Asset Allocation Trends for Defined Benefit Plans

by | Robert J. Waid and Bahman Engheta, Ph.D.

Defined benefit plans have increasingly become more global in their asset allocations to equities, at the expense of U.S. equities. That’s one of the main trends observed by Wilshire TUCS®.
The 2008 global financial crisis led people, firms and pension plans to reevaluate their approach and assumptions to investing. The Wilshire Trust Universe Comparison Service® (Wilshire TUCS®) was used to provide a glimpse into how this has translated into action by looking at allocation shifts by defined benefit plans before and after the global financial crisis.

The Data

Wilshire TUCS® is a cooperative effort between Wilshire Associates Incorporated (Wilshire®) and major custodian banks and trust companies. Custodians blind-submit to Wilshire their clients’ trust plan performance, asset allocation and holdings detail. Wilshire combines the submitted data for plans to be compared to universes of like-styled plans.

A universe of defined benefit plans providing a ten-year history of quarterly asset-level data was selected. Linear growth rates were then calculated for the average quarterly asset allocations for the five years before September 2008 and the three years ending in March 2012. The linear least squares fit was used to better measure trends over time than single point changes, which are subject to short-term effects such as performance and rebalancing. Asset allocations are summarized in Figure 1.

Immediately apparent is the continuing general trend by defined benefit plans to increase their equity diversification by increasing their exposure to international equities while reducing their exposure to U.S. equities.

Diversification, Not Performance Chasing

Diversifying into international equity is even more pronounced with large defined benefit plans (those with assets greater than $1 billion) versus small defined benefit plans (those with assets less than $1 billion). This is not a case of performance chasing, as the Wilshire 5000 Total Market IndexSM has outperformed the MSCI All Country World ex USA Index in three
of the past five years and 2.27% to -1.11% annualized for the last five years ending March 31, 2012, respectively.

Figure 2 shows the steady ten-year trend of growing international equity to total equity ratio from below 20% to nearly 30%. The trend is more than just an increase in international equity; it includes the overall decrease in average equity exposure with a declining growth rate of -1.26% into other asset classes over the last ten years.

Given the trend to diversify internationally, it would be natural to assume that defined benefit plans would be diversifying their bond holdings as well by increasing their exposure to international bonds. This is not the case. As Table I shows, since the global financial crisis international fixed income allocations have increased only slightly, at a rate of 0.12% per year. Over the last ten years, that rate is still lower, at 0.03% per year.

**U.S. Equity as a Funding Source**

International equity and international fixed income account for only...
FIGURE 2
Quarterly Average International Equity to Total Equity for All Defined Benefit Plans

Source: Wilshire TUCS®.

FIGURE 3
Quarterly Average Asset Allocation for All Defined Benefit Plans

Source: Wilshire TUCS®.
part of the decline in U.S. equity allocation. Other asset classes that have benefited from this trend are the equitylike asset classes of real estate and alternative investments.

Prior to the global financial crisis, defined benefit plans consistently increased their exposure to both the original alternative equity asset class—real estate at a rate of 0.44% per year, as well as to all other alternative investments at a rate of 0.50% per year. The real estate bubble virtually stopped the former trend, which has since been at a nearly flat rate of 0.08% per year. The sudden allocation downturn on Figure 3 is clearly tied to the dramatic drop in performance experienced toward the end of 2008.

On the other hand, defined benefit plans have continued stepping up their exposure to the somewhat nebulous asset class—alternative investments—at a rate of 0.47% per year. This catchall investment category includes private equity, hedge funds and fund of funds. Figure 3 shows the steady increase in defined benefit plan asset allocation to real estate and alternatives.

**Takeaways >>**

- Defined benefit plans continue to increase their equity diversification by increasing their exposure to international equities while reducing their exposure to U.S. equities.
- Plans have increased their exposure to international bonds only slightly.
- Defined benefit pension plans have steadily increased asset allocation to alternatives, but the trend of increasing allocations to real estate has been put on hold.
- Large plans have a larger exposure to every other asset class except U.S. equity than small defined benefit plans.
- Small defined benefit plans have eased off of most of their asset class shifting, with the exception of the continued growth of assets into international equity at the continued expense of U.S. fixed income.
Large Plan Differences to Small Plans

The trend of assets flowing out of U.S. equity and into other asset classes is more apparent with Table II’s comparison of the asset allocation of large and small defined benefit plans.

Large defined benefit plans have a larger exposure to every other asset class except U.S. equity than small defined benefit plans. The move out of U.S. equity was more pronounced prior to the global financial crisis for both large and small defined benefit plans as shown in Table III.

What stands out since the global financial crisis is that small defined benefit plans have eased off of most of their asset class shifting. The only notable small plan trend is the continued growth of assets into international equity at the continued expense of U.S. fixed income. All other small defined benefit plan asset class growth rates are nearly flat (plus or minus 0.10%). This is in stark contrast to large defined benefit plans’ continued reduction in U.S. equity into other asset classes, especially alternatives.

Conclusion

Defined benefit pension plans have changed their approach to the asset classes most affected by the 2008 global financial crisis, namely, equity and real estate. The trend of increasing exposure to real estate has been largely put on hold. The trend of shifting assets from U.S. equity to international equity continues but has slowed. Both large and small defined benefit plans are consistent in this regard. Large plans continue to diversify across all asset classes, particularly alternatives, while small plans seem content to diversify mostly into international equity. This implies that although diversification is still an important investment goal, performance memory plays a role in asset allocation decisions, especially for small plans.

Endnotes

1. Average allocations were used to add to 100%. Median values were similar to the average values.
2. The September 15, 2008 Lehman bankruptcy filing is used as the beginning of the global financial crisis.
3. The six-month gap spans the beginning of the global financial crisis and the equity market bottom.
4. For each asset class C, the quarterly average asset allocation \( w_C \) as a function of time \( t \) is fitted by the line \( A_C + B_C \) where the parameters \( A_C \) and \( B_C \) are chosen to minimize the sum of squared residuals. The rate of change \( A_C \) then quantifies that asset class’s allocation trend over the analysis period.

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