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Expanding EBITDA Margins in an ETA Business? Don't Expect It, but Don't Lose Hope, Either

Increasing EBITDA margins are elusive in ETA firms, but CEOs can create value through alternative channels

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When search fund and entrepreneurship through acquisition (ETA) CEOs parachute into an acquired company, they are keenly focused on creating economic value. If the purchased company generates positive equity returns, they have financial upside on an uncapped basis. These CEOs are pedaling as fast as they can to augment value.

One lever that CEOs intuitively grab for is trying to increase EBITDA* margins, thus driving more profitability per revenue dollar. This mindset often manifests itself in the pre-acquisition confidential information memorandum (CIM), which is distributed to potential investors. In nearly every CIM, margins march up over time; they are assumed to increase as if by right. We suspect entrepreneurs create models with expanding margins because they believe they are superior operators than the previous CEO from whom they purchased the enterprise. Additionally, they anticipate enjoying amplifying margins because the company will be larger, facilitating economies of scale, and certain costs will not grow correspondingly with revenue.

Unfortunately, this expectation remains aspirational and not accurate, at least according to our dataset. After analyzing financial results from 44 search fund–acquired firms, we did not observe an increase in average EBITDA margins over time. In fact, we saw margins decline and remain lower. When we discuss margin compression, we reference two anchor points: the margin prior to the ETA purchase and the margin performance compared to what the CEOs forecasted in their CIM. It turns out that margin accretion is more elusive in reality than in an Excel model.

Some companies will successfully amplify margins. Unfortunately, ETA CEOs tend to believe they are like the children in Garrison Keillor's Lake Wobegon—everybody is above average. Of course, this is impossible. Based on our data, ETA CEOs should recognize that margins are likely to decline and understand that they need to explore other ways to create value and manage the company accordingly. Search fund entrepreneurs should be cautious about relying on expanding EBITDA margins as a primary source of value creation—they are elusive.

In this note, we will examine a sextet of key themes related to our dataset and the declining EBITDA margin thesis (**Figure 1**). Even though we are leading with a dour theory (sinking margins), there is still reason to cheer. CEOs do create value in ETA projects, just not through margin expansion on the income statement. Instead, they achieve it by growing the business through balance sheet activities (generating more sales by raising asset turnover and non-debt

* Earnings before interest, taxes, depreciation, and amortization.

leverage) and by benefiting from EBITDA multiple expansion at exit. Operating excellence, as mentioned later, is achieved by generating more EBITDA per dollar of sales and more sales per dollar invested in debt and equity. The latter can be restated as asset turnover multiplied by non-debt leverage. CEOs and investors should approach these ventures with eyes wide open, understanding all the value creation levers and how most ETA businesses generate the returns that lure entrepreneurs and capital providers into the arena, as margin expansion is not typically the solution. Let's dig in.

Figure 1: A sextuplet of themes we will explore in this note

Our dataset and methodology

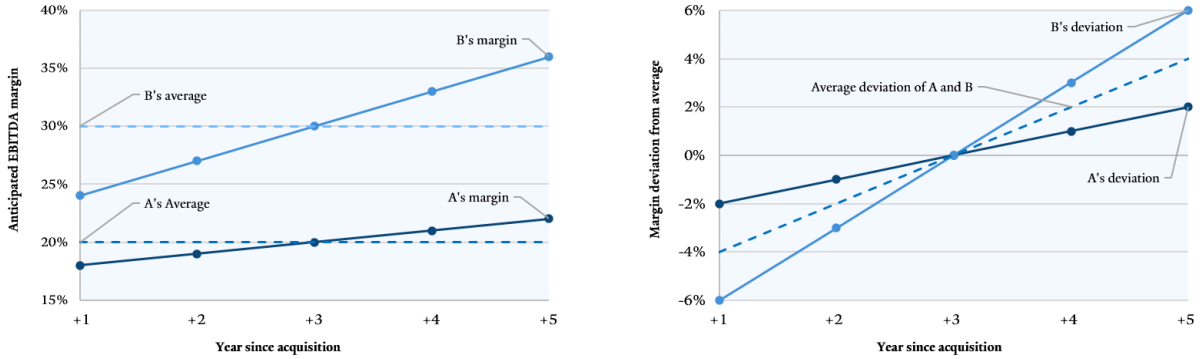
A prominent search fund investor who has navigated the ETA jungle for several decades as both an entrepreneur and investor kindly shared with us a dataset consisting of 44 operating company observation points, each with at least three years of post-acquisition revenue and EBITDA from the profit and loss (P&L) statement. The same P&L data are available for the two years preceding the search fund acquisition. For subsets of this sample, we also have a) cash, long-term debt, members' equity, and total assets from the balance sheet (BS), and b) valuations for the entities that subsequently exited. This sample reflects ETA activity; it is not a comprehensive dataset of every initiated search fund. As a reference point, according to the 2024 Stanford Graduate School of Business Search Fund Study, 328 search funds have acquired a company through the traditional search fund model.[4] While it is certainly not comprehensive, we believe our analysis is directionally valid.

We consider the acquisition year to be point 0, with the previous years, prior to the acquisition, designated as years -2 and -1. The subsequent years after the acquisition are labeled as +1, +2, +3, and so on. Our first two research questions examine whether ETA-acquired enterprises achieve the EBITDA margin levels as detailed in the CIM and whether EBITDA margins of ETA-acquired companies exceed those of the legacy owner-operator.

To conduct these analyses, we need a method to standardize financial metrics like EBITDA margins, which vary across different industries. **Figure 2** illustrates the nature of the problem and the standardization approach we employ. Company A in one industry can operate with excellent margins in the 30s, while company B in another industry might be thrilled with margins in the 20s. It is not an apples-to-apples comparison to mix and match these margins in our analysis. To address this, we calculated an average

anticipated EBITDA margin (from the CIM) for each company in our dataset post-purchase from year 0 and forward. As shown in the left half of **Figure 2**, Firm A's margins are expected to increase from 18% in year +1 to 22% in year +5, expanding by 1% each year. Margins for company B are expected to rise from 24% to 36%, increasing by 2% annually. The average margins for A and B over their expected lives—before exit—are 20% and 30%, respectively.

Figure 2: Margin normalization methodology



We then calculated the positive or negative deviation of each year's margin relative to that firm's average. That is, we subtracted 20 and 30 from the different margins for A and B, respectively. The resulting deviations from the average are shown in the right half of **Figure 2**. Essentially, we preserved the margin trend patterns for both firms while shifting the trends downward so that they both vary around the same zero base. We can now make an apples-to-apples comparison because the deviations for both firms have been standardized by recalibrating them to the same base. Importantly, standardization allows us to calculate the average deviation across firms A and B, providing a convenient summary of margin expansion patterns across different firms with varying levels of typical margins. We used this approach to calculate the average anticipated deviations by year for our entire dataset, including pre-acquisition years -2 and -1.

In our dataset, the results for years +5 to +7 are less reliable due to the relatively few firms in these categories. More importantly, the longer companies remain in the dataset, the less likely they are to become winners, as successful firms tend to exit. This introduces a negative bias in the performance ratio plots presented below for later years. It contrasts with the positive survivor bias that plagues many studies, where performance is overstated because the worst performers drop out. To mitigate the impact of this negative bias, plots from +4 and beyond are shown as dashed lines. This area of the plots should be given less weight.

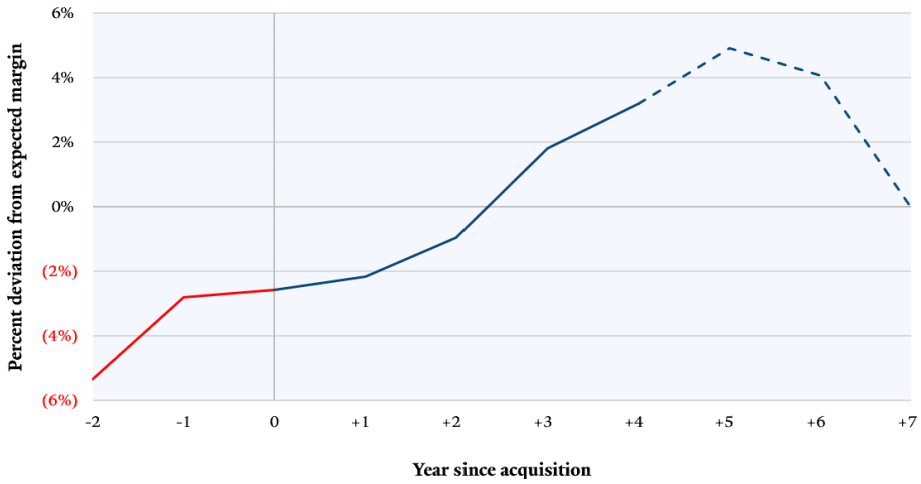
Analyzing expected margin performance

We will first direct our attention to the *expected* margin performance depicted in the CEOs' CIMs. It turns out that ETA CEOs are an optimistic lot and consistently plan to expand EBITDA margins following the acquisition. In **Figure 3**, we plot the expected margins for years +1 to +7. Margins for years -2 to 0 reflect actual performance (mainly reflecting the founder selling the firm) before the ETA CEOs' predictions are made. The post-acquisition margins (years 0 to +7) are forecasted by the search CEO and shared with the investors as targets to be achieved.

These projections are part of the investor and CEO underwriting process and underpin the value creation thesis. They represent a serious effort by entrepreneurs to estimate the margins and profits they aim to deliver. Failing to achieve these targets can lead to potential problems, such as a loss of credibility with debt and equity investors, failure to meet targeted internal rates of return (IRRs), and potentially breaching loan covenants.

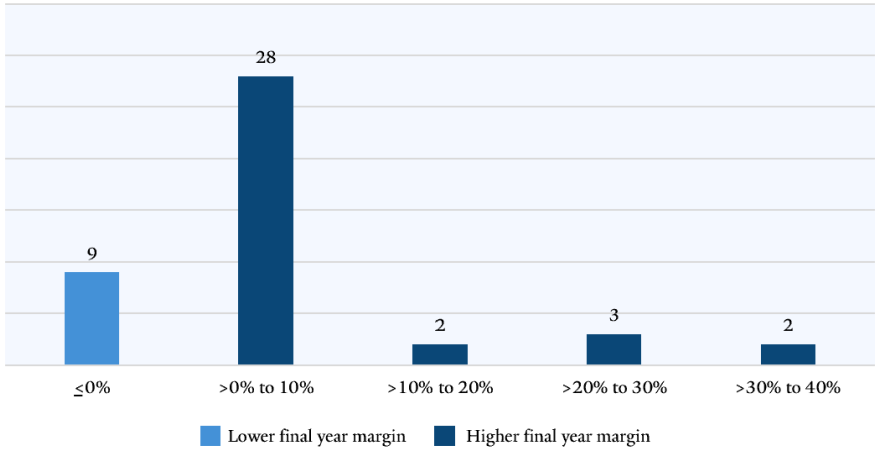
As we discussed above, since different firms have varying levels of margins, we standardized the margins by subtracting each firm's lifetime average margin from the margin for various years for that firm, creating the units we will work with – deviations from the firm's average margin. We then averaged these deviations across all the firms in our dataset. **Figure 3** provides a plot of the average values of these deviations for pre- and post-acquisition years across firms.

Figure 3: Deviation of expected EBITDA margin from firm average



The key takeaway is that ETA CEOs are signaling that post-acquisition margins are expected to rise substantially, by approximately 6% of sales (from -2.5% in year 0 to 3.5% in year +4). Only 9 of the 44 firms in our dataset predict a decline in margins, and those declines were relatively small (they range between -8% and 0). We present more detailed data in **Figure 4,** which displays the frequency and magnitude of the anticipated margin enhancement.

Figure 4: Frequency and magnitude of the anticipated margin enhancement

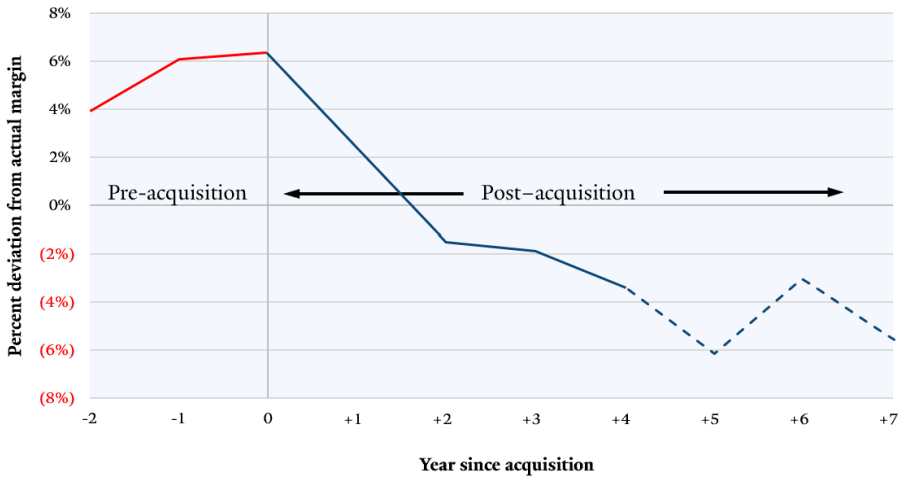


Analyzing actual margin performance

In the previous section, we presented data from the entrepreneurs' orientation of looking out the windshield—prognosticating the future. We will now turn to an examination of *actual* EBITDA margin performance to test the CEOs' soothsaying abilities. Spoiler alert: It is not good.

Figure 5 illustrates the deviations of actual EBITDA performance from each firm's lifetime average margin. This actual post-acquisition trend diverges dramatically from the forecast trend shown in **Figure 3**. Instead of increasing by 6% of sales, margins actually decline by approximately 10% (from 6% in year 0 to -3.5% in year +4). This represents a 16% swing in year +4 margins between the forecast and actual results. Only 12 out of 44 firms show an increase in margins, and 10 of those increases are below 10%.

Figure 5: Deviation of actual EBITDA margin from firm average



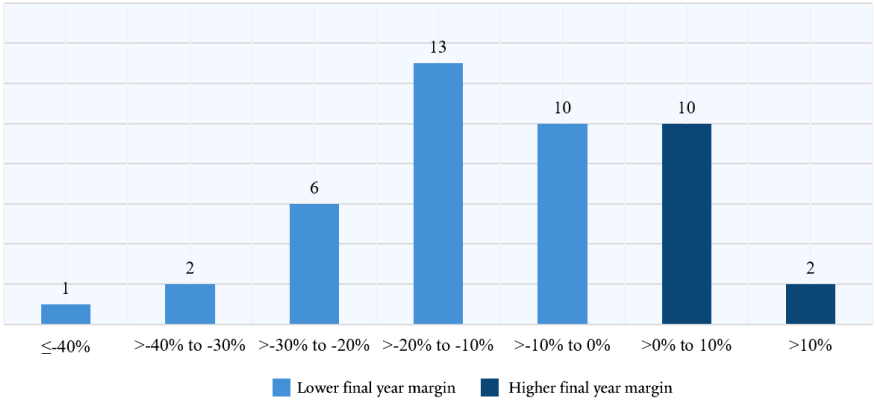
When we discussed margin behavior with the investor who kindly provided us with the data, they attributed part of the deviation to CEO optimism and hyperbole. Additionally, they advised that, despite a quality of earnings assessment, legacy (pre-acquisition) earnings and margins may have been overstated or

recorded at an artificial peak. The investor also suggested that CEOs are investing in their businesses during the early innings to build out the team, infrastructure, sales programs, financial support systems, and a general platform in preparation for accelerated growth. This leads to what is commonly referred to as the J-curve, where margins temporarily decline with the anticipation of a rebound and acceleration. The initial emphasis is on organizational investment rather than revenue growth and margin optimization. This is usually an effort to professionalize and institutionalize the business in anticipation of stabilization and growth. These investments have tangible return expectations, but they are also table stakes for growth and for attempting to create equity value—the historical chassis is unable to support the new ownership group's business expectations. This compresses margins—at least temporarily.

However, our data indicate that these underperforming EBITDA margins often fail to rebound after an initial period of intentional dilution. In other words, margins after year 0 decline compared to expected performance and remain low. There is no evidence of a J-curve; instead, there is an L-curve. This might be because expenses are more variable than CEOs anticipate, and achieving economies of scale is challenging, especially during holding periods of under five years, which is the duration of time that most ETA companies operate. Similarly, the above-mentioned changes undertaken to make the firm more attractive at exit fundamentally alter the cost structure. It is a whole new chassis.

In **Figure 6**, we display the actual frequency and magnitude of margin growth in the same format as **Figure 4**. Only 12 of the 44 firms in our sample augmented their margins. Most firms, 32, saw margins shrink.

Figure 6: Frequency and magnitude of the actual margin enhancement



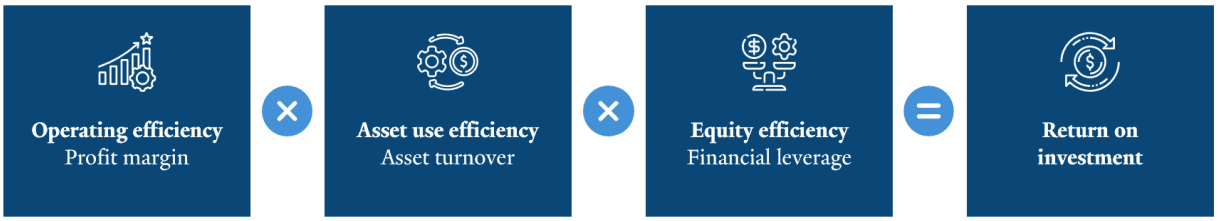
So, if *actual* EBITDA margins are not behaving consistently with *anticipated* EBITDA margins, it is fair to wonder how ETA CEOs are creating value in their ventures—because clearly, they are. The 2024 Stanford Graduate School of Business Search Fund Study reports historical search fund IRRs at 35% with a 4.5x return on investment.[5] There must be other toggles that CEOs are playing with to generate these returns.

To determine where value is being created, we utilized the DuPont analysis[†] framework (**Figure 7**), which highlights that return on investment is a product of profit margin, asset turnover, and financial leverage. We believe the answers lie in the BS—specifically, asset turnover and non-debt leverage—and in multiple expansion at exit, since they are clearly not found in operating margins. It is fashionable to discuss equity

[†] DuPont analysis is a framework developed by the DuPont Corporation that decomposes components that drive a firm's return on equity.

efficiency in ETA circles, which can simply be polite talk for loading the BS with debt. We are enthusiastic advocates of capital efficiency, but ETA CEOs can also prioritize operating and asset efficiencies along with equity.

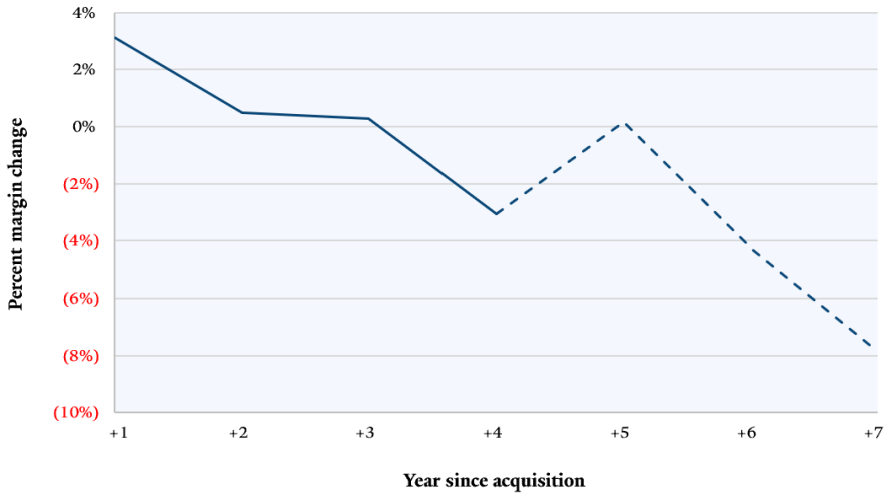
Figure 7: DuPont analysis framework



We requested that the investor provide us with BS data on total assets and the book value of debt plus equity for the firms in the dataset. We successfully gathered this data for 33 firms. Since we do not have BS data for year 0, our subsequent analyses all begin in year +1.

Before examining turnover and non-debt leverage, we first confirmed in **Figure 8** that EBITDA margins decline for this smaller 33-firm subsample as well. The decline from year +1 to +4 mirrors the decline observed in **Figure 5** for the bigger sample. Confident that our subsample behaves similarly to the larger sample, we next examined turnover and non-debt leverage, and finally, multiple expansion at exit.

Figure 8: EBITDA margin performance for the 33-firm subsample with BS data



Examining asset turnover and non-debt leverage

Working with our truncated 33-firm subsample, we tested whether value was being created through BS moves. While we were surprised by the noticeable drop in EBITDA margins relative to CEO expectations and the seller's prior performance, we recognize that this is not necessarily detrimental to a firm's success. To be sure, higher margins are preferred over lower margins, but only if sales are held constant. However, sales will likely increase if CEOs choose to lower margins as a strategic move. Giving up some EBITDA per sales dollar makes sense if the additional sales dollars contribute more EBITDA dollars than those lost to

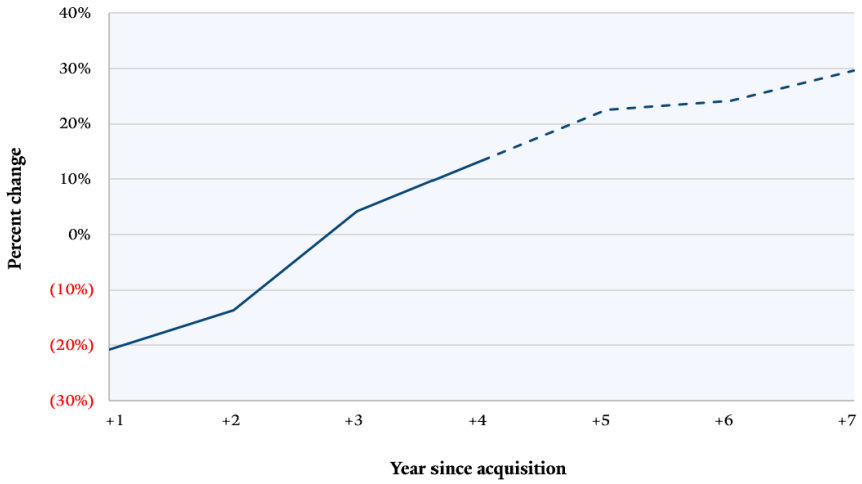
the lower margins. For instance, while margins might decrease when a firm becomes more professionalized, the new organization is likely to attract additional customers and serve them better. The goal is not margin, which is EBITDA per sales dollar, but rather total EBITDA dollars. From an investor's standpoint, EBITDA dollars need to be scaled by the investment made. In effect, the goal is EBITDA per dollar invested, or return on invested capital, rather than EBITDA margin, although margin can be one pathway to achieving that goal. In other words, ETA CEOs sacrifice margin to gain something else. They forgo margin in exchange for other benefits that drive desirable returns on investment.

The DuPont formula suggests that there are two ways to create sales increases: Generate more sales per dollar of assets (asset turnover) or deploy more assets per dollar invested in debt and equity (leverage). Here, leverage refers to sourcing capital from various stakeholders *other* than lenders, such as suppliers (by extending accounts payable) and employees (by offering more deferred compensation). Margin amplification or attenuation is part of a series of integrated choices that a CEO makes while formulating a strategy. When young, first-time, and inexperienced ETA CEOs overly focus on margins (as they do in the CIM), they fail to understand and embrace all the levers available to create equity returns. We want our readers to be better equipped than that. We will now share what we discovered when we examined turnover and non-debt leverage. Hint: These are the keys ETA CEOs are really utilizing, not expanding EBITDA margins.

Asset Turnover

Asset turnover is calculated by dividing revenue by total assets. It measures how efficiently a company utilizes its asset base to generate revenue dollars. The higher the ratio, the better. Firms with lofty asset turnover ratios are capable of getting more revenue throughput on a constant asset denominator. In our testing, we subtracted cash from total assets to neutralize the effects of a company holding excess cash on its BS. In **Figure 9**, we plotted the results of our analysis.

Figure 9: Asset turnover (revenues divided by total assets net of cash)

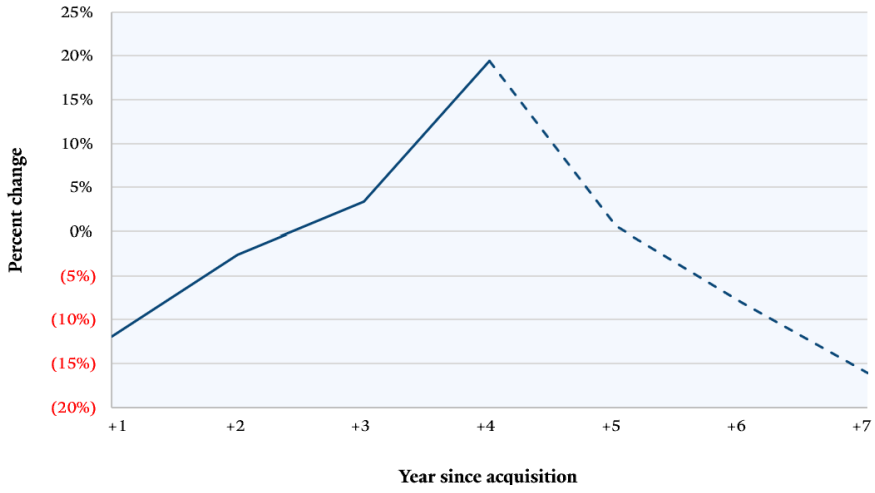


Asset turnover increases by approximately 35% between years +1 and +4, a dramatic change. Clearly, ETA CEOs are demonstrating skill in their ability to drive increasing revenue volumes through the same asset base, even though their margins declined from years -2 and -1. They consciously gave up margins for something else—greater asset turnover.

Non-debt leverage

Search fund CEOs have a choice when considering how to finance their acquisition and ongoing business operations. They consciously decide how to mix equity and debt resources, which will affect their leverage and weighted average cost of capital. When CEOs use more debt, equity investors have less capital in the business, creating an opportunity to amplify returns. In search fund land, leverage is commonly viewed as a multiple of EBITDA dollars. In classic financial analysis, leverage is often described as a ratio of debt to equity, debt to total capitalization, or debt to total assets. Here, we incorporate debt in our investment base along with equity; thus, leverage refers to non-debt operating liabilities, such as accounts payable, wages payable, pensions, deferred rent, and taxes payable. An increase in any of these liabilities represents funding provided by that stakeholder, enabling the CEO to allocate more resources to the business. We calculate non-debt leverage by dividing assets by member equity plus net debt (total capitalization). When analyzing non-debt leverage in our sample set, we excluded cash from assets and used a net debt (debt minus cash) figure in total capitalization. This is the standard method used in financial ratio analysis, as cash can be considered a form of negative debt, given that it earns interest. **Figure 10** illustrates our ETA CEOs' capacity to enhance non-debt leverage.

Figure 10: Non-debt leverage (total assets net of cash divided by member equity plus net debt)



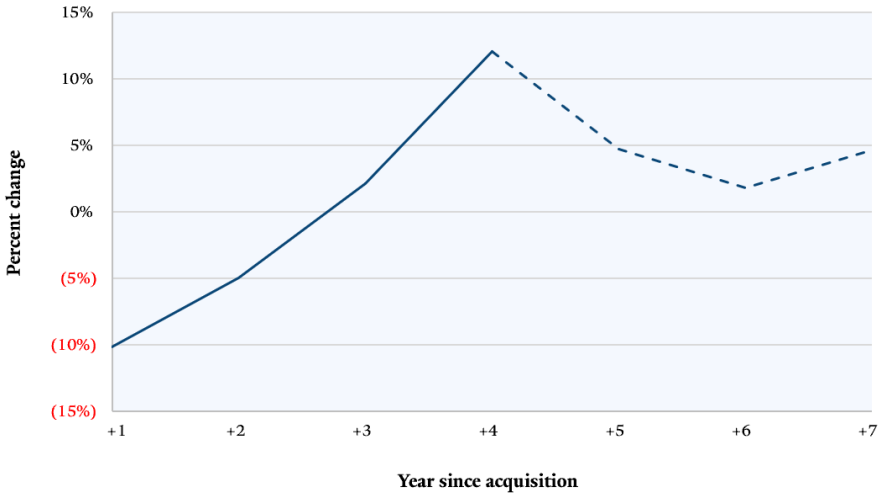
As shown in **Figure 10**, non-debt leverage steadily increases from year +1 to +4 by over 30%. This mirrors the asset turnover behavior observed in **Figure 9**. Once again, ETA CEOs forfeited operating margin points but gained non-debt leverage. They are using various tools to create value, reflecting their strategic approach.

Implications for return on invested capital

Figures 8, 9, and 10 provide mixed signals about value creation: While EBITDA margins declined on average over time, asset turnover and non-debt leverage improved substantially. As discussed earlier, the ETA CEO's goal is to focus on generating high returns on invested capital (ROIC). Let's use the data presented in **Figures 8, 9, and 10** to calculate a modified ROIC, following the DuPont model, as a measure of CEO effectiveness and operational skill. First, we will define our metric. This is not the typical ROIC

(net operating profits after tax divided by the book value of debt plus equity), as the numerator is calculated before tax, depreciation, and amortization. We will refer to it as EBITDA ROIC. We then calculate our EBITDA ROIC by multiplying the EBITDA profit margin, asset turnover, and leverage. Note that in a classic DuPont analysis, leverage is typically considered the equity multiplier, which is total assets divided by common equity. Recall that our leverage is defined as assets over total capitalization, excluding cash from assets and offsetting debt with BS cash. We can see the results of our calculations in **Figure 11**.

Figure 11: Modified return on invested capital (EBITDA ROIC)



The combined improvement in leverage and asset turnover more than offsets the decline in margins, resulting in an upward-trending ROIC. It's a bad news-good news story: Margins decline, but turnover and leverage increase. The key is that the good news outweighs the bad news, as turnover and leverage rise sufficiently to leave ETA firms in our dataset with a higher exit EBITDA per dollar invested. ETA CEOs are relinquishing margin (operating efficiency) but winning with asset turnover (asset efficiency) and leverage (equity efficiency). It is a trade with desirable rewards.

We have illustrated two significant problems associated with common perceptions of EBITDA margins in business, including ETA firms. First, these margins are expected to grow with scale, but the data suggest otherwise. Similar to findings from other samples of larger firms, margins for our ETA sample show no evidence of increases with scale.[‡] The declining pattern observed for margins in this sample sharply contrasts with the rising margins forecasted by managers in CIMs. Second, EBITDA margins are overemphasized as the sole source of value creation, despite the important roles played by leverage and turnover. While EBITDA declines as a percentage of sales, the absolute dollars of EBITDA at exit significantly increase due to substantial revenue growth. This increase in sales revenue stems from both enhanced leverage (deploying more dollars of assets for each dollar of debt and equity invested) and improved turnover (generating more sales per dollar of assets).

[‡] For a study of margin performance patterns in large firms, please see Ertan, A., Lewellen, S. and Thomas, J.K, 2020 Do Profit Margins Expand for High Growth Firms? Journal of Management Accounting Research, 52 (3): 117–135.

Investigating multiple expansion at exit

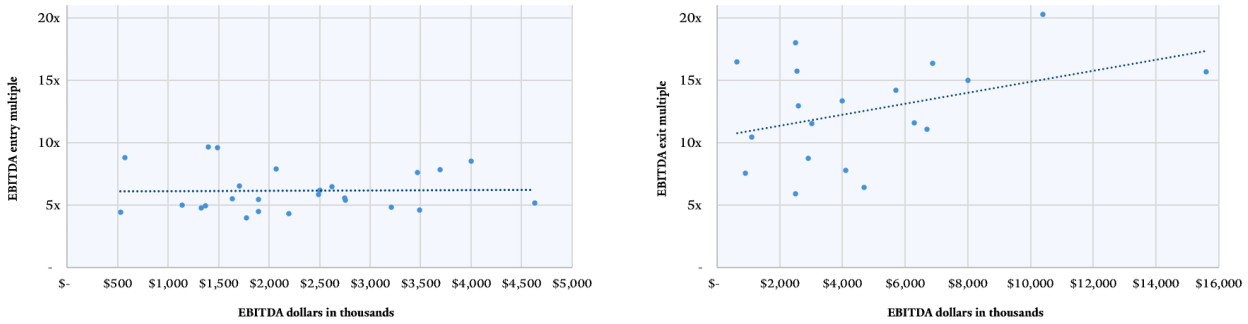
Keep in mind that the ROIC calculations above do not consider EBITDA multiple expansion at exit, which can significantly enhance value creation from non-operating dimensions. In other words, value creation results from both improvement in the calculated ROIC and the potential for exit multiples to exceed entry multiples.

ETA CEOs often benefit from various arbitrage opportunities from entry point to exit, including EBITDA multiples used for valuation purposes. Although no CEO should rely on multiple expansions, they frequently occur during ETA exits. This phenomenon likely arises for several reasons. As search-acquired businesses grow, they attract higher valuations from acquirers, typically private equity firms or strategic buyers. If ETA firms start with $1 to $2 million in EBITDA and scale up to $4 to $6 million (regardless of their margins), there are specific step values at which EBITDA multiples rise. While we cannot provide thresholds, all things being equal, a $25 million EBITDA company generally trades at a higher multiple than a $5 million one. Additionally, one of the primary services ETA CEOs provide for the next buyer is the professionalization and institutionalization of the asset, or at least the initial stages of that process. Part of the professionalization process may suppress margins, but it leads to increased EBITDA dollars. Furthermore, private equity buyers often view search assets as a platform foothold in an industry, featuring an above-average CEO alongside established systems and infrastructure. This sets the stage for additional acquisitions as part of a roll-up strategy. Moreover, private equity and strategic buyers often factor in margin expansion during their underwriting. The next manager believes they, too, are a superior operator and will enjoy amplifying margins.

Once again, buyers recognize and value this. Part of the process involves preparing the company for growth, which buyers are eager to support with their investments. It is also possible that the fruits of investing in upgrading the firm—despite causing initially depressed margins—have not been fully realized by the time of exit. At exit, buyers appreciate this future potential and often offer a higher exit multiple as compensation. This, combined with larger and more sophisticated purchasers who have lower capital costs, leads to multiple expansions. Finally, some search fund entrepreneurs can acquire targets in proprietary, non-auctioned transactions, or at least those with limited auction dynamics. However, ETA assets are typically sold through highly orchestrated, banker-led processes that increase bidder competition, contributing to multiple expansion.

In our dataset, there have been 33 exits. Note that the number 33 coincidentally matches the subsample of 33 companies with BS data referenced above. However, the subsample does not necessarily overlap with our 33 exits. In **Figure 12**, we present a scatter plot of the entry and exit multiples for the 33 companies in our dataset.

Figure 12: Entry EBITDA multiples (left plot) versus exit EBITDA multiples (right plot)



In the entry plot on the left, the regression line consistently lies within the 6.0x to 7.0x range. The flat profile observed suggests that entry multiples do not increase with size. ETA entrepreneurs appear quite adept at acquiring assets. They pay relatively low multiples and resist the allure of multiple creep for firms with higher EBITDA dollars. In the exit plot on the right, we observe two distinct trends. First, there is a marked increase in all exit multiple values, indicating that all assets, regardless of EBITDA dollars, traded at significantly higher multiples than at entry. Specifically, the average entry valuation was 6.0x, while the average exit EBITDA multiple was 14x. Hello, multiple expansion. We have been in contact with another prolific search fund investor who has similarly noted exit multiples at 2.5x entry multiples. This supports our data. Second, in the exit plot, we see that firms with higher EBITDA levels tend to trade at increased EBITDA multiples. Buyers reward CEOs for greater EBITDA dollars. This indicates that ETA CEOs are skilled asset sellers. Furthermore, when EBITDA multiples more than double between the buy and the sell, it can cover up a host of operating sins. Furthermore, CEOs are rewarded for higher EBITDA dollars even with falling margins.

ETA CEOs do not control multiple expansion, unlike asset turnover and non-debt leverage. However, CEOs can showcase their companies to potential acquirers in the best possible light to secure higher exit EBITDA multiples, hoping that this will materialize.

Conclusion

EBITDA margins in ETA firms do not increase post-acquisition, despite what CEOs believe and sell in their CIMs; this is a mirage. ETA CEOs may not excel as operators, at least when it comes to expanding margins from existing sales dollars. Because of this, CEOs should develop a value creation plan that does not depend on margin expansion but instead focuses on asset turnover and non-debt leverage. Perhaps the real value in ETA lies in acquiring a solid asset at a reasonable price, then growing it, professionalizing it, and selling it at a substantially higher EBITDA multiple.

While we hope your margins improve, we believe you should prepare for the possibility that they might decrease. Regardless of how your margins perform, we wish you immense fun, fulfillment, and success in your ETA adventure. We are rooting for your triumph and are cheering you on every step of the way! Good luck.

This case has been developed for pedagogical purposes. The case is not intended to furnish primary data, serve as an endorsement of the organization in question, or illustrate either effective or ineffective management techniques or strategies.

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[4] Kelly, Peter, and Heston, Sara. *2024 Search Fund Study Selected Observations.* Stanford University Graduate School of Business. Case E-870.

[5] Ibid.