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Seeds of Thought

Cognitive Science Meets Investment Management

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Three Key Reasons Investors Should Use Options, but Rarely Do

I began my career as an option trader at Credit Suisse and they have been an integral part of my DNA ever since. Whether as a market maker, prop trader, portfolio manager or CIO, I have always expressed every view through options, with a particular penchant for exotics. When it comes down to it, I believe there are three separate and distinct reasons to intelligently employ options. First, they are an excellent tool for helping us to overcome cognitive biases, including inertia and emotional attachment, by forcing a level of discipline we can rarely attain on our own. Second, they enable investors to express a view while protecting against the black swan event. Finally, they offer a way to isolate very specific expectations, both individually and in combination, creating a leveraged means by which to capitalize on, or protect against them. If you do it right, you can combine all three benefits in one beautifully crafted position. Let's explore all three in some detail, with specific examples.

1. A Tool for Avoiding Cognitive Bias

Recently, one of my coaching clients was grappling with whether or not he should unwind a long equity position after it had experienced a far bigger drop than anticipated. Like many portfolio managers, he doesn't typically employ hard stops, but rather gathers information as a trade progresses and depends on his experience to dictate when to exit. It's a very common approach, but one that leaves you vulnerable to a number of powerful, and potentially debilitating, cognitive biases. In this case, he was concerned that he'd be selling at the lows, effectively getting out when he should be doubling up. He feared the potential for regret.

Over the coming weeks he continued to take a beating on the position. Every step of the way, the potential opportunity cost weighed on his psyche far more than the accumulation of real losses. Each call ended with him acknowledging that the right decision was to unwind the position and to move on to finding more predictable opportunities, only to begin the next session with, "I should have listened to you."

Two weeks in, a narrative had developed, revolving around the company's earnings announcement, one week forward. My solution was simple. Convert the long into a call position representing the same number of shares, using options that would expire in two months (yes, two months). I didn't make the suggestion because implied vols were cheap, but because it was the only way to help him overcome his inertia bias. In essence, I was weening him off the position. The rationale went like this. If the stock continued to collapse, the loss for the strategy would be finite, so the bleeding would end and he could move on to opportunities that presented better odds of success going forward. If the stock jumped back up on the back of the earnings announcement, he could capitalize on it, thereby resolving his fear of potential regret. If the announcement turned out to be a non-event, he could sell out the options before decay became an issue. (In effect, the pending time decay would serve as the "unbalanced force" needed to break the inertia.) As it happened, the stock continued to plummet, and although the option was quickly worthless, it saved him millions in p&l, putting the emotional trauma to rest, and allowing him to move on to better opportunities.

Postscript: A month later, largely as a matter of luck, a positive announcement came out which pushed the stock back up to where he'd first swapped into the options, allowing him to recoup half his premium. I say *largely*, because this potentiality was a factor in choosing the two month expiration rather than a much shorter horizon.

2. Black Swan Protection

This facet of option use is very straight forward. No matter how much research we do, how many possible scenarios we explore, we simply cannot anticipate every possibility, nor can we fathom just how ferocious a move can be ahead of time. By positioning with options, we can express almost any view while limiting the maximum possible downside to a predefined limit. By employing exotic options, you could go so far as to sell volatility in a currency at say 0.5 and still limit your loss to the same amount whether it winds up moving 5% or 150%. While Nassim Taleb concluded from the research that went into his book, The Black Swan, that you should build a portfolio exclusively betting on black swan events, I've built a very long career by doing the opposite. I use options to bet on high probability outcomes, while protecting against the outlier.

As an example, in July 2012, corn had exploded on the back of the "50 year drought". I saw this as an opportunity to express my bearish view on commodities (see Macro Radar 15-6 for the rationale). To simply go short corn at a time when it was in uncharted territory was too risky for my taste. Instead, I went short via put options. By fixing my risk to the premium paid, while allowing me to position for what I believed was a very likely event, I could effectively step in front of the train without exposing my portfolio to great risk. As someone who has traded emerging markets for more than twenty years, this approach has served me well during more than a few crises.

There is a huge benefit to this strategy, particularly in this situation, which often goes unnoticed. You see, if I had simply gone short and spot jumped, it is likely that I, like so many others, would have been spooked by the move. In response, I would have been "disciplined" enough to stop out quickly. When it started to come back off, I'd likely have been tempted to re-enter, only to be taken out again with another "disciplined" tight stop. By the time it made its big move lower, yes, I probably could have participated, but I'd first have to make up for all the previous little losses before showing a profit. Just as importantly, by using options, I avoided the emotional trauma along the way, which allowed me to participate in other opportunities as they presented themselves in the meantime. (If you don't think this benefit is significant, just ask all the trend followers / momentum traders how it felt to miss out on the biggest trends of the past six years.) See Corn 5 Trade Write-Up for details.

3. Expressing Views with Pinpoint Accuracy for Maximum Leverage

Purchasing / selling plain vanilla puts / calls to express a directional view in the underlying is one way to use options, but it isn't where their true power exists. Truth is, options are merely an instrument for expressing a view. The simpler your view, the fewer the benefits options offer, and vice versa. Let's say, for instance, you believe EUR/USD is headed lower, but you haven't developed any specific expectations for how much lower, how long it will take for the move to begin, how rapidly it will happen, what will happen to implied vols if it does (not) go, what role interest rates will play, what alternative outcomes might look like, or what the odds of the different scenarios playing out might be. In that case, you have a fairly undeveloped view which can be expressed with any number of unsophisticated instruments. However, if you have taken the extra time and effort to fully develop your expectations, options can be a phenomenal tool to help you maximize your return on that investment of time and effort.

Let's take the example of USD/SAR (US Dollar versus Saudi Arabian Riyal) from back in June. At the time, I put out SAR1, a trade I structured to express my view on the currency pair. To be honest, I wasn't alone when I got involved, but the structure I chose was very different from those selected by most everyone else. First, some background. USD/SAR is a pegged currency, which explains why it typically trades at a very low implied volatility of roughly 1.0. Anytime tensions flair up in the region or oil takes a beating, market participants who don't normally play in the currency take notice of the low vol and see it as a "cheap punt", just in case they were to let the peg go. These are the moments guys like me live for, when the uninitiated come to play in our sandbox.

Having seen this happen numerous times over the last 20 years or so, I began setting my expectations. First, I was looking to capitalize on what I call the "meaty" part of the trade, while ignoring the aspect that would likely become the focus of blogs and research reports catering to the speculators. In other words, I wasn't looking to benefit from the peg breaking, but rather from a modest repricing of that potential event. At the same time, if I could position in such a way that I could also benefit if it didn't break and even if it broke in the opposite direction of the expectations, then I could put far more capital behind the idea. This last aspect is where my structure differed from everyone else. They were playing for the expectation that the Saudi authorities would be forced to let the Riyal devalue. What made the bet particularly appealing was that the implied vols were so low. So, even if the probability of the peg breaking was low, the potential payoff from an explosive move made the position interesting for them. Understanding this point is important, for it lies at the heart of the difference between how I chose to position and how most others did.

If you are betting on an event that has little chance of occurring, you will wisely risk a relatively small amount on the position. Since you are betting a small amount, the only way the trade is worth having is if the potential payoff relative to that bet is very large. Therefore, traders were looking for options that were heavily biased directionally, so they could cheapen the premium as much as possible, thereby creating a highly leveraged position. In order for it to pay off commensurately, they needed an explosive move in spot, forwards and / or implied vols. A combination of all three would provide the mother lode. Understandably, most opted for the low delta USD call / SAR put.

Instead of betting a small amount in the hopes of an explosive, low probability event, I sought out a structure where I would be willing to apply a significant amount of capital, but with a high probability of benefitting from a modest repricing of risk and even in the absence of that, at least recouping my premium. I chose to purchase a 1 year at-the-money forward straddle. The reason is that the forwards had already jumped, but the implied vols were still near their lows. That is what made the USD puts an essential part of the trade.

By purchasing the combination of calls and puts, if nothing happened, i.e. the peg remained in place, the carry earned on the USD put was so great, it actually paid for the full straddle premium. Since I was primarily interested in benefiting from an increase in implied vols (vega), it didn't really matter whether I owned calls or puts. Finally, it was helpful to know that in a previous episode when the Saudi authorities were pressured to devalue, they actually surprised all the speculators by first revaluing, before finally allowing it to devalue. If that were to happen again, it would have proven to be of huge benefit to me, while everyone else would have suffered. By structuring to benefit from the three most likely outcomes, while losing in only the most extremely unlikely event, I could invest a significant amount of capital in the idea. As a result, I only needed a mild repricing to benefit greatly, which is what happened (see SAR1).

In effect, I had combined all three of the above reasons to use options into one simple, yet elegant solution. The result was a 540 basis point return to the portfolio after just four days in the trade, while avoiding any sleepless nights.

PS: Several subscribers have pushed for me to produce more trade ideas, to which I always ask the same question in response. Would you prefer 20 mediocre trades with a modest expected payoff, or just a couple of high probability suggestions with a much greater expectancy? Of course, there are no guarantees and past performance is no indication of future results, but this is ultimately a game of odds. The more we can tilt them in our favor, the better our chances for success become.

About the Author

For nearly thirty years, Stephen Duneier has applied cognitive science to institutional investment management. The result has been the turnaround of numerous global trading businesses, career best returns for experienced portfolio managers who have adopted his methods, the development of a $1.25 billion dollar hedge fund and 20.3% average annualized returns as a global macro portfolio manager.

Mr. Duneier teaches graduate courses on Decision Analysis in the College of Engineering at the University of California.

Through Bija Advisors' publications and consulting practice, he helps the world's most successful and experienced investment managers improve performance by applying proven decision-making skills to their own processes.

As a speaker, Stephen has delivered informative and inspirational talks to audiences around the world for more than 20 years on topics including global macro economic themes, how cognitive science can improve performance and the keys to living a more deliberate life. Each is delivered via highly entertaining stories that inevitably lead to further conversation, and ultimately, better results.

Stephen Duneier was formerly Global Head of Currency Option Trading at Bank of America and Managing Director of Emerging Markets at AIG International. His artwork has been featured in international publications and on television programs around the world, and is represented by the world renowned gallery, Sullivan Goss. He received his master's degree in finance and economics from New York University's Stern School of Business.

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