

Currency Crisis or Overproduction? A Marxian analysis of the exchange-rate peg collapse in Brazil¹

Antonio Carneiro de Almeida Júnior²

Abstract

Here we revisit the recent past of the Brazilian economy in an attempt to present an alternative characterization of the nature of the late 1990s crisis. The theoretical basis of this analysis is the Marxian Political Economy. This choice is justified by the contraposition between the Marxian Theory of Overproduction Cyclical Crisis and the most popular currency crisis theories, revealing that while the latter focus on the phenomenon's appearance³, the former analyzes it in all its depth. At last, the analysis of capital accumulation during the Real Plan has shown that the referred crisis can be characterized as another manifestation of the overproduction cyclical crises.

Key-words: Real Plan, Currency Crisis, Overproduction, Recent Economic History.

Resumo

No presente trabalho, revisitamos o passado recente da economia brasileira na tentativa de apresentar uma caracterização alternativa da natureza da crise do final dos anos 1990. Isso foi feito tendo a Economia Política Marxista como base teórica. A escolha foi justificada pela contraposição entre a teoria marxista das crises cíclicas de superprodução e as principais teorias das crises cambiais, o que revelou que, enquanto as últimas focam na aparência do fenômeno, a primeira analisa-o por completo. Ao final, a análise da acumulação de capital durante o plano real revelou que a crise supracitada pode ser caracterizada como outra manifestação das crises cíclicas de superprodução.

Palavras-chave: Plano Real, Crise Cambial, Superprodução, História Econômica Recente.

JEL Classification: B51, E32, N16.

1. Introduction:

Chronic inflation was a striking issue for a large portion of Latin-American economies from the early 1980s to the mid-1990s. As a response to that, most of the affected economies adopted stabilization programs that had an exchange-rate peg as a common element. In Brazil, after a series of failed attempts, inflation control was achieved through the Real Plan (Falcão Silva 2002; Kiguel, Liviatan 1992; Teixeira Lanzana 2017; Giambiagi, Além 2016).

If, on the one hand, the stabilization plan's success is unquestionable, on the other, it appears to be unequivocal to most economists that it was also the cause of the Brazilian late 1990s crisis (Kregel 1999; Schwartzman 1999; Saad-Filho, Morais 2002; Saad-Filho, Mollo 2002; Giambiagi, Além 2016). In both the mainstream and part of the heterodoxy, this understanding derives from the currency crisis or the balance of payment crisis theories (Falcão Silva 2002).

¹ We want to show our appreciation for the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior, CAPES, that funded an important part of our research.

² Substitute teacher, Department of Economics of the *Universidade do Estado do Rio Grande do Norte* (Rio Grande do Norte State University, DEC-UERN).

³ This is a reference to the pair of dialectical logic categories phenomenon and essence, or appearance and essence.

It could be interesting, however, to analyze the situation from a different point of view. For the Marxian Theory of Overproduction Cyclical Crisis, every industrialized capitalist economy develops itself through cycles of economic expansion and contraction. The expansion is propelled by an unlimited urge to capital accumulation and surplus-value extraction, but this process has an undesirable side-effect: it imposes progressive restrictions to the realization of the extracted surplus-value, causing overproduction. However, despite having a common cause and common essential characteristics, these overproduction crises carry different appearances that are generated by the event that acts as their trigger or their non-essential cause (Marx 1969, 1973, 1991; Rosental, Straks 1958). To establish this point of view is, therefore, to raise the suspicion that the exchange-rate peg collapse and the external imbalance observed in the late 1990s in Brazil are merely the appearance of another overproduction crisis, placing the government's economic policy as its non-essential cause.

Thus, in order to determine the nature of this crisis, we analyze the capital accumulation in Brazil during the Real Plan. To this end, we adopt the Marxian Economics as our theoretical basis. This choice of theory is justified by contraposing the Marxian Theory of Overproduction Cyclical Crisis to the most popular currency crisis theories, which takes place in section 2. We then carry out the above-mentioned analysis, attempting to establish whether or not there is evidence that suggests that an overproduction crisis has taken place after the accumulation process. Furthermore, we attempt to identify the impacts of the government's economic policy on the cyclical dynamic. This empirical analysis takes place in section 3. Finally, in section 4, we highlight our main conclusions and present some additional remarks.

2. Currency Crises and Cyclical Crises: appearance and essence of the phenomenon

The balance of payment crisis is described by Cesaratto (2013: 361) as a situation in which 1) a loss of confidence causes a reversal in capital flow, 2) capital outflow is limited by the amount of foreign reserves, 3) the country runs out of reserves, and 4) it is forced to adjust through domestic currency devaluation, debt default, and/or restrictive fiscal policy. Throughout the last decades, several researchers have committed themselves to theoretically unraveling the circumstances that would cause the combination of these four factors.

According to Falcão Silva (2002), the current mainstream understanding of the matter derives from the canonical framework of Krugman (1979) and Flood and Garber (1984). In these approaches, due to the coexistence of two opposed economic policies — financing public debt with monetary base expansion and a fixed exchange-rate regime — speculators foresee a regime change and attack foreign reserves the moment their shadow price exceeds their official one.

The second generation of orthodox models was developed by combining the canonic framework with the cost-benefit games of Barro and Gordon (1983). In these models, authors such as Obstfeld and Rogoff (1996) and Velasco (1996) sustain that the government needs to find the equilibrium point in the trade-off less inflation–more unemployment–higher debt cost x more inflation–less unemployment–lower debt cost. Here the contribution is to consider the impact of expectations on the debt cost, making room for a self-fulfilling prophecy.

Still according to Falcão Silva (2002), in addition to the “new generation models”, the contributions of Calvo and Mendoza (1996a, 1996b) and Krugman (1998) deserve special attention. The former authors connect the balance of payment crisis to financial crises.

According to them, due to a foreign capital inflow, the liquidity of the economy rises and banks add risky assets to their portfolio, weakening the banking system. Once banks are not able to honor their liabilities, Central Bank action will expand the monetary base, validating the run on reserves and causing capital outflow. Krugman (1998), on the other hand, sees the currency crisis as a feature of the financial crisis. His approach is similar to Calvo and Mendoza’s (1996a, 1996b), but emphasizes that the problem occurs because the expected rate of return considered by bankers while operating with risky assets is always higher than the effective rate of return, since they expect to share their losses with the government if the worst-case scenario takes place (moral hazard problem).

The heterodox contributions, for their part, are closely related to the analysis of peripheral countries' experiences. For Edwards (1996), the balance of payment crisis is a result of the association between a stabilization plan and a large foreign capital inflow in countries with fragile banking systems. As a result of this capital inflow, the exchange-rate becomes overvalued, while the banking system’s vulnerability increases. Analyzing the Real Plan development in Brazil, Kregel (1999) explains how this occurs. According to him, excessive capital inflows are followed by 1) current account deterioration and 2) a change in government expenditures, moving away from current account expenditures and toward capital account expenditures as a consequence of exchange-rate overvaluation and high interest rates. This situation would tend to get worse given the upward pressure on the interest rate to maintain capital inflow, therefore making the collapse unavoidable.

Saad-Filho and Morais (2002), in turn, place the Real Plan as part of a Tropical Neomonetarism⁴, that is, a new development strategy by the Brazilian Economy which attempts to finance domestic investment with foreign savings by luring foreign capital through the financial market or privatizations. This set of policies, however, seems to be destabilizing because the capital inflow, on which the country becomes structurally dependent, is more sensitive to the central countries’ financial market scenario than it is to the macroeconomic fundamentals or economic

⁴ *Neomonetarismo Tropical*, in Portuguese.

policies of peripheral countries. Hence, this external vulnerability would create the need to keep the interest rate at high levels, causing domestic currency overvaluation. This would then result in new pressure over the interest rate through current account deficits, while also creating carry-trade opportunities. As a result, there is an increasing vulnerability to international financial market disturbances.

After some time without any new contributions, the Eurozone crisis of the early 2010s led researchers once again to this debate. The purpose then was to determine whether this was another currency crisis or not. Cesaratto (2017) explains that there were two predominant views in the debate. The first one, presented by Baldwin et al. (2015) as hegemonic, advocates that this crisis was similar to those currency crises of fixed-exchange-rate regimes. The second one, in turn, argues that this understanding is inaccurate since the crisis was caused by the existence of obstacles to the European Central Bank's (ECB) intervention, which caused a delayed response that made fiscal adjustment necessary. Additionally, the existence of TARGET2⁵ would have guarded Eurozone against an event like this. In favor of this second view, Lavoie (2015) uses Cesaratto's (2013) own definition of currency crisis — presented at the beginning of this section — to argue that, although elements one and four could be observed in the Eurozone crisis, two and three could not.

It is interesting to highlight that while discussing the matter, the possibility of avoiding those crises through the use of adequate economic policy appears to be an implicit assumption for the majority of the aforementioned authors. This is especially true for those who belong to the mainstream since their argument seems to be permeated by the real business cycle theory, presented in works such as Plosser (1989), King and Plosser (1984), and Kydland and Prescott (1990). In Kiguel and Liviatan (1992), for example, the idea presented in the paper is precisely that the use of the exchange-rate as a nominal anchor in a stabilization program combined with the lack of credibility in the program's success can generate a business cycle, causing not only an expansion due to a consumption boom but also a crisis as a result of its subsequent events.

Empirical works such as Juglar (1862) and Burns and Mitchell (1946), however, present evidence of regularity in the cyclical movement of industrialized capitalist economies, a finding that

⁵ TARGET2 (Trans-European Automated Real-Time Gross Settlement Express Transfer System) is a system of automatic compensation for open payments between European Union members that is needed to maintain the monetary union. When a resident in Greece makes a payment to a resident in Germany, for example, the operation is made through reserve transference from a Greek commercial bank to a German one. Concretely, however, it unfolds into a debit-credit operation in the Eurosystem — an organization that includes ECB and other European Central Banks — involving the *Bundesbank* and the Greek Central Bank. The idea behind this system is that the net result of these operations approaches zero in the short-run. If that does not happen, however, the Central Bank in debt has two choices: 1) to use foreign loans to cover the deficit, or 2) to register a TARGET2 debt and offset the money shortage by expanding commercial banks' credit, provided that assets are offered as collateral. In other words, the TARGET2 balance acts as foreign reserves but with one distinction: whereas the capital outflow limit for other countries is the amount of foreign reserves, the limit for Eurozone members is the amount of collateral that commercial and central banks can offer in order to expand the monetary base (SINN 2012; HIGGINS, KLITGAARD 2014).

is opposed to the idea that business cycles would be a result of exogenous random shocks that could be avoided by proper economic policy response. Whereas Juglar (1862) shows that the business cycle length varies from 7 to 11 years, Burns and Mitchel (1946) present evidence of an average length of 8 years.

Although the regularity evidenced by those empirical studies is opposed to the central idea of the real business cycle theory, it is aligned with several other business cycle theories in which it appears as an assumption. A distinguished representative of this group of theories is the Marxian Theory of Overproduction Cyclical Crisis. Marx (1969, 1973, 1991) presents economic crises as a phenomenon inherent to capitalist accumulation. They are taken as overproduction crises and as subject to a law that operates regularly under capitalism as a consequence of competition between capitalists, a dynamic that will be presented shortly.

In an attempt to survive the competition and simultaneously aiming for surplus profit appropriation, capitalists constantly seek new production techniques that can increase labor productivity⁶. As a general economic behavior, this results in the expansion not only of the amount of surplus-value that needs to be realized in the market but also of the number of commodities in which a given amount of this value is materialized, at the same time that it makes the price of production of labor-power decrease. Hence, the demand of the vast majority of society remains restricted to a very narrow limit, while the exigency under the capitalist class consumption rises. Furthermore, the development of Capitalism, which is nothing more than the expression of this competitive dynamic, also results in the development of commercial and banking capital, both of which can act as leverages for accumulation and enhance its effects. Finally, at a given time, the unity between the conditions of extraction and realization of surplus-value falls apart. Crisis, therefore, would be the resulting effect of the shock between the opposite poles of capitalism's fundamental contradiction: the impulse to unrestricted development of the productive forces and the capitalist antagonistic relations of production and consumption (Marx 1969: notebook XIV, 772⁷; 1991: 352–353). It consists not only of overproduction of commodities, but indeed of overproduction of capital in all its forms. It also involves the break in the contradictory unity production x consumption and the anarchy of production as its two essential concrete manifestation forms⁸. The periodic and regular

⁶ It is imperative to highlight that, in Marxian economics, labor productivity measures the number of commodities that can be produced by a given amount of labor, being it dead or living labor, which means that saying that the use of a new technique increased labor productivity is the same as saying that, with this new technique, it is possible to produce a higher quantity of commodities with a given amount of labor. Hence, in this particular framework there is no such thing as capital productivity.

⁷ We are using the original pages of Marx's notebooks, which are presented in the majority of the Surplus Value Theories editions. This enables readers to quickly check the parts we are referring to.

⁸ This understanding is the result of the collaboration between two Marxian economists, a Brazilian and a Portuguese. This and other contributions are presented by them in Mendonça (1990) and Rosas Ribeiro (2008). Unfortunately, both works are available only in Portuguese. Hence, given the impossibility of using them as references, we draw the reader's attention to what is presented by Marx (1969: notebook XIII) while discussing the crisis' manifestation forms. For the

nature of its manifestation, in turn, would be directly linked to the process of renewing fixed capital, with its physical and moral depreciation determining the length of each business cycle (Marx 1956: 110; Rangel 1983, 1985).

In capitalism, however, banking activities are guided by the same principles that govern the accumulation of industrial capital. Given this, while accumulation progressively increases the gap between the conditions of extraction and realization of surplus-value, the expansion of credit progressively increases the maximum limit of this deviation by anticipating values that will only be realized in the future. Accumulation, moreover, fuels speculation in the financial market, which is also linked to industrial capital through financialization. Thus, if, on the one hand, the aforementioned deviation movement could not continue indefinitely, on the other hand, credit makes its limit very elastic, changeable, and certainly dependent on what economic theory classifies as the agents' expectations⁹ (Marx 1991). For this reason, authors such as Carneiro de Almeida (2013, 2016) assume that it is possible to anticipate that economic crises in contemporary capitalism will always assume the appearance of a financial crisis.

According to the above-mentioned author, this is because only two scenarios can follow this accumulation standard: 1) either the deviation between the conditions of extraction and realization of surplus-value increases in such a way that the agents' expectations are reversed because they think that it is no longer possible to assure accumulation, 2) or some external circumstance anticipates this reversal. It is imperative to point out, however, that, according to the author, circumstances that disturb the financial market will only trigger an overproduction cyclical crisis if a latent overproduction — a considerable gap between the conditions of extraction and realization of surplus-value — is already present in the economy (Carneiro de Almeida 2013, 2016).

With that in mind, if we recall what was presented about the currency crisis theories, first of all, we find that, in general, they present circumstances that reverse the agents' expectations as the central cause of this type of crisis. Such circumstances encompass an external factor or a reduction in the level of economic activity — assuming that the dynamics predicted in Calvo and Mendoza (1996a,

author, the possibility of crisis precedes capital circulation, since its two first manifestation forms — the falling asunder of purchase and sale unity and of the unity between money acting as measure of value and ideal price-form and as real exchange-value — are already present at simple circulation. Marx (1969: notebook XIII), however, argues that these forms are still too abstract, and that is why they generate only the abstract or formal possibility of crisis. Although it is only by analyzing capital circulation that we are able to see concrete forms of crisis, Marx (1969: notebook XIII, 714) highlights that those abstract forms are also contained in the concrete ones. Taking this argument as a starting point, we can try to identify which concrete forms of crisis contain all its other manifestation forms. The examination of crises in modern capitalist economies makes two concrete features stand out as essential ones: either there is a disruption in the proportionality between capitals and, as a consequence, overproduction in the form of productive capital, or overproduction of commodities, or both. Hence, by this logic, crises would have two essential concrete manifestation forms: the anarchy of production and the falling apart of the poles of the contradictory unity production x consumption. In them are contained all the other forms, even the most abstract ones.

⁹ Marxian approach on expectations and their influence on fictitious capital market price is presented in Marx (1990: 598).

1996b) and Krugman (1998) are related to the changes in the way that economic agents act in the financial market examined in Minsky (1986). Thus, regardless of the chosen currency crisis approach, the circumstances presented as crisis causes by those theories fit perfectly into both of the financial outbreak scenarios anticipated by Carneiro de Almeida (2013, 2016).

This logic suggests, therefore, that currency crisis theorists, concerned as they are with the phenomenon's appearance, fail to identify the real nature of most economic crises in capitalist economies. The several circumstances that they identify as their causes are nothing more than what Rosental and Straks (1958) call the non-essential cause of the phenomenon: the factor that determines only the characteristics of its appearance. If this is the case for the crisis that struck the Brazilian economy in the late 1990s, only a further analysis can determine. That is what is done in the next section.

3. Accumulation and Crisis During the Real Plan:

The present section is divided according to the stages of the Brazilian economy business cycle.

3.1 Stabilization and Economic Recovery: the recovery phase (1993.Q1–1994.Q3):

The success of the Real Plan in controlling inflation is undeniable. It brought the monthly price change rate from 40% in June to 6.84% in July 1994 and 1.86% in the following month (IBGE/SNIPC¹⁰). The first of its three stages consisted of a temporary fiscal adjustment. Then, in order to resolve the distributive conflict that they believed to be taking place in the country, the government established the *Unidade Real de Valor*, URV (Real Value Unit) which would mark the readjustments of all new contracts, while those currently in operation could voluntarily adhere to it at any time. In establishing the URV as the average of three representative price indexes with daily adjustment, the government's aim was to make its adoption attractive, inducing economic agents to find a sustainable price vector¹¹. Once a satisfactory level of relative price stability was reached, the last stage of the plan was put into action: this consisted of the creation of the Real, the imposition of

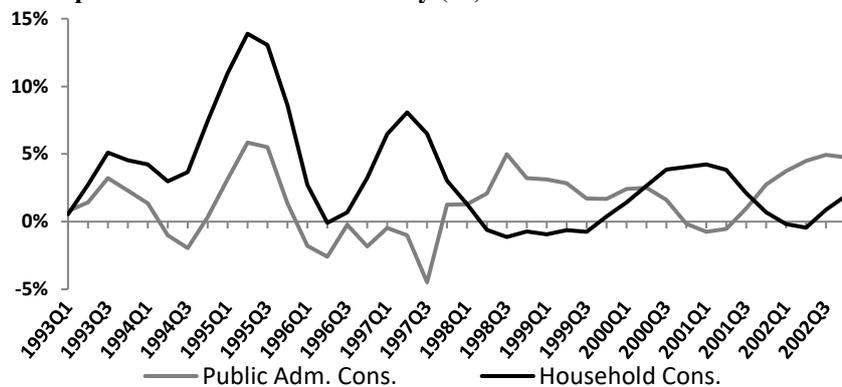
¹⁰ Brazilian Institute of Geography and Statistics/National System of Consumer Price Indexes;

¹¹ Notice that, with over indexation, the government would guarantee that contracts that had their prices readjusted by URV would automatically defend themselves against changes in other prices. This means that relative price structure could not get any worse for any company after the adhesion, only better. For outsiders, however, this structure could only get worse and never better. Besides, when new contracts adhered to indexation, whatever the initial price established by them, it could not fail to be reflected in the URV, while it could otherwise go unnoticed by companies that weren't in the over indexation scheme. Given this, the agents who first adhered to this readjustment method would have, compared to the others, a greater influence on the final result of the price vector.

limits for monetary base expansions, the establishment of the exchange rate anchor and the abrupt conclusion of the liberalization process that had started in 1985 (Ferrari Filho 2001; Saad-Filho, Morais 2002; Giambiagi, Além 2016).

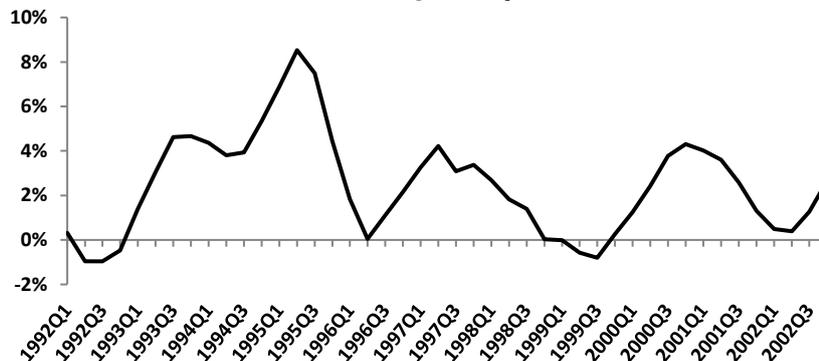
As soon as the three stages of the plan were completed in the second half of 1994, a consumption boom was triggered and, according to Giambiagi and Além (2016), Ferrari Filho (2001), Saad-Filho and Morais (2002) and Saad-Filho and Mollo (2002), it stimulated economic growth. This can be seen by examining the real accumulated annual growth rates¹² of quarterly household consumption and quarterly GDP of the Brazilian economy shown in figures 1 and 2.

Figure 1: Real Accumulated Annual Growth Rates of Quarterly Household Consumption and Public Administration Consumption in the Brazilian Economy (%):



Source: elaborated by the author based on IBGE/SCN 2000 Trimestral (IBGE's National Account System quarterly database).

Figure 2: Real Accumulated Annual Growth Rates of Quarterly GDP of the Brazilian Economy (%):



Source: elaborated by the author based on IBGE/SCN 2000 Trimestral (IBGE's National Account System quarterly database).

Before the consumption boom, as we can see, there was already an economic recovery process in action — one that is typical of the business cycle recovery stage — with supply growing

¹² This type of treatment used on quarterly and monthly data is intended to reduce the impacts caused by circumstantial events in the trajectory of growth rates. It consists of calculating the percentage change of the growth accumulated in one year up to a certain moment in relation to the one accumulated in the immediately preceding annual period. They are obtained through the equations $T_n = \frac{\sum_{i=n-3}^{i=n} x_i}{\sum_{i=n-4}^{i=n-7} x_i} - 1$, for quarterly data and $T_n = \frac{\sum_{i=n-11}^{i=n} x_i}{\sum_{i=n-12}^{i=n-23} x_i} - 1$ for monthly data, where T_n is the accumulated annual growth rate in period n , and x_i is the value of the variable in period i .

hand in hand with demand. It is only after the conclusion of the plan that consumption growth rates detach from the GDP's pace, reaching 13.89% in the second quarter of 1995. This economic recovery was also characterized by the increase in labor productivity as a result of trade liberalization, which made access to advanced foreign technologies easier¹³ and enhanced competition by cheapening imported consumer goods. As we can see in table 1, the productivity of the manufacturing industry — as well as of other sectors (Saad-Filho, Morais 2002: 12–13) — grew at high rates in 1993 and 1994.

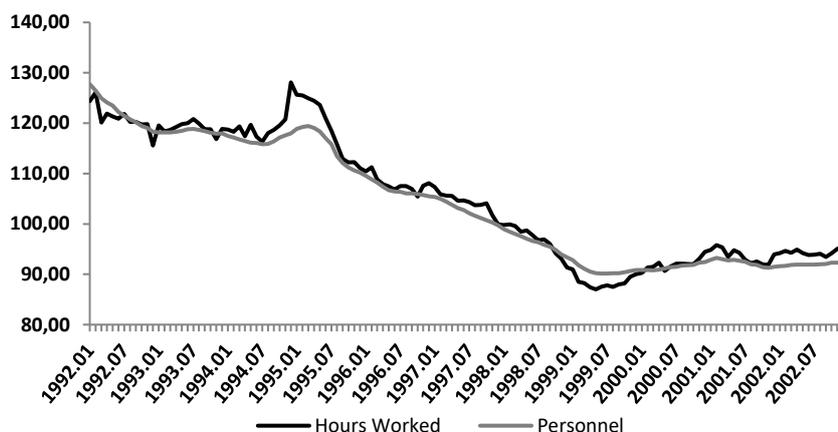
Table 1: Productivity Growth Rates of the Brazilian Economy Manufacturing Industry:

Years	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Annual Var.	4.19%	8.23%	7.46%	0.86%	5.33%	7.95%	1.54%	1.09%	3.03%	0.27%	0.35%

Source: IBGE/PME Antiga (IBGE's monthly employment survey).

The data presented in figure 3 also corroborate this idea since, despite the acceleration of economic growth, we can still see a drop in the indexes of personnel and hours worked in the industrial sector, indicating an increase in social capital organic composition.

Figure 3: Hours Worked and Personnel Indexes for the Industry Sector (seasonally adjusted index, 2006 = 100):



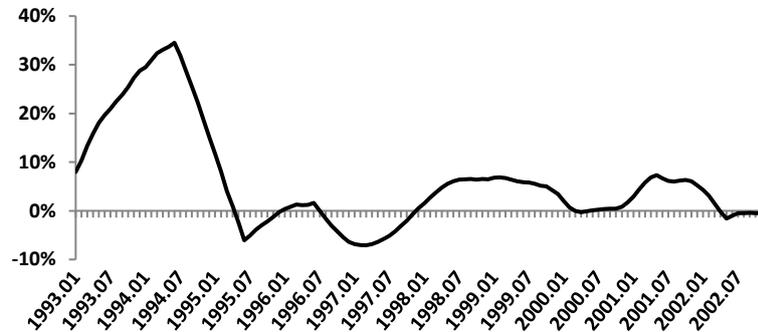
Source: CNI (National Industry Confederation).

Therefore, in the first quarter of 1993 the Brazilian economy was entering the recovery stage of its business cycle. The Real Plan, however, interfered with it, speeding up the process of capital accumulation by stimulating consumption and enhancing competition. This stimulus to consumption is due both to the fall in imported goods prices and to the expansion of the credit supply. As we can see in figure 4, despite the fact that its growth rates started decreasing in July 1994, credit operations to the private sector grew at very high rates until the beginning of 1995. When we examine, in turn,

¹³ There was a significant increase in the capital goods import coefficient between 1993 and 1996 (Saad-Filho, Morais 2002: 12).

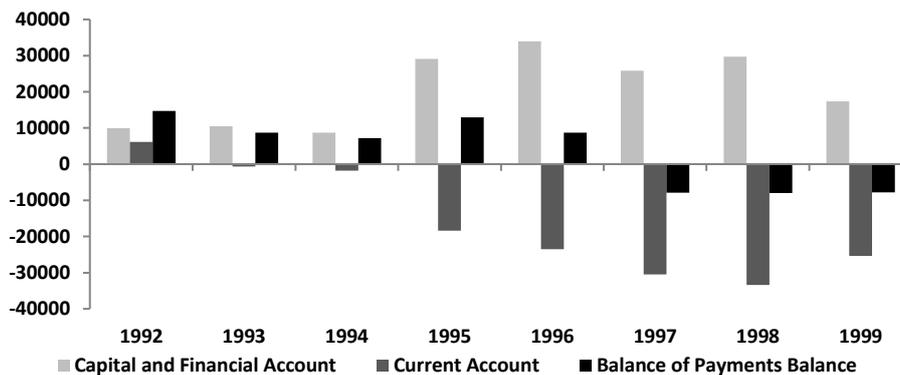
the data in figure 5, we also realize that this expansion is related to the trade and financial liberalization.

Figure 4: Real Accumulated Annual Growth Rates of Monthly Credit Operations to the Private Sector of the Brazilian Economy (%):



Source: elaborated by the author based in BCB Boletim/Moeda (monthly Brazilian Central Bank's Report) and IBGE/SNIPC.

Figure 5: Capital and Financial Account, Current Account (FOB), and Balance of Payments Balance (in US\$ million):



Source: BCB Not. Imp./Set. Ext (Central Bank's report to the press about the external sector).

Notice that the successive surpluses in the balance of payments financial account are funding the current account deficits, which relate mainly to the aforementioned consumption boom. This combination of factors, therefore, ended up anticipating the peak phase of the business cycle; however, it was temporarily aborted due to the combination of two factors — one external and the other internal — as shown in the next subsection.

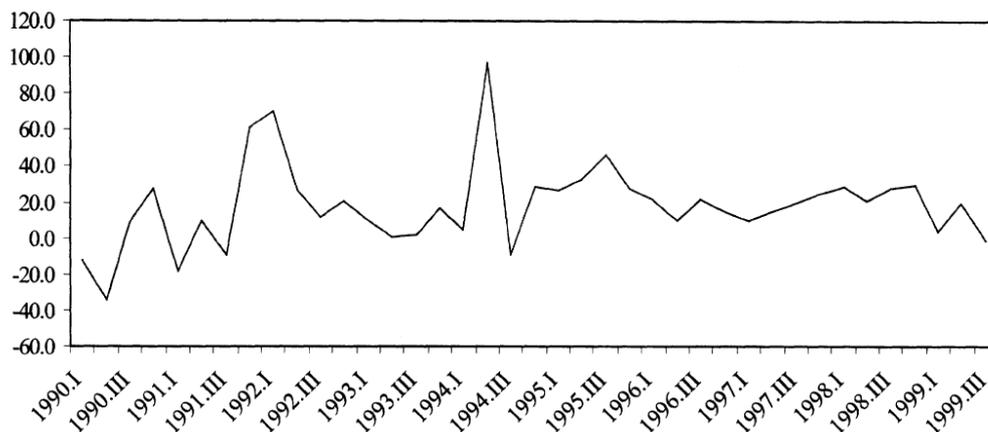
3.2 *Financial Leverage, Accelerated Accumulation and External Vulnerability: the business cycle peak distorted (1994.Q4–1997.Q2)*

As Saad-Filho and Morais (2002) pointed out, the adoption of Tropical Neomonetarism as a development strategy necessarily generates external vulnerability. Thus, in mid-1994, as a consequence of the six increases in the Federal Reserve's discount rate, international liquidity decreased, making it difficult to finance the deficits in the current account of emerging countries

(Saad-Filho, Morais 2002: 11). Meanwhile, the foreign sector was the only one the Brazilian economy could count on to meet their demand for credit after July 1994, when the central bank established a compulsory deposit rate of 100% for additional deposits. With Mexico's debacle at the end of that year, economic agents started to fear the falling asunder of the contradictory unity money acting as measure of value and ideal price-form \times money acting as real exchange-value in Brazil.

For the government, the only possible way to avoid public debt financing problems was to substantially raise the basic interest rate — which was actually done, as shown in figure 6. The private sector, however, had their hands tied. With commercial banks having lost their ability to create money and without the support of the foreign sector, credit supply in the Brazilian economy started to shrink and the accumulated annual growth rates of credit operations to the private sector started to drop, reaching -6.04% in June 1996 (see figure 4).

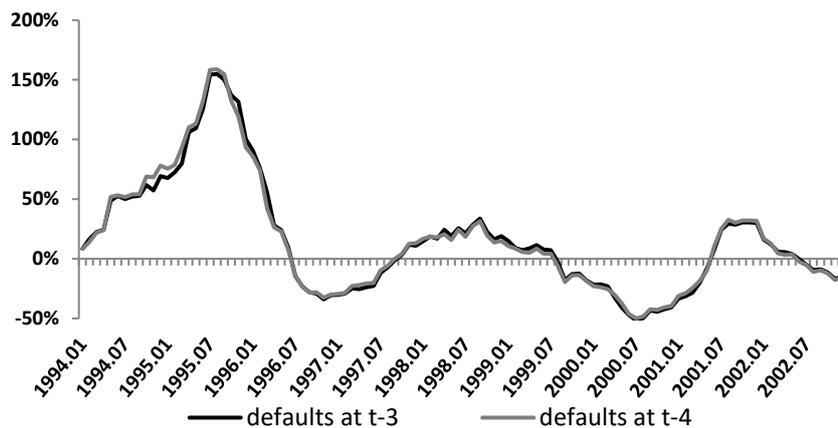
Figure 6: Real Interest Rate of the Brazilian Economy — Selic (overnight) Quarterly Annualized (deflated by the IGP-DI):



Source: Saad-Filho and Mollo (2002: 121).

As a result, companies, consumers and even subnational governments that had debts with post-fixed interest rates saw their cost sharply rise in a scenario of credit shortage, leading to an unparalleled escalation of defaults in the country, as shown in figure 7.

Figure 7: Accumulated Annual Growth Rates of Monthly Default Indexes at t-3 and t-4 of the Brazilian Economy (%):



Source: Elaborated by the author based on ACSP/IEGV (São Paulo's Commercial Association/Gastão Vidgal Economics Institute).

It is interesting to point out that during this period it is also possible to observe a deterioration of what mainstream economists call macroeconomic fundamentals, as argued by Schwartzman (1999: 18–19). Analyzing the evolution of the Brazilian economy's Public Sector Borrowing Requirement (PSBR), presented in table 2, we can see that the public sector goes from an operational surplus of 1.57% of GDP in 1994 to an operational deficit of 5% in 1995, a total worsening of 6.57 percentage points of GDP. Of this variation, 5.38 points correspond to the drop in the primary surplus, from 5.64% to 0.26%, while 1.19 percentage points correspond to an increase in the amount of real interest paid. Thus, this certainly joined forces with external events in the deterioration of financing conditions.

Table 2: Public Sector Borrowing Requirement by Government Level (as a percentage of GDP):

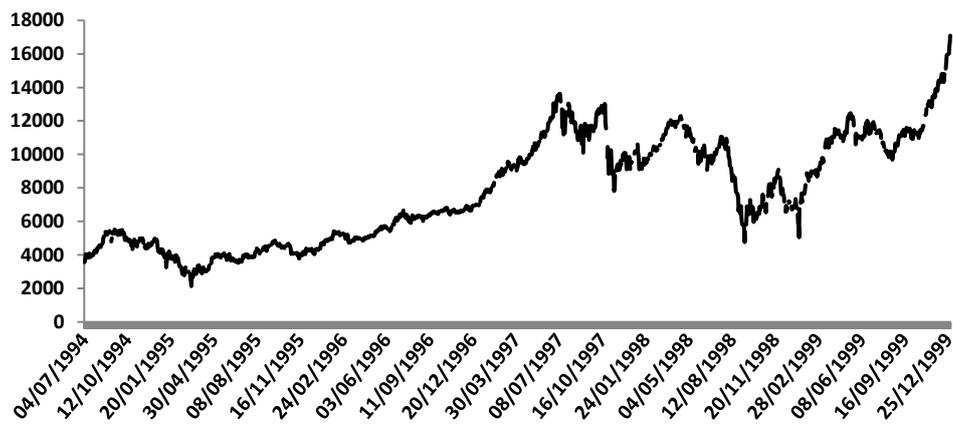
Years	Government Level	Nominal Result	Operational Result	Primary Result	Nominal Interest	Real Interest
1 9 9 3	Public Sector	64.83%	0.80%	-2.18%	67.01%	2.98%
	Central Gov. and BCB	23.96%	0.68%	-0.81%	24.77%	1.49%
	State and Municipal Gov.	27.12%	0.08%	-0.62%	27.74%	0.70%
	State-Owned Companies	13.75%	0.03%	-0.76%	14.51%	0.79%
1 9 9 4	Public Sector	26.97%	-1.57%	-5.64%	32.61%	4.07%
	Central Gov. and BCB	10.15%	-2.00%	-3.68%	13.83%	1.68%
	State and Municipal Gov.	12.08%	0.80%	-0.77%	12.85%	1.57%
	State-Owned Companies	4.74%	-0.37%	-1.19%	5.93%	0.82%
1 9 9 5	Public Sector	7.28%	5.00%	-0.26%	7.54%	5.26%
	Central Gov. and BCB	2.38%	1.74%	-0.52%	2.90%	2.26%
	State and Municipal Gov.	3.57%	2.37%	0.18%	3.39%	2.19%
	State-Owned Companies	1.33%	0.88%	0.07%	1.26%	0.81%

Source: Bacen/N. Imp./F. Púb (Central Bank's reports to the press/Public Finance).

As a reflection of the sharp rise of defaults, the growth rates of household consumption started to decrease until reaching an almost null value in the second quarter of 1996 (see figure 1). Given this, the expansion was temporarily aborted, resuming in the second half of the referred year.

Certainly, both the acceleration of the economic recovery and this cooling of the economic activity make it more difficult to determine the exact moment of the phase changes in the cyclical movement. However, in our opinion, based on the data presented, it is reasonable to interpret the sharp increase of the economic activity in the fourth quarter of 1994 as a transition from the recovery phase to the peak of the cycle — a transition that was brought forward due to the impacts of the economic policy. It is, moreover, equally reasonable to interpret the above-mentioned economic slowdown as a temporary interruption of the expansion, a distortion of the peak phase. Arguments that corroborate this second statement are presented below, starting with the analysis of figure 8.

Figure 8: Ibovespa Stock Index (closing):



Source: BM&FBovespa.

The examination of the Ibovespa stock index evolution path makes it clear that the economic agents themselves were aware that they were facing only a temporary adjustment. Notice that the upward evolution path of the market value of fictitious capital returns to the scene in March 1995. Moreover, Table 3 shows that the substantial positive variation in inventories in 1994 soon became negative in 1995, while in the following year the productivity grew again at high rates (see table 1).

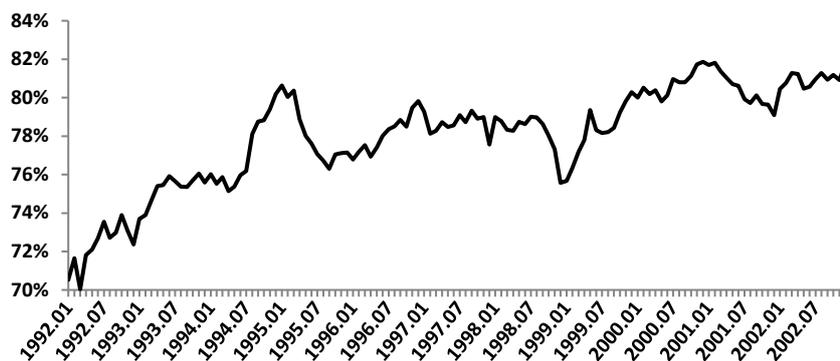
Table 3: Inventory Variation in the Brazilian Economy (R\$ million at constant 1995 prices):

Years	Inventory Variation
1994	5,973.68
1995	-2,088.13
1996	1,305.38
1997	454.53
1998	495.39
1999	6,004.85
2000	12,645.05
2001	8,912.90
2002	-1,715.02

Source: Elaborated by the author based on IBGE/SCN 2000 Annual, IBGE/SCN 1985 and IBGE/SNIPC.

As we can see, the peak stage of the business cycle is resumed in 1996, precisely in its last quarter. The new material conditions, however, do not allow accumulation to take place at the same pace as before. As shown in Figure 9, after some increase, the utilization of the industrial installed capacity remains more or less constant from September 1995 to July 1998. However, although the stability of the referred indicator during a period of rising labor productivity would indicate an increase in the organic composition of capital, the appropriate response in GDP growth cannot be verified, which creates the need to explain what happened after accumulation was resumed.

Figure 9: Utilization of Installed Capacity in the Brazilian Economy Industry (in percentage and seasonally adjusted):



Source: CNI.

The poor performance of the Brazilian economy in the final moments of this business cycle expansion phase can be explained by three effects generated by the Real Plan. The first effect can be approached based on the second generation of currency crisis models (Obstfeld, Rogoff 1996; Velasco 1996). Since the deterioration of the agents' expectations regarding the government's ability to maintain the fixed-exchange-rate regimen generates the need to raise interest rates so as to attract the same volume of foreign capital, this deterioration ends up contributing to the rising of debt cost, which causes further deterioration of expectations and so on, leading to the self-fulfilling prophecy. Although Schwarzman (1999: 18–19), Giambiagi and Além (2016: 137–139), among other authors, argue that the increase in interest expense during the Real Plan was not a relevant factor in the deterioration of public accounts, we have the following reasons to disagree.

Firstly, Giambiagi and Além (2016: 139) argue that, whereas the primary surplus of 2.9% of GDP in the 1991-1994 period was converted into a primary deficit of 0.2% of GDP in 1995–1998 — a total worsening of 3.1% of GDP in the primary result — there was, on the other hand, an increase of 1.1% of GDP in real interest paid from one period to another. Both these factors generated, therefore, a total worsening of 4.2% of GDP in the operational result, with the deterioration of the primary result accounting for 73.81% of this movement and the increase in the amount of real interest

paid being represented by the other 26.19%. For the authors mentioned earlier, this participation is not significant. We just think that it is.

Finally, we also disagree because the examination of the data presented in table 4 leads us to conclude that the government has repeatedly used rollover to reduce the expenses with interests paid. Notice, for example, that in years like 1996, when there was a real reduction in interest paid, there was, at the same time, significant growth in the public sector's net debt.

Table 4: Real Change in Interest Expenses and Public Sector Net Debt:

Years	Interest Expenses	Public Sector Net Debt
1992	13.95%	-0.76%
1993	-6.05%	1.33%
1994	43.86%	-14.94%
1995	34.95%	11.19%
1996	-35.91%	17.87%
1997	4.94%	8.89%
1998	121.57%	23.08%
1999	-10.28%	22.89%

Source: elaborated by the author based in BCB Boletim/F. Públi., IBGE/SCN, IBGE/SNIPC.

Regardless of how this situation is interpreted, the fact is that, in order to face this deterioration, one of the government's actions was precisely to reduce the public administration consumption during the years 1996 and 1997 (see figure 1). Seeing as how, according to data from IBGE/SCN 2000 Quarterly, the share of public administration consumption in total consumption is within the range [20%, 30%], the conditions of surplus-value realization ended up being narrowed.

Moreover, as anticipated by Kregel (1999), this circumstance is aggravated by the increasing deficits in the current account, which also act against the economic expansion by narrowing the conditions of surplus-value realization, since it transfers part of the national capital's demand to the rest of the world. This occurred in Brazil from 1993 to the end of the cycle examined here, as can be seen in figure 5.

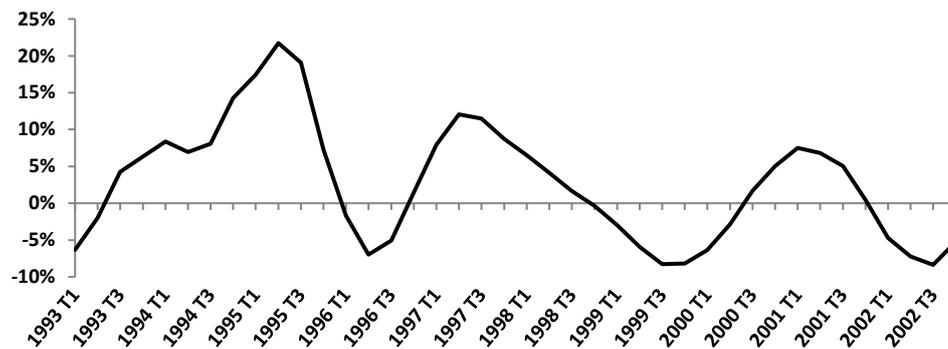
Finally, there was a third effect of the Real Plan that reduced the impact of investments on economic growth and resulted from the financial turmoil of 1995. As a result of the monetary tightening¹⁴ and the sharp increase of defaults, the variation rate of credit operations to the private sector is mostly negative from May 1995 until the end of the cycle, as we can see in figure 4. In other words, as a consequence of the retraction of credit supply, the maximum limit of the gap between conditions of extraction and realization of surplus-value is reduced. Furthermore, in addition to playing a part in the intensification of demand restrictions, this monetary tightening also disrupted

¹⁴ The central bank did lower the compulsory deposit rate in December 1994 and July 1995 to 90% and 83% respectively, and from August 1995 to January 1996, it was decreased gradually until it reached 75%. Clearly, however, it was not enough to boost the credit sector's performance.

accumulation by increasing the price (interest) of the commodity of capital. As credit becomes more expensive, there is a disincentive to its use for consumption (realization credits) and investment (production credits) (Ferrari Filho 2001; Saad-Filho, Morais 2002; Saad-Filho, Mollo 2002).

However, according to the literature (Marx 1969, 1973, 1991; Draguilev 1961; Mendonça 1990; Rosas Ribeiro 2008), although economic policy can distort the business cycle, it cannot prevent it from being the essence of the capitalist economies' movement. Without the leverage of credit, the expansion is supported to a greater degree on the real side of the economy. Therefore, the recovery of investments that started in the fourth quarter of 1996, which can be seen in figure 10 presented below, did not have such a great impact on product growth rates. Despite this, accumulation based on the development of productive forces is indeed resumed (see table 1), putting an end to the interruption of the peak stage.

Figure 10: Real Accumulated Annual Growth Rates of Quarterly Gross Fixed Capital Formation in the Brazilian Economy (%):



Source: IBGE/SCN 2000 Trimestral.

Given the new circumstances, the cycle's peak phase could not last long. In the third quarter of 1997, after only a short period of time, its limit was reached.

3.3 *Overproduction or Currency Crisis? The crisis of 1997.Q3:*

As anticipated in section 2, only two scenarios can follow the peak of the business cycle, and what happened with the Brazilian economy certainly fits into one of them. When, in October 1997, the Asian financial crisis spread terror on the stock exchanges of emerging countries (Schwartzman 1999: 20), the economic agents of the financial market, in turning their eyes to the real side of the economy, witnessed companies with realization difficulties and public finances in a situation that impelled the government to retract its demand. This caused the fictitious capital's expected revenue to be reduced, reversing its value appreciation process. This reversal, which marks the entry into the crisis phase of a new business cycle, is evidenced by the drop in the Ibovespa index

shown in figure 8, unfolding into the destruction of part of the latent circulating capital of industrial capital that was seeking fictitious profits¹⁵ in the financial market.

Facing the impossibility of continuing accumulation, capitalists reduced their investments in 1997.Q4 (see figure 10). It is interesting to note, however, that as GDP growth rates declined each quarter, the installed capacity utilization rate remained more or less constant until August 1998. This suggests the escalation of the number of bankruptcies, implying that a substantial number of companies had not yet recovered from the impacts of the monetary tightening that began in late 1994/early 1995.

The remaining companies, in turn, were able to breathe for a while, not only due to the appropriation of the market shares of those who perished, but also because, as of December 1997, the credit supply to the private sector (see figure 4) began to grow again. Another factor that acted in the same direction was the public administration consumption which, going in a different direction than the household consumption, started to show positive growth rates as of the fourth quarter of 1997, reaching 4.98% in the third quarter of the next year.

Bankruptcies, however, placed a significant portion of the proletariat in unemployment, as can be seen in Table 5.

Table 5: Unemployment Rate of the Brazilian Economy (%):

Years	Unemployment Rate
1995	6.70%
1996	7.59%
1997	8.46%
1998	9.75%
1999	10.44%
2000	-
2001	10.06%
2002	9.88%

Source: IPEA (Institute of Research on Applied Economics).

This could not fail to reduce the demand of both capitalists and proletarians, thus implying a reduction in the growth rate of consumption (see figure 1). In addition, neither the expansion of credit nor the government's economic policy could act as a mitigating factor to the decrease in demand for a long period of time. In the case of credit, if on the one hand it enables goods to circulate without money circulation in the present, on the other it makes it necessary for money to circulate without goods circulation in the future, which intensifies the narrowing of realization conditions. Hence it is no coincidence that, at the end of 1998, the default indexes annual growth rates exceeded 30% (see

¹⁵ Fictitious profits are financial profits earned by fictitious capital owners in operations in the financial market. The concept was created by the Brazilian Marxian economist Reinaldo Carcanholo (Carcanholo, Souza 2009), who was made honorary president of the Latin-American Society of Political Economy after his death. Sadly, his work on fictitious capital is available only in Portuguese.

figure 7). As for the government's economic policy, its source of financing was doomed to exhaustion. This is because, in order to support both the expansionist fiscal actions and the exchange rate anchor — in sliding bands at this point — the treasury started to offer bills of exchange and dollars in the future market, offering hedge opportunities to speculators and socializing the exchange-rate risk (Saad-Filho, Morais 2002: 16–17). This situation laid the ground for what Harvey (2013) presented as the vanguard of “accumulation by dispossession”: the execution, by derivative funds and other major financial capital institutions, of speculative attacks on peripheral countries in order to earn fictitious profits. After the Russian financial crisis in 1998, the financial institutions’ attacks on Brazil generated profits at rates ranging from 200% to 400% in January 1999. In March, in turn, after the change from exchange-rate regimen to a dirty fluctuation, the maintenance of high interest rates made another attack possible: this time against the dollar, yielding gains of 20% in just one month (Saad-Filho, Morais 2002: 17–18).

Therefore, after acting to mitigate the effects of the crisis, these factors started to contribute to its intensification. At the end of 1998, the installed capacity utilization fell by about 3.5 percentage points, showing that the scenario was discouraging production growth in companies that survived bankruptcies. In the following year, in turn, the situation became even more critical. It is precisely in that year that the economy started to show negative rates of economic growth. In such a scenario, the escalation in the installed capacity utilization (see figures 2 and 9) suggests that bankruptcies started to occur at an even more intense pace. This is corroborated by the value assumed by the variation in inventories (see table 3), which points to serious difficulties in realization. It is no wonder that the unemployment rate reached its highest value in the period (10.44%).

As we can see, from 1997 to 1999, the Brazilian economy presented all the essential characteristics of an overproduction crisis, as described by Marx (1969, 1973, 1991) and other Marxian authors. There was: 1) financial turbulence, which attests to the overproduction of capital in its money capital form; 2) production cuts and unemployment growth, which attest to the overproduction of capital in its productive capital form and also to the action of the anarchy of production; 3) insolvency of companies, default of economic agents as a whole, and sharp increase on inventories, which attests to the overproduction of capital in its commodity capital form and also to the breakdown of the contradictory unit production x consumption; and 4) bankruptcy of companies, which is the crisis mechanism to restore the conditions of accumulation. This crisis, moreover, is preceded by an accumulation process characterized by the development of the productive forces, which necessarily leads to an expansion of the conditions for extraction of surplus-value but narrows the conditions for its realization, leading to the rupture of the unity between them, which can only be reestablished by destroying the excess capital. This leads us to conclude that the 1997 crisis was not a currency crisis but a cyclical crisis of overproduction.

4. Final Remarks:

The role of any scientific field is precisely to identify the movement law to which its object of study is subjected so that humankind can be favored by this knowledge. Therefore, it is necessary to look beyond the appearance of the phenomena, since only their essential features have the stability needed to generate a predictable movement. We believe, however, that economic theory has been distancing itself from this guiding principle and analyzing reality more and more superficially. If, on the one hand, the examination of transmission mechanisms of simple causal relationships is increasingly refined and the accuracy in determining the cause-effect quantitative relationship has never been higher, on the other hand, the more complex causal relationships, which involve the study of connections that are difficult to see and understand, seem to be going unnoticed.

By carrying out an analysis such as that of Mendel'son (2013), it is possible to identify what the several crises that have affected capitalist economies for the last 200 years have in common. As we have said before, overproduction is their essential characteristic, and they are subjected to a law that operates regularly in capitalism: the never-ending shock between the impulse to unrestricted development of the productive forces and the capitalist antagonistic relations of production and consumption. Thus, it is necessary to understand such crises as a regular and necessary phenomenon so that one can fully understand the dynamics of capitalist development, which is cyclical. Understanding the distinctions between these crises is very important, but it borders on inertia when dissociated from the knowledge of its essence. The analysis performed here emerges, therefore, as an attempt to contribute to the understanding of the phenomenon in these terms and the following conclusions are derived from it.

At the beginning of 1993, the Brazilian economy was entering the recovery stage of its business cycle. At the same time, the government was acting to achieve price stability through the Real Plan, characterized by a commercial and financial liberalization. With the accomplishment of this objective in the middle of the following year, the new environment ended up affecting both the supply and demand of the economy. On the one hand, commercial and financial liberalization made it easier and cheaper to import means of production as well as final consumer goods, placing national capital before a strong foreign competition and a “once in a lifetime deal” to modernize its productive structure. On the other hand, these same factors, when added to price stability, stimulated consumption. As a result, there was a wave of investment in more productive technologies on the supply side and a consumption boom on the demand side — a combination which distorted the cyclical movement, anticipating the entry into the peak phase in the last quarter of 1994.

This aggressive expansion, however, soon collided with a change in the scenario of the international financial market and the deterioration in public accounts which, combined with the

stabilization plan's monetary tightening, generated an unparalleled escalation of defaults in the country and temporarily interrupted the economic expansion from the end of 1995 to the third quarter of 1996. Although accumulation was resumed by the end of 1996, without credit leverage, it was unable to reach the same speed as before.

This, however, did not prevent the cyclical movement from prevailing, and capital accumulation led to the crisis stage of a new business cycle. With instant bankruptcies of some companies at the beginning of the crisis, the remaining capital, assisted also by the return of credit and by the expansion of public administration consumption, was able to breathe for a while. Due to this, the crisis initially manifested itself only as overproduction of productive capital — to be more accurate theoretically, by the anarchy of production. However, if, on the one hand, bankruptcies provided new market shares for the remaining companies, on the other hand, they generated unemployment and reduced the purchasing power of the capitalist class, narrowing the conditions of realization. Besides, as soon as it became clear that credit and public spending could not be used as countercyclical measures indefinitely, the crisis also started to manifest itself as overproduction of commodity capital with the exacerbated increase in the variation of inventories — a concrete form of the falling asunder of the contradictory unit production \times consumption.

Overproduction is, therefore, the true nature of the 1997 Brazilian crisis. The government's economic policy must be understood only as its non-essential cause, which determines its appearance, while the essential cause lies in the very character of capitalist accumulation, producing the periodic shock between the opposite poles of the fundamental contradiction. The classification of this crisis as a currency crisis is therefore at least inaccurate. For us, it is an overproduction crisis that has external imbalance as a particular characteristic.

References

- Baldwin, Richard, Thorsten Beck, Agnès Bénassy-Quéré, Olivier Blanchard, Giancarlo Corsetti, Paul de Grauwe, Wouter den Haan, Francesco Giavazzi, Daniel Gros, Sebnem Kalemli-Ozcan, Stefano Micossi, Elias Papaioannou, Paolo Pesenti, Christopher Pissarides, Guido Tabellini, and Beatrice Weder di Mauro. 2015. *Rebooting the Eurozone: Step 1 – Agreeing a Crisis narrative*. Accessed at <https://voxeu.org/article/ez-crisis-consensus-narrative>.
- Barro, Robert Joseph, David B. Gordon. 1983. A Positive Theory of Monetary Policy in a Natural Rate Model. *Journal of Political Economy*, 91 (4): 589–609.
- Burns, Arthur Frank, Wesley Clair Mitchell. 1946. Preliminary Sketch of the Statistical Analysis. In *Measuring Business Cycles*. NBER (Org.), 23–36. Massachusetts: NBER.
- Calvo, Guillermo Antonio, Enrique G. Mendoza. 1996a. Mexico's Balance of Payments Crisis: A Chronicle of A Death Foretold. *Journal of International Economics*, 41 (3): 235–264.

- . 1996b. Petty Crime and Cruel Punishment: Lessons from the Mexican Debacle. *American Economic Review*, 86 (2): 170–175.
- Carcanholo, Reinaldo Antônio, Mauricio de Souza Sabadini. 2009. Capital Fictício e Lucros Fictícios. *Revista da Sociedade Brasileira de Economia Política*, 24: 41–65.
- Carneiro de Almeida Júnior, Antonio. 2013. O Caráter Financeiro das Crises no Capitalismo Atual. In *Marxismos na Contemporaneidade: tópicos de política, economia e direito*. Reis de Meneses, Jaldes, Pinto Lyra, Rubens (Org.), 71–97. João Pessoa: Editora da UFPB.
- . 2016. *A Teoria Marxista das Crises Cíclicas de Superprodução: desenvolvimento e aplicação para o caso brasileiro*. PhD Dissertation (PhD in Economic Development) – Department of Economics, Curitiba: Universidade Federal do Paraná.
- . 2019. A Teoria Marxista das Crises Cíclicas de Superprodução: uma modificação da interpretação Mendonça-Ribeiro. *Marx e o Marxismo*, 7 (12): 90–113.
- Cesaratto, Sergio. 2013. The Implications of TARGET2 in the European Balance of Payments Crisis and Beyond. *European Journal of Economics and Economic Policy: Intervention*, 10 (3): 359–382.
- . 2017. Alternative Interpretation of a Stateless Currency Crisis. *Cambridge Journal of Economics*, 41 (4): 977–998;
- Draguñev, Mikhail Samuilovich. 1961. *A Crise Geral do Capitalismo*. Varginha: Editora Alba.
- Falcão Silva, Maria Luiza. 2002. Plano Real e Âncora Cambial. *Revista de Economia Política*, 22 (3): 3–24.
- Ferrari Filho, Fernando. 2001. O Legado Do Plano Real: uma estabilização sem crescimento econômico? *Análise Econômica*, 19 (35): 5–21.
- Flood, Robert P., Peter M. Garber. 1984. Collapsing Exchange-Rate Regimes. *Journal Of International Economics*, 17 (1): 1–13.
- Giambiagi, Fábio. Além, Ana Cláudia. 2016. *Finanças Públicas no Brasil: teoria e prática*. 4 ed. Rio de Janeiro: Elsevier.
- Harvey, David. 2013. *The New Imperialism*. Oxford: Oxford University Press.
- Higgins, Matthew, Thomas Klitgaard. 2014. The Balance of Payment Crisis in the Euro Area Periphery. *Federal Reserve Bank Current Issues in Economics*, 20 (2): 1–8;
- www.ipeadata.gov.br. Accessed: Feb. 08 2020;
- Juglar, Clément. 1862. *Des Crises Commerciales et de leur Retour Périodique en France, en Angleterre et aux États-Unis*. Paris: Guillaumin Et CLE Libraires-Editeurs.
- Kiguel, Miguel Alberto, Nissan Liviatan. 1992. The Business Cycle Associated with Exchange Rate-Based Stabilizations. *The World Bank Economic Review*, 6 (2): 279–385.

- King, Robert R., Charles I. Plosser. 1984. Money, Credit and Prices in a Real Business Cycle Model. *American Economic Review*, 74 (3) 363–380.
- Kregel, Jan A. 1999. Was There an Alternative to Brazilian Crisis? *Revista de Economia Política*. 19 (3): 23–38.
- Krugman, Paul. 1979. A Model of Balance of Payments Crises. *Journal of Money, Credit, and Banking*, 11 (3): 311–325.
- Kydland, Finn, Edward Prescott. 1990. Business Cycle: real facts and a monetary myth. *Federal Reserve Bank of Minneapolis' Quarterly Review*, Spring: 3–18.
- Lavoie, Marc. 2015. The Eurozone Crisis: a balance-of-payments problem or a crisis due to a flawed monetary design? *International Journal of Political Economy* 44 (2): 157–160.
- Marx, Karl. 1956. *Capital: A critique of political economy. Book Two: The process of circulation of capital*. Moscow: Progress Publishers.
- . 1973. *Grundrisse: Outlines of the critique of political economy*. London: Penguin.
- . 1969. *Theories of Surplus Value*. 2ed. Moscow: Progress Publishers.
- . 1991. *Capital: A critique of political economy. Book Three: The process of capitalist production as a whole*. London: Penguin.
- Mendel'son, L. A. 2013. *Теория и история экономических кризисов и циклов*. Moscow: Books on Demand Ltd.
- Mendonça, António. 1990. *A Crise Econômica e sua Forma Contemporânea*. Lisboa: Editorial Caminho S.A.
- Minsk, Hyman Philip. 1986. *Stabilizing an Unstable Economy*. New Haven: Yale University Press.
- Obstfeld, Maurice, Kenneth Rogoff. 1996. *Foundations of International Macroeconomics*. Cambridge, Mass: MIT Press.
- Plosser, Charles I. 1989. Understanding Real Business Cycles. *Journal of Economic Perspectives*, 3 (3): 51–77.
- Rangel, Inácio. 1983. O Ciclo Médio e o Ciclo Longo no Brasil. *Ensaio FEE*, 3 (2) 31–42.
- . 1985. Recessão, Inflação e Dívida Interna. *Revista de Economia Política*, 5 (3): 5–25.
- Rosas Ribeiro, Nelson. 2008. *A Crise Econômica: uma visão marxista*. 1.ed. João Pessoa: Editora Universitária da UFPB.
- ROSENTAL, Mark M., Grigory M. Straks. 1958. *Categorias del Materialismo Dialectico*. 1.ed. México, D. F: Editorial Grijalbo, S.A.
- Saad-Filho, Alfredo, Maria de Lourdes Mollo. 2002. Inflation and Stabilization in Brazil: a political economy analysis. *Review of Radical Political Economics*, 34 (2): 109–134.

- Saad-Filho, Alfredo, Lecio Morais. 2002. Neomonetarismo Tropical: a experiência brasileira nos anos noventa. *Revista de Economia Política*, 22 (1): 3–22.
- Sinn, Hans-Werner. 2012. The European Balance of Payments Crisis: an introduction. CESifo FORUM, 2012, München. *ifo Institut – Leibniz-Institut für Wirtschaftsforschung an der Universität München*, 13 (special): 3–10.
- Schwartzman, Alexandre. 1999. A Crise Cambial e o Ajuste Fiscal. *Revista de Economia Política*. 19 (1): 5–29.
- Teixeira Lanzana, Antonio Evaristo. 2017. *Economia Brasileira: fundamentos e atualidade*. 5 ed. Kindle Edition: Atlas.
- Velasco, Andrés. 1996. Fixed Exchange Rates: credibility, flexibility and multiplicity. *European Economic Review*, 40 (3): 1023–1035.