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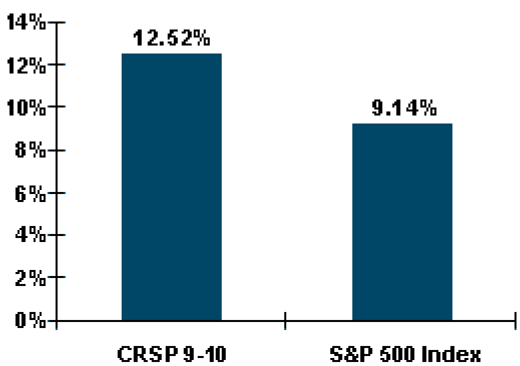
Vice President

Creative Indifference

When Rolf Banz first documented the size effect in 1981 he found that small cap stocks outperform large cap stocks by 3%-4% per year[1]. At that time, much of the research community argued that the premium would be wiped out by trading costs. After all, the average bid-ask spread—the difference between what buyers offer versus what sellers demand—was 3%-4% for small cap, the exact amount by which they over-performed. In other words, the size effect simply seemed to compensate for higher trade costs.

CRSP 9-10 vs. S&P 500 Index
1926-1981



Bid/Ask Spread
November 8, 2001

Mkt. Cap Range ($Millions)	Bid/Ask Spread)
23,826-999,999	.12%
3,735-23,826	.19%
1,429-3,735	.30%
452-1,429	.52%
191-452	.99%
0-191	4.03%

CRSP data courtesy of the Center for Research in Security Prices, University of Chicago.
S&P data courtesy of © Stocks, Bonds, Bills and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated works by Roger C. Ibbotson and Rex A. Sinquefield).
Bid/ask spread courtesy of Bridge.

Dimensional started the first broadly diversified small cap strategy, the US Micro Cap, the year following this research. Originally, we offered the vehicle to diversify large cap exposure and we didn't dwell on the higher returns. The fact that small cap stocks seemed to behave differently and were missing from most plans seemed reason enough to hold them. We thought of small cap as a diversifier—almost as a completion strategy. Since then, we've learned a lot about executing the size effect without getting hurt by trade costs. A big key is to be somewhat indifferent about which stocks you hold.

Traditional index managers and active managers seem like polar opposites in most ways. Yet they share a crucial trait: neither is indifferent about what they buy and sell. Both passive and active managers are compelled to trade; the only difference is in the mechanism that compels them.

A traditional passive manager is compelled by an index. These managers value relative returns—how closely they match index performance—over absolute returns. They try to replicate an index by buying and selling when the index reconstitutes and matching its weights through time. The prices they pay at the end of the day are the same prices the index uses to calculate its return, so the passive manager achieves the goal of tracking the index but pays more in trade costs. Though tracking feels good, it doesn't increase wealth.

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The Factors of Returns

A traditional active manager is also compelled to trade—but more by a search for mispriced securities. When active managers are convinced a security is "underpriced" they buy it. When they are convinced a security is "over-priced" they sell it. Because the world is a jungle where countless traders seek to exploit these mispricings, managers have to be nimble. Buying or selling big positions in tiny stocks that only transact a few thousand shares a day can take way too long. Often a big manager with money to move around will happily incur extra costs to transact quickly, as long as the extra costs are smaller than their short-term return forecast.

Meanwhile, multifactor research tells us that the size effect is strong and pervasive across many thousands of small stocks. Asset class representation can be captured without pure index weights. Small cap indexes, in fact, often include securities like REITs that research suggests aren't even proper specimens of the asset class. At Dimensional, we refine our definition to exclude everything that is less than purely representative—we pare the universe down to the few thousand names across which we can be totally indifferent. We then let the weights fluctuate within boundaries. Sometimes, a stock will be held at double its "index" weight, sometimes at half. We'd rather not *need* to buy or sell any particular name just to maintain perfect weights. This flexibility—absent in traditional index funds—allows for better execution.

One way to avoid the higher trade costs of small cap stocks is to buy them at volume discount, in large "blocks." Managers on the selling side of big block trades are willing to pay a liquidity premium for quick execution. This translates into deep price discounts and lowered trade costs, which translate into increased return. The very illiquidity that would ordinarily undermine small cap returns for traditional indexers becomes a source of added value. Dimensional's small cap strategies capture the asset class with strong correlation to most indexes (R^2 of 90%-98%) but with 150-350 basis points of extra return per year since the various fund inceptions going back to 1982. Instead of paying the higher trade costs of small cap stocks, a patient passive investor who doesn't seek index replication can actually capture those costs as returns.

Performance against Conventional Benchmarks
As of March 2003

Dimensional Strategy	Inception	Conventional Benchmark	Annualized Difference (basis pts.) Last Five Years	Annualized Difference (basis pts.) Since Inception	R^2
US Micro Cap Portfolio	1982	Russell 2000	545	217	0.90
US Small Cap Portfolio	1992	Russell 2000	314	165	0.97
US Small Cap Value Portfolio	1993	Russell 2000 Value	119	164	0.88

Dimensional's strategies are net of all fees.
R2 is since Dimensional strategy inception.

Data courtesy of Russell Analytic Services.

Performance data reported by Dimensional Fund Advisors Inc. represents past performance and does not predict future performance. The investment return and principal value will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Further, there can be no assurance that any of the Portfolios will achieve its investment objective. Prospectuses contain more complete information on risks, advisory fees, distribution charges, and other expenses and should be read carefully before you invest or send money. Prospectuses for Dimensional funds can be obtained directly from Dimensional Fund Advisors Inc., or by visiting the Prospectuses page.

View SEC standardized performance data and disclosures.

The success of block trading is tacit evidence of market efficiency, by the way. Active managers who are willing to sell at a discount tend to be bearish on the stocks they sell. The fact that block purchases generate value-added means the stocks don't continue to fall in price relative to other small cap stocks. In other words, the active sellers are not correct in their bearish forecasts. If they were, the whole thing wouldn't work.

It's only possible to capture these trade costs with a passive mindset, but also without strictly indexing. Prices are on average fair representations of value. Dimensional doesn't pick stocks or time markets because these activities add risk without expected returns. The portfolios do not perfectly replicate indexes of illiquid securities either, because to do so is costly for trading.

Allowing differences in composition saves in execution costs and allows stronger asset class representation—which makes every dollar invested go further to capture the size effect in returns.

1 *Rolf W. Banz, "The Relationship Between Return and Market Value of Common Stocks,"* Journal of Financial Economics *9 (1981): 3-18.*

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