Banking Behaviour and the Brazilian Economy After the End of the Real Plan: a Post Keynesian Approach[*]

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Abstract: This paper analyses – from a Post Keynesian approach - the Brazilian banking behaviour in the current phase of the business cycle that is at the semi-stagnation state of the economy. According to the Post Keynesian approach, banks are economic agents that show liquidity preference, managing their portfolio according to the trade-off between liquidity and profitability. We argue that banking behaviour in Brazil has been determined by the specific institutional-macroeconomic context of the current phase of the Brazilian economy, with banks taking advantage of the high rates of interest and the conditions in which government has managed its internal debt. This environment has favoured the adoption of a conservative but profitable posture by banking sector in Brazil.

1 Introduction

Brazilian economy has been marked in the recent past by a movement of 'stop-go'. High banking spreads and low ratio credit-to-GDP have contributed for an economic growth below the full-employment level. After the change from an exchange anchor regime to a floating one in January 1999, a decline in the external vulnerability of the Brazilian economy and a fall in the interest rate were expected. So, the overcoming of macroeconomic constraints would conduct the economy for a more sustainable economic growth. However, this has not happened, since there are still some severe macroeconomic constraints that obstruct the economy recovery.

This paper aims at analysing the Brazilian banking behaviour in this current phase of the business cycle. As is well know, Brazilian banks has showed its best results. This result could look like a paradox in light of recent events in emergent markets, where banking crises follows currency crises, a phenomena called "twin crises" by Eichengreen (2002). It too look likes a paradox in an post-keynesian sense, since the increase in uncertainty must be correlated with low profits.

In this paper, we argue – as Minsky did – that for the correct understanding of a economy it is necessary to take account that "a capitalist economy with sophisticated financial institutions

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is capable of a number of modes of behaviour and the mode that actually rules at any time depends upon **institutional relations**, the structure of financial linkages and the history of the economy" (Minsky, 1985, pp.26-7). In fact, one of the current institutional specificity of the Brazilian economy is the size and composition of public debt, with predominance of interest or foreign currency indexed and short-term bonds. As we show in this paper, this environment has favoured the adoption of a short-termist but profitable posture by banking sector in Brazil. As a result, the bank trade off between liquidity and profitability – that is the starting point of the liquidity preference approach – has little influence in current Brazilian case.

2 Banking behaviour and credit supply: the liquidity preference approach

In the Post Keynesian approach, banks are economic agents that have liquidity preference determined strongly by their expectations under Knight-Keynes's non-probabilistic uncertainty[1], managing their portfolio according to the trade-off liquidity-profitability. Their liquidity scale shows their precaution that is inherent to uncertain results of the banking activity. The liquidity preference, in an Minskyian sense, explains the balance sheet strategy, rather than choices of individual liabilities, according to the perception of risks and profit opportunities by banks: "For a give state of expectations, bank's liquidity preference will determine the desired profile of the assets they purchase and their prices, that is, the rate of returns each type of asset must offer to compensate for their degree of iliquidity" (Carvalho 1999, p. 132). Consequently, banks do not accommodate passively the demand for credit but they compare expected returns and liquidity premium of all purchasable assets. This means that credit supply may be curtailed because of the increased bank's liquidity preference, irrespective of the 'true' risk attached to commercial lending. So, credit rationing would arise quite independently of the expected returns on capital investment projects (Dow 1996, pp. 503-4).

In the Post Keynesian approach, banks manage dynamically the two sides of their balance sheet. This means that they do not take their liabilities as only externally determined according to customers' preferences. Instead, banks try to influence the customers' preferences through liability management and the use of financial innovations[2]. Thus, modern banks seek to act dynamically on the liability side of the balance sheet, adopting an active behaviour in the search

[1] Non-probabilistic uncertainty refers to economic phenomena for which "there is no scientific basis on which to form any calculable probability whatever. We simply do not know" (Keynes 1973, p. 114).
[2] See, in this connection, Minsky (1986, ch.10) and Wray (1990).

of new deposits and/or managing their reserves. Consequently the funds that finance their assets are strongly conditioned by the own bank behaviour. Therefore, banks shift their liability profile in order to increase the profit opportunities of their business.

Upturn and Downturn Bank Balance Sheet Management

During the upturn banks have an important role in sanctioning the firms' credit demand. Bankers react to the optimistic views on the viability of the firms' debt structure, that are typical of a period of euphoria, increasing their loans in order to respond to the demand for credit of firms. From the point of view of the bank portfolio, during the upturn their expectations become more optimistic (that is, the degree of confidence on their own expectations increases). So, banks prefer monetary returns than liquidity; consequently, they decrease the ratio of liquid/illiquid assets in their portfolio. This behaviour results in the increase of the relative share of advances to customers and particularly long-term loans in the banks' portfolio. The bank search for bigger profits in the upturn of the business cycle can induce them to adopt a more speculative posture: a banker will seek to get bigger monetary returns accepting longer-term and/or riskier assets and at the same time, trying to reduce the rate that they remunerate the deposits, offering safety promises and other special guarantees to their customers. As a result of these banks' behavior, credit supply increases in order to support agent's expenditures, promoting the necessary condition for the enlargement of the economic activity level.

At the same time, in order to leverage their assets, banks actively make use of liability management techniques so that they may change the liability structure of their balance sheet as well as to expand the volume of deposits obtained from the customers. This can be done by two ways: *reserves management* and use of *financial innovations*. In the first case, banks seek to induce their customers to apply their resources in low-reserve absorption *existent* liabilities, e.g. through the management of time deposit interest rate and also through other indirect ways that can stimulate a redirection in the customers' preferences (publicity, bonus, gifts to customers, etc.). In this way they can have more available reserves to expand lending.

In the second case, the use of financial innovations, banks innovate through the launch of new products and services in order to attract new funds try to increase its liabilities or/and save reserves. So, they enlarge their ability to respond to an increase in the demand for credit. Financial innovations, in a period of good perspective in business, are not only the result of

financial institutions trying to bypass monetary authority restrictions, but also the search to raise funds from the customers to finance their assets.

The increase in the leverage degree is a result of the expanding strategy of their portfolio, as banks increasing the use of external funds to acquire assets. In fact, a bigger leverage and higher asset-liability gap induce a riskier position, which was before feared by banks, in any case, are now part of the bank strategy. Even the more conservative bank, pushed by competition and by less perceived risk, needs to expand their loans if they do not want to lose their market share. The leverage factor affects directly the volume of bank's assets and the expected return on equity (ROE), but at the same time increases the fragility of its balance sheet. Therefore, liability management techniques and the use of financial innovations have a crucial role in the banking strategy during the growth path of the business cycle: they can reduce the reserves requirement and also expand the volume of external funds in line with the leverage of loans.

While in the upturn of the business cycle banks have a crucial role in accommodating the demand for credit of firms, during the downturn they carry out the role to amplify the crisis that is just beginning. This happens once they adopt a defensive strategy that results in a credit rationing that can hamper the debt rollover of non-financial firms. When the crisis begins, the uncertainty goes skyward and banks' expectations about future become pessimistic. The flows of expected yields diminished as financial institutions expect an drop in their loans returns due to the decline in the firm's profits. In this context, the risks of the banks customers are re-evaluated and, in general, they are raised. As the perceived risks grow are incorporated in the risk premium, bigger interest rates increase the cost of firms' refinancing, exactly at the moment they are mostly needed. As Minsky stated, there are a lot of fragile economic units in the dowturn that follows an upturn. Banking system as a whole seeks to recover its loans, refusing to rollover most part of the firms debts. Yet, the growth of bad loan figures indicates to banks to ration credit. Consequently, at a macroeconomic level, bad loans increase quickly despite of the trying of bank system to pick up only very good opportunities to lend.

In general, financial institutions manifest their greater liquidity preference conducting their portfolio to a low risk profile. First of all, they change the composition of assets, to a less profitable but more liquid one; consequently, credit supply tends to decline. Thus, banks are likely to reduce the average term of their assets and to adopt a more liquid position throughout the maintenance of surplus reserves and/or the purchase of assets with high liquidity, such as government securities. They also decrease the percentage share of advances to customers in their

portfolio, in particular longer-term loans. At the same time bank leverage decreases trying to reduce the exposition to solvency risk, expressing the greater caution of banks under adverse economic conditions. Under these conditions, banks seek to avoid the mismatching between their assets and liabilities, thereby reducing their exposure to interest risk; at the same time they tend to become more cautions in supplying loans, asking for greater collateral in this sort of operation, in order to diminish exposition to credit-risk.

So, as the banks' state of expectations deteriorates, they adopt more conservative financial postures. The growing perceived risk causes an increase in the banks' liquidity preference with a serious impact on the structure of bank portfolio. Summing up, if one supposes that banks have liquidity preference, it implies that banks do not passively accommodate credit demand when liquidity premium increases vis-à-vis the expected monetary returns. At a macroeconomic point of view, the economic growth becomes limited by financial restraints.

3 Brazilian economic growth and public debt: some macroeconomic constraints

The period after the implementation of the stabilization plan known as Real Plan – after July 1994 - was marked by a remarkable reduction of inflation, even after the major devaluation of January 1999. The evolution of GDP, after two years of economic growth (1994-95), as a result of the initial effects of the stabilization plan based on an exchange rate anchor, disappointed previous expectations of sustainable economic growth after price stabilization. Furthermore, its movement has followed a 'stop-go' pattern (Table 1).

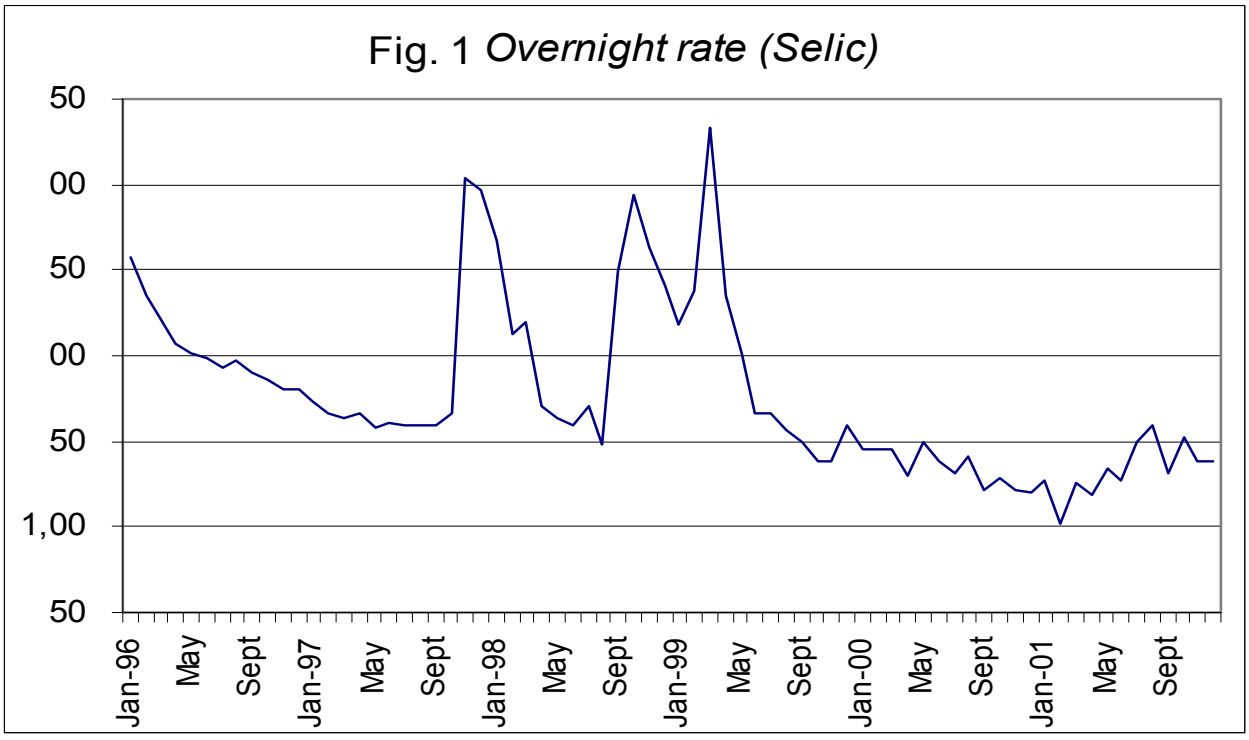
TABLE 1
Brazil, GDP and Prices

Year	GDP Growth	Inflation Rate (*)
1994	5.85	2240.17
1995	4.22	77.55
1996	2.66	17.41
1997	3.27	8.25
1998	0.13	4.85
1999	0.81	4.59
2000	4.36	8.03
2001	1.51	7.40

(*) Rate of change of implicit deflator
Source: Monthly Bulletin of Central Bank of Brazil

Indeed, the Brazilian economy has suffered the impact of the succession of crises: Mexico in 1995, Asian countries in 1997, Russia in 1998, its own crisis in late 1998 and first days of 1999[3], and, more recently, Argentina's ones since end-2001. The perception of high external vulnerability, due to the necessity to finance high balance of payments' deficits; the semi-stagnation of the economy; the adoption by central bank of very high short-term interest rates; and the consequent increase of public debt have contributed to define a very unstable macroeconomic context. Macroeconomic constraints in Brazil are mainly related to the heritage of the period of adoption of an exchange rate anchor in a context of trade and capital account liberalization that generated a high external fragility of the economy and consequently some serious macroeconomic unbalances and weak state of expectations of the private sector.

Despite the shift from an exchange anchor stabilization model to a floating exchange rate plus an inflation target regime in 1999, there was no significant improvement in the macroeconomic variables of the economy. One could expect that the adoption of a floating exchange regime would reduce more quickly the rate of interest in Brazil. Although, after the sharp increase of overnight rate at sky-high levels (reaching more than 40% p.a.), since the effects of Asian crisis until the devaluation of the *real* in January 1999, the interest rates declined, it increased again during 2001 (Figure 1), in view of the new turbulence in international market.



[3] See Paula and Alves, Jr (2000) and Saad-Filho and Morais (2002) for an analysis on 1998-1999 Brazilian currency

Source: Central Bank of Brazil (www.bcb.org.br). Rates of interest are monthly.

Very high interest rates are the result of high country-risk[4] (due to high external vulnerability and the risk of fiscal insolvency) and the adoption of inflation targeting regime[5] in a context of various macroeconomic constraints. High interest rates have had two effects: (i) they constrain economic growth, through the cost of the credit (loan rates), as well as through negative influence on entrepreneurs' expectations; (ii) they increase directly the public debt, once this is mainly formed by indexed bonds or short-term pre-fixed bonds. Indeed, the strong demand for hedge against exchange devaluation and interest rate changes, in turbulent periods, has influenced the Brazilian internal public debt. Brazilian government has been constrained to offer exchange rate and interest rate hedge to the security buyers that charge a high premium risk to rollover public debt[6]. As a result since the end-1998 more than 50% of federal domestic securities has been indexed to overnight rate, while more than 20% has been indexed to foreign exchange (Table 2). Besides, the ratio of federal domestic securities to GDP rose from 29.3% in December 1997 to 52.7% in December 2001 (Figure 2).

TABLE 2
Federal Domestic Securities, Percentage Share of Index Numbers, 1996-2001

End-of-period	Foreign exchange	Reference rate*	Inflation	Overnight rate	Preset	Long-term interest rate	Other	Total
Dec-1996	9,4	7,9	1,8	18,6	61,0	1,4	-	100,0
Dec-1997	15,4	8,0	0,3	34,8	40,9	0,6	-	100,0
Dec-1998	21,0	5,4	0,4	69,1	3,5	0,2	0,5	100,0
Dec-1999	24,2	3,0	2,4	61,1	9,2	0,1	-	100,0
Dec-2000	22,3	4,7	5,9	52,2	14,8	0,0	0,0	100,0
June-2001	26,8	5,0	7,1	50,2	10,8	0,0	0,0	100,0
Dec-2001	28,6	3,8	7,0	52,8	7,8	0,0	0,0	100,0

(*) Average rate of private securities

crisis.

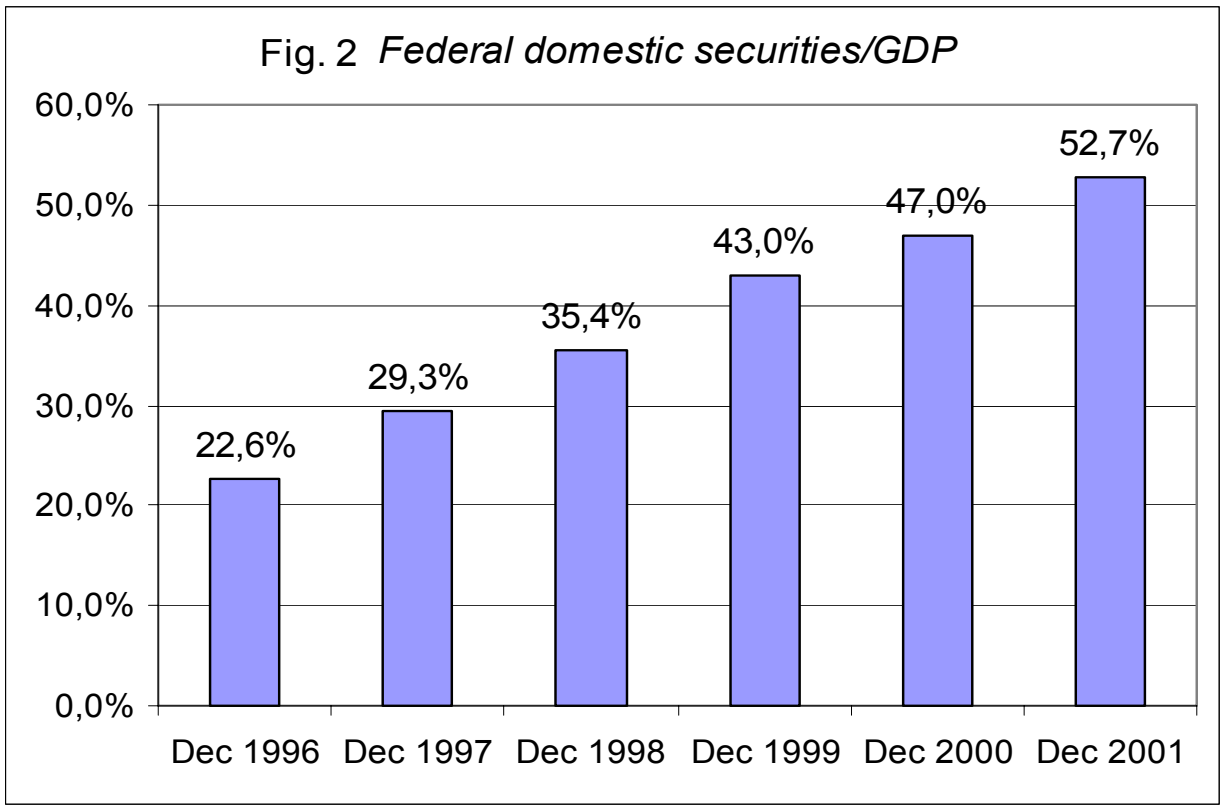
[4] Bresser-Pereira and Nakano (2002) suggest that the causality between interest rate and country-risk can be inverse: since short-term rate of interest has been in a very high level, foreign creditors believe that country-risk is high. According to the authors, the rate of interest is high in Brazil because there are multiple functions for it: to hit the inflation target, to limit the devaluation of exchange rate, to attract foreign capitals, to rollover public debt, and to reduce trade deficit through the control of internal demand. See, also, in this connection, Oreiro (2002).

[5] Under the inflation targeting regime, the Central Bank of Brazil operates the monetary policy *only* to keep inflation low and under control, while the levels of output and unemployment are determined on the supply-side of the economy. In other words, the inflation targeting regime supposes that there is a separation between the real side and the monetary side of the economy, the well-known 'classical dichotomy'.

[6] According to data from BBV Banco Weekly Bulletin (30th August, 2002), the percentage share of federal domestic securities in the financial market in June 2002 was: 34.5% at commercial banks' hands; 33.4% in investment funds and pension funds' hands; 19.1% as reserve requirements; 6.1% at firms' hands; 5.5% with individuals and others; and 1.4% at investment banks' hands.

Source: Monthly Bulletin of Central Bank of Brazil

Therefore, the behaviour of domestic public debt in Brazil has been very vulnerable to the changes in the rate of interest or exchange rate. Thus, the Brazilian government has been forced to generate high primary fiscal surplus (more than 3.5% of GDP[7]), which impedes the use of any anti-cyclical fiscal policy. This fiscal effort, however, was partly neutralized by increases in the rate of interest or in the exchange rate. Here there is a sort of dilemma: due to the composition of public debt, a fall in the rate of interest at the same time that reduces the financial cost of the part of debt tied to overnight rate, has a negative impact on the part of debt tied to the dollar if an interest drop results on an exchange rate depreciation.



Source: Central Bank of Brazil (www.bcb.gov.br)

[7] Primary fiscal surplus increased from 0.24% of GDP in 1998 to 3.23% in 1999, 3.50% in 2000, and 3.75% in 2001, according to BBV Banco Weekly Bulletin (30th August, 2002).

4 Banking behaviour after the Real Plan[8]

4.1 Banks' portfolio management

Banking behaviour in Brazil has been determined by the specific institutional-macroeconomic context of the current phase of the Brazilian economy. Indeed, macroeconomic environment has been determinant in the sort of banking behaviour that has distinguished the recent past in Brazil, with banks taking advantage of the high rate of interest and the conditions in which government manage its internal debt. But at the same time banks strategies are determinants of the current phase of the business cycle since asset portfolio allocation has been dominated by short-term and high liquidity preference that have resulted in low credit supply and high banking spread. As a result, since macroeconomic conditions are very restrictive, banks have adopted a conservative financial posture[9], i.e. high share of government securities in their portfolio, low mismatching between assets-liabilities, high provision for bad loans, low leverage levels and Basle Index far beyond the safety level determined by Brazilian Central Bank (see Table 3 and Figure 3, among others). In other words, banks strategies have been influenced by their high liquidity preference determined by the period of macroeconomic instability and the specificities of the Brazilian institutional environment. Compared with the former period (1996-98), there is no significant change in the banking behaviour in Brazil in 1998-2001 (Paula *et al* 2001). One of the consequences of this financial posture is the high banking spread that obstructs the growth of credit in Brazil and consequently better prospects for economic growth[10].

[8] We are considering that the Real Plan finished in January 1999 with the shift from an exchange rate anchor to a floating exchange regime followed by the adoption of an inflation-targeting regime.

[9] The use of the expression 'conservative posture' in this paper intends only to stress that banks in Brazil have adopted a more short-termist and liquid position that has resulted in low level of credit. However, it must be recognized that to invest in public debt is one of the best investment available in Brazil, as public debt is profitable, liquid and offers hedge against capital and exchange losses.

[10] See more on this matter in section 4.2.

TABLE 3

Banking Leverage and Provision for Loan Losses, 1998-2001 (%)

End-of-period	Leverage (total assets/net worth)				Leverage (total loans/net worth)				Provision for loan losses*			
	DP	FE	FB	Total	DP	FE	FB	Total	DP	FE	FB	Total
June-1998	11.09	12.63	13.68	12.85	2.93	2.93	4.76	3.51	10.76	16.34	21.05	11.06
Dec-1998**	10.07	11.2	15.73	11.47	2.84	3.18	5.64	3.39	17.06	14.85	19.98	14.91
June-1999	9.91	10.22	15.91	11.15	2.62	2.50	5.44	3.11	9.09	7.37	12.13	8.94
Dec-1999	9.09	9.78	15.09	10.65	2.64	2.66	5.01	3.08	13.45	6.26	12.24	10.12
June-2000	9.41	11.19	15.60	11.21	2.81	2.91	5.22	3.31	11.81	4.53	5.54	7.83
Dec-2000	10.36	9.71	15.99	11.27	3.20	3.01	5.46	3.59	12.22	5.12	10.87	9.32
June-2001***	9.68	11.05	14.54	11.15	3.37	3.40	4.13	3.36	10.19	6.36	18.68	11,02
Dec-2001	9.17	9.92	15.34	10.89	3.24	2.89	3.87	3.23	13.22	11.36	13.48	11.57

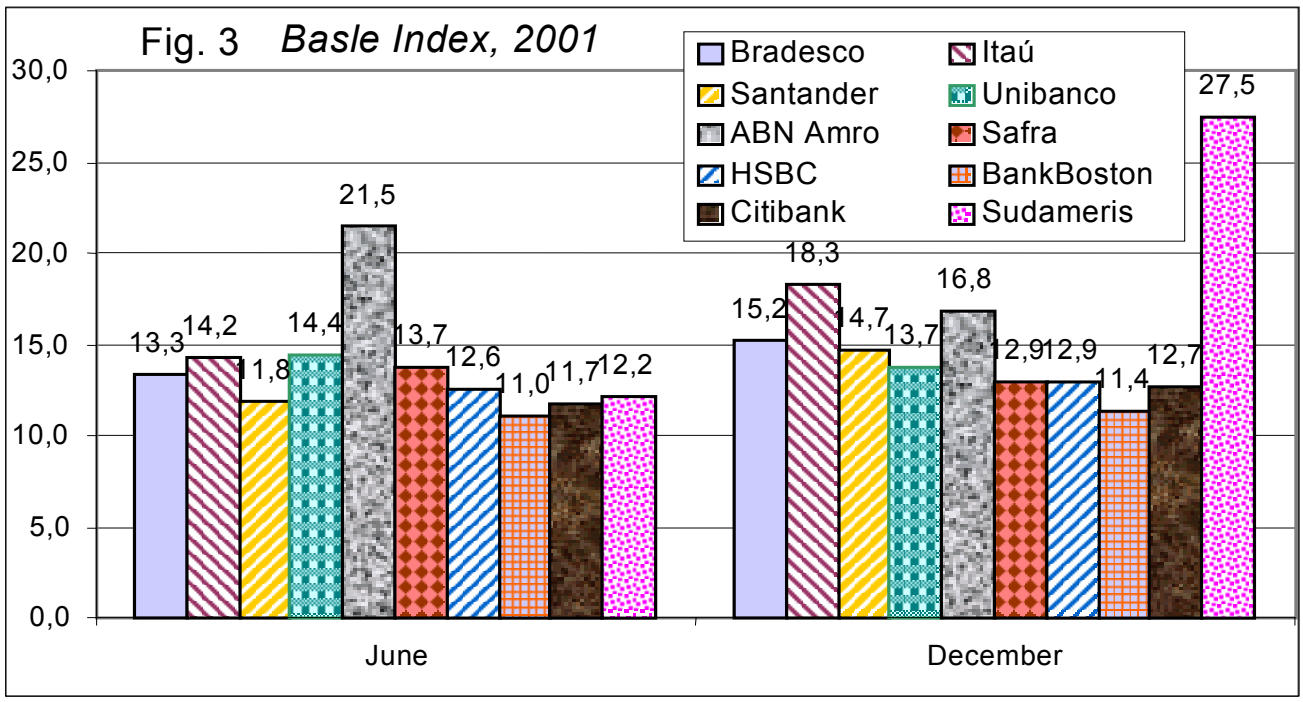
(*) Loan losses expenditures/total expenditures

(**) Excludes ABN Amro because of the incorporation of Banco Real.

(***) Excludes Santander because of the incorporation of Banespa.

DP: 4 major domestic private banks (Bradesco, Itaú, Unibanco and Safra); FE: 6 major foreign banks (Santander, ABN Amro, BankBoston, HSBC, Citibank and Sudameris); FB: 3 major federal state-owned banks (Banco do Brasil, CEF and BNDES); Total: includes all financial conglomerates, public and private ones.

Source: Authors' elaboration with data extracted from the financial conglomerations in www.bcb.gov.br



Source: Central Bank of Brazil (www.bcb.gov.br)

This strategy, however, has not resulted in low profitability. Instead, as we point out above, the institutional-macroeconomic context has favoured banking performance in Brazil, as banks have obtained advantages from the context of macroeconomic instability and of fast

growth of public debt which structure has satisfied the financial institutions' necessities for exchange and interest rate hedge. Thus, they have been able to obtain high revenues with high spread in loans and with government securities.

One should expect that the recent foreign bank entry in Brazil would change the behaviour of the banking sector[11], causing a growth of loans operations, a decline of prices charged for banking services – including mainly rate interest on loans - a reduction in the net interest margins, etc., all these factors as a result of increased competition[12]. As we will see below, these changes have not occurred yet. In fact, the evidence shows that foreign banks have had a more conservative behaviour compared to the domestic private banks[13].

Some available data[14] for the period 1998-2001 show some general features of the bank behaviour in Brazil:

- Overall, banking leverage (both credit and asset size) has been low in all segments of the banking sector by ownership (domestic private banks, foreign banks and federal state-owned banks), although it has been higher in federal public banks (Table 3). Leverage ratio expresses the bank's capacity/desire in control assets by third parts' resources. A lower leverage ratio, *ceteris paribus*, indicates a high risk-aversion behaviour of a bank. One should note that there is no significant change in the tendency of the banking leverage in the period, but only a slight tendency to increase in banking leverage of the domestic private banks in 2000-01. Furthermore, it is worth noting that at least in 2001 the Basle Index, according to Basle Capital Agreement, of the ten major private banks in Brazil was far above the minimum requirement of 11% of capital risk-weighted assets determined by the Central Bank of Brazil (Figure 3). The index has been bigger for the major domestic private banks than for the major

[11] The principal foreign acquisitions, in terms of size, were the purchase of Bamerindus by HSBC, that was paradigmatic since it embraced for the first time a big domestic retail bank, Excel/Econômico by BBVA, América do Sul by Sudameris, Banco Noroeste by Santander, Banco Real by ABN-Amro, and Banespa by BSCH. In terms of market share, banks controlled by foreign financial groups have raised their stake from 7.2% in 1994 and 12.8% in 1997 to 27.4% in 2000 of the total of the assets in the banking sector in just six years (Paula, 2002, Table 6.2). According to Correa (2002, p. 11), the percentage share of foreign banks in the total assets of banking sector in Argentina was 48.6% in 1999, 80.0% in Mexico in 2001, while it was 27.4% in Brazil in 2000.

[12] Claessens *et al* (1998) found some evidence that the entry of foreign banks in domestic markets diminishes both the average profitability and operational expenses of domestic banks, but has no significant effect on net interest margins and provision for loan losses. The decrease in profitability is due to the increase in banking competition, while the reduction in operational expenses result from an improvement in domestic banks' organisational and technical management.

[13] See more in this connection, Carvalho (2002).

[14] Data includes only the 13 major financial conglomerates. The 13 major banks had 77.7% of the banking market share in June 2001 (total assets criteria), according to data from Central Bank of Brazil.

foreign banks, since most of the big retail banks are domestic banks. On the other hand, the expenditures with provision for loan losses, after a fall in 1999-2000, increased throughout 2001. These expenditures were much bigger in federal banks and domestic private banks than in foreign banks over the whole period.

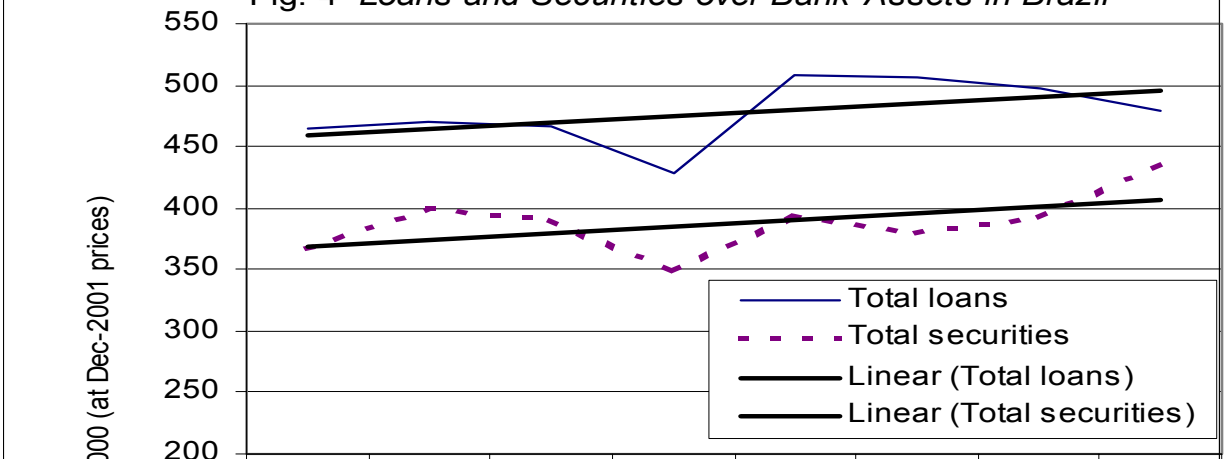
- At the bank's asset composition, loans and securities (plus inter-financial operations) had a slight growth in real terms, and both ones are very correlated (Figure 4). In 2001, however, banks' total loans decreased while the number of securities operations raised. As a result, there is no significant change in the percentage share of the main balance sheet's accounts in 1998-2001[15], although there is an increase in the percentage share of the loans operations in 2000-01 in the case of domestic private banks and foreign banks (Table 4). Securities operations – with predominance of federal domestic securities - have a significant percentage share by 35% in the period, and they have been more important for foreign banks than for domestic private banks. Banks have been able to afford their risk aversion thanks to the availability of high-yielding, risk-free government securities as an alternative investment to private sector lending.

- There is no precise tendency in the case of net interest margin behaviour in 1998-2001[16] (Table 5). Net interest margin can be interpreted as one of the indicators of the success of a bank in the process of profit yielding, that is it measures the microeconomic efficiency of a bank. Net interest margin in Brazil has been bigger in foreign banks compared to domestic private banks, and very low in federal state-owned banks. Therefore, increased competition due to the recent foreign entry has not caused a decline in the net interest margin, that one could expect according to the literature (see, for example, Claessens *et al* 1998).

[15] Soares (2001) states that the cause of the slow credit growth in recent years is the Brazilian adherence to the 1994 Basle Agreement (Central Bank Resolution 2099), as this resolution forced banks to adopt one of the following options: they had to raise their own capital or they had to change their portfolio composition towards more risk-free assets, if they aim to increase their assets without raising their capital account. As Brazilian government has assigned null risk to federal public debt holdings, so it follows that banks were 'pushed' towards federal public debt holdings and, has exempted them from lending (see also Vasconcellos and Fucidji, 2002, p. 8-9). However, as we have already seen, at least in the case of the major banks in the recent years, Basle Index has been above the minimum requirement.

[16] According to IMF (2002, p. 64), "net interest margins [in Brazil] as a ratio of bank assets still stand high compared with other Latin American economies. They are even higher when compared to the U.S., Japan and the euro area".

Fig. 4 *Loans and Securities over Bank Assets in Brazil*



	June-1998	Dec-1998	June-1999	Dec-1999	June-2000	Dec-2000	June-2000	Dec-2001
Total loans	465,13	469,35	466,72	429	507,73	506,65	497,96	480,1
Total securities	366,82	399,67	390,21	349,4	393,47	379,51	392,05	435,8

Source: Central Bank of Brazil (www.bcb.gov.br)

TABLE 4
Banks Portfolio, Percentage Share, 1998-2001

End-of-period	Total loans on total assets (1)				Total securities on total assets (2)			
	DP	FE	FB	Total	DP	FE	FB	Total
June-1998	39.95	39.51	50.8	41.27	34.64	37.34	20.97	34.26
Dec-1998 (3)	42.27	40.63	43.99	42.89	35.96	37.11	27.14	36.53
June-1999	39.42	42.24	49.91	42.43	35.75	35.09	26.63	35.47
Dec-1999	41.77	42.18	48.64	42.98	36.37	36.56	24.62	35.01
June-2000	46.72	44.99	49.31	45.94	35.09	36.02	26.41	35.05
Dec-2000	47.17	43.76	49.73	46.11	35.96	42.96	21.61	34.54
June-2001(4)	49.68	46.44	41.56	44.68	31.51	39.42	26.31	35.17
Dec-2001	49.86	46.12	35.49	42.85	33.26	43.35	34.18	38.99

(1) Includes other loans besides normal loans.
(2) Includes also interfinancial operations.
(3) Excludes ABN Amro because of the incorporation of Banco Real.
(4) Excludes Santander because of the incorporation of Banespa.
DP: 4 major domestic private banks (Bradesco, Itaú, Unibanco and Safra); FE: 6 major foreign banks (Santander, ABN Amro, BankBoston, HSBC, Citibank and Sudameris); FB: 3 major federal state-owned banks (Banco do Brasil, CEF and BNDES); Total: includes all financial conglomerates, public and private ones.
Source: Authors' elaboration with data extracted from financial conglomerations in www.bcb.gov.br.

- In terms of the percentage share of bank revenues, loan revenues (around 45%) and security revenues (around 30%) have prevailed (Table 6). Banks in Brazil rely on interest-earning activity as a major source of income, despite the relatively small size of their loan portfolio. Loan revenues are high as banking spread has been very high (see more in section 4.2). Besides, the average maturity of loans has been low in Brazil[17] reflecting the liquidity preference of the bank system. Overall short-term loans have had higher loan rates, what have assured very high revenues to the banks, although there is not any significant increase in banks' loan operations, both in absolute and relative terms. Security revenues have been more important for foreign banks than for domestic private banks and federal banks. There is a tendency for growth in the case of fee revenues, which are more important for private domestic banks than for any other segment due to the greater diversification of their business since they are big universal retail banks[18]. The relative share of fee revenues, however, is still low in Brazil compared to international standard.

TABLE 5
Banks Profitability and Net Interest Margin, 1998-2001

End-of-period	Return on Assets (ROA)				Return on Equity (ROE)				Net Interest Margin			
	DP	FE	FB	Total	DP	FE	FB	Total	DP	FE	FB	Total
June-1998	0.72	0.50	0.42	0.07	7.95	6.34	5.8	0.88	2.58	3.11	1.13	1.78
Dec-1998(1)	1.09	0.42	0.12	0.42	11.02	4.75	1.91	4.85	2.62	2.83	0.91	1.97
June-1999	1.16	1.11	0.22	1.01	11.48	11.38	3.53	11.27	2.32	4.94	0.24	2.29
Dec-1999	1.12	0.36	0.35	0.54	10.20	3.57	5.24	5.77	2.67	3.47	1.64	2.47
June-2000	1.21	0.36	0.28	0.60	11.38	4.03	4.40	6.72	2.55	2.28	1.46	2.15
Dec-2000	1.09	0.51	0.33	0.35	10.58	5.24	5.23	3.98	2.28	0.58	1.35	1.80
June-2001(2)	1.26	0.98	-1.10	-0.46	12.19	10.87	-16.01	-5.14	2.16	3.21	0.14	1.67
Dec-2001	1.34	0.99	0.28	0.73	12.27	9.86	4.30	7.94	2.89	3.39	1.32	2.35

(1) Excludes ABN Amro because of the incorporation of Banco Real.
(2) Excludes Santander because of the incorporation of Banespa.
DP: 4 major domestic private banks (Bradesco, Itaú, Unibanco and Safra); FE: 6 major foreign banks (Santander, ABN-Amro, BankBoston, HSBC, Citibank and Sudameris); FB: 3 major federal state-owned banks (Banco do Brasil, CEF and BNDES); Total: includes all financial conglomerates, public and private ones.
Source: Authors' elaboration with data extracted from the financial conglomerations in Central Bank of Brazil (www.bcb.gov.br).

[17] According to data from the Central Bank of Brazil (2001, p.13), although the average maturity of firm's loans has increased from 76 days in June 2000 to 98 days in October 2001, it is still very low.
[18] In December 2000, the ranking of banks in Brazil (assets criteria) was as follows: (1o.) Banco do Brasil (state-owned bank); (2o.) Caixa Economica Federal (state-owned bank); (3o.) Bradesco (domestic private bank); (4o.) Itau (domestic private bank); (5o.) Santander (foreign bank), including Banespa; (6o.) ABN-Amro Real (foreign bank): (7o.) Safra +(domestic private bank); (8o.) BankBoston (foreign bank): (9o.) HSBC; (10o.) Citibank. In 2000, the

TABLE 6
Percentage Share of Some Banks Revenues (1), 1998-2001

End-of-period	Loan revenues				Security revenues (2)				Fee revenues			
	DP	FE	FB	Total	DP	FE	FB	Total	DP	FE	FB	Total
June-1998	47.54	45.75	49.83	45.34	25.37	30.13	20.70	29.87	11.53	11.87	8.17	8.35
Dec-1998 (3)	46.85	45.14	48.75	45.92	24.78	33.92	23.89	30.07	12.33	8.77	7.90	8.47
June-1999	49.04	41.01	49.10	43.82	19.13	29.54	23.47	29.33	8.07	5.29	5.42	5.34
Dec-1999	46.59	45.25	48.24	45.73	20.40	29.02	23.97	27.16	14.09	9.65	9.17	9.39
June-2000	46.07	42.82	46.01	44.64	22.62	30.64	23.73	28.70	14.43	9.82	11.61	10.63
Dec-2000	44.14	36.00	50.36	44.86	35.96	42.96	21.61	34.54	14.16	7.62	10.43	9.90
June-2001 (4)	47.07	43.05	49.76	49.30	19.33	37.70	11.52	26.54	12.52	8.20	9.77	9.61
Dec-2001	48.86	40.24	35.63	42.85	33.26	43.35	34.18	38.99	12.01	9.12	12.16	9.91

(1) Percentage share on total revenues.
(2) Includes interfinancial operations.
(3) Excludes ABN Amro because of the incorporation of Banco Real.
(4) Excludes Santander because of the incorporation of Banespa.
DP: 4 major domestic private banks (Bradesco, Itaú, Unibanco and Safra); FE: 6 major foreign banks (Santander, ABN-Amro, BankBoston, HSBC, Citibank and Sudameris); FB: 3 major federal state-owned banks (Banco do Brasil, CEF and BNDES); Total: includes all financial conglomerates, public and private ones.
Source: Authors' elaboration with data extracted from financial conglomerates in Central Bank of Brazil (www.bcb.gov.br).

Considering the high percentage share of securities in the total assets, with predominance of federal domestic securities, the low average maturity of loans, and the low banking leverage, we can conclude that there is no significant change in short-termist bank portfolio management in Brazil in the recent years. What is new in the Brazilian experience is that this strategy has been very profitable for banks (Table 5). Yet, nor the balance of payment crisis and the floating of exchange rate, in the beginning of 1999, was followed by a banking crisis, as it happens in other emergent markets (Bordo at all, 2001). This can only be understood if one considers the specific feature of the current institutional-macroeconomic context in Brazil. In other words, considering liquidity preference approach of banks developed in section 3, Brazilian banking sector has not faced the trade off liquidity versus profitability, as its institutional-macroeconomic context has defined an environment in which banks have been able to mixture liquidity with profitability.

Profitability has been higher for private banks than for state-owned banks (Table 5). Domestic private bank profitability has been bigger and more stable than foreign bank profitability, due mainly to the evolution of the profitability indexes of the three major domestic private banks (Bradesco, Itaú and Unibanco) during the period analysed. Indeed, these banks have reacted positively to the foreign entry, improving their efficiency, obtaining revenue economies through cross-selling activities, and at the same time actively taking part in the recent

four major private domestic banks had 27.6% of total assets of the Brazilian banking sector while the four major

wave of banking mergers and acquisitions in Brazil[19]. The good performance of the three biggest domestic private banks and their active reaction to the entry of foreign banks can be due to "cultural differences (local banks are more adapted to the peculiarities of Brazilian banking market), and the high level of development and sophistication of the Brazilian banking sector as a result of the need to adapt to high inflation (…) Brazilian banks learned to extract advantages from the context of macroeconomic instability, and this was possible due to the need to finance the public debt in Brazil, mixing short-term issues with high rates of interest". (Paula 2002, p. 107)

Although bank behaviour in Brazil has been influenced by the macroeconomic context, this behaviour has been a further factor that has caused more instability, as the high rates charged by banks for loans shows. This matter is analysed with more detail in the next section.

4.2 Determinants of banking spreads in Brazil

The Brazilian financial sector is large and bank-dominated[20], but the depth of intermediation – the extent to which intermediate financial flows by collecting deposits to extend credit – is low. According to IMF (2002), the Brazilian banking sector appears very large when compared to those in other advanced Latin American economies (Mexico and Argentina), at the same time that it provides about the same proportion of loans as banks in these countries. On the other hand, Brazilian banking sector compares to U.S. banking sector in asset size relative to GDP but it provides only half the loans in proportion to GDP (Table 7). Although Brazil has one of the most sophisticated banking sectors in the world in terms of technological advances, the ratio of total credit-to-GDP, oscillating between 25-35% in 1990-2001, has been very low compared to developed countries. One could expect that due to the success of the price stabilization plan in Brazil after July 1994, the volume of loans would increase; low inflation would be a source of economic stability. However, although the ratio of total credit-to-GDP has increased in 1992-95, since then it has decreased to reach the same level as that of high inflation (Figure 5). In fact, more recently this ratio is as low as it had been at the beginning of the 1990s.

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foreign banks had 15.7% of the market share (Paula, 2002, Ch 6).

[19] The three major domestic private banks – Bradesco, Itau and Unibanco – did some important purchases, such as Nacional and Bandeirantes by Unibanco, BCN/Credireal and Mercantil de Sao Paulo by Bradesco, Banerj and Sudameris by Itau. This latter bank has particularly had an important participation in the purchase of state banks, such as Banestado (Parana), Banerj (Rio) Bemge (Minas Gerais) and BEG (Goias).

As a result the low level of credit in Brazil is one of the factors that has contributed to the economy growing below its potential.

Table 7
Banking System in Some Countries, 2000 (% of GDP)

Country/Area	Banking system (1)		
	Deposits	Loans	Assets
Brazil	29.3	24.8 (2)	77.1
Argentina	27.8	21.4	57.4
Mexico	18.3	21.6	25,0
Chile	54.9	70,0	98.4
U.S.	42.6	45.3	77.3
Japan (3)	94.8	84.7	142,0
Euro area	78.9	103.7	258.3

(1) Only deposit-tanking, universal banks are considered.
(2) Data include commercial leasing.
(3) Bank data for Japan are as of March 2001.
Source: IMF (2002, p. 62), with data from Central Bank of Brazil.
Federal Reserve Bank, Bank of Japan and ECB.

One of the main factors that obstruct the increase of the credit in Brazil is the very high banking spread that explains at least partly the high profitability of the big retail banks. Indeed, although banking spread has declined in the recent years in Brazil, it is still very high in terms of the international standard: in 2000, annual banking spread was 38.72% in Brazil, while it was 11.96% in Mexico, 2.75% in Argentina, 5.64% in Chile, 2.77% in U.S., and 3.15% in Euro area (Afanasieff *et al* 2001, table 7, p. 7).

Analysing 1999-2001 one can notice that banking spreads in Brazil first increased at the beginning of 1999, a period marked by the change in the exchange rate regime (Figure 6). After that, banking spreads continually declined, from 3.58% in February 1999 to 2.46% in February 2001, due to the more stable international environment, and the reduction in the overnight rate, besides a set of measures implemented by the Central Bank aiming at reducing banking spreads[21]. This movement was interrupted at the beginning of 2001 due to the international

[20] According to Soares (2001, p. 15), banking loans, during 1998-1999, were equivalent to 92% of total loans of the Brazilian financial system.
[21] These measures included, among others: a gradual reduction of reserve requirements – from 75% to 45% for demand deposits and from 20% to zero for time deposits - new loan loss provision rules, cuts in financial market

turbulence that affected the Brazilian economy, in view of its high external vulnerability, and the energy crisis in Brazil. Loan rates and banking spreads rose quickly resulting in spreads increasing for only six months reaching almost the same level of February 2000.

Indeed, one of the expected results of the change in the exchange rate regime, from a system of exchange rate band to a more flexible exchange rate regime, is the smaller variation in loan rates, as is evident after January 1999 (Figure 7). Overall, shorter-term loan operations have charged higher loans rates: in October 2001 the average term of individual overdraft was 20 days, firm overdrafts 24 days, working capital 153 days, and consumer credit 190 days (Central Bank of Brazil 2001, p. 13). Although in general terms the movement of loan rates tends to follow that of overnight rate movement, the basic rate of interest, the behaviour of the various loan rates has been sometimes different. In particular, personal overdrafts rates are the highest loan rates and experienced a smaller decline after January 1999 vis-à-vis the other loan rates. This sort of credit operation is far the most profitable for banks.

According to the latest evaluation of the determinants of banking spreads made by the Central Bank of Brazil (2001), decomposition of banking spreads in August 2001 was as follows: 37.4% related to net profit margin, 19.2% to administrative expenditures, 19.2% to direct taxes, 15.8% to loan loss-related expenditures, and 8.3% to indirect taxes. This decomposition is almost the same in August 1999, and indicates that some stability in the percentage share of the factors that determine banking spreads in the recent past (Table 8). Loan loss-related expenditures, after a sharp fall in the first quarter of 1999, increased gradually along 2000-01.

As stated by Afanasieff *et al* (2001), evidences from the literature show that loan quality is more important in Brazil as the main factors behind bank interest spreads than for other Latin American countries. On the other hand, net profit margin is the main component of banking spreads, according to the decomposition made by the Central Bank of Brazil. The high percentage share of the net profit margin in 1999-2001 seems to show that the effects of an increased competition due to foreign banks entry, did not have any effects on the banking sector in Brazil at least until the recent past. The 'easy' revenues obtained by banks (both domestic and foreign) in a macroeconomic context that favors the adoption of a more conservative posture can partly explain this behaviour.

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taxation, from 6% to 1.5%, institutional promotion of the Credit Risk Central, instruments to reduce and transfer credit risks (credit derivatives), and increasing flexibility on client's information providing to other banks.

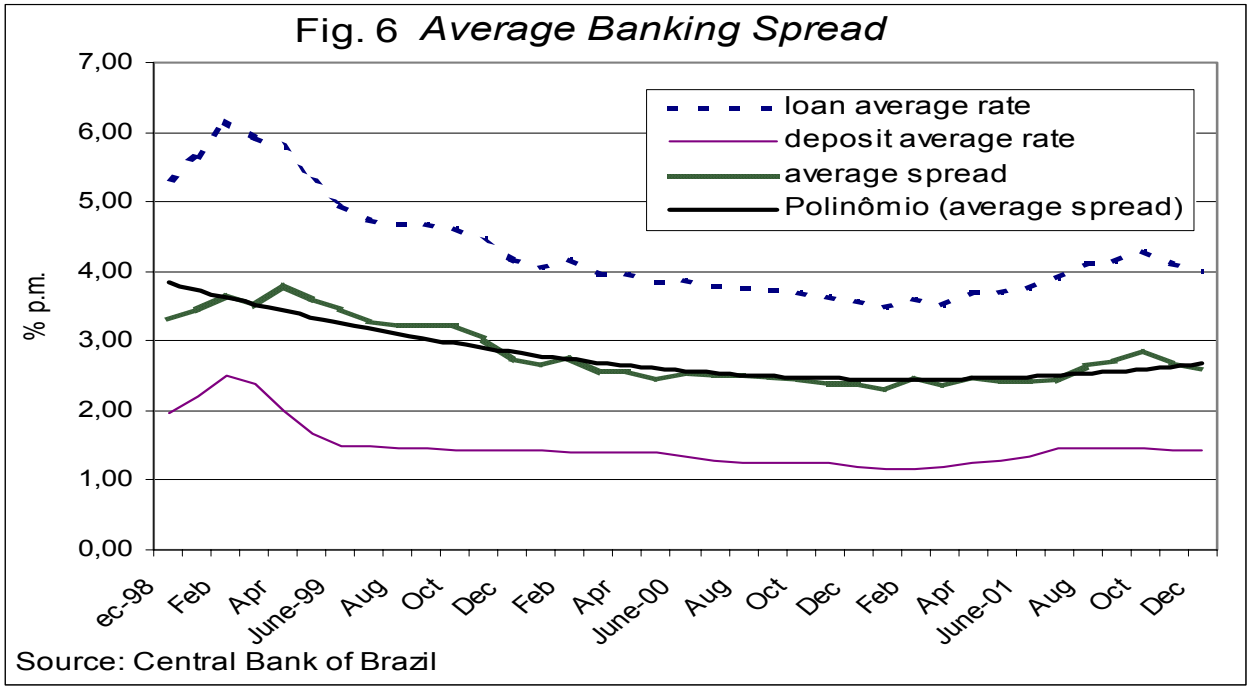

TABLE 8

Banking Spread in Brazil, 1999-2001

	February 1999		August 1999		February 2000		August 2000		February 2001		August 2001	
	% p.m.	Share	% p.m.	Share	% p.m.	Share	% p.m.	Share	% p.m.	Share	% p.m.	Share
Average Spread	3.58	100.0	3.21	100.0	2.73	100.0	2.52	100.0	2.46	100.0	2.65	100.0
Net Profit Margin	1.03	28.8	1.18	36.8	1.08	39.6	0.99	39.3	0.96	39.0	0.99	37.4
Direct Taxes	0.51	14.2	0.68	21.2	0.56	20.5	0.51	20.2	0.49	19.9	0.51	19.2
Indirect Taxes	0.41	11.5	0.38	11.8	0.22	8.1	0.22	8.7	0.21	8.5	0.22	8.3
Administrative Expenditures	0.79	22.1	0.63	19.6	0.53	19.4	0.46	18.3	0.44	17.9	0.51	19.2
Loan Loss-related Expenditures	0.84	23.5	0.35	10.9	0.34	12.5	0.34	13.5	0.36	14.6	0.42	15.8

Source: Central Bank of Brazil (2001, p. 8)

The relevance of net profit margin in the determination of banking spread in Brazil is the result of three factors: (i) as the macroeconomic uncertainty has raised in recent years, banks - as a defensive attitude - seek to compensate greater perceived risks rising banking spread, causing an increase in their net profit margin; (ii) as banks have risk-free government securities as an alternative investment to private sector lending, they require a very high return to offer loans due to the increase in the opportunity costs of non-bearing reserves; (iii) as banking market has been

increasingly concentrated[22], the available evidences indicates that Brazilian banking has a non-competitive market structure (Nakane 2001), which can be conducive to higher interest spreads.

An econometric study by Koyama and Nakane (2001), using an ARFIMA model, decomposed banking spread in the following factors: (i) basic interest rate (Selic overnight rate), that is used as a proxy for the gross mark-up of banks, since time deposits rate and overnight rate have had similar behaviour; (ii) one measure of country-risk, that is spread over Treasury (C-Bond return over American Treasury securities return with same maturity); (iii) administrative expenditures; indirect taxes (IOF, PIS, COFINS and CPMF); and (iv) direct taxes. The authors found the following results for September 2001: risk component (45%); factors related to administrative expenditures (20%), indirect taxes (19%) and overnight rate (16%). In this decomposition of banking spreads, the percentage share of risk-variable was greater than the percentage share of loan-loss related expenditures in the decomposition of banking spreads undertaken by the Central Bank of Brazil. Its forward-looking feature can explain this, once risk-variable is related to the expectations concerning the future scenario, while loan loss-related expenditures refer to the losses of past loans; for this reason it has a backward-looking feature. As we have already stressed, 2001 was marked for uncertainties related to the Brazilian economy. For this reason, one could expect that the risk component of banking spread would increase throughout the year of 2001. In fact, it became even more important in 2001 as it increased from 39.9% in February to 44.8% in September, as a result of the worse macroeconomic context in Brazil that generated uncertainties that affected the level of banking spreads. The importance of the overnight rate in the determination of the spreads can be understood in a different way: since it is the rate that remunerates most of government securities, it works as a sort of opportunity cost for bank investments. Banks know that they have as a portfolio option to channel their resources, government securities with high liquidity and good profitability. For this reason in order to lend – an operation with higher risk than government securities – banks require a very high return to compensate the increase in the risk-premium of credit operations.

The findings of Koyane and Nakane (2001) are in line with the findings of Afanasieff *et al* (2001). These authors, using panel data techniques to uncover the main determinants of the bank spreads in Brazil, found that macroeconomic variables are the most relevant factors to explain the behaviour of bank interest spread: the results of the regression shows that spread

[22] In June 2001, top 10 banks in Brazil had 70.3% share of total assets, 76.6% of total deposits and 70.2% of total credit of banking sector (IMF 2002, p. 63).

increases with rises in either the basic interest rate or the inflation rate, and decreases when output growth rises. However, one should also consider the hypothesis of existence of bank oligopoly market structure in Brazil can be conducive to higher interest spread: "if banks behave like local monopolies or oligopolies, incentives to improve efficiency would normally be weak, and the interest rate spread (…) would be large, discouraging higher deposits and lending volumes". Indeed, the concentration in the Brazilian banking sector suggests the possibility of non-competitive forces at play. Although the studies are not conclusive in this particular subject[23], the findings of a recent study (IMF, 2002) shows some evidences that the Brazilian banks behave as oligopoly, as their revenues are not sufficiently sensitive to changes in their costs to sign they feel the pressure of perfect competition[24]. The study also shows no clear pattern of an increase in competition during the last few years in Brazil.

5 Conclusions

In the recent years, Brazilian economy has followed a semi-stagnation trajectory. The economy in 1998-2001 has as its main feature a 'stop-go' focus, due to some severe macroeconomic constraints – such as the high external vulnerability and problems with the management of the domestic public debt - that obstruct economic recovery. Brazil is a typical case in which when macroeconomic constraints are strong, credit is rationed, uncertainty is high, and the economy cannot. Both firms and financial institutions have their expectations affected negatively by the macroeconomic context, becoming pessimistic about the future of the economy. In such circumstances, there is no automatic mechanism to assure the recovery of an economy.

One of the institutional features of the Brazilian economy is the size and composition of public debt, with predominance of indexed bonds. Indeed, macroeconomic imbalances in Brazil have resulted in the increase of the domestic public debt. Financial institutions have required hedge against changes in the rate of interest, and in the exchange rate, to buy federal domestic securities. This environment has favoured the adoption of a conservative but profitable posture by the banking sector in Brazil, that has obtained high revenues from the high spread in short term credit operations and from government securities. Bank assets portfolio has been dominated by

[23] Nakane's (2001) findings have rejected the hypothesis that Brazilian banks form a cartel.

[24] However, it is worth to note that "in principle (…), there is no one-to-one relationship between market concentration and the degree of competition [in banking market]" and that "some of the same forces promoting consolidation in emerging markets, such as increased foreign bank entry, are also likely to foster competition" (IMF 2001, p. 158).

short-term and speculative activities that have resulted in a low credit supply and high spreads. Therefore, bank strategies have been influenced by their liquidity preference typical of a period of macroeconomic instability. The novelty in Brazilian case is that banking sector strategy has been able to combine liquidity with profitability due to its current institutional-macroeconomic specificities. Under these circumstances, banks have been the main beneficiaries of the economic policy that has been adopted by Brazilian government in the recent past. Considering the current conditions of the public debt management, Brazilian Treasure has transferred a high amount of income from the state to banking sector. In other words, Brazilian federal government has absorbed (almost) the whole cost of macroeconomic adjustment in Brazil in the context of external crisis.

Indeed, bank behaviour in Brazil has been conditioned by the macroeconomic context. At the same time their behaviour influences this context, contributing to the worsening of the factors that obstruct the economic recovery, since they have taken advantage of the unstable macroeconomic environment rising their net interest margin, with negative impacts on the banking spread. One of the main factors that obstruct the increase in banking credit supply, and consequently the availability of finance in the economy, is the very high banking spreads that have been observed in Brazil. It was expected that the recent foreign bank entry in Brazil would change the behaviour of the banking sector, with positive effects on credit supply, prices charged for banking services, and net interest margins; all these factors are the result of increased competition due to foreign entry. However, these changes have not occurred. The recent evidence show that overall foreign banks have had a more conservative posture compared to the domestic private banks.

Finally, one could expect that as the Brazilian economy recovers the growth path, bad loans would decline and banks would increase their credit supply. At the same time, administrative expenditures and net interest margins would decline, with positive impacts on the loans costs. However, considering the various turbulences that affected the Brazilian economy during the 1990s and at the beginning of the 21st century, due to its high external vulnerability, it is not certain that the Brazilian economy will overcome the 'stop-go' tendency that has been typical in recent years. So, in spite of the fact that bank market structure matters, changes in banking behaviour and banking spread in Brazil crucially depend on the improvements of the macroeconomic environment. It is, thus, imperative that a new strategy is found for a sustainable economic growth in Brazil.

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