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OPENNESS AND EFFICIENCY IN BRAZILIAN BANKING

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Abstract: Brazil has recently made great strides in opening its domestic banking market to foreign participation, contrary to what one would have expected from its negotiating stance in regional and multilateral fora dealing with trade in financial services. We review the possible gains from such unilateral liberalization move, and proceed to measure one specific gain that appears most promising: improvements in cost efficiency in the production of banking services. Our results indicate that these gains indeed materialized, although not to the same extent in all segments of the banking market.

Sumário: O Brasil fez recentemente grande progresso em termos de abertura do mercado bancário doméstico à participação estrangeira, ao contrário do que seria de esperar diante de sua posição em negociações regionais e multilaterais sobre comércio de serviços financeiros. Nós examinamos que possíveis benefícios o país poderá obter de tal liberalização unilateral, e apresentamos estimativas de um determinado tipo de benefício que parece ser o mais promissor: ganhos de eficiência de custos na produção de serviços bancários. Nossos resultados indicam que esses ganhos de fato ocorreram, embora não com a mesma intensidade em todos os segmentos do mercado bancário.

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1. INTRODUCTION

Since free trade in services made its way into the diplomatic agenda for the Uruguay Round, Brazil has engaged, or otherwise resisted insistent calling to engage, in service negotiations at the multilateral or regional levels. Lack of enthusiasm on the part of Brazil was not surprising, on account of the little promise of gains it saw from increased market access abroad, and its fear of an onslaught on domestic markets – still very closed – by providers from developed countries. These concerns were especially strong regarding financial services.

In the last few years, however, foreign firms were permitted to make substantial inroads into the Brazilian financial services market. That penetration was neither of the size nor of the shape one would have predicted from the Brazilian stance in recent and ongoing negotiations, or from the few specific commitments made by Brazil in the area. Whatever foreign entry there was basically amounted to unilateral liberalization not included in formal exchanges of concessions.

Within other thematic trade negotiation agendas, interesting trade-offs may call for sophisticated strategic considerations. In agriculture, for instance, each country must factor in the effects of liberalization elsewhere on the equilibrium in worldwide markets for different commodities, of which it may be either a net importer or a net exporter. In the case of financial services, it is generally accepted that market shares everywhere will be redistributed in favor of providers from developed countries, and that developing countries, unless they manage to exchange liberalization in services for concessions in other areas, will have to be content with gains they would equally obtain by liberalizing unilaterally.

Also, countries with little interest in non-discriminatory liberalization may still see gains in (or be prepared to face the burden of) liberalization within a regional group. That may again lead to interesting choices between non-discriminatory liberalization and several possible regional combines. But regional preferences are enforceable only if all participants maintain a similar level of protection against the outside world or rules of origin are in place to prevent more open members from serving as a transshipment route into more closed ones. Regarding financial services, neither condition is fulfilled by the regional integration initiatives in which Brazil participates, making regional liberalization tantamount to non-discriminatory liberalization.

Because financial services lend themselves relatively little to economic strategizing in self-contained negotiations, and because past concessions made by Brazil were a very poor predictor of upcoming liberalization moves, we shall pay less attention to formal trade diplomacy than to the actual effects of the observed unilateral liberalization. Section 2 briefly reviews the relevant facts in support of that option. In section 3, we examine the theoretical case for unilateral liberalization in financial services, and identify one benefit that is both most promising and relatively easier to quantify, namely gains in cost efficiency in financial intermediation. We then proceed to measure the progress made in that respect in the last few years.

We concentrate on the banking market rather than financial services in greater generality. Given the universal banking system adopted in Brazil, and the fact that the Brazilian economy relies very heavily on financial intermediation through banks, that is already quite comprehensive. Banking has also been the sector with the highest profile in terms of recent market opening. It must be recognized, however, that other financial services may show even more dynamism in the future – for instance, it is generally reckoned that Brazil is considerably underinsured.

2. NEGOTIATIONS AND LIBERALIZATION

By 1995, foreign participation in the Brazilian banking market was largely what it had been for the entire preceding decade. Foreign banks operated in Brazil either through capitalized branches or as locally incorporated subsidiaries (sometimes, under both formats). Foreign financial institutions also held minority stakes in banks controlled by nationals, so imparting their international credibility to the local association and enjoying more authority over its operation than warranted by their capital share. Together, all those banks with strong ties to foreign capital accounted for about 15% of total assets in the banking system, and about 30% of assets of private banks (Bevilaqua 1996). Foreign banks concentrated in some market niches, such as international finance and high-end retail banking, or were the consumer finance arms of auto makers. As a result, they had only 4% of the bank branches in the country. Total foreign investment in the Brazilian banking system was close to US$ 2 billion, of which Japan held 24%, the U.S. 23%, France 13%, the UK 11%, and Germany 8% (Bevilaqua 1996).

In terms of foreign participation in total banking assets, Brazil did not compare all too unfavorably to Argentina, with 15% in 1994, to Chile, with 24% in 1996, or to post-NAFTA Mexico, with 20% in 1996 (figures are from Dobson and Jacquet 1998). In terms of market contestability, however, the regime was extremely closed – much more so than in these other countries. Basically, new foreign banks were not permitted to establish in Brazil unless specifically authorized by a presidential decree. The same was required for any expansion of foreign participation, directly or indirectly, in locally incorporated banks. There was no indication of willingness to grant such discretionary authorizations in any substantial scale. Central Bank authorization was also required for the establishment of new branches of any existing bank, and that was used to severely limit the expansion of foreign banks.

The latest Brazilian schedule of commitments in financial services under GATS contains few substantive concessions.[1] Limitations on market access and national treatment were left unbound for most sectors and modes of supply. Some of the few exceptions merely confirmed a long established status quo, like the commitment to no limitations on cross-border supply of freight insurance on exports. Others related to auxiliary services like actuarial, consultancy and survey services in insurance, which shall not suffer any limitation. There is otherwise no commitment whatsoever relating to consumption abroad or cross-border supply of financial services. Commercial presence generally requires the discretionary, case-by-case executive authorization to conduct business; marginal exceptions are insurance brokerage, clearing services for securities and derivatives, and over-the-counter securities trading. The executive authorization may impose ad hoc conditions and limits, including restrictions on branching. Reinsurance and work accident insurance remain public monopolies, and

[1] GATS/SC/13/Suppl. 3, 2/26/98.

Brazil only made a quite indefinite promise to "undertake commitments" in these areas once Congress passed legislation already proposed by the executive lifting these monopolies. As a more palpable promise, and perhaps the most substantive item in the whole schedule, "foreign persons may participate in the privatization of public sector financial institutions and in each case commercial presence *will* be granted" (our emphasis).

GATS schedules that merely freeze the status quo in financial services are the rule rather than the exception (Sorsa 1997, Dobson and Jacquet 1998). Even those have been sometimes welcomed as a progress for preventing policy from ever slipping backwards (WTO 1997). In the Brazilian schedule, however, the executive authorization for commercial presence is so arbitrary that no operative lower bound is created. The notable exception is the rather firm commitment to allow foreign acquisition of public sector banks being privatized. That is in line with the apparent priority accorded by the Brazilian government to maximizing privatization revenues over competing policy objectives.

Liberalization of Brazilian trade in financial services was also not advancing much in the regional sphere. Brazilian foot-dragging with regard to an FTAA is part of a much broader diplomatic program, but even there resistance gets especially strong when it comes to including financial services in the agenda. Just as resistance to GATS concessions, that is hardly surprising given the perceived competitive threat posed by U.S. financial institutions. Within Mercosur, where there is no major money center, one might have expected more progress, but virtually none has been made. The obstacle, at least as far as banking is concerned, has been the great asymmetry between the multilateral trade regime adopted by different members (Bevilaqua 1996, Abreu 1997). While Brazil maintained a closed banking market, the others have very open regimes. Argentina, Brazil's main partner in Mercosur, imposes no restriction either on commercial presence in banking or on consumption of banking services abroad. Any Brazilian concession made on a preferential basis to a regional trading partner which has itself a very liberal regime toward the rest of the world would for all practical purposes amount to a multilateral concession. Firms from any other part would be able to penetrate the Brazilian market through subsidiaries incorporated, say, in Argentina.

That happened, for instance, when NAFTA was formed: European banks made important acquisitions in the Mexican market through their U.S. subsidiaries.[2] The EU also adopted a "single passport" policy, and again much of the further external penetration into markets of EU members occurred through pre-existing subsidiaries in some other member (WTO 1997).

Within Mercosur, market access abroad might be of benefit to Brazilian banks, who could with relative ease extend to these neighboring countries the economies of scale already obtained in their much larger domestic market. Brazilian firms with business in these countries or multinationals with regional headquarters in Brazil might find Brazilian banks especially attractive there, and represent a platform from which these banks could launch onto a broader clientele. Some Brazilian banks have been cautiously testing the water in Argentina with single branch operations. Banco Itaú stands out, having already made much bolder moves into retail. Since 1995, it opened 32 branches, mainly in metropolitan Buenos Aires. Last May, it announced the acquisition of Banco del Buen Ayre, which will add 60 more branches to its Argentinian network, making it the fifth largest in the Buenos Aires region.[3]

Given the liberal regime adopted by Argentina on a multilateral basis, Brazil would in principle need to make no concession to benefit from that market access. However, Argentinian authorities indicated that some preferential treatment has been given to Brazilian banks – supposedly granted right of establishment when they were in less than full compliance with the relevant Argentinian legislation – and threatened to revert to a zero tolerance policy if Brazil did not take liberalization steps as well (Bevilaqua 1996). The only publicized response by Brazilian authorities was to grant a similarly marginal preference to Mercosur investors, allowed to acquire stakes in Brazilian banks without collecting the "toll" – acquisition of "negative assets" of financial institutions under Central Bank intervention – required from other foreigners who wish

[2] "Sin el TLC, la recuperación bancaria hubiera sido más difícil", *El Economista* (Mexico), 5/5/97.
[3] Information from the bank's Argentinian website, www.itau.com.ar.

to establish in Brazil.[4] So far, banks originating in Mercosur made no major acquisition in Brazil.

There is in principle a possibility of imposing “rules of origin of capital” on providers of financial services. GATS in general precludes that type of discrimination in regional commercial integration agreements, but using access to a member of the regional agreement merely as a stepping stone towards another is not covered:

> A service supplier of any other Member that is a juridical person constituted under the laws of a party to an agreement [of regional integration] shall be entitled to treatment granted under such agreement, *provided that it engages in substantive business operations in the territory of the parties to such agreement* (Article V, paragraph 6, our emphasis).

Furthermore, in the case of regional agreements “involving only developing countries, more favorable treatment may be granted to juridical persons owned or controlled by natural persons of the parties to such an agreement” (Article V, paragraph 3).

It is extremely unlikely that such provisions could help resolve the financial services stalemate within Mercosur (they clearly have no bearing on an eventual FTAA). First, enforceability of preferences based on the origin of control is debatable. Compared to rules of origin for goods, it may even be easier to recognize the ultimate origin of controllers of financial institutions who wish to take advantage of their international corporate identity, but it may be hard to characterize that in legal statutes. Second, from the point of view of Brazil’s partners in Mercosur, whose financial systems have

[4] “Banco de Galicia may participate in BCN Barclays this month”, *Gazeta Mercantil Online*, 6/19/97; “Authorization for Galicia’s participation published today”, *Gazeta Mercantil Invest News*, 10/14/97. Banco de Galicia acquired the 23% stake of Brazilian bank BCN in Banco BCN Barclays, a long-established association with Barclays Plc., for a reported amount of US$ 27 million. “Brazil’s BCN sells stake in BCN Barclays”, *Reuters Financial Service*, 12/20/96. To have an idea of the magnitude of the preference accorded to Banco de Galicia, French Société Générale was at the time paying a “toll” of about US$ 4.8 million in connection to a transaction valued at 80% more than Galicia’s acquisition. “Société Générale to take control of Banco Sogeral”, *Gazeta Mercantil Online*, 3/21/97. Incidentally, note that Banco de Galicia is locally-owned Argentinian bank and not a subsidiary of a foreign bank.

much deeper penetration of foreign investment, such discrimination would partly defeat the purpose of obtaining liberalization from Brazil. Third, the overall legal status of Mercosur is not entirely established under the WTO, and it is uncertain whether it would qualify for the developing country provision of paragraph 3. Fourth, the stepping stone qualification of paragraph 6 is unlikely to bind, since most institutions with an eye on Brazil have similar plans at least for Argentina.

Without much improving its willingness to make formal liberalization commitments, the Brazilian government gradually softened its stance in the case-by-case authorization of establishment of foreign banks. That trend started in 1996, with the transfer to foreigners of control over small financial institutions under Central Bank intervention. That transfer was justified as a tidy solution to the problem of liquidation costs that would otherwise be borne by the federal government. The foreign-controlled banks so created were expected to restrict themselves to wholesale or highly specialized operations and were not granted much in terms of branching privileges. Banque Nationale de Paris, which had previously been associated with a Brazilian bank, set foot solo in Brazil announcing that it had no interest in retail anywhere outside the region of Paris.[5] Ford could open its own bank specialized in auto finance after dissolution of its regional alliance with Volkswagen, with the bank they jointly owned going to VW. That far, new entrants posed no threat to large domestic retail banks.

Then, authorization was given for transactions that involved somewhat larger and financially sound banks. But those were mainly transfers to foreigners of minority stakes in banks already controlled by foreign institutions. Société Générale acquired the 50% it did not yet own in Banco Sogeral, and Banco de Galicia of Argentina replaced Brazilian bank BCN with a 23% stake in Banco BCN Barclays (renamed Banco Barclays e Galicia). Again, that did little to upset the market in terms of added competition.

[5] "BNP Brasil will operate by start of March, with Vayssie in command", *Gazeta Mercantil Invest News*, 12/5/96.

The first hint of what lay ahead came with the sale of Banco Bamerindus, in March 1997, to British financial group HSBC. That was once more a bailout engineered by the Central Bank, but it now involved what was then one of the top five private banks in the country, with total assets over US$ 10 billion and a network of 1,200 branches. The acquisition reportedly cost HSBC US$ 885 million – about US$ 360 million in excess of book value.[6] Other large bank bailouts had recently taken place, but in those cases domestic solutions had been found: Banco Nacional had been absorbed by Unibanco and Banco Econômico by the much smaller Banco Excel. According to the Brazilian finance minister, HSBC was allowed to step in "because there simply was no other institution capable of doing so".[7] Political circles kept debating the financial intricacies of the bailout – who would pay how much, to whom, for what, and when – but protectionist protests were muted as local bankers were themselves eager to get past lingering fears of systemic crisis. But it was widely acknowledged that competition would be turned on a full notch.[8]

Other foreign acquisitions of Brazilian retail banks, ranging from quite sound to outright insolvent, soon followed. Banco Santander of Spain first acquired control of Banco Geral do Comercio, a smaller retail institution (assets of US$ 1.2 billion and a network of 77 branches). A few months later, it took over the larger Banco Noroeste (US$ 5.4 billion in total assets and 150 branches).[9] Through Banco Interatlântico, a preexisting local association with Crédit Agricole of France and Brazilian investors it operated in wholesale markets, Banco Espírito Santo of Portugal acquired control of retailer Banco Boavista (total assets of nearly US$ 4 billion). Boavista had negative net worth and was under threat of intervention by the Central Bank.[10] Banco Bandeirantes (total assets near US$ 5 billion), also in difficulties, was sold to the Portuguese Caixa

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[6] "HSBC investment totaled R$929 million", *Gazeta Mercantil Online*, 4/2/97; "HSBC to pay premium in installments", *Gazeta Mercantil Online*, 4/10/97.
[7] "HSBC was the only bank capable of taking over Bamerindus", *Gazeta Mercantil Invest News*, 11/6/97.
[8] "HSBC wants to be the biggest bank in Brazil", *Gazeta Mercantil Online*, 3/27/97; "HSBC redraws Brazil banking landscape", *Reuters Financial Service*, 4/1/97.
[9] "Banco Santander gains foothold in Brazil", *European Banker*, 3/24/97; "Santander acquires control of Noroeste", *Gazeta Mercantil Online*, 10/31/97.
[10] "Espírito Santo to stay with 34% of Banco Boavista", *Gazeta Mercantil Invest News*, 9/2/97; "Boavista Interatlântico to receive R$ 120 million", *Gazeta Mercantil Invest News*, 9/3/97; "Banco Boavista had negative net worth", *Gazeta Mercantil Online*, 9/4/97.

Geral de Depósitos, which had long operated a very small subsidiary in Brazil.[11] Banco Sudameris (total assets US$ 6.4 billion), a Brazilian retail bank ultimately controlled by Banca Commerciale Italiana, was authorized to take over Banco América do Sul (total assets US$ 3.4 billion, and Fuji Bank as a minority stakeholder) and to expand their combined networks to 500 branches.[12] Banco Bilbao Vizcaya of Spain acquired control of Banco Excel Econômico (total assets US$ 10 billion), who was itself having difficulty in digesting its earlier takeover of Banco Econômico.[13] Lloyds Bank, which operated in Brazil both with a branch and with a locally incorporated subsidiary, and in addition to that held a 50% stake in Banco Multiplic, was bought out of the latter association and walked away with its credit portfolio of nearly US$ 1.3 billion.[14]

Last June, CS First Boston took over Banco Garantia, the top investment bank in the country (assets US$ 4.3 billion), paying an estimated US$ 850 million, plus a US$ 35 million toll to the Central Bank. Although Garantia was an icon in its market segment, that takeover caused no public alarm. Sale of Banco Real to ABN Amro, a month later, was not received quite as peacefully. Banco Real is the fourth largest private bank in the country, with nearly US$ 20 billion in assets and a network close to 1,400 branches. Unlike many of the larger banks previously transferred to foreign control, Banco Real reportedly enjoyed perfect financial health, and the sale was motivated simply by succession problems within the controlling family. ABN Amro, which already had a sizeable local subsidiary (total assets US$ 3.8 billion), would pay up to US$ 3 billion for 40% of the voting stock and up to 100% of the preferred stock, plus a US$ 70 million toll, and would be handed control of the bank in shareholders' agreement.[15]

Leading Brazilian bankers made vehement protests against the "lack of transparency" in that negotiation, and complained that they too should have been given a chance to

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[11] "CMN authorizes CDG to purchase Bandeirantes", *Gazeta Mercantil Invest News*, 1/28/98.
[12] "Decree authorizes increase of foreign capital", *Gazeta Mercantil Invest News*, 7/14/98.
[13] "Bilbao Vizcaya to inject $ 1.5 billion into Excel, says Mauch", *Gazeta Mercantil Invest News*, 7/30/98.
[14] "Multiplic and Lloyds to sever partnership", *Gazeta Mercantil Online*, 2/12/97; "Lloyds concludes operation with Multiplic", *Gazeta Mercantil Online*, 4/14/97.
[15] "Holandeses vencem jogo pelo Real", *O Globo*, 7/9/98; "ABN Amro to pay $3bn for Banco Real", *Financial Times*, 7/9/98.

bid for Banco Real. It was also argued that Brazil was promoting a radical opening of the domestic banking market, a course with rare precedents in the entire world that might (for some reason left unspecified) even imperil the autonomy of conduct of macroeconomic policy. Brazil, it was claimed, should at least have negotiated reciprocal concessions in exchange for that market access. Central Bank officials reaffirmed that foreign investment was a welcome contribution in the process of restructuring the domestic financial system. No one defined precisely how far "restructuring" was meant to go, now that it was no longer confined to bailing out banks in trouble. But there was some indication that authorities might be content with the level of competition already attained – apart from the state banks scheduled for privatization, there might be a pause in large takeovers by foreigners.[16]

As a result of all that activity, and a number of smaller transactions not mentioned here, foreign participation increased to 21% of total bank assets, and to 39% of total assets of private banks (up from 15% and 30%, respectively).[17] In particular, foreign banks made great progress in their participation at the top of the bank ranking. Most importantly, there was a qualitative change of outlook in terms of market contestability – which will remain even if it is now decided to slow down foreign entry.

The absence of U.S. banks among the foreigners recently entering or expanding in Brazil is noteworthy. BankBoston and Citibank are oldtimers in the high end of the Brazilian retail market, but did not take part in the recent wave of acquisitions. Instead, they have just obtained authorization to open 20 new branches each (BankBoston already had 36 and Citibank 22).[18] The only substantial new entry was by NationsBank,

[16] "Brazil: bank takeover stokes fear of invasion of foreign capital", *Inter Press Service*, 7/9/98; "Para Febraban, negócio não teve transparência", *O Globo*, 7/9/98; "Swift business surprises financial market", *Gazeta Mercantil Online*, 7/9/98; "Real: Brandão diz que bancos tinham que ser ouvidos", *O Globo*, 7/10/98; "Gustavo Franco rebuts Febraban criticism", *Gazeta Mercantil Online*, 7/10/98; "BC não vai limitar a entrada de bancos estrangeiros", *O Globo*, 7/12/98; "Discussions on bank denationalization", *Gazeta Mercantil Online*, 7/16/98; "Banco estrangeiro enfrentará competição dura", *O Estado de S. Paulo*, 7/19/98; "Foreign investments debate rages on", *Gazeta Mercantil Online*, 7/24/98.

[17] According to balance sheets of 12/97. *Gazeta Mercantil – Balanço Anual 1998*. In the meantime, Brazilian Banco Itaú took over the local subsidiary of Crédit Lyonnais, Banco Francês e Brasileiro (then with assets at US$ 2.9 billion). "Itaú completes purchase of Banco Francês e Brasileiro", *Gazeta Mercantil Online*, 4/2/96.

[18] "CMN makes decisions on Santander, Citibank and BankBoston", *Gazeta Mercantil Invest News*, 5/28/98.

which made a US$ 50 million deal for a controlling stake in Banco Liberal – very far from the largest positions secured by European banks.[19] It has been argued that deregulation of the U.S. banking market and the ensuing consolidation frenzy left little "appetite" for new ventures in emerging markets.[20] Apparently, European financial integration did not have similar effects, as some of the European banks making acquisitions in Brazil were also engaged in true shopping sprees all around Latin America.[21]

Neither the extent nor the direction of such foreign entry would ever have been forecasted from Brazil's position in formal negotiations about trade in financial services. Even after the first signs that Brazil might soften its stance through case-by-case authorizations, most eventual entry was expected to occur in the wholesale end of the market or in investment banking activities that could be performed out of mere representative offices (Bevilaqua 1996).[22] These were the least politically sensitive segments of the market, and the object of the avowed interest of potential entrants (Abreu and Flôres 1990). There, it was sometimes argued, resided the greatest competitive edge of sophisticated money center financial institutions (Garber and Weisbrod 1993 formally presented this argument for Mexico). Such was indeed the nature of the earliest wave of new entrants, which included firms like Merrill Lynch, Salomon Brothers, Bear Stearns, and Prudential Securities; even firms with strong retail activities abroad, like BNP, announced plans to concentrate on those market segments. The ground gained by foreigners in retail banking was remarkable.

In a particular twist of fate, foreign entry in retail banking sidestepped altogether the only channel declared open to it: privatization of public sector banks, in accordance with the Brazilian schedule of concessions under GATS. Only four banks have been privatized thus far: the official state banks of Rio de Janeiro (Banerj) and Minas Gerais

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[19] "Foreigners flock to grab a share: foreign acquisition of Brazilian banks", *The Banker*, 3/98.
[20] "Fusão é confusão" (interview with Henrique Meirelles, CEO of BankBoston), *IstoÉ*, 4/22/98.
[21] "New World ventures", *The Banker*, 10/96; "BBV y Santander también compran activos financieros en Argentina, Brasil, Chile, Venezuela, Colombia, Panamá, Perú y Puerto Rico", *El Economista*, 11/4/94; "HSBC keeps up Latin American drive", *Reuters Business Report*, 5/30/97; "Banks look to Latin America: huge growth potential is attracting foreign interest", *Financial Times*, 8/18/97.
[22] Similar predictions were made for the Mexican market upon formation of NAFTA. "The gringo banks are drooling", *Business Week*, 9/13/93.

(Bemge), a federal bank (Banco Meridional), and a bank that had fallen in the hands of the government of Minas Gerais (Credireal). All four were bought by banks under domestic control: the two state banks by Banco Itaú, Meridional by Banco Bozano, Simonsen, and Credireal by BCN (later taken over by Bradesco).[23] Some foreign investors were reportedly coaxed into taking part, but few pre-qualified for the auctions, even fewer posted guarantees (a pre-requisite for bidding), and only one actually bid.[24] The next to be privatized is the official bank of the state of Pernambuco (Bandepe), and ABN Amro pre-qualified side by side with Bradesco and Meridional.[25] That bank (as most other state banks) is not a very attractive business proposition as a first step into the Brazilian market (not the case of ABN Amro), because its branch network is heavily concentrated away from the major financial centers. The next true test of foreign interest in the privatization process will be the sale of Banespa (the state bank of São Paulo), scheduled for early next year.

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[23] Foreigners do hold a stake in Banco Bozano, Simonsen, and it formally needs executive authorization to acquire other banks in Brazil. It may therefore have benefited from the special treatment of privatization. But some domestic banks with minority foreign partners had their requests for authorization of takeovers expedited on the grounds that they were notoriously "national companies". The reach of that sort of exception is not clear. "Decree necessary if Bradesco is to buy BCR", *Gazeta Mercantil Invest News*, 4/30/98.

[24] BCN, Bradesco, Itaú and investment bank Pactual, all domestic (the latter perhaps on behalf of third parties), pre-qualified and posted guarantees for the Banerj auction (6/97), but the only bid was Itaú's. "Possibility of Banerj being resold does not worry Franco", *Gazeta Mercantil Invest News*, 6/20/97; "Only Itaú presents proposal for Banerj", *Gazeta Mercantil Invest News*, 6/26/97. In the Credireal auction (8/97), the pre-qualified domestic parties were BCN (represented by investment bank Pactual), Bicbanco, Noroeste (before the Santander takeover), and Bozano, Simonsen; BankBoston was the sole foreigner. Only BCN and Bicbanco posted guarantees, and only BCN bid. "Two brokerage firms present guarantees for Credireal", *Gazeta Mercantil Invest News*, 8/6/97; "Bicbanco confirms guarantees for Credireal auction", *Gazeta Mercantil Invest News*, 8/6/97; "Pactual buys Credireal for BCN at minimum price", *Gazeta Mercantil Online*, 8/8/97. Bradesco, Bozano, Simonsen and the Portuguese Caixa Geral de Depósitos (which would soon take over Banco Bandeirantes) reached the bidding stage in the Meridional auction (12/97), and CGD "fought until the bitter end with Bozano, Simonsen". Banco Pactual had pre-qualified but dropped out, and Banco Bilbao Vizcaya had been invited to participate but declined. "BC director clarifies Bilbao's interest in Meridional", *Gazeta Mercantil Invest News*, 10/17/97; "Three groups to bid for Meridional today"; *Gazeta Mercantil Online*, 12/4/97; "Success of Meridional auction will benefit other state banks", *Gazeta Mercantil Invest News*, 12/4/97. In the case of Bemge (finally auctioned in 9/98 after some postponement), foreigners ABN Amro, Bilbao Vizcaya and Santander pre-qualified together with Meridional (already in the hand of Bozano, Simonsen), Bradesco and Itaú, but only the domestic camp posted guarantees or bid. "Six groups dispute Bemge", *Gazeta Mercantil Online*, 6/5/98; "CLC lists confirms three participants in Bemge auction Monday", *Gazeta Mercantil Invest News*, 9/14/98; "Only Brazilian groups will dispute Bemge auction", *Gazeta Mercantil Online*, 9/14/98; "BC authorizes transfer of Bemge stock control to Itaú", *Gazeta Mercantil Online*, 9/18/98.

[25] "Foreign capital could play a part in Bandepe auction", *Gazeta Mercantil Invest News*, 8/14/98; "List of pre-qualified for Bandepe auction being announced", *Gazeta Mercantil Invest News*, 8/27/98.

3. WHY LIBERALIZE?

As mentioned in the introduction, it is generally believed that comparative advantage in the provision of financial services lies with developed countries, and that countries like Brazil have very little to gain from market access abroad. It has been suggested that Brazil should attempt to condition liberalization of financial services on concessions it sought in areas of its own interest. Possible links with agricultural trade with the European Union have been mentioned; [26] in the past, foreign debt negotiations were also a candidate (Abreu and Flôres 1990). Brazil ended by relinquishing any such opportunity with its staunch resistance to formal concessions in financial services, followed by the unilateral, de facto about-face described above.

The change of heart among Brazilian authorities may have been sparked by the prospect of short-term benefits such as the capital inflows associated with bank takeovers or the foreign contribution in the bailout of problematic banks. The Central Bank collected nearly US$ 250 million in tolls from foreign entrants – to which one should add what it saved on institutions that would have required a bailout had they not been so keenly taken over by foreign investors eager to set foot in the Brazilian market.[27] The capital inflows associated with the takeovers may have been more valuable – at recent junctures, at least as a signal – than that fiscal contribution. Yet, any such immediate benefit is likely to be dominated by permanent effects that openness may have on the domestic financial market.

We are therefore led back to the gains from unilateral liberalization of trade in services. Studies advocating liberalization have stressed such arguments (Dobson and Jacquet 1998, for instance), for lack of much else to say to most of the recalcitrant readership. Some of these arguments mix liberalization of trade in services with liberalization of the capital account. The latter indeed facilitates cross-border trade in financial services, but our main interest here is the effect of allowing foreign commercial presence without changing the capital account regime. That seems more applicable to the Brazilian case.

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[26] “Blair praises Cardoso and makes promises for Mercosur”, *Gazeta Mercantil Online*, 5/20/98.

Focusing on commercial presence in banking, the following are the main arguments in support of liberalization, even unilateral:

1. *Classical gains from trade:* Unilateral specialization along the lines of comparative advantage, as dictated by the external prices faced by a small country, tends to make that country better off. But there may be less room for that type of gain in financial services than in trade in goods. This is not to say that countries do not differ enough in endowments and technology for large comparative advantages to arise in financial services, which may in fact explain the observed pattern of cross-border trade in the sector (Moshirian 1994). The problem is that many financial services are not tradeable across borders, either for technological reasons or due to legal restrictions to capital mobility. In many lines of service, the bulk of the value must be added locally. Trade through commercial presence will tap on local resources and be relatively less conducive to reallocation along the lines of comparative advantage. On the other hand, many financial services that are tradeable across borders, and likely to remain so under the Brazilian regime for the capital account, already benefit from a relatively liberal environment (international interbank lending, for instance). Technological progress tends to enhance cross-border tradeability of value-added even in services that require commercial presence, but geographical segmentation of retail banking, for instance, remains strong even in liberalized markets like Europe (WTO 1997).

2. *Less market power:* The extra competition of foreign providers would reduce market power and bring the economy closer to the competitive equilibrium, with higher output and lower prices for financial services. Of course, some of what consumers gain producers lose in the form of reduced profits. Estimates of the net welfare gain for the entire country associated with reduced market power in financial services usually yield small numbers (Rhoades 1982, Berger and Hannan 1998). Furthermore, when analyzing foreign entry, one must deduct from those (to

[27] "BC não vai limitar a entrada de bancos estrangeiros", *O Globo*, 7/12/98.

arrive at a welfare computation at the country level) the monopoly rents that will accrue to foreign entrants – since market power is unlikely to disappear altogether.

3. *Lower prices:* This sort of argument stresses the gains to consumers in spite of the losses suffered by producers. The movement in prices and profit margins may be considerable even if the net welfare gains are small from a partial equilibrium perspective. Reduction of prices for financial services has been considerable in Europe since the single market (WTO 1997). Claessens, Demirgüç-Kunt and Huizinga (1998) find evidence, in a large panel of banks in 80 countries, that profit margins are reduced by foreign penetration. At the partial equilibrium level, however, the argument demands some distributive justification, which may well be warranted but should be made explicit.

4. *General equilibrium spillovers:* Prices of financial services are a cost of production everywhere in the economy, and also a transaction cost for buyers of goods and services. Reduction of these prices would be an across the board incentive to both supply and demand, and there might be welfare gains in the resulting increase in equilibrium output. This calls for an ambitious CGE exercise that falls outside the scope of this paper.

5. *Lower costs:* Foreign entrants might have lower costs, either because they seek cost minimization more actively or thanks to economies of scale and scope from their global activities. Their mere presence would reduce the average cost of financial intermediation. It might also trigger cost saving efforts by domestic firms. Many explanations exist for why firms in imperfectly competitive markets leave cost saving opportunities unexploited in the first place, including departures from profit maximization in favor of other managerial objectives. They would catch up on cost savings once that becomes a matter of survival. Aggregate costs would be driven further down by their efforts or otherwise by their demise, making way for the expansion of cost efficient firms. Several economists have suggested that cost inefficiencies harbored by monopoly power might be quite high (Scherer 1970) – an order of magnitude higher than the welfare loss due to market power itself. Estimates recently produced by Berger and Hannan (1998), based on comparison

of local banking markets in the U.S. with different degrees of concentration, point in the same direction. In connection with foreign entry, Claessens, Demirgüç-Kunt and Huizinga (1998) do find reduction of overhead costs, although the effect is small and not very significant (statistically).

6. *Better allocation of credit:* It is often claimed that credit assessment is the Achilles' heel of Brazilian banks, otherwise very advanced in trading and in customer service. That would be the legacy of many years of high inflation, when banks devoted less to credit concession and more to treasury operations, relying heavily on the inflationary float on their deposits. Their credit policy would focus excessively on guarantees (endorsements or collateral) and give scant attention to the prospects of the project being financed. These features obviously distort credit allocation, making it conform less with marginal capital efficiency patterns. Foreign banks could contribute by importing their superior credit assessment methods. Measurement of these effects, even after the fact, is very difficult – let alone prediction.

7. *More stability:* Some authors believe that an emerging banking market open to foreign participation may be more stable and relieve domestic authorities of some of the regulatory, supervisory and lender of last resort burden. As long as foreign entrants are large international players based in developed countries, they would bring along compliance with their more stringent native regulations and market discipline, count on their own headquarters abroad as a lender of last resort, and on their activities elsewhere as a buffer against local shocks (Gavin and Hausmann 1997). There is the theoretical possibility that more competition could exacerbate the need for prudential regulation, as banks with lower profit margins constitute less valuable franchises, being therefore more prone to risk. A more down-to-earth argument to the same effect is that less profitable banks become less robust to occasional errors of strategy or management, and put more demands on a safety net. But adequate capital requirements can always ward off such dangers of increased competition. The argument of imported stability is stronger if market opening is managed so as to select entrants of good extraction. This may be a point

in defense of a discretionary, case-by-case unilateral liberalization like Brazil's, instead of a multilateral, non-discriminatory set of rules.

8. *Modernization of the payments system:* There are patent inefficiencies in the Brazilian payments system, which requires too much processing of paper documents and too many trips to the bank. It could be made far less wasteful if cash or checks (which require a trip to the bank by the payee and further processing) gave way to electronic debit and credit cards as a means of payment. Similarly, the common practice of paying bills at the bank teller is very inefficient compared to payment by mail or by automatic bank debit. Some hope was expressed that foreign entrants, which run much more efficient payments systems at home, could do the same in Brazil.[28] But Brazilian banks have themselves all the automation capability to promote such changes, and would carry them out if only conditions were right. The most formidable barrier against such improvement seems to be the fact that a large contingent of the Brazilian population remains "unbanked", because their transaction balances do not cover the costs of maintaining a checking account. Assimilation of these contingents in the banking market before substantial improvements in their standard of living hinges on cost cutting advances in bank technology. Furthermore, dissemination of electronic payment awaits abundant and cheap telephone connections. In short, mere opening of the banking market promises no dramatic improvements in this area beyond its possible contribution to reduce bank costs.

In the next section, we try to measure the cost reduction effect described in item 5. We concentrate on that because it is easier to measure than the effects in items 3, 4, 6 or 7, perhaps more substantial than those in 1 or 2, and instrumental for progress in 8. Moreover, note that lower prices are expected to follow from lower costs even if market power is not reduced at all. Marshallian surplus expands both by the reduction

[28] "Entrada do ABN Amro deve acelerar mudanças no setor", *O Estado de S. Paulo*, 7/14/98. One excerpt reads (our translation): "A study by the American consultancy McKinsey shows that Holland (where ABN Amro is headquartered) uses the best banking practices in the world. McKinsey exemplifies noting that the bulk of bill payments in Brazil is still made at bank branches. After the customer gets to the bank and waits in line, processing at the teller still takes on average one minute. In the U.S., the system is semi-automated and a check received by mail takes 20 seconds to be confirmed. In Holland, most payments are made by an automated system taking 5 seconds."

of the social cost of production and by the increase in equilibrium output. If one believes the effects in 2, 3 or 4 to be important, one should be very interested in cost cutting. It may after all hold the best chance of lower prices in the case of Brazil: since new entrants merely took over existing banks, and some consolidation is also under way, the net effects on market power may be disappointing.

4. MEASURING COST INEFFICIENCY

Here we attempt to measure how much progress has been made in reducing banking costs since the domestic market started to open up to foreign entry. We shall be concerned only with costs that represent absorption of real resources in the production of banking services – mainly personnel and administrative expenses. These – as opposed to interest payments, say, which are also an expenditure from the bank's point of view – represent the actual social cost of financial intermediation.

The thorny question in measuring cost inefficiency, usually defined as a ratio costs/output, is the choice of a meaningful measure of output. Some studies interpret the ratio costs/income as a measure of inefficiency in financial services (WTO 1997). Bankers engaged in cost saving programs seem to target this sort of ratio as well.[29] Income may not be a good proxy for output in this context: if unit costs are falling, prices are likely to be falling as well; but prices are equal to income/output, and so the ratio costs/income will underestimate the gains in cost efficiency.

Some other studies measure inefficiency by the ratio costs/total assets (Claessens, Demirgüç-Kunt and Huizinga 1998). Total assets are not a good measure of output either. First, not all assets represent a financial transaction – permanent assets, which are not a liability of anyone else's, clearly do not. Second, even assets that do represent financial transactions should not all have the same weight, dollar for dollar, in a measure of the social value of financial intermediation services. There is certainly more financial service content in a dollar loaned to the public than in a dollar invested in the interbank market, so that some other bank may take the trouble of eventually lending it

[29] "Queda do juro obriga bancos a buscar eficiência", *Gazeta Mercantil*, 8/12/98.

to the public. Third, as much as different classes of bank assets represent different financial services, so do different classes of bank liabilities – notably, deposits.

The problem is then to find an appropriate aggregate of the relevant multidimensional measure of output:

$$(y_1, y_2, \ldots, y_n) \to f(y_1, y_2, \ldots, y_n)$$

a scalar that can be used as the denominator in a measure cost inefficiency:

$$u = \frac{c}{f(y_1, y_2, ..., y_n)}$$

The standard method for obtaining such a scalar is to rearrange the latter as a regression equation:

$$\log c = \log f(y_1, y_2, ..., y_n) + v$$

which does not need to be linear or even parametric. The proportional inefficiency measure $u = e^v$ is obtained from the residual of that regression.

That measure gives only a partial answer to our question, because it captures technical but not allocative inefficiency. The marginal social value of each line of service may not be equated to its marginal social cost in determining what basket of services is produced. We do not measure such deviations from the social optimum. We simply estimate how much each bank spends to produce its own basket of services in excess of what a "representative" bank would have spent.

We have quarterly balance sheet data from 94.IV to 98.II (15 quarters) for a panel of 38 commercial and "multiple" banks operating in Brazil.[30] The panel is however very

[30] The sample includes the following banks: ABC Roma (recently renamed ABC Brasil), América do Sul, Bamerindus (now HSBC Bamerindus), Banco de Crédito de São Paulo (BCSP), Banco do Brasil (BB), Bandeirantes, Banespa, Banestado, Banestes, BankBoston, Banrisul, BBA Creditanstalt, BCN,

unbalanced (it does not include all banks at all dates) and contains only 261 observations. We can afford to significantly estimate fewer parameters than the typical efficiency study of U.S. banking, where the sample sizes are typically in the thousands.[31] Keeping in mind the need to economize on degrees of freedom, we run the following regression:

$$\log c = b_L \log L + b_D \log(D + l_D) + b_S \log(S + l_S) + b_T \log T$$

$$+ a_{mar} I(mar) + a_{jun} I(jun) + a_{set} I(set) + a_{dec} I(dec)$$

$$+ g\,n + d\,t + e$$

where:

c = salaries, benefits and administrative expenses
L = total loans
D = demand deposits
S = savings accounts ("cadernetas de poupança")
T = time deposits
$I(mar)$ = dummy variable for first quarter
$I(jun)$ = dummy variable for second quarter
$I(set)$ = dummy variable for third quarter
$I(dec)$ = dummy variable for fourth quarter
n = number of pre-stabilization quarters included in income statement
t = time, in quarters

Because we believe that some banks should be persistently more efficient than others, and that efficiency across the sample should improve with the passage of time, we

Bemge, Besc, BNL, Boavista, Bradesco, BRB, CCF, Cidade, Citibank, Dresdner, Excel (renamed Excel Econômico), Fenícia, Francês e Brasileiro (BFB), Itaú, Lloyds, Mercantil do Brasil (BMB), Mercantil Finasa, Multiplic, Noroeste, Real, Safra, Sudameris, Sumitomo, Unibanco, and Votorantim. Most of the data comes from *Revista Bancária Brasileira* (several issues) and from the database graciously provided by Economatica.

might be inclined to estimate a panel data model with fixed time and bank effects. That is not practical given the size of our sample. The time trend included in the regression is a parsimonious though imperfect attempt to account for the time effects. That is important for removing correlation between the error term and the regressors, which would otherwise be expected since output levels should rise as inefficiencies (and prices) fall. We experimented with the more flexible specification of higher order polynomials in t, but the time trend estimated in that way is very close to linear. Accounting for the time trend, inefficiencies are measured by:

$$u = \exp(d\,t + e)$$

that is, the benchmark is the "representative" bank (e = 0) in 94.IV (t = 0).

Inflation in Brazil dropped dramatically between June and July, 1994. Because the income statements from which the cost data are extracted show accumulated values in the four preceding quarters, those for 94.IV and 95.I still cover, respectively, 2 and 1 quarters of high inflation. Expenditures entering these income statements were not perfectly indexed, and so the costs incurred in these quarters are underestimated. Besides, the operational routine of banks during the high inflation period was of necessity very different, and that may also distort the comparison with post-stabilization costs. To avoid that noise in our measures of inefficiency, we include the variable n in the regression.

The seasonal dummies are included in a similar spirit. Loans and deposits are likely to be seasonal, while costs accumulated in four-quarter periods are not. The resulting seasonal variations in the relation between costs and output should not be regarded as inefficiency.

Regressors L, D, S and T were chosen because they represent the four broad categories into which transactions between banks *and the public* can be broken down according to balance sheet data. For two public sector banks, namely Banco do Brasil and

[31] A fine example is DeYoung and Hasan (1997), whose panel of 5,435 banks over four years contains

Banespa, we substituted loans to the private sector for total loans (for the other state banks *in our sample*, that adjustment is not very important). That way, their performance is not influenced by the wild swings of public sector lending recently observed in their financial statements, which have no counterpart in the level of service they supplied to the public.

That set of regressors leaves out many services provided by Brazilian universal banks. First, it ignores activities such as brokerage, underwriting, mergers and acquisitions, and asset management. There is little hope of inferring what those are from financial statements alone. For that reason, we excluded from the sample banks that are notoriously devoted to such activities rather than to taking deposits and lending, which were bound to be judged very inefficient. We would also like to account for foreign exchange and money market transactions, but there true services to the public are not easily told from mere treasury operations. Bank funding in the open market and foreign exchange balances are very volatile series, and their values at the statement closing date probably bear little relation to the level of regular transactions in those markets on behalf of customers.

Because our measure of inefficiency is (at least in part) the lack of fit of a cost function, gross misspecification will obviously taint the results. That is indeed a generic criticism to the very idea of estimating efficient cost frontiers, and the pragmatic response of the literature has been to choose flexible functional forms for the cost function. A popular choice is the translog, which involves linear, quadratic and cross-product logarithmic terms in the explanatory variables. That substantially increases the number of parameters to be estimated and, in our case, does not improve the fit of the regression a whole lot. The reason is that some of our explanatory variables (namely, demand and savings deposits) are either very close to zero (for non-retail banks) or otherwise very high (for retail banks). That much variability is not reflected in the regressand, and the result is a poor fit. The parameters l_D and l_S are an alternative flexibilization of the functional form that is parsimonious and helps address that specific feature of the data – they dampen the variability in the corresponding log terms

16,282 observations. Many others are surveyed by Berger and Humphrey (1997).

by shifting their arguments to a region where the log function is less steep. That makes the regression nonlinear, but NLS is easy to implement because nonlinearity is limited to those two parameters.

Ideally, our cost measure should also include an imputed rent on facilities and equipment owned by the bank. We refrain from making such an imputation because we only know the *book* value of permanent assets in use by the banks, which is not likely to reflect the true economic value of the buildings they occupy and the equipment they operate.

There are two other corrections that are often suggested as desirable but, for lack of data, seldom performed. The first is a correction by some index of concentration of loans and deposits. Everything else equal, dealing with a larger number of customers costs more and should count as more service output. The other is a correction for quality of service, which could be based on customer satisfaction data if those were available. Everything else equal, higher quality service is likely to cost more and should also count as more service output. We are unable to correct for either effect, and can only offer both as caveats for the interpretation of our results. Note however that, in strict cross sectional comparisons, the quality and dispersion effects might run in opposite directions and even cancel each other, with high quality banks serving a very selective clientele and mass banks offering lower service quality.

A further question to confront is that of financial statement consolidation in banking conglomerates. Insofar as these are operationally integrated, their consolidated statements should give better measures of cost and service supply. In particular, consolidation would typically have the advantage of bringing into the picture leasing operations, which are usually concentrated in a specialized affiliate of the bank. However, consolidation according to Brazilian law involves many adjustments that are undesirable for our purposes, such as netting out deposits held in the bank by non-financial affiliates, or adding in the personnel and administrative expenses of such affiliates, or consolidating participations in independently operating banks. To avoid all that, we generally restrict attention to non-consolidated statements. We make a couple of exceptions for financial groups still organized along the commercial bank-investment bank-savings and loans lines, case in which non-consolidated statements have very little economic meaning.[32] Foreign banks operating in Brazil both as a branch and as a locally incorporated subsidiary are considered jointly (by the simple sum of the relevant accounts in their financial statements).

Estimation by NLS yields:

$$\log c = \underset{(0.042)}{0.198} \log L + \underset{(0.058)}{0.266} \log\left(D + \underset{(33081)}{65878}\right) + \underset{(0.045)}{0.278} \log\left(S + \underset{(3509)}{3794}\right) + \underset{(0.026)}{0.217} \log T$$

$$+ \underset{(0.280)}{0.263} I(mar) + \underset{(0.278)}{0.321} I(jun) + \underset{(0.279)}{0.321} I(set) + \underset{(0.276)}{0.291} I(dec)$$

$$- \underset{(0.040)}{0.060} n - \underset{(0.006)}{0.020} t + e$$

where the numbers in parentheses are the standard deviations computed from the associated Gauss-Newton regression (Davidson and MacKinnon 1993). The parameter estimates are sensible but are not of much interest in their own right. We are ultimately interested in the associated measures of inefficiency. It is only worth noting that the time trend has a negative sign, indicating gains in efficiency as time passes.

In order to display the results in an organized fashion, we classify the banks in the sample in seven groups. The first three groups include private retail banks with extensive branch networks, classified according to total loans into "large", "mid-sized", and "small". The fourth category, "public sector", includes Banco do Brasil and the state banks. The fifth and sixth groups include non-retail banks, which operate mostly out of a main office (and perhaps a few regional offices), and typically do not accept demand or savings deposits from the public at large. Those are considered "foreign" if they are an integral subsidiary of a foreign bank; otherwise, they are grouped as "domestic" (even if they have foreign participation). In the seventh category we gather

[32] These are Banco Real and Besc.

the high-end retail banks: full service banks targeting a selective clientele and having a much smaller branch network than a regular retail bank of the same size.

Figures 1 to 7 show the percentage inefficiencies – that is, $100\times(u - 1)$ – of the seven categories, with each bank individually labeled. Figures 8 and 9 contain the exact same series, now side by side for ease of comparison of group features, and plotted against the time trend (the solid lines).[33]

Note first that the two largest retail banks, Bradesco and Itaú, made a lot of progress in terms of efficiency gains. Between 94.IV and 98.II, Bradesco's inefficiency declined from –1% to –40%, and Itaú's from 17% to –31%. During the entire period, Bradesco was more efficient than Itaú.[34] Unibanco started off relatively well at –10%, made some headway during the first year (all time low –39% in 95.IV), but then worsened considerably upon absorbing Banco Nacional in early 1996 (all time high 12%).[35] It has now (98.II) recovered most of the lost ground and reached –9% again, but in the meantime it fell far behind the leaders. The less complete data for Banco Real show it apparently stationed at quite good indices (between –20% and –31%) from 95.IV until 97.IV. Bamerindus was curiously the most efficient of the pack in 94.IV (–13%), became the most inefficient by 95.IV (10%), and regained leadership after restructuring by HSBC (–47% in 97.IV). The mean of the group in 94.IV (excluding Real) was –2%, and went down to –40% in 98.II (extrapolating for Real and Bamerindus with their 97.IV levels).

Among the mid-sized retail banks, Noroeste has been a persistent underperformer, and made very little net progress (started at 19% and ended at 16%). That performance is also worse than that of any of the large banks. Safra was the best of its group in 94.IV (–33%), but showed a serious worsening (all time high 30%), and has not yet managed

[33] Tick marks on the *x*-axis may be a little confusing: 1995, for instance, stands for 95.IV, while 1995.5 refers to 96.II. That is however a limitation of the computer program used to generate the graphs (or of our knowledge of its graphical capabilities).
[34] Comparison of simple ratios of costs to income would have ranked Bradesco and Itaú the other way round, at least in 97.IV. "Queda do juro obriga bancos a buscar eficiência", *Gazeta Mercantil,* 8/12/98.
[35] That worsening was also captured by simple ratios of costs to total assets. "Productivity indices of Unibanco and Bandeirantes affected", *Gazeta Mercantil Online*, 7/28/97.

to recover entirely (–15% in 94.IV). The remainder of the group did pretty well over the whole period: between 94.IV and 97.IV, Sudameris improved from –15% to –38%, BCN improved from –24% to –30%, and Excel worsened from –31% to –20% (the latter, due to its troubled acquisition of Banco Econômico, through a much bumpier road). Overall, the group made much less progress than the large banks: while they (excluding Noroeste) were ahead in 94.IV, that is no longer the case.

Among the small retail banks, América do Sul, BMB and Mercantil Finasa form a very homogeneous group, both in terms of the overall level of efficiency and in terms of progress made: they ranged from –20% to –26% in 94.IV, and from –33% to –37% in 98.II. Their performance is therefore very similar to that of BCN in the mid-sized group. Bandeirantes started off much worse at 8%, and ended with little progress at –4%. Boavista started together with the leading group (–23%), but it is now more than half way closer to Bandeirantes (–14%). Like the mid-sized banks, this group also started ahead but made less progress than the large banks.

The public sector banks are a very interesting case. Compared to the former groups, they were typically a disgrace in 94.IV (with the exception of Banestes): Banco do Brasil was 32% inefficient, Banrisul 38%, and Banespa 57%. But they staged a remarkable comeback: by 97.IV, that same threesome was down to –25%, –29% and –1%, respectively, and improving. In the meantime, for instance, Banco do Brasil had even become considerably more efficient than Banco Itaú, which caught up again towards the end of the period. Banespa naturally performs worse among the public sector banks because its private loan portfolio (the measure of loans we used in its case) remained compressed by the huge borrowing requirements of the state of São Paulo.[36]

The non-retail bank categories, both domestic and foreign, are bimodal and dispersed, each with a very efficient and a very inefficient group of banks. The most inefficient are

[36] Banespa loaned to the public sector 2.6 times what it loaned to the private sector in 94.IV, 3.8 times in 95.IV, and 5.2 times in 96.IV. In 98.IV, that proportion was back where it stood for the other state banks in the sample, around 6%, after restructuring supported by the federal government. It reached 41% for Banco do Brasil in 94.IV, but has declined considerably since then: 12% in 95.IV, 5% in 96.IV, and 7% in 97.IV.

much worse than the worst retail banks already examined, including those in the public sector (note that figures 5-7 are not in the same scale as figures 1-4). On the other hand, the most efficient non-retail banks are the most efficient in the whole sample. Bimodality is especially clear and dispersion is especially high among the foreign banks. The temporal evolution among non-retail banks is varied. The best in the foreign group have relatively flat trajectories, while the underperformers show substantial improvement until 96.IV, and then turn back up. The data for the domestic group is more fragmented and true temporal regularities are more difficult to identify. The two long series available show already inefficient BCSP getting worse, and already efficient BBA getting better.

Finally, the high end retail banks also display a lot of dispersion. In 94.IV, some of these were among the most extreme cases of inefficiency in the entire sample: Citibank had 102% and Banco Cidade 149%. Banco Cidade had improved considerably by 95.IV, but made comparatively little progress since then and remains very inefficient. Citibank's improvement was more persistent, and by 97.IV it nearly matched the good performance of Banco Francês e Brasileiro (–27% versus –28%); the latter had started at a much better position (1% in 94.IV). BankBoston has become more inefficient since 96.IV, when it was in great shape at –36% – its latest reading is –16% (98.II).

5. CONCLUSIONS

The estimates above indicate that Brazil gained considerable terrain since 1994 in terms of bank efficiency. The most impressive progress has been made by the public sector banks, the largest retail banks, and some high-end retailers. Mid-sized and small retail banks and a number of domestic non-retail banks have also shown improvement, albeit less dramatic, with respect to their already superior initial performance. The "representative" bank captured by the time trend is about 20% more efficient now than it was in the end of 1994.

That overall tendency to improvement turned out to be very robust to a number of changes in the specification of the cost function or in the method of estimation, although such changes may alter somewhat the efficiency ranking of individual banks and their respective measures of progress. It confirms well publicized results obtained with simpler measures of efficiency, such as cost/assets or cost/income ratios, although those again tend to rank banks and their progress in a different way.[37]

Our findings do lend strong support to the 'quiet life hypothesis' of unexploited cost savings that come to the fore once market conditions turn adverse. But one must resist the temptation to attribute all the observed improvement to foreign entry. Another dramatic change in market conditions preceded the current wave of foreign entry, namely the sudden disinflation of mid-1994. Elimination of the inflationary float cut deep into bank profitability, and it would be a natural reaction of banks to seek cost savings even if the domestic market were to remain closed. In turn, the substantial foreign entry that started in 1996, but only gained momentum in 1997 and 1998, may be too recent to account for much of the efficiency gains already observed. Its effects could have radiated backwards had agents been able to see it coming. But the story told in section 2 makes that hypothesis quite unlikely.

In any case, there is abundant anecdotal evidence of cost cutting efforts induced by the new macroeconomic scenario but intensified by the added foreign competition. A recent news article, drawing on information obtained directly from banks, describes in the following terms the managerial mechanism of transmission: foreign entrants would impose the efficiency standards they have back home on the newly acquired Brazilian subsidiaries, and domestic banks would try to emulate these new competitors.[38] Even if that is too recent a phenomenon to account for our results, it certainly indicates that banks feel that they still have plenty of slack on which to work to improve efficiency. For many banks, the dispersion found in our sample – even within each separate class of banks we considered – certainly supports that view. But our method does not involve an absolute benchmark of efficiency, and so it makes no prediction of how far efficiency gains can go beyond the best practices found in the sample itself. Only a few more years of data will tell.

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[37] "Bancos buscam padrão internacional de eficiência", *Gazeta Mercantil*, 8/12/98.
[38] Ibid.

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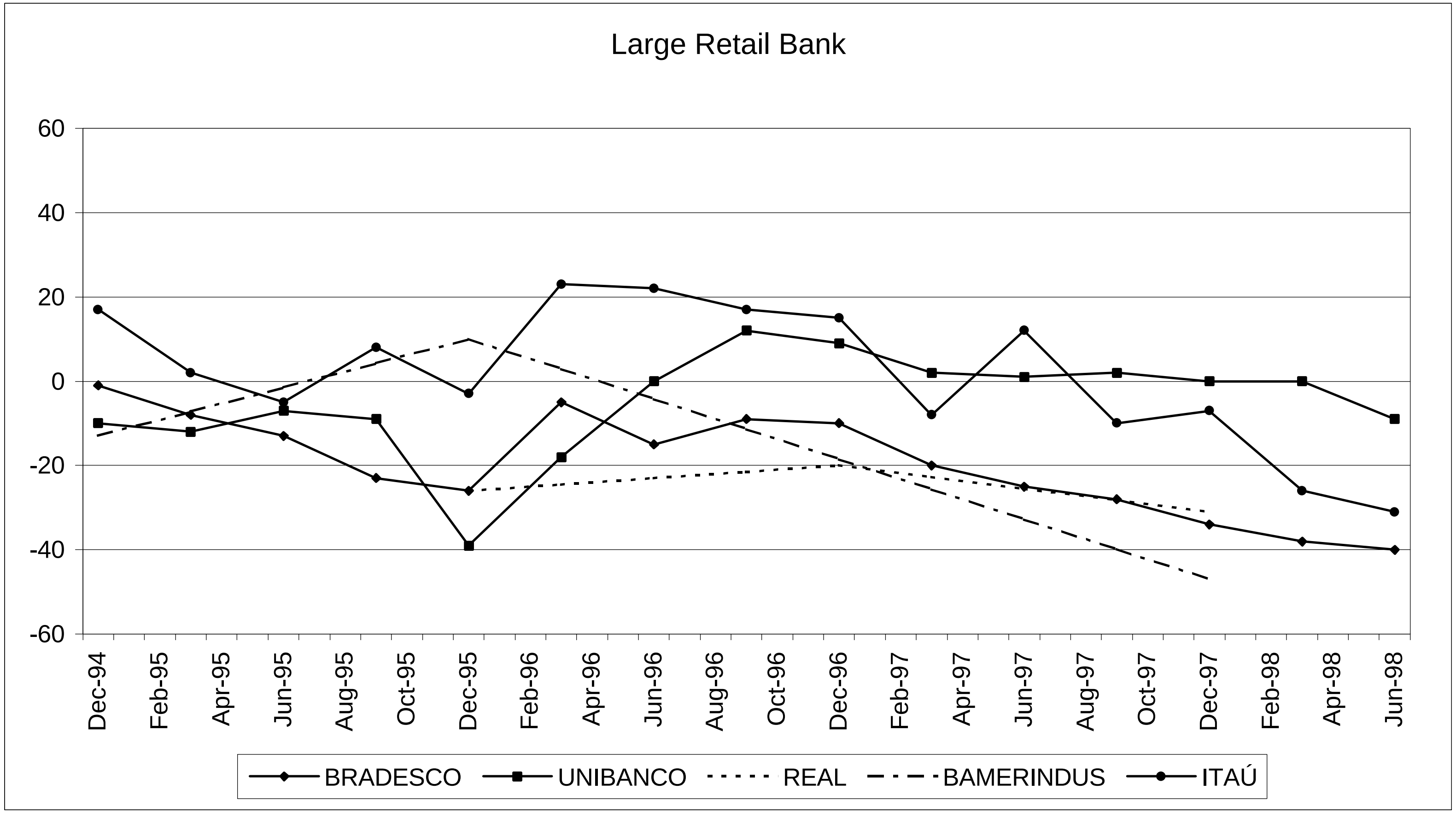
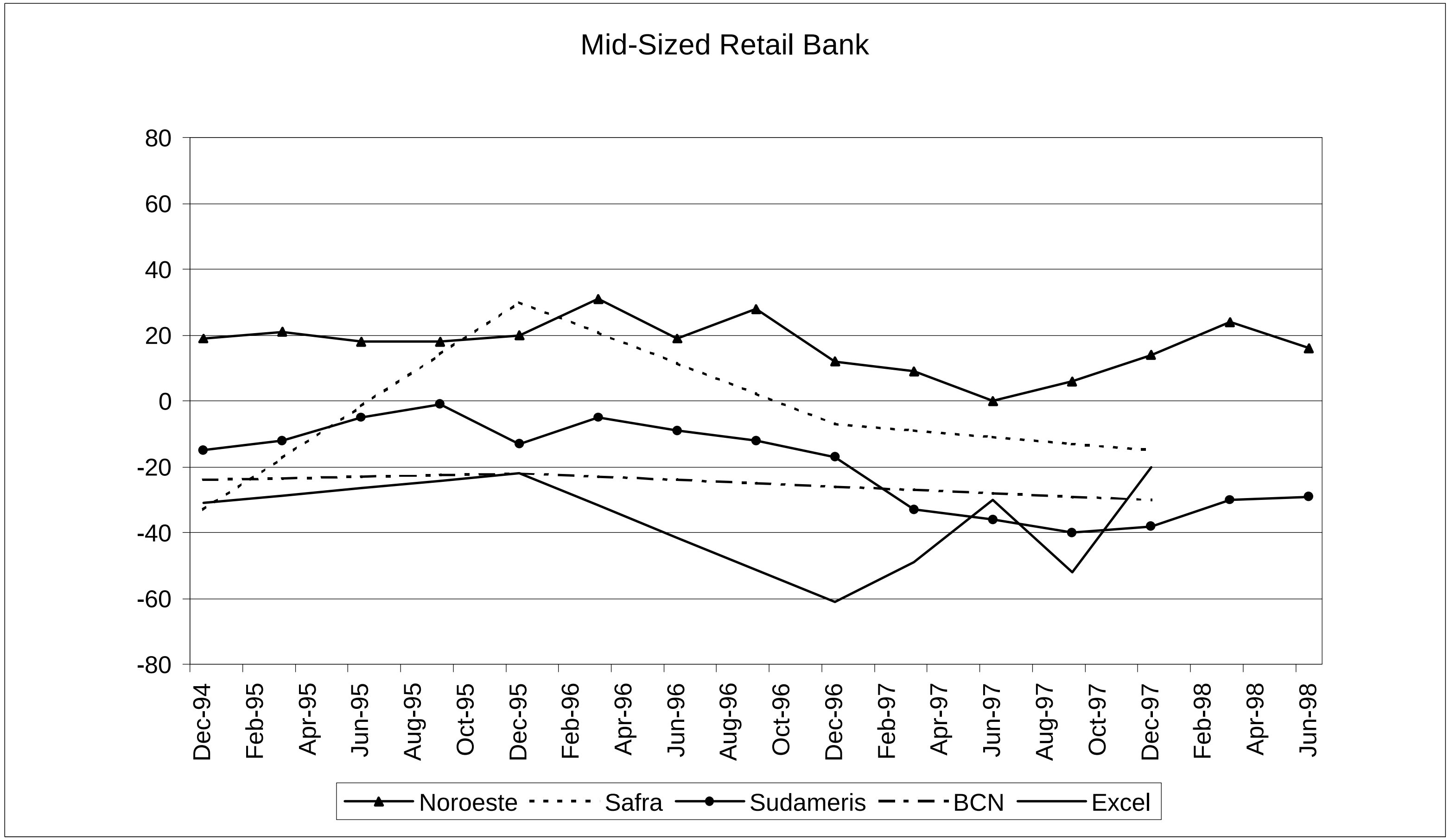
FIGURE 1



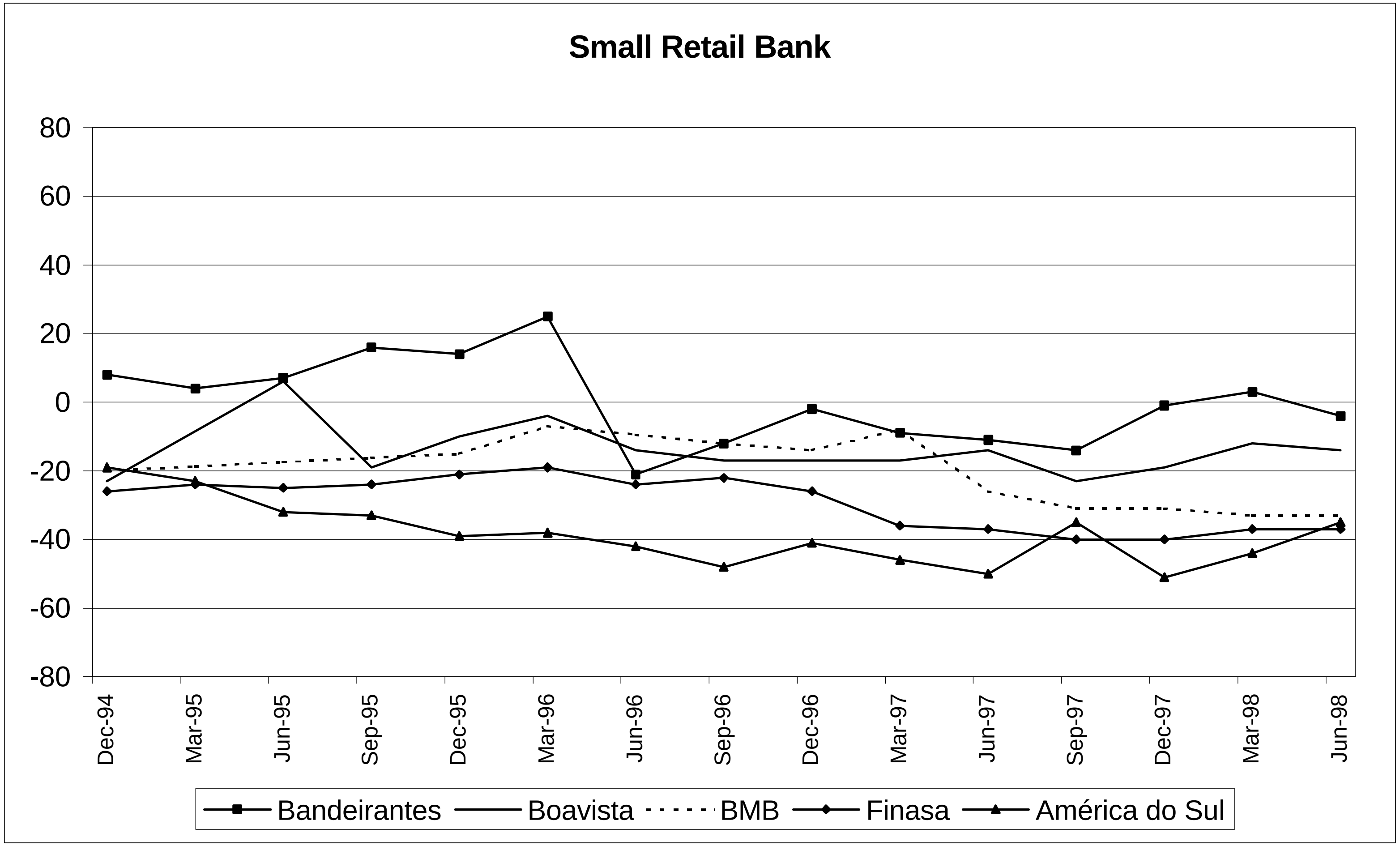
Large Retail Bank
60
40
20
0
-20
-40
-60
Dec-94
Feb-95
Apr-95
Jun-95
Aug-95
Oct-95
Dec-95
Feb-96
Apr-96
Jun-96
Aug-96
Oct-96
Dec-96
Feb-97
Apr-97
Jun-97
Aug-97
Oct-97
Dec-97
Feb-98
Apr-98
Jun-98
BRADESCO
UNIBANCO
REAL
BAMERINDUS
ITAÚ

FIGURE 2



Mid-Sized Retail Bank
80
60
40
20
0
-20
-40
-60
-80
Dec-94
Feb-95
Apr-95
Jun-95
Aug-95
Oct-95
Dec-95
Feb-96
Apr-96
Jun-96
Aug-96
Oct-96
Dec-96
Feb-97
Apr-97
Jun-97
Aug-97
Oct-97
Dec-97
Feb-98
Apr-98
Jun-98
Noroeste
Safra
Sudameris
BCN
Excel

FIGURE 3



Small Retail Bank
80
60
40
20
0
-20
-40
-60
-80
Dec-94
Mar-95
Jun-95
Sep-95
Dec-95
Mar-96
Jun-96
Sep-96
Dec-96
Mar-97
Jun-97
Sep-97
Dec-97
Mar-98
Jun-98
Bandeirantes
Boavista
BMB
Finasa
América do Sul

FIGURE 4

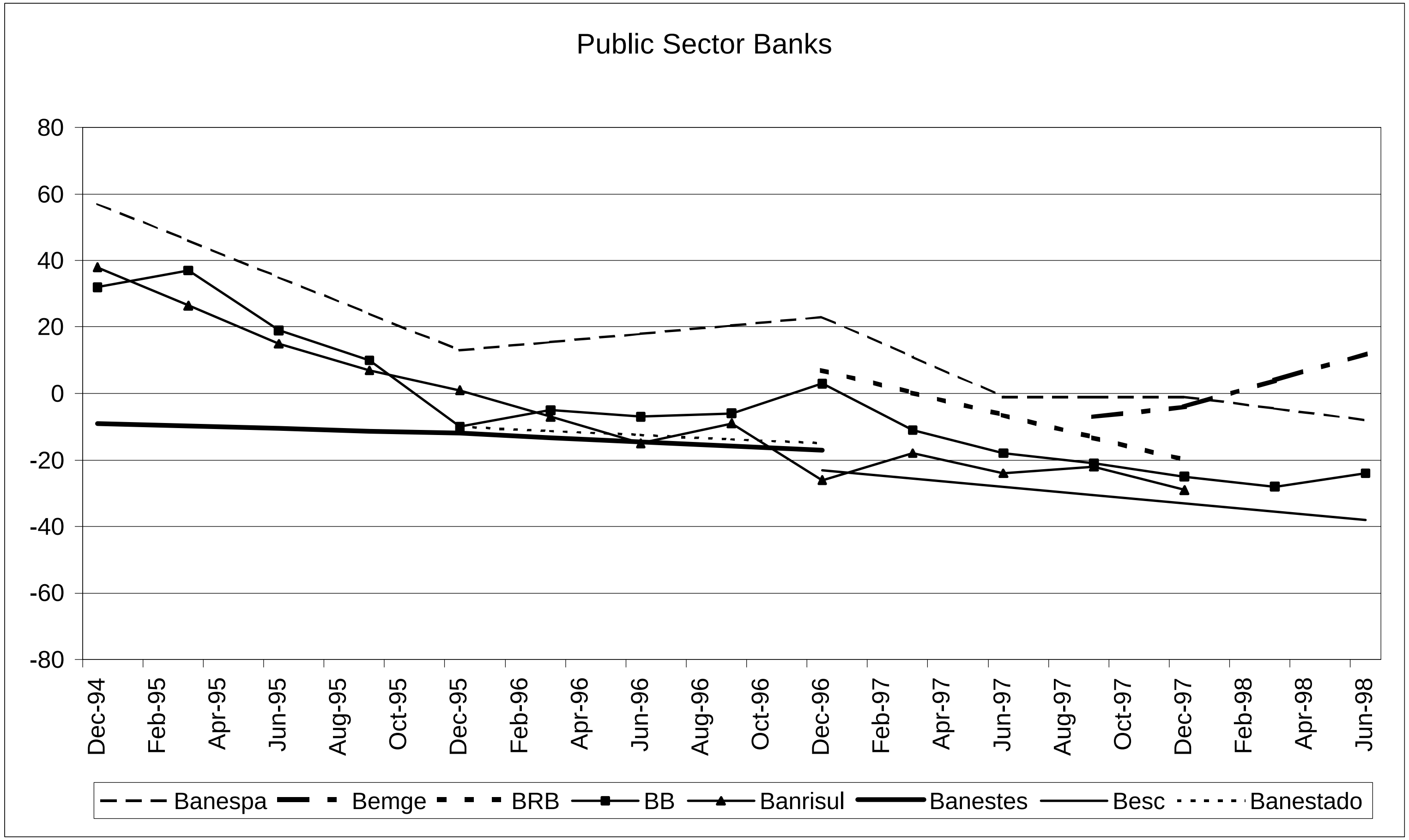
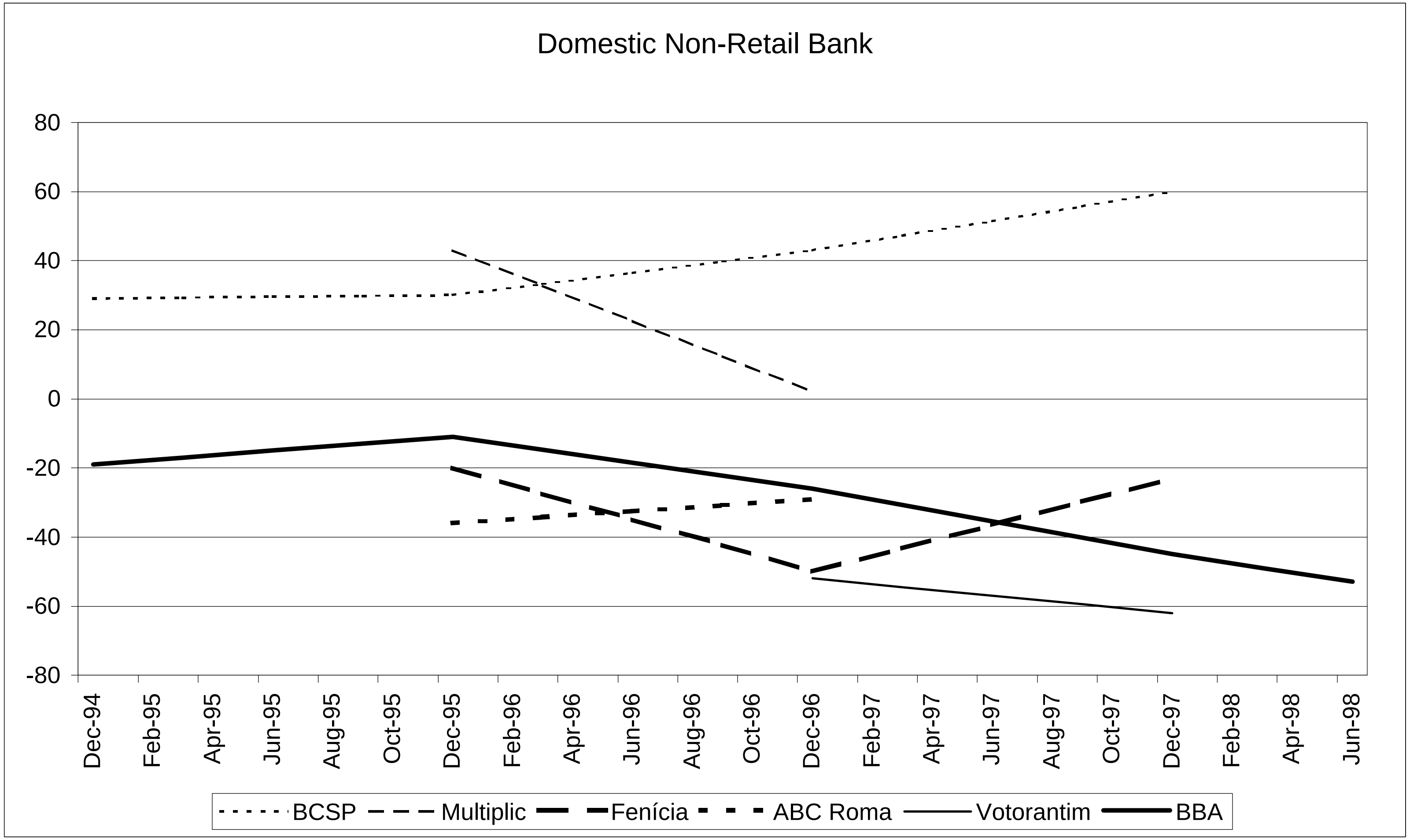

Public Sector Banks
80
60
40
20
0
-20
-40
-60
-80
Dec-94
Feb-95
Apr-95
Jun-95
Aug-95
Oct-95
Dec-95
Feb-96
Apr-96
Jun-96
Aug-96
Oct-96
Dec-96
Feb-97
Apr-97
Jun-97
Aug-97
Oct-97
Dec-97
Feb-98
Apr-98
Jun-98
Banespa
Bemge
BRB
BB
Banrisul
Banestes
Besc
Banestado

FIGURE 5



Domestic Non-Retail Bank
80
60
40
20
0
-20
-40
-60
-80
Dec-94
Feb-95
Apr-95
Jun-95
Aug-95
Oct-95
Dec-95
Feb-96
Apr-96
Jun-96
Aug-96
Oct-96
Dec-96
Feb-97
Apr-97
Jun-97
Aug-97
Oct-97
Dec-97
Feb-98
Apr-98
Jun-98
BCSP
Multiplic
Fenícia
ABC Roma
Votorantim
BBA

FIGURE 6

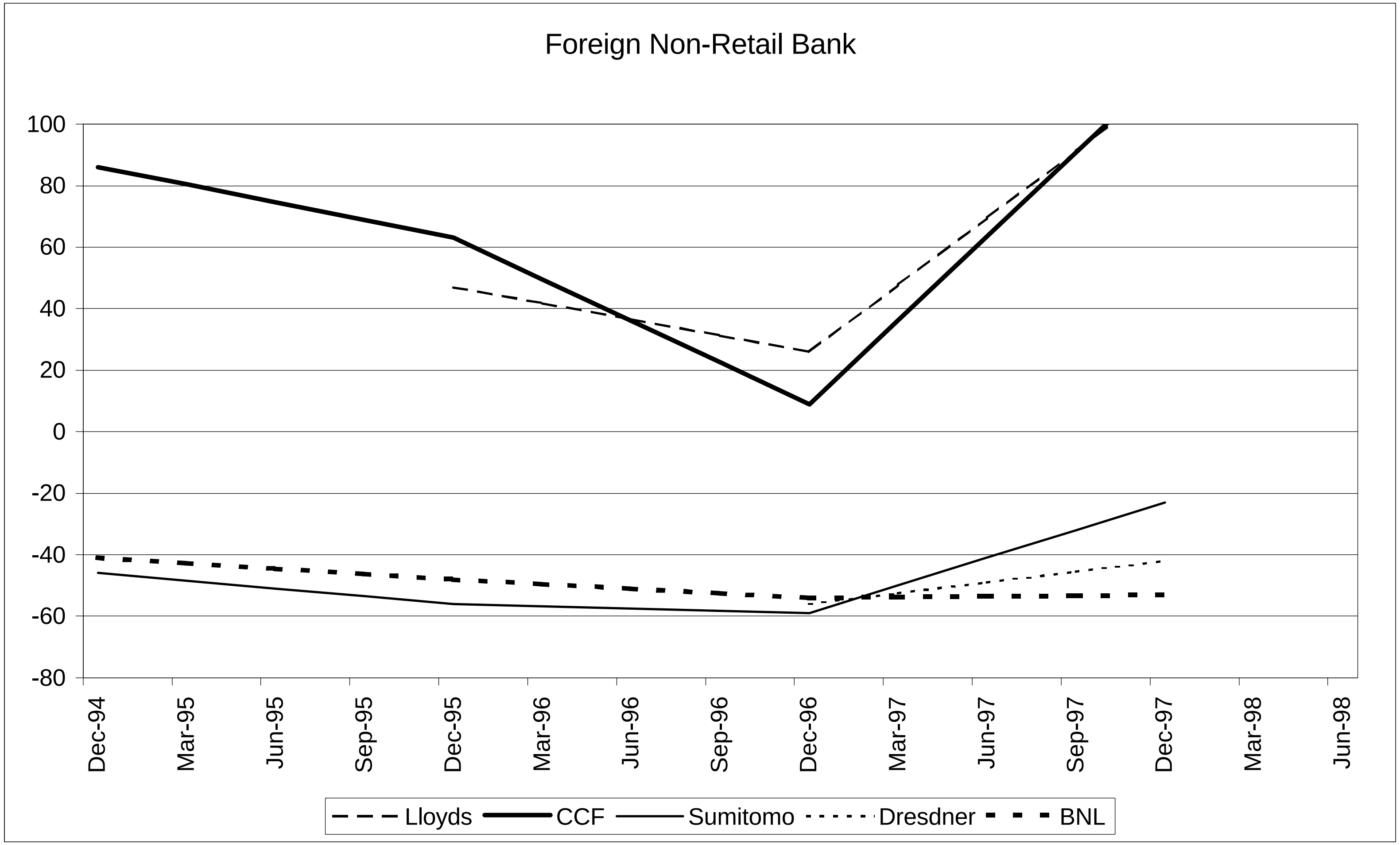
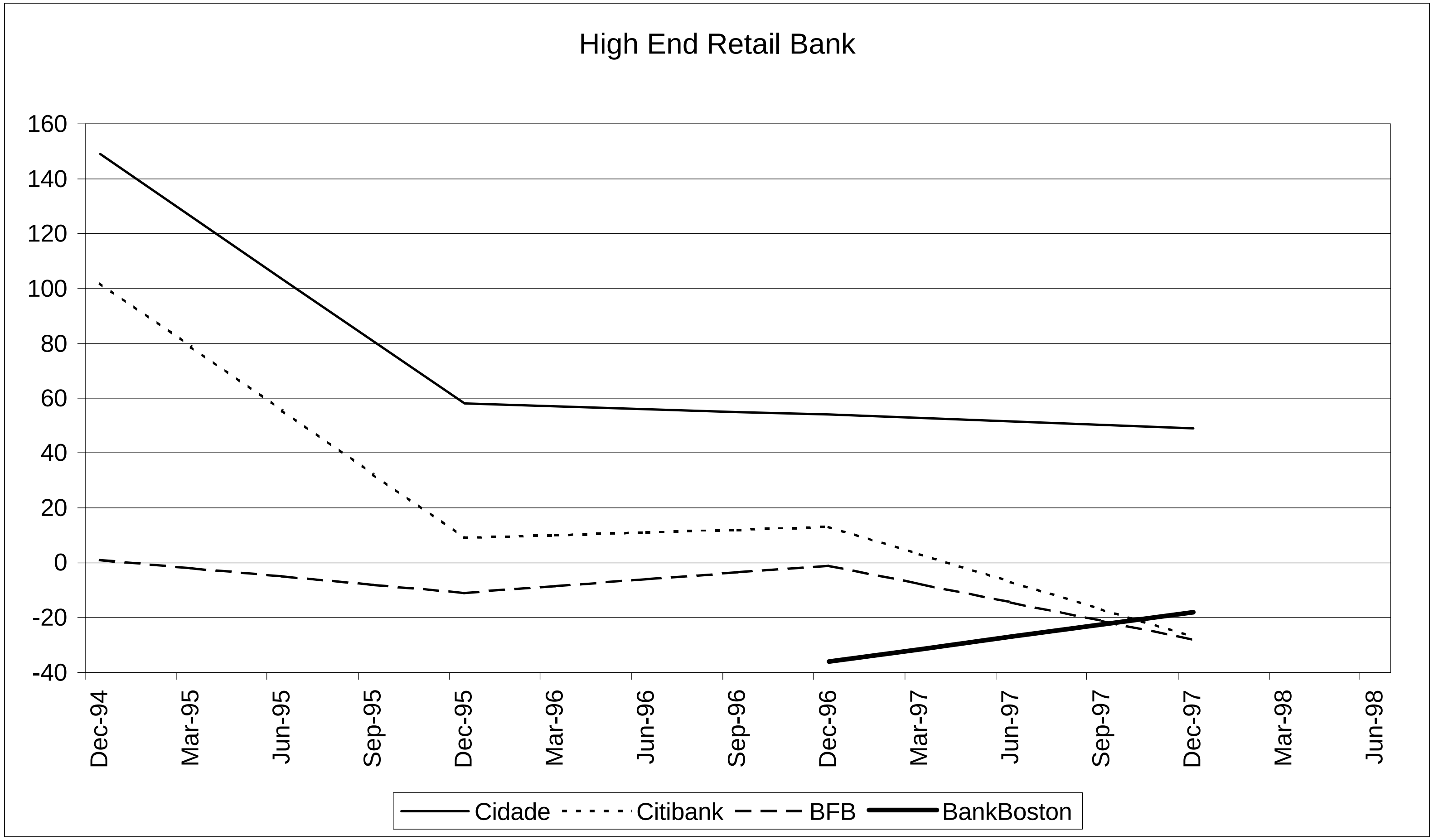

Foreign Non-Retail Bank
100
80
60
40
20
0
-20
-40
-60
-80
Dec-94
Mar-95
Jun-95
Sep-95
Dec-95
Mar-96
Jun-96
Sep-96
Dec-96
Mar-97
Jun-97
Sep-97
Dec-97
Mar-98
Jun-98
Lloyds
CCF
Sumitomo
Dresdner
BNL

FIGURE 7



High End Retail Bank
160
140
120
100
80
60
40
20
0
-20
-40
Dec-94
Mar-95
Jun-95
Sep-95
Dec-95
Mar-96
Jun-96
Sep-96
Dec-96
Mar-97
Jun-97
Sep-97
Dec-97
Mar-98
Jun-98
Cidade
Citibank
BFB
BankBoston