



Investing in a Low-Growth World

Jeremy Grantham

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We Have Met the Enemy, and He Is Us

Ben Inker

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This quarter I will review any new data that has come out on the topic of likely lower GDP growth. Then I will consider any investment implications that might come with lower GDP growth: counter intuitively, we find that investment returns are likely to be more or less unchanged – a little lower only if lower growth brings with it less instability, hence less risk. Finally I will take a look at the reaction to last quarter’s letter, specifically about my outlook for lower GDP growth.

Recent Inputs on a Low-Growth Outlook

Some information came out after the 4Q 2012 Letter or was missed by us and is worth mentioning. First, the Congressional Budget Office slashed its estimate of the U.S. long-term growth trend from 3.0% to 1.9%! Given the source and the magnitude of the adjustment, I think it is fair to say that their number is “close enough for government work” to our 1.5%. At least it is within negotiating distance. Next, a report from Chris Brightman of Research Affiliates actually came out a week before ours and concluded that long-term GDP was 1.0%, a number that really corresponds to our 1.5% because his report has no reference to our two special factors, resources and climate, which take our 1.5% to 0.9%. I was encouraged by the solidness of his research. It also led me to an article in the Financial Analysts Journal (January-February 2012) by Rob Arnott and Denis Chaves. Rob has been writing about the effects of age cohorts on investment returns for almost as long as I can remember, with the central idea that older people are sellers of assets – houses as well as stocks – that younger members of the workforce buy. But they also include the aging effect on GDP growth, which he shows taking a real hit in all developed countries (except Ireland). They are commendably careful in suggesting that their model may be wrong. When or if you read this article, you will certainly hope that it is indeed wrong, for their models estimate from past experience a far greater drop in GDP growth than our work assumed last quarter. And they certainly attacked that aspect in far greater detail than we did. We had included in our report the effect of aging on the total percentage of the population of working age: there are simply fewer workers and more retirees in the distribution. But Rob and Denis (sorry for the liberty) introduce the incremental idea, apparently provable, that older workers lose productivity, no doubt much more in heavy manual work than, say, in writing this. But definitely alas, including all activities with dire consequences, they argue for productivity and GDP growth.

Would Lower GDP Growth Necessarily Lower Stock Returns?

This is where I break ranks with many pessimists because I believe theory and practice strongly indicate that lower GDP growth does not directly affect stock returns or corporate profitability. (At least not in a major way for, as we shall see later, there may be some indirect or secondary effects that may very modestly lower equity returns.)

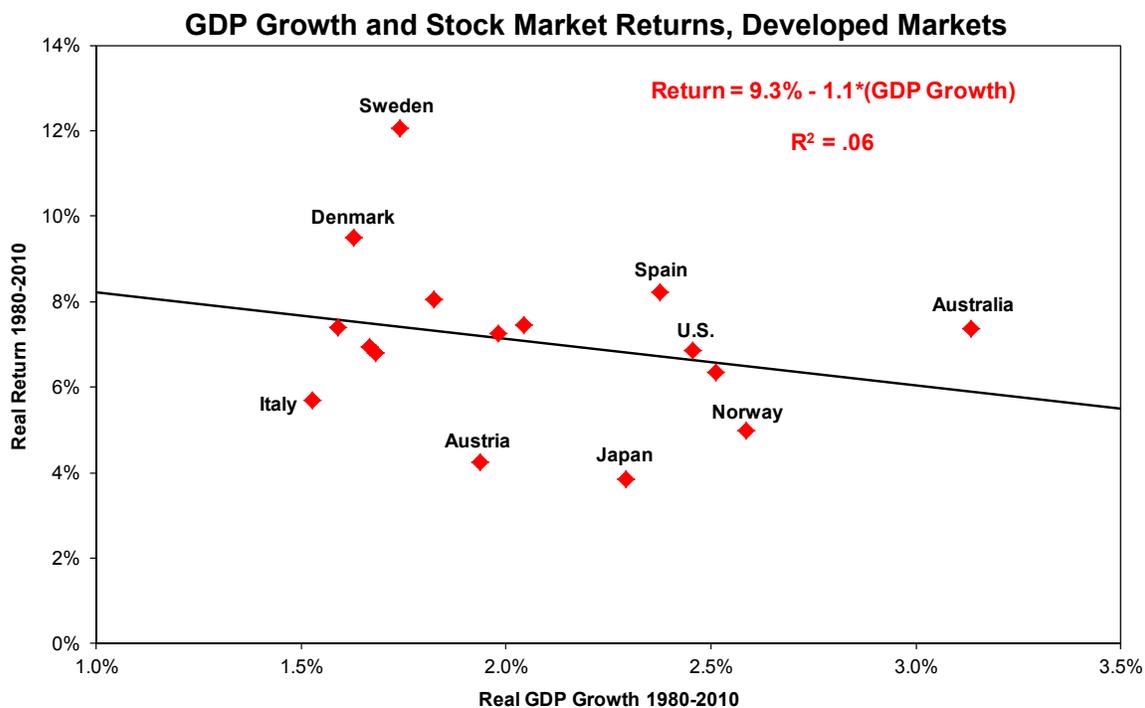
All corporate growth has to funnel through return on equity. The problem with growth companies and growth countries is that they so often outrun the capital with which to grow and must raise more capital. Investors grow rich not on

earnings growth, but on growth in earnings per share. There is almost no evidence that faster-growing countries have higher margins. In fact, it is slightly the reverse.

For there to be a stable equilibrium, assets, including entire corporations in the stock market, must sell at replacement cost. If they were to sell below that, no one would invest and instead would merely buy assets in the marketplace cheaper than they could build themselves until shortages developed and prices rose, eventually back to replacement cost, at which price a corporation would make a fair return on a new investment, etc.

The history of market returns completely supports this replacement cost view. The fact that growth companies historically have underperformed the market – probably because too much was expected of them and because they were more appealing to clients – was not accepted for decades, but by about the mid-1990s the historical data in favor of “value” stocks began to overwhelm the earlier logically appealing idea that growth should win out. It was clear that “value” or low growth stocks had won for the prior 50 years at least. This was unfortunate because the market’s faulty intuition had made it very easy for value managers or contrarians to outperform. Ah, the good old days! But now the same faulty intuition applies to fast-growing countries. How appealing an assumption it is that they should beat the slow pokes. But it just ain’t so. And we at GMO have (somewhat reluctantly for competitive reasons) been talking about it for a few years. Exhibit 1, shown by us before, shows the moderately negative correlation between

Exhibit 1 GDP Growth Unrelated to Stock Returns



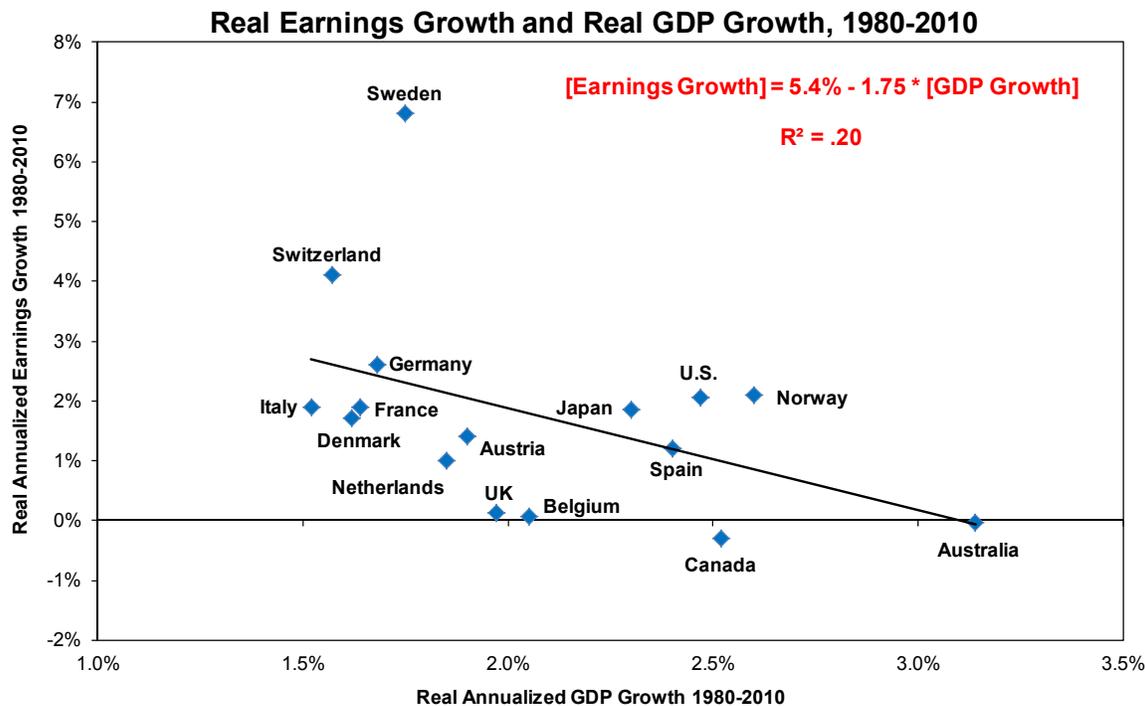
Source: MSCI, S&P, Datastream As of 12/31/10

GDP growth by country along with their market returns. This is shown for the last 30 years only and for developed countries only, but in earlier work (which can be found on our website¹) we went back a hundred years for some developed countries and looked at emerging country equity markets as well and all had the same negative correlations. When I asked my colleague Ben Inker if this was for the same reason that growth companies underperform – that

¹ See Ben Inker’s white paper, Reports of the Death of Equities Have Been Greatly Exaggerated: Explaining Equity Returns, August 10, 2012 at www.gmo.com (registration required).

they are overpriced – Ben came up with another completely sufficient explanation (in about 10 seconds): the faster-growing countries, at least for the last 30 years, have simply had more slowly-growing earnings per share. This is shown in Exhibit 2. For the record, there is also: a) a moderate relationship between higher-priced countries (on Shiller P/E and price/book) and future underperformance; and b) a tendency for more rapidly-growing countries to be overpriced. Therefore we can deduce a logically appealing (but statistically weak) tendency for overvaluation to contribute a second reason for the market underperformance of more rapidly growing countries. (Please notice how carefully said that is.)

Exhibit 2
Earnings Growth Is Negatively Correlated with GDP



Source: MSCI, S&P, Datastream As of 12/31/10

Would Lower Real Rates Lower Stock Returns?

Economic theory can't get everything completely wrong, and perhaps one thing economists have gotten partly right is that the risk-free rate has some relationship to the growth rate of the economy. If that rate approaches zero, there is clearly less demand for new capital; in fact, given accurate depreciation accounting, there would be zero net new capital required. It is also easy to see the risk-free rate settling at something around nil. The risk premium, however, might be little affected. The demand for risk capital – e.g., to replace an old plant, resulting in no new net growth – would still require that the investor expect an adequate return. If it looked likely to be less than that, he would of course withhold his capital until inevitable shortages pushed up profits enough for the corporation to get a satisfactory return, as we have often discussed.

However, and I bring up this complicated issue with trepidation, it does seem possible that in a world with both lower growth and a lower risk-free rate that the risk premium might also drop a little. A lower growth world might plausibly be less volatile because managing a world where the apparent growth is 1.5% (and real growth is 0.9%) is likely to be easier to stabilize than one (as from 1870 to 1995) appearing to grow at 3.4% but actually growing at

3.6%, almost four times higher. (Another way of stating my negative 0.5% resource adjustment, by the way, is to say that the economy's costs are growing at 1.5% but that its utility – or something closer to utility than GDP anyway – is only growing at 0.9%.) If returns to equity holders are to fall, then P/Es must paradoxically rise to bring yields and total returns down. Yet, as always, equities have to sell at replacement cost. Therefore the books have to be balanced by returns on equity falling. This after all seems reasonable – if returns on T-Bills drop and returns to stockholders drop, then a system in balance would suggest that returns on corporate investment also drop. This adjustment would likely be modest and should only occur if a lower-growth world were to become less likely, which is far from certain, merely plausible.

Reflections on Our Work on Lower-Growth GDP

With a few months to reconsider the data, old and new, I would have framed last quarter's issue on declining growth differently to emphasize how routine, even friendly, most of our inputs were. The main new point I wanted to make was that resource costs are treated like GDP increases. Hence, prior to 2002, steadily falling resource costs were treated as a debit when of course steadily lower costs were a great help to well-being and utility. We calculated that adjusted GDP actually grew 0.2% a year faster than stated. Conversely, since 2000, rising costs were a detriment, not a benefit, as shown in GDP. Treated correctly as a negative, resource costs would have reduced real growth by 0.4% a year. This squeeze on growth will continue as long as resource costs rise faster than the growth rate of the balance of the economy. Further, as the percentage of the GDP taken up by resources has recently more than doubled (2002 to 2012), the squeeze on the balance of the economy would also be doubled even if the rate of cost increases stayed constant. Last quarter I estimated that continued increases in resource costs from now to 2050 would lower GDP growth by 0.5%. To prevent that 0.5% effect from accelerating as the share of resources in GDP rises, the rate of resource cost increases must decelerate from the recent 7% a year to a much more modest 2% a year by 2050. (By then, of course, it might well be over the current 7% ... it is just not knowable.) As one can see, this is not nearly as draconian an assumption as it might initially appear to be and in this context it is worth remembering that we don't really know what caused resource prices to spike from 2002 to 2008 so impressively. This was a much bigger price surge than occurred during World War II! Indeed, it may easily turn out that the resource price rises will squeeze future GDP growth substantially more than our estimates.

Although our low estimate of future GDP growth attracted attention and plenty of opposition, it was only produced as a necessary backdrop to show the potential significance of our two new points: the large deduction for a cost squeeze from resources (0.5%) and a very slight but increasing squeeze from climate damage (0.1 rising to 0.4 after 2030), which latter deduction is considered almost ludicrously conservative by that handful of economists that study the costs of climate change. Our work on the traditional aspects of GDP growth was approached by us as a necessary chore; we were not looking for trouble. Consequently, we tried to keep it simple by using the obvious data sources. "Where on earth did GMO get its pessimistic population data?" ran one complaint. Well, would you believe the U.S. Bureau of Census? And as for productivity, we extended the 1.3% average for the last 30 years out for 30 more years. This is clearly a very friendly assumption given: a) the recent 1.3% in productivity growth of the last 30 years had declined a lot from its 40-year surge of 1.8% after World War II; and b) the fact that the segment of much higher productivity – manufacturing – has declined to a mere 9% of total labor from 19% in 1980 and continues to decline. Even my one override, -0.2% a year for the next 18 years as a result of much-reduced capital spending, seems, based on econometric modeling, to be a very modest debit. For there to be so modest a negative effect needs capital spending to drift back toward normal in the relatively near future. And even then this -0.2% effect was exactly offset in our forecast by a +0.2% bonus for the unanticipated surge in fracking activity and the ensuing burst of momentarily cheap energy. So why the fuss? The resource debit merely reflects the remarkably odd GDP accounting that counts an unfortunate surge in necessary costs as a benefit, and the remaining 1.5% is merely reflecting recent data. Higher growth assumption, Mr. Bernanke should be aware, must prove longer-term improvements in productivity or, tougher yet, increased labor input.

Short-Term Behavioral Impacts on the Market from Lower GDP

Of course, in the short term there are always temporary behavioral responses. If GDP growth drops unexpectedly, corporations might easily be caught mis-budgeting or overexpanding (although this current ultra-cautious U.S. corporate system, which only reluctantly makes capital investments, is unlikely to be caught out too badly), and perhaps more importantly investors may be shocked by continuous revenue warnings, which might cause the market to sell off. Recent corporate announcements, while usually still claiming exceptional profit margins and generally hitting earnings targets, are increasingly missing revenue targets and issuing future revenue warnings. We must admit, though, that recent revenue warnings have not stopped the market from rising, nor has the unexpectedly slightly negative growth for the fourth quarter GDP.

Within sectors there would quite likely also be a shift in preferences. Growth stocks might seem relatively more attractive: “If the system isn’t growing, the least I can do is pick a few companies that clearly are still growing.” Perhaps quality franchises would also become more appealing with the logic being that at least in the transition to lower top-line revenue growth, competition would become more severe and, hence, defensive moats even more than usually desirable.

Engineered Low Interest Rates

The Fed’s negative real rates regime, designed to badger us into riskier investments in order to push up equity prices and grab a short-term wealth effect (that must be given back one day when least comfortable and least expected), has gone on for a long and, for me, boring time. This low interest rate period is serving, therefore, as a sneak preview of what a permanently lower rate regime might look like (although any permanently lower rates reflecting lower GDP growth would be by no means as low as these engineered rates that we are currently experiencing). So what are some of these effects? The artificially low T-Bill rates first work their way slowly up the curve. Next, the most obviously competitive type of equities – high yield stocks – begin to be bid up ahead of the rest of the market, as has happened. “I’ve just got to squeeze out some higher rates somewhere, anywhere,” is the pension fund plea. Then, this low rate competition begins to filter into other securities, historically sought after for their higher yields: higher-grade real estate, where the “cap rates” slowly fall; and, unfortunately, also forestry and farmland, mainly of the larger and more standard varieties that appeal to institutions, which show declines in their required yields, i.e., their prices rise. The longer the engineered rates stay below true market rates, the higher asset prices become until, yes, you’ve got it, corporate assets begin to sell way over replacement cost. Then, if the heart of capitalism is still beating at all, a long period of over-investment begins and returns are bid down and everything moves into balance, often helped along if asset prices get too high, as in 2000 and 2007, by a good healthy market crunch. (This strategy will be seen in future years as archetypical of the Greenspan-Bernanke era: badger and bully investors into taking more risk and eventually pushing assets – houses or stocks or both – far over replacement value, followed eventually, at long and hard-to-predict intervals, by exciting crashes. No way to run a ship, but it does produce an environment that contrarians like us, who can take a few licks, can thrive in.)

Stock Option Culture Messes Things Up

The normal capitalistic response described above runs smack into the new tendency for corporations to either sit on money or buy stock back (regardless of how expensive it may be!), which works in the opposite direction to create shortages, drive prices up, and, as a by-product, lower job creation and GDP growth. So where does this all come out? You tell me. All that I know is: a) if we in the U.S. don’t invest, others will and it will, in the longer run, definitely end badly; b) that even if there is a lower-return world in the future it is still better to own the cheaper assets; and c) it behooves buyers of “cap rate” type assets like real estate to realize that the current low rates are flattered by current Fed policy, which will, like everything else in life, pass away one day, leaving them looking overpriced. It can’t be too soon for me. In the meantime for us at GMO it means emphasizing care and maintaining a heightened sense of value discipline, not only in stock selection, as the whole world is once again bid up over fair value in a way so typical of the post 1994 era, but also in forestry and farmland. GMO has investments in those areas too and recognizes the

need to sidestep overpricing by emphasizing the nooks and crannies. Fortunately there are more nooks and deeper crannies in forests and farmland than there are in almost any other area, certainly including stocks.

Danger of the Fed Overestimating Growth

This doesn't really fit in with a quarterly letter emphasizing important good news, but being about the Fed, I have to make an exception. The Fed appears to be still assuming a 3% growth rate for future U.S. GDP. It would be safer and more confidence-inspiring, now that Bernanke appears to take his responsibility for growth seriously, that he at least have a reasonable growth target (preposterous as that notion is to me that the Fed should or even could affect long-term growth simply by messing about with interest rates). The growth in available man-hours has definitely declined by about 1% a year, yet Bernanke's assumption for our GDP's normal trend growth appears unchanged at its old 3%. Ergo, he must be assuming an offsetting rise of 1% in productivity. But why? We should treat these assumptions quite seriously for this is famously (for me) and painfully (for all of us) the man who could not see a 3³/₄-standard-deviation housing market, and indeed protested that all was normal, etc., etc., etc. (Dear handful of niggling readers, this 3³/₄-standard-deviation event is calculated on the assumption of a normal distribution, as is often done in investing, even though we [especially at GMO] know this is not true but is just a convenient statistical device. In fact, we at GMO know quite a bit more on this topic for we have studied more or less all assets for as long as we can find data and we have found a remarkable total of 330 "bubbles," 36 of which we call "major, important bubbles," which we define as 2-standard-deviation events, given the same assumption. Well, a 2-sigma event should occur every 44 years in a normally distributed world and they have occurred every 31 years. This is much closer to random than we had previously thought. Yes, financial asset data is fat-tailed; that is, there are more outlying events than are found in a normally distributed series, but they are not extremely fat-tailed. They show up as 2-sigma events but occur as often as 1.8-sigma events would occur in normal distributions. Extrapolating, we can assume that Bernanke's 3³/₄-sigma housing bubble would occur, adjusted for our fat-tailed real-life history, not every 10,000 years, but somewhere more like 1 in 5,000 years! I previously used "a 1-in-1,200-year event" as a casually selected very large number to describe the 2006 housing bubble. But under challenge, these current numbers are more accurate. No, this does not mean we have 10,000 years of data or even 5,000. It is just statistics, full as always of assumptions, which in this case we hope approach rough justice. What it does definitely mean, though, is that it was extraordinarily unlikely that the extremely diversified U.S. housing market would shoot up like it did and, frankly, even more remarkable that Bernanke and his timid or incompetent advisors could miss it. This is a doubly amazing miss because his and Greenspan's policy caused this bubble in the first place!) In comparison, his willingness to target an unrealistic 3% level for GDP growth is statistically a microscopic error, a picayune mistake. Unfortunately, though, in the hands of probably the most influential man in the global economic world, it is an extremely dangerous one. I like the analogy of the Fed beating a donkey (the 1% growing economy) for not being a horse (his 3% growing economy). I assume he keeps beating it until it either turns into a horse or drops dead from too much beating! Fine-tuning economic growth, an impossible job for the Fed anyway, is hardly likely to get any easier by badly overstating trend-line growth. It seems nearly certain, therefore, that the Fed will keep trying to whack the donkey for far too long. The likely consequences of this policy are, to be frank, over my head, but my colleague Edward Chancellor will address them briefly if I can nag him effectively.

Investment Implications

Courtesy of the above Fed policy, all global assets are once again becoming overpriced. This reminds me of the idea sometimes attributed to Einstein that a workable definition of madness is constantly repeating the same actions but expecting a different outcome! But, as always, asset prices are not uniformly overpriced: emerging markets and, we believe, Japan are only moderately overpriced. European stocks are also only a little expensive, but in today's world are substantially more risky than normal. The great global franchise companies also seem only moderately overpriced. Forestry and farmland, which is not super-prime Midwestern, is also only moderately overpriced but comes with our nook and cranny sticker attached. But much of everything else is once again brutally overpriced. Notably, U.S. stocks (ex "quality") now sell at a negative seven-year imputed return on our numbers and most global growth stocks are close to zero expected return. As for fixed income – fugetaboutit! Most of it has negative estimated

returns on our data, and longer debt, as always, carries that risk that may be slight in any period, but is horrific if it occurs – accelerating inflation.

When one combines the apparent determination and influence of those who do the bullying with the career risk and short-termism of the bullied and the desire of the general public to believe unbelievable good news, these overpricings can go much further and the Fed can win another round or two. That's the problem. A clue to timing would be when we begin to hear more passionate new era arguments: profit margins will always be higher; growth will snap back to 3% for the developed world; and new ones I can't think of . . . maybe "when the discount rate is this low the Dow should sell at, perhaps, 36,000." In the meantime, prudent managers should be increasingly careful. Same ole, same ole.

Disclaimer: The views expressed are the views of Jeremy Grantham through the period ending February 6, 2013, and are subject to change at any time based on market and other conditions. This is not an offer or solicitation for the purchase or sale of any security and should not be construed as such. References to specific securities and issuers are for illustrative purposes only and are not intended to be, and should not be interpreted as, recommendations to purchase or sell such securities.

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We Have Met the Enemy, and He Is Us

Ben Inker



If modern portfolio management has a single defining urge, it is almost certainly diversification. We look for diversifying assets, strategies, and managers. A thoughtful investor can argue against almost any asset class – stocks, bonds, hedge funds, private equity, commodities, you name it – but arguing against diversification is like arguing against indoor plumbing. I don't want to sound like I'm calling for a return to chamber pots and outhouses, so I'm not actually going to argue against diversification. But I do want to point out that as more and more investors scour the world searching for diversifying assets, they will tend to diminish the potential of those assets to help their portfolios. As a result, it may be that we need to rethink the kind of diversification we are likely to be able to achieve.

Basic Asset Characteristics

To keep things simple, let's look at two basic characteristics of assets – the underlying cash flows that they deliver, and the market's behavior in discounting those cash flows back to the present. Let us assume for the moment that the characteristics of the cash flows are fixed. Equities experience falling earnings and dividends in recessions and depressions; high quality fixed income payments are largely unaffected by economic growth but their real value is negatively impacted by inflation. Lower quality fixed income has cash flows that look more and more equity-like as yields and default probabilities increase, although they are probably less safe against inflation than the dividend stream of equities should be in theory.

Then we have the market behavior in discounting those cash flows back to the present. Equity investors historically seem to have increased their discount rates in the face of both high inflation and deflation. Bond investors reduce their discount rates in recessions. These patterns may well have been historically stable. But because they are driven by investor behavior, not the underlying cash flows, they are subject to change if investor behavior changes. The two changes that we most care about as investors are a change to the equilibrium discount rate for an asset class and a change to the way that discount rate changes in different environments. And if we are going to come up with a decent guess as to how either will change in the future, we need to understand who owns the asset, why they own it, and how they own it.

Examples – Commodity Futures and TIPS

A nice example of this is commodity futures. The long-term data on commodity futures returns, such as it is, suggests there has been a healthy risk premium to a long position in commodities going back in time. John Keynes gave an explanation to this in 1930, explaining “normal backwardation” in commodity markets is due to the fact that commodity producers are more prone to hedge their price risk than commodity consumers. This creates an imbalance in the futures market. The imbalance is resolved only if the forward curve of commodity prices is such that speculators believe there is a sufficiently positive expected return to take the other side of the hedgers' positions. Back when Keynes made his argument, it was almost certainly fair to say that the only participants in the commodity markets were hedgers and dedicated commodity speculators. If all you do is speculate in commodity markets, all volatility in those markets is risk, and you want to get compensated for that risk. You will only rationally take a position if it offers a decent risk/reward trade-off on its own. But let us imagine two kinds of changes that might happen to this

market over time. First, a group of broader-thinking speculators enter the market – let’s call them hedge funds. They will only invest if they see a positive risk/reward trade-off from their speculative activity, but because commodity speculation is only a portion of what they do, they don’t need as high a risk/reward trade-off as the dedicated commodity speculator, because the risk of these trades is, broadly speaking, uncorrelated with the other risks they are taking in their portfolios. So as they come into this market, the expected level of backwardation should fall, but not disappear entirely. However, another feature of this market would be expected to start to change. When it is only hedgers and speculators participating in the market, there is no reason for the gains and losses for speculators to be correlated with anything else in particular, but when the hedge funds get involved, there is suddenly a reason for those correlations to change. If an event happens that costs hedge funds money in one of their other activities, they will likely respond by liquidating their positions in unrelated markets, as not only do they have a smaller capital base to take risk on and therefore voluntarily liquidate some of their positions, they also could easily have their counterparties reduce the amount of leverage they are prepared to offer them, leading to an involuntary liquidation.

This liquidation will push up the discount rate on the expected cash flows from their positions – in other words, prices will move against them and they will take a loss. So in this stage, the hedge fund managers have taken a strategy that was historically uncorrelated with the rest of what they did and created a correlation out of thin air. The correlation probably will not be there all of the time, but at least at those times when diversification would be most helpful, the expected correlation should have gone up. Perhaps a simpler restatement of this effect is to say “the more investors hold an asset on margin, the less safe it is to hold that asset on margin.”

So once the hedge funds get involved, the expected risk/reward trade-off of the activity should go down, and the correlation of the returns with other activities hedge funds are involved in should go up. But this isn’t the end of the story because there is another group who got involved in the commodities markets: institutional investors. The difference between them and the hedge funds is that hedge funds are inherently speculators who are incented fairly purely to make money above cash (or, actually, a zero return). The institutional investors have a set of liabilities that they manage against, whether they explicitly do so or not. Any investor who is saying “I would like to protect the real value of my portfolio against inflation” is implicitly worrying about a liability stream that has an inflationary component. This immediately redefines risk. Risk is no longer purely about losing money in absolute terms, but rather about losing money relative to the liability – in this case, failing to keep up with inflation. An asset that helps protect against that event can be of value to the investor *even if it has a zero or negative expected return*. Hedge fund managers may cause the risk/reward trade-off of an activity to decline and make the correlation of that activity with others go up, but they probably won’t cause the expected return to go negative, except inadvertently.¹ Institutional investors – or really any “real money investor” including retail and whatever else exists that is neither institutional nor retail – can drive the expected return to an asset down to the cash rate or even below it. If an asset protects the portfolio against an event that they fear, it can be perfectly rational to invest in that asset with an expected return below cash. For investors who believe a long position in commodity futures will protect them against inflation, they may perfectly happily invest in that long position even in the face of a negative expected return.

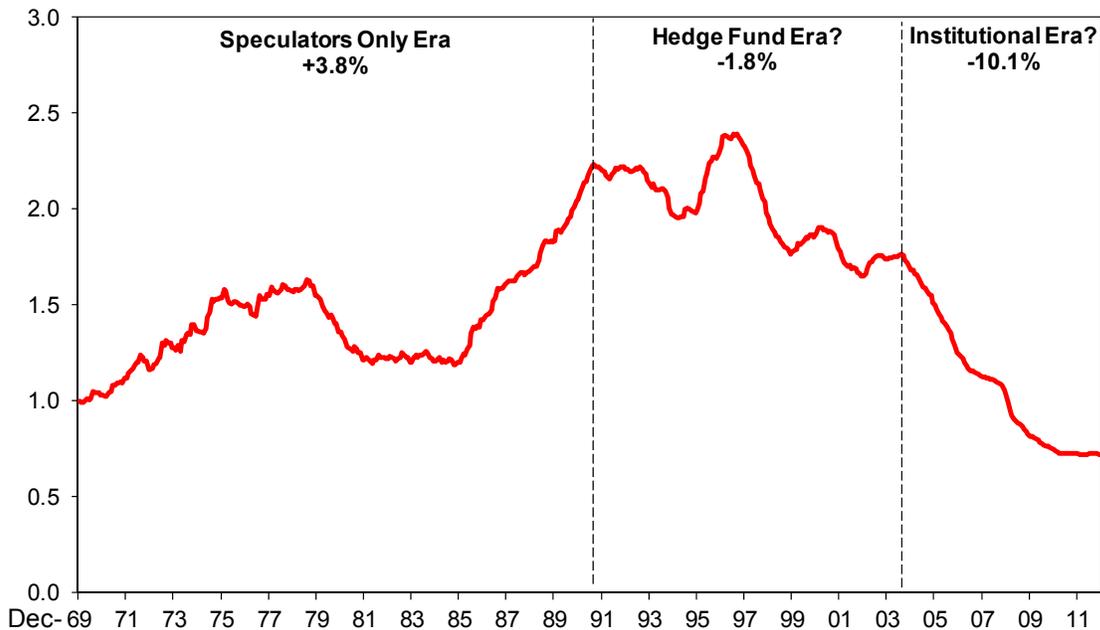
So, by the time we’ve got the institutions involved, we’ve taken an asset (long commodity futures) that had a long history of providing a decent risk premium over cash with low correlations to other investments and both increased its correlations with other asset classes and driven its long-term expected return down to the point where it may well be zero or negative. The history of the roll return on commodity futures is certainly consistent with this story, as can be seen in Exhibit 1.²

¹ Strictly speaking, this isn’t true because if there was an activity that was strongly negatively correlated with the activities of that hedge fund, the manager might well contemplate it even with a zero or negative expected return because doing so reduces his risk, but given the “heads I win, tails you lose” nature of hedge fund incentives, where there is participation in gains but no clawback in the event of losses, it’s far from clear that hedge fund managers actually manage their portfolios to reduce risk at the expense of a lower expected return.

² The roll yield is a proxy for normal backwardation, but an imperfect one. Normal backwardation is a situation in which the futures price is lower than the expected spot price at contract maturity, whereas the roll yield is determined by what actually happens, not what the market expected would happen. A negative roll yield does not necessarily mean there is no normal backwardation – if commodity prices are expected to rise with inflation, a negative roll yield that is smaller than inflation (such as for the GSCI Reduced Energy index from 1991-2003) still suggests some normal backwardation, albeit a fairly small amount. The much stronger negative roll yield since 2004 is much more strongly suggestive that the normal backwardation has disappeared.

Exhibit 1

Cumulative Roll Yield on S&P/GSCI Reduced Energy Index



Source: S&P, Federal Reserve As of 12/31/12

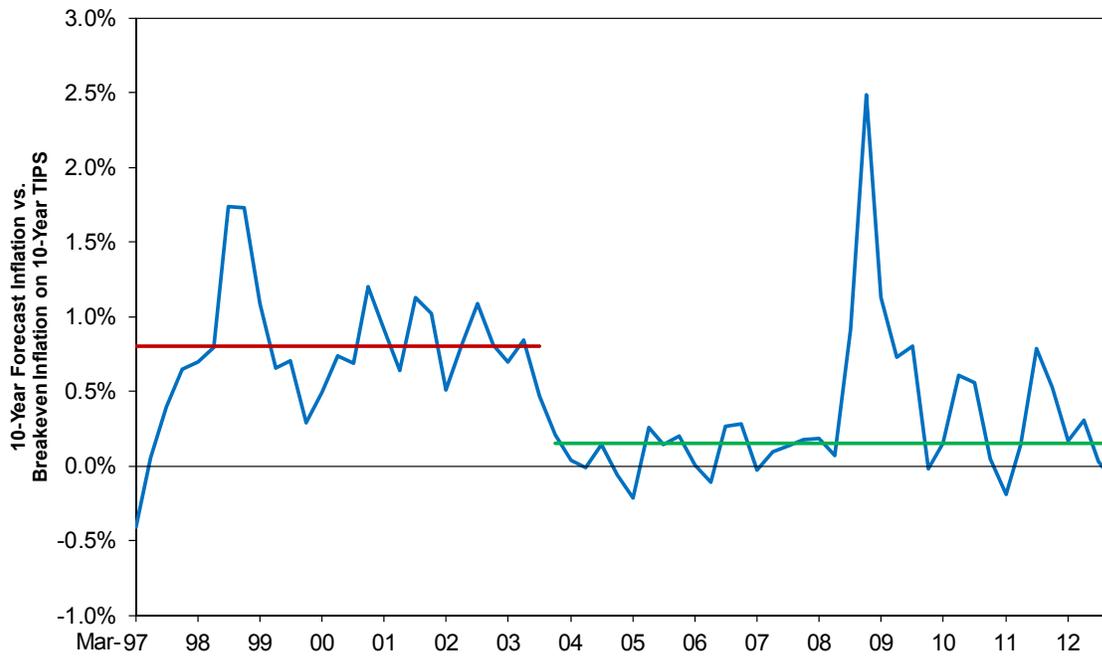
At this point you may be saying that you never cared much about commodity futures in the first place, so this is not a particularly interesting example. So let's take another one, TIPS. Our conclusions on TIPS are not as stark as with commodities – it looks like their historic returns relative to treasuries overestimate what they are likely to do going forward, but the process of “disappearing return premium” is not as far along. That being said, things seem to have started changing for TIPS, and we think investors should be aware of how the future of TIPS may be fairly substantially less exciting than their past has been.

The underlying cash flows of TIPS are fairly easy to understand as they offer a coupon plus a principal adjustment for inflation, which combine to give fixed real return. TIPS haven't been around all that long, so it is not clear exactly how they would have done in an inflationary environment, but let us assume, as most proponents of risk parity strategies do, that TIPS would have done particularly well when inflation surprised to the upside and growth to the downside. For a “real money” investor this is a pretty exciting asset. Most investors find themselves cash-flow constrained when growth surprises to the downside,³ so an asset that makes them money under those circumstances is a big deal. Combining that with inflation protection makes for a pretty ideal asset. If the proponents of risk parity are right and TIPS have this basic characteristic, there is no particular reason to expect that they should offer a return premium over cash – arguably they might deliver less than cash because their protection can be so valuable. While they have historically had a higher return than traditional treasuries of an equivalent maturity, it is pretty clear that investors have not always viewed TIPS the way that they do today. Not only did the basic notion of risk parity not exist when TIPS were introduced, but very few institutional investors had even gotten around to thinking about the nature of their liabilities and what assets were a good fit for them. When TIPS first came out, just about the only investors who were involved in the market were traditional fixed income managers who had traditional nominal fixed income benchmarks. They were interested in TIPS only when they offered a good information ratio against traditional treasuries. Because the difference between nominal treasuries and TIPS is the inflation component to the TIPS return, we can look at a breakeven rate of inflation for TIPS, where the breakeven rate is the rate of inflation, which will mean that TIPS and treasuries have the same return. For about the first six years after the original issuance of TIPS,

³ Looking at the different classes of investors, governments face falling tax revenue and rising spending in recession, corporations falling profits, endowments and foundations falling donations, and individuals falling labor income.

those breakeven rates were consistently lower than economists' inflation forecasts. If the economists turned out to be correct, TIPS would give a higher return than treasuries, as wound up being the case. Over time, as investors began recognizing the benefits of the inflation protection TIPS provide, the breakeven rates converged with economists' expectations, as we can see in Exhibit 2.⁴ As we go forward from here, it seems perfectly plausible, although certainly not assured, that the breakeven rates will rise above market expectations of inflation, and TIPS will be priced to give a lower return than traditional treasury bonds.

Exhibit 2
TIPS "Cheapness" vs. Nominal Bonds



Source: Survey of Professional Forecasters, Datastream As of 12/31/12

This pattern caused the early investors concerned with real returns to get a double gain. First, TIPS were priced at “too high” a real yield, offering an undervalued asset. And then, as investors discovered the charms of TIPS, the falling real yields (even relative to nominal bonds) provided an additional gain. While this gain was a one-time event, pricing in a possibly permanently lower return to TIPS, that is a hard sell to anyone who jumped on the TIPS bandwagon somewhere along the way, because all they have seen is strong returns from the asset, and it is impossible to “prove” that the rates of inflation priced into the TIPS market are higher than the market’s unbiased expectation of future inflation because there are few mechanisms other than the TIPS themselves that can help tease out the market’s inflation expectations in the first place.

⁴ It actually looks as if there are a couple of pieces to the yield on TIPS versus nominal treasuries beyond inflation expectations. One, which can be easily seen in their behavior in the financial crisis, is that TIPS are less liquid than nominal treasuries and less readily used as collateral. In a liquidity crisis as occurred post-Lehman, it was probably an extraordinary demand for liquidity that caused TIPS to become so cheap to nominal treasuries. If we could replace the nominal treasury with something of equivalent liquidity to the TIPS in the chart, we might see that, “liquidity adjusted,” the spread has already gone negative.

But if you will humor me for a moment and accept my premise on TIPS, they will have gone from an asset with a fairly high risk premium, driven by the fact that they were not a natural asset to own for any group of investors, to one with a significantly lower risk premium as they are in demand for their hedging characteristics, despite the fact that the basic characteristics of their cash flows have not changed.

Does this mean any attempt to look at the historical characteristics of asset classes is pointless because their characteristics are inherently subject to change? No, but it means you want to be particularly careful when looking at an asset whose pricing has tended to change in a way that made it a particularly effective diversifier.⁵ TIPS and commodities have been lovely diversifiers historically, and this has led them to be included in more and more portfolios over time. Their effectiveness as diversifiers may well be less in the future and their returns quite likely to be lower.⁶ If you are assuming otherwise, what you are really saying is that the market has been inefficient historically *and will continue to be inefficient in the same way going forward*.

More Sustainable Diversification

Now, don't get me wrong. All active managers, GMO included, have an implicit belief that markets are inefficient. We at GMO do not believe the markets are efficiently priced today, nor are they particularly likely to be efficiently priced in future. But in our asset allocation portfolios, we focus our particular attention on situations where the price of an asset has already moved away from our best estimate of fair value. These are situations where we believe the market inefficiency has already had its effect, and we do not need to assume future investors will continue to be irrational in order to earn the excess return. Future opportunities will require the markets to remain inefficient, but we believe that the opportunities we are exploiting today should outperform even if the market becomes efficient going forward, or if tomorrow's inefficiencies are unrelated to today's. We hope and expect that markets will remain inefficient in the future, but we get quite nervous wagering our clients' money on an assumption about the way in which the inefficiencies will manifest.

So, if historically strong-returning diversifying assets deserve a certain amount of wariness with regard to their future correlations and returns, is there any kind of diversification you can get excited about? We believe there is. One clear example, which had made its way into our multi-asset portfolios, is equity put selling. This strategy, which is mathematically equivalent to writing a covered call, has the same risk as equities in a fairly explicit manner. If you sell an at-the-money put on the S&P 500 and the S&P 500 falls by 10%, you lose the same 10% that you would have if you owned the S&P 500 directly. The difference is in the way you get paid. If you own the S&P 500, your payment for bearing the risk of the S&P 500 going down is the right to participate in the S&P 500 going up. If you sell a put, you get paid an option premium but do not participate in the market's upside. In the period that listed options on the S&P 500 have been around, selling put options on the market has given you more or less the same return as owning the market. While puts have had a "lower volatility" than stocks over this period, we don't think of this fact as evidence of a market inefficiency. The reason you get paid a risk premium on stocks is because of the size and timing of the losses stocks give investors, and put selling exposes you to that same exact risk, and consequently should give the same return. But we still think of put selling as interesting diversification within an equity allocation because of the difference in the way you are getting paid. When equities are overvalued, there has historically not been that much upside to the market, but the return to selling a put option has been largely unaffected, since the option premium has

⁵ One other asset that has become increasingly popular in institutional portfolios over the years is private equity. We believe this is another example of an asset for which it is very dangerous to base your return and correlation assumptions on historical data, although for different reasons. We view private equity as nothing more or less than a version of active equity management with some added leverage, and with the large amounts of money devoted to the asset class, we think it would be unwise to assume that the median private equity manager will be able to generate risk-adjusted excess returns going forward. And many of the correlation benefits of private equity come down to the rather artificial accounting benefit of not marking the portfolio to market.

⁶ The nice thing about TIPS relative to commodities here is that at least there is a fairly straightforward way to judge the valuations of the TIPS and therefore see whether something has structurally changed in the pricing. It is much harder for commodities because there is no obvious way to tease out the market's unbiased forecasts for future commodity prices and disentangle them from the forward curves in commodity markets. Another difference between the two is that TIPS have a lot of duration with regard to their risk premium, while commodity futures do not. So, if you really do believe that the risk premium on TIPS is destined to go negative but is still positive today, TIPS will get a windfall gain from the shift, whereas commodity futures will not.

remained fairly stable.⁷ At a time like today, where many equities look to be significantly overvalued, the prospect of getting paid a “normal” equity risk premium for selling puts looks pretty attractive, and we have therefore added put selling as part of the equity portion of a number of our multi-asset portfolios.

Another example of a diversifying asset is quality stocks. The primary reason that we own quality stocks today is that they look much cheaper than the overall U.S. stock market, but another consideration in their favor is the fact that they are very likely to have more stable cash flows than other companies during a depression or financial crisis. Given that most of the other equities we find attractive today, such as continental European value stocks, would be particularly vulnerable to either depression or crisis, we feel quality is a particularly valuable version of equities to own, and quality makes up a larger percentage of our equity portfolios than its pure forecast would suggest.

Both of these forms of diversification are less sexy than the idea of buying an asset that will both make you strong returns in the long run *and* make money in particular in the times the rest of your portfolio is losing. Such an asset would be pure gold, metaphorically speaking,⁸ and should you find it, by all means buy it. But if you will take my advice, under no circumstances will you want to tell other investors about that asset, and you’d better watch those other investors like a hawk to make sure they haven’t discovered it. Once they do, it is likely that pricing will change such that either the return or the diversification benefit or both will be less sexy than they used to be and you’ll have to rethink your portfolio strategy. The nice feature of the diversification in quality stocks and put selling is that it doesn’t require the market to be inefficient in any particular way for it to work, and it should even survive my doing something as silly as talking about it in a quarterly letter.

⁷ This is a somewhat surprising finding, because you might have thought that expensive equity markets were particularly prone to large losses, which would make put selling a bad idea. However, our research shows that, at least since 1983, call buying in an expensive market has been disastrously bad, while put selling has had returns that are largely unaffected by the starting valuation of the market. Neil Constable, of our global equity team, recently wrote a paper on the topic of put selling, “New Options for Equity Investors,” which is available to GMO clients. Please contact your Client Relationship Manager if you would like to have a copy of this paper.

⁸ We do not believe that gold has these characteristics. There seems no particularly obvious reason to assume that gold should do any better than keep up with inflation over time, nor a reason to assume it will provide an extraordinary gain in either an inflationary period or during a depression. It is nicely portable if you think you might have to leave your home country in a hurry, but that is certainly not an argument for buying gold futures or ETFs.

Mr. Inker is the co-head of asset allocation.

Disclaimer: The views expressed herein are those of Ben Inker as of February 6, 2013 and are subject to change at any time based on market and other conditions. This is not an offer or solicitation for the purchase or sale of any security and should not be construed as such.

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