## EXHIBIT 1 TIC-TAC-TOE

x	0	х
х	0	0
0	х	х

appears to be false. The ultimate outcome [of the game] is determined by who can lose the fewest points, not who can win the most. Money management has been transformed from a Winner's Game to a Loser's Game.

When the article was written — now more than two decades ago — the Standard & Poor's 500 index was virtually the only standard used by institutions to measure market returns. (And even it wasn't used very often.) And in those ancient days, the portfolios of most institutional managers — and most mutual funds — were dominated by a blended list of the large-cap stocks in the S&P 500. In this modern day and age, however, other styles have developed, some with extreme emphasis on value or growth, or on medium- or small-cap stocks. Given variations in investment performance among these styles (at least over interim periods) and in volatility risk (in all periods), it seems only good judgment to compare like with like.

To date, most mutual fund performance evaluations have been fairly simplistic: How has a fund performed relative to "the market"? The Standard & Poor's 500 stock index is usually used as a proxy for the market, despite the fact that it accounts for only 72% of the capitalization of the U.S. stock market and is dominated by corporations with gigantic market capitalizations. (Its 50 largest stocks account for 35% of the entire market, more than the 28% weight of the 6,800 "non-500" stocks in the market.) But today, many funds resemble "the market" only tangentially.

So, under the concept of style analysis, a mutual fund is compared not with "the market," but with its peers following a similar investment style. For many years, this type of analysis was performed by institutional investors using a box with a vertical axis running from large to small market capitalization and a horizontal axis running from value to growth (usually based on ratios of market-to-book value or price-to-

EXHIBIT 2 INSTITUTIONAL STYLE BOX

	Value	Growth	
Large	х	х	
Small	х	х	

earnings). Each account got an "X" somewhere along each axis. It wasn't very complicated, but neither did this approach make it very simple to evaluate comparative performance.

## RESULTS OF EQUITY FUND STYLE ANALYSIS

Enter Morningstar. Its contribution — and it is, as advertised, "a more intelligent way to select and monitor mutual funds" — was to divide the simple box punctuated with Xs into a nine-box matrix — just like tic-tac-toe — in which each fund is, in effect, forced into one of nine boxes: large-, medium-, or small-capitalization on the vertical axis; value, blend (mixed), or growth on the horizontal axis.

The beauty of this system is that it immediately becomes possible to quantify the vital statistics of each fund's performance relative to its peers. Large-cap growth funds are compared with other large-cap growth funds; small-cap value funds are compared with other small-cap value funds; and so on. And, under the Morningstar system, each fund then gets a category rating, ranging from "one" (lowest 10%) to "five" (highest 10%). Both, therefore, are very tough leagues to break into.

Exhibit 3 shows the first of nine tic-tac-toe boxes for the current mix of the 741 equity funds with five-year records followed by Morningstar, which makes their detailed records remarkably accessible through its Principia data base.\*

While this analysis is important, I cannot emphasize sufficiently the importance of achieving superior total returns in the long run, irrespective of style or category. If a given style group, say, small-cap value, fails to outpace "the market" over twenty years, for example, it would seem counterintuitive to give much credit to a manager who creates such a "product" (in the customary parlance) for clients, even if it out-

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