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Correlation between Shareholder Concentration and Firm Performance with Regard to Midcap Companies

Wynn Lemmons

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by

Wynn Lemmons

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Dr. Alexey Malakhov
Thesis Director

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Abstract

The research herein explores the correlation between performance and shareholder concentration. This paper compares the performance of a group of companies with a single shareholder stake of over 10% from the universe of the S&P 400 Midcap Index to the performance of the index itself over a period of eight years (January 1, 2009 to January 1, 2016). When run as a simulated portfolio, the group selected generated a slight amount of positive alpha, but the results were ultimately statistically insignificant.

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Introduction

Around the Northwest Arkansas area, one need not look far to stumble across a number of highly successful businesses. In a hundred mile radius of the University of Arkansas, one finds the headquarters of J.B. Hunt, Tyson, and Walmart. Three vastly different companies spanning a variety of industries. From retail to transportation, these highly varied businesses all have one peculiar trait in common: they are "family-owned" enterprises. All three of the founding families (although not necessarily the founders themselves at this point) still maintain significant ownership stakes in the firms. The abnormality of the shareholder concentration and the performance of such firms provided an impetus for this research.

It is precisely that phenomenon which this paper aims to explore. The question addressed herein is whether or not shareholder concentration correlates to stock price outperformance in midcap companies. Specifically, this analysis utilizes the S&P 400 Midcap Index as its universe of securities to benchmark the performance of 36 companies meeting the proper shareholder parameters from January 1, 2009 through January 1, 2016.

Methodology & Analysis

Timeframe:

The logic behind the window of time explored herein is as follows: the 2009-2016 timeframe was chosen in an attempt to avoid most of the highly negative effects of the financial crisis on general share prices. With the uncharacteristic nature of a so-called "Black Swan" event skewing traditional fundamentals, it made the post-crisis era a more constructive period for examination.

Selection Criteria

Within the chosen universe (the S&P 400 Midcap Index), the companies of which the alternative examined portfolio was comprised were selected according to a number of criteria. First, of the 403 companies comprising the index, 336 were eliminated for not meeting a floor requirement of a single portfolio's holding at least 10% of the outstanding equity. It is important to note that "single portfolio" was a parameter so as to eliminate the holdings of many passive money managing entities such as Fidelity, Vanguard, etc. that may have collectively exceeded the floor in their holdings (which would typically be a collection of a plethora of index-tracking, individual portfolios with small single positions). Second, of the 67 remaining companies with a current single shareholder exceeding 10%, 29 were eliminated due to the shareholders' not having exceeded the floor for the course of the timeframe of interest. This step allowed for the elimination of such shareholders who had built up a 10% stake over the course of the window or whose holdings had fluctuated below said limit. This left the 36 companies seen below (figure 1).

Original Group					
% Stake	Shareholder	Ticker	Name	Sector	Industry Group
49.14	RFPS Management Co.	ROL	Rollins Inc	Consumer, Non-cyclical	Commercial Services
38.28	Liberty Media Corp.	HSNI	HSN Inc	Consumer, Cyclical	Retail
35.01	Gazit Entities	EQY	Equity One Inc	Financial	REITS
34.04	Joseph George	MCY	Mercury General Corp	Financial	Insurance
29.36	Clarence L. Werner	WERN	Werner Enterprises Inc	Industrial	Transportation
28.50	Ellen R. Gordon	TR	Tootsie Roll Industries Inc	Consumer, Non-cyclical	Food
27.71	John N. Kapoor	AKRX	Akorn Inc	Consumer, Non-cyclical	Pharmaceuticals
25.72	Hagedorn Partnership	SMG	Scotts Miracle-Gro Co/The	Consumer, Cyclical	Housewares
21.61	Dareth A. Gerlach	LANC	Lancaster Colony Corp	Consumer, Non-cyclical	Food
20.40	William Robert Berkley	WRB	WR Berkley Corp	Financial	Insurance
19.88	JMAC Inc.	WOR	Worthington Industries Inc	Basic Materials	Iron/Steel
19.81	Dai Ichi Life Insurance Co. Ltd.	JNS	Janus Capital Group Inc	Financial	Diversified Finan Services
19.79	Biglari Capital LLC	CBRL	Cracker Barrel Old Country Store Inc	Consumer, Cyclical	Retail
18.41	R. Philip Silver	SLGN	Silgan Holdings Inc	Industrial	Packaging & Containers
17.88	Mubadala Development Co.	AMD	Advanced Micro Devices Inc	Technology	Semiconductors
16.60	State Farm Mutual Auto Insurance	HNI	HNI Corp	Consumer, Cyclical	Office Furnishings
16.52	James W. Cabela	CAB	Cabela's Inc	Consumer, Cyclical	Retail
16.30	Singleton Group LLC	KMPR	Kemper Corp	Financial	Insurance
15.61	State Farm Mutual Auto Insurance	GMT	GATX Corp	Industrial	Trucking & Leasing
15.18	Trian Fund Management LP	WEN	Wendy's Co/The	Consumer, Cyclical	Retail
15.14	Hyatt J. Brown	BRO	Brown & Brown Inc	Financial	Insurance
15.05	Southeastern Asset Management Inc.	GHC	Graham Holdings Co	Consumer, Non-cyclical	Commercial Services
14.49	Valentin Gapontsev Trust	IPGP	IPG Photonics Corp	Technology	Semiconductors
14.02	Paul Marciano	GES	Guess? Inc	Consumer, Cyclical	Retail
13.98	Silver Star Development Ltd.	SNX	SYNNEX Corp	Technology	Software
13.35	Crane Fund	CR	Crane Co	Industrial	Miscellaneous Manufacturing
13.33	Cventures Inc.	MDC	MDC Holdings Inc	Consumer, Cyclical	Home Builders
12.40	Carlos Slim Helu	NYT	New York Times Co/The	Communications	Media
11.33	Alice N. Schwartz	BIO	Bio-Rad Laboratories Inc	Consumer, Non-cyclical	Biotechnology
11.12	Longdon Co. of Virginia	NEU	NewMarket Corp	Basic Materials	Chemicals
11.00	Primecap Management Co.	PLT	Plantronics Inc	Communications	Telecommunications
10.90	Carl H Lindner III	AFG	American Financial Group Inc/OH	Financial	Insurance
10.73	John T. Ryan III	MSA	MSA Safety Inc	Industrial	Environmental Control
10.42	Thomas A. James	RJF	Raymond James Financial Inc	Financial	Diversified Finan Services
10.24	State Farm Mutual Auto Insurance	ATR	AptarGroup Inc	Industrial	Miscellaneous Manufacturing
10.04	Atlanta Capital Management Co.	FICO	Fair Isaac Corp	Technology	Software

Position size as of April 24, 2016 *Figure 1*

Analysis:

Subsequently, the appropriate pricing data was pulled from Bloomberg for the various companies and index (quoted as weekly closing price). From this, an equal-weighted portfolio of the above equities was constructed by taking the week-to-week price performance (% change) of each company, then aggregating these changes into a portfolio comprised of the above selected firms. The same approach was taken for the index. This method was chosen so as to allow a proper comparison of the two entities (as opposed to an average of price movements which would possess similar inherent flaws to price-weighted indices such as the Dow Jones Industrial Index). Granted, constructing an equal-weighted portfolio of the various companies does inherently ignore a number of factors such as firm size. Such short-comings will be addressed in the Confounding Variables & Biases segment of the paper.

Following, two portfolios, imagined to have started at a base of $100, were run through the various price change collections to produce the results seen below.

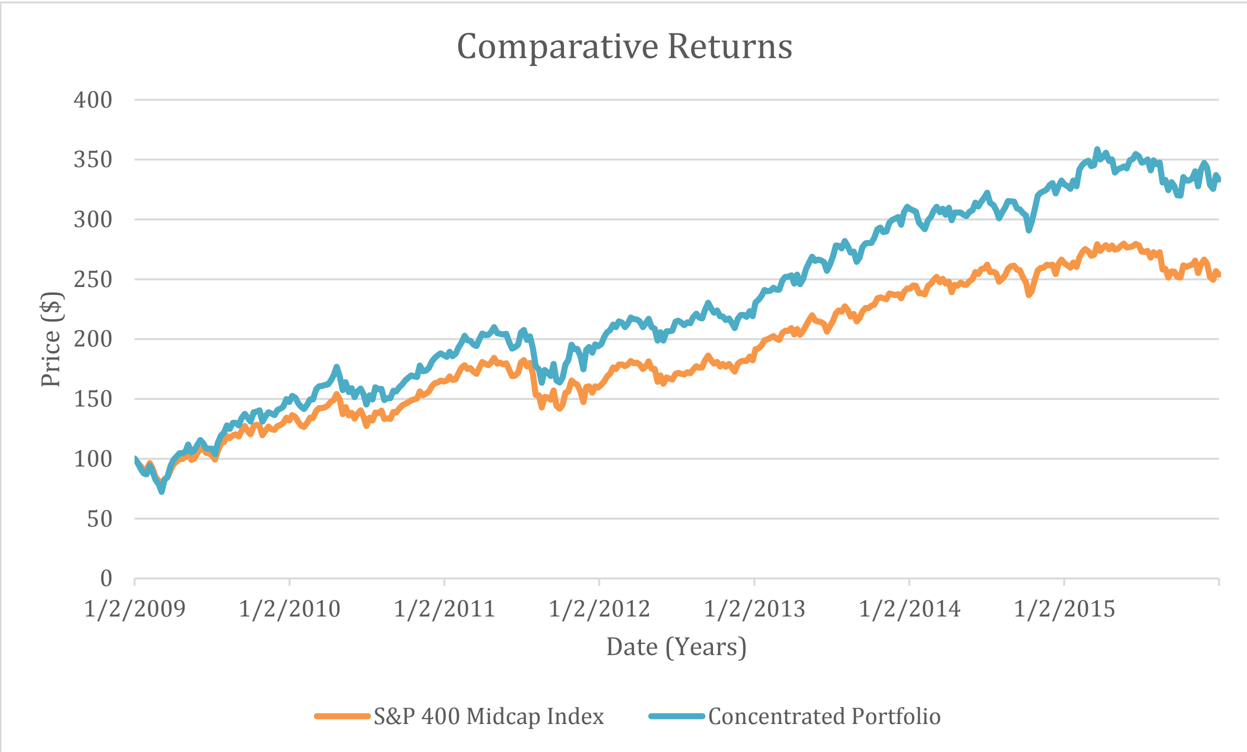

Figure 2

A t-test and regression were then run on the data. The inputs and results are shown below.

t-test		
	S&P 400	Portfolio
Average Weekly Return	0.292%	0.372%
Weekly Std Deviation	2.71%	2.89%
Sharpe Ratio	0.090	0.112
Risk Free	0.0488%	
T-Stat v. S&P 400	0.525	
n	365	
Beta	1.030981	
Alpha	0.000719	

Figure 3

Note:

- The Risk Free rate utilized was the average weekly yield of a U.S. Government 10-Year Note over the period
- N is the number of observations for the week-end pricing data within the period examined

Regression					
Regression Statistics			Alternate Calculation (Double Check)		
Multiple R	0.96868		Beta		1.03098
R Square	**0.93835**		Alpha		0.00072
Adjusted R Square	0.93818		Avg Week Portfolio		0.00372
Standard Error	0.00718		Week Rf Rate		0.00049
Observations	365		Avg Week Mrkt		0.00292
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.28483	0.28483	5525.06110	1.0198E-221
Residual	363	0.01871	0.00005		
Total	364	0.30354			
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept (Alpha)	0.00072	0.00038	1.90458	0.05762	
Beta	1.03098	0.01387	74.33075	0.00000	
	Lower 95%	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*	
Intercept (Alpha)	-0.00002	0.00146	-0.00002	0.00146	
Beta	1.00370	1.05826	1.00370	1.05826	

Figure 4

Results:

This analysis brings to the fore a number of considerations. Examining Figure 2 provides the reader with the initial impressions that firms with such concentrated shareholder bases tend to outperform the overall index within the given timeframe. From this though, one must then consider the level of risk required to achieve the superior performance.

It is for this consideration that the t-test and Sharpe Ratios are most relevant. In comparing the Sharpe Ratio of the S&P 400 Midcap Index (.090) to that of the alternate portfolio (.112) that one is able to see that it does, in fact, outperform the given index on a risk-adjusted basis. Unfortunately, one must then consider the results of the t-test. With a value of .525, the results of the test are insignifant to make any conclusive claim. The answer that most readily comes to mind for these findings seems to be that, although one may gain a superior risk-adjusted performance (utilizing only Sharpe Ratio as one's metric), the amount gained by way of performance (.08% weekly) is very little more in terms of that which is shouldered by way of increased exposure to variance (.18%).

Moving to the regression analysis of Figure 4, one is able to gain a more clear understanding of the previously mentioned results. With an R Square value of .93835, it can be inferred that around 93% of the variance in the concentrated portfolio's returns can be explained by changes in the overall market (which, in the case of this study is the S&P 400 Midcap Index). Conversely, what is implied by the calculated alpha and beta values is that the outperformance generated by said portfolio is extremely small (Alpha = .00072) and that the collection of companies with concentrated shareholder bases ultimately moves very similarly to the index itself (Beta = 1.03098).

Confounding Variables & Biases:

It should be noted that there are a number of external factors that could drive the results found herein. As was mentioned earlier, the study's portfolio operates under the structure of an equal-weighted portfolio. This was the most effective way to perform the analysis of the piece, but is a short-coming in as far as accounting for firm size is concerned.

Furthermore, one must also consider the varying degrees to which the positions are concentrated as well as the variety of motives behind said positions. A prime example of such differences can be found in examining the positions of Thomas A. James and Trian Fund Management LP. In the case of Thomas A. James's position in Raymond James Financial Inc., that is more similar to the various companies discussed in the introduction ("family-owned" enterprises). This can be compared to the motives behind Trian Fund Management's positions in The Wendy's Company. Trian, although having a similarly vested interest in their company's performance as James, is a noted activist investor. This is important in that the strategies undertaken by an activist investor to drive value within a firm are often very different from those that dictate the thought-process of legacy and family shareholders (often long- v. short-term approaches). It is challenging to draw such a simple connection as suggesting that a larger, single vested interest in a company's performance will correlate to overall performance with so many variables at play, but the purpose of this study in itself was simply to examine the relationship between the two, not to expansively answer such other questions as what drives the relationship itself (should it have existed more strongly).

One must also note that this research failed to perform out of sample testing. The portfolio tracked is constructed utilizing information beyond the scope of that which was available to shareholders at its time of incipience, and was not rebalanced over the course of the study. Hence, the results obtained herein would require more refinement and testing to construct an effective trading strategy.

Finally, the benchmark used for the study was the stated price performance of the S&P 400 Midcap Index at face value. This could be problematic in that the actual composition of the index over time is subject to change (a factor for which this study did not take account). Hence, this introduces aspects of survivorship bias to the analysis in that companies moving in and out of the index pool were largely ignored.

Conclusion

Although the constructed index provides promising levels of performance, the statistical insignificance suggests that far more research is necessary. Possible alternatives in approach could take into account the size of the various shareholder positions as a percentage of overall outstanding equity or perhaps the size of the firms themselves. Interestingly, many of the companies meeting the shareholder criteria came from the consumer sector of the index. In line with the discussion of Walmart in the introduction, one could also possibility of this relationship's existing in such sectors as Consumer Staples or Consumer Discretionary.

Ultimately, the findings of the study are statistically insignificant for the time period examined. Although this was the case, the relationship seen through the slight generation of alpha still provides a promising point of interest for further exploration.