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# Investment Outlook

*from Bill Gross*

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## Zeno's Paradox

I once wrote that a good “bond manager” should metaphorically be composed of 1/3 mathematician, 1/3 economist and 1/3 horse trader. I still stand by that, although I would extend it now to the entire investment arena, especially after experiencing several years of “unconstrained” asset management. Surprisingly though, upon reflection, I find that personally I was never really an “A+ student” at any of the 3 but good enough at each to provide consistent long term alpha and above average profits for clients. In math, for instance, I was a 720 SAT guy but certainly nowhere near 800 status. In economics, I never got beyond Samuelson and an introductory MBA class at UCLA Anderson, but was self-educated enough to have forecast and ridden the secular bond bull market beginning in 1981, and fortunate enough – though “addled” – to have predicted the housing crisis, as well as named and described the “New Normal” that would follow. Horse trader? Well that’s an even more subjective assessment but I can remember being a rather mediocre fraternity poker player. You could usually bluff me out of a big pot, and these days in the market I find myself turning right sometimes when I should be going left. Whatever. B+, A-, B is how I would grade myself but the returns and the relative alpha compared to contemporaries proved to be the real scorecard, and I’m happy with the result, acknowledging of course that some in the “classroom” I worked and work with at PIMCO and Janus earned Summa Cum Laude status and more themselves.

But back to the 1/3 math thing. It’s there that I find the average lay and even many professional investors still thinking and managing assets at the grade school level. The childlike “teeter totter” principle, for instance which couldn’t be simpler in its visualization of bond prices going up when interest rates go down, produces foggy-eyed reactions from a majority of non-professionals, and from a few supposed experts as well. And too, the concept of longer maturities inducing more risk for bond holders seems to stump many. Heaven forbid the introduction of the more refined concepts of duration and forward yield curves as well as the extension into stocks with the addition of an equity “risk premium” and how it might be calculated. “Forget about the math,” many investors really seem to say – “let’s stick to the old Will Rogers adage, ‘If a stock is going to go up – buy it. If it ain’t going up – don’t buy it!’”

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Well today's markets are markets that increasingly will be dominated by math, not Will Rogers. And negative interest rates are front and center. To explain, let me introduce a twister I first came across during one of my high school math classes known as Zeno's paradox. Zeno was an ancient Greek who posed the following conundrum: Imagine a walker heading towards a finish line 10 yards away but every step he took was half of the length of the step he took before. If so, even if he walked an infinite amount of steps he could never reach his destination. Mathematically correct but the real world resolution was that Zeno's walker and everything else that we experience moves forward in full step integers as opposed to fractions. It was a mathematical twist only.

But there is no "math only" twist to today's bond and investment markets. Negative interest rates are real but investors seem to think that they have a Zeno like quality that will allow them to make money. In Germany for instance, 5 year Bunds or OBL's as they are called, yield a negative 30 basis points. That produces a current price of 101.50 at a 0% coupon that guarantees, guarantees that an investor will get back 100 Euros 5 years from now for every 101.50 Euros she invests today. Why would a private investor (the ECB has a different logic) buy a 5 year OBL at a minus 30 basis points and lock in a guaranteed loss? Well credit and electronic money has its modern day disadvantages in that you can't withdraw billions of physical Euro Notes from the local bank, nor can banks withdraw some from the central bank. You have to buy something and that's the yield that's artificially being imposed. Besides, the purpose of it is to force the investor to buy something with a positive yield further out the maturity spectrum or better yet with a little or a lot of credit risk to get inflation and the economy's growth engine started again. Seemingly logical, but as I've pointed out in recent years – not working very well because zero and negative interest rates break down capitalistic business models related to banking, insurance, pension funds, and ultimately small savers. They can't earn anything!

Anyway, for those private investors that continue to hold 5 year OBL's and lock in a guaranteed loss 5 years from now, many of them are using a bit of Zeno's paradox to convince themselves that they will never reach the loss-certain finish line at maturity. They think that because 4 year OBL's yield even less (-40 basis points), the 5 year OBL's will actually go up in price (remember the teeter totter?) if 4 year rates stay the same over the next 12 months, and the ECB has sort of – sort of – promised that. Whatever it takes, you know. If so, the private investor will actually make a little money over the next year (10 basis points) and she can give herself a slap on the back for having eluded the ECB's negative interest rate trap!

Ah but Zeno's, Draghi's, Kuroda's, and even Yellen's paradox is actually just that – a paradox. Some investor has to cross the finish/maturity line even if yields are suppressed perpetually, which means that the "market" will actually lose money. Yet who cares about Zeno and a bunch of 5 year OBL investors? Well 30-40% of developed bond markets now have negative yields and 75% of Japanese JGB's do. Still who cares about them, just buy high yield bonds or even stocks to avoid Zeno's paradoxical trap. No! All financial assets are ultimately priced based upon the short term interest rate, which means that if an OBL investor loses money, then a stock investor will earn much, much less than historically assumed or perhaps might even lose money herself. Yields have been at 0% or negative for years now across most developed markets and to assume that high yield bond and equity risk premiums as well as P/E ratios have not adjusted to this Star Trek interest rate world is to believe in – well to believe in Zeno's paradox.

The reality is this. Central bank polices consisting of QE's and negative/artificially low interest rates must successfully reflate global economies or else. They are running out of time. To me, in the U.S. for instance, that means nominal GDP growth rates of 4-5% by 2017 – or else. They are now at 3.0%. In Euroland 2-3% - or else. In Japan 1-2% - or else. In China 5-6% - or else. Or else what? Or else markets and the capitalistic business models based upon them and priced for them will begin to go south. Capital gains and the expectations for future gains will become Giant Pandas – very rare and sort of inefficient at reproduction. I'm not saying this will happen. I'm saying that developed and emerging economies are flying at stall speed and they've got to bump up nominal GDP growth rates or else. Cross your fingers. Zeno's paradox was a mathematical twist only and the artificial/negative interest rate world created by central bankers has similar logic. The real market and the real economy await a different conclusion as losses from negative rates result in capital losses, not capital gains. Investors cannot make money when money yields nothing. Unless real growth/inflation commonly known as Nominal GDP can be raised to levels that allow central banks to normalize short term interest rates, then south instead of north is the logical direction for markets.

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