Institutional Investor

The much-coveted 5 percent real rate of return is difficult to achieve, but for investors willing to use derivatives and leverage there is a potential way to do it.

The 5 Percent Solution

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ILLUSTRATION BY **LUKE BEST**

INSTITUTIONAL INVESTORS ARE IN A QUANDARY. They commonly target 5 percent real annual returns, or 7 to 8 percent nominal returns. Starting from today's prices for stocks and bonds, the likelihood of actually achieving those returns is low.

When economist John Maynard Keynes was criticized for his shifting policy views, he is believed to have responded: "When the facts change, I change my mind. What do you do?" Unfortunately, institutional investors have been reluctant to publicly accept the new fact of those inconveniently low market yields. Instead of facing the grave reality of past promises being unaffordable in a low-return environment, these investors — or their sponsors — use overly optimistic return expectations as a convenient way to keep kicking the can further into the future.

In recent years some investors have gingerly lowered their long-run return targets, but few institutions outwardly expect less than a 4 percent real return or 6 to 7 percent nominal return on their overall portfolios. Over the past decade and a half, such expectations have generally not been fulfilled, and most investors will likely be disappointed yet again over the coming decade. In fact, those with simple, traditional portfolios like 60-40 U.S. stocks and bonds are even more likely to be disappointed going forward.

Sadly, we cannot change these facts. In the following pages we document the challenge (record-low forward-looking yields), review common institutional responses (highly equity-centric portfolios) and give our recommendations (more effective diversification). Specifically, we propose balanced risk allocations across traditional market premia, truly diversifying return sources from liquid alternative risk premia, and improvements in portfolio construction and risk control. Admittedly, some of these suggestions entail the use of direct leverage, which is an obvious risk, although one that needs to be compared with the near-complete concentration in equity market risk found in most institutional portfolios. We believe that prudent use of leverage is a manageable and rewarding risk to take. We think the ideas presented above can give the investors who adopt them their best chance of getting close to 5 percent long-run real returns.

Current market yields and valuations make it very unlikely that traditional allocations will achieve 5 percent real return in the next five to ten years. These forward-looking measures have been correctly sending the same message since the late 1990s. They are sending an even stronger message today.

As a proxy for expected long-term real returns, we compute the prospective real yield of the traditional 60-40 U.S. stock and bond portfolio. Our estimate of the real equity yield is a simple average of (i) the smoothed earnings yield (the so-called Shiller price-earnings ratio, inverted to become a yield) and (ii) the sum of the current dividend yield and 1.5 percent, an assumed real rate of growth for dividends per share. The real bond yield is the difference between the long-term Treasury bond yield and a measure of long-term expected inflation. The figure to the right ("Time to Get Real") presents the 60-40 weighted average of the two real yields since 1900.

Until the 1990s it was relatively easy to achieve 5 percent long-run real returns. The long-run average real yield since 1900 is 5 percent, and realized returns matched the promise of this prospective return as the 60-40 portfolio delivered, on average, close to a 5 percent real annual return. Indeed, this historical experience may have contributed to the 5 percent real return becoming such a widely used target for institutional investors with 60-40-like portfolios. (Skeptics might note that trading costs and fees, not included here, were higher in the past and would have reduced realized returns in past decades even more than now. Moreover, 60-40 only evolved into an institutional standard

Model Citizens

Alternative portfolios share one common risk

Of course, we are not the only ones recommending something other than a 60-40 portfolio of stocks and bonds. The low-return environment has changed common institutional investment practices since the 1990s. Some pioneers, like Yale University, adopted the "endowment model" and diversified into various alternative asset classes, combining reliance on the equity premium with faith in illiquidity premia and in hedge fund alpha. This investment model gained popularity in the early 2000s after the equity market bust. By now the majority of U.S. pension funds and other institutions invest some portion of their portfolios in alternatives.

The degree of external management varies widely across institutions and approaches. Most pension funds and endowments have relied on external managers while raising the share of passive mandates over time. However, some major institutions with large internal staffs have increasingly relied on in-house management. For the traditional 60-40-type allocation, Norway's Government Pension Fund Global has led this trend, and in private markets and other illiquid assets, some large Canadian pension plans have been at the forefront.

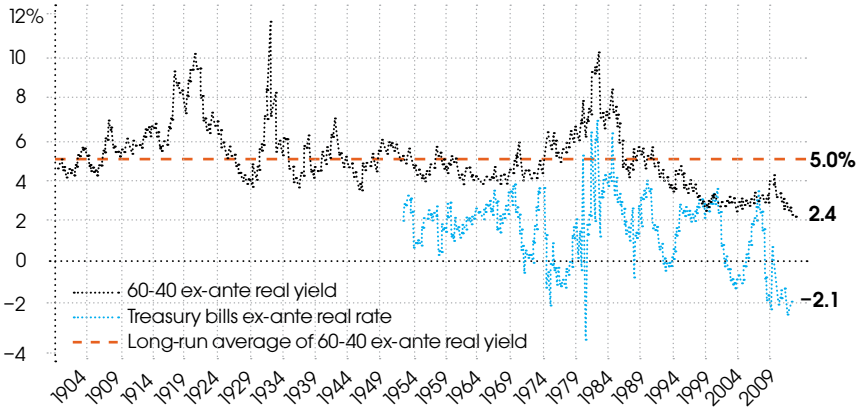
Based on the above distinctions, the main alternatives to the externally managed 60-40 investment model could be called the Yale, Norway and Canada models. Yet they all share one important commonality with 60-40: Their performance still depends largely on equity market direction, though some of that may be masked by the use of private investments. Thus, although the return experience over the past decade has been mixed, the diversification experience has been disappointing, as all of these portfolios have moved surprisingly in sync.

We firmly believe that a very different approach gives investors who employ it a more reliable way to achieve relatively ambitious return targets, while mitigating large losses that could lead to procyclic capitulation (throwing in the towel when everyone else is throwing in the towel). Our approach emphasizes effective diversification and less concentrated equity market risk. To achieve this goal, some use of direct leverage is needed. In contrast, most common investment models choose concentration and avoid direct leverage, even while embracing embedded leverage: leverage that is built into the securities, like equities, or even into the investment structure, like private equity.

— C.A. and A.I.

TIME TO GET REAL

The real yield of a 60-40 stock and bond portfolio is well below its historical average.



Source: AQR Capital Management.

over time; until the 1960s stocks were considered speculative investments.)

Unfortunately, that favorable environment belongs to the previous century. Since 1998 the ex-ante real yield of 60-40 has been below 3 percent most of the time, making the task of investors that much harder. At first — say, during the period of 1998 to 2000 — most investors took no notice because stock markets boomed and return prospects were wrongly judged on past performance, extrapolating the future long-run equity premium from what it had been in the past, rather than on prospective yields, which at the same time were falling as a result of excessive valuations. In addition, while equities were getting very expensive (low yields), bond yields were relatively high. After the tech boom turned into a bust and bond yields fell, investors began to pay attention to forward-looking returns, but hardly enough.

Currently, the prospective real yield on the 60-40 portfolio is 2.4 percent, its lowest level in 112 years. Roughly speaking, the ex-ante real yield on stocks is 4 percent and bonds is zero percent — both below their long-run average levels, with bonds well below.

There are really only three possibilities going forward. First, that there has been a permanent change in fundamentals, such that real equity earnings growth will be sustainably stronger than in the past, making expected real returns from here much higher than the equity yields imply. In the second scenario these yields will remain near their current levels, and the expected real return of the 60-40 portfolio will be permanently much lower than it was in the past. In the third scenario these yields revert toward their historical averages, delivering higher prospective returns after the reversion, but as this occurs investors will experience a period of even worse realized returns as rising asset yields cause capital losses. Both the second and third scenarios strike us as plausible, but we are skeptics of the first, while recognizing that dreams die hard.

"We are not just pointing to the magical, expensive alpha of outperformance and saying, 'Solve the problem by adding 2 to 3 percent a year.'"

Of course, there will be market rallies, some quite substantial, along any of these paths, but that does not change the fact that these three are the only possible long-term future scenarios.

It may surprise some that the prospective real return on 60-40 is now at a record low. After all, weren't things worse, for instance, near the peak of the tech bubble, when equities were so expensive? Though equities are expensive today, they were far more expensive in early 2000 (in the sense of high prices versus fundamentals, yielding a low expected real return). Yet in early 2000 bonds were quite cheap on a historical basis. Today is relatively unique in that both stocks and bonds are expensive at the same time.

Notice that throughout our history, while sometimes low and sometimes high, the prospective real return on 60-40 has never gotten seriously close to negative. However, there is another asset whose near-term outlook is even worse and in fact negative. The lower thin line in the figure above shows the ex-ante expected real yield on cash (defined as Treasury bills less a short-term measure of inflation). This cash yield is currently near record lows, –2.1 percent, reflecting the central bank's attempts to stimulate the economy by pushing investors into riskier assets or providing cheap financing for direct investments. This effort sustains the low prospective return environment for all kinds of assets, but it can also offer direct benefits for those who can borrow (finance their positions) at such low rates. A key distinction, at least for the short term, is that one could borrow at a real rate of –2.1 percent and buy a 60-40 portfolio with a real yield of 2.4 percent, raising the prospective return on this levered portfolio to 4.5 percent. This positive carry on risky assets may balance some of the valuation concerns, for the time being.

Investors have two broad choices in how to respond to the stark news delivered above. They could take a very long-term view and accept that the 5 percent real return target is unlikely to be achieved in the next five to ten years but perhaps is still a reasonable very long-term goal, making plans according to these lower expectations. Or they could take action. This article is about a set of actions, based specifically on our recommendations, of course! In particular, we recommend:

- Harvesting a broad set of return sources, far broader than the typical set that relies heavily on the equity risk premium;
- Implementing a series of portfolio management methods we label "alpha in portfolio construction";
- Putting in place the risk control necessary to see this, or any approach, through the tough times.

We freely admit that all our recommendations fall into a strange category. They are all "alpha" in the sense of a deviation from the market portfolio of wealth that we expect will add to performance, stability or both. But one should not pay alpha prices for the things we propose. Some are strategic allocation recommendations, or bets on a broad set of systematic strategies, while others are techniques for combining these allocations and managing their risks. In addition,

as in all forms of alpha, they are zero-sum. We do not claim, nor could anyone claim, to fix the problem of low expected real returns for everyone. But on the other hand, we are not just pointing to the magical, expensive alpha of outperformance and saying, "Solve the problem by adding 2 to 3 percent a year." That is not a recommendation; it's a hope, and typically a very elusive and expensive one. We believe our recommendations are concrete — clearly not doable for all investors at once but certainly doable for a large subset and at low cost.

WE NOW DELVE DEEPER INTO OUR first recommendation: identifying diverse return sources and harvesting them cost-effectively. Later sections will discuss the value added from portfolio construction and risk control. It is useful to think of the return sources of any portfolio as a pyramid with three layers, starting from the base, with the highest-capacity and lowest-cost sources, and moving up to the top, with the lowest capacity and highest costs.

• Market risk premia form the base and are the rewards for stable long-only holdings in major asset classes. The equity premium is the best known and most important, while other examples include the term premium (what long-term bonds earn over cash), credit premium and commodity premium. These premia have high capacity and low fees when accessed, say, through index funds.

The average CIO faces myriad choices when constructing a truly diverse portfolio, but it is really simpler than it's often made out to be. We have recommendations for each of the three layers.

At the base layer of market risk premia, we believe risk-balanced allocations should be favored. Instead of depending mostly on the equity premium, as a 60-40 portfolio does, investors should consider putting together what has come to be called a risk parity portfolio, in which the importance of several market risk premia are balanced. One liquid version of a risk parity portfolio includes one third of the risk budget in global equities for growth, one third in global government bonds for deflation protection and one third in real assets (commodity futures and inflation-linked bonds) for inflation protection. Such a portfolio can offer more robust performance across macroeconomic scenarios than a 60-40 portfolio, which excels in a strong growth/stable inflation scenario and tends to suffer amid weak growth and either high inflation or deflation. More generally, the risk parity portfolio tends to offer a higher risk-adjusted return over the long term.

Importantly, the goal of risk parity portfolios is balanced risk allocation, not balanced dollar allocation. This results in more effective diversification than found in risk-concentrated portfolios (such as the equity-dominated 60-40) and can lead to lower volatility and higher risk-adjusted returns.

"We believe strongly in risk parity as a better strategic base for tactical views than a portfolio that is quite strongly tilted to only benefit in one type of scenario."

• The middle layer has attracted increasing attention as investors have learned to appreciate that much of what is marketed as alpha can be better understood as systematic alternative risk premia. Some of the many examples include the value premium, the premium to basic convertible or merger arbitrage, the premium to carry strategies and the extra expected return from accepting illiquidity.

• True alpha is elusive and scarce, and is the top of the pyramid. It has inherently low capacity and is a zero-sum game, so it must be earned at the expense of other investors. If true alpha is found, it should justify higher fees.

This volatility reduction may be capitalized — converted into higher returns — by moderate use of leverage.

In addition to very thorough global diversification, many risk parity portfolios are also more effective at managing risk through time, applying the same "risk not dollars" approach by leveraging less when market risk is higher. In the extreme, a risk parity portfolio might employ no leverage in times of exceptional market risk.

Investors can, of course, overlay tactical asset-class views on top of their risk parity portfolio. We do not argue that the parity portfolio is always conditionally optimal, but we believe strongly in risk parity as a better strategic base for such tactical views than a portfolio, such as 60-40, that is quite strongly tilted to benefit only in one type of economic scenario (growth, for example). Long-run success relies more on getting the long-run allocations right than on large timing bets.

We recognize that it may seem contradictory to recommend risk parity when bonds are historically even more expensive than stocks. Again, we stress that we recommend risk parity as a better strategic allocation for the long term. We understand the tactical case for a bond underweight, but any such underweight should start from the superior strategic allocation of risk parity as described above, and we recognize that when starting from superior diversification, market timing is not easy. Moreover, risk parity critics often miss that bonds offer liability and tail hedging services, besides enabling better risk-balancing. Real-world risk parity portfolios are also better diversified and more robust than narrow stock-bond portfolios. Last, risk parity portfolios that target constant volatility over time will cut the sizing of bond positions if bond volatility rises.

In the second layer of the pyramid, alternative risk premia should be preferred to traditional sources of alternative exposure. When most investors think about "alternatives," hedge funds, private equity and various other illiquid investments come first to mind. However, these investments tend to offer more equity market exposure than desired in truly alternative returns. The correlation of both major hedge fund indexes and private equity indexes with global equity markets exceeded 0.8 in the past decade.

Although hedge fund marketing is all about alpha, a drill-down into the industry track record suggests that hedge funds deliver a combination of an embarrassing amount of market risk premia (simply being long stock market risk), alternative risk premia and some alpha — not so much, but by many measures at least positive.

As for private equity, academic research suggests that most funds are even weaker on the key dimensions of performance, risk, liquidity and costs. To clearly outperform public markets, investors need to identify top-quartile managers in advance. Otherwise they are purchasing very expensive, leveraged and illiquid forms of plain market beta.

As opposed to these typical alternatives, we prefer truly diversifying alternative risk premia. Terminology varies, as alternative betas are sometimes called dynamic betas, hedge fund betas, smart betas or exotic betas. These are long-short strategies that seek to capture the "good" systematic return sources that many hedge funds harvest (as opposed to the equity premium, which is "bad" if it is delivered at 2 percent management and 20 percent performance fees). Certain style strategies — for example, the value tilt, momentum tilt or low-beta tilt — have historically delivered attractive long-run returns in and across virtually all asset classes studied. Other approaches — such as merger arbitrage and convertible arbitrage — are inherently asset-class-specific, but straightforward, diversified versions have delivered strong historical results. Unlike most hedge funds and private equity funds, these dynamic strategies tend to have low correlations with equity market direction.

Seeking alternative risk premia at non-alpha prices is one of the most important ways to help investor performance. These are potentially rewarding and highly diversifying return sources. They are often called alpha, but they really aren't alpha in the sense of unique insight or genius. However, to the extent an investor has little exposure to these return sources, they can be considered alpha in that they are value added to a portfolio and when implemented correctly are uncorrelated to traditional markets. The key is that they should not be bought for alpha prices.

Alternative risk premia are high-capacity and liquid. They do require some use of what we call the dirty words of finance: leverage, short-selling and derivatives. They do come with their own set of risks. Yet they are time-tested, and we think they should be a big part of long-horizon portfolios trying to achieve 5 percent real returns, as long as they are not accessed through long-biased, high-fee hedge funds or through traditional active management, where they are usually packaged as long-only investments at an implicitly very high fee.

The top layer is alpha. Of course, you should take it if you can find it, but some cynicism is warranted. The overall assumptions about alpha are too heroic for the real world, and, again, it can't save the pie (alpha adds to zero across everyone). Admittedly, our recommendations cannot save the pie either. For everyone who does risk parity, someone else must overweight equities more than the market. For everyone who adds a long-short value strategy, someone must take on more growth risk, and so on. But our recommendations are available in far higher capacity to the investors who would follow them than literal alpha in the conventional sense.

True alpha can still help or even save individual plans, so pursue it based on your own honest assessment of your ability to find it (net of high fees and with open eyes as to whether it really comes from alternative beta premia) and of your possession of the resources required to do so.

ONE THEME WE WANT TO EMPHAsize at the risk of forcing double, maybe triple, duty on the word is a very different idea of alpha: that is, alpha in portfolio construction (and risk control to follow). This does not involve the rare skill of traditional alpha at the top of our pyramid but rather represents the skillful combination and management, including cost control, of the various components of the portfolio. Long-run investment success requires identifying attractive return sources, harvesting them cost-effectively, diversifying among them aggressively and overlaying smart risk controls. Many investors focus too much on the first activity at the expense of the others. We believe that portfolio construction, risk management and cost control are the low-hanging fruit of managing a long-term portfolio. It's far easier and more plausible to add impactful value to the whole portfolio net of fees through these concepts than the more typical pursuit of alpha.

"An investor who chooses to accept above-average risk will sustain above-average losses in bad times and will not be well positioned to buy when bargains appear."

Here are some specific suggestions for improving a portfolio (alpha in construction and control):

• The prospectively low-return environment underscores the importance of cost-effectiveness, whatever returns investors are harvesting. When it comes to external management, it is essential to not pay alpha prices when it's not really alpha. Fair fees depend on the return source.

• Allocate by risk, not dollars. To achieve effective diversification, it helps to use meaningful measurement units. Measuring portfolio shares by dollar allocations can be highly misleading. The 60-40 dollar split between stocks and bonds may sound balanced but is actually roughly a 90-10 risk allocation given the greater risk of equities. Risk parity investors have taken this message to heart, but it really applies to every investor. Even if at the end of the day you decide you are comfortable with a 90-10 risk allocation into equities, it is better to invest so with open eyes.

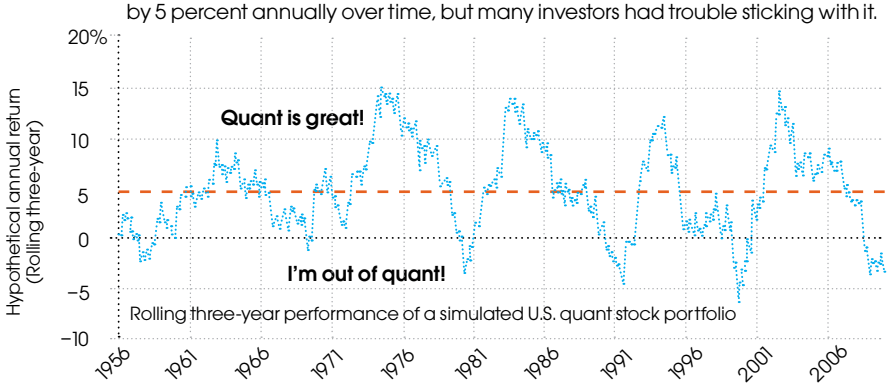
• Ensure that you are building a truly diversified portfolio across investments. Investing in alternative products that are highly market-directional, because many such investments are highly correlated with the equity market, only provides the illusion of diversification.

• Effective diversification almost assuredly requires some amount of leverage, short-selling and derivatives. All should be used in a prudent manner. They involve risks, but we think these risks have proven to be manageable even through some vicious downturns. Return-seeking investors who cannot or will not use these tools are resigned to letting equity market direction drive their portfolio performance.

One of our important messages is that you get to choose your risks — for instance, two paths to high expected returns are concentration in aggressive assets (generally equities) or prudent use of leverage applied to a more diversified portfolio. Both concentration and leverage are risky, and nobody should tell you different. Sadly, you don't get to choose high expected strategic returns without one of these risks. But choosing to concentrate in equities simply because it is the more common choice does not make it any less scary (in the absolute; it may be less scary relative to your peers' making a similar poor choice).

RIDING THE WAVE

A blended quant portfolio of value and momentum stocks outperformed cash by 5 percent annually over time, but many investors had trouble sticking with it.



Source: AQR Capital Management.

RISK CONTROL IS ULTIMATELY about surviving to the long term and not sabotaging it along the way. Although diversification is central to our investment philosophy, investors may want to supplement it with other means of risk control that help them stick to their game plan when faced with unexpected losses. These means can be quantitative: concentration limits, drawdown control rules, rebalancing to target a stable level of portfolio risk over time, tail hedges (though rarely the explicit purchase of insurance). They can also be psychological: education, preparation and precommitment. What follows is some hard-learned, and occasionally hard-earned, risk control advice for those tough investment environments when spine is truly needed to sustain supposedly long-run allocations.

In the wake of the financial crisis of 2008–'09, when many supposedly super-long-term investors acted as liquidity takers, not liquidity providers, we have asked ourselves the obvious question: Why? One simple answer gets to the heart of what it means to be a long-term investor. Long-term investors are often painted as having above-average risk tolerance and a natural edge in being liquidity providers (contrarian buyers of risky assets) in bad times. Both ideas contain a seed of truth, but they may not be right for a single investor.

An investor who chooses to accept above-average risk will sustain above-average losses in bad times and will not be well positioned to buy more when bargains appear. A contrarian investor has to begin a plan in good times and retain some dry powder to have any chance of acting as a contrarian liquidity provider in bad times. Choose which one you want to be — or, at least, what combination you want to be. But don't assume you can be both to the full extent of your endurance without realizing that they will tax you at precisely the same moment. As simple and obvious as it sounds, we think many very long-term institutions "double-counted" their resolve and thought they could be higher long-term risk-takers and liquidity providers in a crisis, and both to the limit of their endurance. But both draw on the same "budget for pain," and this must be recognized up front.

At worst, the result of institutions trying to be both is procyclic capitulation — losing faith and selling risky holdings near the market bottom. We can never truly banish this, as we do not know ex ante the possible depths of a crisis. But by not double-counting how long-term you are, essentially thinking you can have a very aggressive strategic asset allocation and be the one to provide liquidity near the nadir, we think you greatly increase the chance it does not happen to you!

Our next concrete recommendation, after not double-counting what it means to be "long term," is to consider your own self-imposed drawdown control methodology on the overall portfolio. Investors generally face three choices in tough times: Never reduce risk because of losses; reduce risk to control losses subjectively, using judgment on the fly; or reduce risk because of losses in a systematic fashion (what we call having a drawdown control methodology) and add risk back using a similarly systematic methodology.

Frankly, we started out our careers with a lot of sympathy for the first approach, particularly for strategies in which value investing is a big part, as value positions often get more attractive after suffering. Although we are still theoretical fans of that method, we have seen too many instances where a resolve never to cut (or even to add to) risk becomes a mad dash to control losses on the fly at the worst possible time. It does seem clear that no matter what their stated plans to hold the line, all investors have some breaking point, and we believe our collective biases can lead this subjective break to happen at the worst times. This is all magnified when leverage or a high-volatility portfolio is chosen.

Let's delve further into the second approach. We are all subject to many of the same investment biases we describe throughout this article, biases that will feel most acute during the toughest times. Although this subjective method may seem somewhat useful for reducing risk when in pain, we have found it to be completely useless or even a detriment when adding back risk after the pain has started to abate. Choosing when to add back risk is at least as hard to manage well as cutting risk in the first place.

All considered, in most practical instances — again, particularly in the presence of leverage or an aggressive portfolio posture — we prefer the third approach, a systematic drawdown control methodology of early intervention and modest risk cuts, in a hope never to have to cut draconically near a bottom, to either plan one or plan two. Note again that this is a form of zero-sum "alpha," as the world as a whole cannot cut risk.

Last, this might be a stretch to call "risk control," but while we're talking about throwing in the towel at the worst time, an additional high-level recommendation would be to alter or at least soften the focus on three- to five-year evaluation periods for managers and styles. These evaluation periods are death to returns, and nobody ever notices.

Financial market data abounds showing short-run (within a year) momentum patterns and multiyear reversal (value) patterns. Yet investors often make asset-class allocation decisions and manager fire-hire decisions using a three- to five-year evaluation period. In short, they act like momentum investors at reversal (value) frequencies. Return-chasing — allocating toward winners or away from losers — at multiyear horizons and procyclic capitulation after disappointing performance are among the most common ways investors can sabotage their own long-run performance.

The figure on page 77 ("Riding the Wave"), gives an admittedly self-serving example of the simulated three-year returns of a simple quant long-short strategy since the mid-1950s. Despite a very appealing long-run performance — the dotted line about 5 percent in excess of cash — three-year returns exhibit waxing and waning fortunes. (Note that recent results are well within the historical range.) Few investors have the resolve to stay with a strategy through its waning periods.

Of course, we do not counsel ignoring investment performance forever, nor do we counsel never switching asset classes or managers. All we counsel is that if three- to five-year returns are major criteria, and they often are, they are frequently being used in a statistically backward manner that should be acknowledged and perhaps changed.

BEFORE CONCLUDING, LET'S ASK the obvious question: If we're right, why don't more people listen to us?

First, we dismiss the highly unlikely answers that we may be wrong, unconvincing or simply not well liked.

Consider why more people don't leverage a diversified portfolio rather than focus on equities. In theory, it might be optimal for investors to let equities be 90 percent of portfolio risk. If the equity premium offered a uniquely high Sharpe ratio (reward for risk) among return sources, proportionate to its dominant risk, it would be reasonable to depend so heavily on one return source. In practice, however, other asset classes and many long-short investment strategies have historically offered comparable or higher Sharpe ratios. Also, looking ahead, prospective real equity returns are below the long-run average, and it is hard to make a case for a uniquely high reward for this single risk. If investors let equity market direction dominate their portfolio performance, they are doomed to follow the roller-coaster ride of market gyrations with little recourse and a smaller reward than usual.

Yet most investors still choose concentrated equity market risk, despite the better rewards of leveraged diversified portfolios. Investors dislike leverage for both bad reasons (the appearance of speculation) and good ones (any levered portfolio is vulnerable to the danger of having to deleverage at fire-sale prices). This risk is real but can be managed (*Institutional Investor*, May 2010). Concentration risk cannot be managed in any analogous way and, unlike leverage risk, brings a lower risk-adjusted return, not a higher one.

Another main reason for equity domination is familiarity — "everyone does it" — and the resulting lack of peer risk (recall Keynes's safety in failing conventionally).

"If investors let equity market direction dominate their portfolio performance, they are doomed to follow the roller-coaster ride of market gyrations."

Underlying this familiarity are some fair reasons, such as a strong theoretical basis, as well as extensive empirical evidence over 100 years in numerous countries. These reasons together enable investors to sustain their long equity bias through several years, or even a decade or more, of disappointing performance. Any other return source may lead to more time inconsistency (a nicer way to say throwing in the towel at the worst time).

So, while still dismissing the unlikely answers initially mentioned above, we think the difficulty in implementing these suggestions comes down to lack of familiarity, the agency problem of failing conventionally being the superior way to underperform and some real, but in our view overdone, concerns about leverage. The bottom line is that without these barriers we think our recommendations, even given their large capacity, would, like all forms of alpha, be largely arbitraged away, so these barriers may be things to lament, but for those with more freedom to act than the average investor, they are also reason to celebrate.

In conclusion, traditional, simple asset-class allocations — say, 60-40 stocks and bonds — are likely not going to make 5 percent real returns from here given that forward-looking real returns are at half this level. The standard universe of "alternative asset classes" is not likely to fill the gap, as it tends to repeat the problem of concentration in equity risk, just at a higher fee. Nevertheless, we believe that some investors can still achieve the stated 5 percent goal, or at least far closer to that, if they embrace a modest amount of innovation, as we detail in this article, and thoroughly prepare themselves to see it through. No single idea will do the trick, but investors should consider a well-balanced combination of market premia and alternative risk premia, pursue alpha through portfolio construction and employ thoughtful risk controls. Each of these can help investors get closer to the 5 percent real return target. Together they may even make the target realistic for some, and the diversity of ideas should give investors a less rocky ride. ●●

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