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11988 El Camino Real | Suite 500 | P.O. Box 919048 | San Diego, CA 92191-9048 | 858.755.0239 | 800.237.7119 | Fax 858.755.0916 | www.brandes.com/institute

Is U.S. Small Cap a Viable Alternative to U.S. Private Equity?[1]

By Bruce Grantier[2]

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[1] Written originally for Federated Press 2nd Annual Alternative Investment Strategies Conference May 2003, expanded and updated through 2008.

[2] Bruce Grantier is a member of the Brandes Institute Advisory Board.

Executive Summary

A number of recent academic studies have compared U.S. private equity returns to U.S. public equity returns, generally concluding that average private equity returns have been no better than public equity returns. These results are surprising, given the risk premium typically expected of private equity investments.

Private equity tends to be illiquid, often with a high degree of valuation uncertainty, and tends to incur high costs of origination, research, due diligence, monitoring, and governance. While private equity management fees are in general notably higher than public equity fees, in the papers that I cite, in most cases the private equity returns are shown net of fees. All considered, one would expect (and this appears to be conventional wisdom) that private equity returns should substantially exceed public equity returns. The research I mention, however, suggests on average this risk premium is not evident. It is noteworthy that the top private equity managers have outperformed public markets by a wide margin – which may explain the often erroneous perception.

The question remains, however: given the illiquidity and additional costs in private equity, should not the average return on private equity have exceeded that of public markets? Given the premium that U.S. small-cap stocks have historically earned over U.S. large-cap stocks, plus the potential for manager value-added, I propose U.S. small cap equity as an alternative to private equity. Small-cap public equity typically involves less of the resource costs (time and staff) associated with private equity. The idea for comparing small caps to private equity was inspired by the first paper I reviewed.[3]

I also review manager value-added returns to address the argument that, while private equity returns have not outperformed public equity returns on average, the upper quartile private equity managers have. To determine quartile rankings for private equity managers, Thomson Reuters ("Thomson") evaluated performance for a large sample of private equity funds, including both venture and buyouts. Thomson shows private equity returns by quartile, after management and sales fees, and relate to the 1985 - 2005 period. Past performance is not a guarantee of future results. I show small-cap manager performance over a slightly different 20-year period and conclude the median manager has frequently outperformed the small-cap benchmarks. While the amount of value-added performance in small cap depends on style, it appears to compare reasonably well with the value added produced by upper quartile private equity managers.[4]

My overall conclusion is that based on long-term performance, small cap has been a viable alternative to private equity in seeking compelling returns.

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[3] Chen, Baierl, Kaplan (2002), "Venture Capital and its Role in Strategic Asset Allocation."

[4] There are material differences between private equity and small-cap public equities. Private equity capital is invested in companies or projects that are not quoted on public stock exchanges. Private equity investments also are characterized by large investment amounts and illiquidity (capital committed for longer periods). Conversely, small-cap public equity investments are traded on public exchanges, offer more liquidity than private equity, and require smaller investment minimums.

This paper makes little mention of risk. While risk may be easily calculated in public equities, it is more problematic to quantify in private equity. This is because private equity investments generally, until recent accounting changes, were carried at cost until paid out or revalued. In the early part of the "J-curve" private equity investments tend to produce little cash flow and so appear to have zero beta (correlation to public markets) – no wonder they appear to be good diversifiers! Researchers have tried methodologies such as those applied in real estate (another infrequently valued asset class) with limited success. Thomson does not calculate or refer to the volatility of returns, although they do calculate the dispersion of manager returns about the median for a given vintage year. For these reasons, I do not discuss risk in this paper.

I would like to thank the Brandes Institute for interest in and support of this topic, in particular David Hecht, a financial writer with the Brandes Institute, a division of Brandes Investment Partners, who helped in writing and managing the production of this paper through to completion. I thank Mercer Investment Consulting in Toronto, for small-cap manager return data and Scotiabank Group Treasury for private equity data. I would also like to thank Peng Chen of Ibbotson Associates, Professor Josh Lerner of Harvard, and Professor Alexander Ljungqvist of New York University, who very graciously made comments and references to further research. I take full responsibility for my conclusions.

I. Private Equity Returns: the Popular Perception

By way of background, private equity includes venture capital and buyouts. Venture capital includes seed, early stage, and later stage investments, and is generally perceived as the higher returning category of private equity. Buyouts include mezzanine investments.

Thomson Reuters is a leading provider of return data for venture capital, buyouts, and private equity. Their "2008 Investment Benchmark Returns" shows the returns provided in Exhibit 1, to which we have added returns of U.S. public markets for comparison.[5] Thomson uses an internal rate of return ("IRR") calculation based on "takedowns" (actual capital calls, as opposed to committed capital), distributions (cash and/or securities), and residual value (investments carried at cost unless otherwise revalued). The IRR methodology is appropriate for private equity, since the investments are illiquid and not frequently priced – unlike public equity investments. In illiquid investments the Chartered Financial Analyst ("CFA") standard "time-weighted rate of return" is considered difficult to use, since values of residuals are not always available at the time of cash flow.

Exhibit 1: U.S. Private Equity Annualized Horizon IRRs and Public Equity Annualized Returns, as of Dec. 31, 2007

Asset Class	1 Year	3 Year	5 Year	10 Year	20 Year
Venture Capital	20.40%	9.50%	38.60%	18.60%	16.70%
Buyouts	25.40%	14.00%	15.50%	8.60%	12.40%
All Private Equity	25.30%	13.00%	13.30%	10.80%	13.70%
S&P 500 Index	5.50%	8.60%	12.80%	5.90%	11.80%

Source: Thomson Reuters: *"The 2008 Investment Benchmarks Report: Buyouts and Other private Equity"* page 290. S&P via FactSet (data as of 12/31/07)

Notes: Private equity returns are after fees, expenses, and carried interests, unless otherwise stated. Public market returns (S&P 500 Index) are before fees and other expenses of investing.

[5] All returns in this review are geometric (i.e., compound annual returns), as opposed to arithmetic returns.

The data clearly shows that for most periods, private equity returns have been better than public equity returns, as measured by the S&P 500 Index. Keep in mind, however, the S&P 500 Index is comprised solely of large-cap stocks, and that past performance is not a guarantee of future results.

II. Review of Recent Private Equity Research

After reviewing a number of academic studies, I identified five papers that address the fundamental question: have private equity returns been historically better than public equity returns? Contrary to the returns listed in Exhibit 1, the five studies I reviewed suggest private equity has not outperformed public equity. The papers generally reference one another, supporting different points or developing new points. Their approaches are all different, reflecting, in my opinion, a high degree of innovation. The true measure of returns is not easily resolved, as private equity residual values, at the time of these studies, were only known with certainty when impaired or revalued or when funds are liquidated. The rest of the time valuations were carried at historical cost, which most likely do not accurately reflect true market value. A recent U.S. FASB accounting change, Statement No. 157 (2006) requires residual values be "marked to market" vs. carried at cost. The Private Equity Industry Guidelines Group issued guidelines in December 2007 to assist firms in applying this standard.

Private Equity Research Discussed[6]

1. Chen, Baierl, Kaplan (2002) "Venture Capital and its Role in Strategic Asset Allocation"
2. Kaplan, Schoar (2003) "Private Equity Performance: Returns, Persistence and Capital Flows"
3. Cochrane (2004) "The Risk and Return of Venture Capital"
4. Ljungqvist, Richardson (2003) "The Cash Flow, Return and Risk Characteristics of Private Equity"
5. Lerner, Schoar, and Wong (2005) "Smart Institutions, Foolish Choices? The Limited Partner Performance Puzzle"

The five studies referenced in this paper are summarized below.

1. **Chen, Baierl and Kaplan** ("CBK") calculated the returns of 148 matured venture capital funds on the Thomson database between 1960 - 1999, and compared them to public market returns over that period (using the S&P 500 Index as a proxy for large cap and Center for Research in Security Prices ("CRSP") pricing data for all stocks in CRSP's small cap universe as a proxy for small cap.[7] CBK used only matured private equity funds to avoid the use of interim pricing, which consists of carrying unrealized gains/losses at cost. By accounting convention in the private equity industry, unrealized investments are carried at cost unless impaired or revalued by subsequent refinancing. By using only matured funds, CBK calculated cash-on-cash IRRs and eliminated the potential for optimistic pricing of funds. CBK's returns are shown in Exhibit 2. (Their research showed results for other asset classes, but I focused on returns for large- and small-cap stocks.)

Exhibit 2: U.S. Private and Public Equity Returns, Annualized, 1960 - 1999

	Annualized Return
U.S. Large-Cap Stocks (S&P 500 Index)	12.20%
U.S. Small-Cap Stocks (CRSP pricing data[8])	14.50%
Venture Capital	13.40%

Source: Chen, Baierl, and Kaplan (2002). Past performance is not a guarantee of future results.

[6] Full references and more information about the data in the studies are shown in References and Appendix A.

[7] Disclosure for CRSP small cap data is included at the end of this paper.

[8] The Center for Research in Security Prices provides pricing data for all stocks in CRSP's small-cap universe.

2. **Kaplan and Schoar** ("KS") calculated returns of "largely liquidated"[9] venture capital and buyout funds on the Thomson database. KS then calculated what they call the public market equivalent ("PME"). This uses the total return from investing in the S&P 500 Index over the same period. A PME is a ratio of private equity return to public equity return for a specific period. A PME of greater than one means the private equity investment exceeded the public equity investment. Exhibit 3 shows KS's annual and average PMEs over their sample period, 1980 - 1997.

Average equal weighted PMEs for private equity, venture capital, and buyouts were each about .96 over the sample period, indicating generally one would have been slightly better off in public markets. Venture capital performance improved over the sample period, while buyout performance was fairly stable throughout the period.

Exhibit 3: U.S. Private Equity, Venture Capital, and Buyout PMEs, 1980 - 1997

Year	PME Private Equity	PME Venture Capital	PME Buyouts
1980	0.99	0.95	-
1981	0.68	0.51	-
1982	0.35	0.35	-
1983	0.71	0.53	1.06
1984	0.89	0.54	1.30
1985	1.24	0.73	1.00
1986	0.91	0.76	1.13
1987	0.84	0.98	0.84
1988	0.90	1.16	0.79
1989	1.01	1.03	1.00
1990	1.18	1.53	1.05
1991	0.95	1.13	0.87
1992	0.99	1.31	0.79
1993	1.09	1.65	0.84
1994	1.45	1.81	0.89
1995	1.14	2.05	0.62
1996	No largely liquidated funds		
1997	No largely liquidated funds		
Average	0.96	0.95	0.97

Source: Kaplan and Schoar (2003)

[9] "Largely liquidated" produces a larger set than CBK's study, however it does not appear to affect the conclusions since KS define largely liquidated as funds whose residual value remains unchanged for six quarters and is less than 10% of invested capital.

3. **Cochrane** utilized a different database and different approach in order to correct for potential pricing bias. He used the Thomson database, which provides data on a large number of individual projects (as opposed to funds comprised of many projects).

His data included:

- specific dates of investment and liquidation
- method of liquidation (IPO, acquisition, refinancing, or write-off)
- performance gross of fees (unlike the other studies).

He noted that generally the most successful projects progressed to the initial public offering ("IPO") or acquisition stage. These projects formed the right hand tail of the probability distribution of all returns. He used data on out-of-business projects, which formed a smaller left-hand tail of the distribution. These two samples provided evidence as to the shape of the total probability distribution for all projects in the sample. Cochrane concluded that the annualized return estimate of his sample (15%) was fairly similar to that of the S&P 500 Index (15.9%) over the January 1987 to June 2000 period (he also noted a similarity to the CBK conclusion).

4. **Ljungqvist and Richardson** ("LR") evaluated mature funds, and to avoid the limitations of interim valuations LR used the cash flow of 73 matured private equity fund investments of one large institutional investor over 1981 to 2001.

LR's measurement of performance may be more accurate than the previously described studies, as LR took into account exactly when the capital investments were made by the fund; in comparison, the Thomson database uses takedown dates.[10]

LR found:

- It took on average six years to invest 90% of the committed capital.
- The internal rate of return of the average fund did not turn positive until the eighth year (suggesting interim pricing is not very informative).

The proper discounting of cash flow is significant as LR's study found (unlike prior studies) the private equity returns of closed funds exceeded equivalent public equity returns by 5.7% over 1981 - 1993. However, the still-open funds from 1994 to 2001 had an average annual return of -34%; reflecting 1) the typically long time period required to turn positive and 2) the rapid growth in private equity fundraising (producing excess demand for private equity relative to supply, as noted in this paper in factors driving returns).

LR examined the factors driving the positive returns and found that the main factor behind excess return was the early timing of investments in private equity (in 1998 - 2000 there was a tenfold annual increase in private equity fund raising – shown in Exhibit 4.) They concluded that "too much money chasing too few deals" is likely to be a factor in future returns.

[10] When a private equity firm asks its limited partners or investors for commitments of capital to fund activity (typically purchases), the firm requests "paid-in capital" or a "takedown."

Exhibit 4: Sample of Private Equity and Venture Capital Funds Raised between 1981 - 2001

Vintage Year	Number of funds raised	Sample Size	Fraction of total VC Funds by Number	Fraction of total VC Funds by Fund Size	Total Fund Size*	Mean Fund Size*	Min. Fund Size*	Max. Fund Size*
1981	94	1	0.00%	0.00%	75.0	75.0	75.0	75.0
1982	NA	NA	NA	NA	NA	NA	NA	NA
1983	181	2	50.00%	75.00%	454.6	227.3	113.6	341.0
1984	199	5	40.00%	25.70%	276.5	55.3	35.0	100.0
1985	185	4	25.00%	5.10%	724.6	181.2	36.6	400.0
1986	159	6	16.70%	51.90%	2,265.6	377.6	25.0	1,175.0
1987	198	8	37.50%	2.20%	6,458.0	807.3	25.0	5,600.0
1988	213	12	8.30%	16.00%	11,122.9	926.9	100.0	2,200.0
1989	264	11	18.20%	5.40%	4,108.1	373.5	46.0	1,066.0
1990	236	4	50.00%	11.20%	1,246.6	311.7	24.3	1,015.5
1991	NA	NA	NA	NA	NA	NA	NA	NA
1992	209	6	33.30%	3.30%	2,937.8	489.6	15.0	1,020.0
1993	261	14	28.60%	4.60%	7,033.9	502.4	27.0	1,880.0
1994	304	NA	12.50%	7.40%	8,771.9	NA	NA	NA
1995	408	NA	15.40%	7.30%	7,261.4	NA	NA	NA
1996	439	NA	22.20%	6.80%	15,714.4	NA	NA	NA
1997	655	NA	29.40%	7.70%	19,639.8	NA	NA	NA
1998	800	NA	17.10%	17.40%	36,832.0	NA	NA	NA
1999	1,087	NA	20.00%	14.30%	32,309.2	NA	NA	NA
2000	1,872	NA	34.80%	22.20%	49,314.3	NA	NA	NA
2001	829	NA	100.00%	100.00%	464.6	NA	NA	NA
Total	8,593	NA	24.90%	14.80%	207,011.1	NA	NA	NA

Source: Ljungqvist and Richardson, 2003

*In millions

Note: "NA" denotes information not available.Fund size is measured in millions by asset size, in dollars. The sample size represents the number of funds included in the sample for the individual year. For example, in 1983, the two funds included in the sample were $113.6 and $341 million.

5. **Lerner, Schoar, and Wong** ("LSW") carried out perhaps the most exhaustive research of the five studies. They assembled a group of 417 limited partners ("LPs"), which invested in 1,398 funds raised between 1991 and 2001. The LPs included public pension funds, corporate pension funds, foundations and endowments, advisors, banks, and insurance companies. The funds included early stage venture, late stage venture, and buyouts. The authors showed that returns varied (perhaps surprisingly) dramatically depending on who the LP was, as opposed to what the fund was. Their unweighted average IRRs are summarized in Exhibit 5:

Exhibit 5: U.S. Private Equity, Venture Capital, and Buyout Returns, Annualized, 1991 - 2001

Limited Partner	Overall	Early Venture	Late Venture	Buyouts
Public Pension Funds	7.60%	12.10%	10.80%	3.20%
Corporate Pension Funds	5.10%	9.40%	10.90%	0.30%
Endowments	20.50%	34.60%	19.30%	0.10%
Advisors	-1.80%	-0.50%	-1.00%	-4.30%
Insurance Companies	5.50%	2.60%	12.30%	-0.60%
Banks	-3.20%	-13.90%	1.00%	-2.20%
Other Investors	4.80%	-6.80%	17.80%	-2.30%
Average for Private Equity Investment	6.90%	12.80%	9.40%	0.40%

Source: Lerner, Schoar, and Wong (2005). Past performance is not a guarantee of future results.

I followed up by posing two questions to the authors of the LSW paper. The questions and their responses follow.

1) Did they compare private equity returns by vintage year with public market returns? They didn't, but since all funds were raised in the 1990s, public market data is readily available to allow for comparative analysis.

2) How did the authors adjust for interim pricing? They used seasoned or reasonably mature funds, so the bulk of the market value was realized. This is a similar technique to KS – understandable, since Antoinette Schoar co-authored both KS and LSW. CBK used the matured-funds approach described earlier.

The LSW study is significant because it shares a unique insight on private equity investing – the large success rate in LP investing of endowments was far ahead of pension funds, advisors, and banks, except in the buyout category.

At the May 2007 CFA Institute Annual Conference, David Swensen, CIO of the Yale Foundation, spoke on successful private equity investing. Swensen said manager selection was "all that mattered" in private equity. Swensen was asked about his "secret recipe" – of which he spoke candidly. He said while equity weight and diversity will get you part of the way, the real trick is in the investment process and team and their ability to make high-quality asset decisions. He said that if you invest in absolute return assets (i.e., hedge funds, real estate and private equity) without skill, "You will get killed. Fees don't care who you are. The only way to be successful is to be top decile."

Overall, these five papers take diverse, rigorous, and objective approaches to answering a key question facing potential investors: have private equity returns exceeded public market returns? The five papers we reviewed raise some serious doubts that the answer is "yes."

III. Review of Small-Cap Performance

Large-Cap vs. Small-Cap Returns

Exhibit 6 shows returns and standard deviations of large-cap and small-cap U.S. public stocks from January 1926 through December 2008. The S&P 500 Index is used for large cap. Small cap data is based on Ibbotson's universe of small-cap stocks. The compound annualized return of small cap over this period was 16.5% vs. 12.9% for large cap.

Exhibit 6: Annualized Return and Standard Deviation: Small Cap vs. Large Cap, 1926 - 2008

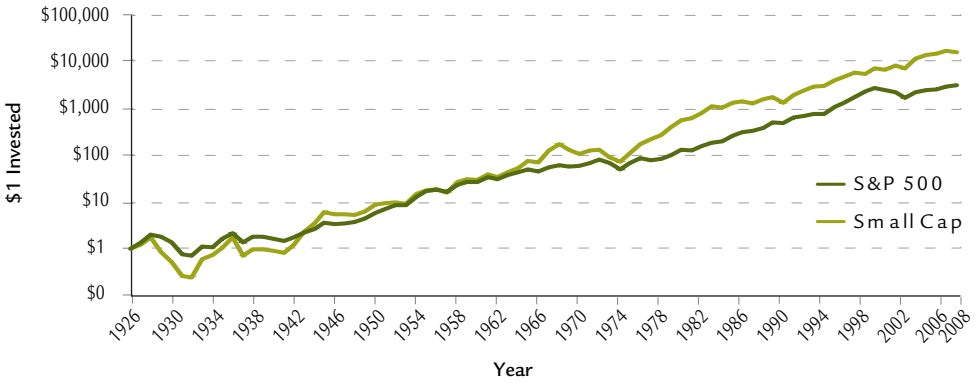
Asset Class	Annualized Return	Standard Deviation, Annualized
U.S. Large-Cap Stocks	12.90%	20.60%
U.S. Small-Cap Stocks	16.50%	33.00%

Source: Ibbotson via Morningstar, S&P via FactSet (data as of 12/31/08). Past performance is not a guarantee of future results.

Disclosure for Ibbotson small cap data is included at the end of this paper.

Small-cap stocks outperformed large caps by 3.6% annualized over this time frame, shown graphically in Exhibit 7. The scale is a log scale, so it shows percentage return differences between small cap and large cap fairly in all periods – otherwise the large dollar differences in later years swamp the early-year return differences. It may be noted that small cap underperformed large cap for a long period following the depression in 1929. From 1950 through 2008, small-cap stocks outperformed large-cap stocks.

Exhibit 7: Cumulative Returns, Small Cap vs. Large Cap, 1926 - 2008*



Source: Ibbotson via Morningstar, S&P via FactSet (data as of 12/31/08). Past performance is not a guarantee of future results.

*Small cap returns are based on Ibbotson's small-cap stock universe. Please see description of the universe at the end of this paper. Large-cap returns are represented by the S&P 500 Index.

Exhibit 8 shows the out-performance of small-cap stocks vs. large caps in 4-year rolling periods[11] – a time frame commonly used by institutional investors. Small cap out-performance has varied but persisted over the long term.

[11] Rolling periods represent a series of overlapping, smaller periods within a single, longer-term period. A hypothetical example is the 20-year period from 12/31/82 through 12/31/02. This long-term period consists of 16 smaller 5-year "rolling" segments. The first segment is the 5-year period from 12/31/82 to 12/31/87. The next rolling segment is the 5-year period from 12/31/83 to 12/31/88, and so on.

Exhibit 8: Rolling Four-Year Excess Return, Annualized – Small Cap vs. Large Cap, 1930 - 2008* Rolling Four-Year Excess Return – Small Cap vs. All Cap

Source: Ibbotson via Morningstar, S&P via FactSet (data as of 12/31/08). Past performance is not a guarantee of future results.

*Small cap returns are based on Ibbotson's small cap stock universe. Large cap returns are represented by the S&P 500 Index.

IV. Value Added: Private Equity vs. Small Cap

The argument is sometimes made that, while average private equity returns have not fared better than public markets, upper quartile private equity returns have been *much* better than public markets. The purpose of this section is to shed some light on the magnitude of potential value added from manager selection, and to demonstrate that significant value added is also attainable in small-cap public equities.

To determine quartile rankings for private equity managers, Thomson evaluated performance for a large sample of private equity funds, which included venture and buyouts. All returns are after management and sales fees, and we show for comparison purposes the 1987 - 2007 period. Past performance is not a guarantee of future results.

As the quartiles show, manager selection has been key in private equity performance (e.g., our earlier quote from David Swenson). Upper and lower quartile and median vintage IRRs from Thomson Reuters' "*The 2008 Investment Benchmarks Report"* are shown in Exhibit 9 (vintage IRRs are described following this Exhibit).

Exhibit 9. Quartile Returns – U.S. Private Equity IRRs from Vintage 1987 to Dec. 31, 2007

Asset Class:	Upper	Median	Lower
Venture Capital	17.6	7.9	-0.3
Buyouts	16.0	9.6	5.4
All Private Equity	17.1	8.2	0.7

Source: Thomson Reuters: *"The 2008 Investment Benchmarks Report: Buyouts and Other private Equity"* and Thomson Reuters: *"The 2008 Investment Benchmarks Report: Venture."* Past performance is not a guarantee of future results.

"Horizon IRRs" are calculated using a pooling of cash flow during the period in question, and may include cash flow of funds formed prior to the period in question. This approach counts the net asset value (NAV) of those earlier funds as a takedown (outlay) occurring at the beginning of the period. NAV, which is interim pricing, may overestimate asset values.

"Vintage IRRs" are also calculated using a pooling of cash flow, but using only the cash flow of funds formed during the period. This pooling of cash flow results in a cap-weighted, time-dependent IRR (which, of its own, is neither right nor wrong). However, the effect of size weighting in the actual data increased the IRR, since larger funds have had higher IRRs than smaller funds. The effect of time dependence varies.

We discuss manager value added in public equities below.

Exhibit 10 shows the frequency of out-performance of the median portfolio return for each category compared to equity indices by size and style. The following data suggests that the median of small-cap managers, over time, have beaten their benchmarks fairly consistently, and more frequently than large-cap managers.

Exhibit 10: Rolling Four-Year Returns of Median Portfolio*, Sept. 30, 1989 to Sept. 30, 2008: Frequency of Median Return > Overall Index and Style Index

Size and Style	# of Portfolios in Sample (as of Sept. 30, 2005)	Overall Index Return (Median vs. R1000 or R2000)	Style Specific Index (Median vs. R1000 Value or Growth, R2000 Value or Growth)
Large Cap Core	362	14/16	N/A
Large Cap Value	333	12/16	9/16
Large Cap Growth	300	8/16	13/16
Large Cap All	995	12/16	N/A
Small Cap Core	117	15/16	N/A
Small Cap Value	177	15/16	14/16
Small Cap Growth	156	11/16	14/16
Small Cap All	450	16/16	N/A

Size and Style	# of Portfolios in Sample (as of Sept. 30, 2008)	Median Return > Overall Index[12]	Median Return > Style Index**
Large Cap Core	216	9/13	N/A
Large Cap Value	286	9/13	9/13
Large Cap Growth	258	5/13	8/13
Large Cap All	760	7/13	N/A
Small Cap Core	83	13/13	N/A
Small Cap Value	155	13/13	11/13
Small Cap Growth	137	10/13	13/13
Small Cap All	375	13/13	N/A

Source: Mercer Investment Consulting, returns measured through Sept. 30, 2008. Past performance is not a guarantee of future results.

*Portfolios are institutional separate accounts.

**See Exhibit 11 for each style category's style index. See disclosure page for index definitions.

Note: All returns are gross of fees and are annualized. See disclosures at end of paper for style category and index definitions.

[12] Overall index refers to the overall category index without reference to style. For example, the overall index for Large Cap Value is the Russell 1000 Index, the overall index for Small Cap Value is the Russell 2000 Index, etc.

Clearly, manager selection has produced value-added returns in both small-cap stocks and private equity. In addition, depending on the style, the magnitude of potential out-performance from small-cap managers,[13] as shown in Exhibit 11, appears to have compared reasonably well with the difference between median and first quartile private equity funds, as shown in Exhibit 9.

Exhibit 11: Annualized Rolling Four-Year Geometric Excess Returns, Sept. 30, 1989 - Sept. 30, 2008

Rolling 4 Years to	Large Cap Core vs. Russell 1000 Index	Large Cap Value vs. Russell 1000 Value Index	Large Cap Growth vs. Russell 1000 Growth Index	Small Cap Core vs. Russell 2000 Index	Small Cap Value vs. Russell 2000 Value Index	Small Cap Growth vs. Russell 2000 Growth Index
Sep-93	0.5	0.0	1.9	3.0	1.4	9.7
Sep-94	0.7	1.1	1.1	1.4	-0.8	7.1
Sep-95	0.2	-0.3	0.8	2.3	-1.6	7.5
Sep-96	0.5	0.4	0.8	3.5	1.7	7.2
Sep-97	0.2	1.0	-1.6	5.6	3.3	4.6
Sep-98	-0.9	-2.0	-1.9	4.7	0.7	5.8
Sep-99	-0.5	-1.7	-1.0	3.7	2.0	5.6
Sep-00	0.2	-1.1	0.2	2.7	2.2	8.1
Sep-01	1.4	0.7	4.4	4.7	1.3	7.9
Sep-02	2.1	2.3	6.0	6.4	4.2	9.1
Sep-03	1.8	2.5	5.3	5.7	2.2	7.0
Sep-04	1.9	1.6	4.3	4.6	1.6	2.4
Sep-05	0.6	0.4	1.9	2.7	1.7	1.9
Sep-06	0.2	-0.5	1.1	0.4	0.2	0.0
Sep-07	0.4	0.0	2.0	1.4	1.3	1.4
Sep-08	0.8	0.7	1.4	-0.1	0.6	-0.1

Source: Mercer Investment Consulting, returns measured through 9/30/08. Past performance is not a guarantee of future results. Portfolios are institutional separate accounts.

Note: All returns are gross of fees and are annualized. See disclosures at end of paper for style category and index definitions.

V. Conclusion

Private equity investing tends to require extensive commitments in time and resources, is illiquid and has a high degree of valuation uncertainty. Logically, private equity should provide premium returns to compensate for these costs. However, according to a number of academic studies, average historical private equity returns – adjusted for interim pricing – appear to have been less than historical small-cap public equity returns.

Small-cap public equity, on the other hand, can offer a viable alternative to private equity. In addition to generally having provided better long-term historical returns than large cap, it also appears that active small-cap managers have, on average, produced respectable excess returns over a given benchmark. This further enhances the attractiveness of small-cap returns and mitigates the argument that (if you had the resources and could pick them and had access to them) only private equity managers have provided value-added relative performance.

[13] Managers for portfolios that are institutional only separate or commingled funds.

References

Chen, Peng, Gary T. Baierl, and Paul D. Kaplan "Venture Capital and its Role in Strategic Asset Allocation." *Journal of Portfolio Management*. Winter 2002.

Cochrane, John "The Risk and Return of Venture Capital." *Journal of Financial Economics*. 2004.

Kaplan, Steven and Antoinette Schoar "Private Equity Performance: Returns, Persistence and Capital Flows." MIT Sloan School of Management Working Paper 4446-03. November 2003.

Ljungqvist, Alexander and Matthew Richardson: "The Cash Flow, Return and Risk Characteristics of Private Equity." National Bureau of Economic Research Working Paper. January 2003.

Lerner, Josh, Antoinette Schoar, and Wan Wong "Smart Institutions, Foolish Choices? The Limited Partner Performance Puzzle." MIT Sloan School of Management Working Paper. January 2005.

Weidig, Tom and Weber, Barbara. "The Challenge is using Standard Risk Management in Private Equity". SSRN ID881591.

Appendix "A"

	Source	Period	Number Studied	Category
Chen, Baierl, Kaplan	Thomson Venture Economics	1960-1999	148 Liquidated Funds	Venture Capital
Kaplan, Schoar	Thomson Venture Economics	1980-1997	580 Largely Closed Funds 166 Largely Closed Funds	Venture Capital Buyouts
Cochrane	Thomson Venture One	1987-2000	7,765 Companies	Venture Capital
Ljungqvist, Richardson	Large Institutional Investor	1981-2001	73 Closed Funds	Venture Capital Private Equity
Lerner, Schoar, Wong	Asset Alternatives Dir. of Alt Inv Services Galante's Directory Thomson Venture Economics	1991-2001	417 Institutions, 1,398 Mature Funds	Early Venture Late Venture Buyouts

Past performance is not a guarantee of future results.

The CRSP Cap-Based Portfolio data tracks micro, small, mid and large-cap stocks on monthly and quarterly frequencies. For the Cap-Based Portfolios, CRSP ranks all NYSE companies by market capitalization and then divides them into ten equally populated portfolios. AMEX and NASDAQ stocks are then placed into the deciles determined by the NYSE breakpoints, based on their market capitalization. The largest capitalizations in each decile serve as the breakpoints that are applied to various exchange groupings. CRSP portfolios 1-2 represent large cap stocks, portfolios 3-5 represent mid-caps, portfolios 6-8 represent small caps, and portfolios 9-10 represent benchmark micro-caps. The portfolio returns include the reinvestment of dividends and income, but do not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The Ibbotson Associates data universe includes companies traded in the NYSE, AMEX, and NASDAQ. Companies in deciles 1-2 are defined as large, deciles 3-5 are midsize, deciles 6-8 are small, and deciles 9-10 are micro company stocks. Growth and value styles for each size grouping are determined by the book-to-price ratio where the total market capitalization of the growth and value indices are equal for that size portfolio. All Ibbotson growth and value indices were constructed with data from CRSP, the Center for Research in Security Prices, Graduate School of Business, The University of Chicago. Index composition is rebalanced annually in June. The Ibbotson universe of small cap stocks measures performance of small cap stocks in Ibbotson Associates' data universe defined by Ibbotson as "small cap." It includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The Mercer Large Cap Core style category is comprised of actively managed separate accounts from managers who concentrate their holdings in large capitalization domestic equity using a strategy that is not characterized as growth or value. The purpose of this group is to allow a comparison with the universe of large cap equity funds without focusing on a particular investment style. It includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The Mercer Large Cap Value style category is comprised of actively managed separate accounts from managers who concentrate their holdings in large capitalization domestic equity using a value-oriented strategy. The purpose of this group is to allow a comparison with the universe of large cap value equity funds. It includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The Mercer Large Cap Growth style category is comprised of actively managed separate accounts from managers who concentrate their holdings in large capitalization domestic equity using a growth-oriented strategy. The purpose of this group is to allow a comparison with the universe of large cap growth equity funds. It includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The Mercer Large Cap All style category is comprised of actively managed separate accounts from managers who invest in equities in all market capitalizations, regardless of style (growth, value or core). The purpose of this group is to allow a comparison with the universe of all cap equity funds without focusing on a particular investment style. It includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The Mercer Small Cap Core style category is comprised of actively managed separate accounts from managers who concentrate their holdings in small capitalization domestic equity using a strategy that is not characterized as growth or value. The purpose of this group is to allow a comparison with the universe of small cap equity funds without focusing on a particular investment style. It includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The Mercer Small Cap Value style category is comprised of actively managed separate accounts from managers who concentrate their holdings in small capitalization domestic equity using a value-oriented strategy. The purpose of this group is to allow a comparison with the universe of small cap value equity funds. It includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The Mercer Small Growth Value style category is comprised of actively managed separate accounts from managers who concentrate their holdings in small capitalization domestic equity using a growth-oriented strategy. The purpose of this group is to allow a comparison with the universe of small cap growth equity funds. It includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

The Mercer Small Cap All style category is comprised of actively managed separate accounts from managers who concentrate their holdings in small capitalization domestic equity regardless of style (growth, value or core). The purpose of this group is to allow a comparison with the universe of small cap equity funds without focusing on a particular investment style. It includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

S&P 500 - SP500 G: The S&P 500 Index is an unmanaged, market capitalization weighted index that measures the equity performance of 500 leading companies in leading industries of the U.S. economy. Although the index focuses on the large cap segment of the market, with approximately 75% coverage of U.S. equities, it can also be a suitable proxy for the total market. This index includes dividends and distributions, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

Russell 1000 Index - RUSSELL1K: The Russell 1000 Index is an unmanaged, market capitalization weighted index that measures the performance of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 Index and includes approximately 1,000 of the largest securities based on a combination of their market capitalization and current index membership. The Russell 1000 represents approximately 92% of the U.S. market. This index includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

Russell 1000 Growth Index - RUSSELL1V: The Russell 1000 Growth Index is an unmanaged, market capitalization weighted index that measures the performance of the large-cap segment of the U.S. equity universe. It includes those Russell 1000 Index companies with higher price-to-book ratios and higher expected growth values. The index includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

Russell 1000 Value Index - RUSSELL1V: The Russell 1000 Value Index is an unmanaged, market capitalization weighted index that measures the performance of the large-cap segment of the U.S. equity universe. It includes those Russell 1000 Index companies with lower price-to-book ratios and lower expected growth values. The index includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

Russell 2000 Index - RUSSELL2K: The Russell 2000 Index is an unmanaged, market capitalization weighted index that measures the performance of the small-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 Index and includes approximately 10% of the total market capitalization of that index and includes approximately 2000 of the smallest securities based on a combination of their market capitalization and current index membership. This index includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

Russell 2000 Growth Index - RUSSEL2KV: The Russell 2000 Value Index is an unmanaged, market capitalization weighted index that measures the performance of the small-cap segment of the U.S. equity universe. It includes those Russell 2000 Index companies with higher price-to-book ratios and higher expected growth values. This index includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

Russell 2000 Value Index - RUSSEL2KV: The Russell 2000 Value Index is an unmanaged, market capitalization weighted index that measures the performance of the small-cap segment of the U.S. equity universe. It includes those Russell 2000 Index companies with lower price-to-book ratios and lower expected growth values. This index includes the reinvestment of dividends and income, but does not reflect fees, brokerage commissions, withholding taxes, or other expenses of investing.

Please note that all indices are unmanaged and are not available for direct investment.

Past performance is not a guarantee of future results.

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