PIMCO's Global Central Bank Focus

Paul McCulley
PIMCO
Managing Director,
Portfolio Manager

The Uncomfortable Dance Between V'ers and U'ers

Around the world, in investment committee meetings and on trading floors (and at the Fed!), one question dominates discussion and debate:

> *How can it be that risk assets, notably common stocks, have been roaring ahead, presumably discounting a robust V-shaped economic recovery, while Treasury bonds are holding their own with a bull flattening bias, presumably rejecting the V-shaped hypothesis, instead discounting a U-shaped recovery as the base case, with a W-shaped outcome the dominant risk case?*

One of these markets is wrong, it is commonly argued; the only question is which one. In the longer run, we here at PIMCO certainly agree, siding with the U-shaped camp. But that does not necessarily mean that one of the markets must necessarily capitulate to the other in the months immediately ahead. And the unifying explanation is simple: The Fed is committed to maintaining "exceptionally low levels of the Federal funds rate for an extended period." The Fed is also openly committed to being extraordinarily careful in reducing its elevated balance sheet, implying that a very elevated level of excess reserves/liquidity will be sloshing through the financial system for a long time.

To be sure, the Fed has been communicating repeatedly, with academic flourish, the technical details of its ability to eventually hike its policy rate, even with a bloated balance sheet and massive excess reserves:

- Hiking, via its newly-granted powers of last fall, the interest rate it pays on excess reserves (IOER), which should act as a floor for the more visible Fed funds rate; and
- Reducing excess reserves directly through massive reverse repurchases, including using tri-party repo arrangements, effectively augmenting the universe of counterparties beyond the capital-constrained primary dealers, to include liquidity flush end users.

But the Fed has also gone out of its way to communicate that discussions are about the "how" of its exit strategies, not a signal as to the "when," in the phraseology of the *Financial Times'* Krishna Guha. Thus, not only is the price of Fed liquidity set to hover near zero for an extended period, but the sheer volume of Fed-supplied liquidity is also likely to be flush for an extended period. In turn, as long as the Fed retains ownership of its longer-dated assets, sterilizing their liquidity effect via reverse repos, the Fed will remain not just the arbitrator of the Fed funds rate, but will also be a holder of market risk previously borne by the private market.

Thus, while rich risk asset prices can certainly be viewed as a consensus expectation for a strong recovery, such lofty valuations can also be viewed as a consensus expectation about the Fed's commitment to erring on the side of being too late, rather than too early, in starting a Fed

Allianz Global Investors

funds tightening cycle. Indeed, one could actually be agnostic, even antagonistic, about a big-V recovery and still be favorably disposed to risk assets, in the short run. Historically, what pounds risk asset prices is either a recession or unexpected Fed tightening; or worse, both. Right now, it is hard to get wrapped around the axle about recession, since we've just had one, which might not even be over.

To be sure, the economy could have back-to-back recessions, as was the case in 1980 and 1981–1982. But that episode was associated with massive Fed tightening in 1979–1980, followed by massive easing in the middle months of 1980, followed by massive Fed tightening yet again, as Paul Volcker waged a two-step war against inflation. Presently, the Fed is openly declaring that it will maintain near-zero short rates for an "extended period," in the context of inflation below its implicit target.

Thus, as long as economic recovery appears underway, even if stoked primarily by (1) policy stimulus and (2) a turn in the inventory cycle, there is no urgent reason for investors to run from risk assets. Put differently, investors can be agnostic about (3) the strength of private demand growth until the one-off forces supporting growth exhaust themselves, as long as they don't have fear of Fed tightening.

In turn, a bull flattening bias of the Treasury curve, with longer-dated rates falling toward the near-zero Fed policy rate, can be viewed as a consensus view that the level of the output/unemployment gap plumbed during the recession is so great that disinflationary forces in goods and services prices, and perhaps even more important, wages, will be in train, even if growth surprises on the upside. Accordingly, Treasury players, like their equity brethren, need not fear the Fed, as there is no economic rationale for an early turn to a tightening process.

Thus, both rich risk markets and the lofty Treasury market can be viewed as rational in their own spheres, even if they are seemingly irrational when compared to each other. The tie that binds them, that allows them to co-exist, need not be a common view regarding the prospective strength of the recovery, but rather a common view as to the Fed's friendly intent and reaction function.

But, you retort, this can't go on forever – at some point, risk assets will have to capitulate to reality if the big-V does not unfold, no? Yes, but it is not quite as simple as that. Without the big-V, Treasuries will tend to bull flatten, soothed by rational expectations of an extended period of the Fed funds rate pinched against zero. In turn, such a path for Treasuries would provide valuation support for risk assets. How so?

All risk asset prices are analytically the Net Present Value of expected growth in cash flows, discounted by the appropriate-duration risk-free rate plus a risk premium. Thus, expectations of a friendly-for-longer Fed policy would be supportive of risk assets, as they (1) tend to pull down long-duration risk-free rates, while also (2) pulling down the market-required risk premium (which moves inversely with investors' animal-spirited risk appetite, which moves inversely with fears of Fed tightening).

To be sure, this fundamental valuation framework —known as the Gordon Model—also implies that in real terms, the positive P/E effect of low long-term risk-free rates is moderated to the extent that the non-big-V scenario also implies lower growth in real profits. There are no free lunches. But since real long-term

Treasury rates trade in real time, while "new-normalized" real growth rates are uncertain, subject to animal-spirited conjecture, friendly real long-term interest rates will tend to dominate the formulation of P/Es.

Thus, ironically, the biggest intermediate-term risk for risk assets is not that the big-V doesn't unfold, but that it does, inciting the Fed to bring the extended period of a near-zero policy rate to a close. But again, you retort, doesn't that imply that in the absence of the big-V, risk asset prices could levitate into bubble valuation space? Yes, it does mean that. And that is a very, very uncomfortable proposition for those grounded in fundamental analysis, as I am.

The Efficient Market Hypothesis in Retreat

But such discomfort is likely to be an enduring fact of life on the journey to the New Normal. Recall, a core tenant of "fundamental analysis" is the efficient market hypothesis, which presupposes that rational investors will, given time, always pull nominal—and real—values back toward their "fundamentally justified" levels. Yes, there will be noise in real time, the hypothesis allows, but it also holds that neither irrational gloom nor irrational exuberance will go to extremes: momentum players will, in the end, always be trumped by value players, before momentum players have done any great harm. Market failures, capitalism's equivalent of estrangement in families, are simply assumed away. They are not supposed to happen; therefore, they won't.

But they do. Such was the case with the Forward Minsky Journey1 that unfolded alongside the Great Moderation for twenty-five years after the recession that ended in 1982. Ever-increasing private sector leverage was applied on the presumption that the Great Moderation was a perpetual motion machine, rather than an epoch that would eventually implode on its own debt-deflationary pathologies, as Minsky envisaged. Nominal asset prices, notably property, became bubbly-unmoored from "fundamental" value, yet both borrowers and lenders were willing to "validate" those unmoored <u>levels</u> with legally binding nominal debt obligations—hedge debt units followed by speculative debt units followed by Ponzi debt units.

It all blew up, of course, with not just trillions of net worth destroyed, but also the wisdom of religious belief in the efficient market hypothesis. Thus, as we look forward, a huge amount of humility is warranted in projecting asset returns on the basis of tight bands around what "fundamentals" suggest constitute fair value. Yes, there is no substitute for fundamental analysis; it remains at the core of investment management. But asset values can stray far, very far, away from their putative "fair" levels, much, much further than was the case during the middle-aged years of the Great Moderation. The efficient market hypothesis may not be dead, but it is most assuredly in retreat.

Behavioral Economics and Finance in Ascendency

In contrast, the insights of behavioral economics and finance are very much in ascendency. This personally brings me great satisfaction, as both of my macroeconomic heroes, John Maynard Keynes and Hyman Minsky, were quintessentially behavioral economists, starting with the proposition that developing a theory as to how the world <u>does</u> work is much more productive than developing a theory as to how the world <u>should</u> work. That's not to suggest that there is not room for both types of theorizing. Indeed, one without the other is silliness, and both Keynes and Minsky did both.

And the envelope between those two modes of theorizing is the fact that the future is inherently uncertain. That might not sound like a profound assertion, and it isn't. We all intuitively know that. But the efficient market hypothesis conveniently assumes away that reality, in what is technically called the "ergodic axiom"—that past and current relationships between variables are reliable predictors of future relationships between variables. This assumption holds in astronomy, which is why astronomers can forecast with incredible accuracy when the next lunar eclipse will unfold.

This assumption also holds in calculating the risk of any given hand in a defined card game—there are 52 cards in the deck and it is quite possible to calculate with great precision the odds of winning the game, such as Blackjack or Poker. That doesn't mean that you can know with precision whether you will win, simply that you can forecast the odds of any given player winning, given the cards in their hands and other players' hands, in the context of what cards are left in the deck. Indeed, I find it amusing when television shows broadcasting such games flash up the odds of any player winning after each card is dealt. There is risk, but not uncertainty—we know there are 52 cards in the game and we know what constitutes a winning hand. The ergodic axiom holds.

In investment markets, however, the ergodic axiom doesn't hold, even though it is implicitly assumed in the efficient market hypothesis (but ironically, not in the legal disclaimers of all investment presentations, which state that past results are not necessarily indicative of future results!). In investment markets, genuine uncertainty exists: We can't assume that we know how many cards will be in the future deck or what will constitute a winning hand. That's not risk, but rather uncertainty.

And how do we deal with it? As Keynes explained in Chapter 12 of the *General Theory*, we deal with it by falling back on convention, or rules of thumb. In his words:

> *"Certain classes of investment are governed by the average expectation of those who deal on the Stock Exchange as revealed in the price of shares, rather than by the genuine expectations of the professional entrepreneur. How then are these highly significant daily, even hourly, revaluations of existing investments carried out in practice?*
>
> *In practice, we have tacitly agreed, as a rule, to fall back on what is, in truth, a convention. The essence of this convention—though it does not, of course, work out so simply—lies in assuming that the existing state of affairs will continue indefinitely, except in so far as we have specific reasons to expect a change. This does not really mean that we really believe that the existing state of affairs will continue indefinitely. We know from extensive experience that this is most unlikely.*
>
> *The actual results of an investment over a long term of years very seldom agree with the initial expectation. Nor can we rationalize our behavior by arguing that to a man in a state of ignorance; errors in either direction are equally probable, so that there remains a mean actuarial expectation based on equi-probabilities. For it can easily be shown that the assumption of arithmetically equal probabilities based on a state of ignorance leads us to absurdities.*

We are assuming, in effect, that the existing market valuation, however arrived at, is uniquely correct in relation to our existing knowledge of the facts which will influence the yield of the investment, and that it will only change in proportion to changes in this knowledge; though, philosophically speaking, it cannot be uniquely correct, since our existing knowledge does not provide a sufficient basis for a calculated mathematically expectation. In point of fact, all sorts of considerations enter into market valuations which are in no way relevant to the prospective yield. Nevertheless the above conventional method of calculation will be compatible with a considerable measure of continuity and stability in our affairs, so long as we can rely on the maintenance of the convention. For if there exist organized investment markets and if we can rely on maintenance of the convention, an investor can legitimately encourage himself with the idea that the only risk he runs is that of a genuine change in the news over the near future, as to the likelihood of which he can attempt to form his own judgment, and which is unlikely to be large. For, assuming that the convention holds good, it is only these changes which can affect the value of his investment, and he need not lose his sleep merely because he has not any notion what his investment will be worth ten years hence.

Thus investment becomes reasonably 'safe' for the individual investor over short periods, and hence over a succession of short periods however many, if he can fairly rely on there being no breakdown in the convention and on his therefore having an opportunity to revise his judgment and change his investment, before there has been time for much to happen. Investments which are 'fixed' for the community are thus made 'liquid' for the individual."

Those few paragraphs, my friends, are the foundation of modern behavioral economics and finance. Human beings, including investment managers, face both risk and uncertainty, and deal with uncertainty by resorting to conventions, notably that yesterday is the best predictor of today, and that today is the best predictor of tomorrow. George Soros calls it reflexivity.

But when that comforting convention is overwhelmed by a new reality, all hell breaks loose. Uncertainty can no longer be simply assumed away. And when that happens, human beings tend to disengage, eschewing investment in favor of building up cash reserves. And if this proclivity becomes both widespread and profound, we find ourselves in Keynes' Liquidity Trap—there is plenty of money around, but risk-averse investors, infected with uncertainty, refuse to "put it to work"—on either Wall Street or Main Street. Such was the case a year ago, following the fateful decision to let Lehman Brothers fall into a watery grave.

The way out of that lacuna was for (1) the fiscal authority to step into the breech and borrow money from the newly risk-averse, putting it to work to recapitalize the banking system and on Main Street in support of aggregate demand; and for (2) the monetary authority to drive the interest rate on money to zero and promise to hold it there for an extended period, making holding cash very painful while reducing uncertainty, re-exciting investors' risk appetite.

Bottom Line

Fiscal and monetary authorities around the world have done exactly that over the last year, and since April, in the words of the G-20, it has "worked." Well, at least on Wall Street, where risk appetite is in full bloom. Whether or not that renewed risk appetite finds its way to Main Street is the key question beyond the immediate horizon.

PIMCO's Global Central Bank Focus

We here at PIMCO think it will, but only in a muted way, not a big-V way. We also recognize, however, that markets can stray quite far from "fundamentally justified" values, if there is a strong belief in a friendly convention, one with staying power. And right now, that convention is a strong belief in a very friendly Fed for an extended period. Thus, the strongest case for risk assets holding their ground is, ironically, that the big-V doesn't unfold, because if it were to unfold, it would break the comforting conventional presumption of an extended friendly Fed.

Simply put, big-V'ers should be wary of what they wish for. U'ers, meanwhile, must be mindful of just how bubbly risk asset valuations can get, as long as non-big-V data unfold, keeping the Fed friendly. But that's no reason, in our view, to chase risk assets from currently lofty valuations. To the contrary, the time has come to begin paring exposure to risk assets, and if their prices continue to rise, paring at an accelerated pace.

Paul McCulley
Managing Director

About the Author

Paul McCulley is a PIMCO managing director and generalist portfolio manager, and a member of their investment committee. He also heads PIMCO's short-term bond desk and leads their cyclical economic forums. He holds an MBA from Columbia Business School and an undergraduate degree from Grinnell College.

1. "The Shadow Banking System and Hyman Minsky's Economic Journey", Global Central Bank Focus, May 2009, http://www.pimco.com/LeftNav/Featured+Market+Commentary/FF/2009/Global+Central+Bank+Focus+May+2009+Shadow+Banking+and+Minsky+McCulley.htm