

Diversification: An Expensive Lunch Recently, But Free Over Time

The Benefits of Diversification Ebb and Flow, But Now is Not the Time to Abandon the Time-Tested Strategy

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One of the most important concepts taught to MBA students in Investments 101 is that portfolio diversification is fundamental to a sound investment strategy. In 1952, Harry Markowitz, pioneer of Modern Portfolio Theory, coined the oft-cited phrase, “Diversification is the only free lunch” in finance. Diversification has earned this reputation because of its ability to produce superior risk-adjusted returns over time.

PMC firmly believes in the value of diversification, and we reflect that philosophy in the construction of our portfolios. In our Quantitative Research Group’s (QRG) study, *Capital Sigma: The Sources of Advisor-Created Value* (2015), we find that appropriate diversification can indeed deliver positive active, or excess, return over time.

While diversification works over time, it does not work *all* the time. In some periods, which have lasted for several years, asset class diversification has not worked. Undoubtedly, there will be periods in the future where diversification will underperform.

To illustrate the cyclical nature of diversification’s benefits, we look at the 18-year period from 1/1/1999 through 12/31/2016. We study the performance of a moderate allocation strategy, comparing a 60/40 diversified strategy to a non-diversified policy portfolio. The non-diversified policy portfolio consisted of 60% US equities (S&P 500) and 40% US intermediate fixed income (Bloomberg Barclays US Government/Credit Intermediate Index). The diversified strategy was allocated in accordance with PMC’s 2016 Suggested Moderate Asset Class Portfolio (ACP).

The graph to the right shows the relative performance of the diversified strategy compared to the non-diversified strategy. For approximately 12 years beginning in 1999, the diversified portfolio performed very well relative to the non-diversified policy portfolio, as indicated by the rising line. The one exception during this period was the peak of the financial crisis in the latter half of 2008, during which the safe-haven, US-focused nature of the non-diversified policy portfolio did a better job of protecting capital.

Investnet | PMC 2016 Suggested Moderate Asset Class Portfolio

Non-Diversified Policy Portfolio		Diversified Strategy	
Equity	60%	Equity	60%
US Large Cap Core (S&P 500)	60%	Large Cap Growth	10.26%
		Large Cap Value	10.26%
		Mid Cap Growth	4.88%
		Mid Cap Value	4.88%
		Small Cap Growth	2.01%
		Small Cap Value	2.01%
		Int'l Developed Mkts.	15.54%
		Emerging Markets	3.89%
		Commodities	4.47%
		REITs	1.80%
Fixed Income	40%	Fixed Income	40%
US Intermediate Bonds	40%	Intermediate-Term Bonds	19.66%
(Bloomberg Barclays US Gov't/Credit Int.)		Short-Term Bonds	4.09%
		High Yield	2.04%
		TIPS	2.03%
		International Bonds	8.21%
		Emerging Market Bonds	1.94%
		Bank Loans	2.03%

Diversified vs. Non-Diversified Strategies Relative Performance: 1/1/1999 – 12/31/2016



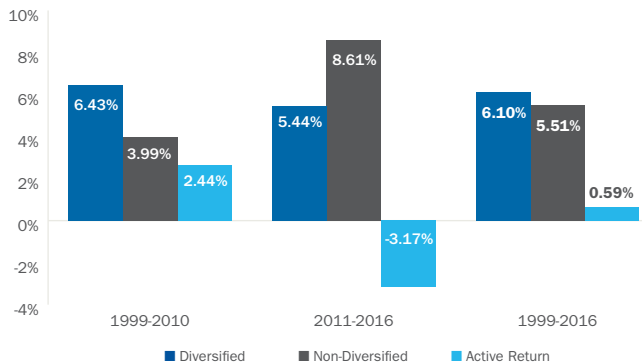
Source: Morningstar, Investnet | PMC.

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However, the picture changes dramatically over the next six years, beginning in 2011. The diversified portfolio significantly underperforms the non-diversified portfolio. Exploring the explanations as to why this cyclicality has occurred is beyond the scope of this piece, but possible reasons include monetary policy differences between the US and international economies, as well as varying investor risk appetites.

The graph below contains a comparative analysis of these individual sub-periods, and shows that over the 12 years ending 12/31/2010 the diversified strategy generated an annualized active return of +244 basis points relative to the non-diversified strategy.

Annualized Returns on Diversified, Non-Diversified Strategies



Source: Morningstar, Evestnet | PMC.

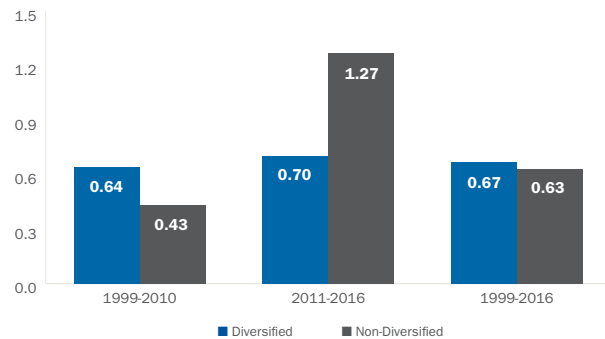
As noted above, however, the ensuing six-year period ending 12/31/2016 was a difficult one for the diversified strategy, as it delivered an annualized active return of -317 basis points. The diversified portfolio's struggles were most acute in the three years from 2013-2015, during which the strategy produced an annualized active return of -469 basis points. Note also that including alternative investment asset classes and employing active managers would have exacerbated the diversified strategy's underperformance during this period.

Despite the poor recent results, diversification has added value over the entire 18-year period, with the diversified strategy outperforming the non-diversified policy portfolio by an annualized +59 basis points.

Diversification has also proven its worth over time on a risk-adjusted basis, as demonstrated in the Sharpe Ratio graph below. The non-diversified strategy benefited

from an extremely low volatility environment for domestic US equities and fixed income over the past few years. But the longer-term, volatility-dampening characteristics of a diversified strategy that originally prompted Markowitz's famous phrase continue to hold true.

Sharpe Ratio



Source: Morningstar, Evestnet | PMC.

Primary Asset Class Contributors to Active Return

Analysis of the contributions from individual asset classes during these periods is also instructive. The table below lists the asset classes comprising the diversified portfolio, as well as their respective annualized contributions to active returns.

Annualized Contribution to Active Return			
Asset Class	1999-2010	2011-2016	1999-2016
Equity			
Large Cap Growth	-0.09%	-0.01%	-0.07%
Large Cap Value	0.18%	0.00%	0.12%
Mid Cap Growth	0.24%	-0.07%	0.14%
Mid Cap Value	0.33%	0.02%	0.22%
Small Cap Growth	0.07%	-0.02%	0.04%
Small Cap Value	0.14%	0.00%	0.09%
Int'l Developed Markets	0.39%	-1.38%	-0.21%
Emerging Markets	0.67%	-0.54%	0.27%
Commodities	0.34%	-0.97%	-0.10%
REITs	0.17%	-0.02%	0.11%
Fixed Income			
Intermediate-Term Bonds	0.00%	0.00%	0.00%
Short-Term Bonds	-0.04%	-0.07%	-0.05%
High Yield	0.08%	0.10%	0.09%
TIPS	0.04%	0.01%	0.03%
International Bonds	0.02%	-0.27%	-0.08%
Emerging Market Bonds	0.10%	0.07%	0.09%
Bank Loans	0.00%	0.04%	0.01%

Source: Morningstar, Evestnet | PMC.

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For the 1999-2010 period, each asset class contributed positive or neutral active returns, with the exceptions of Large Cap Growth and Short-Term Bonds. In the equity segment, Emerging Markets (+67 bps), Int'l Developed Markets (+39 bps), Commodities (+34 bps), and Mid Cap Value (+33 bps) were primary contributors. Emerging Markets Bonds (+10 bps) and High Yield (+8 bps) contributed most in the fixed income segment.

For the disappointing 2011-2016 period, most of the equity asset classes contributed negatively to performance, with Mid Cap Value (+2 bps) being the only asset class generating positive annualized contribution. Far and away the biggest detractors from annualized performance during the period in the equity segment were Int'l Developed Markets (-138 bps), Commodities (-97 bps), and Emerging Markets (-54 bps). For the three years spanning 2013-2015, those three asset

classes accounted for an aggregate -382 basis points of active return. Within the fixed income segment during 2011-2016, High Yield added value (+10 bps), but the International Bonds asset class was a significant detractor (-27 bps).

Without question, diversified portfolios in recent years have materially underperformed non-diversified strategies invested in US large cap equities and intermediate-term bonds. But the recent results should not deter investors from employing a strategy of diversification at the asset class level. Just as it is extremely difficult to successfully time the market on a consistent basis, it is equally as difficult to predict when and why a diversified strategy may underperform. Advisors and their investor clients would be well served to maintain an appropriately diversified portfolio to have a great opportunity to generate superior risk-adjusted returns.

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