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A stylized globe graphic composed of numerous thin, parallel lines in shades of gray and orange, creating a textured, spherical effect.

The **Weekly** Globe

The Fed's Decisions and Game Theory

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A novice poker player looks at their cards and tries to gauge the strength of their hand. That is considered level 1 thinking. In level 2, the player thinks about what their opponent may have. Level 3 is reserved for good players: "what does my opponent think I have?". Highly-skilled players design their strategies based on level 4: "what does my opponent think that I think they have?".

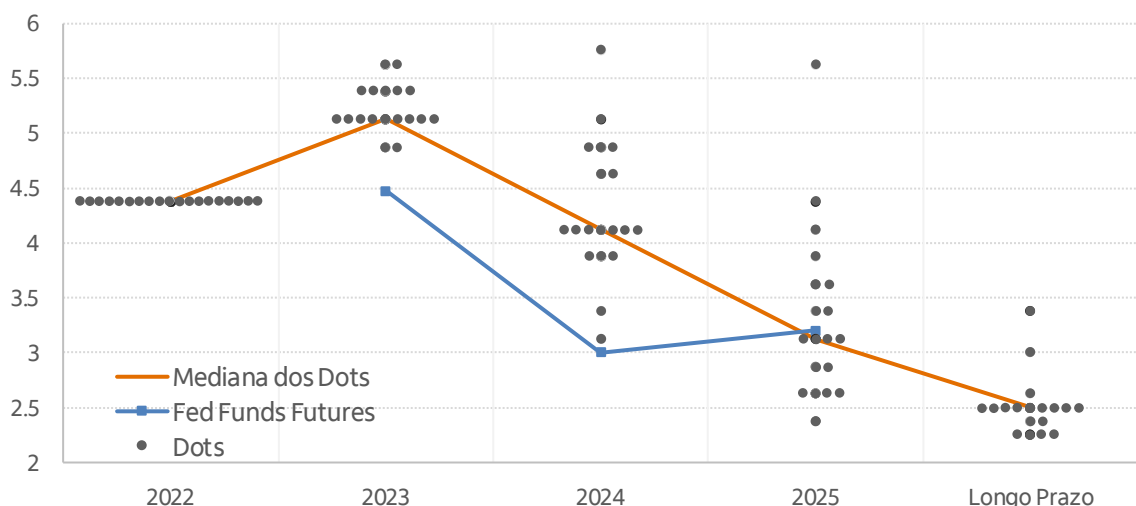
Game theory—a mathematical concept applied to strategies in competitive situations where the result of a decision is interdependent on the actions of other players—is currently a necessary tool for the business and investment world. The simple recommendation of buying a particular stock may be analyzed through the lens of this theory; the average of available and expected information is already reflected in the current price. Recommending a purchase (or sale) is the same as saying that your analysis or information are a little better or closer to reality than the average of other market

participants.

Not surprisingly, good managers consistently and calculatedly get it right. In recent quarters, one of the main factors that affected markets and asset prices was the US interest rate. Observing Federal Open Market Committee (FOMC) decisions, listening to speeches from the Federal Reserve Chairman, or tracking inflation projections improves your models and analyses (similar to level 1 thinking).

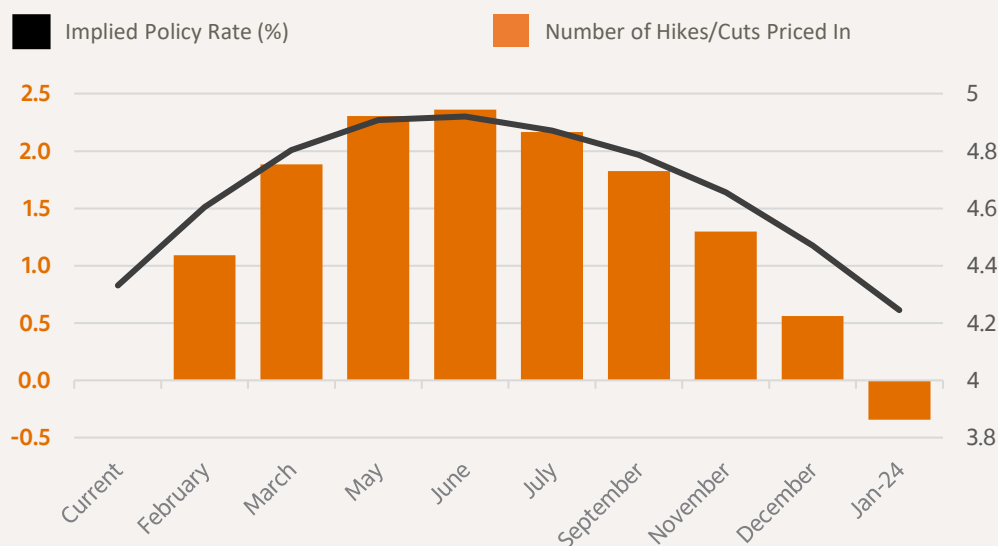
Evaluating the difference between the dots (expectations of increases or cuts in the interest rate by Fed officials, which you can see in graph 1) and the expectations of the market extracted from the trading of financial instruments (graph 2) tells you what your "opponents" are thinking, which is equivalent to level 2 thinking. In this real example, despite the median of Fed officials pointing to 5.125% for the end of 2023, the market shows something much lower, approximately 4.5%.

Graph 1: Most recent dots from the Federal Reserve



Source: Bloomberg

Graph 2: Expectations for interest rate increases/cuts implicit in market instruments



Source: Bloomberg

One of the reasons for that difference is explained by game theory. The transparent communication of Fed officials (via discussions and their dot plot) is essential to signal to the market what they want to do. A more hawkish tone, as we are currently seeing, is not only necessary, but it also helps market participants understand the actions of the central bank, estimate their impact on the economy and reevaluate models for the various asset classes and real economy.

Once that impact is estimated, participants adjust their expectations regarding the need for interest rate increases and transmit this view to the future market—and this time they believe that we will not need as much increase as the Fed signals. However, one view is dependent of the other. If the Fed signals fewer increases, expectations shift and everything changes.

The parallel to level 3 thinking originates from here: how am I going to position my portfolio based on what the Fed has shown (interest rates, for example), what the Fed thinks (dots), what market participants think (prices) and what information and models I have.

Our tactical positions in the investment committee, **Top Picks** lists of **Equities** and **Credit** and our portfolios managed in **Actively Managed Solutions (AMS)** are examples of how we position ourselves in relation to what the market thinks.

"Expensive" and "cheap" are not absolute concepts, but rather are relative to the current price. And acting in a way that is interdependent to the market (purchasing and selling, underweight and overweight) is purely game theory applied to investments.



Takeaways:

- Game theory applied in the world of investments is present even in the simplest decisions;
- The Fed signals its intentions for the market in a transparent way, waiting for participants to absorb and analyze that information in a dynamic way;
- "Expensive" and "cheap" are relative concepts, not absolute;
- Tactical positioning of portfolios is nothing more than disagreeing, in different degrees of conviction, with the average analysis of market participants.



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