Center for Entrepreneurial and Financial Studies

Capital Dynamics

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Value Creation in Private Equity

Joint research findings from Capital Dynamics and the Technische Universität München

Second study

June 2014

Summary

In the aftermath of the global financial crisis, investors were concerned about the private equity value generation model, questioning to what extent returns are driven by financial leverage versus operational improvements. In 2009, Capital Dynamics and the Technische Universität München completed an inaugural research study analyzing the determinants of value creation across 241 private equity exits[1]. Results showed that leverage accounted for just one-third of value creation. Furthermore, the results offered evidence that operational improvements were more important in driving value at private equity portfolio companies than at their listed counterparts.

Increased exit activity over the past two years expanded the Capital Dynamics proprietary deal database with additional data reported for exits from investments made at the peak of the buyout boom from 2005-2008. With this new data, we gained further insight into how value and private equity alpha were created across such deals and developed a more up-to-date picture of value creation in the private equity industry. In this second study, we examined detailed deal information on sales, EBITDA, multiples, net debt, enterprise value and cash flows between investors and portfolio companies, resulting from 701 exits completed between 1990-2013. The sample includes deals from around the world and, to our knowledge, is one of the most comprehensive analyses in this area of research up to today.

Our new findings demonstrate that operational improvements remained the key driver of value creation and consistently contributed to value creation in private equity transactions. Unlevered returns comprising operational improvements and the multiple effect accounted for 69% of value creation, up 2 percentage points since our first study in 2009. Consequently, the impact of leverage declined slightly from 33% to 31%. Notably, the new results revealed a greater role for EBITDA growth in value creation – with 41% attributed to this component – up 10 percentage points from the previous results.

Furthermore, we found that the leverage component in value generation for deals made during the last buyout “boom” (2005-2008) was 29%, lower than the overall sample and lower than during the years leading to the boom or “pre-boom” years (2001-2004). Despite higher entry leverage, strong EBITDA growth during the holding period enabled substantial reduction of leverage until exit. While EBITDA contribution to value creation was 31% for pre-boom deals, it increased to 40% for boom-year deals.

Value creation from a change in acquisition and exit multiples, also known as the multiple effect, contributed 18%, down 1 percentage point from the previous study. In the current study, we broke down the multiple effect into two factors: pure market movement or market timing and company-specific valuations linked to operational performance as well as asset quality improvement under General Partners’ (GP) ownership. We found that the latter accounted for the majority of the multiple effect: of the 18% value created, 60% was due to GP-driven multiple expansion, and 40% was due to changes in the valuations of comparable public market benchmark companies.

Finally, we registered an increase in operational alpha of realized private equity deals against public counterparts compared to the 2009 results. Greater operational value added from 2005-2008 deals contributed to outperformance. The unlevered annual returns of private equity exceeded those of public benchmarks by 14 percentage points. Private equity operational alpha accounted for about a third of overall private equity deal returns. The results show the superior business model of private equity, which generates value for investors beyond sector returns and leverage.

[1] Capital Dynamics, the Center for Entrepreneurial and Financial Studies (CEFS) at the Technische Universität München (2009): “Value Creation in Private Equity”

Key findings

Value creation in private equity remains operations-driven

We analyzed value creation in realized buyout transactions, as measured by the value creation multiple or gain on invested capital, and also calculated the percentage contribution of each specific value driver in overall value creation. Our sample comprised fully realized deals, including 55 unsuccessful deals where value was destroyed. Deals with outlying performance (more than two standard deviations from the mean, which were all positive outliers) were excluded from the analysis. Figure 1 demonstrates that operational contributions accounted for roughly half of overall value creation, while the use of leverage accounted for 31% of total value creation and the multiple effect for 18%. In comparison with the inaugural study, the main value creation components did not change very much. There was a slight decline in the leverage contribution from 33% to 31%, while the operational and multiple effects increased, both by 1 percentage point. Our results support the persistence of value creation drivers in private equity and the results of our first study.

GP-driven multiple expansion was more important than market timing

In the framework of the current study, we expanded our analysis of value creation resulting from the multiple effect. We compared private equity deal multiples, as measured by enterprise value/EBITDA at entry and exit, to public benchmark company valuations to assess the impact of movement in public market multiples. As shown below in Figure 1, the analysis revealed that 7 percentage points of the 18% attributed to the multiple effect were due to an uplift in public market valuation, while the majority - 11 percentage points - were due to private equity deal-specific multiple expansion. We attribute this to GP multiple expansion skills which are linked closely with qualitative operational improvements. GPs' ability to improve asset quality by gaining market share, institutionalization, brand creation and diversification of customer base, to name a few factors, resulted in above market multiple expansion. The median entry multiple for private equity deals was 10% lower than that of public benchmarks, while the exit multiple was 1% lower than the benchmark company multiple at exit.

EBITDA growth increased in importance

In terms of absolute values, there was a notable change in average value creation multiple and sources of operational growth. We recorded a decline in the value creation multiple from 2.72x to 2.51x, as shown in Figure 2. Despite a decline in multiple, value creation from EBITDA growth increased from 0.88x to 0.93x, while the free cash flow contribution declined notably. As a result, the contribution of EBITDA to growth increased from 32% to 37%, while the free cash flow component decreased from 15% to 10%. Further analysis revealed that the decline in multiple and shift in operational drivers was propelled by deals made during the buyout boom.

Figure 1: Value creation drivers (%)

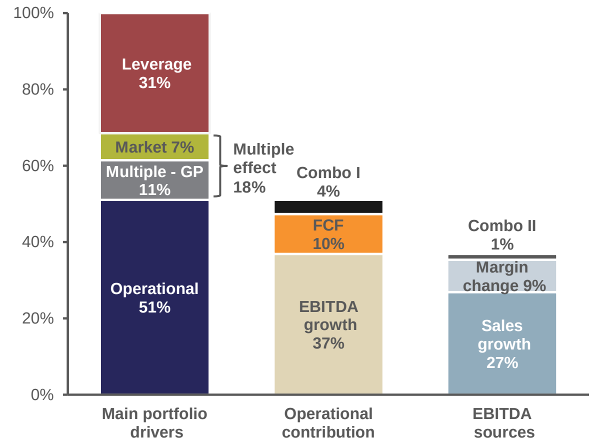
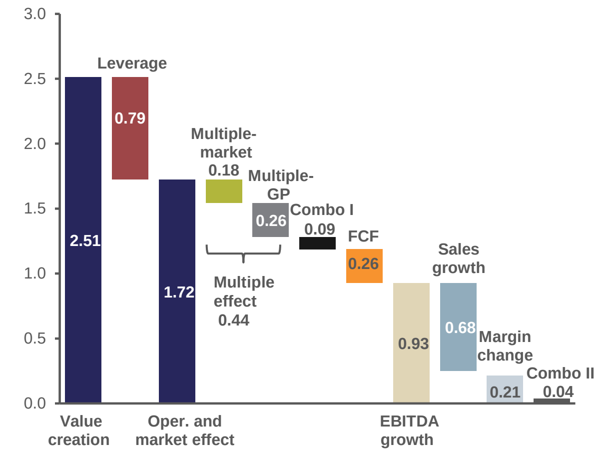


Figure 2: Value creation drivers (times money)



Note: Average (mean) value creation across 701 deals. Combo I is the combination of EBITDA and Multiple, Combo II is the combination of Sales and Margin

Buyout boom deals had stronger value creation resulting from EBITDA growth, though less value created overall

Figure 3 shows that value creation in investments made at the peak (2005-2008) of the last buyout cycle generated less gains compared to deals made during the years leading up to the boom (2001-2004). The value creation multiple declined from 2.64x to 2.46x. Our analysis demonstrates a noticeable shift in the sources of value creation. Leverage contribution diminished, while operational factors such as EBITDA growth became the major drivers of successful value creation. In 2005-2008 deals, EBITDA growth accounted for 40% of overall value creation, 9 percentage points higher than in deals made in the 2001-2004 period. In contrast, the contribution of leverage to value creation was 29%, 6 percentage points lower compared to 2001-2004 deals. As figure 4 shows, EBITDA growth was driven more by improvements in EBITDA margin, and the combination of margin improvement and sales growth, than sales growth alone.

Figure 3: Value creation drivers over the last cycle

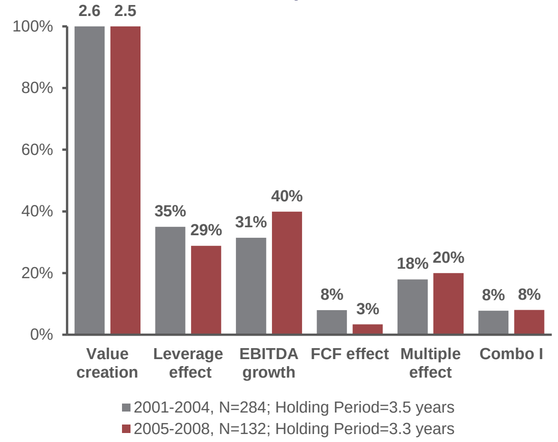
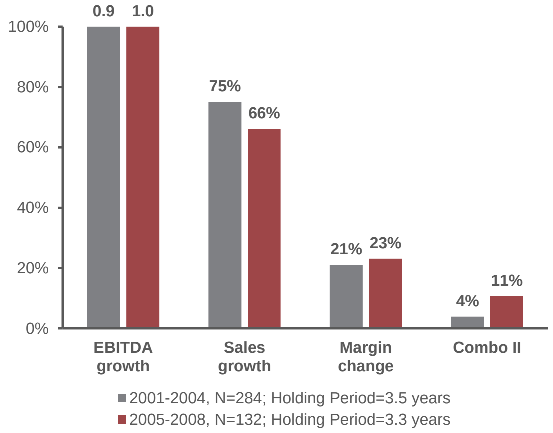


Figure 4: Sources of EBITDA over the last cycle



Note: N denotes number of transactions

Mid-cap deals had the strongest EBITDA growth. Large-cap deals relied more on leverage, while multiple expansion was more pronounced among small-cap deals

Figure 5 reveals differences in value creation drivers across transaction sizes. Large-cap buyout deals, those with enterprise value at entry of EUR 500 million or higher, show the highest value creation multiple of all buyout deals, at 2.76x. However, the higher multiples were driven by the substantial deployment of leverage, which accounted for 40% of overall value creation. Furthermore, margin improvement played a more important role in EBITDA growth among large-cap deals compared to deals of other sizes.

Figure 5: Comparison of value creation drivers by size

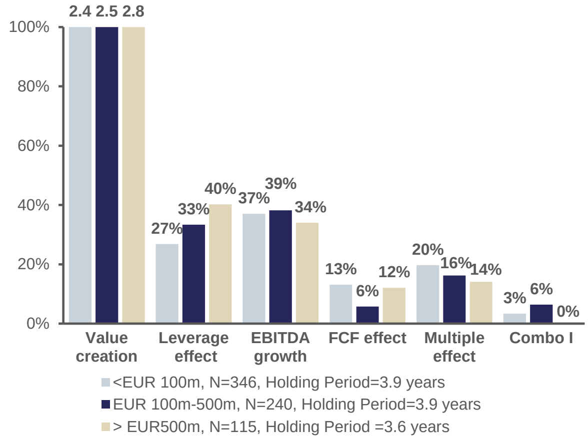
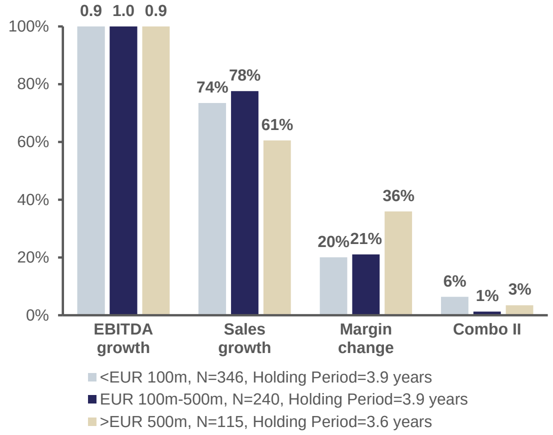


Figure 6: Comparison of EBITDA sources by size



Mid-cap deals delivered 2.50x overall gain on invested capital. Value creation in mid-cap deals was more operationally-driven than in large-cap deals. A third of value creation was driven by leverage and two-thirds by operational and multiple effects. Pure operational factors accounted for 51% of total gains. Value creation from EBITDA growth represented the highest share among these three size brackets, with top-line growth the most pronounced reason for EBITDA growth among mid-size deals.

Small-cap deals demonstrated the lowest overall value creation multiple, at 2.44x. However, such deals showed the most operational improvement and relied least on financial engineering, with the leverage component accounting for only 27% of returns. Operational and multiple effects accounted for 73% of gains, the highest across all size categories, while pure operational factors accounted for 53%. On the other hand, the results indicate greater opportunities for value creation from multiple among smaller deals, with the multiple effect contributing 20% to overall gains, the highest across all size categories.

Private equity operational alpha increased to 14%, driven by strong EBITDA growth

To identify the operational alpha of private equity we benchmarked the unlevered returns of each private equity deal against a publicly traded peer company that was selected based on geography, industry and a minimum deviation between the private equity deal and public peer company with respect to sales and EBITDA at the time of acquisition. Overall, private equity deals yielded an annualized rate of return of 41% on average, while publicly traded peers returned 15%. After the extraction of leverage, private equity deals averaged an annual unlevered return of 28% compared to 14% for public equities, resulting in operational private equity alpha of 14%. Private equity operational alpha resulted from the superior EBITDA growth of private equity-backed companies achieved by acquisitions and organic growth compared to public benchmarks. EBITDA of private equity-backed companies grew 42% during the holding period, while public benchmark companies' EBITDA increased by 12%.

The 2009 study recorded operational alpha of 6%. The increase in operational alpha is attributable to the inclusion of deals from 2005-2008, which outperformed public companies substantially, despite slightly lower value creation compared to 2001-2004 deals. The growth of our data set to include North American and Asia-Pacific deals also contributed to the increase in alpha. The results confirm that private equity creates value beyond just the application of leverage. As Figure 8 shows, leverage accounted for 31% of the annual return, 35% was the portion of the return that matched the unlevered return of a public benchmark and 34% of the return was private equity operational alpha.

Figure 7: Private equity alpha (annual return in %)

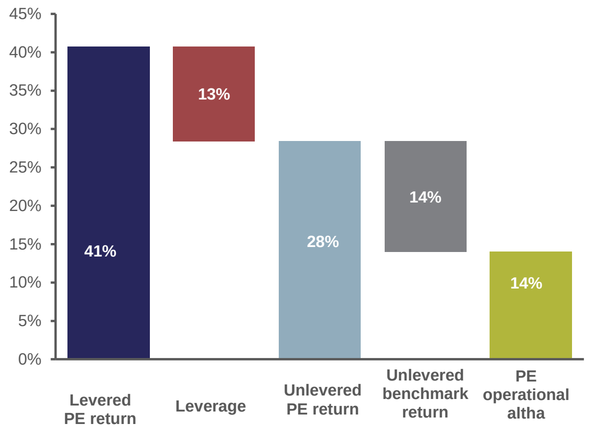
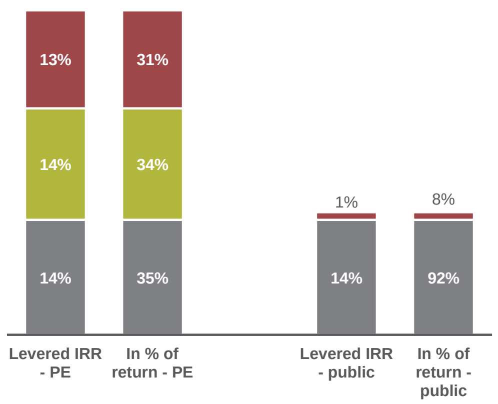


Figure 8: Operational vs. financial effects



Asia-Pacific deals generated the highest operational alpha, driven by sales growth

Finally, we examined value creation across regions. Figure 9 illustrates a few distinctive features of value creation by region. Asia-Pacific buyout deals showed the strongest results with respect to value creation from operational sources such as EBITDA growth and free cash flow generation. Sales growth was a major source of EBITDA increase for Asia-Pacific deals, although value deteriorated slightly due to decreased margin. The multiple effect was a strong driver for Asia-Pacific deals due to the greater impact of public market movements and more market inefficiencies in the region, enabling deals to be sourced at attractive entry valuations. Value creation from leverage played a subordinate role in Asia-Pacific buyout deals compared to North American and European deals. Value creation from leverage was almost equally important for both North American and European deals, accounting for 31% and 32% of overall gains. The same was true for margin improvement. However, North American deals demonstrated higher value creation from the increase in EBITDA due to sales growth, while European deals generated more value from free cash flow and multiple effect.

Furthermore, benchmarking of private equity unlevered returns against public companies revealed that Asia-Pacific deals demonstrated the highest operational alpha. As shown in Figure 10, it amounted to 44% while the operational alpha of North American deals amounted to 22%, followed by European deals which generated 10% alpha.

Figure 9: Value creation drivers (%) by region

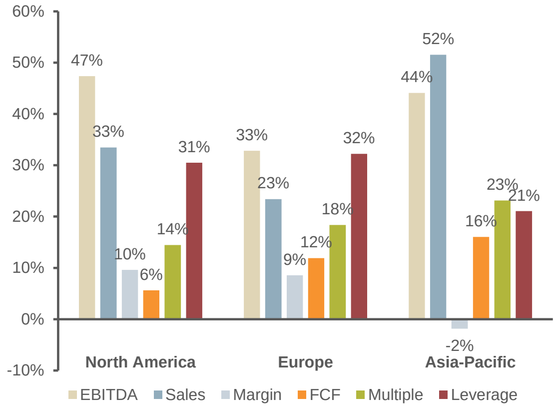
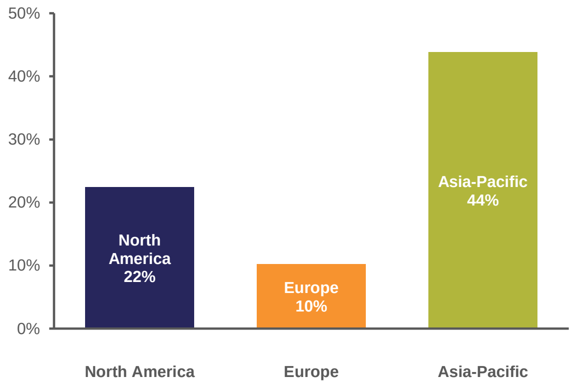


Figure 10: Private equity alpha by region (annual return in %)



Note: Sales and Margin are the main drivers of EBITDA growth; the combined effect of Sales and Margin is captured but not presented above.

Conclusion & Outlook

This study serves as a benchmark for value creation across investment years, transaction sizes and regions. It can help investors have informed discussions with GPs about their value creation strategy. The current study demonstrates that operational improvements are the key to successful generation of value for investors. Leverage bolsters returns, while acquisition debt used in accretive acquisitions by buyout platform companies may support the implementation of an operational strategy. However, only managers with sound operational strategies, clear value creation plans and good execution skills appear to effectively mitigate financial risk and magnify returns. Furthermore, the study provides empirical evidence that a larger part of the multiple effect is the result of qualitative operational enhancements rather than pure market movement. GPs demonstrating such multiple expansion capabilities can differentiate themselves in current valuation-rich environments.

The results also demonstrate that operational alpha was a main driver of returns in 2005-2008 deals, a picture that has emerged from the exits made thus far. The backlog of unrealized companies from the last buyout boom remains high and, therefore, we will analyze further developments in the next issue in our series of Value Creation Studies.

For further information, please contact:

Kairat Perembetov, Vice President
Capital Dynamics AG
Bahnhofstrasse 22
CH-6301 Zug
Switzerland

Phone +41 41 748 8436
Fax +41 41 748 8440
Email kperembetov@capdyn.com

Dr. Ivan Herger, Managing Director
Capital Dynamics AG
Bahnhofstrasse 22
CH-6301 Zug
Switzerland

Phone +41 41 748 8424
Fax +41 41 748 8440
Email iherger@capdyn.com

Capital Dynamics

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Our investment history dates back to 1988. Our senior investment professionals average over 20 years of investing experience across the private equity spectrum[2]. We believe our experience and culture of innovation give us superior insight and help us deliver returns for our clients. We invest locally while operating globally from our London, New York, Zug, Beijing*, Tokyo, Hong Kong, Silicon Valley, Sao Paulo, Munich, Birmingham, Seoul, Brisbane, Shanghai* and Scottsdale offices.

[1]Capital Dynamics comprises Capital Dynamics Holding AG and its affiliates; assets under management/advisement, as of December 31, 2013, include assets under discretionary management, advisement (non-discretionary), and administration across all Capital Dynamics affiliates. Investments are primarily on behalf of funds managed by Capital Dynamics. [2]Average years of experience held by Capital Dynamics' 20 most-senior investment professionals. *Diligence Capital is a legally separate company operating under a strategic cooperation with Capital Dynamics.

Prof. Dr. Reiner Braun
Center for Entrepreneurial and
Financial Studies (CEFS)
Technische Universität München
Arcisstrasse 21
80331 München
Germany

Phone: +49 89 289 25181
Email: reiner.braun@wi.tum.de

Benjamin Puche
Center for Entrepreneurial and
Financial Studies (CEFS)
Technische Universität München
Arcisstrasse 21
80331 München
Germany

Phone: +49 89 289 25190
Email: benjamin.puche@tum.de

Center for Entrepreneurial and Financial Studies (CEFS) at the Technische Universität München

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