Microcaps' Factor Spreads, Structural Biases, and the Institutional Imperative

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TRANSCRIPT

Jim O'Shaughnessy (Jim): Well hello everyone. This is Jim O'Shaughnessy, with another episode of What Works on Wall Street Podcast. Today we're going to be talking about one of my favorite parts of the market, microcap stocks. With me, I have Ehren Stanhope, who is a Principal here at O'Shaughnessy Asset Management.

Why don't we start out, Ehren, by defining microcap? Because we both know that the index that claims it represents microcap, really isn't microcap. We take a very different look, and you went very in depth in your paper on this. Why don't we start out saying, what's a real microcap? What are some of the problems with the index that says it represents microcap stocks?

Ehren Stanhope (EJS): Sure. The index itself is, the construction of it, is very interesting. Russell takes a perspective that, when you think about the Russell 1000 and the Russell 2000 and the Russell Micro. They're going to rank every stock in the US in an ordinal way, so 1 to 4,000. They're going to start by making the Russell 1000 Index the top 1,000 stocks. That's all very, very simple. Russell 2000 then is stocks 1,000 through 3,000. Also, very, very simple.

Then the nuance starts to come in when they look below that level, to microcap stocks, where the Russell Microcap Index is the 2,000th through the 4,000th stock. That's where you get a lot of overlap actually with the Russell 2000 index, which surprisingly, on a market cap weighted basis is 88% of the Russell 2000.

Jim: That's just amazing to me. It's really, when you look at it that way, the so-called microcap index is really a small cap index stock. Smaller cap, but small cap.

EJS: Absolutely. Then you know, on top of that, so you're getting 88% overlap there, which means that small 12% amount is just this tiny little tail that exists. You're basically just over weighting that tail. If you're an index investor, and you're doing it through an ETF, then you're literally paying 3x expense ratio for a microcap ETF versus the Russell 2000 ETF, which is astounding.

Jim: Yeah. It's crazy.

EJS: I don't understand how that works.

Jim: Because they market cap weight all of their indexes, the median market capitalization and the average market capitalization is going to be much higher because of the market cap weighting. Any benefit that you might receive from that tiny tail is basically negated, because there's so little weight in that ETF or in that index, to the names that you and I might really consider microcap, that it really doesn't have any effect on the performance of the index itself. That's borne itself out with the actual performance of the Russell Microcap Index.

EJS: Yeah, absolutely. The correlation between the Russell 2000 and the Russell Micro is 0.96, so I mean it's effectively the same thing. To your point about the fact that you're just getting this tiny exposure, and because of the market cap weights. Another way to look at it also is through dollar volume. If you do that same analysis looking at the Russell 2000 versus the Russell Micro, that small tail, which is just 12%, that's unique for the Russell Micro, if you look at it on a dollar volume weighted basis, it's actually half that amount.

What that's actually telling you is, not only are you paying 3x for passive exposure, but what you're actually also paying for, in market impact costs, is this very illiquid tail as well. Which, to your point, when you look at the returns on the indexes over time, the Russell Microcap, looking all the way back to 1982, delivered just a 10.1% annualized return, which is basically on par with the Russell 2000, and slightly worse than the Russell 1000. Which completely flies in the face of Fama-French's original research about size premiums and things of that nature.

Jim: Exactly. I remember for *What Works on Wall Street*, we found that the so-called small cap effect was a chimera, because it was assuming that all these intensely illiquid names could be bought, and they can't be, without a huge market impact. With our research, we have found that there are ways to play in what we would call a true microcap space. Why don't you talk a little bit about our definition of microcap, in terms of capitalization? Then also talk about the liquidity screens that we also put into place to avoid huge market impact.

EJS: Sure. When you think about the microcap space, so we've talked about what the market considers microcap is basically small cap. We view microcap as between $50 million and $200 million in market capitalization.

Jim: Which is tiny.

EJS: Which is really, really tiny, which is effectively that, if we were to use the Russell methodology, it would sort of be the 2600th stock on down. Effectively what we view as microcap is that small tail of the Russell Microcap Index.

Jim: Right. Then one of the things that we found when we were doing our research, and as we've been running the portfolio for many, many years, is that liquidity is really, really important to understand. Why don't you talk a bit about what our minimums are and why we have them in place?

EJS: For liquidity, I talked a little bit about dollar volume a minute ago, in thinking about the index. It's incredibly important also, when you're thinking about individual stocks to select. We put in a floor of $100,000 volume, when we're thinking about the universe as a whole. What that actually does is it screens out a good portion of the universe. When we think of that $50 to $200 million group, it's about 1,300 stocks. When you apply the liquidity filters, it drops to close to 500, currently today. Liquidity has a massive impact.

Jim: Right. After you do that, effectively you're looking at the total market capitalization of the group that is available for investment, is like a mid cap stock. It's really, really small. If you take the whole group, it's one large cap stock. If you take what we would consider investible microcaps, it turns into whatever a midcap stock, a single midcap stock, which led you in your paper, which I really love, to say that, "The land of microcap is one of great opportunities, and the island of misfit toys." Which I certainly agree with. There is so much garbage down in the microcap universe, that you really have to be careful when you're sorting through it. In fact, you created three different categories, three broad categories, why don't you explain each of the three?

EJS: Sure. When you look at the microcap universe, to your point, it's just the land of misfit toys. Where logically, when you think about companies that are growing, you've got companies that are just initial startups, which I called new ventures. Basically companies that have become revenue positive in the last three years. These companies, as you can expect, would have characteristics that would bear out along those lines, where they're attempting to rapidly grow sales. Sales are typically very low, but you're going to see actual rapid sales growth, because they're starting from such a low base. Which for a lot of people seems very, very enticing, but their businesses aren't yet proven. New ventures tends to be, when you look at microcap, that $50 to $200 million, historically it tends to be about 25% of the overall universe. It's a huge component of, what are microcap stocks.

Then, on the flip side of the equation, those are sort of companies that are on the upswing, but you've also got a large group of stocks that are on the down swing. I call them fallen angels, back to my fixed income days, thinking about bonds that have been downgraded over time. You effectively have these companies where their business model has failed, when they've lost a huge contract, whatever it may be, and effectively they're value traps.

Jim: Yeah. Potentially on their way to the morgue.

EJS: Exactly. Then the third component, which is the bulk of microcap stocks, I kind of referred to as steady state. Those companies that have been within the microcap market spectrum for the last three years. Those companies tend to have, as you would imagine, the most stable characteristics. The one that meet sort of the best quality thresholds that you can think of. The entire microcap universe is really this kind of revolving door of new issues, fallen angels, which has this center core of steady state firms, which tend to be the ones, it's not exclusively, but tend to be more of the ones that we're interested in.

Jim: Right. We did another paper about how, if you're in the right microcap names, and we're going to get into how you get into those names in a minute, this is almost a proxy for private equity, when you think about it. Since 2012, more than 70 of our holdings have been taken over. That's because you have these private equity firms scouring, looking for the diamonds in the rough. Of course, we're also looking for the diamonds in the rough, and I think we do a pretty good job of finding them.

I think the first factor that we should discuss, that really improves our odds, is the quality factor. You want to talk a bit about that?

EJS: Yeah. Quality, you can think about quality from a bunch of different angles. The way that we think about it really coalesces in kind of three themes. Earnings quality, financial strength, and then earnings growth. Each of those have its own group of characteristics that can be used, but the ones that we've found that tend to be the most successful. As it relates to earnings quality, really thinking about, how conservative are the accounting policies of the underlying company? Are they appropriately depreciating their assets relative to the capital expenditures that they're laying out? Are they using accruals to boost earnings? If you are looking in the microcap space, you do not want companies that have lots of non-cash earnings.

Jim: Right.

EJS: Some of them are very obvious. Some of them are less intuitive. An example of a less intuitive one is that you actually really don't want to invest companies that are rapidly growing their operating assets. The reason is that, sort of hearkening back to the thing that we talked about a moment ago, about rapid sales growth, is so many managers and people underestimate how much cash is needed to grow a business. If a small cap company, or a microcap company, lands a huge contract and all of a sudden they need to triple their inventory and buy a new factory, or whatever it may be, that is all cash that has to be outlaid before they can even bring in an extra dollar of revenue. Earnings quality is a huge component of thinking about microcap stocks.

Jim: Yeah. Talk a bit about the magnitude, because it's very impressive. When you look at just the entire universe of microcap, and then you look at the subset of that universe that has passed these quality screens that we have, the results are pretty dramatic.

EJS: Yes! When you start, so if you take sort of a broad objective approach and you say, okay, if I rank every stock in the universe based on earnings quality and then financial strength, the strength of its balance sheet, earnings growth, its profitability over time, and you say, "I'm just going to eliminate the worst 10% by each of those." You look at that, first of all, the universe gets cut in half right off the top, because those tend to be very dynamic, sort of mutually exclusive cuts that exist. If we just take the microcap universe, which over the 1982 to 2016 period, returns about 8.9%, by simply eliminating the worst of the worst, you improve your overall return by about 500 basis points.

Jim: Yeah, that's huge.

EJS: Not only that, you reduce volatility by 10%, and then your risk adjusted returns, the Sharpe ratio, is effectively on par with what most people consider to be the most stable part of the market, which is just large cap stocks. Quality is incredibly important in microcap.

Jim: Yeah. It's funny too, because microcap is, on its own, the universe as a whole is something that your average investor wouldn't really want to make an allocation to, I think. Because if you're buying a lot of junk with the good stuff, the junk tends to overwhelm. That's why I personally, and we as a firm, believe so strongly in stocks that you don't want to buy are almost as important as stocks that you do want to buy.

Now let's get to the more fun part of microcap, which is after we have eliminated the securities that we don't want to consider for a variety of reasons, we use both value and momentum. I think one of the things that I'd like you to talk about is, A, why we do that. Also, B, the spreads between the top decile of both momentum and value, and the bottom decile by value and momentum. They are absolutely huge. Biggest of any section of the market that I have seen. You want to talk a bit about both of those?

EJS: Yes. To your point, they're the widest that I've ever seen also, regardless of geography, country, market capitalization range, whatever it may be. Value is very intuitive, as most people are familiar with. We take a unique approach, what we believe is a unique approach. We actually sort of skew away from the traditional value metric of price to book. It's not something that we use in how we go about assessing value. There are a lot of reasons for that, probably can get to those another day. You could probably talk about five hours on that.

Jim: We have a podcast with Chris Meredith, and I think Patrick's on that one as well, about price-to-book. In my most recent edition of *What Works on Wall Street*, where we got the CRSP data, which goes from the late 1920s to 1963, where the Compustat starts. What we found is, price to book did not work. Low price to book did not work between 1927 and 1963. That is a very, very long period for a factor not to work. We've found some other things that are problems with price-to-book, but that is actually another podcast that we have recorded. If you’re interested folks, you can also ask to hear that one. Go ahead with your explanation.

EJS: Value, I think the important thing about value is, number one, making sure it’s an objective assessment. In business schools the world over, we learn about discounted cash flows. Any practitioner will tell you that the greatest problem with discounted cash flow analysis is, you can effectively make any company worth $100 billion, by just changing the discount rate. By a very small amount, by half a percent, 1%. If you’re using a discounted cash flow analysis, you’ve got to predict discount rates, which means you need to predict things like inflation. You need to predict the yield on the 10-year, in 10 years from now. Those things are just very challenging to do. The perspective that we take is, let’s predicate our investment decision based on historical characteristics. Because it’s evidence, it’s empirical, it’s real, it’s happened, it’s occurred.

Jim: Right. Exactly. It’s not a forecast.

EJS: We’ll look at things like, basic things like price to earnings ratios. We look at price to sales. We look at EBITDA to enterprise value. We look at free cash flow to enterprise value. Then there’s another component, that I think is unique to our assessment of value, particularly in microcap, which is this idea of shareholder yield. Which we use prominently across our strategies, and within value, and in the large cap space. It’s actually quite effective within microcap as well. We’ll use those as a composited signal, a value signal.

The nice thing about that, in using multiple different factors, is that you get a purer signal that’s more consistent over time, and it gives you that 360-degree objective view of cheapness. Thinking all the way from the top line of sales, through operating earnings, through bottom line earnings. Then through free cash flow, which is effectively the cash that’s left over after you’ve reinvested in the business, paid your capital holders. Then shareholder yield, which reflects how the company is oriented towards its own shareholders, through dividends and through buybacks.

Jim: Right. How good they are at allocating capital themselves.

EJS: Exactly. Whereas, in the microcap space, you’re not looking for companies that are repurchasing lots of shares. It doesn’t make a whole lot of sense if a company is trying to grow, that they’re going to repurchase 10% of shares outstanding. To your point about capital allocation is, you just want to stay away from companies that are issuing massive amounts of shares, because just as if they were heavily reliant on issuing debt, it shows the fact that they can finance their balance sheets in an organic way, through organic growth, as opposed to reliance on third parties.

Jim: Exactly. We found, when we did the various accounting ratios, that external financing, the group that was in the highest 10% of external financing had just horrific returns. I think, if my memory serves me correctly, worse than T-Bills. Over more than 45 years. Clearly not a great way to try to go about generating cash flow for business purposes. Okay. Many, many people get the value side of the equation. Let’s talk a bit more now about the momentum side of the equation.

EJS: Momentum is certainly a key factor. The way that we construct it is we use multiple different momentums. We look at 3-month momentum, 6-month, 9-month. We aggregate those together. A unique nuance of our view of momentum is that we also include a component for a stock’s volatility. The easiest way to think about this is if you were to think about a stock chart, and you saw a stock that kind of looked like an EKG (electrocardiogram) machine that was just all over the place, but had sort of a steady upward pattern. The challenge with investing in stocks like that is, those spikes and dips place an enormous emphasis on the manager to time their entry exactly right. If you get it partially wrong, all of a sudden a stock that could have been advantageous to our performance is no longer that, and it’s actually quite the opposite.

What we seek to do is look for companies that have a steady, thinking again of that stock chart, lower left, upward right, very upwardly trending stock price. That takes the onus off of the manager to perfectly time the investment, and is, first of all, much better for the client experience at the end of the day, because it reduces overall volatility. By including that component of low volatility within our momentum composite, it reduces the returns associated, I should say reduces the volatility associated with the momentum by about 20% overall. If we then bring it all together, and start thinking about the combination of value and momentum together, you’ve got a very powerful investment signal.

Jim: Right. With spreads that are bigger than any other part of the marketplace.

EJS: They’re massive. One of the things that I’ve found most astounding about the microcap space is the smallest factor spread in microcap is larger than the largest factor spread in large cap. When you think about large cap, as you can imagine, one of the largest spreads is going to be value. Back to the 1980’s, we looked at best decile of value versus worst. The spread was about 12.5%. On the microcap side of the equation, the value spread, it blows out over 28%.

Jim: That’s just amazing.

EJS: Which is massive. I mean, from a theoretical perspective, that’s telling you, you could go long the cheapest decile of microcap, and then short the most expensive decile. I mean, good luck actually implementing that in a portfolio, because I don’t know any broker that’s willing to let you short a portfolio of 200 microcap stocks that have no liquidity. That’s probably part of the reason why those spreads are so big. I think it also has a lot to do with what we were talking about earlier, this idea of quality. Where you’ve got this revolving door of completely different types of companies that exist in this space, that cause this massive differentiation that occurs.

We see the same thing when we look at, if you think about, if you just had sort of perfect foresight and you were to look at the return spreads of just investing in groups on microcap stocks. If you looked at the average 12-month return of the best performing microcap stocks versus the worst performing microcap stocks over time, the spread between those is like 200%. The best performing stocks are annualizing at something like 65% per year. Nobody’s ever going to be able to capture that, but what it’s telling you is there’s massive, massive differentiation in microcap stocks.

Jim: Yeah. Probably goes back to the familiar reason that they’re under analyzed. Very few people are paying any attention to them, and I think we think that one of the reasons factors work so well down here, is precisely because of those reasons. These names can get significantly mis-priced, because they have, I think in our actual portfolio, half of the portfolio has no analysts covering the stock. That varies, but I think on average it’s been about half. Then fully two-thirds of the portfolio has one analyst, or at most two. It’s a difficult space to play in as well.

That brings me to my next question, which is, we believe in what we’ve seen, is that the alpha here is really only available if you don’t want to try to scale your portfolio. Talk a bit about that and about our approach saying, look, we are pure active alpha hunters, and that means that we’re going to be closing our portfolio at a level that virtually all professional investors would simply say, "That’s not even worth doing."

EJS: Yeah. I think that when you look at listeners that are familiar with small cap managers that have expertise in that space, will kind of recognize this also. Generally, where you’re going to find the best managers in these spaces, these eclectic spaces, are boutique independent shops. Let’s say that you could find a strategy that accessed the value theme in microcap, and very effectively, it’s never going to be a Black Rock, because their capacity is going to be maybe a couple hundred million dollars, maybe a billion dollars if they really, really push it. That’s just not enough to support a dedicated team, in terms of the fee revenues. Either that or they’re going to charge you 3% for the product, which no investor is particularly interested in that.

I think that we certainly have an advantage there, and so we kind of think about that in terms of these structural disadvantages associated with the space, that keep it to continue to inefficient in addition to the points that you mentioned about the low analyst coverage and low institutional ownership. Those really kind of coalesce in a few key arguments. Number one, the supply of transactable stock. We mentioned earlier that this entire microcap space is very, very small. It’s maybe $100 billion, but that’s before we start screening out the garbage, effectively.

Microcap is also one of the most closely held spaces. These are tiny companies. They’ve got board of directors. They’ve got founders, so just like any private equity investment or venture capital investment, they’re going to own large portions of the stock, which isn’t tradable. They’re not going to trade it. The average free float for the entire microcap universe, the way that we define it, is only about 70% of the outstanding stock. Compare that to Apple, say, where it’s 96% of the shares outstanding is free float.

Not only that, but the volume of transactable stock is also dramatically different. In the large cap space, you look today, the average daily volume, the total for large cap, it’s around $100 billion per day. Then that drops further in the small cap space it’s right around $20 billion per day. Then within microcap, it’s less than a billion dollars a day. It’s less than half a billion dollars a day. It’s about $420 million daily volume. You start to think, okay, if I’m going to build a strategy in this space, it probably can’t be much bigger than that, as a whole, if I want to be able to move in and out. Astoundingly, when you think about the multiples there, the volume of transactable stock in large versus micro, it’s over 200 times greater. The volumes are tremendously different and give you a lot less space to work with.

Jim: Yeah. We have found, and I have found this during my career, that really the greatest opportunities are places where you see scarcity. They're overlooked, and they're overlooked for all of these institutional reasons that we've been discussing. That kind of leads me to my next question. Who is this right for? I think your paper makes some really great points about who can use this and who can't. First off, who can use this? Then we'll talk a little bit more about who can't use this.

EJS: I think that, you know, there's been an argument for quite a while that microcap can be a substitute for private equity. People fall on different sides of the equation there, as a liquid alternative for private equity. The more time that I spent looking at the universe, thinking about this idea that we've got firms that are sort of new ventures, steady state, and then fallen angels, which you could consider distressed. Then thinking about the types of private equity that exist, whether it's venture capital, distressed, buy out firms. We've talked about all of those things today. Those things all exist in the microcap space. I think that for people that are looking for eclectic exposure, that have a significantly large edge but are okay with the fact that they can't add billions and billions of dollars to this opportunity, it's going to be a small portion of your portfolio, but it is a source of alpha that we've seen work both on a live time basis, and obviously in the research also.

Jim: Right. I sort of, when I talk about this, and I love to talk about microcaps, as I said at the beginning, it's my favorite segment of the market, because these so-called anomalies just continue to persist. They persist for reasons that are structural, not necessarily for other reasons. I was speaking to a guy today on the phone, and he was asking me about this. He goes, "Well, you know, who can use this type of portfolio?" I said, "Honestly, it's pretty much limited to individual investors, family offices and very, very small pensions or endowments, and I really emphasize small." You make the case that if you have a $30 billion fund, you can't make an effective investment in microcap to move the needle on your overall fund's return.

I think that this is one of those areas of the market where the individual and smaller family office, smaller pension endowment, foundation, can truly move the needle and get returns that simply are not available to the large-scale type investor. That's one of the things that I find very attractive about this. Full disclosure, my grandson has most of his portfolio in microcap. He's three and a half, so he has a very long-term time horizon. I think that for investors who are trying to find alpha in a world filled with beta, this is a really, really great place to start looking. There are others, and we have investments there as well, and those will be the subjects of other podcasts. The size of the spreads, the difficulty with transaction costs, the difficulty with assessing market impact, all of those keep this space of the market very fertile, as far as I'm concerned, in terms of ability to generate consistent alpha going forward.

Any other observations from your paper – which, by the way, I think is great — that you'd like to add about the microcap space?

EJS: You know, I think the one thing that I would probably add, as I was thinking and writing a conclusion for the paper. We've talked a lot about the alpha that's available in this space, and the scarcity associated with it. We work with a lot of advisors and institutions and consultants, and it just sort of dawned on me that we're in this environment where clearly passive investing is gaining momentum, sort of as the day goes by. A lot of people, in some cases rightfully so, have decided to go passive in portions of their portfolio. Yet a lot of people spend so much time, when they think about allocating, how to allocate their portfolio. They think first in terms of the largest allocation, so large cap.

You really want to be spending your time doing research where the alpha is available. Switch the institutional paradigm from this idea of needing to focus and spend time to find advantages in the large cap space. Think first about microcap and small cap. We tend to follow a lot the sort of most popular stars on the block, which tend to be, particularly in the endowment space, everybody's looking at their peers to see how allocations are being made.

There's a reason that some of those large endowments are allocated in the way that they are. Whether it be to private equity or venture, because that is their way to add exposure to the portfolio, because they can't access areas that are, on a fee basis, much cheaper, through things like microcap. They have to pay two and twenty to get illiquid, 10-year lockups, in a portion of the market that the structure of it is such that it can't be arbitraged away, because their concentration is so high. Whereas, my guess is that if they had the ability to microcap or small cap, would be a much easier place to start to generate returns, particularly on a net of fee basis.

Jim: Yeah, at a fraction of the cost, in terms of private equity, venture capital, et cetera.

EJS: Exactly. I think, as I got towards the end of the paper it really started to stir in my mind a lot, this idea that I think that the perspective that a lot of people that, we're traditionally taking and taught to take on how to go about asset allocations, is probably actually flipped. Don't start with the largest allocations in the portfolio. Think first about the portions of the portfolio where you can add the most value above whatever premium you're seeing. Whether it's on the fixed income side or the equity side. From our perspective, that's microcap.

Jim: Yeah. I totally agree. I think that's a really good way of looking at it, even though I believe, and we have demonstrated, that you can add value, even in the big cap space. If the train that everyone is on is going to be passive, if you really want to try to generate the alpha, you're absolutely right, look in places that can traditionally generate that type of alpha, and do your homework there.

The other thing that I find kind of interesting is that this is a space effectively barred to huge investors. If you have a $30 billion portfolio, or endowment, or pension, or whatever, as you note in your paper, forget about it. You simply can't make a big enough allocation here. That's what I get excited about, because we can offer to individual investors and to family offices and to very small pension, endowments, et cetera, something that is truly exciting, as far as I'm concerned. I'm an investor in this, as you know. You simply can't get at it if you are a massive investor.

Well this has been absolutely fascinating. Thank you very much. My guest has been Ehren Stanhope, who is a Principal here at O'Shaughnessy Asset Management, and has written a terrific paper. It's on our website (osam.com) if you'd like to download it and take a look. As always, if you have any questions, feel free to get in touch with us. Thank you. And thank you, Ehren.

EJS: Thanks Jim!

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The universe of All Stocks consists of all securities in the Chicago Research in Security Prices (CRSP) dataset or S&P Compustat Database (or other, as noted) with inflation-adjusted market capitalization greater than $200 million as of most recent year-end. The universe of Large Stocks consists of all securities in the Chicago Research in Security Prices (CRSP) dataset or S&P Compustat Database (or other, as noted) with inflation-adjusted market capitalization greater than the universe average as of most recent year-end. The stocks are equally weighted and generally rebalanced annually.

Hypothetical performance results shown on the preceding pages are backtested and do not represent the performance of any account managed by OSAM, but were achieved by means of the retroactive application of each of the previously referenced models, certain aspects of which may have been designed with the benefit of hindsight.

The hypothetical backtested performance does not represent the results of actual trading using client assets nor decision-making during the period and does not and is not intended to indicate the past performance or future performance of any account or investment strategy managed by OSAM. If actual accounts had been managed throughout the period, ongoing research might have resulted in changes to the strategy which might have altered returns. The performance of any account or investment strategy managed by OSAM will differ from the hypothetical backtested performance results for each factor shown herein for a number of reasons, including without limitation the following:

- Although OSAM may consider from time to time one or more of the factors noted herein in managing any account, it may not consider all or any of such factors. OSAM may (and will) from time to time consider factors in addition to those noted herein in managing any account.
- OSAM may rebalance an account more frequently or less frequently than annually and at times other than presented herein.
- OSAM may from time to time manage an account by using non-quantitative, subjective investment management methodologies in conjunction with the application of factors.
- The hypothetical backtested performance results assume full investment, whereas an account managed by OSAM may have a positive cash position upon rebalance. Had the hypothetical backtested performance results included a positive cash position, the results would have been different and generally would have been lower.
- The hypothetical backtested performance results for each factor do not reflect any transaction costs of buying and selling securities, investment management fees (including without limitation management fees and performance fees), custody and other costs, or taxes – all of which would be incurred by an investor in any account managed by OSAM. If such costs and fees were reflected, the hypothetical backtested performance results would be lower.
- The hypothetical performance does not reflect the reinvestment of dividends and distributions therefrom, interest, capital gains and withholding taxes.
- Accounts managed by OSAM are subject to additions and redemptions of assets under management, which may positively or negatively affect performance depending generally upon the timing of such events in relation to the market's direction.
- Simulated returns may be dependent on the market and economic conditions that existed during the period. Future market or economic conditions can adversely affect the returns.