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# Just in case

Evan Lorenz writes:

It isn't every day when a rise in the overnight repo rate upstages a drone attack on the Saudi Arabian oil infrastructure, but 10% isn't your ordinary rate. Now in progress is a speculation on rare events—the ones of two weeks ago, for example—and the means to capitalize on them. While not every stratagem is available to every investor, the ideas and value propositions under discussion just might engage amateur as well as professional.

Our survey of the sources and uses of volatility naturally begins with that Fount of Instability, the Federal Reserve. Of particular significance are excess reserves, precautionary balances held over and above the legal minimum. In December 2007, the grand total of such funds was $1.8 billion. Today, it tops $1.2 trillion, with a "t."

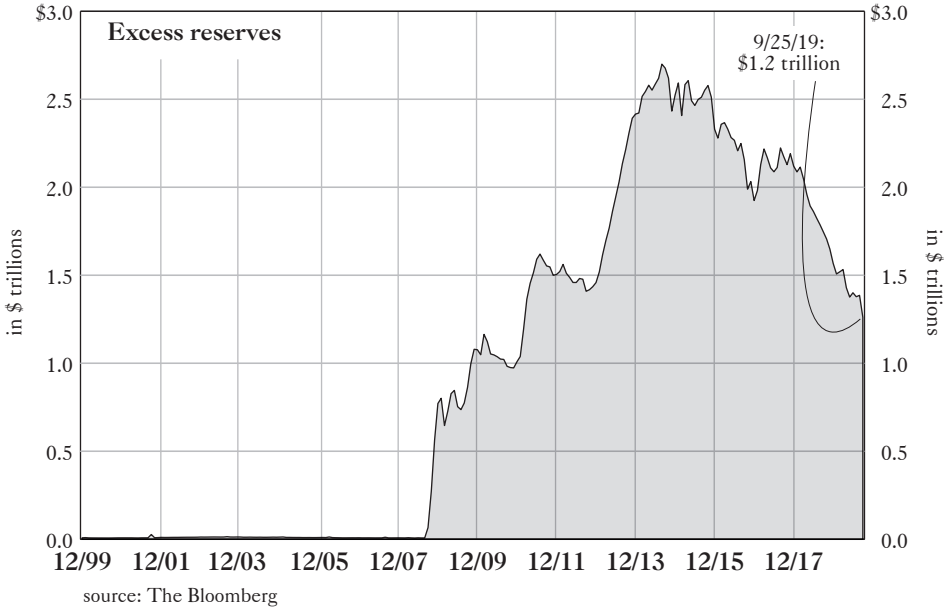
If you're like us, you stopped and stared at that 10% secured borrowing rate, which flitted across the Bloomberg screen on Sept. 17. Why didn't someone mobilize a few billion out of that definitionally idle $1.2 trillion to meet the spike in demand? Someone, for instance, like JPMorgan Chase & Co., which (like other American banking giants) is earning net interest margins in the neighborhood of 3%?

The edifice of post-crisis bank rules holds some of the answers. Regulators aimed to make banks safe; unfortunately for the rest of us, they succeeded. Alongside such protocols as Basel III, the Dodd-Frank Act and the Volcker Rule, big banks must comply with a liquidity coverage ratio, meaning they must hold enough "high-quality, liquid assets" to survive a 30-day run. While Treasurys and agencies qualify as HQLA, a bank selling a T-bill must wait 24 hours to get its cash, a fact that makes bank reserves, which are immediately accessible, the preferred safe asset.

JPMorgan, Wells Fargo & Co., Bank of America Corp. and Citigroup, Inc. are estimated to hold more than half of all excess reserves, but those balances are not as excessive as they seem because the behemoths must conform to the liquidity coverage minimum. The four do conform, but, as of June 30, with not much room to spare. Then, too, primary dealers, which are required to buy Treasurys at each auction in the absence of a full allotment of public bids, were bulging with inventory: On Sept. 11, they held $219.3 billion of government paper, more than double the $101.4 billion balance a year ago. So, a combination of routine events—the Sept. 16 deadline for quarterly tax filers, a large Treasury auction and, of course, the burgeoning federal budget deficit—led to a sudden tightening of liquidity and the lurch upwards in secured financing costs.

"At a certain point, even though banks may have cash and you may have collateral, they may not do the trade," Christopher Whalen, publisher of The Institutional Risk Analyst, tells me. "It is kind of a self-fulfilling prophecy, where the regulators say, 'You are all islands: You have to have enough liquid assets to fund all of your net outgoing payments for 30 days.' This is an extraordinary thing in the 21st century. We shouldn't have to do that

**How excessive?**




source: The Bloomberg

anymore. It's kind of like 12th-century Italy. Yet, that is the world we live in."

The takeaway from this fact pattern is not that we are fated to repeat the events of 2008 but that cash is siloed in banks and, owing to the post-Lehman regulatory apparatus, may not reach the right hands in the urgent moment.

"We've tended to assume that liquidity is constant and will never change," says Dean Curnutt, the CEO of Macro Risk Advisors. "We are getting ample evidence, not just through repo failure but through other recent market events, that this jump to illiquidity conditions is very real. We are likely to see more of it, especially as we are in this period of people worrying about central-bank efficacy, and they are worried about the state of the global economy."

There's a lot of worry to go around. Last week, the Fed instituted a series of overnight and term repo facilities, weighed the need for a standing repo facility and—on Sept. 26—was the recipient of some free advice from a pair of Federal Reserve alumni to resume quantitative easing with an outright infusion of $250 billion.

Sleepless, an investor may therefore imagine a matched set of monetary risks: On the one hand, an illiquidity-driven selling panic; on the other, a liquidity-powered buying panic. Still tossing and turning, he redirects his thoughts to the 2020 elections.

How to protect one's net worth in these interesting times? Buying a put on the S&P 500 may spring to mind first. The 2800 (5% out of the money) strike on the March 31, 2020 expiry is priced at 97.40. It means that our investor would gain if the market falls to 2702.60, or by 8.1%. Of course, if the market does not drop by 8.1% in six months, he'd lose.

For the well-to-do enterprising investor (the kind who can deal in options written by an investment bank or brokerage house), there are other choices. Mindful of this year's rate-induced stock-market rally, he could investigate a rate-contingent put. It would come into the money if, within six months, the S&P 500 slipped by 5% *and* the 10-year swap rate, which currently stands at 1.54%, went up by 20 basis points, to 1.74%. Such things could happen. After all, it was the decline in that swap rate, to 1.54% from 2.7% at year-end, that catalyzed this year's S&P lift-off.

According to Curnutt, this option is 70% cheaper than its exchange-traded, vanilla-equivalent put. The fact that stocks drop so consistently when rates rise and vice versa (negative correlation in finance-speak) is what creates the opportunity. "That's how the model prices the option," he says.

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Back, now, to the public markets and to flyers on the latent illiquidity of bonds. We have a pair of securities in mind: iShares iBoxx Investment Grade Corporate Bond ETF (LQD) and iShares iBoxx High Yield Corporate Bond ETF (HYG; both on the NYSE Arca).

In each case, the seller of shares, or the buyer of puts, would be laying down a bet on a day of reckoning for the ETF structure itself. It's an appealing structure in a rising market, all right, but a potentially troublesome one in a falling market. For the ETF shareholder, selling is effortless—you just say the word. It's not so easy for the ETF manager, who must find buyers for the bonds in the portfolio in order to acquire the cash with which to pay the departing equity holders.

We outlined this idea in the Dec. 14 issue of *Grant's*, leaning heavily on the work of Adam Schwartz, paid-up subscriber and founder and chief investment officer of Black Bear Value Partners, L.P. It was a winner in 2018, Schwartz relates, but not so in 2019, with LQD and HYG logging gains of 15.8% and 11%, respectively, including reinvested dividends.

Schwartz is as puzzled as we are by the September repo kerfuffle. If you can't finance Treasurys even for a day or two, except at crisis-level rates, and in a pretty fair economy, he asks, how do you expect to trade, and to finance, corporate debt in a poor economy—or, for that matter, in an economy good enough to warrant increasing rates? "It gives me pause when there is a lack of liquidity in what should be the most liquid market in the world."

Schwartz says he finds puts on the LQD particularly attractive. The ETF sports a yield of 3% and an effective duration of 9 years. Let's say the 10-year government yield jumps by two percentage points to 3.6% and that the spread between investment-grade bonds and Treasurys, currently 122 basis points, remains constant. This would lead to an 18% reduction in the LQD (the 9 duration multiplied by two to express that two percentage-point rate rise). Such a scenario would produce for the holders of the January 2021 puts with a 121 strike (5% out of the money) a profit 5.4 times the premium paid.

The investment-grade bond universe is split down the middle between triple-B and single-A/double-A. "I'm not worried about the single-As and double-As," says Schwartz. "I'm worried about the triple-Bs, which keep borrowing more money. The story is, rates are low so they can keep on refinancing, but what if that changes? You make a little before losing a lot. The key to investing is to make a lot and lose a little."

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According to Bank of America Merrill Lynch, 38% of the global fund managers surveyed in September are looking for a recession next year, the biggest proportion since August 2009 (which happened to mark the second month of what has proven to be the nation's longest business expansion).

"Inflation compensation isn't just low, it is negative," Curnutt observes. "You are getting nothing in compensation for inflation, given where the yield curve looks and where rates are." Thus, the 10-year Treasury yields only nine basis points more than the two-year while the 10-year and three-month bill curve is inverted.

"So, let's take an example where inflation starts to show up, and then you see some risk premium in the longer part of the yield curve," Curnutt goes on. "Maybe all rates go up, but it starts to show up in the 10-year breakeven, which would go up a lot. What you will see is a bear steepening of the yield curve. The whole yield curve goes up, but it is tilted to the back end because that is the view of future inflation. You can buy an option that bets on the spread of 2s/10s expanding."

Well, maybe you can't, if you don't invest for a living, but anyone can take a flutter on the listed Quadratic Interest Rate Volatility and Inflation Hedge ETF (IVOL on the NYSE Arca). IVOL owns Treasury inflation-protected securities (87.4% of the portfolio as of Sept. 25), cash (9.7%) and options betting on a wider 10-year/two-year curve. The fund, which charges a 1% management fee on its $61 million in assets, has a 30-day yield of only 0.44% but offers high returns if the yield curve

widens. For more on the IVOL, see the issue of *Grant's* dated May 17, 2019.

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EZ monetary policy will either work its magic or backfire. How to prepare for these polar-opposite contingencies? Buy stocks and place your hope in central banks? Expect the worst and buy bonds? Buy both and pray the gains from one asset class offset the losses from the other?

Enter here the power of negative rates and compound returns. Options are valued on a forward price, not on the current price at which the referenced asset is trading. What is the forward price? You find it, in large part, by subtracting expected dividend payments from an assumed rate of interest. If that rate were negative, you would confront a problem you might have encountered in middle school: namely, subtracting a positive number from a negative number, giving you an even more negative number. Multiply the current price of an equity index by this negative number, and you will find that the forward price is below the spot. Longer-term options thus come cheaper in countries where interest rates are negative.

Today, the Nikkei trades at 21,885. Using the negative rate on offer in Japan and the estimated future dividend strip, the fair value of the Nikkei in 2029 is 17,160. That's approximately *22%* below the spot price. According to bond quant Harley Bassman, this alignment of rates and prices makes it possible—i.e., possible for a professional—to fund the purchase of a 10-year Nikkei call with the sale of a 10-year Nikkei put. Thus, if you, the pro, are still with us, sell the 10-year put at a 13,750 strike price; it's 37.2% out of the money. With the proceeds of that sale, buy a 10-year call with a 24,000 strike; it's 9.7% out of the money. Both options cost approximately ¥2,100 today.

The net result? If the Nikkei rallied by 9.7% or more in a decade, you would own the index at a 24,000 cost basis. If the Nikkei fell by 37.2% or more in a decade, you would own (by selling a put you are effectively long a call) the index at a 13,750 cost basis.

"If the Nikkei gets down to 13,000, you are buying cans of tuna and guns," Bassman tells me. With a 15.7 times price-to-earnings ratio, Japan is already cheaper than the United States (19.3 times on the S&P 500), Britain (17.8 times on the FTSE 100) and Germany (19.9 times on the DAX). Your options and you would be losers if the index spent the next decade loitering between 13,750 and 24,000.

Bassman, author of the blog Convexity Maven, has been down this road before. "The best one I ever did is almost coming due right now," he says. "I did S&P 500 1800 vs. 850 10-year options [a call and a put, respectively] in 2010. Think about that. I created this as a structured note at Merrill Lynch. I got five guys to do it: myself, my partner, the salesman and two clients. That is it. I went to 40 trading managing directors at Merrill Lynch in 2010, and no one would do it. Are you nuts? Look at this over here. It is a structured note with a 9:1 payoff on the upside vs. a 1:1 loss on the downside."

Of course, if you are a non-Japanese investor, the rise or fall in the yen will also figure in your returns. Here, too, monetarily medicated markets play to your favor. If you wanted to buy a two-year call on the USD/JPY exchange rate (a bet that the yen will weaken against the greenback) with a strike price of 100 yen to the dollar (vs. the current exchange rate of 107.7), you have the opportunity in a non-exchange-traded derivative. It would cost 5.75% of notional, or $57,500 on a $1 million contract. However, the seven-year contract with the same strike price only costs 3.75%. "Indeed, you read this correctly, the seven-year option costs 35% less (two percentage points) than the two-year option," Bassman writes. "To end the suspense, it is the seven-year option that is the 'wrong price' at 3.75%."

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"The smart institutional investor right now is thinking about ways to potentially hedge the portfolio and is looking at allocations to go long volatility, is looking at allocations to intelligent global macro that have vol components to it and potential allocations to [commodity-trading advisors]," Christopher Cole, founder and CIO of Artemis Capital Management, L.P., tells me. "These are strategies that are either implicitly or explicitly long volatility. In a nutshell, you want to look to strategies that benefit from change, not strategies that are reliant on mean reversion. A lot of the things that probably don't have great three-year track records, that don't look so great in the rearview mirror, are the things that you want to be looking at in a period where the cycle is undergoing significant changes."

Wouldn't it be fine, Cole goes on, if you could buy fire insurance on the eve of a fire? Or, at least, when the risks of a conflagration are objectively highest? The Artemis Hedgehog strategy, two months old and managing $84 million (minimum investment is $10 million), tries to do exactly that.

The M.O., says Cole, is to sift decades' worth of cross-asset conditions to identify patterns that signal shifts in volatility regimes. It's not just a hunt for the next crash—the fund is impartial between meltdowns and melt-ups, he says, and "volatility shifts on both the right and the left tail." But sometimes there is nothing to do, in which case, says Cole, Hedgehog does nothing.

"The reason we call it Artemis Hedgehog is that hedgehogs have been alive for 15 million years," the founder adds. "They have outlasted dinosaurs."

He recalls the Isaiah Berlin line about the fox knowing many things but the hedgehog only one: "What the hedgehog knows, in essence, is defense. Obviously, if the hedgehog was playing defense all the time, it wouldn't be able to eat. But that simple strategy of being able to be defensive and get spikey the way that a classic hedge fund should do—we took inspiration from the animal."

Artemis Hedgehog offers a range of fee schedules and comes with an optional market overlay (i.e., going long the S&P 500 alongside an allocation to the fund). No fees or expenses are attributed to the market overlay, says Cole.

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