suggest is that the state should assume the role of Entrepreneur–in-Chief, directing the flow of productive resources to the employments in which can best serve human needs” (1943:233).

The required amendments here are: …best serve China’s interests and needs on a global scale.

Conclusion: The China Model - State Capacity, Public Leadership and Structural Transformation

> *A context of deliberately created stability achieved by risk-spreading mechanisms … can facilitate industrial deepening, export expansion, and political compromises to share adjustment costs. ... Unassisted entrepreneurs may not have either the foresight or the access to capital to follow long-term prospects. Their decisions may lock in the country into a specialization in industries with inferior prospects" (Wade: 1990*)

Wade’s model was “the other China”: Taiwan. Continental China ridded along, but went much farther, leapfrogging the island. Given the arguments discussed so far, and despite the current (sometimes enraged) neo-liberal statements that continue to view State action and bureaucracies as always ineffective (or at best irrelevant), the reason seems to remain with Karl Polanyi, for whom “The road to free markets was opened and kept by an enormous increase in continuous, centrally organized and controlled interventionism” (1992 [1944]: p.127) and with Max Weber , whose statement that “Capitalism and bureaucracy found each other and belong intimately together" is as true today as when it was written, in the beginning of the last century (1968: p.1395, n. 14]).

China's compressed "case-study" provides us, I trust, with sufficient empirical evidence to validate the claims about the effectiveness of a properly developed Entrepreneurial State as a vehicle for carrying out structural transformation in a superior fashion than "markets alone"[71].In the conceptual framework conceived by Keynes, Minsky, and Schumpeter, where*, technology, finance and competition are always pushing towards unexpected outcomes and unpredictable possibilities,* let me submit that entrepreneurial states and government policies crafted to forge and assist structural transformation *are a permanent necessity dictated by the market's behavior rather than by its failures.*

Consequently, their making must be based upon a correct understanding of the characteristics that, under this framework, *define the actually existing capitalist economy*: finance as its "headquarters", competition as creative destruction, endogenous technological progress, entrepreneurial strategies conceived to *differentiate* each firm from its competitors and monopolize market opportunities, irreversible decisions, "crucial decisions", in G. Shackle's catch phrase, and multiple types of uncertainties.

Additionally, the perception of economic progress under capitalist conditions as *turmoil* where new and old assets, firms, and sectors coexist *and compete*, allows the introduction of the concepts of *sunrise and sunset industries*, as well as potential and effective conflicts between them. On the other hand, the perception of the economic environment as a *darwinian-lamarkian arena* where survival does not necessarily belong to those with *better technologies or productivity potential*, but rather to *those with best adaptation skills*, legitimizes sector-based and selective financial, technological and industrial policies[72] , and the need for collective entrepreneurial action to forge and produce the future competitiveness of the system as a whole, a task that each separate sector has no means to anticipate or even map. Under this framework, policies designed to *manage the creative destruction process,* aiming at investment co-ordination, innovation diffusion, and conflict management become not only economically rational, and business-friendly, but badly needed. The overall desired *policy result* is to decrease the system's inescapable elements of financial and technological instability and uncertainty.

Using CDB's strategy, Sanderson and Forsythe provide us with a sharp explanation of the "financial big picture":

> "...it is the volume of CDB lines of credit— the security that financing is available if needed— that gives Chinese…. companies a leg up over their global competitors, allowing them to focus on increasing their scale above all else and spawning trade litigation in the United States and Europe. More crucially, though, they provide the guarantee that makes commercial banks feel safer lending to the companies, thus bringing in billions of Yuan of more loans"

To which they aptly add:

> "The United States simply do not have a government-owned bank of equivalent scale or assets" (p.153).

From a macrofinancial perspective, it's precisely the features and intricacies of that *globally oriented public financial governance model* that we must dissect to learn. Chinas' model offers a rich pool of lessons for any country struggling with the tensions among untamed globalization, poorly constructed global governance structures and mechanisms, and the need for domestic policy space as a country[73].

If this chapter was successful in its line of reasoning, the reader should now recognize two key outcomes: a) Finance affects all economic spheres and it is a crucial "lever" for economic development and structural transformation. That is the main point of the "Schumpeter-Keynes-Minsky" approach. b) China is building a robust and comprehensive global strategy within a state-led model of globally oriented financial governance, backed by public policy and development banks and a substantial degree of "socialization of investment". Holding them together immediately led to the question: what are the implications of this emerging financial Behemoth for Brazil? That brings us to the closing chapter of the book.

5. Implications and Policy Recommendations for Brazil

Leonardo Burlamaqui, Felipe Rezende and Matheus Vianna

Misguided Policymaking in Brazil and Some Suggested Alternatives

As of 2017 China became the second major investor in the global economy. Chinese global investments have risen at a compound rate of 16% from 2011 to 2014. The volume of foreign direct investment from China reached US$ 183.2 billion, surpassing the foreign direct investment into China which amounted to US$ 126.0 billion in 2016. In 2015 Chinese firms executed 579 mergers and acquisitions abroad, covering 62 countries and regions with transaction value of US$ 54.44 billion, out of which US$ 37.28 billion were financed by sources within China. In 2016 Chinese companies spent US$ 227 billion on acquiring foreign companies, outbound mergers, and acquisitions have grown 33% per year in the past five years (Financial Times: 08/18/2017). Summing up: China is going global, big time.

In contrast, Brazilian real GDP contracted 3.6 percent in 2015 and another 2.6 in 2016. Meanwhile, annual inflation reached 10.7 percent in 2015—way above the Central Bank of Brazil's target rate of 4.5 percent, or even the 6.5 percent ceiling of its policy band (IPEA report: 2016). At the time of this writing, growth did not return, inflation is being curbed by the collapse of investment, consumption, and employment, not by proper policy corrections, local states are all broke (contrary to the federal government, they do not create money, therefore they *do go* bankrupt), unemployment remains high and violence is spiraling both, North and South of Brazil. According to the World Bank, 2.5 million of Brazilians will cross *back* the line of poverty this year (cf. O Globo: 2/13/2017).

The only crisis response by Brazilian policymakers so far is fiscal austerity. Despite overwhelming evidence that austerity policies failed where they were implemented, it is startling that our establishment continues to propose contractionary measures to pave the way for economic growth, despite its failure for almost three years and so much contrasting evidence coming from countries as China, which explicitly repudiated those policies. In Brazil, there is a virtual, blind, consensus towards fiscal tightening. The most likely scenario is that Brazil will continue to run current account deficits in the foreseeable future (the post crisis average was 2% of GDP).

If policymakers narrow the nominal budget deficit to zero in the next administration, then the private sector must run a deficit equals to 2% of GDP (equals to the current account deficit). The private sector deficit (spending more than its income) is dangerous to macroeconomic stability and unsustainable. If the domestic private sector wants to run a surplus (spending less than its income) then the government balance must be above the current account deficit.

The policies proposed by *fiscal hawks* fail to recognize the obvious *facts*: fiscal austerity always throws stagnant economies into recessions, or deepens them. It does not improve the situation of indebted households and business, it worsens them. Moreover, there is no solid theoretical reason, or empirical evidence, to believe that cutting public spending will automatically increase private spending. To be sure, an attempt to impose further fiscal austerity at this point will lead to further declines in output, employment, and private spending, thus amplifying the direct effects of government cutbacks and limiting the ability of businesses and households to generate strong cash flows to service their financial obligations, stimulate production and create employment.

The theoretical framework exposed in chapter 1 makes clear that one sector's financial position cannot be viewed in isolation. Policymakers must understand the links between public sector deficits, domestic private sector surpluses, and current account deficits. This is not to say that we should run fiscal deficits forever, nor that they cannot be inflationary but following fiscal rules blindly – especially with the economy in tatters -without determining the impacts on the private sector, balance is disastrous to growth *and* to financial stability.

Much of the concern about public finance in Brazil centers around reducing the public debt burden and debt sustainability. However, a sovereign government, which issues its non-convertible currency, is not subject to the same constraints that business, local states, and households face (Rezende

2009). The Brazilian government issues its own currency, the Real, and has the power to levy and collect taxes denominated on its liability. As in the case of other sovereign countries, it can always service its debt denominated in its currency.

However, Brazilian policymakers feared the news of a credit rating downgrade, mainly on an election year. They have been operating under the wrong paradigm. Counter to the deficit hysteria view, affordability is not an issue, because the federal government can always meet their debt obligations denominated in their own currency. Ratings agencies are still clueless on their assessment of default risks of sovereign currency issuing governments. Contrary to the conventional view and despite credit downgrades, the demand for government securities to finance growing public debt in 2015 was the highest in 8 years (figure 51 and 51A).

Figure 51 and 51A. Domestic federal public debt (DFPD) refinancing; issuances and redemptions in 2015

Source: Ministry of Finance 2016

Recent CRAs warnings and downgrades on Brazil's sovereign credit rating miss the point that Brazil, in contrast to countries under the European union, has monetary sovereignty. It is the sole issuer of a nonconvertible currency (the Real). It cannot be forced by currency users to default on its domestic debt denominated in local currency.

In other words, there is nothing but misguided ideas preventing Brazil from flipping its policies towards an effective development strategy, based on domestic demand rather than depending upon foreign demand and finance. Brazil's federal public investment is unusually low, given Brazil's infrastructure bottlenecks and investment needs (figure 52 and 53).

Figure 52. Public Investment (% of GDP)

Source: Ministry of Finance 2016a.

There is ample policy space to promote private and public infrastructure investment, in which public banks – specially the national development bank – and private domestic capital markets should play a major role financing the supply side of this program.

It is well known that government spending can contribute to productivity by lowering private sector costs and through investment in key areas such as infrastructure, health and education, and research and development. China is the world's poster country that Brazil needs to shift its policy to mobilize domestic resources and adopt an investment-oriented growth strategy. There is ample space for policy to promote infrastructure investment. As an example, the world economic forum ranks Brazil's infrastructure 114th out of 148 countries (WEF 2013). In fact, the IMF, until very recently a well-known crusader of austerity, is calling for an infrastructure push by developing economies (see IMF 2015a). It seems Brazilian policymakers will be, like in the tales of betrayed husbands, the last to notice it.

Figure 53. Total infrastructure stock (% of GDP)

1 For Brazil, road data contains all of transport. Brazil stock revised significantly upwards to 46-54% from an earlier published version based on longer time series showing 2-3x higher investment rates in the 1970s and 1980s compared to the 1990s and 2000s. The estimate shown is based on data provided courtesy of Dr. Armando Castelar.

Source: McKinsey 2013, p. 13

Consistently with the new IMF prescriptions, it is crucial to increase government-sponsored infrastructure investment projects as the current rate of federal investment in infrastructure is small, compared to Brazil's investment needs. Brazil is well known for its high tax burden. It should use the fiscal leverage of the federal government to increase government deficit on both fronts, that is, increasing federal government investment in infrastructure and tax cuts for households and firms by simplifying its tax system, and providing tax cuts on production, employment, and income. Public investment can close Brazil's housing gap, through the expansion of the government program "My home, My life".

Furthermore, a "Development-oriented" financial governance strategy should implement a national job guarantee program to foster job creation for those willing to work[74]. In this program, no worker would get paid less than the minimum wage, and those able and willing to work would be employed, thus reducing the social costs of unemployment and poverty.

Contrary to the conventional belief that a job guarantee program would be inflationary, it can be designed to ensure that the deficit spending is at the right level to ensure and maintain employment – and, as a result, consumption- by setting a wage anchor. The program can be designed not only to provide the job training, but also to increase labor force qualification and the productivity of unemployed workers, which works as an increase in the labor supply. Among its benefits, it reaches social targets by mobilizing resources for additional social services to be provided by the community with gender, racial, and regional effects.

This government initiative should be targeted directly to those unemployed workers "at the bottom" of the income distribution, leading to improvement of dignity of those who have been denied the opportunity for social inclusion. Moreover, the percentage of the population living in poverty or extreme poverty would be significantly reduced.

Rather than an obsessive concern over budget deficits, the current debate should recognize the global failure of "Austerity Alone", about *what could be done differently and where to learn* from.

Lessons from China

A comprehensive analysis of opportunities and challenges brought to Brazil by China's emergence was carried out by Accioly, Pinto and Cintra, quite a few years ago (IPEA 2011). Their main point is stated very clearly: "to give up the future for the sake of the present could turn to be extremely dangerous" (Accioly, Pinto and Cintra: 2011, p 348). We could not agree more. The problem, from the perspective of China's state-led model of financial governance, is that there is nothing in the Brazilian landscape that resembles the availability of funding, institutional coordination and entrepreneurialism we see in the Chinese public financial system. If we compare BNDES assets of U$ 320 billion with CDB'S 1.7 Trillion, we start to get the picture. Adding to that CDB's global strategy, and the multiple sources of funding from the other Chinese policy banks, it worsens the challenge.

A way to see the unfolding of this bottleneck is to consider the regressive specialization of Brazilian trade with China. Despite the jump of Brazilian exports to China from a little over U$ 1 billion in 2000 to more than 30 billion in 2010 (Accioly, Pinto and Cintra: 2011, p 317), its "quality" or technological content is very low: commodities and low-tech manufactures.

On top of that, China became Brazil's number one export's destiny. The other side of the argument is that Chinese imports are flooding Brazilian markets, and medium and high technology content imports are increasing their percentage in the import's basket: from 16% in 2000 to 44% in 2009 (Accioly, Pinto and Cintra: 2011, p 323). The resulting threat is not only de-industrialization – which will occur in some sectors for sure – but the loss of technological capabilities, which equals to mortgaging the Country's future.

This clearly does not point to a successful upgrading of Brazilian competitiveness, rather the opposite. It suggests that Brazil is dangerously close to, if not already in, a "technological trap". In that sense, while China is clearly leapfrogging its major partners in the sense of designing, and achieving a long-term strategy of structural change and social inclusiveness[75], Brazil is falling behind.

What must be done? Or more appropriately, what can be done? That's precisely the "trillion-dollar question" for Brazil. There are no easy answers, and to produce a comprehensive one is obviously beyond the scope of this study. What we will try do, as a way of conclusion, is to provide some elements that, in our perspective, should frame the discussion on how to properly address the question. The late Antonio Castro used to say that China's ascendancy was a "tectonic movement" for the global economy (Castro: 2011p 99-100). He was absolutely right.

China is the Asian developmental model on steroids. By now, China has shown it has the institutional, financial, and intellectual capabilities to outcompete everybody else – it is already "number 2", and that happened in less than three decades[76]. It has "geography" and challenges coming from both internal and external fronts pushing it to move fast. It is acquiring the technological capabilities to move from "made in China" towards "created in China" (Castro: ibid). It has become a heavyweight global player, and it has a domestic market of - potentially – 1.3 billion consumers. In one sentence: China's ascend raised the bar. It inaugurated a whole "new game" in terms of building strategy and capabilities for economic performance and competitiveness.

In that sense, to the question "how should a country like Brazil face competition with China", the quick answer should be: avoid it. Do your best to search/discover/ build the ways and sectors in which collaboration and integration could replace competition. We believe that was Castro's response as well: "Só faz sentido reforçar aquilo em que temos chance de correr mais rápido do que eles [chineses]... o resto tem que ser redirecionado ou desaparecer" (2011: p.99). Among the industries/sectors that Brazil has a chance, commodities and food are the easiest candidates, and are already being exploited.

On the food side, there are great prospects for exports, if we consider the Chinese "rebalancing policies" underway, which are bound to increase the wages/income of the vast majority of the population (Accioly, Pinto and Cintra: 2011, Lardy: 2011, Pettis: 2013). On the commodities front, there is the Pre-Salt Programme, which is potentially a unique opportunity for technological upgrading and spill-over effects for many other sectors, and should generate – over time- a sizable stream of revenue for the Brazilian state which could become a strategic source of funding for "competitiveness policies" (Kregel: 2009)[77] .

From an "economic ideology" perspective, Brazil has some advantages as well. Policymaking in the country *used to be* quite pragmatic and there is ample space for discussion, proposals and implementation of industrial policy, comprehensive financial regulation, management of capital flows and other still largely "forbidden measures" in most of the other large economies around. The public debate on those issues must resume. Furthermore, our domestic market is a quite big one (for both, consumer and capital goods). This means that if the economy grows at a 4 to 6% annual rate, Brazil can, at the same time, produce for the domestic market, export and absorb a hefty basket of imported goods (that is precisely what China does in a much larger scale – the scale of a 10-12% growth rate – and what South Korea, Taiwan and Singapore did not so long ago). Fiscal revenue would obviously grow accordingly, and generate another potential source of funding. Finally, Brazil does not need to become protectionist. It needs to become way more strategic from a "state capacity and policymaking capabilities" point of view.

However, and far from downplaying their importance, those are not the core economic problems we face. Let us suggest that, from our Schumpeter-Keynes-Minsky theoretical lenses, they are twofold: a) *Vision.* Brazil does not have a clear vision – in fact it does not have any vision- for designing its long-term competitiveness agenda, b) *Finance-Investment*. More precisely, the lack of both, supply and demand for long term funding. It seems worth it repeating a thought we just touched upon: there is nothing in the Brazilian landscape that resembles the availability of funding, institutional coordination and entrepreneurialism we see in the Chinese public financial system. It almost goes without saying that this holds even more truth for the clear majority of Brazilian corporations and for the private financial system.

Since the late eighties, it's not usual for Brazil to grow at 4-6% annually, and specially to maintain that pace. Why? Without getting into the "exchange rate/interest rate debate", which can partially explain it – and was already scrutinized by, among others, Rossi and his colleagues at Unicamp- let's look at the Achilles heel of the matter. It is common knowledge that Brazil has a low investment/GDP ratio. From the analytical perspective outlined in the first chapter, what the country lacks is not "savings", but finance, more precisely, long term funding availability and a clear and comprehensive investment strategy (which means a state equipped with a vision, a strategy and policy space to implement them).

Brazil has neither one. BNDES, which provides the bulk of long term funding for development, has a loan portfolio of roughly US$ 220 billion, but includes development projects, architectural renovation for landmark buildings, movies, art and culture and what more one can think of. It does not do innovation – or it does very little of it. Let's compare that with the US$ 1.7 Trillion loan portfolio of CDB, which is just one of China's sources of long term funding for development and innovation (although the most strategic funder as Burlamaqui showed in chapter four). Summing-up, no long-term vision for a (robust) competitiveness strategy depresses animal spirits (which means scarce innovation). No long-term funding availability equals in low investment. Low investment results in low growth, high unemployment and, most likely, increased inequality. End of story.

In that sense, Brazil needs a thorough restructuring of its incentives' structure for funding innovation and development, including the private and the public financial systems. Furthermore, the public financial system dedicated to innovation (the best example is FINEP) should expand and become much bigger. To give just one idea, the planning ministry, in coordination with science and technology agencies, universities and the patent office, could establish venture capital agencies - with private and public banks' advice, but public control (The U.S Department of Defense and Army both have them. See Block and Keller: 2011). That would expand the "supply of funding". Easier said than done for sure, but it is an area to reflect upon.

To act on the "demand side" for long term funding, let us point to two areas.

The first is the "other Achilles heel" of Brazil's economy: infrastructure. The country just lost 600.000 tons of soybeans exports contracts to…. China due to "infrastructure gridlock" (Aprosoja: 23/3/2013). The delays - 57 days in Paranaguá, and up to 32 days in Santos port - and the general obsolescence[78] of roads, railways and ports were the main causes. A program of overall infrastructure renewal is urgent. It could create the opportunity for a burst of technological innovation and creative imitation – look at China – and not addressing the issue will cost the country dearly: the loss of areas where we have an established competitive advantage[79]. In fact, Chinese banks and corporations have perceived that, and began to exploit that opportunity. Over the past two years, there has been a surge of interest by China's biggest companies in Brazil. Chinese companies buying assets in Brazil range from China Three Gorges Corporation (CTG), the builder of the dam of the same name, and energy transmission specialist State Grid Corp of China to trading company Cofco, and aviation-to-finance conglomerate HNA. Technology companies such as Baidu are actively committed to invest in Latin America's largest economy. Deals involving Chinese companies have exceeded $10bn in 2015 and are bound to escalate in the next three years, according to Dialogic (Financial Timers: 11/13/2017).

Figure 54 - Chinese Acquisitions in Brazil: 2009-2017

Source: Dealogic © FT

But, so far, this is happening without any clear long-term strategy coming from the Brazilian government.

The second area that we want to mention refers to "forging the future". A broad, but strategically conceived, Brazil-China partnership for establishing joint cooperation initiatives (instead of free-trade agreements) in the areas of Biotech/Biomedical/Bio-fuels. An initiative like that could provide a host of opportunities for technological upgrading and monopolization of market opportunities – the goal of Schumpeterian competition – and for strategic collaboration. The smart use of the Amazon's, the most diverse and largely unexplored flora in the world, has the potential to create a unique competitive advantage for Brazil, and this is a feasible goal. Singapore's Biomedical Sciences Initiative, currently under way is already showing the path (Pereira: 2008).

Properly coordinated and subject to bilateral cooperation, the exploitation of these science based sectors could turn into a major – and difficult to imitate - cluster of radical innovations, maybe one or two general purpose technologies, and a host of productivity-enhancing investments.

However, to achieve that sort of endeavor, key "institutional pre-conditions" should be in place:

The recognition of crucial role of knowledge governance-based institutional coordination, which, once in place, should open the institutional space for sharp reduction in the number of ministries and the creation of a knowledge-governance pilot agency to help forge and oversee that structural transformation strategy;

- A proactive role of the public sector and the creative – and comprehensive – use of public resources, funding, administrative guidance and deal making power to craft structural change and push for radical innovation;

- A commitment to "manage change" – to manage creative destruction, instead of relying on the "market" to perform the magic[80].

- Awareness of focused nature of the strategy: not targeting everything, but a very specific set of niches and, then, heavily pushing for their rapid transformation.

That is certainly a challenging agenda for both policy and institutional design, but we submit that the pay-off should be very high.

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[2] And starting from a very low base.

[3] In 2010 the annual growth rate stood at 10.4%. The effect of the global recession showed, in 2008, as a mere annual blip with the growth rate dropping to 9.6% compared to 14.2% during the previous year.

[4] China's success in reducing poverty over the last three decades has been remarkable, and is well recognized globally. The number of poor in China living on less than $1.25 per day fell from 835 million in 1981 to 208 million in 2005 (WB: 2013" China: Poverty Alleviation through Community Participation"

[5] Wray (1992) has shown how the theory of liquidity preference and the endogenous money approach may be integrated.

[6] Keynes presents the own-rate of own-return as follows: "For there is a definite quantity of (e.g.) wheat to be delivered a year hence which has the same exchange value to-day as 100 quarters of wheat for 'spot' delivery. If the former quantity is 105 quarters, we may say that the wheat-rate of interest is 5 per cent per annum; and if jt is 95 quarters, that it is minus 5 per cent per annum. Thus, for every durable commodity we have a rate of interest in terms of itself; —a wheat-rate of interest, a copper-rate of interest, a house-rate of interest, even a steel-plant-rate of interest." (Keynes, 1964 p.222)

[7] For a steel plant the value of l is going to be zero and the q is going to be dominant, for holding commodities, then the value of q is going to be zero and the c factor is going to be dominant, and the l factor is going to be zero. In the case of money (or an asset in which l is greater than its carrying costs), the q factor is going to be zero, the carrying costs is going to be almost zero and its liquidity premium is going to be dominant (money has a return that is determined by its liquidity premium, or its user cost). The rate of return on money does not fall when there is an increase in the demand for money. If an individual engages in a spot-forward transaction in terms of wheat, its carrying costs are the primary determinant of its return. The return of holding wheat over time produces no real income and requires storage, insurance and so on, i.e. carrying costs c are negative.

[8] Since we take money as our unit of measurement/ comparison, this means that a factor on money is going to be set at zero (this also shows the importance of money as the unit of account in the decision-making system independently of its role in the transaction process).

[9] Kregel (1996) has argued that we can think about these returns as being the futures price relative to the spot price for every asset, so that the framework of spot-forward prices is always explicitly present in this argument.

[10] In the absence of an asset like money (liquidity greater than it is carrying costs and zero elasticity of production, and substitution), equilibrium would be reached where all rate of returns would converge to zero, a point in which capital no longer is kept scarce.

[11] This same argument was also used in the *Tract on the Monetary Reform* and it was applied in *The General Theory* as the operation own-rates of own-interest will determine the level of output (see Kregel 2010).

[12] As Keynes put it, "let us suppose (as a mere hypothesis at this stage of the argument) that there is some asset (e.g. money) of which the rate of interest is fixed (or declines more slowly as output increases than does any other commodity's rate of interest); how is the position adjusted? Since $a1 + q1$, $a2 - c2$ and $l3$ are necessarily equal, and since $l3$ by hypothesis is either fixed or falling more slowly than $q1$ or $- c2$, it follows that $a1$ and $a2$ must be rising. In other words, the present money-price of every commodity other than money tends to fall relatively to its expected future price. Hence, if $q1$ and $- c2$ continue to fall, a point comes at which it is not profitable to produce any of the commodities, unless the cost of production at some future date is expected to rise above the present cost by an amount which will cover the cost of carrying a stock produced now to the date of the prospective higher price." (Keynes, 1964, p.228)

[13] Keynes emphasized that capital has a return because it is scarce and not because it is physically productive. In a monetary system it makes no difference whether investment is productive or nonproductive in the physical sense.

[14] It should be clear that, "If by money we mean the standard of value, it is clear that it is not necessarily the money-rate of interest which makes the trouble… the same difficulties will ensue if there continues to exist any asset of which the own-rate of interest is reluctant to decline as output increases." (Keynes 1964, p.229) If it was not because of the special characteristics of money, production would proceed until the economy reached full employment because it would always be possible to redirect employment to produce more asset that requires labor. But the problem is that there is an asset (i.e. money) that does not require labor in its production, so that when the demand for it is higher than the demand for other things, labor cannot be put to work. "Unemployment exists because men want the moon" (Keynes 1964, p.235)

[15] Keynes restates the process of convergence as follows: "We should have said that it is that asset's rate of interest which declines most slowly as the stock of assets in general increases, which eventually knocks out the profitable production of each of the others, —except in the contingency, just mentioned, of a special relationship between the present and prospective costs of production. As output increases, own-rates of interest decline to levels at which one asset after another fall below the standard of profitable production; —until, finally, one or more own-rates of interest remain at a level which is above that of the marginal efficiency of any asset whatever." (Keynes 1964, p.229)

[16] The use of NPV method still poses some problems such as the fact that future cash flows cannot be predicted even when it is possible to generate objective probabilities, i.e. the net proceeds of an investment are not perfectly known. Second, choosing the appropriate discount rate involves

predicting changes in the future path of interest rates considering the riskiness of each individual project [Kregel 1999]. Third, as Kregel (1999) and many finance theorists have argued the NPV method ignores the value of management flexibility (or embedded options in investment projects). For instance, it does not take into account decisions to postpone (or defer) a project, decisions to expand, or decisions to abandon a project. It becomes then necessary to deal with future possible investments (options) embedded in investment projects.

[17] As Kregel (1999) noted, this idea goes back to the short period theory of prices which was determined by the expectation of the price that the investor will get for the commodities that s/he will buy or sell today at the future date, so that if an investor is a holder of commodities or excess stocks, the decision that has to be made is whether s/he is going to sell today (s/he would be using them) and buy doing that s/he would preclude the ability to sell them tomorrow (or at some future date). The argument behind the impact of prices on excess stocks was determined by individual expectations of the movements of prices. If the spot price is $100 and if the price tomorrow increases to $110, the investor has implicitly taken a loss implied by the decision to sell the commodity at $100, rather than holding today and sell it tomorrow. Thus, the cost of using the commodity today would be present value of the loss that the investor incurred from selling today rather than selling tomorrow at a higher price. [Kregel, 1999]

[18] From national accounting identities, gross domestic product (Y) equals the sum of consumption expenditures (C), investment (I), government purchases (G) and net exports ($X - M$) that is $Y = C + I + G + (X - M)$. We know that $S = I + G - T + CA$, rearranging the terms we get: that $S - I = G - T + CA$ where $(S - I)$ the private sector balance equals the government balance plus the current account balance.

[19] Jang-Sup Shin (ed). 2007.Global Challenges and Local Responses: The East Asian Experience (Kindle Locations 240-244). Kindle Edition

[20] This time, Europe is – somewhat ironically - the major victim.

[21] "Be Afraid. That's the takeaway for both investors and taxpayers in the 307-page Senate report detailing last year's $6.2 billion trading fiasco at JPMorgan Chase. The financial system, thanks to dissembling traders and bumbling regulators, is at greater risk than you know" (G. Morgenson, NYT, 3/16/13).

[22] For further details see, as an example, Barbosa (2008) and Arestis, De Paula and Ferrari-Filho (2008).

[23] Improved external accounts and a surge in capital inflows contributed to the appreciation of the exchange rate and domestic asset prices.

[24] Improved external accounts and a surge in capital inflows contributed to the appreciation of the exchange rate, which harmed the competitiveness of domestic industries and its export capacity, and domestic asset prices contributing to a consumption boom.

[25] Even though the government has been trying to reduce indexing in the economy, they introduced a formula, through the enactment of law 12.382/11, to readjust the minimum wage in Brazil that depends on prior-year inflation plus the level of GDP growth from the last two years. To be sure, it allowed real incomes to go up by doing this, but it also reintroduced an inertial component to changes in the price level in Brazil.

[26] For the sake of comparison, non-financial private sector debt growth in Brazil increased at a rate similar to debt growth in China, which is already dealing with the consequences of an asset price bubble fueled by credit.

[27] It includes bank loans, bonds, and foreign borrowings

[28] Article 202 of law no. 6,404/76 – known as "The Brazilian Corporation Law", requires the payment of mandatory dividends, which should be at least equals to 25.0% of a company's net income. Note that the Provisional Measure 627/2013, enacted into law no. 12.973/2014 on May 14, 2014, among other things, mandated that "under the new law, dividends from profits generated between January 1, 2008, and December 31, 2013, that are greater than the amount calculated using the Tax Balance Sheet are not subject to tax. In the original version of PM 627, this rule was limited to dividends paid on November 12, 2013, if the company made an election to apply the new law from January 1, 2014. The new law removes this limitation." (PWC 2014, p.2). This suggests that while corporate profits are subject to taxation, dividends based on earnings are tax exempt.

[29] This will be discussed in more detail in the following sections.

[30] Note that "There has been a long-standing difference between nationality-based and residency-based foreign bond placements in Brazil. However, the difference between the two measures has widened substantially after 2009, which coincided with the post-global crisis environment of ample liquidity. The growing wedge between residency and nationality criteria since 2010 has coincided with stepped up efforts from the Brazilian government to mitigate currency appreciation pressures through capital control measures (figure A5). In particular, between early 2011 and early 2012, the government progressively increased the maturity of the debt issued abroad, subject to foreign exchange taxation. Because foreign subsidiaries are non-resident from a balance of payments perspective, they would not be subject to the tax unless the proceeds were repatriated. Interestingly, issuance through Cayman Islands has increased after the tax tightening, and reduced after the tax loosening between 2010 and 2012. In addition, FDI intercompany loans (one possible repatriation channel of the proceeds from foreign issuance) have increased after tax loosening as well, while portfolio and FDI-equity stabilized." (Bastos et al 2015, p. 15)

[31] In aggregate, we get the following:

$$P = I + Gov_{def} + NX + C_p - S_w$$

Where P equals aggregate profits; I = investment; Gov_{def} = the budget deficit; NX = the current account surplus; C_p = spending out of profits; S_w = saving out of wages

While Kalecki-Levy profit equation shows how profits are generated at the macro level (that is, firms cannot increase aggregate profits by slashing wages), at the micro level firms compete for profit flows. By decomposing firms' return on equity formula, then we get the following:

The return on equity (ROE) equals return on assets (ROA) times leverage, where ROA = Profits / Total Assets; and Leverage equals (Assets / Equity), that is, total assets divided by shareholders' equity. The return on asset is useful to analyze how effectively firms are converting their investments into profits. If we expand the return on assets formula we get the following:

In Keynes's model, profit seeking behavior drive capitalists to undertake investment and production with a view for profits. This means that the production activity is organized and directed by firms, according to their profit expectations, and their decision-making is based upon the uncertain future behavior of markets. That is, the process of aggregation in *The General Theory* takes place considering the factors that are determined by (q-c), i.e. decisions to invest in instrumental capital goods, non-instrumental capital goods such as investment in housing, buildings and so on. That is, to induce investment the demand price must exceed the supply price of capital.

[32] See Mantega (2013) for more details. While the conventional belief points to state-based intervention and rising gross public debt as the cause of Brazil's current crisis (Romero 2015), they overlook the growth of financial fragility in the Brazilian economy.

[33] The establishment of a target for the primary fiscal surplus would bring about a decline of gross public debt in relation to GDP to build investors' confidence in the government ability to meet the debt service.

[34] Note that the same ratio is 227% in Japan, 175% in Greece, 132% in Italy, 129% in Portugal, 105% in Singapore, and 101% in both the United States and Belgium. That indicates that the proclaimed inexistence of fiscal-policy space, except for debt reduction, in Brazil is completely unaware of international data and ignorant of International comparisons (Source: The Economist's Intelligence unit).

[35] Direct investment overseas by Chinese companies has increased from just $5.5bn in 2004 to $56.5bn in 2009. About 70 per cent of the money invested in 2010 went to other parts of Asia. Latin America came in second place with 15 per cent ("The China Cycle" FT. 09.13.2010.)

[36] For a discussion, from an evolutionary perspective, of the pertinence of using that concept instead of "catch-up", see Burlamaqui: 2011.

[37] And this whole scale structural transformation went beyond dry economic statistics: when deplaning in Beijing for the 2008 Olympic games, McGregor recounts, the New York Times architecture writer, Nicolai Ouroussoff, compared arriving at the city's new airport 'to the epiphany that Adolf Loos, the Viennese architect, experienced in New York more than a century ago. He had crossed the threshold into the future.' (2010: Locations 529-531).

[38] Maybe needless to say, the questions "is it capitalism?" and "if so, what kind of capitalism best describes the Chinese system?" It remains largely unanswered.

[39] But especially banks, since – in contrast to most western countries today - *China's banking system is its financial system*. This is not to say that there are no other types of financial institutions or "shadow banking system" in China, but to affirm that they never had any relevance in financing

development and – at least until very recently (2010 on) – they did not play any noticeable *destabilizing* role. Nevertheless, according to Wray (2013: 11): "Moving forward, the rise of shadow banking raises important issues that need to be addressed regarding regulation and supervision of financial institutions, including the decision whether to "level up" or to "level down" (tighten rules on shadow banks, or relax them on traditional banks)".

[40] Minsky treated these as "phases of capitalism" instead of *varieties*. According to him, that phase of finance capitalism collapsed in the Great Depression. What emerged afterwards was new stage of capitalism: managerial welfare-state capitalism (Minsky 1992, Wray 2010). I do not agree with that taxonomy. It is very much US-rooted. A state-led variety of "Finance capitalism" resurfaced in Asia and was a key feature of the "Asian miracles". China is the latest example of that pattern.

[41] From the nineteen centuries to WWII, Germany had in its own Big 4's. The "4 Ds": Deutsche, Dresdner, Darmstader and Disconto (Hilferding: 1910, Landes: 1969: chapter 5).

[42] The "big four" state-owned commercial banks are the Bank of China, the China Construction Bank, the Industrial and Commercial Bank of China and the Agricultural Bank of China, all of which are now the largest banks in the world.

[43] Which were not in Hilferding's model.

[44] I'm well aware that this discussion goes much beyond the scope and purposes of this study. Nonetheless, I believe it has a potentially fertile departure point for a future line of inquire on China.

[45] This discussion elaborates on material from Burlamaqui: 2000.

[46] "In China, it is very important to display the political power of the Communist Party… Management can solve a majority of problems, but not all of them" Li Lihui, the president of the Bank of China quoted by McGregor, 2010: Locations 1127-1129.

[47] A good example of what I have in mind is given by McGregor (2010): "Most foreigners dealing with large Chinese state companies in the early days of economic reform – he writes- felt much like the Japanese executives from the giant Mitsubishi conglomerate negotiating to build a power plant for Baoshan Steel... The Japanese were aggrieved when the Chinese side got the better of them during the talks and they were forced into concessions. 'Yes, you win the negotiations,' the Mitsubishi executives exclaimed. 'But it was your national team fighting our company team!' Chen Jinhua, a titan of state industry who recounted this story in his biography, said the Japanese were right. 'We had invited many capable experts from China's electrical power system to join our negotiating team, but Mitsubishi, as a single company, had been unable to do so,' Chen wrote. 'This example showed the superiority of our wide socialist co-operation." McGregor, Richard (2010 Locations 1155-1161).

[48] I am obviously excluding works in Chinese, once I am not versed in the language.

[49] But let me warn the reader that the book although valuable as a source of information, is quite disorganized in laying it out. There is plenty of repetition and the main themes keep exiting the narrative just to come back in later chapters. Caveat emptor.

[50] The sub tile of the book is “The Fragile Foundation of China’s Extraordinary Rise”, which is a statemnt of analysis produced in this report will not endorse.

[51] They are known as “the Big 4”.

[52] It is quite puzzling that the China’s Development Bank, also founded in 1994 and possibly the most strategic player in the Chinese financial landscape, as we will see in the next section, is never properly discussed in their book.

[53] Founded in 1948.

[54] From the mid-1990s to the mid-2000s, the PBOC has progressively delegated its previous supervisory functions for parts of the financial system to other bodies: The China Securities Regulatory Commission (CSRC) and the China Insurance Regulatory Commission (CIRC) (Cousin: 2011, pp. 21-2).

[55] When the savings-and-loan fiasco erupted in the US.

[56] 2003 marks the beginning of the Jintao/Jiabao leadership.

[57] More precisely, provided the conditions for them to write-off their non-performing loans.

[58] The book does not extend the description into what precisely happened in that episode from a “balance sheet perspective”, but what seemed to have happened was that the Central bank bought bonds from the “treasury”, issuing money at the same time. The banks “sold” their bad loans to the central bank and with the money infused by the treasury, recapitalized and “cleaned” their balance sheets. Note that all the players are public entities, and all of them coordinated by the Communist Party. That means it is a “closed circuit” where there are neither hazard decisions nor “friendly fire”: no one gets cut off by “market forces”, “bond vigilantes” or “bets” by their Citibank or Goldman-like advisor-investment bank against loans or project’s ability to generate cash-flow.

[59] Let’s recall this was before the first signs of the 2007-8 financial “big bang”. Interestingly, most of the “learned public opinion” sees Zhu as a big reformer/privatizer. Big reformer he was, privatizer, only if we add the suffix “Chinese style”: The IPO’s never gave foreign buyers any stake holding in the business they were acquiring. They remained minor stockholders (Here, I’m totally in agreement with McGregor’s interpretation [2010, chapters 1-2]).

[60] They received compensation, but well below their market value and especially to their “expected future value” once urbanization was in place. Of course, if we stay within this somewhat *Marxist* way of looking at the picture, the same stroke also helped produce a sizable labor force, Marx’s “industrial reserve army”, available to sell its labor force in the new factories for a very modest price by any international standard.

[61] Because it started in the city of Wuhu.

[62] And note that after Lehman, there were many mergers and acquisitions as well as restructurings and an ocean of cash and guarantees injected by the FED and the Treasury in the US “too big to fail”

banks, insurance and corporations. After Lehman, no other big institution closed in the US, supposedly the "land of the market" (See Blinder: 2013 for an excellent discussion of these issues). From that perspective China's preemptive policy action of recapitalizing the banks when they need it, and then making sure that finance and funding would be there when needed was not surprising at all: as mentioned before, Big Government *plus* Big Bank *plus* industrial policy. Very much in line with a Keynes-Minsky-Schumpeter approach to "policy in hard times".

[63] Concerning the comparison between the US and the Chinese stimulus package, Lardy gives such a clear and concise explanation, that it is worth it quoting it at length: "the US stimulus package compared with China's suffered in two respects. First, relative to the size of the respective economies the US stimulus was much smaller. Second, while the Chinese program consisted overwhelmingly of increased expenditures, about a third of the US stimulus consisted of tax cuts. But much of the increased income received by US households, as a result of these tax cuts, was used to pay down debt rather than to finance additional consumption expenditures. While this was rational from the point of view of heavily indebted individual households, paying down debt did nothing to increase aggregate demand. These differences in the timing, size, and design of the two stimulus programs contributed to the markedly different economic outcomes in the two countries in 2009—a sharp absolute decline in real output in the United States but only a modest growth slowdown in China" (Lardy: 2011, Kindle Locations 271-279).

[64] As already mentioned, government policies were implemented within close coordination, with and under close supervision of the Communist Party (McGregor: 2010 chapter 2).

[65] For a broader analysis and discussion of China's strategy for Africa, see Carmody and Owusu in Leão, Pinto and Acioly (eds): 2011.

[66] For a thorough analysis of the plan, see "China 2030 - Building a Modern, Harmonious, and Creative High-Income Society". The World Bank and Development Research Center of the State Council, the People's Republic of China, 2012.

[67] BNEF: Bloomberg New Energy Finance.

[68] When fiscal deficits were ballooning and the credit for long term projects from private finance were basically frozen in most of the "North".

[69] At that point, a high official of Alcatel-Lucent remembers telling his boss, the Chairman, that "We won't die at the hands of Huawei; if we die, it will be at the hands of China Development Bank."

[70] Summer 2017

[71] Something (structural transformation by markets alone) which, by the way, never happened in history. That makes the comparison irrelevant, and I am only referring to it because it is so much embedded in economics fairy tales encyclopedia.

[72] To either encourage or discourage investments according, for instance, to sunrise and sunset industry criteria.

[73] What should we learn? What's transferable? How can we compete? Where is there room for collaboration?

[74] See Minsky 1965, Tcherneva and Wray 2007, Wray 2007, Mitchell and Wray 2005 for a detailed exposition of Minsky's proposal for the employer of last resort program)

[75] Slow inclusiveness if looked from a 30-year's perspective, very rapid if seen from what happened in the last decade – especially during the crisis. See Lardy: 2011, chapters 1 and 2.

[76] Although the country is following the lead of Japan, South Korea, Taiwan and Singapore, its speed and scope have no historical precedents.

[77] However, the way the whole program has been managed, it would have to go through a radical change. The way we have it right now points towards a fifteen-year regression in terms of industrial policy, rather than a strategic industrial upgrading tied to a cluster selective innovation policies.

[78] Physical, logistic and administrative.

[79] The international business press is already firing the shots: "Brazil: Humbled heavyweight": Financial Times, March 25th, 2013.

[80] For a further development of those themes from an essentially analytical perspective, see Burlamaqui: 2012 and 2018 chapters 1 and 6.