In this second quarterly letter we'll approach two themes that are frequently discussed with our investors: (i) What is the most appropriate benchmark for an equity long-only fund and (ii) how to properly evaluate the results of an investment fund.

Measurement

Measuring can be a very complex task – particularly due to the fact that it is very hard to find a reference that does not change due to exogenous factors. Even the kilogram, which is the standard unit of mass in most countries, has been subjected to revision.

> *"A cylinder, known as Le Grand K, was created in 1799 by the French Academy of Science, and has since been the reference utilized worldwide to determine what is a kilogram. To guarantee uniformity, since 1889, copies of the cylinder have been distributed to several different countries. Recently, scientists discovered that the original cylinder has been losing mass – and therefore, weight – relative to its copies. The difference, of the order of 50 micrograms, is equivalent to less than a single grain of sugar. It may seem small, but changes in this unit of mass, theoretically, influence the value of other units, such as the ampere and the volt, whose calculations are intrinsically linked to the kilogram. Symbolically, the discovery that the mother cylinder's weight has been altered creates a strange situation: a kilogram isn't a kilogram anymore. (Source: National Physical Laboratory/UK - Veja)"*

The problems related to measuring the quality of the performance delivered by investment funds or executives in general are even more complex. Standard metrics such as Sharpe, EVA, among others, are very easily calculated and may be used for a diverse set of conclusions, but they'll hardly show us, in isolated fashion, whether the results were derived from quality of execution, excessive risk-taking or merely by chance.

This discussion raises a fundamental question for equity fund investors. Given the difficulty of measuring performance, what is the fair compensation of a fund-manager? This ponderation became clearer in the midst of the 2008 crisis, when several investors were struck with severe losses, meanwhile a vast number of fund managers, despite the magnitude of the negative results delivered in 2008, were allowed to walk away with the very high compensations received in prior years.

In our case, we are frequently questioned about the fact that part of our compensation is indexed to an absolute benchmark (IPCA[1]+6%). Afterall, is it fair for us to charge a performance fee when the fund's return is lower than the Ibovespa's? Many, with reason, are bothered about the idea of "selling" this option for free to the fund-manager.

Estimating the value of the fund manager's option

We do not believe that volatility is an appropriate measure of risk. There are several low volatility strategies that are enormously risky in terms of the principal loss at stake. However, volatility is an extremely important variable for the

1 Brazilian CPI.

calculation of options (including the fund-manager's option).

Market participants most frequently use the Black-Scholes formula to value options. Even though this formula (and the model behind it) contains well-known flaws, it enables the estimation of the value of the option to a fund manager, as well as the observation of the sensitivity of this same option to volatility. Our objective is not a precise calculation of the value of this option, but to construct instruments that help in the discussion presented so far.

To better illustrate this exercise, let us utilize the fees charged by our fund. The total cost is composed of a 2% p.a. (per annum) administration fee, accreted to a 10% p.a. performance fee charged over what exceeds the spread between our fund's returns and the IPCA+6% benchmark. Therefore, the performance-related share of our costs can be represented *ex-ante* by the value of the fund manager's option. The results of the calculation of this option are presented in the table below (hypotheses necessary for such calculation follow in the annex), considering a multitude of possible scenarios for implied volatility:

Volatility	10,22%	22,68%	33,33%	54,00%
Reference	Atmos, last 12 months	Ibovespa, last 12 months	Ibovespa, last 60 months	Ibovespa, 12 months high during 2008/2009 crisis
Option value	0,30%	0,78%	1,20%	2,00%

As can be noticed, the value of the fund manager's option ranges between 0.3% and 2% (on an yearly basis). Our perception is that reasonable volatility levels should typically price the option at around 1% of AUM (again, on an yearly basis). This, in turn, would be equivalent to charging a simple 3% administration fee on AUM, and no performance fee, every year.[2]

Investor Alignment

As has been presented so far – if our objective was to maximize the value of our option as managers (represented by the performance fee, as illustrated above), we would utilize volatility-maximizing strategies, forgetting about capital preservation, and concentrating our stock picks in leveraged or cyclical companies. In practice, we do just the opposite.

Even though we understand that the period of our fund's existence since inception is short, and that the task of evaluating oneself is never exempt of bias – if we had to enlist the reasons for the low volatility of our fund, they'd be the following: (I) Lack of reluctance to hold a significant portion of assets under management as cash when we understand stocks have a significant loss potential with very small changes in assumptions, (II) Concentration of the fund in companies with stable cash generation, and (III) Utilization of protection with limited cost, sacrificing part of our short-term returns to avoid big losses in market downturns.

We believe that, in the long-run, the fund's volatility will not remain as low as it has been in its first year. In this initial period the percent amount held as cash has stayed near its upper limit of 33%. Should asset prices return to reasonable levels, presenting lower loss potential in conservative scenarios, the fund's exposure will increase significantly. Therefore, the fund should present a higher volatility exactly when we estimate that there is a lower probability of permanent loss of capital for our investors (including Atmos' partners, that invest a significant share of their personal equity in the fund).

2 It is important to note that the fund is endowed with a high-water mark. Therefore, even though we are concentrating our analysis of the fund-manager's option in a one-year period, the annual cost for multiple periods would be even lower.

However, true interest alignment occurs when the relative importance of the return on the partners' own capital invested in the fund is greater than the value of the option to the fund manager. With the natural growth in AUM, this equation's equilibrium will probably be altered as time goes by. This structural break in alignment is theoretically inhibited by the re-investment of the dividends received by the partners in the fund itself, and the implicit moral and professional risks associated with non-cooperative strategies.

Fund Manager's Compensation

With the discussion up to this point we hope to have demonstrated that we are not seeking an option on the investor by having chosen an absolute returns benchmark. However, this still does not answer two questions: (I) Why not choose a relative benchmark like the Ibovespa Index, and (II) Why not charge only an administration fee.

The first point to be raised is that our portfolio's typical behavior is somewhat different from the Ibovespa's or other stock indices, for that matter. After all, it isn't completely uncommon that stocks with stable cash-flow generation go up while stocks of more cyclical companies go down, and vice-versa. This in turn creates a volatility in the fund vs. index ratio. Therefore, for non-indexed portfolio's, even a relative benchmark continues to produce a free option to the fund manager. To illustrate, (noting that the period is short and that this pattern may not repeat itself in the future), the volatility of the ratio between our fund and the index in the last 12 months was 14%, greater than the fund's absolute volatility of 10%.

For the fund manager, this option against an index, will typically be worth more in periods of moderate variation in asset prices like the one we live in now, while for periods of extreme variation the option against an absolute benchmark will be worth more.

As an example, if we charged as a performance fee 20% of returns exceeding the Ibovespa (which is a market standard), the portfolio would have to go up by 7% (gross NAV/share) more than the index, for the fund's managers to receive 1% of the AUM as a performance fee. In this scenario, the fund's total cost would be 3% a year (including the 2% administration fee).

Putting the above in perspective, for Atmos to earn the same 1% on AUM as a performance fee, our portfolio needs to present a gross return of 24% a year. This certainly isn't a easy rate of return to attain in the long-run.

	Absolute Benchmark			Relative Benchmark		
Performance fee	10% of IPCA +6%	10% of IPCA +6%	10% of IPCA +6%	20% of Ibovespa	20% of Ibovespa	20% of Ibovespa
Gross absolute return	24%	34%	44%	n.m.	n.m.	n.m.
Gross return exceeding the benchmark	12,5%	22,5%	32,5%	7,1%	12,2%	17,3%
Return exceeding the benchmark after the *2% administration fee*	10,1%	19,9%	29,7%	5,0%	10,0%	15,0%
Performance fee to the investor	1,01%	1,99%	2,97%	1,00%	2,00%	3,00%

Given that Brazilian stocks have risen considerably in the last ten years due to the generalized rise in commodity prices and a reduction in the country's innate risk as perceived by investors, most people concentrate their analysis of the fund manager's option value on extreme scenarios. However, we believe that going forward returns should decrease to more moderate levels, as observed in developed countries.

A relative benchmark can also contribute to promote misalignment of interests between investors and managers. If the fund presents a good performance in relation to the Ibovespa, at any given point in time, there is a possibility that the manager will be incentivized toward indexing his/her portfolio. This goes against our managing principle which is to maximize long-run expected returns.

And why not utilize a higher administration fee, and charge no performance fee at all? We understand that it is not "fair" to define our annual pay without providing investors with a solid rate of return on their invested capital. Charging a performance fee over returns that exceed an absolute benchmark guarantees an incessant search for maximization of long-run returns, as long as the manager is properly aligned with his investors.

At this point we would like to re-enforce that we do not believe in some sort of previously designed recipe, neither do we think we own the best solution to resolving the manager-investor misalignment problem. We believe that solutions are individual to each product, the people involved, and the fund's specific culture. We are solely sharing with our investors the reflexions and questions we postulated in the process of creating our fund.

In the end, we'll hardly ever be able to answer whether the cost structure – administration fee and performance – was well balanced *vis à vis* the delivered result; but we would have the same troubles if we were managing a fund with a higher administration fee or a relative benchmark. Just like when one goes to a restaurant, its hard to tell whether the fair price of a dish is R$40 or R$60.

How to measure a fund's performance

Quantitative criteria are easier to analyze. They allow for the comparison of a large number of funds, without having to go through the struggle of executing a more qualitative due diligence about performance. However, if it is probable that good managers may be found in the first positions of quantitative ranks in the long run, this does not guarantee that the first in these same ranks are necessarily good managers. There are several funds in the market, and the law of large numbers alone guarantees that some will succeed in the long run purely due to chance.

In our opinion, the decision to invest in a fund shouldn't be based on criteria much different from those utilized by investors to select companies. It is necessary to evaluate how aligned the manager's interests are with one's own, the consistency of the strategy, the history of the controlling shareholders, the risks being assumed, among others. Risk is of fundamental importance and cannot be simplified by only looking at volatility.

Through thorough analysis of both quantitative and qualitative criteria, one can have a better idea of how to evaluate a fund. However, independent of all the due diligence performed, the investor is only increasing his/her probability of selecting a good manager. After all, not even a kilogram is always a kilogram.