



# The uncertainty of investment returns

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From 2000 to 2010, one of the better places to invest capital was in U.S. treasuries. The decade of the bursting tech bubble, 9/11 and the worst financial crisis since the Great Depression was a good time to hold “risk-free” assets. Most investors, however, did not invest their portfolios entirely in U.S. treasuries. Nor did they, in mid-2009, invest entirely in U.S. equities even as the U.S. emerged from the global financial crisis and domestic equity markets began the first of many double-digit gains. The better path is always clear in hindsight.

Frustratingly for investment professionals, decisions must be made based on assumptions of what future investment environments will look like. Uncertainty surrounding these assumptions and corresponding asset class returns require prudent investors to construct portfolios capable of performing well in a variety of environments through diversification.

## Diversification in name only

Though the benefits of diversification are well understood, confusion around what constitutes a diversified portfolio remains. Portfolios masquerading as appropriately diversified can often be classified as one of two types.

The first (and in our experience the most common) is *the equity beta portfolio*. The return-seeking allocation of an equity beta portfolio is typically invested across a variety

of equity sub-classes: domestic large-, mid- and small-cap; developed international; and emerging markets. The number of equity sub-classes provides an illusion of diversification; however, each of these sub-classes relies on the same risk factor to drive returns: equity market beta. While returns across these sub-classes do differ from each other in any given year, the difference is usually one of degree rather than direction. In a period of market stress – a “risk-off” environment – concentrated exposure to this one systematic risk factor can result in severe drawdowns, which could put investor objectives in jeopardy.

If we expand the definition of systematic risk beyond exposure to equity markets, we can examine the flaws inherent within our second pretender: *the economic growth portfolio*. The economic growth portfolio looks to improve upon the equity beta portfolio by incorporating additional return drivers within the return-seeking allocation. Often this takes the form of an allocation to 1) high-yield or senior loans to gain exposure to credit market risk, and 2) real estate investment trusts to gain exposure to the listed real estate market, both of which are less correlated with the broader equity market. The inclusion of these additional sources of return can result in a less volatile and more efficient portfolio relative to one reliant entirely on equity market beta. However, like equity markets, credit and listed real estate markets are driven by economic growth at a fundamental level. A reduction in corporate earnings can result in downgrades and

defaults (which impact credit markets) and downsizing (which impacts listed real estate markets). The economic sensitivity of equity, credit and real estate returns leaves an investor again with portfolio components whose return differences in any given year will largely be a matter of degree rather than direction.

We believe both the equity beta and the economic growth portfolios suffer from the same flaw: dependence on a specific investment environment, one in which corporate earnings growth is strong and inflation stable. As noted previously, future investment environments and corresponding asset class returns are highly uncertain. Minimizing uncertainty of portfolio outcomes is the point of diversification, but we feel portfolios are too often diversified in name only, with success in meeting investment objectives dependent on a very narrow range of potential scenarios (see *Figure 1*).

## More return drivers, less uncertainty

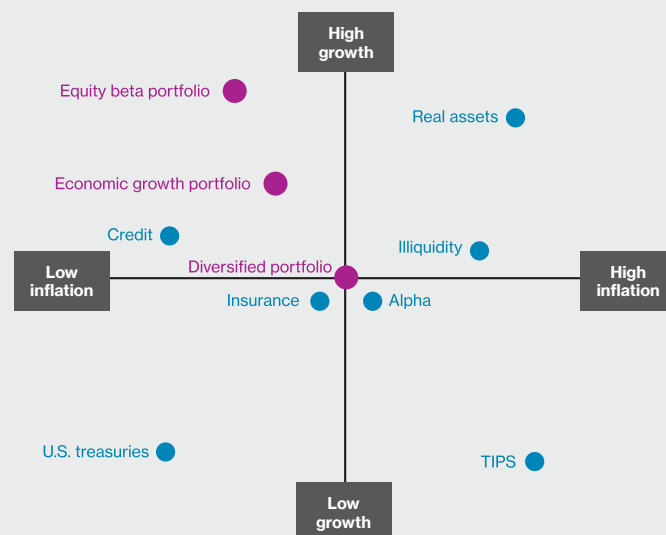
When building a truly diverse portfolio, we begin by identifying unique sources of potential return. These return drivers include economically sensitive sources of return such as equity and credit risk premia as well as less cyclical sources of return such as insurance, illiquidity and alpha (see *Figure 2*). By introducing these less cyclically sensitive sources of return, the correlation between individual portfolio components decreases and the range of potential portfolio outcomes begins to narrow.

Each of these return drivers includes asset classes with unique risk and return profiles. For example, in any given year, the range of potential equity returns will be wider than that of credit returns. Investors expect to be compensated with higher returns over time for the tail risk implied by this higher relative variability. This tradeoff requires thoughtful consideration when determining the size of portfolio positions: a diverse set of return drivers inappropriately sized can return us to the equity beta portfolio with a single risk factor dominating the portfolio.

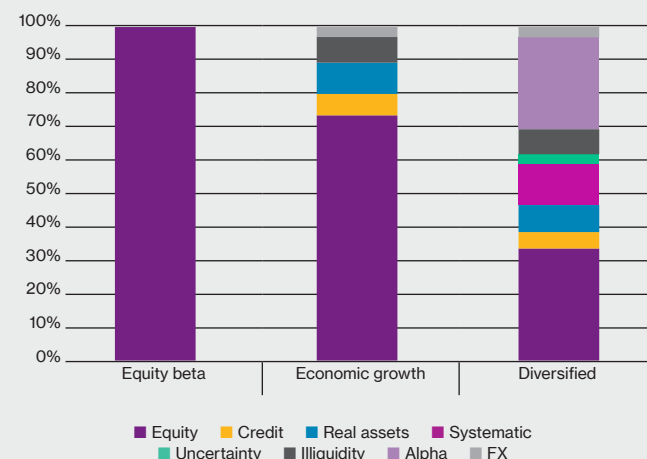
Inappropriate sizing can also lead to an over-diversified portfolio, which while efficient in its risk/return trade-off, may prove inefficient in its expected return relative to investor objectives. An appropriately diverse portfolio seeks to protect against the uncertainty of future returns by narrowing the range of potential portfolio outcomes while leaving it wide enough to meet a desired return objective, a balance that is ultimately dependent upon client context (see *Figure 3*).

Comparing the performance of the equity beta, economic growth and diversified portfolios over the past 10 years demonstrates the value of diversification even in a period

**Figure 1. Economic environment**  
**Illustrative portfolio positioning**

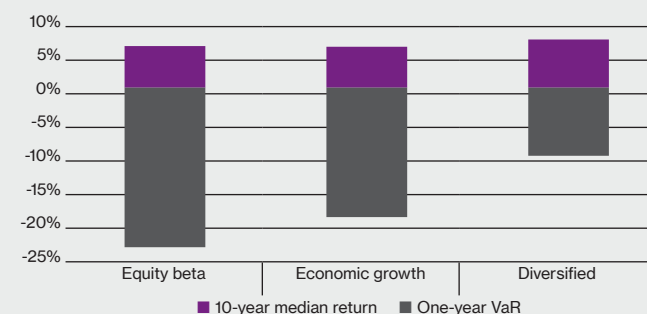


**Figure 2. Attribution of return drivers**



Attribution of return drivers based on Willis Towers Watson's Lower for Longer Capital Market Assumptions as of January 1, 2019.

**Figure 3. Range of portfolio outcomes (10-year median return vs. one-year VaR)**



Expected returns are based on Willis Towers Watson's Lower for Longer Capital Market Assumptions as of January 1, 2019. Worst case is a 1 in 20 probability (VaR95). Return distributions incorporate fat tails and correlations between return-seeking asset classes increase when fat-tail events occur. The example portfolio does not imply a guarantee of future performance or risk reduction. Willis Towers Watson model results and assumptions may not be realized.

largely favorable to equity and credit assets. A diversified set of return drivers provides more downside protection during the initial period of stress, which allows the diversified portfolio to keep pace with the less diversified portfolios during the recovery such that the overall experience from a return perspective is similar, but with significantly less volatility (see Figure 4).

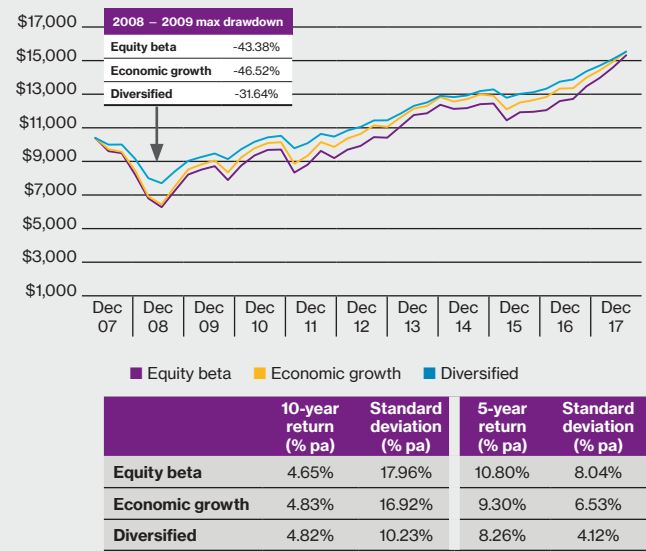
### Client context

For plan sponsors, the acceptable range of portfolio outcomes, and consequently the appropriate sizing of various return drivers, is a function of plan characteristics and objectives. A fully funded, frozen plan considering annuitization in the near term will have a lower return objective and will need less exposure to return drivers with greater variability than a poorly funded plan attempting to close a deficit over the long term. The shorter the time horizon, or the lower the return objective, the greater the need for diversification.

In addition to return objectives and risk constraints, plans have varying requirements with respect to fees, complexity and liquidity – variabilities that impact the appropriateness and sizing of specific asset classes. Of these three elements, we’ve found liquidity to be commonly misunderstood when designing a return-seeking portfolio in a pension context. Based on our experience, a typical corporate pension plan has both an investment horizon and a liability duration in excess of 10 years with annual benefit payments accounting for a small percentage of plan assets for the near future. Yet we frequently see plans with 90% to 100% of their portfolio invested in very liquid assets (i.e., capable of being moved to cash within 30 days). We believe this liquidity mismatch is common among defined benefit plans, and addressing it can widen a plan’s investment opportunity set to include diverse sources of return beyond those found in public markets (see Figure 5).

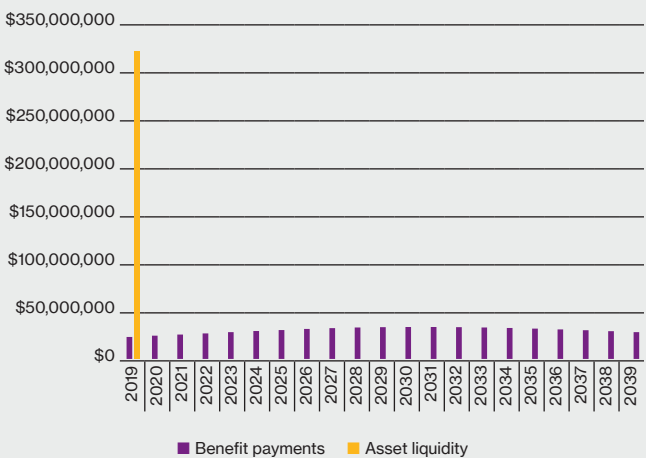
While building a truly diverse portfolio may result in a narrower expected range of portfolio outcomes, there need not always be a trade-off between reducing variability and seeking higher returns for pension plans. By working in a total portfolio framework, defined benefit plans can help reduce risk while improving potential returns. Constructing an efficient liability hedging portfolio allows for more capital to be invested in return-seeking assets without increasing total portfolio risk. (See [Liability-driven investment strategies can be surprisingly simple](#) [May 2018].) Similarly, understanding a plan’s liability profile and reducing liquidity mismatches allows for a broader investment opportunity set, which can reduce risk while improving returns.

Figure 4. Historical performance of diversified vs. non-diversified portfolio



**Note:** Based on index returns.  
**Equity beta:** 100% MSCI ACWI  
**Economic growth:** 70% MSCI ACWI; 15% FTSE EPRA/NAREIT Developed; 7.5% ICE BofAML Global Non-Financial High Yield (BB-B) (USD Hedged); 7.5% S&P/LSTA Leverage Loans Index  
**Diversified:** 30% MSCI ACWI; 2.5% FTSE EPRA/NAREIT Developed; 7% NCREIF ODCE Equal Weighted; 4% S&P Global Infrastructure USD Hedged; 5.0% ICE BofAML Global Non-Financial High Yield (BB-B) (USD Hedged); 5.0% S&P/LSTA Leverage Loans Index; 2.5% JP Morgan GBI-EM Broad Composite; 1.25% JP Morgan CEMBI Broad Diversified; 1.25% JP Morgan EMBI Global Diversified; 14.5% HFRI Fund Weighted Composite; 14.5% HFRI Fund of Funds: Conservative; 12.5% Preqin Private Equity Index. **The example portfolio does not imply a guarantee of future performance or risk reduction.**

Figure 5. Liquidity mismatch



Based on sample plan with liability duration of 14 and asset market value of \$323m. Actual results may vary.

We may not know what future investment environments will look like, but we can be better prepared for whatever comes by building a portfolio with a diverse set of return drivers sized in-line with client objectives and considered within a total portfolio framework.

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