

A Systematic Approach to Differentiation

A Discussion with Artisan Partners Thematic Team portfolio manager Christopher Smith

PORTFOLIO MANAGER
Viewpoints

October 2018

What is your process for identifying opportunities for alpha?

To start, we believe stocks with the highest alpha-generation potential are ones for which we can apply differentiated one- to three-year views versus the street across two key metrics: 1) a company's earnings power and 2) the multiple paid for a business. We believe differentiation has the greatest opportunity to be uncovered by identifying multi-year inflection points, as they are often initially misunderstood by the market.

Our research process is designed to objectively source inflection points in thematic trends and company-specific business models. From a thematic standpoint, these inflections are often driven by secular, structural or cyclical forces. From a company-specific standpoint, inflections are often the residual of thematic triggers, but can also be caused by idiosyncratic factors, such as changes in management, business models and/or societal behaviors.

Our bottom-up research allows us to develop a variant perspective on the core growth rate, earnings power and return on invested capital (ROIC) / return on incremental invested capital (ROIIC) of the companies and industries exposed to these inflections. We strive to objectively evaluate these variables by forecasting a company's fundamentals and building a five-year earnings model.

Taking a multi-year variant view on sustainable earnings power is a key source of potential alpha generation. From our perspective, earnings-power differentiation is most impactful when it's top-line driven; however, sustainable margin-growth differentiation can also be a powerful alpha-generation source. We are trying to understand whether growth rates may be accelerating over the next one to three years, versus growth that may be above consensus estimates, but decelerating. In our opinion, the investment community's view of sustainable growth rates matters significantly for the multiple paid for a business, which is why we focus so much on acceleration versus deceleration.

Why have you chosen to focus on return on invested capital in understanding a company's earnings power trajectory?

We believe investors don't spend enough time forecasting the sustainability of ROIC and the resulting potential for multiple expansion/compression. In our view, the ROIC trajectory is as powerful as—if not more so than—earnings power differentiation. We didn't arrive at this conclusion on instinct alone. Our historic observations have taught us that the multiple paid for a company is most correlated with the company's ROIC along with that ROIC's sustainability and the company's cost of capital. As the ROIC of a business increases over time, the multiple paid for that business should increase as well.

For this reason, we focus much of our efforts on understanding a company's ROIC trajectory. By diving into the ROIIC characteristics of a business, we can better assess the ROIC sustainability. The five-year horizons of our models allow us to evaluate the quality and sustainability of our investments' growth rates and return profiles. The combination of fundamental earnings power differentiation and a changing/sustainable ROIC trajectory creates an ideal candidate for our portfolio.



Christopher Smith
Portfolio Manager

15 Years Investment
Experience

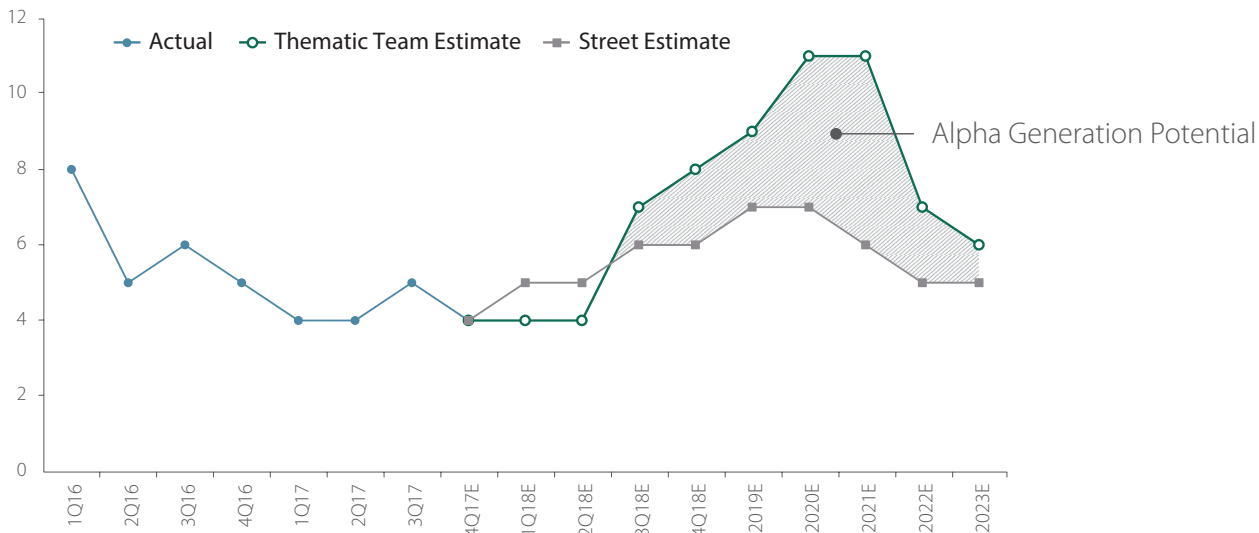


How do you build objectivity and repeatability into your process?

To create the highest probability of success, we try to be as objective as possible. We attempt to eliminate as many of those subjective variables that can creep in—analyst/PM communication, stock performance relative to your fundamental analysis, conviction level, fear of being wrong, thesis creep—and allow our industry and company-specific research to be maximized.

To do this, we build our multi-year business models based on the variable we have determined is the biggest driver of each company's differentiation—this could be revenue (pricing/units/billings), margins or earnings. Once we have determined the driver, we don't want to change it (e.g., going from revenue to EPS), as that can lend itself to thesis creep and subjectivity. Also, our experience has taught us that "moving down the income statement" (from revenue or margins to EPS or some other metric) can mean that our idea has become over-owned/crowded, and our thesis has primarily played out.

Exhibit 1: Systematic Analytical Framework—Differentiated Views (%)

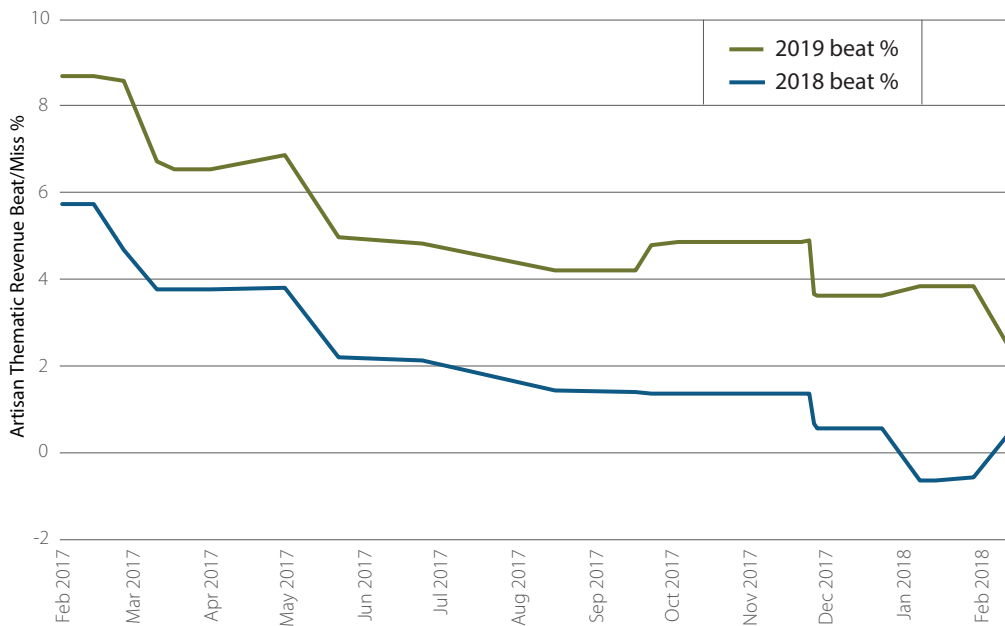


This hypothetical example is provided for illustrative purposes only and is not intended to constitute a past specific recommendation or reflect a past or current holding. The stylized example is intended to convey a high-level overview of the analysis performed in connection with the team's research process, and the type of information that is considered in that analysis. The information contained herein represents a simplified presentation of a complex process. The investment process is subject to change and may differ materially from what is stated herein.

Naturally, the majority of investment opportunities have more than one true variable that can determine whether alpha will be created. We believe our focus on one key variable allows for clarity and maximum utilization of our time and research process. As important, we look at the delta in our views versus Street estimates on a multi-year basis (as seen in Exhibit 1), as that forces us to discuss whether our fundamental analysis is truly focused on structural business-model changes, rather than shorter-term fluctuations in trends that don't warrant longer-term changes in the ROIC and multiple paid for the business.

Veeva Systems is a good example of how this process plays out. In Exhibit 2, you can see how our internal revenue differentiation for Veeva for FY 2018 and FY 2019 tracked since the beginning of 2017. We initially thought that Veeva's revenue would be ~6% higher than consensus forecasts for FY 2018 and ~9% higher for FY 2019. Through 2017, our thesis around Veeva's new product launches creating higher revenue growth and expanding Veeva's overall TAM (total addressable market) began to play out, and our differentiation to consensus narrowed. Veeva reported its FY 2018 Q4 earnings results in February, which validated our initial FY 2018 revenue forecasts. As a result, our differentiation went to ~0% for FY 2018 and only 2% for FY 2019, as consensus modeled higher revenue opportunities from Veeva's new products.

Exhibit 2: Tracking Differentiation Over Time



Source: Artisan Partners/Bloomberg. Thematic team estimates for FY 2018 and FY 2019 revenue reported by Veeva Systems versus analyst consensus estimates are provided for illustrative purposes only. Estimations of revenue reporting are not exact and the results for Veeva are not representative of all securities researched or held within the portfolio.

Given this visualization, it was clear that our current internal view on Veeva's earnings power was not significantly differentiated from consensus views. In this scenario, we would rotate the capital into other names we believed have more differentiation and valuation upside. The visualizations—namely, our focus on new product offerings driving higher revenue and long-term TAM opportunities—allowed communications on the name to be clear and objective, including when to size up, reduce or exit the position.

We track this type of data on all the names we cover, whether we are invested in the name or not. Over time, we will use the data to see how effective we are at forecasting differentiation, how much we change our estimates and what our biases and weaknesses might be. For example, there may be a certain industry we shouldn't cover anymore because we haven't been able to consistently create research that allows for significant, consistent differentiation. This should also help us continually improve our overall research process, making the team more effective over time.

How do you think about portfolio construction and the role it plays in risk management?

Our portfolio construction does not follow a linear path, but rather is an ongoing cycle whereby we continuously work to ensure the portfolio maximizes our chances for investment success. While our investment process is rooted in bottom-up research, we recognize that certain risks can emerge when seemingly independent risks are aggregated at the portfolio level. Left unchecked, these hidden risks can have a significant impact, either positive or negative, on portfolio risk and return. Our processes help us identify these risks and allow us to construct a portfolio that aligns with our fundamental views.

As part of our research process, we determine our expected valuation upside for each security within our coverage universe. We then put our estimates into a custom-built Black-Litterman portfolio optimizer. The optimizer is based on the historical returns and correlations of each security, but the expected returns are based on our fundamental, bottom-up work. This optimization routine corrects for the limitations of traditional portfolio optimizers by incorporating our forward-looking return estimates, rather than simply extrapolating past returns into the future. Like traditional mean-variance optimizers, the model produces an efficient frontier, but this frontier is rooted in our fundamental research.

The result is a valuable tool that allows us to target a desired level of risk and upside potential in order to maximize the portfolio's Sharpe ratio. Additionally, and perhaps more importantly, this tool helps us maintain objectivity around capital allocation across securities and themes. While we are not tethered to these recommendations, this approach provides a reasonable starting point for our discussions.

One key benefit of the optimizer is the premium it places on low/negatively correlated securities. While it is natural to size positions based purely on our estimates of their expected outcome, the optimizer may suggest we size-up lower correlation assets in order to enhance the risk-adjusted returns of the overall portfolio. For example, we may hold a company that has a lower upside estimate than other holdings if it has lower correlation to other holdings and themes. That would allow us to hold bigger positions in those names which do have higher upside based on our research. By balancing these names and correlations, we aim to construct a more resilient portfolio that is less dependent on a narrow set of market circumstances. Rather than simply investing in a collection of names we like, our goal is to construct a cohesive portfolio where we understand how each position is expected to interact with the others.

To further improve the portfolio efficiency, we combine this systematic process with discretionary inputs that are not accounted for by the optimizer. We incorporate many forward-looking inputs including implied volatility, differentiation, potential catalysts and crowding. This helps ensure that position sizes reflect a more complete set of variables that ultimately impact portfolio returns. For example, if we find that a security is crowded and we don't have much differentiation, we may diverge from the optimized position weights and reduce our exposure accordingly.

In addition to portfolio optimization, we seek to understand the underlying drivers of portfolio risk and return by decomposing each security into factor exposures. This helps us understand how each security may act in different market environments and illustrates the impact it may have on the overall portfolio. This also enables us to shock the portfolio with stress tests and scenario analyses, and it helps us identify any unintended risks.

We also regularly monitor factor trends to help us avoid and potentially profit from painful factor unwinds. For example, Exhibit 3 shows the cumulative returns of the growth vs. value factor over time. The upper and lower dashed lines represent two standard deviations above and below the long-term trend. Statistically, the cumulative return line should fall between the two bands 95% of the time. Therefore, when the cumulative return line approaches the upper or lower two standard deviation band, it is a strong indication that the prevailing factor trend may reverse. We use this tool to track numerous factor and macro trends, which has helped us successfully navigate several factor events.

Exhibit 3: Identifying Factor Risks



Source: Artisan Partners/S&P. Factor returns are represented by the S&P 500 Growth (SGX) and Value Stock (SVX) Indexes. **Past performance does not guarantee and is not a reliable indicator of future results.**

Options can provide a critical role in both portfolio construction and risk management. We are active participants in the options market and seek to harvest disparities between implied volatility and future realized volatility. We use options both offensively and defensively in an attempt to enhance return and to protect against the downside. Moreover, we aim to use options that reflect our fundamental views and align with our add/sell/trim prices on single-name securities.

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Return on Invested Capital (ROIC) is a measure of how well a company generates cash flow relative to capital invested in the business. **Return on Incremental Invested Capital (ROIIC)** is a measure of how well a company generates cash flow relative to each additional unit of capital invested in the business. **Earnings per Share (EPS)** is the portion of a company's profit allocated to each outstanding share of common stock. **Black-Litterman Model** is an asset allocation model developed by Fischer Black and Robert Litterman that produces a set of expected returns within the mean-variance optimization framework. **Mean-Variance Optimization** is a quantitative tool that aids in asset allocation decisions by considering the tradeoff between risk and return. **Sharpe Ratio** is a measure of risk-adjusted return—it is the average return earned in excess of the risk-free rate per unit of volatility or total risk. **Efficient Frontier** is a graphical representation of a set of optimal portfolios offering the highest expected return for a defined level of risk.

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