1. What made you decide to attempt to replicate private equity and venture capital investing?

We were initially drawn to the PE and VC asset classes given their attractive long-term return profiles and we wanted to see if we could preserve the risk and return characteristics while improving upon the usual 10-12 year lock-up requirement. As our research progressed, several additional "frictional points" jumped out at us that we thought we could improve upon: 1) high fees, 2) asset class diversification challenges, and 3) immediate asset class exposure to solve the challenges tied to the uncertain timing of capital calls and distributions.

2. How long did it take to derive a formula that allowed you to reproduce the returns and risk characteristics of these two asset classes?

It's a complex undertaking given the opacity of the industries, in particular the challenges with the data. All-in it took several man-years to develop the entire program, including the frameworks and the machine learning elements that allow us to track the asset classes.

We should mention that Thomson Reuters is our partner for these indices. We chose to work with Thomson Reuters as our data partner as they have company and transaction level data going back several decades for both PE and VC.

3. You have a Research Index and an Tracking Index for each asset class. Explain the difference between the two?

Correct. For both the Private Equity and Venture Capital asset classes we developed a Research Index, which is driven by the performance of thousands of U.S. PE or VC-backed companies, and a separate Tracking Index that is comprised of liquid securities. The motivation for creating the Research Index was to have a direct tie to the PE and VC asset classes from which the Tracking Index is designed to mirror. This is critical and something missing from other products that claim to track the asset classes. Currently, the PE Research Index is comprised of over 2,000 PE-backed companies with a total market cap of nearly \$2T and the VC represents over 8,000 VC-backed companies with a total market cap of nearly \$800B.

The related Tracking Indices are designed to track the performance characteristics of the two Research Indices and are comprised of approximately 200 liquid securities. Thomson Reuters serves as both the calculation and publishing agent of the index values for both PE and VC.

4. What have the historical returns of private equity and venture capital investing been?

Over the last 20 years the Tracking Indices have generated average annual returns of 15.89% and 19.55% through December 2017, for PE and VC respectively, versus 7.17% for the S&P. Ultimately, we measure the success of our products based on how tightly they track their corresponding Research Indices.

5. How do you pick the individual public securities in the Tracking Indices? Explain the three-step process you use to build the portfolios.

The construction of our Tracking Indices is entirely systematic and we can use a three-step framework to illustrate the key elements. To start, the Tracking Index is constructed utilizing liquid securities to mimic the sector distribution of the Research Index. From there we use a set of proprietary models to measure the risk ("beta") of the Research Indices and adjust the exposure to the liquid securities of the Tracking Index as appropriate to match the same expected market movement as the Research Indices. We then re-allocate risk across sectors to tighten the tracking (but do not add or subtract any leverage as part of this step).

6. How closely do the Tracking Indices mirror other measures of alternative investments?

There are a number of different private market benchmark providers. We generally look at Cambridge Associates' indices as they seem to be utilized by the majority of institutional investors. One major difference between our return profile and that of Cambridge Associates is that we construct a replication portfolio based on the "gross performance" of the underlying PE and VC-back companies, whereas the Cambridge data is based on manager provided "net performance," i.e., after the fund managers have taken their fees. Given the average level of fees in the asset classes, that leads to a material difference.

7. What are the advantages of using this approach as opposed to simply investing in a private equity or venture capital fund?

Many investors, particularly large investors with well-developed PE programs, look at our indices as an additional tool they can use to complement their existing private markets program. We can play a role in helping these investors maintain their target asset class exposure levels, reduce the average cost of their privates sleeve, and provide an element of liquidity that is easier to access than through the secondary markets. There are a few investors looking at our indices as part of a core/satellite framework – just like in their liquid equities portfolio where they want core exposure to be complemented by niche or specific managers. For investors that may be subscale for a full-blown PE program, the indices may represent a compelling alternative to a Fund of Funds offering.