

The Market Makes Mistakes

July 2024

Dear investors,

After a late 2023 marked by optimism, with a strong Ibovespa rally in November and December, the market returned to a general sense of discouragement about equity investments this year. Whenever prices fluctuate sharply, the natural reflex is to look for an explanation in the economy that justifies the price movements and to settle on the thesis that seems most plausible. However, this behavior carries, implicitly, the premise that the observed variation is an appropriate reflection of reality, and not a widespread pricing error.

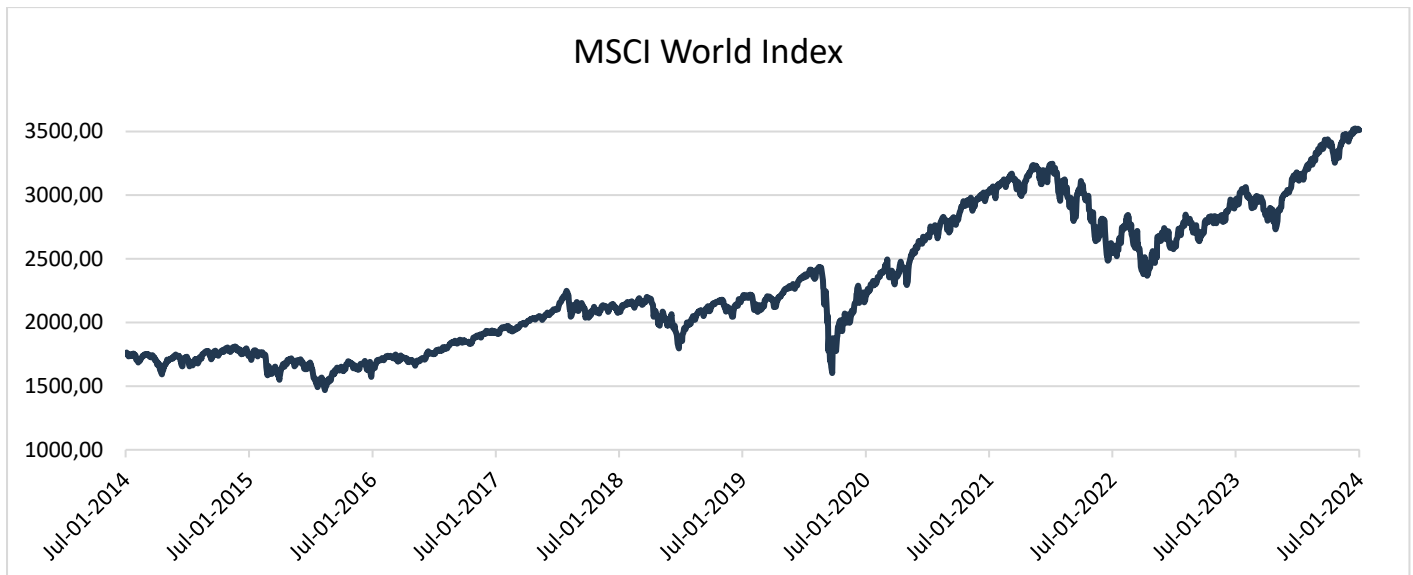
There is some debate over the assumption that the market is always right. One school of economists and investors argues that prices are always the result of the best estimates one can make about each asset, reflecting the collective wisdom of the set of active investors who constantly evaluate the information available at any given moment. Another school argues that the investor public occasionally makes pricing errors or is forced to trade assets in the market for reasons other than intrinsic value analysis, so that asymmetries arise between the likely value of assets and the price at which they are being traded. Our view is aligned with this second group, and we believe that today the prices of some stocks on the Brazilian exchange do not reflect the fundamentals of their businesses.

Can the Market Really Be Wrong?

The more investment experience we accumulate, the more skeptical we become of highly abstract arguments that lack clarity about the concrete factors and agents behind a thesis. Treating the market as an abstract and omniscient entity therefore seems like a bad idea to us. A first reason is that the price does not exactly represent the collective opinion of all investors about what an asset should be worth, but rather the equilibrium point between supply and demand for that asset at that exact moment. The concepts are correlated, but not identical.

There are several reasons that may prevent an investor from consistently acting in accordance with their convictions. The most common is simply not having capital available to act: if you believe an asset is very cheap but lack the liquidity to buy it, you will not participate in that day's price determination. If you need to consume capital for some reason (for example, to cover operating losses), you may even be forced to sell assets you consider cheap. In times of economic stability, it is uncommon for multiple investors to find themselves in this situation simultaneously, but in times of crisis, this is precisely what is expected to happen, and it becomes understandable that prices cease to be guided purely by intrinsic value analyses.

Another perspective that supports the fallibility of market pricing is observing how much stock prices vary. The MSCI World Index is an index that tracks the prices of approximately 1,500 companies from 23 developed countries, representing ~85% of the total value of those countries' stock markets. In other words, it is broad and diversified enough to be a good representation of the global economy. The fundamentals behind this index cannot, almost by definition, be very volatile, since the global economy is an enormously complex system that is highly dependent on productive capital (infrastructure, factories, machinery, etc.) and human capital (the level of people's qualifications) — two factors that almost never vary much over short periods. The types of events that could cause large variations are technological revolutions, on the positive side, and global catastrophes on the scale of world wars, on the negative side. Nevertheless, this is the MSCI World Index chart for the past 10 years:



Not as stable as one might expect. Thus, in the absence of a series of events of global proportions that would justify such observed volatility, it seems more reasonable to us to consider that market prices are not always adequate representations of the real economic value of the assets they represent.

Having acknowledged the possibility that the market can be wrong at certain times, let us analyze the current Brazilian scenario and consider whether we are in one of those moments. There are two central topics of concern among most Brazilian professional investors today: the global inflationary crisis and the way the current government has been pursuing fiscal balance. Both topics are complex to analyze in detail, but we will provide a synthesis of what is currently being discussed and our own interpretation.

The Impact of the Global Inflationary Crisis on Brazil

The global inflationary crisis is not news. The BACEN (Brazilian Central Bank) began the cycle of interest rate hikes — the classic strategy for combating inflation — in March 2021. The Fed (Federal Reserve) started this move in March 2022, and the ECB (European Central Bank) in July 2022. The more recent development is that the Fed decided to keep rates high for longer than the market initially projected, in the same way we saw happen in Brazil. This has two main impacts.

The first is that, with higher American interest rates and concerns about the economy, many investors have decided to shift capital into US fixed income securities, seen as the safest among investment options. This migration creates selling pressure across various other asset classes, including our small Brazilian stock exchange, in which foreign investors currently account for approximately 55% of the total trading flow.

The second is that the BACEN has been hesitant to lower the benchmark interest rate, despite inflation in Brazil over the past 12 months (Jun/23 to May/24) having been 3.9%, considerably below the 20-year average of 5.7% p.a. The BACEN's reasoning can be followed through the COPOM meeting minutes, but is well summarized in the excerpt: "a scenario of greater global uncertainty suggests greater caution in the conduct of domestic monetary policy." There is enormous controversy around the interest rate level maintained by the BACEN. Since monetary policy is not our specialty, we will limit ourselves to the observation that today the real interest rate is 6.6% p.a., compared to the 20-year average of 5.1% per year.

Our interpretation of these two factors is not positive, but is milder than what we have been hearing from other investors. The selling pressure generated by the migration of capital into fixed income certainly affects stock prices, but has no effect whatsoever on the intrinsic value of the Brazilian companies whose shares are being sold and is therefore a merely transitory factor that does not change the long-term return expectation. The extension of the BACEN's contractionary policy makes it harder for companies to grow and

makes financing more expensive while rates remain high, so there is an impact on the real value of businesses. However, the intrinsic value of each company is far more dependent on what is expected to be the long-term average interest rate than on the debate over whether the BACEN will cut rates a bit further at the next COPOM meeting or six months from now. In other words, the value deterioration caused by a few extra quarters of high interest rates is on the order of a few percentage points, not tens of them.

Brazil's Much-Sought Fiscal Balance

Since the beginning of the Lula government, there has been tension around the topic of fiscal balance, so the context is well known: the public sector currently spends more than it collects in revenues — the so-called fiscal deficit — and the government has resisted from the outset any initiative to cut spending. As a result, the way fiscal balance has been sought is through revenue increases.

The government's appetite for revenue is not new either. We wrote in our October 2023 letter that we expected tension around fiscal responsibility to persist throughout the entire Lula government, and we maintain the same expectation, since the absence of fiscal austerity stems from the ideological conviction of left-wing governments that the public sector should be expanded. The fact itself already generates discomfort, as Brazil is not known for low taxes and pressuring the productive sector with even more taxes does not seem like the best path forward.

Moreover, the way in which revenue increases have been pursued has generated additional discomfort because, rather than admitting that taxes are being raised, the government has maintained a discourse of merely correcting anomalies in the tax system through changes to calculation rules and interpretations of already-granted tax benefits. The practical result of these changes has consistently been an increase in the effective tax rate, so there is clearly a higher tax burden, and the discourse that denies this fact understandably generates distrust among business leaders and investors. Even more damaging is the uncertainty created: what will the next change be, and which businesses will be affected? The range of Brazilian sectors that have some type of tax benefit is enormous, and therefore a large portion of the economy may be the target of veiled tax increases.

On these points, we are aligned with the prevailing market view. We understand that this pursuit of revenue through unpredictable changes to tax rules is harmful to the business environment in Brazil. However, it is not something that makes investing unviable. Our approach has simply been to assume pessimistic scenarios on tax matters when estimating the fair value of each business. It is also worth considering that the impact of a tax increase is not necessarily a direct reduction in a business's profitability. Since companies in the same sector typically benefit from the same tax incentives, a rule change affects all competitors equally and the competitive position of each company tends to remain unchanged. The problem is that if the tax increase is fully passed on to prices, demand volumes are expected to decline. The affected sectors must therefore navigate the dilemma of sacrificing growth or a portion of their profitability.

Is Brazil Getting Better or Worse?

Those who invest in Brazil know that periods without controversy and political noise on the horizon are rare. For this reason, a healthy dose of instability and systemic problems in our economy is already embedded in the price levels considered normal in our market. So much so that the average P/E multiple of the Brazilian stock exchange over the past 10 years is 10.3x, while that same multiple in the American market is 18.3x. Today, the P/E multiple of our exchange stands at 7.5x. So the question is: is the current scenario really that bad?

A year ago, the Ibovespa was very close to its current price. At the time, the SELIC rate was at 13.75% p.a. with 12-month accumulated inflation of 3.2% (i.e., real interest rates of 10.5% p.a.), and there was still

uncertainty about how long the BACEN would keep rates at that level. GDP was expected to grow 2.2% in 2023. The tax reform was still under discussion, with no clear prospect of approval, and the new spending cap rule was still open, already with an expectation of a fiscal deficit.

Since then, the SELIC rate has fallen 3.25% and real interest rates have fallen 3.9%. GDP grew 2.9% in 2023, 32% above the projected figure. Inflation remains under control, with a lower risk of rising again. Fiscal issues are still a problem, and are unlikely to cease being one anytime soon, but we are relatively better off than a year ago. The tax reform was approved, although the details of its implementation remain pending, and we have a spending cap rule that, while far from ideal, limits the growth of public spending and tends to work as long as the economy continues growing. In short, things have clearly improved over the past 12 months.

Even more important than these macroeconomic factors is the evolution of company results during this period. On this point, we will take the liberty of analyzing only what interests us: the earnings and prices of the companies in which we invest through the Ártica Long Term FIA. The comparison of the situation a year ago versus today is summarized in the table below:

| | Period | | |
|--|-------------|-------------|----------|
| | 2T22 a 1T23 | 2T23 a 1T24 | Change % |
| Portfolio Net Income | R\$ 0,9 Bi | R\$ 1,6 Bi | +74% |
| Portfolio Price/Earnings Multiple (ex-MLAS3) | 11,7x | 8,7x | -26% |
| Price/Book Value Multiple of MLAS3 | 0,55x | 0,51x | -7% |

Note: Portfolio Net Income and P/E multiple reflect the individual indicators of each company weighted by the Ártica Long Term FIA's allocation in each company.

Due to this substantial improvement in our portfolio companies' results, the Ártica Long Term FIA rose approximately 20% over the past 12 months. However, the Price/Earnings multiple of our current portfolio of Brazilian companies is lower than it was before. We have separated Multi (MLAS3) because of the negative net income in 2023, which makes the Price/Earnings multiple meaningless; the Price/Book Value multiple remained stable even with better prospects for the company today.

In other words, the fund today is cheaper than it was a year ago in relative terms, even with a more favorable economic environment and a clear trend of improving operating results among the businesses in our portfolio. In the more rigorous internal analysis we conduct — in which we estimate the fair value of each portfolio company and compare it with their market values — we currently find ourselves at an atypically high level of discount. We see nothing that would justify this price level as appropriate. These shares simply seem cheap to us.

Even so, there remains an argument we have been hearing with some frequency: there is no expectation of any catalyst that could make the market rise in the short term. However, when companies are doing well and their shares remain cheap, is it really necessary for a specific event to occur, or is it sufficient for investors to notice the potential return implied in current prices and decide to start buying again?