KROLL

Created Value Attribution Whitepaper

Whither Deleveraging?

Implications of Higher Interest Rates for Private Equity Value Creation

Until recently, private equity (PE) investors have greatly benefited from historically low interest rates. Throughout 2022 and 2023, interest rates rose significantly. This new interest rate environment results in major impacts on value creation for PE investments.

There is a three-fold impact in the new interest rate environment. First, debt capacity is reduced, which reduces the magnitude of potential leveraged returns. Second, more of each debt payment during the expected holding period goes to interest expense and less to debt paydown. Finally, higher interest rates result in a higher cost of debt. In turn, ceteris paribus, there is an increase in the required rate of return on investments (i.e., the industry weighted-average cost of capital [WACC]). Assuming no changes in growth profile and/or risk profile, increases in the WACC should result in a decrease in valuation multiples and, assuming no increase in EBITDA, portfolio company values.

Entering in a low-interest environment and exiting in a high-interest environment would result in the greatest negative impact on value creation. We have observed in our created value attribution (CVA) studies that the greatest negative impacts attributable to capital markets (beta) occur in such situations. The good news is that lower multiples would also impact entry costs for investments in the new high-interest-rate environment.

To underscore the potential impact on value creation of investing and exiting in the current interest-rate environment, the following thought experiment provides a quantitative illustration of the impact of current higher interest rates on value creation compared with those of the low-interest-rate environment of the recent past.

To assess this theoretical impact, we have utilized the Kroll CVA Framework (aka the Framework; the Duff & Phelps CVA Framework; and the Viscio-Pushner Model).

The Framework addresses the fatal flaws of the traditional value bridge by accounting for add-on acquisitions and—through benchmarking— assessing the relative performance of the portfolio company compared to its industry peers. Typically, it attributes created value to approximately a dozen value-change drivers, each of which is mapped to one of the four fundamental sources of value creation: industry/sector, beta (capital markets), deleveraging, and alpha.

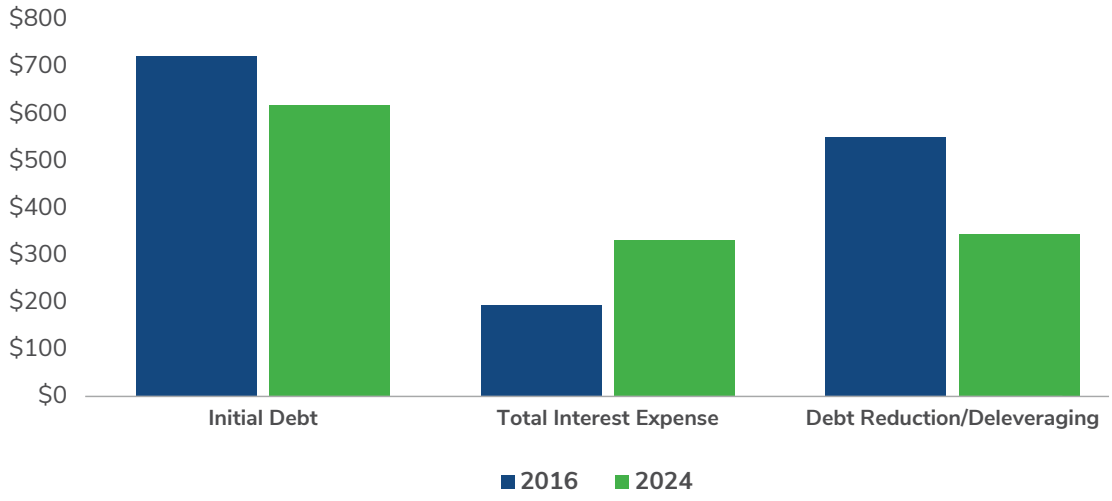
Industry/sector reflects the performance of the industry benchmark. Beta represents value change reflecting the change in market rates of required returns. Deleveraging is the organic (vs. transactional) decrease in net debt. Alpha represents organic value creation on an outperformance basis.

Assuming no impact from the required industry rate of return, we have quantified the theoretical impact of increased interest rates on a hypothetical PE investment with a six-year holding period and an exit MOIC (i.e., multiple of invested capital) of 3.9X in a low-interest-rate environment.

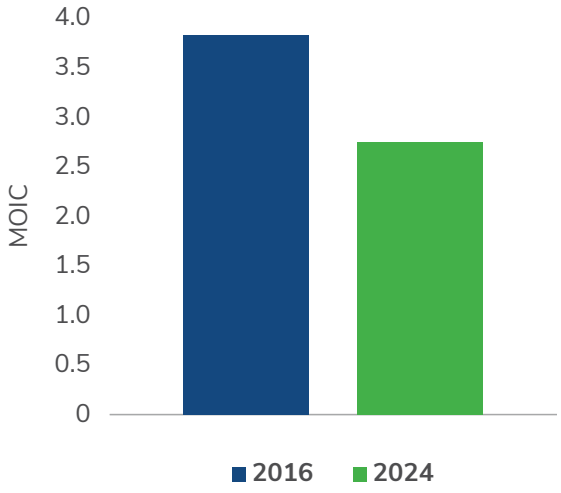
To reflect a typical impact of the higher interest-rate environment, we performed a before-and-after analysis that assumes an increase in debt spread of 150 basis points (bp) (from SOFR + 450 to SOFR + 600) and a decrease in debt capacity from 70% to 60%. We assumed the same entry and exit EBITDA multiples for both scenarios. (These assumptions reflect market conditions up until the Federal Reserve rate-cut announcement in September 2024. We also performed a sensitivity analysis to reflect the potential change in market conditions stemming from the rate cut).

The impact we found was that, while the exit multiple remains unchanged, the MOIC under the high-interest-rate regime declines to 2.8X. That decline was attributable to a net loss in value creation caused by a reduction in deleveraging, which was the effect of decreased debt capacity and higher cost of debt. The value creation attributable to industry/sector, beta and alpha remained unchanged.

Direct Impact of Higher Interest Rates



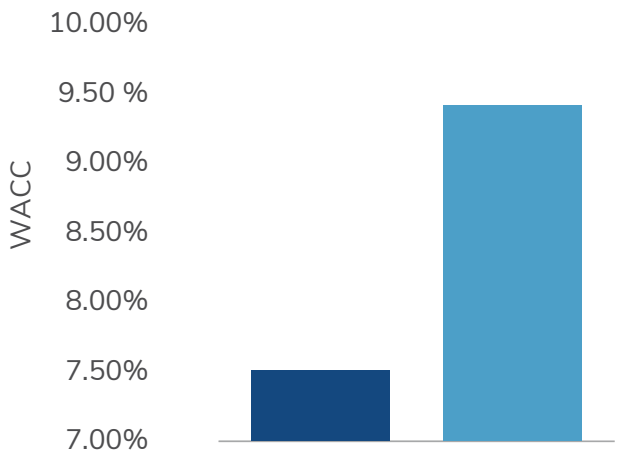
Direct Impact of Higher Interest Rates



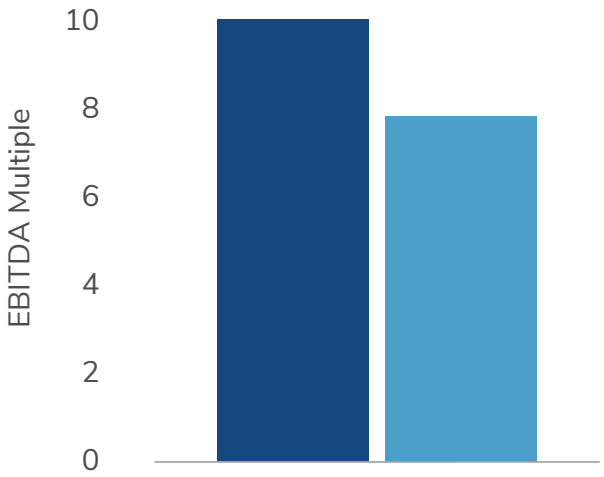
Next, we examined the potential incremental effect of an increase in the cost of capital on the WACC and EBITDA multiple. The higher cost of debt, ceteris paribus, would result in an increase in the WACC, representing the required return on the unlevered assets of the business enterprise.

We estimated that higher interest rates and reduced leverage between December 2021 and June 2024 are likely to increase typical WACCs by roughly 190 bps. This increase will likely reduce an exit multiple of around 10X on a nominal pre-interest-increase basis by roughly 2.5X.

Likely Change in WACC



Impact of WACC on EBITDA Multiple

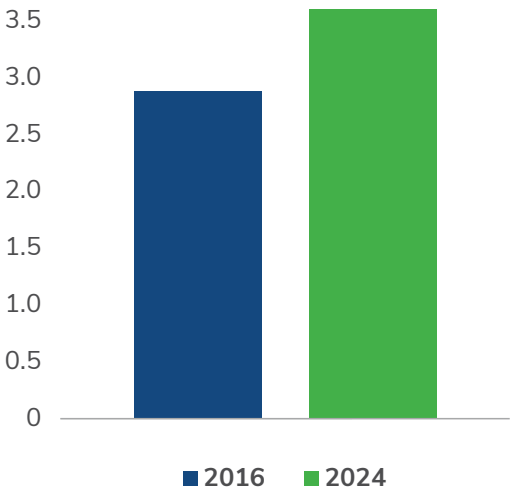


If the GP manages to both purchase and sell at the new lower multiple, the MOIC would actually increase from 2.8X to 3.5X.

It should be noted that while the lower entry price has a positive effect on returns, all else being equal, the overall negative impact of the increase in interest rates in this scenario still has a negative material effect on value created through deleveraging. This negative impact results in a loss of created value of approximately 11%, on a MOIC basis, relative to the baseline scenario we began with in this thought experiment.

Additionally, despite the lower entry price in this scenario, the decrease in created value on an absolute, vs. on a MOIC (i.e., relative), basis also represents a loss of total created value of approximately 11%. This direct loss from reduced deleveraging is offset by capital preservation from the lower entry price and, possibly, the potential to deploy that capital elsewhere.

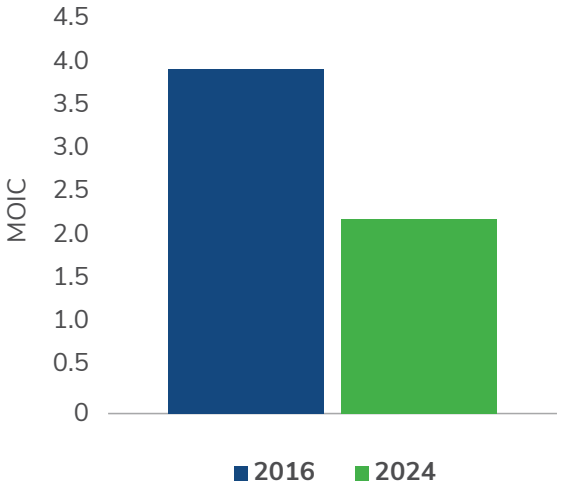
Impact of WACC on MOIC



Finally, we look at the worst-case scenario whereby entry was made in the more favorable interest-rate environment and exit was made in the less favorable environment, along with higher WACCs and lower multiples. Based on those assumptions, the result is a total reduction in MOIC from 3.9X to 2.2X.

While observed valuation multiples may not currently fully reflect the higher WACCs stemming from increased debt costs, as other factors such as changes in growth profile and changes in risk profile factor into valuation multiples, an increase in the required rate of return on capital should eventually have a negative impact on value. That said, such an impact, resulting in lowered entry multiples, could be at least a partial benefit for future investments in portfolio companies, as seen in the second scenario.

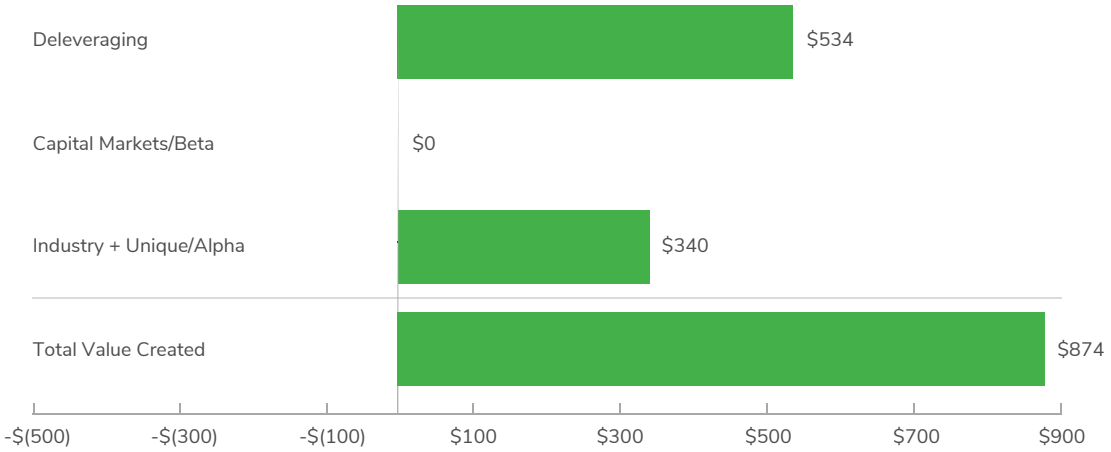
Combined Impact of Higher Rates and Change in WACC



In terms of fundamental sources of value, we see below that the impacts of higher interest rates are first transmitted directly through reduced deleveraging and indirectly through reduced leverage.

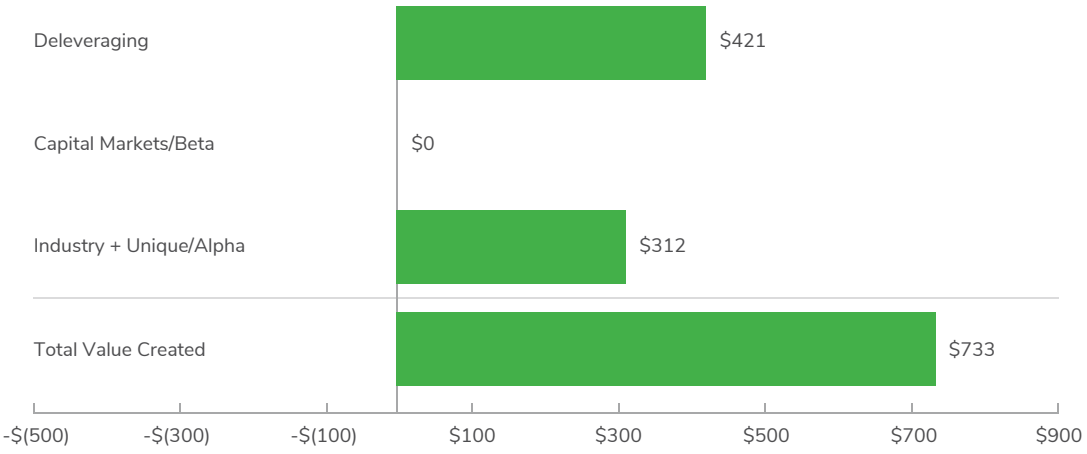
For the Base Case Scenario of our simplified example, we see that value creation occurs entirely through deleveraging and industry/unique value creation.

Value Creation by Fundamental Source, Pre-Interest Rate Increase (Base Case Scenario)



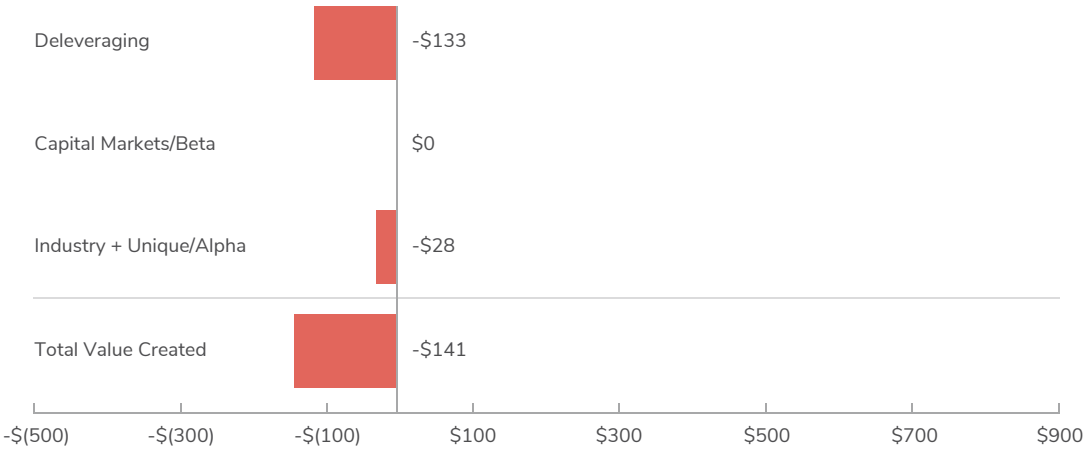
After reflecting the direct impact of higher rates and reduced leverage, deleveraging and industry/ unique value creation decline.

Value Creation by Fundamental Source With Direct Impact of Interest Rate Increase(Impact on Debt Capacity and Interest Expense Only)



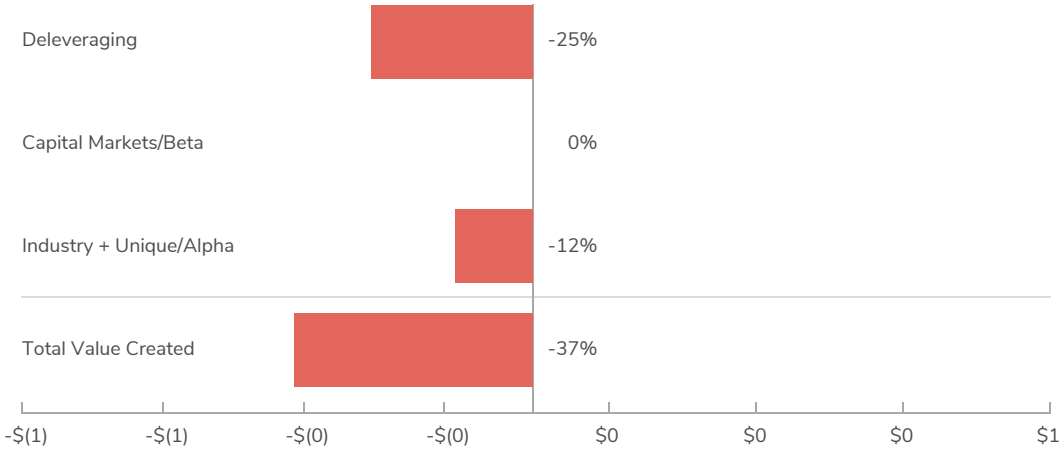
We then plot the changes in value creation, first in absolute ($) terms, which shows a reduction in deleveraging of $141 million relative to total baseline value creation of $874 million.

$Change in Value Creation by Fundamental Source From Direct Impact of Interest Rate Increase (Change From Base Case)



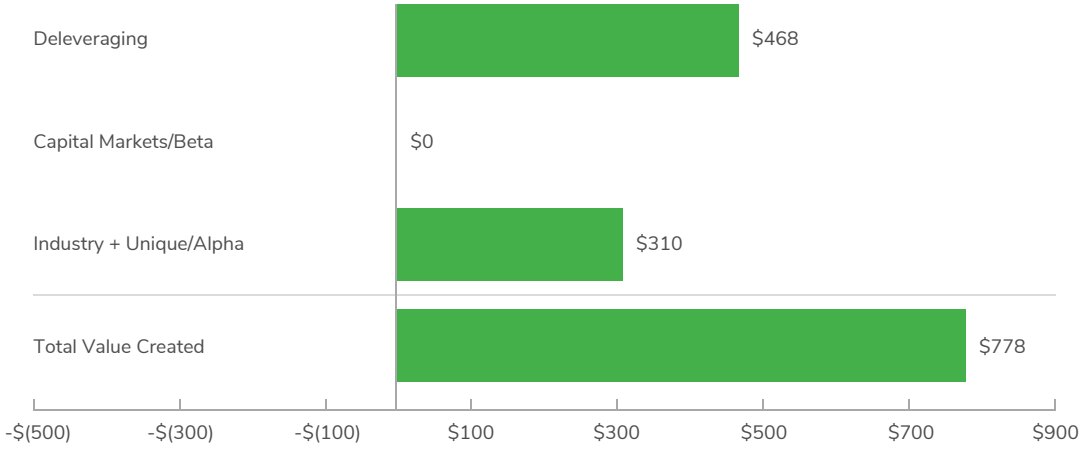
In percentage terms relative to total value creation, the reduction in deleveraging represents a decline of 25% from Base Case Scenario deleveraging. The reduction in industry/unique value creation (due to reduced leverage) reduces value creation by an additional 12%.

%Change in Value Creation by Fundamental Source With Direct Impact of Interest Rate Increase (Change From Base Case)



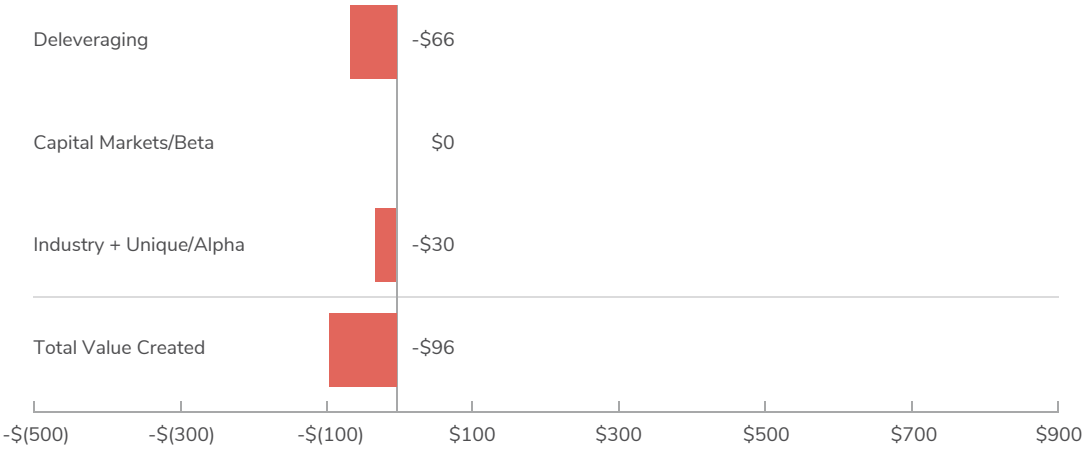
If we examine the second scenario and the direct impact of higher rates but with both entry and exit at lower values due to a higher WACC, the direct impact on deleveraging is reduced, but the negative indirect impacts are also reduced due to less leverage. Deleveraging now contributes $468 million to total value creation, while industry/unique value creation is $310 million.

Value Creation by Fundamental Source With Direct Impact of Interest Rate Increase (Impact on Debt Capacity and Interest Expense Only)



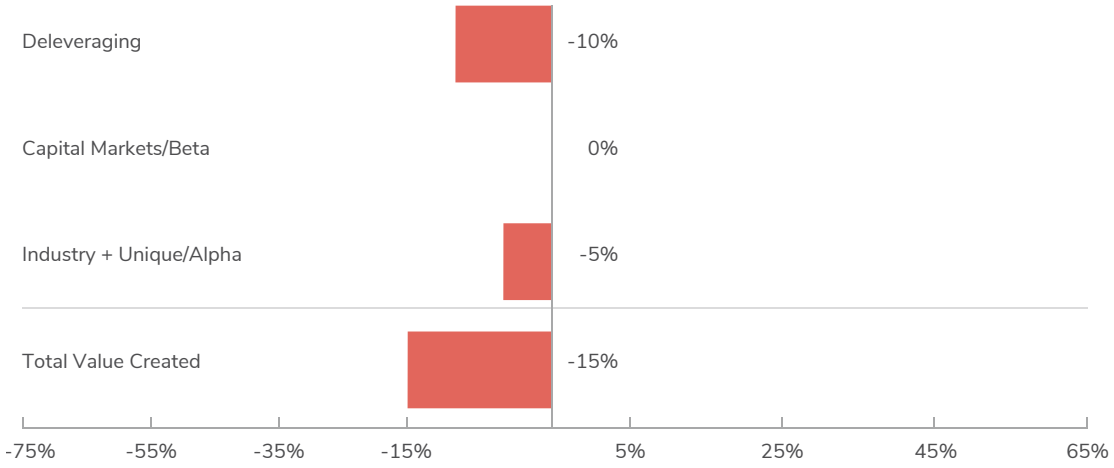
And in terms of the $ change from the Base Case Scenario, there is a reduction in deleveraging of $66 million, relative to base case value creation, and a reduction of industry/unique value creation to $30 million.

$Change in Value Creation by Fundamental Source Assuming Entry and Exit With Higher WACCs (Change From Base Case)



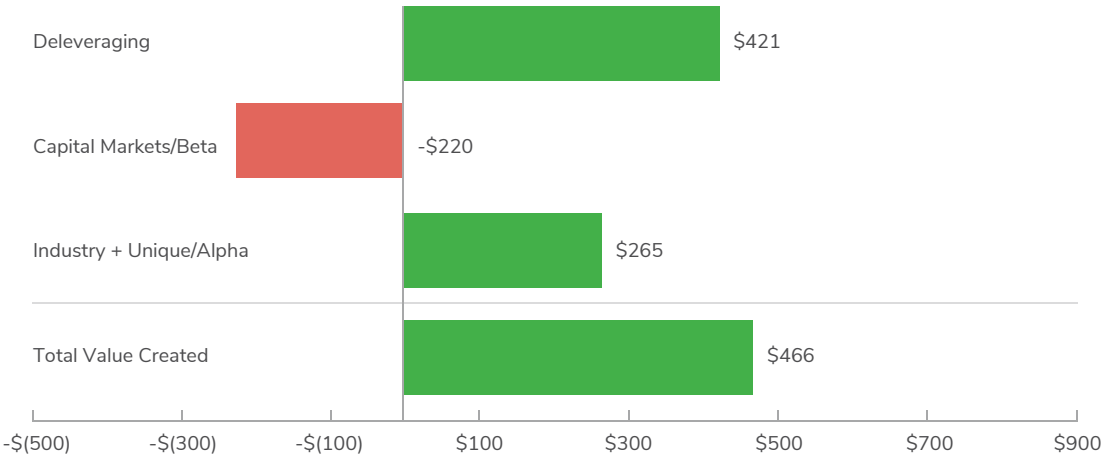
In percentage terms relative to total value creation, the reduction in deleveraging represents a decline of 10% from Base Case Scenario deleveraging. The reduction in industry/unique value creation due to reduced leverage reduces value creation by an additional 5%.

%Change in Value Creation by Fundamental Source Assuming Entry and Exit With Higher WACCs (Change From Base Case)



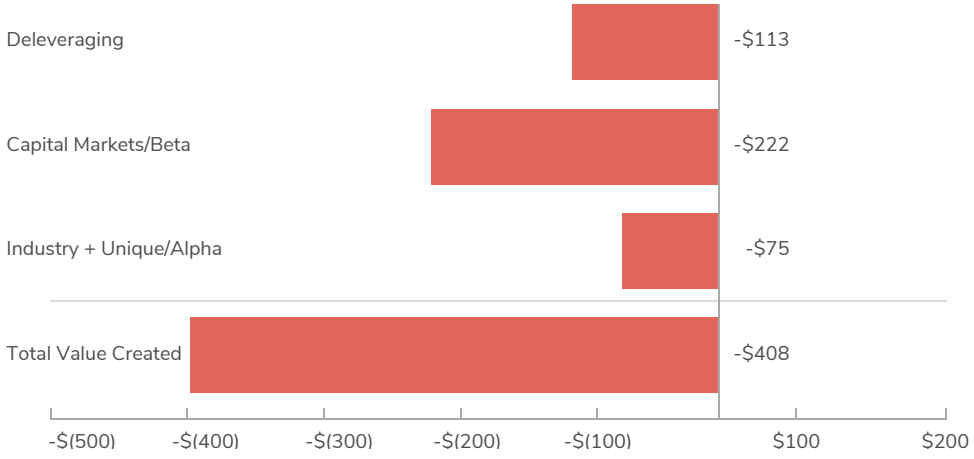
Finally, we show the worst-case scenario in terms of fundamental sources of value, which reflects the direct impact of interest rates, the purchase at a high multiple, and exit at a lower multiple. Here the impact is channeled across all the fundamental sources, showing reduced deleveraging, negative capital markets/beta value creation, and reduced indirect impacts on industry/unique value creation. (We have seen this pattern in several of our CVA studies).

Value Creation by Fundamental Source With Direct and WACC Impacts of Interest Rate Increase



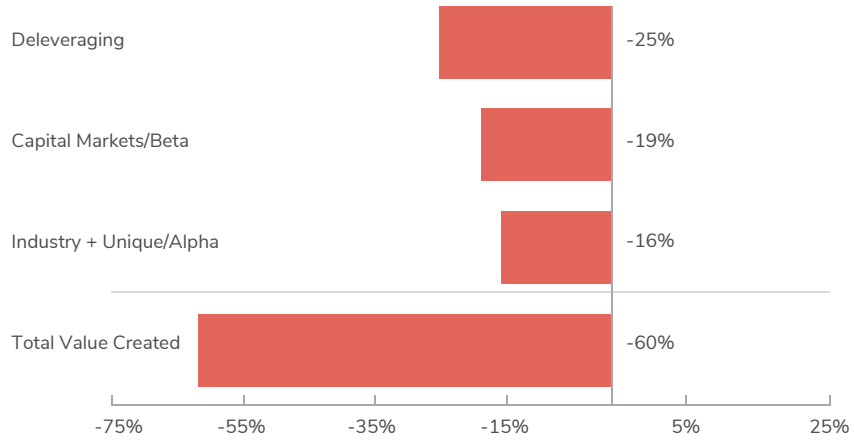
In terms of the absolute changes from the Base Case Scenario, the dollar-value impacts are negative across the board.

$Change in Value Creation by Fundamental Source With Direct and WACC Impacts of Interest Rate Increase (Change From Base Case)



lin percentage terms relative to total value creation, the reduction in deleveraging represents a decline of 25% from Base Case Scenario deleveraging, while capital markets value creation falls 19% and industry/unique value creation reduces value creation by an additional 16%.

%Change in Value Creation by Fundamental Source With Direct and WACC Impacts of Interest Rate Increase (Change From Base Case)



These examples illustrate the likely changes in value creation for investments made before and after the recent increase in interest rates. Even if the higher cost of capital decreases the multiple at both entry and exit with positive results, the opportunity for value creation through deleveraging in all likelihood would be reduced.

As we have been writing this report, the Federal Reserve cut rates, which seems to have reduced the rate increases discussed herein. If we consider the latest SOFR rates and assume that typical debt spreads moderate to SOFR + 575 and debt capacity moves back to 65%, we find that the MOIC in the first scenario (with direct interest-rate impacts) rises to 3.1X. Similarly, the moderated cost of capital impacts in the second scenario leads to a MOIC of 3.6X. In the worst-case scenario of higher rates and lower exit multiples, the MOIC remains at 2.2X. While these numbers are generally a bit less negative, the impacts are roughly similar to the earlier findings.

Whether investments were made in the more favorable interest-rate environment or are made in the current, less favorable interest-rate environment, but perhaps with lower multiples, the analysis herein underscores the more limited returns likely to be available from financial engineering and deleveraging, compared to recent history. It also highlights the importance of creating value through building better businesses and driving alpha through outperforming industry revenue growth, industry margin change, or industry change in risk-adjusted growth profile, or some combination thereof.

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