

In this QUARTERLY ATMOS LETTER we will discuss the perspectives of the Brazilian banking sector, given the importance of Itaú-Unibanco in our investment portfolio. First and foremost, we will approach the themes that have been impacting share-prices of companies that belong to the aforementioned sector in the last few months, such as the “Brazilian subprime” and the effect of so-called macroprudential measures. In the last sections we would like to offer an alternative method to evaluating banks and provide a discussion on the topic of Brazilian interest-rate spreads.

### “Dwell in the past and you lose one eye”: Brazil is not facing a subprime credit crisis

The 2008 crisis remains fresh in everyone's memory, and the comparison between the current Brazilian credit market and the American subprime “fiasco” has become a fashionable analogy. The most commonly utilized arguments refer to the strong growth in credit supply, and the high commitment of consumer income to servicing debt (presently at approximately 25%, according to Brazilian Central Bank data).

In our view, the portion of consumer income committed to servicing debt is an important indicator, albeit one that should not be analyzed individually. The median income commitment of the American consumer wasn't high in absolute terms before the crisis (it actually fluctuated around 18% of disposable income)<sup>1</sup>, and hadn't grown significantly before the 2008 credit crisis.

Mean and median values are not always good structural indicators. Before the crisis, the United States had: A high level of gross debt with excessively long maturities, leveraged in derivative structures, backed by little capital - all of which were added to an excessive lack of alignment of corporate executives and credit rating agencies. These characteristics fattened the tail of the distribution of bad outcomes, enabling a small spark to cause the unrolling of a credit crisis of “biblical proportions”. We don't encounter any of these traits in the Brazilian credit market and particularly, Brazilian banks such as Itaú-Unibanco have concentrated ownership, which we consider a fundamental characteristic for a sound investment as minority shareholders in banks. Last, but of utmost importance in our opinion, it should be noted that bank directors in Brazil are held accountable for insolvencies with their own personal assets, not to mention the risk of going to jail.

*Any executive can claim to be aligned to the shareholders of the company he runs, but there are significant differences in the level of commitment. The situation is analogous to the old story behind the “American breakfast”: The pig and the hen are aligned, but in different levels. While the hen is involved in solely providing the eggs, the pig commits its own life as it provides the bacon.*

This doesn't mean that we have nothing to learn from the American crisis. After all, “dwell in the past you lose one eye, forget the past and you lose both”<sup>2</sup>. It was exactly due to a past filled with economic crises that the Brazilian financial system organized itself in a diametrically different way to the financial “modus operandi” of developed markets.

### Macroprudential measures

The Central Bank seems to have diagnosed, at least in its official press-releases, that the two main causes behind higher inflation are a commodity supply shock and an accelerating credit market. We do not wish to diminish the relevance of such arguments, but it is quite notorious that service sector inflation is positioned around 8.5% p.a. (per annum), even though it is less susceptible to the two main inflation drivers listed above. In fact, our conversations with corporate executives have led us to hold a different view. Structural problems such as logistics (or lack thereof) and scarcity of labour are recurring complaints, and there have been instances where companies

1 - <http://www.federalreserve.gov/releases/housedebt/>

2 - Ancient Russian proverb.

have had to raise prices more than once in the last six months to pass on such rising costs.

Following this line of thought, we believe that inflation will only be lowered if there is a significant effort to lower growth during the next few quarters. The government does not seem willing enough to accept this sacrifice, declaring publicly that Brazil will grow at least 4% this year. Similarly, the Central Bank seems reluctant to increase real interest rates.

It must be noted that, twelve months ago, considering the values of the yield curve and one-year inflation expectations, we had a real interest rate of approximately 6%, while nowadays this value has increased to approximately 6.6%. A meager increase of only 60bps in the real interest rate even though base nominal interest rates (as measured by the Selic rate) have increased more than 300bps. This elevation is even lower when we consider the distortionary effects of a tax being charged over a nominal and not a real base. Utilizing a tax-rate of 15% (the lowest rate for individuals) the real interest rate increased from 4.4% to 4.9% (+50bps). If we were to utilize a tax-rate of 34% for companies, real interest rates climbed from 2.4% to 2.6% (+20bps). In a nutshell, the increase in real interest rates up to now have not been sufficient to promote significant economic deceleration.

To further complicate matters, in Brazil there is a problem of simultaneously existing interest rates, some of which are not influenced by movements in the Selic rate. Some examples are loans granted by BNDES – the state-owned National Bank of Economic and Social Development (which comprise 65% of the credit granted to companies) and subsidized loans to the real-estate sector with resources from savings accounts (17% of the total credit granted to both companies and individuals). In the case of BNDES, considering the expected inflation for the next 12 months, a tax-rate of 34% and utilizing a spread of 3% over the BNDES base-rate (TJLP – Long-term interest rate), real interest rates actually fell from 1.20% to 0.5%. From the saver's point of view, savings accounts (which comprise 32% of total fixed income investments) are yielding less than 2% in real terms, a reduction in relation to the past year.

The shy increase in real interest rates is a strong stimulus toward indexation, as we have been observing in the beginning of 2011. Moreover, subsidized rates increase the amplitude of movements that must be made in the Selic rate in order to stimulate or decelerate the economy, which in turn influences the value of the Brazilian currency. It would certainly be more coherent for the Central Bank to try to correct these distortions, but the monetary authority seems to favour short-term policies that end up increasing the cost of credit for the majority of firms and the population as a whole, who are not able to borrow money at subsidized rates.

This does not mean that the Central Bank will not succeed in its attempt to cool down the economy with macroprudential policies. After all, aggregate demand variations are not dependant upon how much the credit markets grows, but upon the variation in the credit impulse.

### Credit Impulse

In simplified fashion, we can say that the increase in the supply of credit deposits an additional financial amount in the hands of the consumer equal to the variation in the stock of credit minus financial expenses. The change in this indicator from one year to the next is what matters for measuring the variation in the aggregate demand for goods and services. As an exercise, suppose that the stock of credit grows 20% p.a. with an interest rate of 20% p.a. In this case the credit impulse is zero every year. The growth in credit markets is only sufficient for the consumer to pay off interest expenses.

Calculating a country's credit impulse is not a trivial task, but our approximations show that the variation was not very positive in the last 5 years. In fact, from 2005 to 2010, the growth of 24% p.a. in consumer credit was not enough to compensate the high interest rates for consumers that during this period were higher than the aforementioned growth figure (albeit quite lower than the numbers reported by the Central Bank, as we shall explore in the last section of this letter). We believe that the strong increase in the retail sector's nominal revenue of 12.1% p.a. during the last five years was derived particularly from the growth of 11.5% p.a. in total payroll<sup>3</sup>.

Obviously there are determinate sectors that have benefited tremendously from the expansion of credit and therefore have grown much more than the increase in total payroll. However, we cannot extend this phenomenon to the economy as a whole. The stock of credit card debt, that is mostly amortized over monthly periods bearing no

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3 - Sources: IBGE and Brazilian Central Bank.

interest, and is frequently cited as being responsible for the explosion in consumption over the last few years, represents only 2% of yearly total payroll. As a side note, the durable goods category, which was one of the sectors that benefited the most from the increase in the aforementioned credit card debt, is one of the few presenting deflation nowadays.

The Central Bank's focus in taking the growth of credit toward a 15% target, through the use of macroprudential measures (even if new measures are necessary) may end up having, at some point in time, a strong impact on consumption. For 2011, with a nominal growth of consumer loans of 15%, and considering the increase in interest rates observed thus far, we calculate a variation in the credit impulse of -3% vs. a positive effect of almost 1% in 2010.

The most significant problem is that the impacts and lags of macroprudential policies are unknown, thereby increasing the risk that the Central Bank may miscalculate the sizing of its measures appropriately. Alongside this issue, with a higher inflationary inertia, it is probable that the duration of the monetary contraction will last longer, as mentioned by the Central Bank in its last release. Moreover, in the next cycle, there will be less space for a decrease in real interest rates, given that (i) monetary policy won't have the same potency with the lower growth of the supply of credit, and (ii) eventually measures such as the IOF over credit can be reverted.

Amidst this scenario of cost pressures, uncertain demand and high multiples, we do not feel comfortable in being exposed to consumption-related companies. But in the case of the big private banks, it seems to us very unlikely that we'll see credit growth below 15%. In addition, the current provisions of Itaú-Unibanco are already high enough to deal with the probable increase in credit defaults and the interest rate spread should go up this year. However, the evaluation of a bank requires a more careful and detailed analysis.

### Alternative evaluation of a bank

A bank's credit spread is, at least in part, a reflection of the risk premium of the assets it holds in relation to liabilities. To illustrate, let us suppose that an investor purchases R\$100 in a bond traded in the market with a nominal yield of 14% p.a., utilizing a leverage multiple of 5x equity, with a 12% p.a. cost. The bank's revenue will be  $R\$100 \times 14\% = R\$14$ ; its cost will be  $R\$80 \times 12\% = R\$9.60^4$ . In this manner, our investor obtained a profit of R\$4,40 over an invested equity of R\$20.

How much is this strategy worth? Certainly not more than equity value (R\$20), given that it is possible to replicate it in the market. Therefore, the fair relation of Price:Earnings (P/E) is of  $R\$20/R\$4,40 = 4.5x$ .

We can decompose this R\$4,40 profit into two parts: (i) The equity of R\$20 x the base interest of 12% = R\$2,40 and (ii) a risk spread of  $R\$100 \times 2\% = R\$2,00$ . This second part does not add any present-value to the strategy and reflects only a risk-premium, or the value required in order to compensate for a higher exposure to the risk of restructuring debt. For example, if there were to be a "haircut"<sup>5</sup> of 20%, the investor would lose all his equity. On top of all that, there's always the risk that the market might remove the investor's financing at an unfavourable moment.

This simple example illustrates that it is necessary to be very cautious to conclude that low P/E multiples indicate good investment opportunities, more so when the profit is a consequence, in large measure, of a risk premium.

The model above reflects in simplified fashion the structure of a medium-sized bank. It is true that these institutions are able to invest in loans that are not available in the market. However, (i) the borrowing costs are higher than the "risk-free" rate (CDI – Interbank deposit rate) and dependant upon swings in the market's mood, (ii) they have high expenses with no significant counter-weight in service revenues, and (iii) they need to pay taxes. With these characteristics and a low franchise value, we do not see reasons for such institutions to trade anywhere above 1x book-value. Maybe the main advantage faced by medium-sized banks is the fact they can take risks, knowing implicitly that in the end of the day the government will bail them out (including shareholders), in the eventual occurrence of a crisis. Waiting for divine benevolence in judgement day does not seem to us like a

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**4** - Since the investor took leverage in the order of 5x equity, that means he must have put R\$20 in equity, and taken a loan of R\$80, with an annul cost of 12%.

**5** - When the bond matured, the investor would receive only R\$80 instead of R\$100. This would be enough to allow him only to settle his debt.

prudent investment strategy.

In the case of large retail banks, however, the situation is different and a lot more interesting. Given the high value of such banks' franchises, they are able to generate a lot of service revenue, borrow at rates below the regular market levels and access more profitable loans. Even so, a share of such bank's results is still in part attributable to a risk premium that, in our opinion, should be excluded from the analysis of the investment.

At this moment, we would like to propose an alternative view, splitting the results of large retail banks into three parts:

- i. **The investment of cash in the "risk-free" rate (CDI):** Represented by shareholders equity (+) deposits (-) permanent assets (-) compulsory reserves (+) float (+) other adjustments<sup>6</sup>. In our evaluation, these assets should be analyzed by their nominal value, net of taxes. In the case of Itaú-Unibanco, the investment of cash contributes to approximately 40% of the bank's results. In other words, the high interest rates in Brazil explain in large part the difference in profitability between Brazilian and developed markets' banks.
- ii. **Results accruing from the risk-spread:** Represented by the rate exceeding the "risk-free" (CDI), that investors require to purchase a bank's credit portfolio, after losses that are expected with provisions and net of all costs. Although there are hardships in estimating a fair risk premium, considering that big retail banks' credit portfolios are quite well diversified and that large corporations represent around 1/3 of the total portfolio, we believe a risk-spread around 1% p.a. to be quite appropriate (around 108% of CDI, in line with the rate that large corporations are able to fund themselves locally)<sup>7</sup>. Always remembering that we are talking about results after provisions (in the case of Itaú-Unibanco, provisions expenses represent something around 4% of the portfolio per year), which compensates the fact that the bank's credit portfolio is more risky than that of a large corporation. As we discussed in the beginning of this section, this part of the result does not generate any present value.
- iii. **Franchise results:** Represented by service results, insurance (ex-float), treasury<sup>8</sup> and credit above the risk-premium. In simplified fashion, this result is calculated considering the bank's total profit, net of items (i) and (ii) listed above. The lower the risk-premium required by an investor in item (ii), the higher the share of the bank's results that will be considered a franchise result.

Utilizing the premises stated above, we can calculate the franchise's P/E for 2011. Firstly, we subtract item (i) above, from the bank's current market value, which results in an adjusted market value. To calculate the franchise's result, we utilize the procedure listed in item (iii) above. In this example, we continue to utilize 1% as the risk-premium. We encountered the following results for the banks' P/E ratios (Adjusted market value/franchise profits): 18x for Itaú-Unibanco, 20x for Bradesco, while in Banco do Brasil's case very little is left in the form of a franchise result.

More important than looking at the absolute results, is noticing the sensitivity of multiples to the previously stated risk-premium premiss, so as to measure the quality of a bank's bottom-line. While in Banco do Brasil (BB) a risk-premium of 1% practically nullifies franchise results, in Bradesco its necessary to use a risk premium of approximately 2.4% and in Itaú-Unibanco 2.7% to arrive at the same result.

BB's multiple is particularly sensitive to the risk-premium, given that the gross credit spread and the revenues accruing from services/insurance, in comparison to the average credit portfolio, are quite lower than those of other banks. It should also be noted that in 2010 Banco do Brasil's ADA<sup>9</sup> was only 2.66% of the average credit portfolio (even though credit directed toward the rural sector represented 20% of the bank's portfolio) versus 3.47% for Bradesco and 3.80% for Itaú-Unibanco. In other words, not only are Itaú-Unibanco and Bradesco less sensible to the risk-premium, they are also more conservative in their provisions.

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**6** - In Banco do Brasil's case, for instance, we consider the value that still has not been recognized in the company's equity, which refers to PREVI's (the bank's pension fund) surplus.

**7** - It's hard to estimate a precise value for the risk-premium. A 1% rate seems to be relatively in line with funding spreads of large corporations and below the funding rate of medium-sized banks. Even though Itaú-Unibanco's credit portfolio has a profile that can be considered relatively more risky than a large corporation's, we are considering these 1% after default-costs, which in the case of Itaú-Unibanco consume approximately 4% of the credit portfolio in any given year.

**8** - We consider the treasury results of Itaú-Unibanco and other large Brazilian banks to be recurring, given the consistency of these results throughout cycles.

**9** - Allowance for doubtful accounts.

In the case of medium-sized banks, for example, a risk-premium of approximately 2.6% is needed to nullify franchise results. Considering that these banks' portfolios present a more risky profile, are much less diversified and also that, in general, medium-sized incur substantial risk of losing their major funding sources if a crisis is to occur; we do not believe that this premium would attract many investors to purchase these banks' credit portfolios. This supports our assessment that medium-sized banks do not deserve to negotiate above book-value.

It is interesting to observe that, utilizing a risk-premium that we consider reasonable, the franchise P/E ratios of Brazil's two most significant private banks is still lower than the P/E ratio for which first line retail companies are going for. And all of this albeit the fact that these banks are much more liquid and, in our evaluation, present much clearer profit perspectives. We believe that the retail sector may be more affected by macroprudential measures than the aforementioned banks that should maintain a solid growth in their credit portfolios, and will benefit from the rise in spreads.

### Credit-Spread in Brazil

A recurring concern when it comes to bank's future results is the sustainability of the high current returns, given Brazil's high spreads. We do not believe this is a trivial matter.

First and foremost, the data provided by the Central Bank that refers to credit spreads practiced by the financial sector are very distorted and quite higher than what is effectively practiced by large banks. When calculating the rates charged for individuals, for instance, the Central Bank only considers the share of credit-card debt that pays interest. Usually this share represents only 20% of total credit-card debt, with the rest split between the 40% pertinent to the 30 days that consumers are given to pay their credit-card bills and the other 40% referring to non-interest bearing credit-card debt. Also outside the Central Bank's calculations are the rates charged over so-called "directed resources"<sup>10</sup> (28% of the total debt burden of individuals), which are significantly lower than average.

For Itaú-Unibanco, the sum of resources directed toward public employees, vehicles, real-estate, non-interest bearing credit-card loans and "directed resources" sum up to 80% of the total credit lent out to individuals. Nowadays, banks utilize loans as a way to attract clients and generate value through the cross-selling of a multitude of products.

A second consideration that must be made refers to the sustainability of Brazilian banks' high returns. The fact of the matter is that a large part of the gross spread of Brazilian banks is consumed by defaults, taxes and high expenses in relation to the size of the credit portfolio (Brazil is a vast territory with a still rather small credit market). Therefore, the effective spread which translates into profits, is rather smaller. In Itaú-Unibanco's case, the net-spread is at most 2.7% (according to our previous exercise, where we bring franchise results to zero), while BB's span around 1%. It is exactly for this reason that other private banks, with a reasonable market-share, like HSBC and Santander (even with the proper adjustments to financial leverage being made for Santander) do not generate ROE's above 15%, a result which is far from exceptional considering that base-rates in Brazil are higher than 10%.

In the end of the day, only the two biggest private banks in Brazil are able to achieve a high return on invested capital. This fact reinforces our view that the decline in Brazilian credit spreads that is bound to occur at some point in the future should be gradual and in line with the market's growth, allowing for a higher dilution in expenses in relation to the total stock of credit. On top of that, Itaú-Unibanco should start to benefit from the merger's synergies beginning this year. With a team of executives holding an almost flawless track-record, known for delivering higher-than-expected results and particularly obsessed with improving efficiency, we see space for returns to rise above current levels. Newspaper headlines witnessing the shockingly high profits generated by Brazilian banks should continue to be commonplace. The long-standing Brazilian notion, that bankers always make money, has never been more realistic.

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**10** - Directed mostly towards real-estate credit.