Valara
Capital Management, LLC

Is Your Value Manager Concentrating Too Hard?

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Prelude:

Facing competition from high alpha, alternative strategies, on the one hand, and low fee, passive strategies on the other, traditional value managers have struggled to carve out a living in the middle. To remain relevant they have focused on delivering high alpha concentrated portfolios of their most attractive value ideas. While the concept has been received well by the market, there are potentially two structural problems with the model.

The first is that managers have increasingly committed to staying fully concentrated *at all times* under the mantra of "we will always provide you with our best ideas". This would appear to be a triumph of marketing over logic. If one believes that the valuation based opportunity set ebbs and flows from greater to lesser mispricing, depending on market circumstances, then a static level of concentration is irrational and likely detrimental to performance. To maximize alpha it is critical to size positions in proportion to risk adjusted expected return.

The second problem relates to the absence of a strategy to manage the end of the value style cycle. While the hedge fund industry has its own structural issues, it has built flexibility into its investment strategy. When a hedge fund manager runs out of long ideas, he/she can capitalize on this one sided market condition by going short. When a long only value manager runs out of relatively mispriced securities, what can he/she do? The only choice has been to cycle through other value stock options regardless of their merit. By not identifying a strategy to manage the end of the value style cycle the industry has left itself unnecessarily vulnerable to surrendering hard fought alpha.

These two problems are obviously related – the second being the extreme expression of the first. Both are reflections of an unwillingness or inability to adjust to the opportunity set provided by the market – for marketing reasons or by mandate. This paper does not attempt to address all of the potential pitfalls of active value management. It exclusively examines whether there is a better portfolio strategy to manage the ebb and flow of value – typically known as the value cycle.

Introduction:

The goal of this paper is threefold. First to document the variation of valuation based opportunity (valuation spreads) in the US stock market over time. Many identify with this concept immediately, embracing it as self-evident. However, if we are to examine the value style cycle and address the two alleged problems with traditional value management, we need a means of measuring this ebb and flow. With the concept of valuation spreads established and documented, we will examine the rewards to concentration within value portfolios with a specific eye toward when concentration pays and when it does not. Finally, we will examine the importance of valuation spreads to the value style cycle and propose an alternative end of cycle strategy.

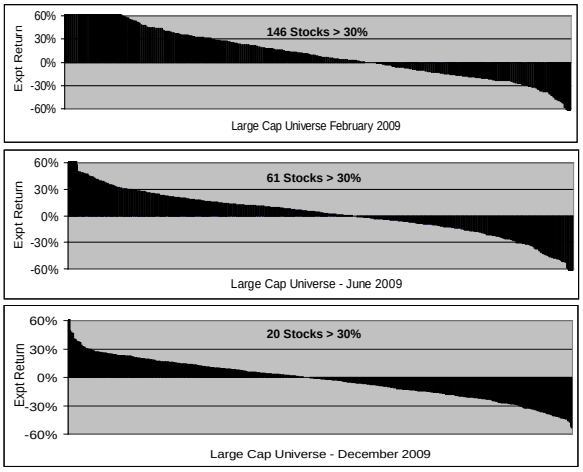
Valuation Spreads:

The fixed income world is accustomed to thinking about relative valuation differentials in terms of yield *spreads* but the concept is not commonly applied to the equity market. If one were to estimate fair value for each stock in the defined universe and then rank order them by percentage expected return, it would facilitate a similar comparison. The resulting distribution would be a representation (estimated) of the valuation spreads that exist in the opportunity set. Alternatively, valuation spreads could be thought of as differentials in price to normalized earnings power, price to book value or price to sales relative to history. Regardless of the chosen metric, the idea is to measure the dispersion of observations around the mean. A wide dispersion relative to history indicates that valuation relationships are out of whack favoring purchase (more stocks are cheap to the mean than is usual). A narrow dispersion suggests that the market is substantially depleted of relative value and that caution is warranted in making individual stock selections.

Exhibit A is output from our own valuation model. This data shows what the opportunity set looked like to us at three distinct points in time. Each of the three graphs represents the series of expected returns for the more than 500 stocks in our valuation model, at the specified date, ranked from the most attractive on the left to the least attractive on the right. The top graph, with the fat tails, is indicative of the opportunity rich (wide spread) environment that existed at the height of the Financial Crisis (February 2009). What we referred to as dispersion, above, is clearly visible. The graph on the bottom is the universe as it looked to us only ten months

later - after the Federal Reserve and US Treasury convinced the markets that disaster had been adverted. Uncertainty and anxiety dissipated and the relative abundance of misvalued stocks disappeared. Needless to say a lot of valuation arbitrage went on in those ten months[1].

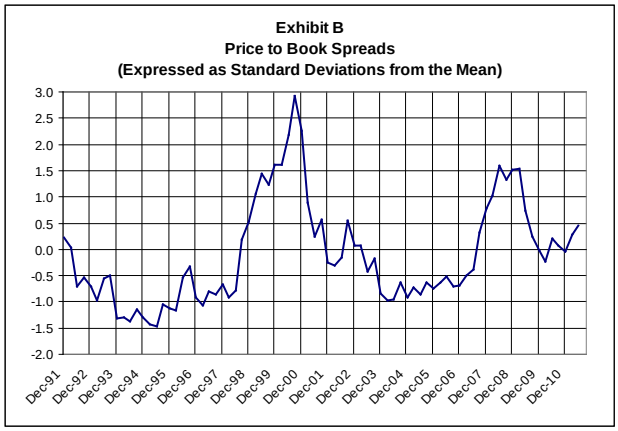
Exhibit A



From a fundamental perspective, the variation in spreads over time reflects the imperfect nature of the market's attempt to assess individual stock fair value in an uncertain world. Spread widening occurs when markets *over react* to either bottom-up/micro, or big-picture/macro information. Spreads, by definition, measure the relationship of one to another or to the whole. Therefore, any over reaction that has an outsized impact on a specific company, industry, sector or growth class… has the effect of widening spreads. In the technology bubble of the late 1990s spreads widened because new economy stocks were embraced as omnipotent while old economy stocks were discarded. This proved to be a classic over reaction and a major relative value opportunity. As a full cycle investor, it is not as important to anticipate the direction of spreads as it is to accurately assess where they are.

Measuring Valuation Spreads:

The ideal valuation metric, for the purpose of measuring spreads, would be one that is relatively insensitive to economic cyclicality and provides a steady gauge of the trend in underlying value of individual firms. Accepting that nothing is perfect, we chose price to book value. We view book value as an indicator of one of the key drivers of productive capacity – capital. As an indicator of productive capacity, it is a reasonable proxy for normal earnings power which would have been at the top of our list if it were available from an unbiased source.
The details of our derivation of price to book spreads are included in the appendix to this paper. The data is historical, as reported, price/book value from Factset's WorldScope database. It includes all US companies that existed at each historical month end that met our screening criteria for inclusion in the universe. The universe was defined as the 700 largest US companies with price to book ratios greater than zero and less than 30 (the latter being necessary to eliminate distorted capital structure situations). To summarize the math: for each monthly observation we computed the ratio of the average price to book of the universe divided by the average of the top quintile (lowest P/B) and expressed the result as a standard deviation from the series mean. The monthly data for the last twenty years is presented in *Exhibit B*.



Clearly there has been significant variation in valuation spreads as measured by price to book value. The pattern of the last twenty years has been periods of relative valuation tightness followed by significant spikes in spreads. The range of observations varied from 1.0 to 1.5 standard deviations tight (below the mean) to more than 2.0 standard deviations wide (above the mean). Interestingly, the two observable spikes occurred for completely different reasons – the late 1990's driven by the bubble in technology stocks (greed) and the 2008 by the Financial Crisis (fear).

Thesis:

It is our thesis that when spreads widen significantly investors are given an opportunity to choose from a large number of stocks that are materially undervalued relative to the broader universe. Significant undervaluation warrants increased risk taking (larger position sizes)

because the investor is being compensated by high individual stock expected returns. This is the time to embrace portfolio concentration. When spreads are below the mean, particularly when they are more than one standard deviation below the mean, investors should be broadly diversified. The rationale for individual "value" stock exposure is diminished, and we believe that there are implications for equity "style" allocations. For market environments that fall in between, the rational strategy is to commit to individual stocks (alpha ideas) in proportion to the return opportunity that they present and invest granularly any capital that is unable to be so deployed.

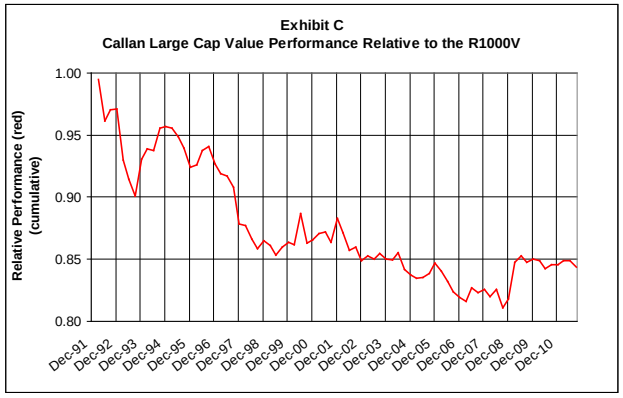
Concentrating Too Hard:

"We will at all times provide you (the client) with a concentrated portfolio of our fully researched, best ideas." This "pitch" has been adopted by virtually all value managers that expect to charge a full active management fee. After all, one can not justify a full active management fee with anything less than one's best ideas – one's convictions. If a manager lacks conviction, he or she has no place in active management.

We have shown in *Exhibit B* that valuation based opportunities are not constant over time. In fact, they vary considerably. In this light, there is no apparent logic to maintaining a static level of portfolio concentration. No matter how compelling it may sound to the client, it is not in his/her best interest. One of the primary axioms of finance is to take no more risk than one is compensated for by expected return. In the context of the investment portfolio, position size (exposure) is equivalent to risk; therefore, static portfolio concentration is a violation of this principle.

Given our thesis, we would expect to find that concentrated value managers do well coming out of wide valuation spread environments but perform poorly after spreads have narrowed. To test this hypothesis we acquired large cap value manager return data from Callan Associates. They provided us with average quarterly returns[2] which they broke down into two groups: (1.) value managers in their database with portfolio holdings of less than 50 stocks (concentrated portfolios) and (2.) those with more than 50 stocks in their portfolio (diversified). Neither of these groups are official Callan sub-categories. We will refer to the set of concentrated managers as the Callan Concentrated Value or CCV, and the diversified set of managers as the Callan Diversified Value, or CDV.

Exhibit C shows the performance of the average Callan Large Cap manager versus the Russell 1000 Value over the last twenty years. Results have been poor. Unfortunately, they have been poor enough that the dominant trend of the group average is steady underperformance versus the Russell 1000 Value.



Overlaid with valuation spreads in *Exhibit D*, it is possible to see some tendency to outperform or match the benchmark after valuation spreads have widened – albeit modest. This speaks poorly of the ability of the average active value manager to pick individual securities and determine industry/sector weightings.

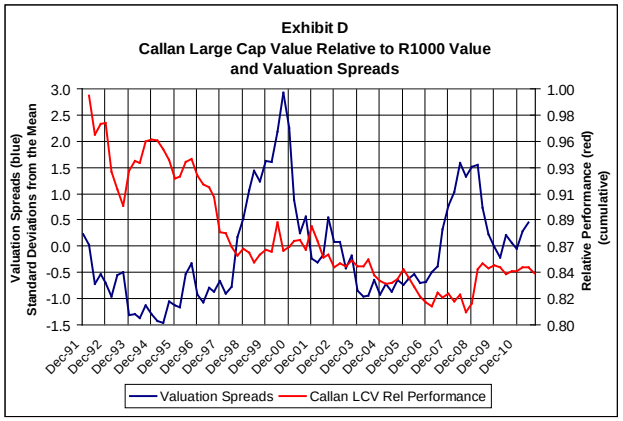
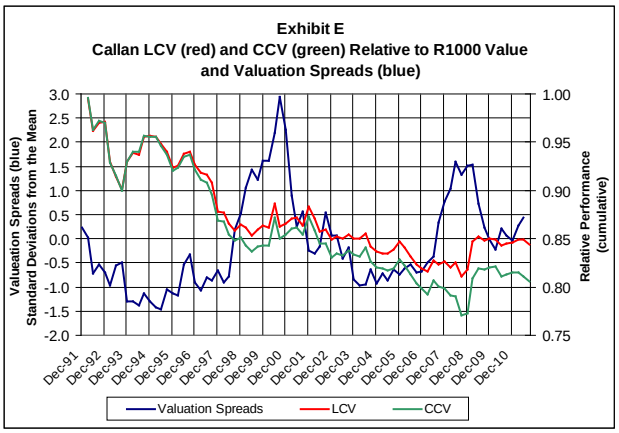
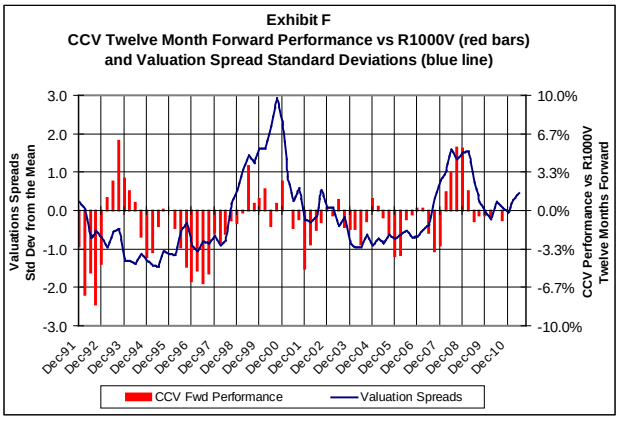


Exhibit E adds the relative performance of the CCV subset versus the Russell 1000 Value.

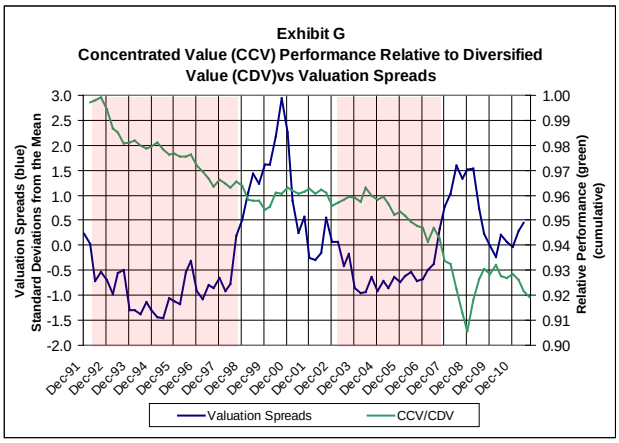


The CCV results are even worse. In this case it appears that convictions on average have been misplaced. Again, the dominant trend is underperformance but with a discernable tendency to do better after spreads have widened. This tendency is more visible as expressed in *Exhibit F* which shows the rolling forward twelve month performance of the CCV relative to the Russell 1000 Value. The one noticeable outlier period is eighteen months in the early 1990s (possibly related to the recovery of the Financials after the real estate crisis of 1989/1990).



To eliminate the general trend of underperformance versus the Russell 1000 Value and isolate the Concentrated (CCV) versus Diversified (CDV) effect, we computed the performance of the CCV relative to the CDV. From this data it is very clear that the only times in the last twenty years that concentrated managers have added value to the diversified peer group is following periods of significant spread widening. This trend is evident in *Exhibits G and H* and is summarized in *Table 1*.

Exhibit G shades the periods during which valuation spreads were below mean in red. These shaded periods correspond to obvious episodes of underperformance. *Exhibit H* displays the rolling forward twelve month return of the Callan concentrated sub-group (CCV) relative to the Callan diversified managers (CDV). To summarize: the forward twelve month relative performance is almost always negative in periods in which observed spreads are below the mean. Forward twelve month performance is more favorable once spreads have sufficiently widened. *Table 1* shows the percentage of the net underperformance that occurred over the entire 20 year period that followed observations of negative spreads. Note that negative spread observations preceded periods that account for the substantial majority (if not all) of the total underperformance. Collectively, these exhibits display the relationship we expected to find and they support the contention that maintaining a perpetual level of high portfolio concentration is a poor strategy.



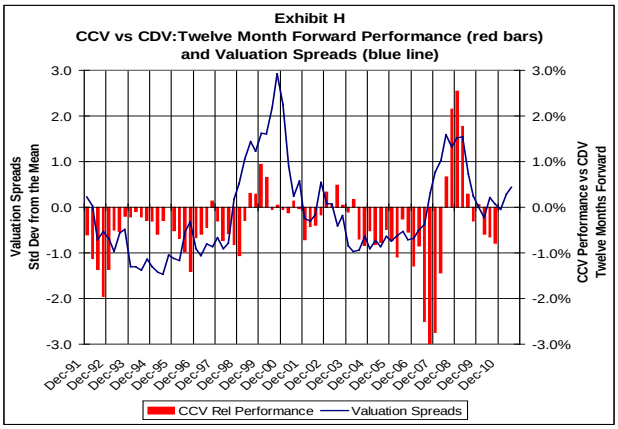
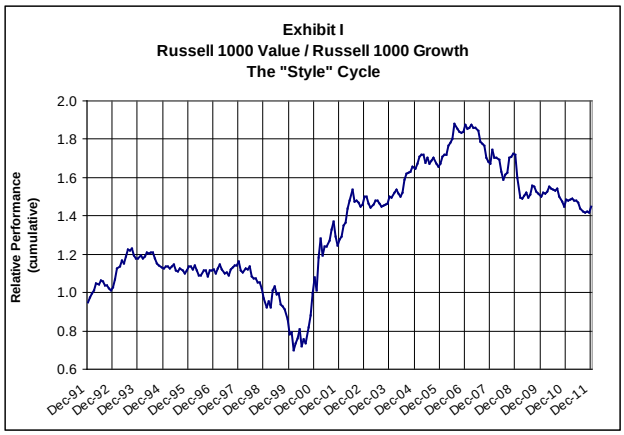


Table 1	Percentage of Total Underperformance that Followed Periods When Valuation Spreads were Below the Mean:		
	Three Months Fwd	Six Months Fwd	Twelve Months Fwd
CCV - R1000 Value	95.1%	103.6%	76.9%
CCV - CDV	69.8%	98.4%	87.9%
Percentage of Quarters with Spreads below the Mean	60.8%	60.8%	60.8%

The remaining question is: how much conviction can one have in the relationship between valuation spreads and forward performance depicted above in exhibit H? Hypothesis testing is an obvious way to calculate a measure of conclusiveness. Given the historical data, one can conclude at the 99.95% confidence level that when valuation spreads are below the mean concentrated managers underperform diversified managers in the forward twelve months[3]. It is interesting to note that it is only when spreads are over 1.1 standard deviations above the mean that one can have fairly high confidence that concentrated managers outperform (90% confidence level). The fact that this latter test isn't stronger is likely a reflection the generally poor record of active value managers over the time period examined. With apparently poor stock selection, concentration exacerbates errors and detracts from performance in all but the richest (widest spread) environments.

Valuation Spreads and the Value Style Cycle:

As commonly conceived, there are two general investment styles: value and growth. Historically, there have been alternating cycles in which one style of investment outperforms the other, as shown in *Exhibit I.* It is part of our thesis that valuation spreads are an important, if not essential, driver of these cycles. It would be difficult to envision a sustained period in which value outperforms growth that originated out of a period of tight spreads. Were that to happen, it would imply a wholesale change in underlying company fundamentals – with what was value becoming growth. There has been a whiff of this type of change in the reemergence of commodities after 25 years of decline. However, even this is more of a revaluation due to higher prices than a reclassification to growth status.



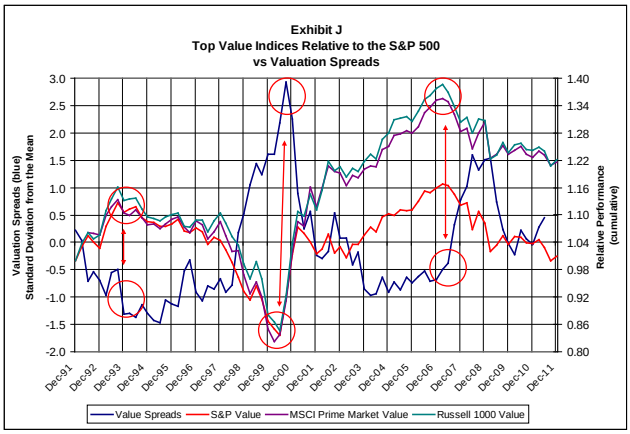
As can be seen in *Exhibit I*, if you have reason to believe that the value style cycle is mature then you would be well advised to make alternative plans. The peak to trough performance differentials are significant – to say the least.

Most institutional investors hire managers for a particular niche of expertise within an asset class. Large Cap Value is one of these niches. Typically, when hired to manage a value strategy, an advisor is discouraged from moving outside the style category and buying high p/e growth stocks. There is, commonly, some latitude to shift toward style neutrality and, when valuation spreads get historically tight, that is what we would advocate. If one were managing an asset allocation oriented product, shifting all the way to growth might well be advised. The point is that staying fully committed to value at the end of the cycle is a questionable diversification strategy.

Before examining the data, we should note that our views on the end of the value cycle represent a natural extension of our thesis against perpetual concentration. We believe that the value cycle ultimately runs out of momentum because value opportunities are so thoroughly arbitraged that they are no longer compelling relative to higher growth alternatives. When the market gets this picked over, spreads are narrow and concentration has already become a bad idea. At this juncture, one should be significantly diversified with a preference for style neutrality. Since we are advocating style neutrality (not growth) we will examine the value cycle against the S&P 500.

Exhibit J plots the performance of three major value indices relative to the S&P 500 against the backdrop of valuation spreads. While the Russell 1000 Value dominates the industry it is not the only available

measure. All three indices are considered large-cap in nature. The Russell 1000 Value and MSCI Prime Market Value have approximately 650 and 410 constituents, respectively, with the S&P 500 Value having somewhat fewer – 370. Judging by performance, the MSCI and the Russell are similar indices with the S&P 500 Value being noticeably different – at least since 2000.



In this case, it is the similarities of the various indices that are of interest. We make the following observations:

1. There is a broad inverse relationship between valuation spreads and returns to "value" – with all of the indices tending to move in the opposite direction of valuation spreads over time.
2. There is important information in valuation spreads at the extremes. When spreads get measurably tight (one standard deviation or greater) "value" is at least well through its run versus the S&P 500, if not substantially exhausted.
3. The 1990's experience might have engendered confidence in the usefulness of valuation spreads as a cycle timing tool but this is undermined by the persistence of the cycle in 2004-2006. Whether spreads are a useful timing tool or not, it's clearly advisable to know where you are versus the mean.
    a. One does not want to be in value when spreads widen from a period of complacency.
    b. When spreads are wide the seeds of a value cycle have been planted.[4]

It is from these observations that we conclude that style neutral diversification is the preferred combination with value based stock selection. A manager should pursue all individual stock opportunities that warrant investment. However, when the opportunity set dwindles he/she should not force investments back into value. The dwindling opportunity set is the early warning sign that the value cycle is maturing. Capital that can not be reasonably put to work in relatively undervalued stocks should be diversified (style neutrally) in the S&P 500 or its equivalent.

Conclusions:

Value managers make two systematic mistakes – staying fully concentrated at all times (by choice) and staying fully committed to value once the "value" is gone (by mandate). These appear to be errors of convention. Nonetheless, "*We do it this way because that is how it's done…*" is a poor rationale for an investment strategy.

While twenty years is not a conclusive time period, the evidence supports the idea that valuation spreads are an important factor in both value manager performance and the style cycle. The fundamental rationale for this relationship is compelling – when valuation spreads have been substantially arbitraged from the market the challenge associated with stock selection increases as the value cycle has shed most of its embedded alpha. From the data presented heretofore, we draw the following conclusions:

1. A static level of portfolio concentration, while traditional, has little theoretical merit. The data suggests that portfolio concentration should vary from heavily concentrated when valuation spreads are wide to substantially diversified when they are narrow. Individual security risk should be taken on the basis of individual security expected return.
2. Narrow spreads are generally a more potent indicator than wide spreads because of the greater propensity for industries to experience significant value destruction than to reinvent themselves as high growers.[3]
3. The relationship of the value cycle to valuation spreads is a natural extension of our thesis on portfolio concentration. When spreads have been arbitraged to a significant degree, the fuel for value (style) to outperform has been substantially depleted. The risk of being diversified outside of value (style) is relatively

low while the risk of value (style) under-performing is high. Therefore, when spreads are narrow at the end of the value style cycle, there is a strong rationale for managers to diversify in a style neutral manner. This should be a key part of an end of the value cycle management strategy.

Appendix:

Data: To create our measure of valuation spreads we used price to book value data from FactSet's Worldscope database. The data was collected monthly, and is "as reported", for companies that existed at the time period of interest. For each historical month end we collected the p/b for the 700 largest US companies (by market capitalization). We excluded companies with p/b values that were negative. In addition to p/b, we collected each company's p/b quintile ranking within its own sector. After the data was collected, we noticed that a handful of stocks with very high p/b were having an impact on the data. These companies generally had distorted capital structures and frequently were on the very edge of qualifying for the top 700 by market cap. The overall effect of these companies was to artificially widen and add volatility to the calculated spreads. To manage this distortion, we excluded p/b of greater than 30 from the data.

Calculation: For each month, we calculated the average p/b of those stocks in the first (lowest p/b) quintile (by sector) and the average of the overall universe. We then computed a ratio for each month (we call this the monthly PBR): the mean of the overall universe divided by the average of the first quintile (lowest p/b).

$$\frac{\text{Monthly Universe Mean}}{\text{Mo Mean of Top Quintile}} = \text{P/B Ratio (PBR)}$$

We then calculated the mean and standard deviation of this ratio across all observed time periods (240 months). Finally, for each month we subtracted the computed monthly PBR from the series mean and divided by the series standard deviation.

$$\frac{\text{Mean of PBR Series} - \text{PBR}(x)}{\text{Standard Dev of PBR Series Mean}}$$

The resulting series of standardized variances from the mean is our measure of valuation spreads.

[1] Given the long duration nature of stocks and the resultant sensitivity to valuation assumptions, we would argue that there is a normally distributed range of estimate error around fair value with a standard deviation of approximately +/- 20% (the range of error would depend on the skill of the individual responsible for the estimates). This being the case, an opportunity set in which two thirds of the stocks fall within +/- 20% upside suggests a substantial absence of alpha.

[2] Equal weighted average gross returns.

[3] The hypothesis tested is that when spreads are below the mean the forward 12 month return (CCV-CDV) is greater than 0 (concentrated outperforms diversified). The calculated t-value is -7.48 with 46 degrees of freedom. This result rejects the hypothesis at the 0.05% level of significance. This t-value would occur less than 5/100 of one percent of the time if the hypothesis was correct.

[4] P/B, as a measure of valuation spreads, gave a distorted signal in late 2008 due to the subsequent destruction of capital in the financial stocks. Spreads were not as wide as they looked.