Report

DYNAMO 70

2.2011

7x (with interest)[1]

The theme of the prior Report was triggered by articles published in the press this year. Concerned with the rapid growth of credit in Brazil and the "exorbitant" debt service burden of Brazilians, the authors suggested that the country was heading to a subprime financial crisis, as the one in the United States. As a refresher, their argument is built as follows:

- In Brazil, the combination of a rapid expansion of domestic credit and of high interest rates produces the perverse effect of an excess of consumer debt service burden. Brazilians commit around 24% of their annual income to pay debts. In the U.S. financial crisis, American consumers "blew up" with a commitment of only 14% of income.
- With leading indicators of credit under stress, Brazil would theoretically be on the verge of a subprime crisis, similar to the one in the U.S.
- The system is heading for a crash as evidenced by the increase in non-performing loans, the best indicator of households' financial capacity saturation.
- The credit bubble threatens the soundness of our financial and banking system. Proof of this is the recent evidence that smaller banks are facing difficulties.

In the previous Report, we discussed the first argument above, regarding the debt service burden, noting that the financial crisis in the United States had specific genesis and evolution, derived from the unique mechanics of the U.S. mortgage market. Thus, isolated statistics, out of context, cannot mean very much. That said, we now describe the peculiarities of our local credit markets. The idea is to continue the analysis, addressing the other topics above. In the end, we take this opportunity to update our thesis on Itaú Unibanco, an important investment in our portfolio.

1 *A quick note to give some clue on this weird title, which is a pun based on a Brazilian saying. As we saw in our last Report, Brazil´s credit market developed local practices, specificities not commonly founded in other places, such as the possibility for consumers to pay their credit card transactions in monthly installments, or "times" as we say here, incurring no interest rates. In this sense, '7x (with interest)' refers to the current price-earnings ratio of Itaúsa, which profits are interest rate leveraged, and, at the same time, alludes to this particularity of Brazilian credit market.*

Credit and crises

Articles in the press echo a fairly widespread belief: given the experiences in other countries, the rapid expansion of credit in Brazil could lead to a crisis in the banking system. Again, this doesn't seem to be the case. First, due to the micro-economic fundamentals of the industry. The system carries a low level of leverage, the largest banks are well capitalized, with Basel ratios (17.1%) above the requirements of the Central Bank (11%) and international standards (8%), the system's liquidity is high, loans to deposits is not excessive (1.1), provisions are adequate and supervision by the Central Bank has been very effective. Moreover, the quality of funding in Brazil is also differentiated. The sourcing is mostly local, diverse, and for the most part from retail deposits, which brings great stability. The banks have virtually no competition in capturing domestic savings and therefore do not need to take risks of external funding origination. The risk of mismatch is still low, as mortgages do not prevail over other types of loans. The average maturity of the portfolio is short (1.3 years), which enables that adjustments be implemented quickly. However, even with all this evidence available, this has not been the focus of theses analyses. Not a single line of the press articles was devoted to the micro-sector specificities of our banking system. The preferred method is to compare macroeconomic variables and experiences of other countries.

Even in the field of macro correlations, there are problems with the arguments presented. If it is true that banking crises are often preceded by a rapid expansion of credit, not every credit boom ends in a banking crisis. Much to the contrary, most of them are absorbed without causing major disruptions. In fact, empirical studies show that the cycles of credit expansion when accompanied by the presence of other ingredients, such as economic growth, stable currency, greater trade liberalization, and better banking supervision, usually do not result in banking crises (Barajas and Dell'Ariccia, 2007). There is also evidence that the stage of the cycle helps. That is, credit booms in countries where financial development is not yet consolidated would be less likely to end up in a systemic crisis. On the other

TABLE 1

	2003	2010
Unemployment Rate	12,4%	6,7%
Informal Employment Rate	39,9%	30,8%
Basic Interet Rate (Selic - Central Bank)	16,50%	10,75%
Average Inflation (last 3 years)	9,8%	5,4%
Annual GDP Growth(last 3 years)	1,7%	3,9%
Credit/GDP	24,6%	46,4%

Source: Central Bank, Dynamo.

hand, the probability of financial instability increases when credit growth is associated with rapid increases in asset prices (Borio and Lowe, 2002), the deterioration of credit quality (Kraft and Jankov, 2005) and the easing of the criteria for granting loans (Dell'Aricccia, Igan and Laeven, 2007). High inflation and high capital inflows are usually also present in the "bad" cycles. If our credit cycle shows the presence of some of these potentially 'negative' elements, the general picture of the country allows us to dismiss with a fair amount of certainty the idea of a banking crisis on the horizon.

In our view, the structural transformation of the country set a benign environment where credit is expanded in a controlled manner, accommodating consumer demand that has long been suppressed. There is a clear macro-evolution of socioeconomic indicators in the country (Table 1).

Given that the level of penetration of credit in Brazil is still low, a higher share of financial services in GDP and an expansion of the credit market should be seen as a natural consequence of the structural improvements illustrated above.

In 2011, we saw deterioration in some of these indicators. Inflation rose again, staying above the government's target, and economic growth slowed. In response, the Central Bank raised the basic interest rate and credit is already growing at a lower pace. This reaction illustrates the responsiveness of our system, showing that the automatic feedback mechanisms are operating well. Banks in Brazil have control over the supply of credit and the Central Bank has effective tools to direct their behavior. The recent macro-prudential measures follow this trend[2]. In the U.S., it is worth remembering, the system lost the ability to control the supply of credit, making it hostage to an external variable: the price of real estate assets, set in a market environment artificially stimulated.

The recent increase in provisions for doubtful accounts also illustrates this willingness and ability of banks in Brazil to rapidly adjust their balance sheets to the warning signs of economic activity. The deterioration of the macro environment vis-à-vis the rapid expansion of credit in recent quarters has led to an increase in defaults in some segments – a natural occurrence, typically cyclical, consistent with historical data. Banks understand market signals and cautiously reduce current results, by increasing provisions, while at the same time updating models for the new environment. In fact, we have learned from our long experience monitoring the sector in Brazil, that banks often anticipate a possible future deterioration, increasing spreads ex ante. They compensate the higher risk with higher prices, effectively demonstrating pricing power.

Thus, credit expands in Brazil in the wake of several macro predicates: currency stability, economic growth, employment expansion, formalization of the economy, maturity of institutions, judiciary system stability, political democracy, development of capital markets, investment grade status, and preferred destination of foreign direct investment, among others. Perhaps more importantly, in parallel, Brazil retains the micro attributes that ensure sobriety in this environment of growth: a central bank with an effective ability to monitor and control a system with negative feedback mechanisms in place[3].

Credit and bubbles

The recent increase in property prices in Brazil has also been interpreted as a warning sign for the country. The housing bubble, the main villain of the American crisis, would supposedly already be making its way here. This argument also deserves to be contextualized. First, it is worth remembering that household debt is still very low

2 *Set of decisions taken by the CMN (Conselho Monterário Nacional) and the Central Bank in December 2010 in order to, amongst other objectives, enable the sustainable growth of credit markets. Examples of the decisions include: increase in capital requirements for credit to individuals and raising reserve requirements for demand and time deposits.*

3 *A recent example was the creation of the Central of Credit Transfers (C3, in Portuguese), an initiative from the Central Bank and sector representatives to improve the transparency and safety of credit portfolio transfers. The initiative is an answer, whose effectiveness is highly promising, to address the problem of duplication of credit portfolio sales, a practice used by the management team at the recently uncovered scandal at Banco Panamericano.*

in Brazil as it represents only 18% of total household outstanding debt, compared to 75% in the U.S.[4]. The loan to value here is also very low, i.e., by our rules, the owner usually contributes roughly 45% the of property value as a down-payment, while in the U.S. it could be as low as 0% (100% financed). Additionally, our system imposes annual amortization of debt principal, starting from the very first year. The equity stake, which is already high from the start, necessarily increases each year. In the U.S., it was common to find interest-only home loans. In some instances, there was even a grace period for interest. That is, we do not have in place here the mechanisms of income extraction from the property, widely disseminated by the American model. The credit, private consumption and, ultimately, domestic demand does not depend so directly on the behavior of housing prices[5].

In 2010, only 17% of mortgage lending in Brazil was granted to borrowers who have taken at the same time other types of loans. That is, the habit of taking on a personal loan to use it as downpayment to finance the property is not very widespread (at the most 3%, i.e. 18% x 17%). The appreciation of property prices in Brazil already carries a positive effect on the value of the funding guarantees, but to say that Brazil is "heading towards a subprime crisis" seems like an exaggerated leap[6].

Another angle of analysis that helps rule out a banking crisis in Brazil is a comparative examination on the quality of the results from banking institutions. Haldane (2009) suggests that the excessive returns of U.S. banks that preceded the crisis reflects the effects of a higher level of risk assumed by these financial institutions. In this sense, the "banking productivity ***miracle*** may have been, at least in part, a ***mirage***." A fair amount of the returns of U.S. banks can be explained by three well-defined strategies: i) increase in leverage, including through off-balance sheet transactions, ii) proprietary trading gains, by marking to market assets in the trading book; iii) gains with transactions involving derivatives[7]. In Brazil, banks are less leveraged, there are no off-balance sheet transactions along the lines of international banks, prop. trading does contribute but not significantly, and the use of derivatives is restricted primarily to hedging. The banks' results come from financial intermediation, financing/loans activities, and fee revenues. The increase in profits is explained primarily by the advance of bancarization, greater demand for fee-based products, and the higher share of wallet of the banks in these markets, combined with the vertical and horizontal concentration of the industry, allowing the internalization of scale gains[8]. That is, the results of banks in Brazil are based on fundamentals that are healthier, more resilient and recurring.

As seen above, it seems premature to say that Brazil is heading towards a credit bubble and that we are on the verge of a systemic risk. With this, we are not saying that the Brazilian consumer's debt service burden is low, or that it should not be closely monitored. The Central Bank itself suggests "caution" with the pace of expansion (Central Bank, April 2011). In a recent survey, financial institutions indicated that "the level of consumer debt service burden" is the most important factor in the decision to offer credit (Central Bank, June-2011). Interestingly, in the same survey, institutions rank the debt service burden as more relevant to them, the credit providers, than for the credit takers. As if the system recognizes that the borrower may be more 'distracted'. This is also consistent with the statistic that the debt service burden is higher in lower income classes, where the level of financial education is lower.

Since the supply of credit in Brazil is concentrated and we do not have a developed secondary market with securitization, the final performance of the credit is borne by the offeror. In other words, the credit grantor will reap the profits or bear the losses of the transaction. This means that the system has every incentive to carefully control supply. Differently, again, from the U.S. market, where many intermediaries receive payments up front for the origination of each step of the operation, dissolving the fundamental

4 *With respect to interest on mortgages, there are also differences. When the U.S. housing crisis erupted, floating rate mortgages (or ARM, adjustable-rate mortgage) represented approximately 40% of the total market (Federal Reserve Bank of NY, 2010) and roughly 80% of the subprime market (Dodd, 2007). When home prices started to depreciate in the second semester of 2006, the refinancing of these loans became troublesome. The ARMs had to face higher interest rates to be reset, which sharply increased defaults. The side effects soon spread to other markets. In Brazil, mortgages bear the TR (taxa referencial) rate as a basis, which has behaved, at least in recent years, almost as a fixed rate. However, we are well aware that this may not be the case in the future.*

5 *A note of academic curiosity: comparative experiences in other countries shows that where the mortgage credit market is still at an incipient stage, an increase in property prices may even have a counter-cyclical effect on aggregate consumption (Muellbauer, 2007). This is because part of the population still had no access to its first home and those who already own a property are also unable to take credit against it, as there isn´t a secondary market, with securitizations and collaterals, properly developed. That is, a country experiencing a boom in housing prices before having a mortgage credit market fully developed, everything else constant, can experience a counter-cyclical effect, via increased precautionary savings, since in theory it would require a greater savings effort to make a down-payment on the first property. In Brazil, statistics show high housing deficits and significant appreciation of real estate prices in several capitals, but we are unable to say that this may be the case here. In fact, empirical evidence to date goes in the opposite direction: aggregate consumption is rising while part of the population has access to its first house.*

6 *Moreover, in order to expand long term mortgage financing in a sustainable way, Brazil needs to solve its funding equation, since the outstanding balance of savings deposits is running out.*

7 For example, by offering tail risk insurance. While the remote probability risk doesn't materialize, the return from these operations appears to be "easy". However, as we have seen, when the worst does happen, losses are of great proportion.

8 The recent increase in operating expenses and the decrease in the efficiency ratio should be understood as a reflection of banks' efforts to prepare for future growth. This spending, which can be viewed as upfront investments, still has not generated the corresponding increase in revenues.

connection between compensation of the loan provider and performance (risk) of the final borrower.

Still on this theme, a brief note on concentration and stability of the banking system. Since the last financial crisis, there has been a growing technical literature that addresses the banking system in light of network connection theories[9]. In this approach, which brings insights from biology, particularly the epidemiology and infectious processes, the large institutions, financial hubs, become potential vectors for high contamination and, if infected, they endanger the entire system ('too big to interconnect'). In this sense, these authors are sympathetic to more decentralized structures, less concentrated banking models where shocks are only propagated locally and do not cause major disruptions in the network. As it turns out, in the same way that when large institutions are infected they cause great unrest, when immunized they can bring robustness to the network. That is, it is unclear whether a concentrated banking model, where the hubs have good financial health would not be appropriate. In Brazil, we have had this experience. In times of crisis, it is the smaller banks that tend to be on the brink. They have concentrated funding and loan portfolios. They are more leveraged to the cycles of economic activity and more susceptible to the hits and misses of their own operational strategies. Not coincidentally, in periods of stress, the flight to quality of deposits in Brazil migrates towards the large banks. Due to the features described above, they bring security to the system, functioning as vaccines, immune defenses, often stimulated by the regulatory authority themselves.

This practical experience in Brazil is strongly supported by theoretical arguments and empirical studies. In theory, a higher concentration of the banking system increases the pricing power of banks, often leveraging the profitability of the system. Higher profits can serve as a buffer in times of crisis. Moreover, as we have seen, a higher industry concentration facilitates the supervisory work by the regulatory authority, increasing the potential effectiveness of controlling contagion in times of stress. In fact, using comparative data from 69 countries, Beck (et al. 2005) showed evidence that where banks are more concentrated the chances of systemic crises are smaller. In this context, the movement to endorse bank mergers in the United States during the crisis can be interpreted as a lesson learned.

Lastly, it is worth noting that our banking market has an active presence of state-owned banks. Banco do Brasil, Caixa Econômica Federal and BNDES are important participants in the market, in which they also play a governmental/institutional role. With deep pockets, they develop incipient market segments, test new distribution channels/products, and work in a counter-cyclical way or even as "cleaners" of the ecosystem, eventually absorbing fragile participants. Hence they end up bringing more robustness to the system, aside from generating positive externalities for the other privately-owned players.

The 'Credit' from Itaú Unibanco

We have seen that the national financial system rests on solid foundations that allow us to rule out the possibility of a major crisis, particularly of a subprime nature. However this does not mean that we cannot have isolated bad news. The banking business is not a simple one: it deals on a daily basis with a variety of risks and uncertainties, it is people, capital and technology intensive, leveraged to economic cycles, requires technical diligence and usually does not tolerate management carelessness. Recently, it became public that a fraud was perpetrated by the managers of Panamericano bank, a fact that surprised not only market participants, but also the regulator and even the controlling shareholder. Good industry fundamentals do not guarantee a good investment. Investing is a complex task, a continuous search for safer paths. In our experience, the bottom-up approach is one of these precious shortcuts.

In Dynamo Reports 59 and 60, written at the time of the last major financial crisis, we described in detail the differences of the fundamentals of the banks here and abroad, justifying our optimism with the prospects of Itaú Unibanco. We pointed out that Itaú Unibanco grew by retaining the desirable attributes of a defined control structure: a bank of owners, which preserves the reputational capital, with a long term orientation towards shareholders' interests, and not short term maximization of managers' compensation, as was the case with other franchises abroad.

Since then, the operating results have been quite reasonable. The levels of returns remain at high levels, 23% (ROE), as do market shares in key segments: 16% of total loans (27% excluding the state-owned banks), 40% of credit card issuance, 39% of credit card and debit card acquiring[10], 34% of auto financing, 20% of the net interest margin of the entire system, and 19% of the proceeds from banking fees and services. It is true that spending increased for the integration of the operations of Unibanco, but synergies are yet to be reflected in full. In presenting the results for the year of 2010, the CEO and co-owner of the bank, Roberto Setúbal, announced aggressive targets of operational efficiency to be achieved by the end of 2013. In the past, the bank has shown an ability to overcome integration challenges and deliver on schedule synergy gains from prior acquisitions. In fact,

9 *Haldane 2009, Battiston et al. 2009, Hale 2011, among others.*

10 *Considering 100% of Redecard in 2010, a company in which Itaú Unibanco has control with a 50% stake.*

mergers are in Itaú's DNA, since its origins as the Banco Federal de Crédito in the 1950's. In the last fifteen years the list of mergers and acquisitions has been increasing: Banerj, Bemge, Banestado, Beg, BBA, and more recently, BankBoston. In addition, Unibanco was also established as a result of a number of mergers. Given the track record of integration and high level of commitment from the company, we find it unquestionable that this is a management team that deserves the benefit of the doubt.

Throughout this year, Itaú's preferred shares have depreciated 30% and Itaúsa, our main vehicle, is down 31%. The market seems to have given no "credit" to management's guidance or it doesn't take comfort with a target so far out in the future. In the realm of daily NAVs, 2013 seems too remote for money managers and investors in general. When disclosing Q2'11 results, Itaú announced it had increased provisions for loan losses on their portfolio above analyst projections, mainly for small and medium enterprises (SMEs), acknowledging that there was a mismatch for the segment between the expansion of the loan book last year and the reality of the performance this year. Besides that, most likely the provisions for the individual portfolio will increase over the next two quarters. Investors have responded negatively to this growth in provisions and it is not unusual to find claims that these would be the first sign of a credit crisis. As shareholders, we are obviously not satisfied with the increase in non-performing loans, but we recognize that this behavior is not alarming, especially if we look at it from a historical perspective. Changes in provisions and adjustments in credit pricing models are part of the cyclical nature of the banking business.

At the same time, the bank is clearly focused on establishing a more effective strategic position in the SME business. Proof of this is the recent hiring of about two thousand new officers for the segment. This effort resembles the recent past in the auto business, in which the bank was aggressive in establishing a leadership position through massive investment in expanding the distribution channels through car dealers. As competition intensified and spreads declined, Itaú Unibanco continued to show improving results, benefiting from the economies of scale achieved by establishing a first mover advantage.

Given the good long-term prospects of the SME segment, well positioned to benefit from the country's growth and the formalization of the economy, the bank's investments seem to make sense. Still, short term missteps and recalibrations are expected to occur, as they are typical of complex movements such as this. We find it unlikely that a loss of major proportions will occur in Itaú Unibanco. The bank has shown discipline and pragmatism in the past, quickly reversing the course of action when the expected results didn't come. This was true of Taií, which offered loans to individuals using a street retail model. The bank realized that the experience would not be profitable and discontinued the operation, addressing part of the target market through its own branches or through other channels, such as payroll lending and partnerships with large retail chains. We do not believe that this is the case with the SME segment, which already is a profitable reality for the bank and no longer a mere experiment. Anyway, it is worth recalling this episode as it illustrates a distinctive characteristic of the culture at Itaú Unibanco, which is key in a business that at the same time requires entrepreneurial initiative and the ability to take on risk, as well as strategic vision and capital discipline.

With the threat of another major crisis in the air, exacerbated by the U.S. downgrade and Europe's fiscal situation, financials are once again an unfavorable asset class worldwide. This combination of emphasizing current negative news, ignoring important trends that will materialize in the long term, treating investments in companies with local dynamics as global sector themes, mixed with a good deal of misunderstandings and hasty analysis, as we have pointed out throughout this Report, have pushed the bank's stock price downwards. According to our numbers, Itaúsa trades around P/E = 7.0x in 2011 and 6.5x in 2012. Just as a theoretical exercise, if we consider at face value the efficiency index goals proposed by the company and correcting today's market value by the cost of money (CDI) we would have a P/E = 5.3x in 2014.

Some contend that there are no arguments against flows. Others counter that the argument of the flow is the flow without arguments. From our end, a company with the qualities of Itaú Unibanco negotiating at this valuation level, 7x…, seems like a rare investment opportunity.

Rio de Janeiro, 26th August, 2010.

DYNAMO COUGAR x IBX x IBOVESPA Performance up to July/2011 (in R$)

Period	Dynamo Cougar	IBX médio	Ibovespa médio
60 months	161,6%	74,9%	69,8%
36 months	54,2%	-4,6%	-4,2%
24 months	73,9%	23,9%	20,7%
12 months	22,8%	6,6%	0,2%
Year to date	-2,0%	-9,9%	-15,4%

NAV/Share on July 30th = R$ 295,701875517

DYNAMO COUGAR x FGV-100 x IBOVESPA
(Performance – Percentage Change in US$ dollars)

Period	DYNAMO COUGAR* Year	DYNAMO COUGAR* Since 01/09/93	FGV-100** Year	FGV-100** Since 01/09/93	IBOVESPA*** Year	IBOVESPA*** Since 01/09/93
1993	38,8%	38,8%	9,1%	9,1%	11,1%	11,1%
1994	245,6%	379,5%	165,3%	189,3%	58,6%	76,2%
1995	-3,6%	362,2%	-35,1%	87,9%	-13,5%	52,5%
1996	53,6%	609,8%	6,6%	100,3%	53,2%	133,6%
1997	-6,2%	565,5%	-4,1%	92,0%	34,4%	213,8%
1998	-19,1%	438,1%	-31,5%	31,5%	-38,4%	93,3%
1999	104,6%	1.001,2%	116,5%	184,7%	69,5%	227,6%
2000	3,0%	1.034,5%	-2,6%	177,2%	-18,1%	168,3%
2001	-6,4%	962,4%	-8,8%	152,7%	-24,0%	104,0%
2002	-7,9%	878,9%	-24,2%	91,7%	-46,0%	10,1%
2003	93,9%	1.798,5%	145,2%	369,9%	141,0%	165,4%
2004	64,4%	3.020,2%	45,0%	581,2%	28,2%	240,2%
2005	41,2%	4.305,5%	30,8%	790,7%	44,1%	390,2%
2006	49,8%	6.498,3%	43,2%	1.175,8%	46,4%	617,7%
2007	59,7%	10.436,6%	68,4%	2.048,7%	73,4%	1.144,6%
2008	-47,1%	5.470,1%	-50,1%	973,3%	-55,5%	453,7%
2009	143,7%	13.472,6%	151,9%	2.603,3%	144,0%	1.250,7%
2010	28,1%	17.282,0%	15,2%	3.013,2%	6,2%	1.334,5%

2011	DYNAMO COUGAR* Month	DYNAMO COUGAR* Since 01/09/93	FGV-100** Month	FGV-100** Since 01/09/93	IBOVESPA*** Month	IBOVESPA*** Since 01/09/93
JAN	-4,8%	16.456,3%	-2,2%	2.946,5%	-4,0%	1.276,5%
FEB	2,9%	16.940,3%	0,3%	2.955,9%	1,3%	1.293,7%
MAR	7,7%	18.255,9%	4,1%	3.081,0%	4,0%	1.349,7%
APR	3,4%	18.871,4%	2,6%	3.163,0%	-0,2%	1.347,4%
MAY	0,4%	18.941,9%	-0,8%	3.135,9%	-3,1%	1.302,0%
JUN	-0,5%	18.842,8%	-2,3%	3.060,0%	-1,9%	1.275,3%
JUL	-3,7%	18.136,5%	-5,0%	2.901,8%	-5,6%	1.198,7%
Year to date	4,9%	18.136,5%	-3,6%	2.901,8%	-9,5%	1.198,7%

Average Net Asset Value for Dynamo Cougar (Last 12 months): R$ 1.450.798.763,00

(*) The Dynamo Cougar Fund figures are audited by Price Waterhouse and Coopers and returns net of all costs and fees, except for Adjustment of Performance Fee, if due.
(**) Index that includes 100 companies, but excludes banks and state-owned companies. (***) Ibovespa average.

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DYNAMO

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