We intend to utilize our PERIODIC ATMOS NEWSLETTERS as a vehicle to communicate in simple and transparent fashion how our investment decisions are taken over time. In this first letter we shall approach some of the core topics that constitute our investment philosophy and the way we approach managing the fund.

## INVESTMENT PHILOSOPHY

Our investment process is guided by the detailed study of each company, always seeking the understanding of the assets through a continuous analysis of the business, an ongoing evaluation of the risk/return equation and the search for an adequate margin of safety.

We could further prolong ourselves by discussing the meaning of some of the terms described above, which are central to a value-oriented investment philosophy. However, since such terms and definitions have already been vastly discussed in books and letters over the past few decades, and to a much greater extent than we could in these few pages, we chose to reinforce in this letter our comprehension of risk that, allied to our value-orientation, characterizes our approach towards managing the fund. Our view of risk is based upon the conceptual difference between long-term and short-term expected returns.

## Long-Term vs. Short-Term returns

The conventional approach toward risk/return indicates that however larger the risk incurred, the higher the potential return. However, we believe that, there is a certain threshold at which higher risks translate into lower returns over the long-run.

We can better illustrate how this happens utilizing the analogy of a biased coin: Suppose an investor finds a coin with an $80 \%$ probability of "showing up heads". Excited with the possibility of making an easy profit he decides to bet $100 \%$ of his wealth with another person who doesn't know that the coin is biased.

Looking at the bet in isolated fashion, the investor has an interesting expected return of $60 \%$. But it seems clear that, if he bets all of his capital in 20 successive trials, the odds are quite low that he won't eventually lose the bet and subsequently all of his capital. Even so, his arithmetic expected-return is never altered.

This example alerts to the danger of focusing excessively on expected returns, without taking into consideration the distribution of results. The investor has just under $99 \%$ chance of losing everything at the end of 20 trials, and a little over $1 \%$ chance of making an $100 \%$ return per trial (p.t.). Even so, the power of accumulating $100 \%$ p.t. weighed by a probability of a little over $1 \%$ of not losing at any stage, generates a return of $60 \%$.

## Expected return of one single trial:

$80 \% \times 100 \%+20 \% \times(-100 \%)=60 \%$
Probability of not losing everything in $\mathbf{2 0}$ successive trials:

$$
(1-20 \%)^{20}=1,15 \%
$$

Expected return of 20 successive trials:

$$
\left[(1+100 \%)^{20} \times 1,15 \%+(1-100 \%)^{20} \times 98,85 \%\right]^{1 / 20}=60 \%
$$

Geometric average return (in the long-run the number of heads and tails converges to the expected frequency):
$(1+100 \%)^{0,8} \times(1-100 \%)^{0,2}-1=-100 \%$

All of this does not mean that the bet does not make sense. As long as the investor commits a smaller share of his capital, it is possible to increase the long-run returns in detriment of shorter-run returns. In the graph below we present the key variables necessary for the evaluation of short-run risk/return (arithmetic expected return) and long-run risk/return (geometric expected return), in relation to the relative amount of capital allocated in each trial. The geometric average is focused right at the point where the distribution is concentrated, avoiding distortions of very high returns that might be all too infrequently achieved. We note that there is a share of total capital to be invested in the strategy at hand that maximizes long-run returns. From this point onwards, however, more risk implies in less return. Mathematically, the aforementioned "optimum point" is determined by the percent amount that maximizes the geometric average.


This exercise exposes the dangers of strategies that are quite common in the market, and aim to increase short-term returns through the use of leverage or a high exposure to more risky investments. A great number of assets that seem to be trading at attractive prices, are in reality quite exposed to the risk of eventually presenting a permanent loss of capital. This makes it one of our highest goals to be as focused as possible in avoiding such losses. Some of the risks that might lead to such an event are quite common:

Governance risks: This issue is important not only from a judicial standpoint, but also in order to assess the motivations of those making decisions. We look to concentrate our portfolio in competent and honest managers, aligned to the interests of minority shareholders.
In the past, in Brazil, this issue was centered around the due-dilligence of controlling shareholders' trackrecords. However, with the recent evolution of the Brazilian capital markets and a higher pulverization of companies' shareholder-base, it has become very important to comprehend how aligned executives are.

Value trap: In the past, one of the big challenges facing Brazilian businessmen was trying to survive the oscillations of an unstable macroeconomic environment. However, currently, with the country presenting higher levels of stability, the newfound excess of capital may be extremely relevant as a means of increasing competition over the next few years. Companies' objectives are shifting from short-term cashflow generation to the construction of solid bases, that allow them to lucratively exploit their sector's
growth. This investment cycle may take a few years to mature, but it should significantly impact our investment theses.

Today we are still able to find some companies that negotiate with a significant discount to what "a priori" seems fair given current operational free cash-flow generation. This would traditionally indicate there still are investments to be found with a reasonable margin of safety. However, many of these assets seem to intrinsically deserve such aforementioned discount, given the fragility of their relative competitive positions, incessant need of investments to maintain the business functioning and low returns on invested capital. What may seem like a small detail, such as a company's incapacity to pass on inflation, decreases significantly this same company's fair multiple.

The best investment opportunities seem to us to be located in businesses with a solid competitive position and high growth opportunities, even if this eventually implies in having to pay somewhat of a premium to multiples ordinary businesses trade at.

Cyclical businesses: In this specific asset class it is common for analysts to project "normalized" long-term scenarios. But very hardly do adjustments occur in an orderly fashion. Cyclical reversions are usually unexpected, and prices move rapidly from peak to trough. Margins also tend to compress and working capital increases due to the time needed for production to adjust. When this happens operational free cash-flow generation tends to get compromised, and leverage levels that previously seemed reasonable start looking unsustainable. Moreover, since these cycles are usually quite long, executives can feel a false sense of comfort during times of tranquility to make large acquisitions and/or increase greenfield investments. The result usually is that the company gets overtly leveraged compromising long-term survival prospects.

## PORTFOLIO MANAGEMENT

Given the above-mentioned risks, we choose to manage our portfolio having as core positions companies that: (i) Are managed in order to generate value to all shareholders, (ii) Have sufficient quality to sustain a reasonable competitive advantage over the long-run and survive cycles, (iii) Negotiate at an attractive price. However, the possibility of incurring in a permanent loss of capital cannot be taken for granted, even for businesses with such characteristics.

In evaluating opportunities, we do not focus exclusively on the potential for appreciation, but particularly, on the possibility of incurring in a permanent loss of capital. We do this by estimating a value for each company based on a conservative scenario. Said value is always taken into consideration, even if unlikely to occur, as a mechanism to ponder the possibility that we might be wrong in our more optimistic assumptions. Our basic rationale is that even a robust process, conducted arduously, and fed by multiple sources of information does not necessarily lead to better decision making. Technological changes, competition and tax increases can always surprise us negatively. It is also important to note that valuations are quite sensitive to small assumption changes.

And how do we control the portfolio to avoid committing an excessive amount of capital? When the aggregate portfolio's potential loss - calculated taking into consideration an estimated value for each asset under a conservative scenario - is superior to a value that we judge reasonable (around 25\%), we adjust our holdings and increase our cash position (being able to go up to a limit of $33 \%$ allocated in cash). If even under such circumstances we aren't able to reduce risk to the extent we judge appropriate, we
utilize hedges with limited cost. It is important to note that the number presented previously isn't an estimate of the highest loss potential the fund can incur in, but rather a reference that reinforces our constant focus on how much we have to lose at any given instant. We also do not utilize our cash position as a means to try to arbiter short-term movements in market-prices. As stock prices fall and the risk/return equation becomes more attractive yet again, we start to have more space to increase our investments in equities. This implies in a more dynamic posture and more "rebalancing" within the portfolio itself.

These portfolio management characteristics should result in a low correlation of the fund with the lbovespa Index, particularly when talking about small variations in the index. However, for larger movements, some degree of correlation is inevitable. All of this means that in years when price movements are high on the upside, coming from an already relatively high base, the fund should present returns lower than those posted by the index. We believe this effect will be compensated for with lower relative "drawdowns" in bad years.

Our basic view of the Ibovespa is that, despite presenting a relatively high expected-return over the shortrun due to the fact the index is highly concentrated in commodities, the long-run returns tend not to be as interesting. Investing in equities does not necessarily mean one will obtain returns higher than those presented by fixed-income alternatives in the long-run, with the sole cost of having to bear a higher volatility along the way. To prove the point, one ought only to remember that the Japanese Nikkei has presented a negative yearly compounded rate of return for the last twenty years, just as has the German DAX and the American S\&P500 during the last five years.

## PERSPECTIVE FOR BRAZILIAN COMPANIES IN 2010

Overall, we believe that companies will deliver exceptional returns this year. First off, an unexpected increase in demand implies in a big dilution of fixed costs and, therefore, a considerable expansion of margins. We've already been able to notice such an effect in first quarter results, with many companies, cross-sector, reporting higher than expected profit figures. This should contribute to a good performance of domestic equities. However, the strong increase in profits in 2010 and 2011 already seems quite priced in to us.

The scenario described above also comes in a moment when the international equilibrium seems quite frail, for a series of different reasons: A problem of high-indebtedness in the "Piigs" countries (Portugal, Ireland, Italy, Greece and Spain), an improvement in US growth that arrives unaccompanied by new jobs, and also a more restrictive credit and real-estate market in China. Unfortunately, we do not have the capacity to predict whether these or other risks that are still out of our radar will materialize. What we do know is that, utilizing somewhat more conservative premises, most Brazilian equities nowadays have reasonable loss potential.

Even though the current environment seems positive to the domestic economy, long-run profit levels may be quite different. With many companies betting on a strong expansion, investment is growing in very expressive fashion, which might drastically increase competition in a diversity of different sectors over the long-run. Moreover, a reasonable share of the gains of scale and efficiency may be passed on to consumers through lower prices, or even to the government, reflecting lower margins.

Aside from that, the country still faces significant macro risks, such as: (i) An increase in the Debt:GDP ratio, (ii) The continuous increase in public spending which creates quite an unsustainable path for
income growth, (iii) Nominal deficits that, albeit being quite low in comparison to the rest of the world, can expand significantly in the face of lower growth, (iv) Lack of infrastructure, to name just a few.

The materialization of some of the above-described risks, domestic or international, or for that matter even a change in market perception, might mean lower growth potential and /or higher discount rates being utilized to value domestic assets. This would imply in lower valuations, even for companies with stable free cash-flow generation. As a consequence of the lack of opportunities to invest all of our portfolio with margin of safety, and not due to some prediction as to what will happen to the stockmarket in the short-run, we currently have $30 \%$ of our portfolio allocated into cash.

The combination of being a partner of good businesses, but having sufficient cash to avoid excessive losses in moments of excess optimism, will allow us to take advantage of eventual market turmoils and increase our exposure when the margin of safety increases. This will be fundamentally important to help us in our objective of obtaining good absolute long-term results.

