The Effect of the Global Crisis in Brazil: Risk Aversion and Preference for Liquidity in the Credit Market[1]

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Introduction

THE collapse of Lehman Brothers investment bank on September 15, 2008 marked a transformation of the international financial crisis, which began in the American high risk mortgages market in the middle of 2007, into a systemic global crisis. On one side, the increase of aversion to risk and the absolute preference for liquidity in the principal advanced economies set in motion a generalized flight movement by quality global investors and the virtual interruption of foreign commercial credit lines, resulting in an abrupt devaluation of the currencies of various economies. On the other side, the strong retraction of economic activity of central economies associated with a move to reduced leveraging of the financial system and of deflation of assets translated into a reduction in dynamism of world commerce.

The purpose of this article is to present the impact of the international crisis in the Brazilian economy from a post-Keyneisan theoretical reference point, with an emphasis on the virtual paralysis of domestic banking credit after September 2008. The arguments are built on three interpretive hypotheses.

The first is that, in the recent credit cycle, the competitive dynamic led to the emergence of high risk practices in the Brazilian banking system, such as term deposits with daily liquidity and loans to companies coupled to dollar derivative operations, whose destabilizing potential came to the surface when there was a reversal of expectations in the face of the escalation of the international financial crisis and its contagion of peripheral economies, including Brazil. In other words, underestimation of risks that characterize banking activity at its peak phase increased the impact of the international crisis on the Brazilian economy.

Excessive prudence in the reversal phase is also intrinsically characteristic of profit-making banking activities. However, in the case of Brazil, and this is the second hypothesis, the conservatism of the banks in the retraction phase was exacerbated by the relatively short credit term and by the existence of the pseudocurrency of public bonds, with liquidity and low risk profitability, which allowed rapid reallocation of its portfolios. With the reversal of expectations associated with the escalation of the international crisis and its repercussions on the world economy, private banks reacted with excessive prudence, generating, in their movement to reallocate portfolios, strong retraction of credit, contributing to the rapid deceleration of economic activity.

The third hypothesis is that the retraction of economic activity in the last quarter derived from the contraction of credit could have been mitigated if Brazil's Central Bank (BCB) had, as in the example of the central banks of central economies, reacted, in an opportune manner, to the deterioration of the expectations of agents and to the "pooling of liquidity" in the inter-banking market. Stubbornly maintaining its mandate as guardian of stability and with an ambiguous diagnosis that the Brazilian economy was growing beyond its potential, Central Bank as the monetary authority failed to see the seriousness of the deceleration underway in the advanced economies and its implications for the Brazilian economy.

Competitive Dynamic and the Credit Cycle

In the capitalist economy, understood as the monetary economy of production, the banking system acts as a free agent in granting purchase power in anticipation of spending (in consumption and in investment). Besides their function of financial intermediation banks create currency to grant credit, while being an integral part of the private institutional organization that is the vast hierarchical payment system which is organized around the Central Bank.

By creating currency rather than granting credit in order to meet their debts banks free society from the anchor of building a foreseeable resource and play a key role in the increase of the level of investments. However, banks act on the assumption of future expectations in a world or uncertainties and irreversibility. Thus when they expand credit they are acting according to their own considerations about the state of business, the performance of the economy and their prospects for profitability and the risk of the recipients, requiring a "margin of guarantee" from them defined on the basis of the value of the collateral of the loans and the updated prospects for profit of the business to be financed.

While they are of a private and well-defined nature, banks are also innovative and dynamic companies in search of increase of profits. Subordination to the logic of the appreciation of wealth means that the banks are in competition amongst themselves and with other financial institutions to gain market power and greater profits in different financial markets, whether domestic or international.[2] The competitive strategies adopted by banks in diligent administration of their assets and liabilities always have the objective of continually obtaining the greatest profit possible, in an arrangement of profitability with liquidity of financial investments. However, there is no guarantee that these strategies will be successful, since, as Keynes showed, economic decisions, owing to uncertainty, are always a risky bet in relation to the future. In this way, bank activism "affects not only the volume and the distribution of finances, but also the cyclical behavior of prices, income and employment" (Minsky, 1986, p.226).

The implacable search for appreciation of wealth, in a world of uncertainty and irreversibility, causes banks to neither respond passively nor to the demand or preference of other agents for loans and banking investments not under the command of Central Bank. In certain circumstances, this latter, which occupies the top of the monetary hierarchy, can have its objective of generating economic liquidity thwarted by strategies adopted by banks in the administration of their assets and liabilities for the purpose of increasing profit, looking to reconcile profitability with liquidity of their financial investments. The banks can do as much to make matters difficult as they can to concretize the decision of the monetary authority in amplifying liquidity conditions as in restraining liquidity activity. In the first case, they can make use of additional reserves for purely financial transactions without impacting monetary income, causing a repression of liquidity, which can compromise businesses not only by non-financial economic agents, but also smaller scale banks. In the second case, as highlighted by Minsky (1984, 1986), banks can develop new financial instruments that, at least partially, can replace restrictions placed on monetary assets.

As with all other capitalist economic agents, banks have a preference for liquidity and future expectations, to which they direct their strategies in an incessant quest for appreciation. In this sense, they actively manage both sides of the balance sheet and also use expedients such as off-the-books transactions. Since the desire of banks to maintain liquidity depends on optimistic or pessimistic considerations for the state of business throughout the economic cycle, the evolution of credit above all has to be pro-cyclical, as if the banking system were essentially constituted of private for-profit institutions.

The expectations of banks on the state of business throughout the economic cycle can lead to the assumption of excessive risk, to financing of speculative activities and/or to rationing of credit, with adverse effects on economic growth. Thus, throughout periods of optimistic expectations, banks pressured by competition grant credit without requiring insured guarantees, while debtors pay their debts by the assumption of new debts. The expansion of indebtedness then becomes similar to underestimated risks. This is because, in the incessant quest for appreciation, a bank that adopts more prudent behavior *vis-à-vis* its rivals risks losing market share.

Continual refinancing of previous debts with reduction in the margins of security of the contracts makes possible the appearance of unstable assets throughout the economic cycle. According to the financial instability hypothesis formulated by Minsky, the instability emerges to the extent that the flow of expected income is no longer sufficient to cover committed obligations when the innovations favored the increase in investments and profit, whether from the frustration of expectations, or from equally unexpected interest rates.

By contrast, when expectations degenerate, the banks have to shrink the granting of credit, reducing amounts and terms, raising interest and guarantee requirements. In the same way that there is excessive assumption of risk by banks at their peak phase when they look to expand their market share, caution in the reversal phase is intrinsically characteristic of profit-making bank activities. However, by contracting, reducing, or not renewing credit lines, banks contribute to the financial fragility of their clients, generating a vicious cycle of increasing default and aversion to risk. In certain circumstances, banks decide to strongly ration credit, braking economic growth or even leading to regression of production and investments.

As Keynes showed in one of his articles about the crisis of 1929, banks can behave myopically when pessimistic expectations predominate. In such circumstances, bankers look to reduce their exposure to risk in a manner so abrupt that, without warning, they threaten their own solidity, given that such an attitude can lead to the failure of their debtors. This myopia is at the base of a vicious circle of increase of default and deflation of debts and prices of assets (Keynes, 1973).

In order to limit the inherent instability of the banking system, authorities seek to impose rules of caution for the functioning of banks, which are applied to the composition and quality of credit and on the levels of indebtedness, among others. However, with financial innovations, the banks try to cheat any and every control. The new instruments and procedures contribute to expanding the complexity of the financial structures and the relations between debtors and creditors. The result, as Minsky well points out, is the increase of economic instability.

Brazil's Recent Credit Cycle

Since the adoption of the Real Plan in the middle of 1994, the competitive environment of the Brazilian banking system underwent an important transformation that translated into increased solidity of institutions and an advance in level of sophistication.[3] Up to 2002, however, the system showed no change in how it acted in relation to the standard of the years of high inflation, by maintaining a high preference for liquidity. With the exception of a short period of credit expansion after the Real Plan, banks continued prioritizing applications in public bonds *vis-à-vis* granting of credit.

The present credit expansion cycle had its beginning shortly after the first months of 2003, when banks began to expand credit offering to the private sector, in expectation of increasing their market share and their profit margins.[4] This change in the composition of bank portfolios occurred when there was a combination of two elements: on the one side, confirmation of a guarantee that there would not be a change in the economic policy of the new government;

on the other, reduced macroeconomic volatility, resulting from the subsequent favorable improvement of foreign accounts in the international context, as much in terms of foreign commerce as in the liquidity conditions for peripheral countries. This scenario of reduced macroeconomic volatility and expectation of reduction in basic interest rates – and consequently reduction of earnings with treasury operations – induced banks to redefine their operational strategies, prioritizing credit expansion.

Banks identified increase of credit to individuals as an enormous earning potential, in the face of optimistic expectations as to the recovery of jobs and income under the government of President Luiz Inácio Lula da Silva. For financial institutions, credit to families is much easier to evaluate than company credit, which requires greater knowledge of business, financial analysis and monitoring of the corporation's activities. At the same time, since the interest rates for individual credit are higher, personal credit operations are also more profitable.

Recovery of credit for individuals began before the first signs of consumer purchase power recovery. The greater will to take on credit, even with its very high interest rates, reflected, on the one hand, favorable expectations by consumers in relation to the future performance of the economy and, on the other, the need to update purchase of durable goods. Participation in credit by individuals in the totality of financial system credit operations began to rise in 2003, a tendency that was reinforced by the expansion of the amount of income after 2004 and which was maintained until 2007.

From the beginning of the expansion phase of the cycle the expansion of loans with free resources to individuals was anchored in the modalities of personal credit, vehicle acquisition and credit cards. Personal credit, which included operations with consigned credit, contributed on average to nearly half the growth of loans granted in this segment.[5] A consigned credit mode offers banking institutions the advantage of punctual payment and the guarantee of debt service. In return the recipient obtains credit with interest rates much lower than those in other individual credit modalities. The lower cost of this credit mode allowed families to expand consumption, as well as to exchange debts, using the resources to end much higher cost financing such as credit cards and special checks). It also exerted a great influence on the expansion of credit to individuals for acquisition of vehicles operations that offer the guarantee of fiduciary alienation. By allowing rapid recovery of goods, this mechanism reduces the credit risk and allows reduction of the risk premium covered by financial institutions.

The willingness of families to expand their indebtedness was also stimulated by the strategy of large wholesale networks, soon imitated by banks and their financiers, of stretching the terms of credit operations to the consumer. This stretching, significantly reducing the value of installments, contributed to the reduction of default, above all in a scenario of increased income of the population and, on a lesser scale, the increase of employment. The average term of individual operations rose from 308 days in January 2004 to 488 days in December 2008. This relative stretching of terms made possible the expansion of credit even in a scenario of extremely elevated average nominal (and real) interest rates.

In 2008, with the rise in the level of economic activity and the continuity of increase in investment begun in 2007, operations in the company sector, in particular industrial companies, assumed leadership over expansion of private sector credit.[6] Various inter-related factors contributed to the greater dynamism of credit with free resources. On the demand side, the acceleration of the Brazilian economy's rhythm of growth after the second quarter of 2007 and its resulting stimulus to ongoing production decisions and the increase in productive capacity, requiring third-party resources, impelled more bank credit to be contracted, above all in the modality of working capital used for cash flow needs.

In addition, various Brazilian companies and multinationals that counted on other financing sources returned to the domestic bank credit market in 2008 due to the continuing deepening of the international financial crisis. The crisis resulted in an expected worsening in terms of cost and terms for fund raising by major companies (and banks) in the international market. Replacing, at least in part, their fund raising in the international market, large companies expanded loan contracts for working capital loans on the domestic market in increasing volume and longer terms.

A weakening of financial conditions in the central economies, marked by strong deflation of assets, also contributed to reduced dynamism in the Brazilian capital market, and in particular to a brutal retraction of the primary stock market. To cover losses in their home countries, investors shed their domestic market capital positions. The exit of these investors depressed response to initial public offerings (IPO) and additional issues.[7]

Two economic policy decisions aimed at slowing credit and decelerating the expansion of the economy to restrain inflationary pressures contributed equally to the lesser domestic market dynamism of capital in 2008, raising companies' costs for gaining issue of direct debt bonds. The first of them was the January instituting of a compulsory deposit on *leasing* company bank deposits, which raised resources for its bank controllers through debenture issues. This requirement resulted in the retraction of debenture issues by leasing companies and increased competition between large banks for raising resources through term deposit certificates (CDB), which translated into a rise in the interest offered to clients and in the offering of daily liquidity for deposits up to two years after the initial term of two to three months.[8] The interest increase of CDBs applied upward pressure to the interest rates of direct debt instruments issued by non-financial companies in the capital market, such as debentures and promissory notes, as well as increasing the prospecting costs by medium and small size banks.

The second measure, the rise in the SELIC rate after April, reinforced this dispute for resources in the domestic capital market. To increase the profitability of federal public bonds, the high interest rate provided a trigger for the reallocation of portfolios of financial investments, notably of institutional investors, to the detriment of private debt shares and bonds, causing an increase in the costs of company and bank fundraising, most of all for those of medium and small size. For smaller companies, resource fundraising through private bond issues became more difficult with the deterioration of international financial conditions, given that, with the lack of foreign credit, the large Brazilian and multinational companies went on to acquire on the domestic market, increasing the competition for available resources.

On the offering side, the greatest dynamism of the Brazilian economy, associated with the growth of the domestic market, stimulated the adoption by banking institutions of strategies of credit increase to the company sector, notably in terms of working capital. Thus, in the context of rise in the cost of acquisition of resources by companies in international and domestic capital markets, some banks went on to offer loans tied to operations with dollar derivatives under more favorable conditions. In these credit operations, banks offered resources to companies with double indexing: rates between 50% and 75% of Inter-banking Deposit (CDI) interest and exchange variation based on predetermined quotations. The relative stability of the exchange rate led banks and companies to underestimate the risk of these operations, which were offered to export and non-export companies of every size, construction companies and even medium size banks.[9]

This loan modality, introduced into the country by foreign investment banks, and rapidly diffused by private national banks, brought the potential for impacts from the financial crisis into the Brazilian banking market. This is because, after the bankruptcy of Lehman Brothers investment bank in the middle of September, the strong increase in risk aversion created generalized flight by quality global investors and a virtual interruption of foreign lines of commercial credit, resulting in an abrupt deflation of the currencies of various peripheral economies, among which was Brazil.[10]

Between 15 September and 15 October, the real depreciated 22.7%, bringing strong losses to Brazilian companies that had realized dollar derivative operations in the over-the-counter market in Brazil and abroad, whether as protection from exchange risk, or for speculative earnings, or to reduce the cost of bank loans. Thus, besides the impact of the crisis through the virtual paralysis of foreign lines of commercial credit, which compromised renewal of the Contract Exchange Advance (ACC) and reduced its terms,[11] the banking credit market went on to suffer the effects of the problem of liquidity "pooling" in domestic credit inter-banking, as will be seen in the following.

International Crisis and Liquidity Pooling of in the Brazilian Banking System

The systemic global crisis strongly affected the Brazilian economy as much in terms of foreign commerce as in financial flow, including lines of commercial credit.[12] The freezing of inter-bank and international financial markets and the abrupt devaluation of the real connected to the flight for security for foreign investors and the unraveling of operations with exchange derivatives accomplished by companies[13] led to a rapid deterioration of bank expectations that reacted by narrowing credit and "pooling" liquidity.

Throughout 2008, the banks confronted growing difficulty in renewing their foreign credit lines that maintained ACC operations. However, after the bankruptcy of Lehman Brothers, the interruption of credit concessions picked up with foreign resources in the domestic market, seriously affecting the financing of Brazilian foreign commerce and requiring arrangements from the Federal Government to assure the furnishing of resources for this activity.

The international crisis hit the Brazilian economy at a peak moment following completion of a sequence of six quarters of accelerated growth. In a context such as this, when companies produce more and new investments, banking credit is essential as much for the working capital as for expansion of production. When expectations reversed, banks reacted with an excess of prudence and vigorous retraction of credit, causing companies to review their production and investment plans. The result was a rapid deceleration of economic activity in the last quarter of the year.

Growing rumors about losses from exchange derivatives by companies and banks set in motion a movement of absolute risk aversion and preference for liquidity by the banks. From not knowing the degree of exposure of the many participants to the risk of losses in these operations, banks withdrew credit not only from other banks but also companies and individuals. This exacerbated reaction from the major Brazilian banks was facilitated by the existence of public bonds indexed to the basic interest rate, which made them even more attractive with the rise in the SELIC rate by BCB in September.[14] The relatively short banking credit term in Brazil also favored this movement to portfolio reallocation, characteristic of active management of bank balance sheets.

Even in the context of the escalation of the international crisis and the deterioration of credit conditions in the domestic market, however, loans for working capital continued growing, with a variation of 12.3% between September and December. An increment such as this within a scenario of contracting credit seems paradoxical. However, there are at least two explanations for this behavior. In the first place, with paralysis of the international credit market, an increase in demand for banking credit by large companies occurred. This was the case with Petrobras, which at the end of October was authorized to raise up to eight billion reals on the domestic market in new loans to meet the financing needs of ongoing investments.

In the second place, for contractual reasons the banks were obligated to expand the concession of loans to companies that incurred huge losses from exchange derivatives, whether for hedges, or for reduction of bank credit costs. Besides financing the margin calls from the margin on the Commodities and

Futures Exchange (BM&F) for companies that were, on the basis of hedges, exchange derivative operations (IBRE, 2008), the banks rolled over and expanded lines of credit to the companies to which they had given loans based on options and dollar swaps.

Small and medium size banks were the most affected by the "pooling" of liquidity, since they lacked a large base of depositors and depended on the fundraising from inter-bank resources and availability of credit in order to provide continuity for their active operations.[15] Since the major banks ceased acquiring vehicle financing and consigned credit portfolios from smaller banks, credit concessions in these market segments were strongly affected.

The largest private banks, like Itaú and Unibanco, which conducted exchange derivative operations with the companies, suffered increased cash flow pressure owing to margin calls from the BM&F. With its financial health under suspicion, Unibanco saw itself obliged to anticipate publication of its third quarter results and launched a major effort to repurchase its notes (Adachi & Balarin, 2008). According to rumors that were circulating in the financial market at the time, the Itaú-Unibanco merger had to occur because of the cash flow difficulties of the institutions.[16]

The tightening of liquidity equally affected Votorantim Bank, ranked ninth largest in activity and the leader in financing used vehicles, due to rumors about its financial health owing to losses of 2.2 billion reals from Votorantim Group companies with exchange derivative operations. With Votorantim's difficulties,[17] credit in this segment was virtually paralyzed with serious implications for the business of new vehicles. With elevated stocks on hand, manufacturers interrupted production in the last two months of the year, affecting the whole chain of production.

The International Crisis and the Reaction of Brazil's Central Bank

In Brazil, where the system of inflation has been in effect since July 1999.[18] Central Bank' modifications to the basic interest rate (SELIC rate) are meant to influence the expectations of private agents. The objective is to maintain the rate set by the National Monetary Council, CMN) for the calendar year (January to December) by monitoring expectations in relation to the evolution of inflation, the interest rates and the performance of economic activity. In this strategy of leading monetary policy, decisions related to interest rate goals are made on the basis of prospective macroeconomic performance scenarios, described in *Inflation Reports* which the monetary authority issues quarterly.

In 2008, Central Bank of Brazil led the monetary policy to maintain inflation in the center of the interest rate goal. Expanded Consumer Price Index – IPCA – equal to 4.5%) from the assessment of having "relevant risk for an inflationary scenario," due to the persistent lack of synchronization between the rhythm of the expansion of demand and domestic offering. In response to the strong price rise of foods through the first half of this year, pulled by the high acceleration of agricultural commodities prices on the international market, which raised the accumulated IPCA in 12 months to be increasingly further from the center of the goal, the monetary authority began, in April, a new phase of raising SELIC that would only be interrupted in October, when the Brazilian economy had already been strongly hit by the impacts of the deepening of the global crisis. In four consecutive meetings, the Monetary Policy Committee (COPOM) raised the SELIC rate which jumped from 11.25% per year at the beginning of April to 13.75% on September 10. The last increase in the basic interest rate therefore occurred in the middle of the increased turbulence in the international financial market and the movement of intense deflation in international prices of agricultural commodities and petroleum.

The high SELIC rate goal on the eve of the fall of Lehman Brothers and from the transformation of the financial crisis into a systemic global crisis raised some disbelief. Even recognizing that the central banks had a mass of information not available to private economic agents, the diagnosis of lack of synchronization between the expansion rhythm of domestic demand and the offering seemed incorrect in light of the various available indicators in September and/or released in subsequent months. GDP results from the first two quarters of the year did not indicate acceleration in the growth rhythm of the economy, therefore belying the thesis that the real GDP growth was inflationary pressures that would throttle the growth process.[19]

Up to September 2008, with the setbacks from the contagion of the international crisis, the Brazilian economy was seen to be registering significant growth in the development of gross fixed capital and industrial production. Leadership was noted in the production expansion of capital and durable goods, which grew at the rate of double digits, given the evolution of family consumption, which stimulated productivity investment decisions. If the production capacity of the economy, necessary to accommodate the growth of demand, was increasing, what was the reason for the persistence of the assessment of there being a lack of synchronization between domestic demand and the offering? One possible explanation resided in the instrumentation used by the monetary authority to evaluate the need to adjust the interest rate goal, from the reference point of potential GDP, the fixation on which is absolutely arbitrary.

Could it be that, besides the famous conservatism and attachment to a mandate for price stability in the institutional regime of an inflexible inflationary rate, the Central Bank of Brazil was convinced of the validity of the thesis of “decoupling from emerging economies?” The belief in the armor of the Brazilian economy, owing to the sterling execution of the “lessons from the market,” seemed to be a plausible explanation for the SELIC rate goal, as a complement to the diagnosis of the “accelerated rhythm of demand.” Thus, everything indicated that the BCB erred twice: once by insisting in the diagnosis that the Brazilian economy was growing beyond its potential and the other by not glimpsing the seriousness of the ongoing deceleration in advanced economies associated with the movement of downshifting from the financial system and from deflation of assets.

Careful of its image as guardian of Brazilian currency, COPOM chose to maintain the SELIC rate goal at a level of 13.75% per year in the penultimate meeting of 2008. The decision was applauded and anticipated by financial market analysts and by economists and economic consultants, as Mendonça de Barros (2008) illustrates, on the eve of the COPOM meeting on the 28th and 29th of October: "the most correct and sensible decision would be a halt in the process of an interest increase at least until the next meeting in December. The deep cut in bank and commercial credit offering could be sufficient to reduce the domestic demand and anchor inflationary expectations."

In the COPOM Minutes, released on November 7, the commitment to price stability was reaffirmed, with a clear note to those who interpreted the halt of the high SELIC rate cycle as a sign of relaxation of monetary policy. Notwithstanding the evaluation that "persistence of important lack of synchronization between the rhythm of expansion of demand and the aggregated offerings continues to represent risk in an inflationary dynamic," the decision of maintaining unchanged the basic interest rate was justified by the increase in uncertainty in relation to the "expected path of domestic spending in consumption and investment." However, BCB was signaling that "in the event of a verifiable change in the profile of risks that implies modification of the prospective basic scenario outlined for inflation by the Committee," the monetary policy stance would be promptly adjusted to the circumstances.

Maintenance of the SELIC rate goal at an elevated level, while central and peripheral countries significantly reduced their basic interest rates, sought, on the one side, to avoid the damaging *pass-through* effects from the devaluation of the real to domestic prices and, on the other, to restrain the expansion of domestic demand. However, in the face of the seriousness of the impact of the global crisis on the Brazilian economy, the narrowing of monetary policy was not only unnecessary but unadvisable.

In a situation of elevated risk aversion and the pooling of liquidity in the larger institutions, maintenance of the interest rate at an elevated level was even more adverse to credit conditions, for companies as well as for medium and smaller size banks, accelerating the road of the Brazilian economy to recession. The deep withdrawal of domestic bank credit and the interruption of foreign commercial lines were more than sufficient to reduce domestic demand and "anchor expectations of inflation," since they provoked a brusque halt to economic activity in the last quarter of the year. The deceleration of activity was so rapid and so intense that the inflationary pressures of strong dollar appreciation were unconfirmed and the IPCA decelerated, closing the year at 5.9% (0.6 percentage points below the rate ceiling).

The rebound of expectations for inflation for 2009[20], new information about the deterioration of the global economy and strong indications of rapid deceleration of the level of domestic activity were not, however, sufficient for the BCB to modify its monetary policy strategy. In the last meeting of the year, on the 10th and 12th of December, COPOM decided once again to maintain the basic interest rate goal at the level of 13.75% for the year.

The minutes released on December 18 suggested the cut in the tax as COPOM's next move. The SELIC rate goal reduction was already, however, "priced" by agents. Since November, the Swap DI rate of 360 days indicated a change in expectations by the agents, who went on to project a fall in the interest.

BCB's rigidity in conducting monetary policy in the last quarter of 2008 strongly contrasted with the actions of its colleagues in the principal advanced and peripheral economies. Besides the important rate cuts, various central banks looked to reactivate credit and improve liquidity conditions through increase of monetary issue. In Brazil, by contrast, unrestricted adherence to the monetary regime of inflation rates aims required the monetary authority to fulfill commitment operations of public debt bonds with the banking system in order to prevent SELIC from effectively falling below the rate of 13.75% per year. Thus, at the same time that the compulsory requirements on bank deposits were reduced to resolve the problem of lack of liquidity and the difficulty of refinancing of smaller banks, BCB was looking to avoid expansion of the volume of currency in circulation in the economy.

Equally contributing to the rapid deterioration of the economic scenario was the inept management of the monetary authority's liquidity "pooling." From September to November, the BCB adopted a series of measures to resolve the problem of lack of liquidity and the difficulty of refinancing by smaller banks, postponing the rise of the compulsory portion over inter-financial deposits of leasing companies, and promoted changes in the cash deposits, time deposits, and the additional compulsory regulations requirements incurred over cash deposits, term deposits and from savings.[21] Reduction in the compulsory aliquot over cash deposits and the expansion of the value of the deduction for the additional liability aimed at helping small and medium size banks that were only rolling over their credit portfolios with very high cost CDB issues. On the other hand the purpose of the expansion of deductions associated with acquisitions of assets from financial institutions had was to stimulate purchases of credit portfolios from small and medium size banks by the major banks.

Major banks, however, were uninterested in inter-bank prospect of financial assets of less than 40% of the compulsory resources on term deposits for two reasons. In the first place, because the compulsory resources on term deposits were maintained in bonds, containing, therefore, remuneration indexed to the SELIC rate. In the context of risk aversion, the banks preferred to maintain compulsory resources with income near SELIC, maintained at 13.75% by BCB in October, rather than buying portfolios from smaller banks, with annual return around 21% (150% of CDI).

In the second place, banks considered the rules for purchase of portfolios severe since they forbade a co-obligation figure, a mechanism by which the bank originating the credit is kept as a guarantor after the credit is released. In other words, according to the rules, the purchaser banks would assume all the risk of the credit portfolio acquired with the compulsory resources. According to the banks, this would require a new analysis of the credit, creating the hesitation by the potential purchasers.

Thus, two days before going into effect, the acquisition rules for portfolios were loosened by BCB, by eliminating the prohibition of co-obligation, introduced with the aim of guaranteeing greater control over the use of the incentive. In reviewing its decision, BCB clarified what would be the most effective control, instead of forbidding redistribution of risks among banks, would prohibit resale of the portfolio to the credit-originating bank, as was done in the new version. However, these changes had little effect in motivating the major banks to acquire the credit portfolios of the smaller. In spite of the BCB's measures, the problem of liquidity pooling deepened, with the emergence of more accurate information about the losses such as derivative operations from the exchange, which were revealed to be greater than initially supposed.

In the middle of October, the liquidity scarcity reached the highest strata of the medium size bank segment and also a portion of the investment funds. According to Guimarães (2008)*:* "The major banks turned over their liquid assets overnight, earned almost 14% without doing anything, while small and medium banks found difficulty in getting through the day. The entire structure of domestic credit was altered in less than a month, in such a way that, when there is financing, it is much shorter and more expensive."

Besides the rise in guarantee requirements for offering or renewing lines of credit, banks increased the interest rate of active operations in the last quarter of 2008. This high derived as much from the increase in the banks' cost of rising funds as from the rise of the risk spread by the increase in uncertainty, aggravated by the losses derived from operations with dollar derivatives, estimated at US$25 billion, which involved three thousand companies, many of them with income exclusively in reals and without the availability of liquid assets to pay off one-time and full demand contract losses.[22] Banks renegotiated loans associated with dollar derivatives to avoid the collapse of these companies, but raised the risk premiums.

On October 13, BCB once again changed the rules for compulsory collection on term deposits, raising the percentage of the compulsory from 40% to 70% that could go to the banks for the purchase of other banks' credit portfolios. In the same way, it changed the eligible assets for buying inter-bank operations with compulsory resources, authorizing bond acquisitions from investment fund portfolios.

On the same day BCB increased the compulsory requirement exemption from 700 million to 2 billion reals [US$ 324.80 million and US$ 928 million at the exchange rate of 2.1551 of 15 October 2008] equivalent to 15% of the resources held in term deposits. Since only ten banks held more than 13 billion reals in term deposits, at the beginning of this norm taking effect, only they continued to be subject to the requirement of this withdrawal. In order to also improve the liquidity condition of medium size banks, BCB changed the rules for the additional compulsory on cash deposits, term and savings deposits. The exemption limit for these operations was raised from 700 million to one billion reals, which freed nearly all medium size banks from this requirement.

Although in the second half of October innumerable portfolio purchases – consigned credit, leasing, vehicle financing and loans to medium size companies – had been announced by the major banks, closed business only reached 1.5 billion reals out of a potential for 30 billion reals [US$ 709.2 billion and US$ 14.2 billion at the exchange rate of 2.1151 of 30 October 2008], causing the monetary authority to increase pressure on the major banks (Cruz, 2008).[23] Thus, with the aim of forcing the major banks to acquire financial assets from the medium and small and to disperse liquidity in inter-banking, BCB promoted a change, on October 30, in the form of implementing withdrawal of term deposits, establishing that 70% of that liability would be maintained in cash and no longer exclusively in public bonds. This new form of withdrawal, which went into effect on November 15, imposed a penalty on banks that would not use their compulsory resources to acquire the financial assets of smaller banks, since the in-cash compulsory withdrawal increased the cost of the opportunity to leave behind the unused capital.

In producing this measure, however, BCB erred in its evaluation of the impact on the management of the public debt, since the banks did not use federal public bonds to comply with the 70% of the liability of compulsory withdrawals. Thus less than two weeks after the publishing of Newsletter n. 3.417 by BCB the CMN changed the rules for additional liability compliance which affected cash, term and savings deposits (Resolution. 3.643 from November 13, 2008). After December 1st the withdrawals would no longer be made in cash, with remuneration following the SELIC rate, so that they would be fulfilled in Federal public bonds indexed to SELIC. With this change, CMN attempted to assure that the demand for federal public bonds would not be affected by the change in the withdrawal rule for term deposit.

The strategy for change in the percentage of compulsory withdrawals adopted by the BCB was innocuous, given the preference for liquidity by banks and the possibility of the liquid, profitable and very low risk investments in public bonds, the private banks simply didn't expand credit. Liquidity only began to flow again when, in March, 2009, the Government decided to guarantee, through the Guaranteed Credit Fund, bank deposit receipts (RDB) up to 20 million reals [US$ 8.6 million at the exchange rate of 2.3297 of 30 March

2009] per investor, without daily liquidity, issued at a minimum six month and maximum five year term, with a ceiling for the financial institution's collection at a maximum value of 5 billion reals [US$ 2.1 billion at the exchange rate of 2.3297 of 30 March 2009].[24]

In order to ease the contraction of credit by the private banking sector, the public financial institutions expanded and/or created new credit lines. If it were not for the anti-cyclical action of the public banks, above all BNDES and CEF, the recession of the Brazilian economy in the last quarter of 2008 would have been even more dramatic.

Notes

1 This article has benefited from close reading by Marcos Antonio Macedo Cintra, whom I thank for commentaries and suggestions. Errors and omissions are entirely the author's responsibility.

2 The notion of competition as a dynamic process, present in Marx and Schumpeter, has been adopted here, in which the market opportunities are continually exploited by businessmen in their quest for greater income, in counterpart to static competition as a market structure predominant in economic theory. In banking the process of capitalistic competition takes on specific traits, owing to the specific nature of banks and the unique role that they perform as raisers of credit currency. On this point see Freitas (1997).

3 This movement was conditioned by a full conjunction of macroeconomic, structural and regulatory factors. For greater detail, see Freitas (2007a).

4 On the recent credit cycle and its determiners, see, among others, Cintra (2006), Oliveira (2006) e Freitas (2007b).

5 The regulation of consigned credit from pay slips of active and inactive workers in December 2003 provided an additional impulse for the expansion of credit to individuals. Introduced in Provisory Measure n.130 – on September 7, 2003, later converted into Law n.10.820, on December 17, 2003 –, the modality of consigned installment loans grew dizzily, reaching a volume of 9.7 billion reals in December 2003 [equivalent to US$ 3.3 billion at the exchange rate of 2.8892 of 30 December 2003]. Since then, consigned credit has come to be continually expanded in its portion in the total of personal credit, jumping from 35.5% in December 2003 to 62% in June 2008. It can be seen as an innovation sponsored by the Government, with the aim of honoring reduction in the cost of the loans, which represented a new business opportunity that the smaller banks knew how to take advantage of, winning important slices of this new segment (Freitas, 2007a).

6 By contrast, cooling off of credit to individuals was noticed for the first time in the present cycle owing to the lesser dynamism of loans for acquiring goods and personal credit, most of all in consigned goods. The rise in Financial Operations Tax (IOF) that began on direct consumer financing, the reduction from 30% to 20% by the INSS in the discount limit for loan payments to retirees in January, as well as consecutive increases in the SELIC rate between April and September explain why these modalities, which were leading the expansion of credit with free resources, lost ground in 2008. In the case of consigned credit, the narrower margins due to the elevation of SELIC and the problems with anticipated credit liquidation caused various banks to review their operational strategies in this segment.

7 For Brazilian capital market performance, see the Technical Note from the Conjuncture Group *O mercado de capitais brasileiro em 2008*: os impactos da crise financeira. Available at: <http:\\www.fundap.sp.gov.br>.

8 On the rise of CDB with daily liquidity, see Carvalho (2008).

9 For more details about the workings of exchange market derivatives, see Prates & Fahri (2008). On loan operations linked to dollar derivative contracts see, among others, Lucchesi et al. (2008), Brandimarte et al. (2008), Balthazar (2008) e Adachi (2008).

10 For the impact of the financial crisis on national currencies of peripheral countries, see Prates & Cunha (2009).

11 According to Safatle & Galvão (2008), the renewal rate of ACC operations that surpassed 100% before the escalation of the foreign crisis fell to 25% in the third week of September, while the terms "that were 360 day, were reduced to 90 days or, in the best cases, 180 days."

12 Concerning the effect of the contagion of the global crisis in capital flow for Brazil and the commercial Brazilian balance sheet, see Iedi (2009).

13 Concerning this point, see the Technical Note from the Conjuncture Group *Panorama das economias emergentes*: o efeito-contágio da crise. Available at: <http:\\www.fundap.sp.gov.br>.

14 Owing to the public debt management model, which combines the monetary market of public bonds, and the existence of public debt bond indexed to the basic interest rate, banks in Brazil exerted a preference for liquidity acquiring Federal public bonds, which assured them very low risk, high income and ease in relocation of portfolios (Lopreato 2007; Freitas, 1997; Oliveira, 2009). The institutional characteristics of Brazilian public debt management at least in part explain the difficulty confronted by BCB in acting to resolve the problem of inter-bank liquidity pooling, from seeing itself obligated to review decisions on withdrawal of compulsory term deposits. This point will be discussed more fully further on.

15 Small and medium size banks were also affected by the security flight of institutional investors, and the major individual investors that, taking advantage of the CDB daily liquidity, transferred their applications to institutions considered more secure, such as public banks and the major private banks.

16 Itaú and Unibanco announced the merger on November 3, 2008 through the constitution of a holding company by which the controlling families of the two banks would each comprised 50%. This form of transaction surprised the market and fed rumors that the Itaú's liquid assets had been much more affected by margin calls than supposed and the agreement was therefore more favorable to the Moreira Salles family.

17 In order to avoid the collapse of Votorantim, the government authorized its purchase by BB. On this basis, on October 21 the Provisionary Measure n. 443 was published which authorized BB and CEF to acquire participation in financial institutions based in Brazil. Begun at the end of October, the negotiations were concluded on January 9 with the acquisition by BB of 49.99% of voting stock and 50% of joint stock, leaving control of the institution in the hands of the Ermírio de Moraes family. The deal was closed for 4.2 billion reals. See Lethbridge (2008) and Rocha (2009).

18 Concerning the system of inflation goals, see the Technical Note from the Conjuncture Group *Regime de meta de inflação em perspectiva comparada*. Available at: <http:\\www.fundap.sp.gov.br>.

19 Real GDP growth in the second quarter of 2008 was 6.1% by comparison to the same quarter of the previous year, a close variation to that registered in the two previous quarters: 5.9% in the first quarter and 6.2% in the fourth quarter of 2007. Concerning this point, see Technical Note from the Conjuncture Group *A evolução da atividade econômica e is impactos da crise financeira*. Available at: <http:\\www.fundap.sp.gov.br>.

20 In the report on inflation published in December 2008, new inflation projection indicated a variation of 6.2% of IPCA in 2008 and 4.7% in 2009, while the collected market expectations by Manager and Investor Relations (Gerin) of BCB on December

19 pointed to a variation of 6% for the IPCA in 2008 and 5% in 2009. Although above the center of the goal, these projections were within the CMN margin of error of 2 pp, established by CMN.

21 Between September 23 and November 13, BCB promoted ten changes to the compulsory regulation. Some of these changes altered recently completed modifications, suggesting that the monetary authority had not appropriately evaluated the seriousness of the problems of financial system illiquidity.

22 Concerning the estimates of losses from exchange-based derivatives operations, see, among others, Balthazar (2008) and Bautzer (2008).

23 On October 17, more than 18 credit portfolios had been bought by the largest private banks (Bradesco, Itaú-Unibanco) and public banks (Nossa Caixa, CEF and BB), with remuneration of up to 150% of the CDI (Carvalho & Ribeiro, 2008). On October 30, Durão (2008) reported that, after a period of suffocation, the position of the small and medium size banks began to be normalized, owing to the concession of credit operations, whose cost declined from 150% to 125% of the CDI, and from adjusted operational agreements between banks to purchase new credit originating from small and medium size banks.

24 The Bank Deposit Receipt (RDB) with the special guarantee of the Credit Fund Guarantor (FGC) was instituted by the National Monetary Council on March 26 2009 (Resolution n. 3.692). The maximum value that each institution could issue RDB was limited to the total CDB issued up to June 30, 2008 or up to twice the reference assets. However, on 23 April, in an extraordinary meeting, CMN decided to include in the calculation of the RDB holding limit the exchange of titles issued by financial institutions. (Resolution n. 3.717).

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Abstract – This article discusses the impacts of the international crisis on the Brazilian economy, with emphasis on the virtual paralysis of the domestic banking credit market that has occurred since September 2008. It argues that the dynamics of banking competition led to the emergence of high-risk practices. The destabilizing potential of these practices came to light when the aggravation of the international financial crisis and its contagion in peripheral countries such as Brazil caused a reversal of expectations. Generalized conservative behavior by banks during the retraction phase was exacerbated in Brazil by the relatively short credit cycle and by the liquidity, profitability and low risk of public bonds, allowing a rapid recomposition of portfolios. The Central Bank, sticking to its mandate as the guardian of price stability, failed to move to mitigate the deceleration of productive activities that resulted from the contraction of credit.

Keywords: Systemic crisis, Liquidity preference, Banks, Credit crunch, Brazil.

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