

iShares Market Perspectives

Diversification is Dead. Long Live Diversification!
Building portfolios through a prism of risk

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Over the last several months, a number of financial experts and commentators have begun to challenge one of the basic pillars of investing: diversification. They've said that basically because everything performed badly in the market turmoil of 2008 and early 2009, that "diversification is dead." Let's start with what seems like a basic question: how would you define diversification in a portfolio, as well as correlation?

It's a great question. And it's important because the definition has to deal with the uniqueness or what's different in assets. What 2008 and the beginning of 2009 really showed us is there were a lot more things that were common across these assets than people anticipated. We can't ask more from diversification than it can deliver, and so if we don't build portfolios that have differences, we have to expect this kind of behavior.

In a discussion of diversification, correlation always comes up. Correlation is a measure of a relationship between two things. Yet we've asked one number to capture a very complex relationship. For example, think about an investment in an investment-grade credit instrument and one in, say, the S&P 500. Typically you'd expect investment grade credit and equities to be relatively diversifying. However, both are sensitive to interest rates, and both will have some sensitivity to inflation, to economic movements, and to liquidity needs. So, as interest rates rise, all other things held constant, both of these assets should fall in price, but inflation would probably have a more muted impact on equities than on investment-grade credit. Last year, however, we saw a tremendous liquidity squeeze combined with a severe economic slowdown. Both of these causes should drive down prices of equities and credit bonds, with the economic slowdown having a more pronounced impact on equities and the liquidity squeeze a more pronounced impact on credit bonds.

In other words, depending on what's driving the price of those assets, you could have a very different relationship between them. But correlation is just going to be an average relationship over various states during the time period considered for the correlation calculation. We have to be careful about how much we ask that one little number to do for us.

What happened exactly last year that caused the benefits of diversification to disappear?

Last year, two things basically drove asset class returns: exposure to economic risk and liquidity risk. Investment grade credit defaults spiked, or expectations of defaults spiked, at the same time as

earnings expectations dropped dramatically with the expectation of economic slowing. So that led to these two assets moving in tandem. We also saw this huge pull, as I mentioned earlier, on liquidity. Investors were very much overleveraged, and the demand for immediate capital (the definition of liquidity) was very, very high, which causes forced selling. Credit instruments tend to be less liquid, and so their prices fell to reflect the fact that you're holding something that's much less liquid and suddenly the market cared deeply about liquidity.

Liquidity also impacts equity returns. It is necessary to the functioning of most corporations and their ability to generate earnings, and it drives the ability of investors who have been over levered or consumers who are over levered to be able to buy, which drives earnings. So you saw this high correlation between credit and equity.

At the core of what you're talking about is the issue of what actually drives asset class returns. Can you speak to that a little bit?

What should get rewarded are risks that you can't diversify away, and you shouldn't be rewarded for bearing risks that you can diversify away. So if you start thinking about what risks you can't diversify away, in school it's called systematic risk (system wide), but really what it means are things like economic risk, liquidity, interest rates, inflation or political risk.

If you think about investments solely in terms of what asset class you own -- whether bonds or equities or real assets or small cap, large cap, international and so forth -- rather than in terms of their exposures to systematic risks, you have less information about what's going to drive that asset in extreme times.

With the market rebounding, have the benefits of diversification returned, or is diversification still really dead?

Nobody complains about the lack of diversification when all the risky assets rise, only when all the risky assets fall. So as the liquidity situation has improved, and as expectations of economic turmoil have eased, risky assets all have been rising. Neither scenario tells you much about diversification, however, because it's the common features across risky assets that have been driving performance. Diversification deals with what is different rather than common across assets.

What can investors do about balancing risks in a portfolio?

If you think about investing, we only really do two things. We try to generate return and we try to manage risk. There are only two ways to generate return: arbitrage — capture return and bear no risk (very rare) or bear risks that are expected to be rewarded. On the risk-control side, you can either hedge the risks that you don't believe you will be compensated for bearing, or you can diversify across the risks that you are bearing for which you expect compensation. So I think portfolio construction really is about thinking about a number of key questions. What risks am I bearing? Are they likely to be compensated? How do I hedge away the ones that won't be compensated? How do I build diversified exposure to the ones that should be compensated? That is the essence of investing.

It sounds like diversification perhaps works over the long term, but not during extreme or stressful markets. Should investors just grin and bear it when their portfolios are disappearing, or is there something they can do about it?

I don't think diversification failed, but what you have to realize is that different investments may in fact have some unique features and some common features. If the common features, like liquidity or economic uncertainty drive performance, you're going to see that across most of your risky assets. So you can say diversification failed, but you weren't diversified versus that common theme, in this case economic uncertainty and a liquidity shock.

As to what you can do, we have been doing a lot of work on this in thinking about how can you manage through tough times. What we found is that what you want to do is build a diversified portfolio — where you hold diverse exposure to the various systematic risks, but you also want to be able to manage how much exposure you have to this risky portfolio.

When financial markets are poised to reward risk bearing, you want to be in the risk-bearing business. But when the market, especially at extremes, has pushed those premia down to extremely thin margins then risk bearing is not likely to be well compensated and investors benefit from bearing less risk and holding more of their wealth in safe, liquid assets.

Many investors think their portfolio is well diversified if they're in stocks and bonds and international and domestic and so forth. And you're saying they probably aren't. So what are the signs that they should be looking for that they may not be?

I think they should ask themselves, "What risks am I being compensated for?" Start thinking about systematic risks. When you're holding something like the S&P 500, it's too easy to simply say you're bearing equity risk. What does equity risk compensate you for? One of the biggest things it compensates you for is economic uncertainty. The logic goes something like this. Equities are a claim on future earnings. At the market level earnings are much less a function of the entrepreneurial skill of any one CEO

but are very sensitive to the economic environment facing all firms with earnings tending to expand and contract with economic growth.

What drives broad markets, to a large extent, are things like interest rates, economic uncertainty, and political risk in places like emerging markets, for example — in developed markets too recently. So you want to think about what risk am I bearing and can I build diversified exposure across those risks, rather than stopping at that asset class level.

So what's the right mix, when you're thinking of strategic versus shorter term?

We find it's very difficult to be effective at micro-timing, trying to capture small mispricings between stocks and bonds or between bonds of different durations — I call that low breadth portfolio management because it's kind of a one/zero transaction, you're either right or you are wrong. Contrast this with a 100 stock portfolio where you could be right on 52 and wrong on 48. What we find, though, is at extremes, the ability to recognize gross misevaluation even for low breadth opportunities is much higher.

For the bulk of the time I think you want to hold that strategic asset allocation. But at market extremes you want to be able to moderate your risk exposure to that asset allocation. If you want to tactically time things, the probability of success is much higher if you do it at extremes where mispricing is most obvious.

How would you suggest an advisor think about constructing a portfolio using the framework of risk that you're discussing?

For our institutional clients, we've built a proprietary sort of mapping matrix that maps between asset classes and these systematic risks. Unfortunately, we can't give this away, but I think advisors can do a fine job of this. If the fear of being imperfect in that mapping prevents you from doing it, just think about how imperfectly portfolios performed last year. And basically the hurdle is that the new portfolio has got to do better than that.

Maybe you're not sure how much political risk is in an S&P instrument. Maybe that's zero. You can say that. And would you say there's more in an emerging basket? Yes. There's more exposure to interest rate risk in a sovereign debt instrument, than in an equity instrument, and more credit exposure in investment grade and even more in high yield. When you just start thinking about it along those dimensions and getting rough rankings correct, you start to see, hey, most portfolios are massively exposed to economic risk and, effectively, credit risk, which is very akin to economic risk. So if you start saying how can I get more exposure to interest rate risk or inflation risk or political risk, you start to shape your portfolio differently, albeit certainly imperfect, probably a large step better than what we're doing right now.

How would you use iShares ETFs to manage some of these systemic risks you're talking about?

When you invest in an iShares Fund, you're effectively buying exposure to different systematic risks. So an example, if you buy an inflation-protected treasury instrument, you are effectively buying

some liquidity risk and a lot of interest rate risk. Now, one of the things that's convenient about iShares funds is you can short them¹. So if you feel you have too much interest rate risk or you're worried that interest rates are going to go up, that's an instrument you'd want to short. If you're worried more about inflation, you could sell a nominal treasury iShares fund to lower the portfolio exposure to inflation risk and then you could buy back some of the interest rate exposure through an inflation-protected instrument. If inflation rises, the portfolio benefits from the underweight in nominal treasuries, without changing the portfolio's interest rate exposure. So that is an example of how you might be able to hedge some of these risks if you had a forecast of which one of those you were most concerned about.

Are there any ways that investors should think about this framework that you've been discussing today?

There's one other thing that that question makes me think about. If you think about how most individuals manage their wealth, one of the things they do is carve off a piece of their portfolio and buy

insurance. Insurance is a negative expected value investment. We buy something expecting it to lose money. In fact, we hope it loses money. We don't want our house to burn down, or be in a tragic accident. We buy this thing effectively betting that our house will burn down. We hope it won't, and we expect to lose money on the trade, but we all do it, and we're very comfortable doing it.

We need to do the same sorts of things with our investment portfolios, where you might take part of it and say I'm willing to effectively lose money so that if something bad occurs, I've at least got some protection and I make some money from this. And if it doesn't, I'm willing to have this loss in this part of my portfolio. A kind of insurance mentality, I think sometimes makes sense in an investment portfolio. Some examples might help to make this more clear. A holding in long Treasuries might act as a protection against a severe economic slowdown or mass panic as Treasuries likely benefit during a flight to quality and from expectations of lower rates and reduced inflationary pressure that accompany an economic slowdown.

Some examples: Common Risk Factors in Portfolios: The iShares Solution

RISK FACTOR	ASSET CLASSES THAT MAY DO WELL	THE ISHARES SOLUTION	ASSET CLASSES THAT MAY DO POORLY
Rising inflation	Commodity-producing countries TIPS	iShares Barclays TIPS Bond Fund (TIP) iShares MSCI Canada Index Fund (EWC) iShares MSCI Australia Index Fund (EWA) iShares MSCI Brazil Index Fund (EWZ)	Nominal bonds Equities (over short term)
Slowing U.S. growth	Long Treasuries	iShares Barclays 10-20 Year Treasury Bond Fund (TLH) iShares Barclays 20+ Year Treasury Bond Fund (TLT)	Consumer Cyclical Real Estate
Rising interest rates	Cash Short duration bonds	iShares Barclays 1-3 Year Credit Bond Fund (CSI) iShares S&P Short Term National ATM-Free Municipal Bond Fund (SUB)	TIPS Long Treasuries Real Estate
Tightening credit spreads	High yield bonds (long term)	iShares iBoxx \$ High Yield Corporate Bond Fund (HYG)	High yield bonds (short term) Equities Real Estate Private equities
Improving investor sentiment	Equities High yield bonds	iShares S&P 1500 Funds (ISI)	Fixed Income

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¹With short sales you risk paying more for a security than you received from its sale.

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