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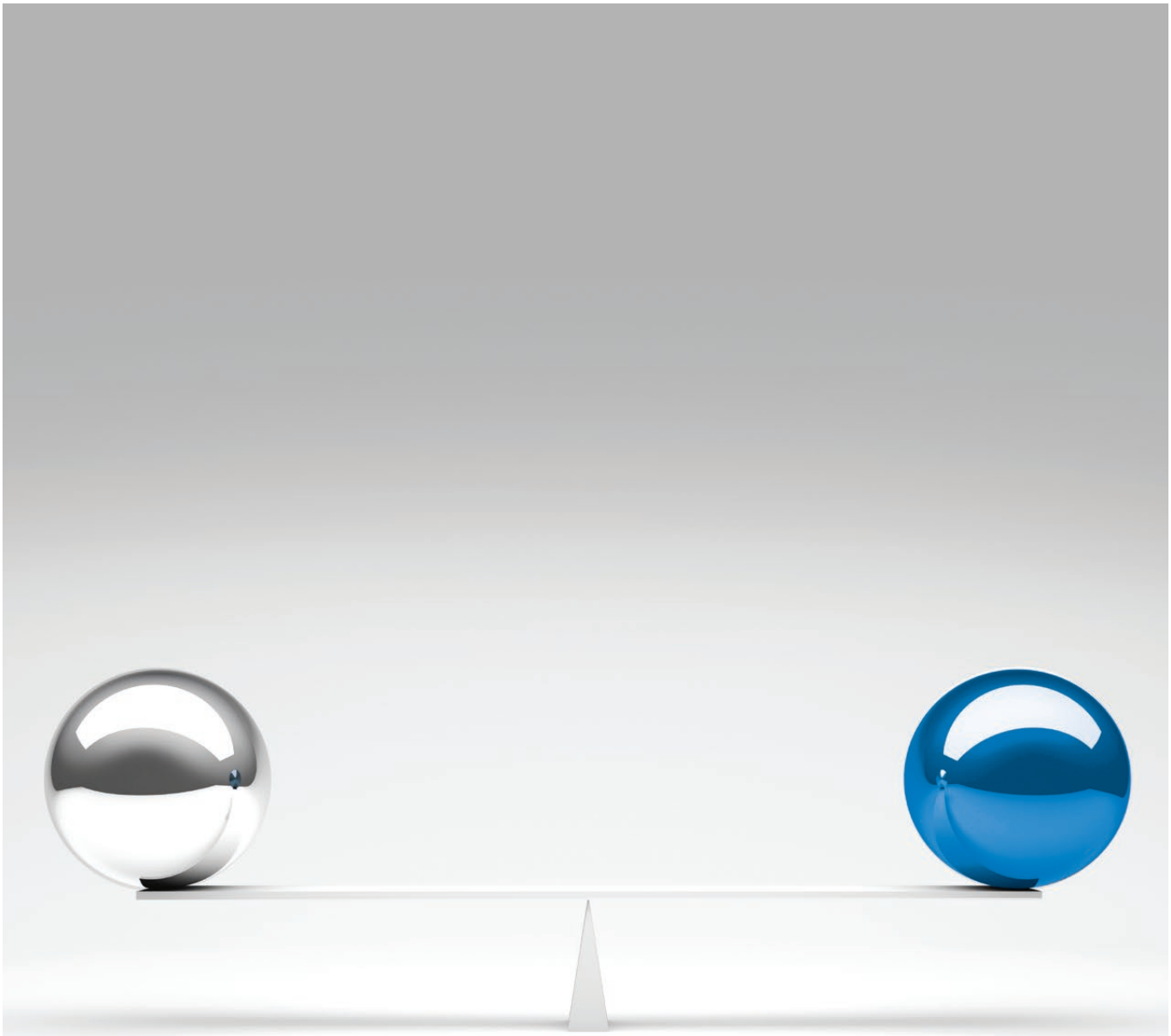


2016 First Quarter

Corporate Insights

Managing the multiple: Weighing growth against profitability

Introduction

The world's public equity markets gyrated wildly during the second half of 2015 and into early 2016. Companies in some industries saw billions of dollars of value added to or subtracted from their equity values in the course of weeks or even days. Yet, by and large, we have seen that market multiples have continued to expand in the years since the 2008 financial crisis. And when we look at the markets as a whole, growth expectations have remained stable and in fact are somewhat lower than prior to the 2008 financial crisis. So, what do market multiples really tell us?

Market multiples are widely accepted as a barometer for value and, more importantly, they influence a wide range of strategic decisions as corporate clients benchmark themselves to their competitive landscape and evaluate potential M&A opportunities. Such a reliance on multiples in decision-making increases the importance of dissecting – and understanding – market multiples for what they truly are – a shortcut to relative valuation.

This paper, the second in our **Credit Suisse Corporate Insights** series, explores the relationship of market multiples to fundamental drivers of value. We find that – at their core – market multiples reflect the market's discrete expectations about company growth and profitability (as measured by return on capital). The value paid for growth and returns varies; in the markets right now, higher multiples are being paid for returns on capital than for additional growth.

The role and importance of market multiples

Equity valuations are often more art than science but, conventionally, they are based on two methodologies: intrinsic and relative valuation. The intrinsic valuation approach is often derived from a discounted cash flow (DCF) methodology. A DCF approach requires comprehensive and granular knowledge about a company's operations and the ability to make reasonable assumptions on its income statement and investment requirements. In short, DCFs can be transparent and technically sound, but are often highly subjective and time consuming.

Thus many investors and companies use relative valuation, via multiples, as a way of making easier comparisons across times, sectors and markets. Market multiples reflect the market's valuation of a company's expected operational performance. These ratios are a simplified way to assess valuation, requiring fewer assumptions and less time. While there are many flavors of multiples, from simple P/E to more complex Price/Book, we focus our attention here on one of the most common shorthand multiples, EV/EBITDA (a ratio of Enterprise Value to a common proxy for operating cash flow, EBITDA).

By definition, all market multiples are a simplification of the fundamental drivers behind valuation. The benefit of market multiples is that – when properly viewed – they provide tremendous insights into how investors evaluate the three fundamental drivers of valuation: **return on capital, growth and risk**. Generally speaking, investors reward with premium valuations companies that are expected to produce superior operating fundamentals. A company's cash flow generation potential and growth prospects are both a consequence of management's strategy and capital allocation decisions.

The risk factor is more slippery, and embodies elements of market sentiment, capital structure, perspectives on the quality of management, volatility of operational performance, and the attractiveness of a company's business portfolio. These disparate elements are worthy of a paper unto themselves. For the purposes of this analysis, we account for the market's perception of risk by evaluating company-specific returns on capital relative to each company's cost of capital – which is commonly referred to as the return on capital spread[1].

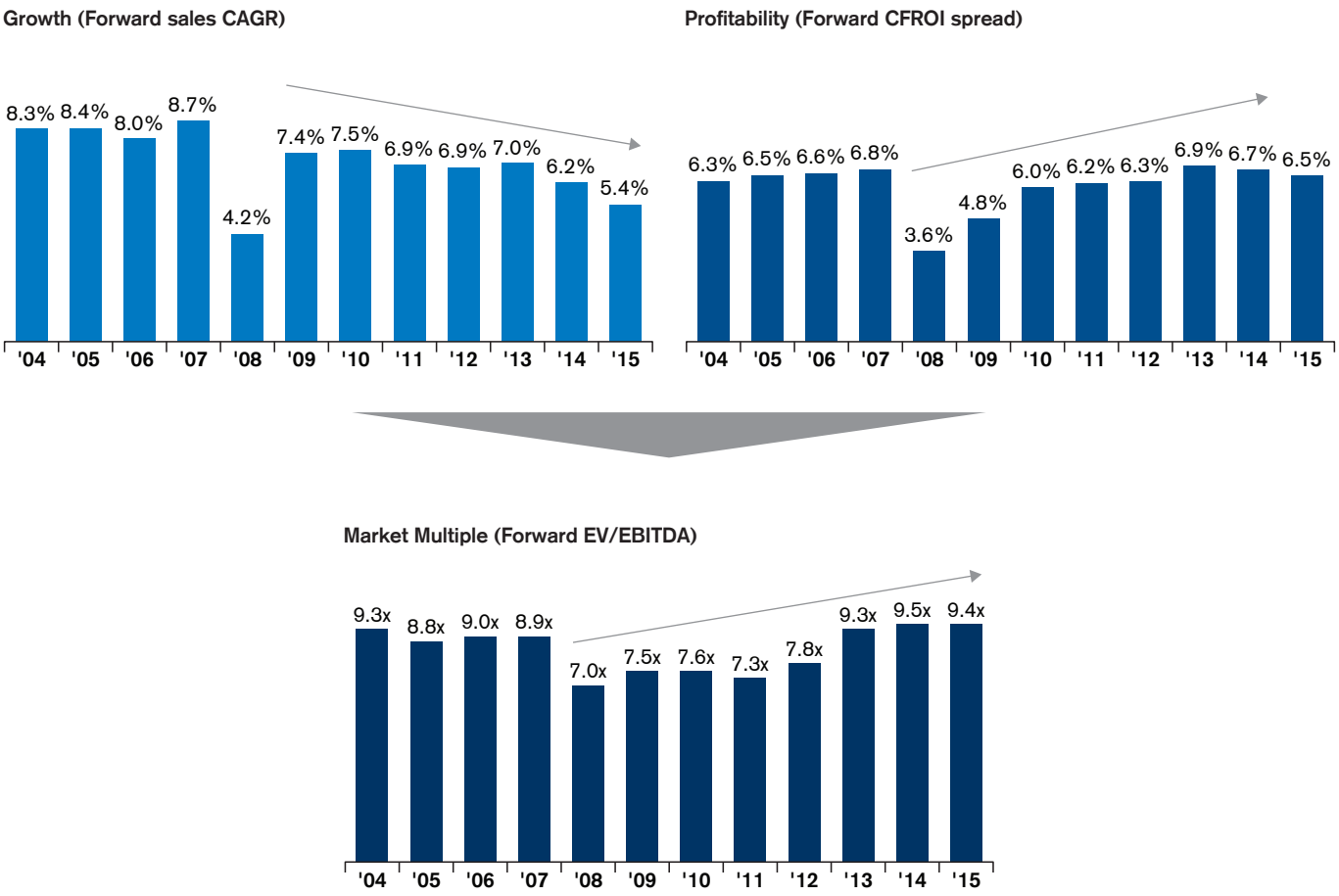
The relationship between market multiples and company fundamentals today

Market multiples have generally expanded in the last several years, despite subtly lower growth expectations, as shown in Exhibit 1. This multiple expansion alone suggests that investors are willing to pay a higher multiple today for lower levels of growth. Why could this be?

At first glance, this may point to irrational market behavior currently, exposing a disconnect between market valuations and company operating performance. But there's more to the story than just growth; the other factor is company profitability which we measure by returns on capital. We have used a cash flow return on invested capital (CFROI)[2] metric, which is a more comprehensive measure for a company's profitability than evaluating margins alone. CFROI captures both the income statement and balance sheet and provides a holistic view of a company's ability to generate cash flows from all of its invested capital.

Return on capital spreads for companies have increased to reach near-term highs over the past decade. The apparent correlation between increasing market multiples and increasing returns on capital spread, in an environment when growth prospects are slowing, suggests that multiple expansion can be attributed to increasing net profitability. In fact, we find that improving returns on capital is the critical driver behind premium multiples.

Exhibit 1: Comparing market multiples to underlying operating drivers for the market over time

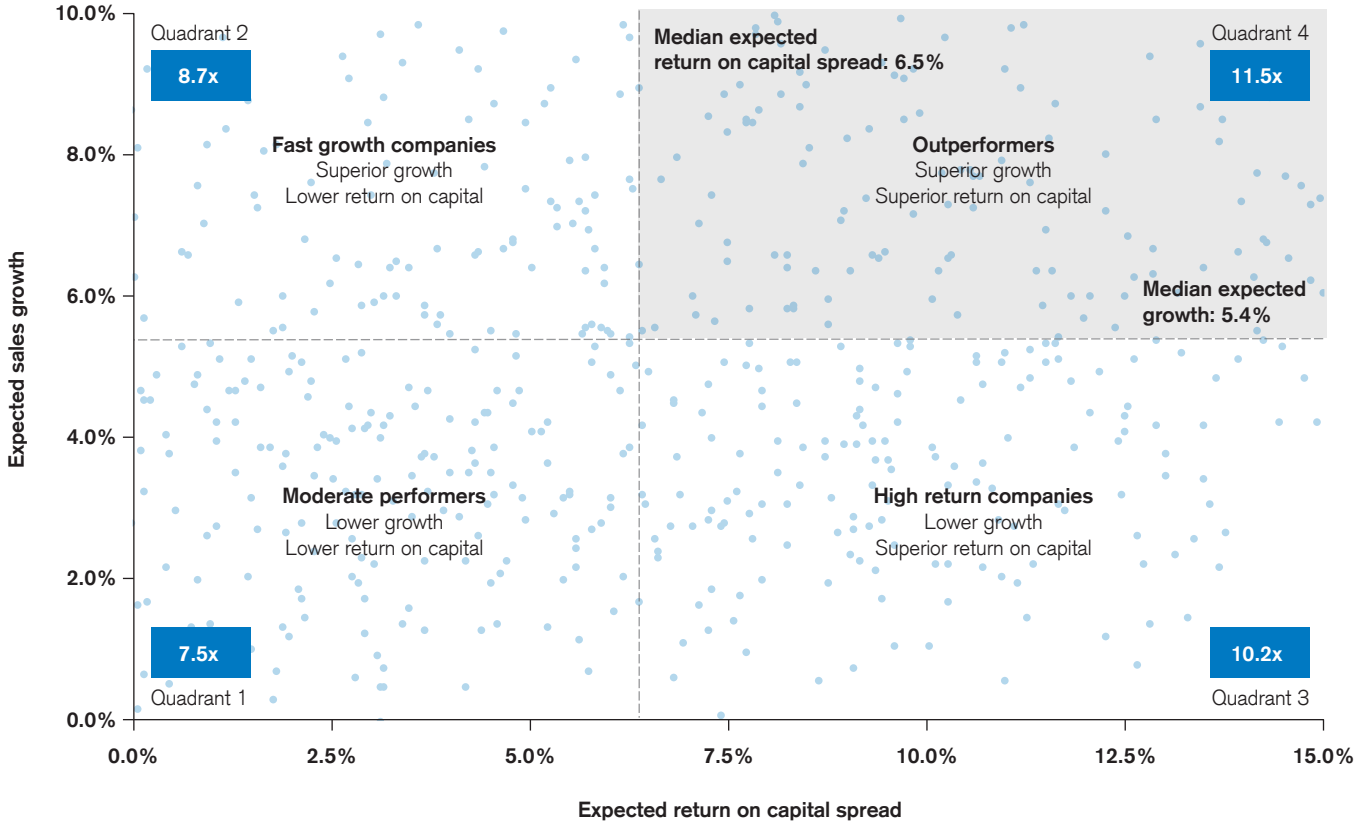


When comparing company operating fundamentals to observed market multiples, we see that companies with superior expected growth and/or superior expected return on capital tend to trade at a premium multiple in the market compared to other companies. Conversely, companies with lower expectations in growth or returns on capital tend to trade at a discounted multiple in the market compared to other companies.

Exhibit 2a demonstrates this relationship via a quadrant analysis. Here we take all companies in our data set as of December 2015 and plot them relative to their respective expected return on capital (on the x-axis) versus expected forward sales growth (on the y-axis). Next, we dissect the results into quadrants based on median level performance for growth and return on capital. Finally, we observe the median forward EV/EBITDA multiple for companies in each quadrant.

This "2 by 2" approach clearly shows that companies in the top right – those with above-median growth coupled with above-median return on capital – trade at the highest multiples in the market, currently 11.5x. This multiple is well above the 7.5x earned by companies with more modest performance in growth and return on capital, on the bottom left.

Exhibit 2a: The Quadrant Quotient[3]

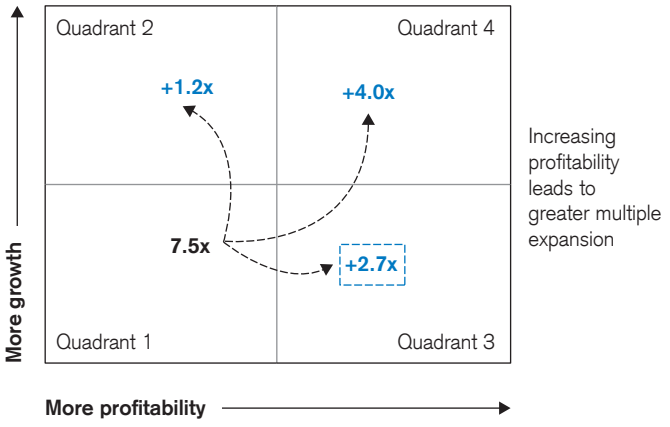


Note: Multiples represent median forward EV/EBITDA

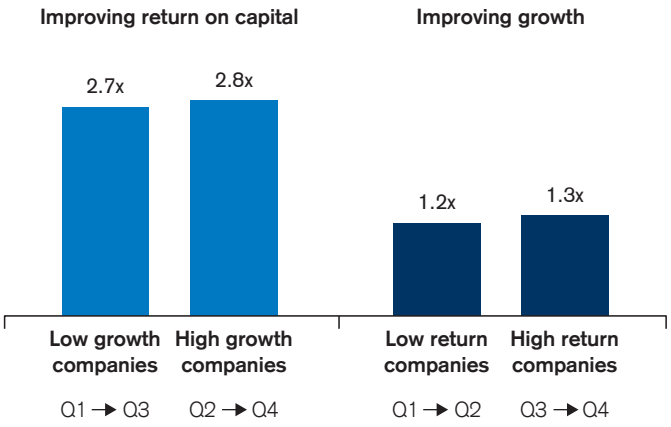
Furthermore, Exhibit 2b shows the immense power of improving returns on capital. Improving returns on capital to above median levels can drive almost three turns of enterprise value relative to a modest-performing company's forward cash flows (2.7x incremental multiple expansion when moving from bottom left to bottom right). This is more than double what improving growth can do to that same company's market multiple (1.2x incremental multiple expansion when moving from bottom left to top left).

Exhibit 2b: Assessing incremental changes in the Quadrant Quotient[3]

The incremental multiple premium received from moving across quadrants



The incremental multiple premium received from improving growth or return on capital



The companies that achieve the greatest premium multiples in the market are those that generate both outstanding returns on capital and superior growth. This set of outperforming companies currently earns an impressive 4.0x premium on a median basis when compared to the more moderate performers in the bottom left quadrant. This tells us that the impact of growth is amplified when you combine it with superior return on capital. As an aside, we have also evaluated the data across specific industries, and have found similar results.

Exhibit 2 establishes that there are two distinct paths for multiple expansion for a company: either through increasing returns on capital (which can be driven by margin expansion or asset efficiency improvements) or through higher levels of growth. The optimal path would of course be to simultaneously drive both, like the companies in the top right quadrant of Exhibit 2a.

We must acknowledge that difficulty, as not every company can actually drive superior performance in both growth and returns on capital. For some companies, driving higher growth may prove more challenging than driving returns on capital, while for others the opposite may be true. This reality should influence a company's strategic decisions around which path to pursue.

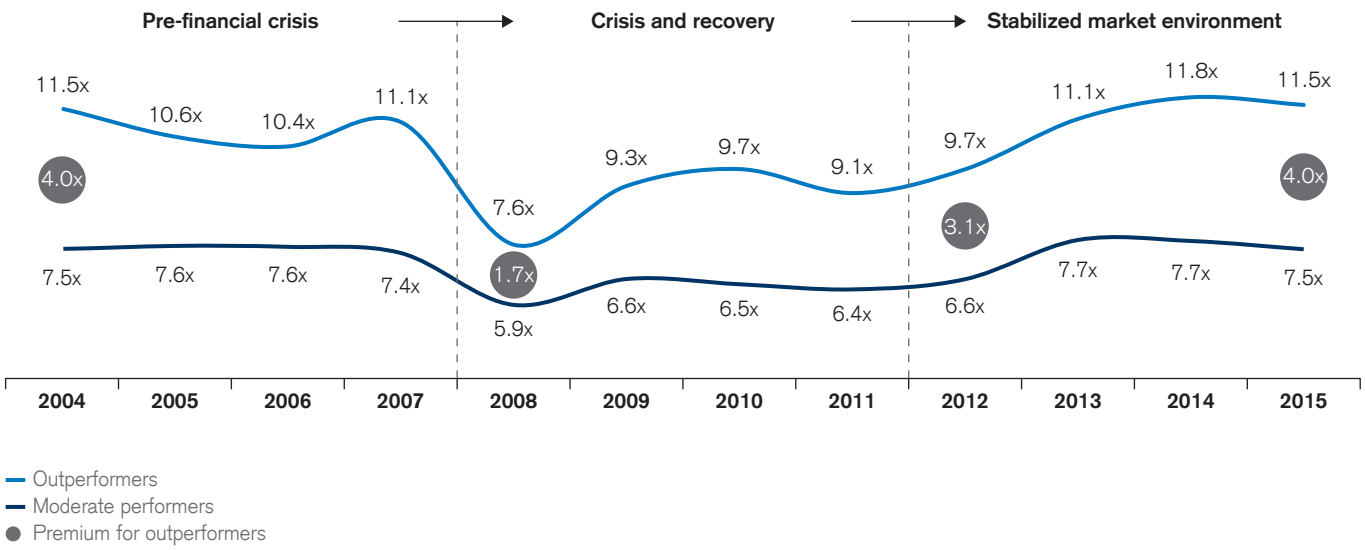
So why is it that some companies trade at a discount? We often hear management teams express concern that they trade at a lower multiple than their peers, which they view as unjustified or inexplicable. As our analysis reveals, multiples are a reflection of market expectations about fundamentals; in other words, a company may trade at a discount because the *market views its fundamentals as weaker than peers*. Market multiples embed perspectives about the operating performance and future expectations of that performance, company by company.

The relationship between market multiples and company fundamentals over time

The fact that companies with superior fundamentals trade at premium market multiples is not just a function of today's volatile market environment, but rather this relationship is persistent and clear over longer periods of time. As Exhibit 3 shows, the market *consistently* ascribes premium multiples to companies with superior operating characteristics, even at the depths of the 2008 financial crisis. The outperforming companies with superior returns and superior growth (representing the top right quadrant of Exhibit 2a) have consistently maintained a premium to the moderate performers (representing the bottom left quadrant of Exhibit 2a).

Although the premium for superior operating performance is persistent, the *level* of premium varies over time, as evidenced by the dynamic levels of credit the market rewards to companies with superior fundamentals. The premium paid for superior fundamentals is currently 4.0x today but historically it has been as low as 1.7x, in the depths of the financial crisis in 2008.

Exhibit 3: Premium paid over time for superior fundamentals[4]



The influence of systemic factors on market multiples

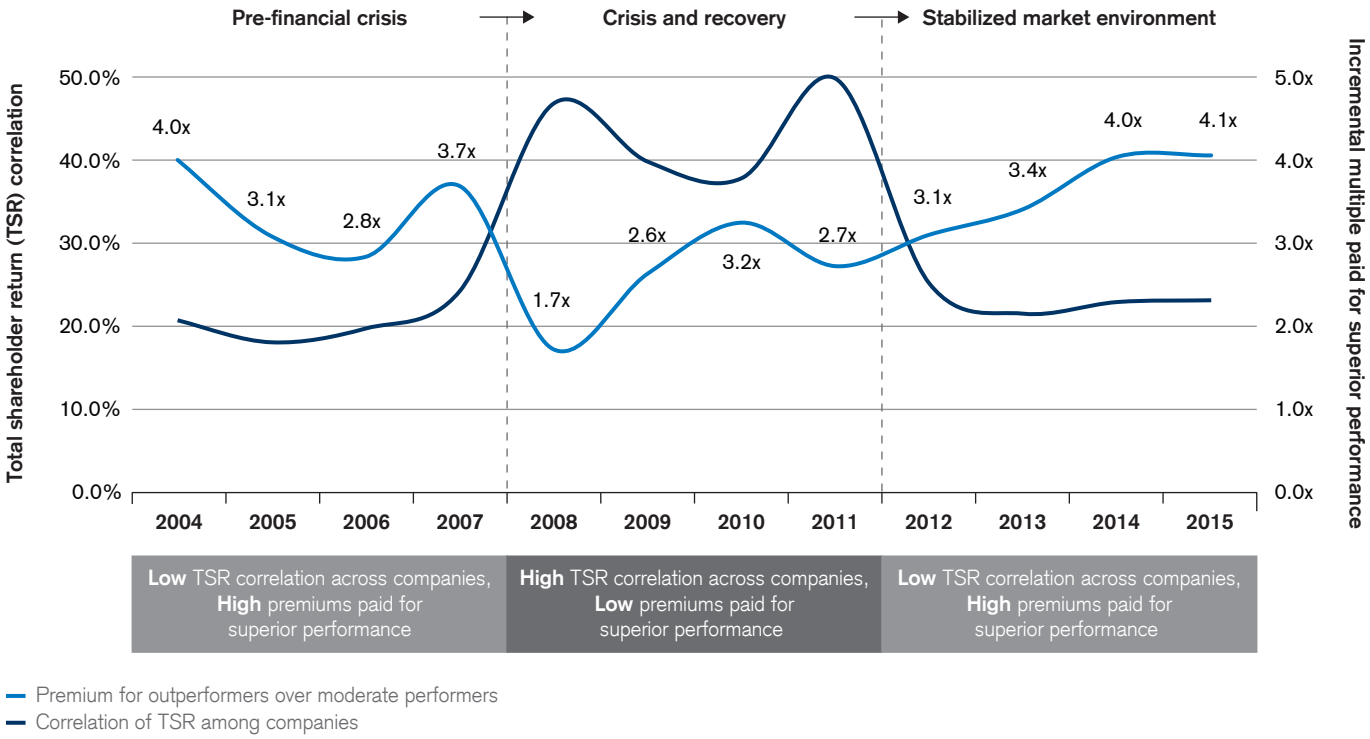
Macro-economic conditions can also help explain the differences in the level of premium a company receives for its fundamentals. In other words, market cycles influence market multiples and the premium investors are willing to pay for superior performance. In Exhibit 4, we examine the relationship between the correlations of total shareholder returns (TSR) at a given time against the premium the market is willing to pay at that time for superior performance by again comparing outperformers to moderate performers.

In the period prior to the 2008 financial crisis, TSR correlations were low, showing us that stocks did not trade closely together and that the market rewarded companies with superior fundamentals; in other words, companies with strong fundamentals traded at a premium to peers.

During the depths of the crisis and recovery period, TSR correlations increased markedly, meaning that a larger proportion of companies moved with the tide of the market, while the premium for superior fundamentals declined and tightened; company stock prices movement was much less related to their individual fundamentals. In the last several years, with a more benign market environment, TSR correlations have declined and top performers are again able to distinguish themselves from the pack as the market pays for that outstanding performance.

The credit top performers earn across this time period highlights the distinctly inverse relationship between TSR correlations and the level of premium ascribed to companies with superior fundamentals, as we show in Exhibit 4. In short, the overall market sentiment – whether bearish or bullish – matters when it comes to getting credit in the market for superior performance.

Exhibit 4: Total shareholder return (TSR) correlation vs. the premium paid for superior fundamentals[5]



Does higher growth always mean a higher multiple?

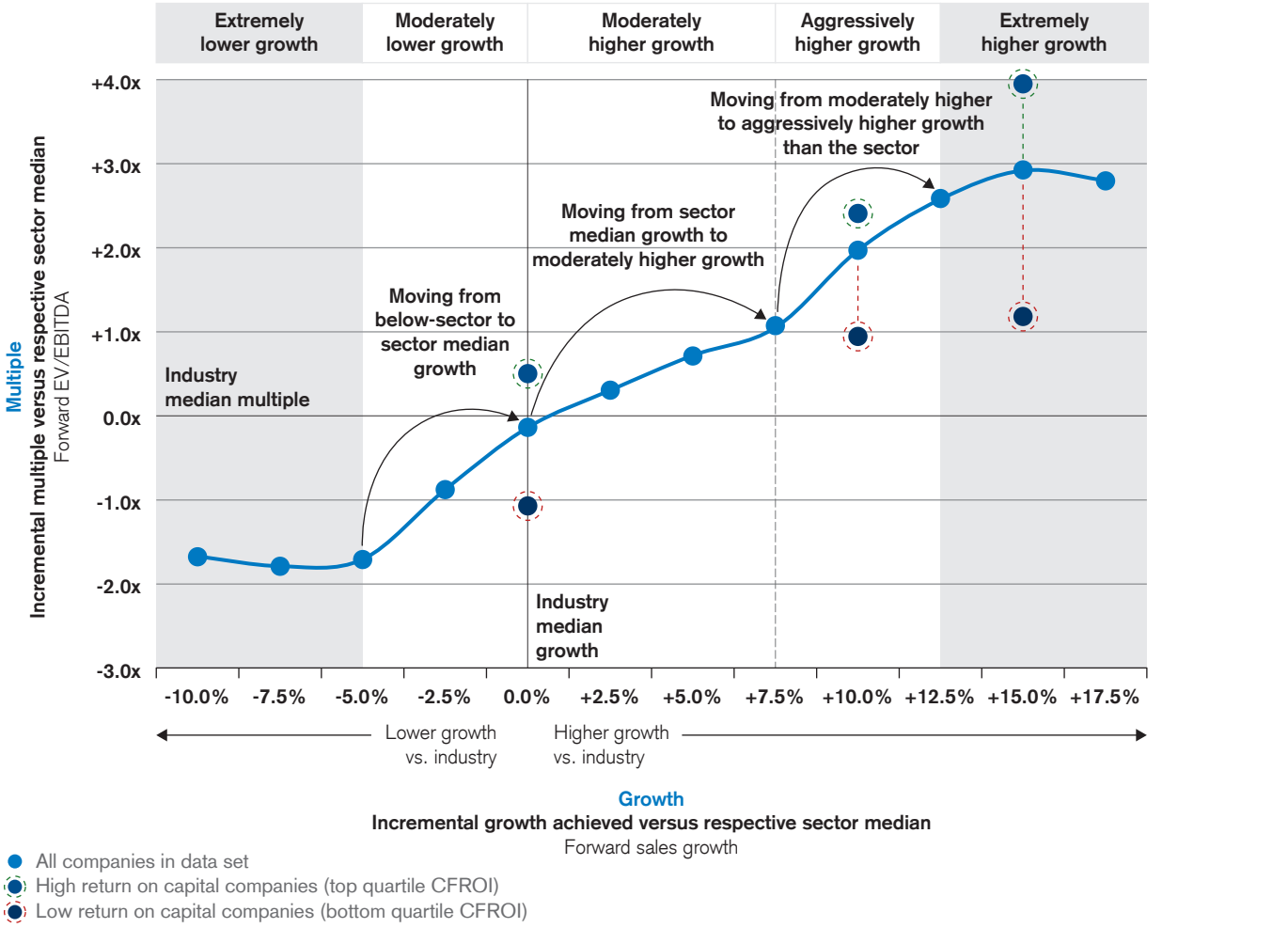
There is a prevailing belief that higher growth should drive proportionally higher multiples. But is it really that simple? Does higher growth inevitably lead to higher multiples?

We put this idea to the test by evaluating how market multiples move against incrementally higher levels of growth. To do this, we assessed individual company growth expectations against their respective sector medians and the multiples earned by individual companies against their respective sector medians (e.g. Consumer companies are compared against the Consumer median growth rates, Tech companies against the Tech median growth rates, etc.).

Exhibit 5 shows a summary of the results of that analysis. Here, we have sorted the companies into aggregates (represented by each data point) based on their level of growth expectations relative to their sector median growth rate, which can be seen along the x-axis. We then plotted the resulting incremental multiple these companies received relative to their respective sector median, which can be seen on the y-axis.

We looked at this relationship of incremental sector-adjusted growth to sector-adjusted multiples over a decade. So these results represent not just last fiscal year, but rather aggregate results over time.

Exhibit 5: The Incremental Growth Curve[6]



If the conventional wisdom were true – that there is a proportional relationship between growth and market multiples – then Exhibit 5 should result in a clear linear relationship … but that is not what we see. There is a distinctly non-linear relationship between incremental growth and incremental multiples, revealing that the relationship between growth and multiples is more nuanced than conventional wisdom suggests. In other words, increasing growth doesn't always lead to proportional multiple expansion, because growth and multiples do not always move in lockstep.

Exhibit 5 also shows us, first, that companies with growth considerably below median do not get rewarded for improved growth until they reach a threshold closer to the sector median. Just below the sector median growth level, the growth/multiple relationship appears to steepen, offering higher rewards to companies which move from below-median to in-line with their sector. Second, just above the median growth level, companies are rewarded for improving growth, albeit at a slower rate. Third, it is not until growth crosses a certain level above the sector median (+7.5% higher than sector median) that it is meaningfully rewarded by the market.

Notably, the *penalty* for lower growth (as opposed to the premium for higher growth) is asymmetrical. Investors seem to penalize more for lack of growth than they are willing to ascribe credit for superior growth. As Exhibit 5 shows, companies with growth prospects +5% above their respective industry had a premium of almost 1x on an EV/EBITDA basis but companies with growth prospects -5% below the respective industry received a discount greater than 1x on an EV/EBITDA basis. As a general rule of thumb, the market punishes lack of growth more severely than it ascribes credit for superior growth.

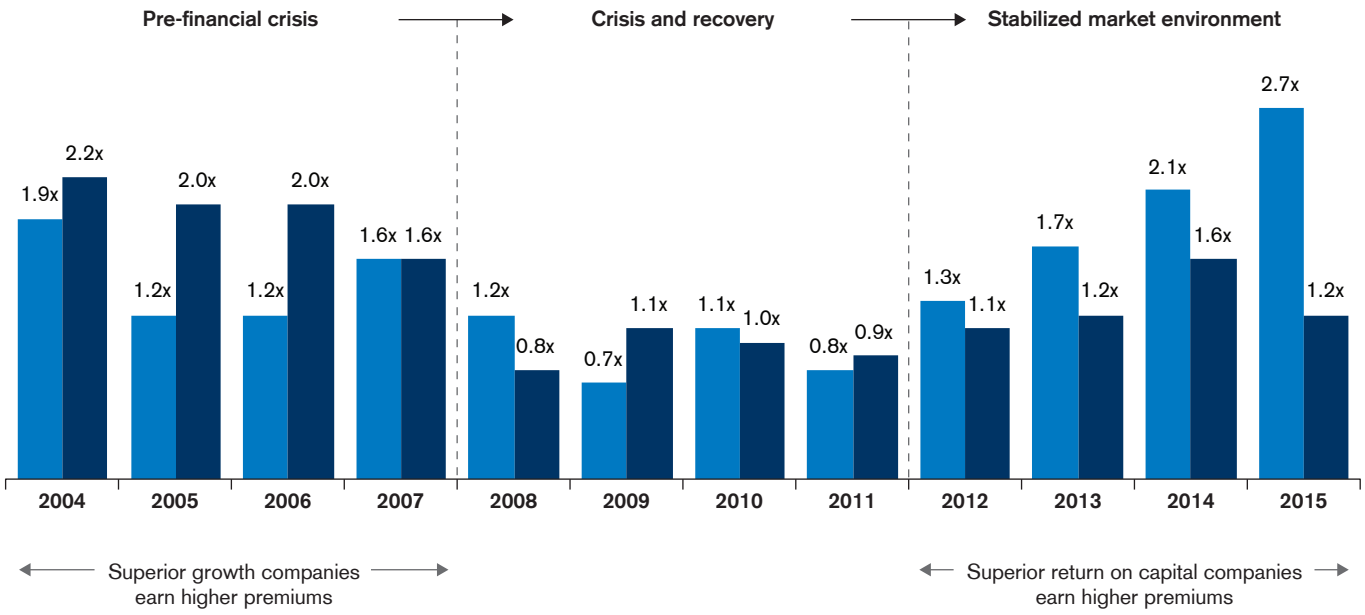
What does this mean for corporate decision-making? These insights can help inform a decision framework for managers on how and when to prioritize growth over returns on capital. A company with a growth profile near the median of its sector may wish to prioritize returns on capital if they cannot foresee growth opportunities significant enough to be rewarded with a meaningful incremental multiple. When faced with decisions of selecting between growth or return on capital opportunities, management should assess how much incremental growth they will be able to generate and weigh the expected benefits they will receive in terms of multiple expansion.

The trade-off between growth and returns on capital – which drives more value?

By now we have established that returns on capital and growth are the key operating drivers behind market multiples. Ideally, all companies would like to generate superior returns on capital and growth simultaneously … to end up top right of Exhibit 2a with a correspondingly high market multiple. Since that outcome is not attainable for every company, management teams must examine the trade-offs between sometimes opposing strategies of pursuing growth or returns on capital as the pathway to driving value creation.

Exhibit 2b demonstrated that – currently – returns on capital drive a higher premium than growth. But has this always been the case? The relationship between returns on capital, growth and multiples is a dynamic one, as we see in Exhibit 6. In the pre-crisis era of 2004-2007, companies that expected to deliver superior growth benefited from higher market multiple premiums than those with superior return on capital expectations. During the financial crisis in 2008 and in the several years that followed, there were material fluctuations and no clear pattern. Since 2012, the returns and growth relationship has flip-flopped: investors are now paying a greater premium for companies with superior return on capital expectations than those with high growth. In fact, the level of premium paid for return on capital by the market versus the level of paid for growth continues to widen.

Exhibit 6: The premium multiple received from moving quadrants over time[7]



The trade-off between growth and returns on capital – which lasts longer?

As companies find themselves trading with a premium or discount market multiple it's important to think about which is the best way to defend the premium or escape from the discount. Knowing whether to pull the return on capital or the growth lever is vital to maintaining a premium valuation, or to help close the gap to value aspirations.

To better understand the dynamics of sustainability of growth and returns on capital, we broke down companies into quartiles relative to their sectors, separately for growth and returns on capital over the first and second half of our twelve years of data. We then compared the number of companies that were able to *sustain* their quartile position from the first half through the second half of that period.

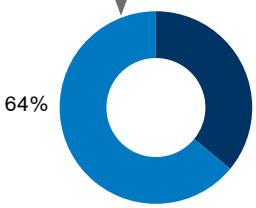
As Exhibit 7 shows, of the top quartile **growth** companies in the first period, only a third of those companies were able to maintain that position in the second period. On the other hand, the clear majority of companies in the top quartile of **returns** in the first period were able to maintain that advantage in the second period. This highlights the "stickiness" of returns on capital versus growth overall.

As we have shown in previous sections, superior growth and returns on capital are the key drivers of premium valuations. However, once a company reaches a premium position, it is much safer to defend it by focusing on conserving high levels of returns on capital than by aiming at delivering high growth over long periods of time.

Exhibit 7: Transition matrices of the sustainability of returns on capital and growth[8]

Returns on capital
Medians shown: Period 1 2004-2009; Period 2 2010-2015

Period 1 \ Period 2	Quartile 1 (Low return)	Quartile 2	Quartile 3	Quartile 4 (High return)
Quartile 1 (Low return)	64%	27%	7%	1%
Quartile 2	24%	46%	26%	4%
Quartile 3	10%	24%	46%	20%
Quartile 4 (High return)	4%	8%	25%	64%

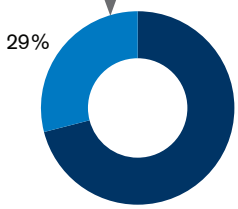


Close to two thirds of the high return companies are able to deliver high returns in the next period

- Companies that sustain high returns on capital
- All other companies

Growth
Medians shown: Period 1 2004-2009; Period 2 2010-2015

Period 1 \ Period 2	Quartile 1 (Low growth)	Quartile 2	Quartile 3	Quartile 4 (High growth)
Quartile 1 (Low growth)	29%	38%	28%	5%
Quartile 2	20%	51%	25%	4%
Quartile 3	15%	38%	39%	8%
Quartile 4 (High growth)	12%	23%	36%	29%



Less than one third of the high growth companies grew at similarly high rates in the following period

- Companies that sustain high growth rates
- All other companies

Returns on capital are "stickier"… and the market is willing to pay more for them

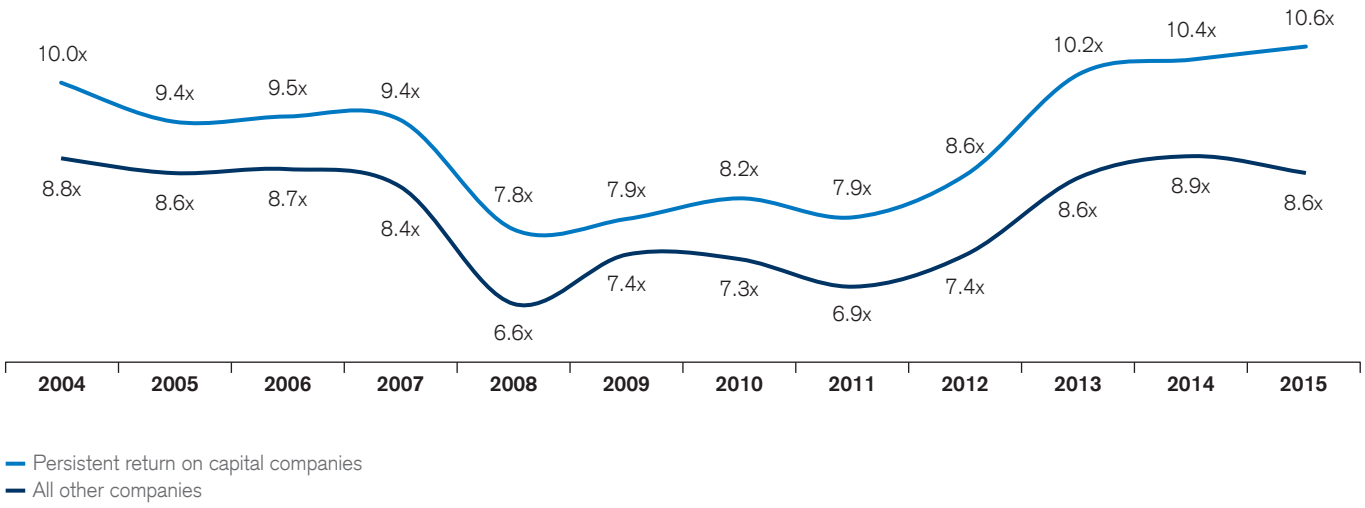
We have seen that returns on capital are "stickier" than growth. So what? Do persistent returns on capital matter to the market, and do multiples reflect that performance?

Exhibit 8 evaluates companies with persistent levels of returns on capital over long periods of time. As this exhibit shows, irrespective of the absolute levels of growth or returns on capital, companies that have a demonstrated ability to sustain their returns on capital over prolonged periods of time earn a premium multiple versus the rest of the market.

This analysis also highlights an idea that we haven't touched upon: how the market's level of confidence in a company or its management influences market multiples.

Take two companies with similar business models and similar levels of returns on capital in a given year of, say, 10%. Company A has much higher volatility in its performance and a lack of transparency to investors in its ability to generate future cash flows, while Company B consistently generates stable returns on capital and investors have great transparency in its ability to deliver on its forecasts. Between these two companies, our analysis confirms the notion that investors would be willing to pay a premium for Company B, given its lower volatility and higher transparency on operating performance. A company's ability to sustain its returns on capital clearly influences market multiples. We would argue that the market premium reflects both predictability and transparency. The market appears to pay a premium for companies with highly persistent returns on capital.

Exhibit 8: Companies with persistent returns on capital vs. the rest of the market[9]



Conclusion

As we have seen, multiples are a consequence – not a driver – of value creation. Market multiples shift dynamically with market conditions but value creation principles remain absolute. The ultimate path to value creation is one that improves a company's underlying operating fundamentals: superior growth and superior returns on capital remain the key drivers to value. Management teams should focus on improvements in the underlying operating drivers of value creation. Multiple expansion should follow the improving fundamentals.

Which of the fundamental operating levers is most relevant now? Superior returns on capital are the "stickiest" way to create and sustain value through higher multiples. Companies that are able to deliver superior return on capital earn a higher premium today than those that deliver superior growth expectations. So, in sectors where there is scarcity of growth in today's market, there is still a way to drive value creation through returns on capital (e.g. margin expansion or asset efficiency improvements). Growth remains an important driver of value, but it is not the only one and nor, in fact, currently the most important one. It's much harder to sustain high growth than it is to sustain high returns on capital in the long term. Companies that can achieve both superior growth and superior returns create the most value for their shareholders.

So what does this all mean practically? Market multiples reflect market sentiment about operating performance. So what really matters is not the multiple itself but rather what the multiple represents in terms of fundamentals: returns on capital and growth. Decisions about which value-creating path to take all emanate from that point, including whether further growth or improvements in returns on capital are most viable at a particular point in time. And strategic decisions – including M&A – should incorporate those insights about operating metrics. Those insights should inform views about portfolio rationalization, the attractiveness of prospective M&A targets and the balance between equity and debt as an acquisition currency. In short, market multiples provide not just insights into the drivers behind relative valuation, but a blueprint for closing valuation gaps and improving returns to shareholders.

Dataset and methodology

Universe – We have used a comprehensive data set which includes US public companies of market capitalization greater than $1bn, excluding utilities and financials. We have focused our analysis on positive EBITDA companies. The data set contains 2,215 companies observed from 2004-2015. We refer to this data set as representative of the overall market in our analysis.

Multiples – We have used forward-looking EV/EBITDA multiples as a gauge for valuation. In doing so we have calculated – at December 31 of each year from 2004-2015 – each company's enterprise value and two year forward looking EBITDA based on sell-side consensus at each specified point in time.

Returns on capital – We have used a cash flow return on invested capital (CFROI) metric, which is a more comprehensive measure for a company's profitability than evaluating margins alone. Unlike margins, returns on capital provide a holistic view of a company's ability to generate cash flows from its invested capital. It is holistic in that it captures both the income statement and balance sheet side of a company's financial health. Certain analyses also are evaluated on CFROI spread, which is CFROI net of the HOLT cost of capital. The HOLT cost of capital used is a market-derived, inflation-adjusted discount rate that is forward-looking and based on market sentiment at each point in time.

Growth – We have used sell-side consensus forecasts to obtain two-year-forward sales, from which we calculated a two-year expected forward compounded annual growth rate (CAGR).

End notes

1 We use a market-derived discount rate from the Credit Suisse HOLT framework, which is an inflation-adjusted rate which is forward-looking and based on market sentiment at each point in time.
2 Throughout this paper, the return on capital metric we use is the Credit Suisse HOLT cash flow return on investment (CFROI®). CFROI is calculated as an internal rate of return over the economic life time of the company's assets. The cash flow component is estimated as after-tax EBITDA plus rent expense, research & development expense and other accounting adjustments. Invested capital includes cash, net working capital, inflation-adjusted gross plant, capitalized R&D, capitalized operating leases, operating intangibles and other assets. Invested capital does not include goodwill and other non-operating intangibles.
3 Analysis as of December 2015. FY3/FY1 sales CAGR is based on IBES consensus median sell side forecast. NTM CFROI is estimated based on IBES consensus median EPS sell side forecast. Each quadrant represents an aggregation of companies based on their respective growth rates and levels of return on capital. Quadrant multiples represent EV/FY2 EBITDA multiples and are calculated as median multiple of all companies per quadrant. In 2015, the bottom-left quadrant contains 337 companies, the bottom-right quadrant contains 262 companies, the top-left quadrant contains 261 companies, and the top-right quadrant contains 337 companies.
4 In any given year, quadrant multiples represent EV/FY2 EBITDA multiples and are calculated as median multiple of all companies in the top-right quadrant (outperformers) and bottom-left quadrant (moderate performers). The top-right quadrant contains all companies with above-median NTM CFROI spread and above-median FY3/FY1 sales CAGR. The bottom-left quadrant contains all companies with below-median NTM CFROI spread and below-median FY3/FY1 sales CAGR. Premium is defined as multiple gap between the top-right quadrant and the bottom-left quadrant.
5 In any given year, correlation is calculated for all companies' total shareholder returns (TSR). TSR is calculated daily over a 12-months period. Premium is defined as multiple gap between the top-right quadrant (outperformers) and the bottom-left quadrant (moderate performers).
6 FY3/FY1 sales CAGR is based on IBES consensus median sell side forecast. Companies are grouped by levels of growth in excess of their respective sector median per year in increments of 2.5%. Sector defined per GICS-code.
7 Median multiple increase for superior return on capital companies is defined as multiple gap between the bottom-right quadrant and the bottom-left quadrant. Median multiple increase for superior growth companies is defined as multiple gap between the top-left quadrant and the bottom-left quadrant. The bottom-right quadrant contains all companies with above-median NTM CFROI spread and below-median FY3/FY1 sales CAGR. The bottom-left quadrant contains all companies with below-median NTM CFROI spread and below-median FY3/FY1 sales CAGR. The top-left quadrant contains all companies with below-median NTM CFROI spread and above-median FY3/FY1 sales CAGR.
8 Return on capital is defined as actual CFROI. Growth is defined as actual year-over-year sales growth. Companies are classified into each quartile relative to their sector. Sector defined per GICS-code. Medians for return on capital and growth are calculated over the periods 2004-2009 and 2010-2015. The shaded diagonals represent the percentage of companies that did not move quartiles between periods.
9 Persistent return on capital companies are defined as companies that consistently earned returns on capital in excess of 8% for a minimum of five consecutive years.

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