FACTORS IN FOCUS

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Indexing Isn't Enough

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A recent series of Wall Street Journal articles highlighted a reality that we have been discussing for some time: there is a fundamental shift taking place in how people invest. Away from traditional "active" management—stock picking and market timing—and towards low-cost "index" mutual and exchange-traded funds (ETFs). The push towards passive investing is the good news. That bad news is, after an initial screen that excludes active managers and sorts index funds by expense ratios, there is minimal guidance, let alone consensus, on the best way to allocate your portfolio.

The Limits of Simplicity

On one end of the spectrum, hard-core index enthusiasts suggest just two "Total Market" Index Funds that cover the US and non-US stock markets. Total Market Index Funds are cheap, and over time, they perform well.

Table 1 Portfolio Allocation	1994 to 2015 Ann. Returns	2000 to 2015 Ann. Returns
Total Market Index	+8.1%	+4.2%
Asset Class Index	+10.7%	+8.4%

Table 1 shows, since 1994, a globally-diversified Total Market Index (70% US, 30% Int'l) returned +8.1% per year, sufficient for most investors to achieve their long-term goals. This despite the fact that the international index component managed just +5.3% per year.

The results since 2000 tell a different story. This period coincides with a steep decline in large cap and technology companies that were all the rage in the 1990s. Total Market Indexes hold stocks in proportion to their relative size. The bigger the company, and the more it has recently risen in price, the larger its stake in the index. Overweighting large stocks has damaged returns for 16+ years, as the Total Market Index has barely managed 4% annually since 2000.

Two minor adjustments to the Total Market Index would have improved its long-term results and the consistency of those results without significantly greater complexity. First, on the US side of the portfolio, adding large cap and small cap *value* stock indexes to the Total Market Index creates better balance amongst large/small and growth/value companies. Second, replacing the Total International Stock Index with international large cap and small cap value stock indexes provides much better diversification and higher expected returns than the big, multinational foreign stocks that dominate traditional foreign stock indexes. The "Asset Class Index" in Table 1 represents these changes.

The benefits are obvious. Over the full period, the Asset Class Index had about 2.5% a year greater performance and returned over 4% per year more since 2000. The first time frame highlights the higher potential returns of large and small value stocks; the second demonstrates their diversification benefits. Despite lackluster returns for the large-cap-dominated Total Stock Market Indexes since 2000, value and small cap stocks continued to produce returns close to their average result over the entire period.

Complexity: Sophisticated, Or Just Complicated?

Diversifying beyond large cap US and international stock indexes has offered great rewards. Unfortunately, many investors take these diversification principles too far. Instead of simply refining a basic index fund portfolio to include the well-documented benefits of value and small cap stock diversification, they also (or, instead) include several other asset classes with far less justification. Table 2 on the next page lists a handful of examples.

REITs

Real estate is an investment opportunity that is sometimes considered in addition to traditional stocks. Real Estate Investment Trusts (REITs) are publicly-traded stocks that give investors an opportunity to own companies whose performance is said to mirror the long-term returns of the commercial real estate market. Viewed in portfolio terms, REITs are smaller stocks and lumped in with the small-cap allocation. In this example, we took the 10% REIT allocation from the Small Cap Value Index. Table 2 reports

Table 2 Portfolio Allocation	1994 to 2015 Ann. Returns	Risk (Standard Deviation)
Asset Class Index ("ACI")	+10.7%	19.6
ACI w/10% REITs	+10.5%	18.8
ACI w/10% Emerg. Mkts	+10.6%	19.9
ACI w/10% Commodities	+10.0%	18.6

that this additional diversification did not matter much. The "Asset Class Index w/10% in REITs" had 0.2% per year *lower* returns than our standard asset class index, with about 0.8 per year less volatility. Unless you were checking your portfolio on a daily basis, a 0.8% difference in standard deviation wouldn't matter to you. But over time you'll begin to notice a 0.2% per year lower return. When you add in the fact that most of the return from REITs comes from dividend payments that are taxed as ordinary income and not at preferred capital gains rates, you realize their exclusion from a portfolio is very sensible.

Emerging Markets

The developing countries of China, Brazil, India and South Korea, just to name a few, have higher economic growth when compared to the US, Europe, and Asia. But higher growth does not reliably translate into higher stock market returns. Over this period, the DFA Emerging Markets Index had lower annualized returns (+5.5%) than any of the five developed market asset classes in the Asset Class Index. Predictably, then, adding 10% in emerging markets (taking it from the international large and small value indexes) slightly reduced results.

And while emerging market stock markets haven't had higher returns, they are smaller, less liquid, and contain added political risks not found in developed markets. And they are **extremely** volatile. At 34.2, the annual volatility of emerging markets stocks was approximately double that of the Asset Class Index from 1994-2015. So it's no surprise to see that the Asset Class Index w/10% Emerging Markets registered slightly higher portfolio volatility, offsetting any potential diversification benefits.

Commodities

Whenever investors get a hankering for something different, or when they start to get spooked by the potential for higher inflation, demand for commodities like Gold, Silver and Crude Oil become widespread. A commodity index combines the futures contracts of a few dozen commodities into a basket that is supposed to provide added diversification and enhanced real returns when compared to a traditional stock portfolio. Since 1994, these potential benefits have failed to materialize. The Bloomberg Commodity Index has returned just +2.3% per year over this stretch, which is even less than the +2.6% per year return on risk-less One-Month Treasury Bills. Adding commodities to our Asset Class Index (reducing each of our five core stock indexes by 10%) did lower its volatility by about 1%. Unfortunately, annualized returns dropped by 0.7% per year. And commodities, like REITs, are extremely tax inefficient. From time to time, speculators make money buying and selling commodities at the right time. As long-term investors, it's hard to make a case for them.

As Simple As Possible, But Not More So

There are more alternative examples I could cite, all available in low-cost index funds. And that's the problem with a general "indexing" philosophy. What should you hold? What is the basis for adding or removing asset classes?

When it comes to stocks, their long-term record is superb. We've known for 25 years that adding value, and small-cap asset classes have the potential to increase portfolio returns. Applying this logic to non-US developed markets also improves portfolio diversification. High-quality, short-term bonds are the logical choice for reducing overall portfolio risk and improving liquidity for rebalancing or withdrawals.

Beyond a handful of core stock and bond asset classes, however, it's difficult to enhance returns further and reduce risk. Adding alternative asset classes reliably increases complexity, usually impairs tax efficiency, and generally follows a performance-chasing pattern of adding strategies after they've performed well (when the conventional wisdom for using them seems most prominent), only to experience the inevitable underperformance, further penalizing portfolio results.

So while we continue to be a champion of broadly-diversified, low-cost index and asset class mutual funds, we also realize that your portfolio's asset allocation is at least as important a factor in your long-term success— ***indexing isn't sufficient***. We're not going to simplify our approach to the extent that returns suffer and the risk grows unacceptably high. But at the same time, we'll avoid superfluous alternative asset classes only to appear more sophisticated and appealing from a marketing perspective.

We'll make it as simple as possible, but not more so.

source of data: DFA Returns Web

Total Market Index = 70% CRSP 1-10 Index, 30% MSCI All World ex.US

Asset Class Index = 21% DFA US Large Cap Index, 21% DFA US Large Value Index, 28% DFA US Small Value Index, 18% DFA Int'l Large Value Index, 12% DFA Int'l Small Value Index, rebalanced annually.

"ACI w/REITs" = substitute 10% DJ REIT Index for DFA US Small Value Index

"ACI w/Emerging Markets" = substitute 10% DFA Emerging Markets Index for DFA Int'l Large Value and DFA Int'l Small Value Indexes

"ACI w/Commodities" = 90% ACI Index, 10% Bloomberg Commodity Index