Do Small and Mid-Market Buyouts Outperform?

Dr Andrea Carnelli Dompé, Vice President
Davide Ferri, Research Analyst

September 2019
Introduction

While we’ve seen large- and mega-buoyout (LMBO) managers attract record-breaking pools of capital over the last few years, Pantheon believes that small- and mid-market buyout (SMBO) deals can potentially offer greater upside to investors. In this paper, we explain why we favor the small and mid market and quantitatively evaluate its characteristics.

Our analysis of buyout deals with vintages 2000-2012 shows that SMBO deals have outperformed their LMBO peers by a Total Value to Paid In (TVPI) compounded annual growth rate (CAGR) of 5%. We believe this result is driven by various factors, including:

- Opportunities for significant value improvements throughout the investment period
- Broader investment opportunity set
- More attractive entry multiples and opportunity for multiple expansion at exit

While this is by no means an exhaustive list of the potential competitive advantages exhibited by SMBO managers, it suggests that SMBO managers may have more levers of value creation at their disposal and we believe that this plays a part in explaining the historical outperformance in the small and mid market.

Key Points

1. Small and mid-market buyout deals (SMBOs) have historically outperformed their large-mega (LMBO) peers by 5% TVPI CAGR
2. At the same time, the performance of SMBOs has historically been more dispersed than that for LMBOs
3. As a consequence, in order to obtain attractive risk-adjusted performance in the SMBO space, disciplined manager selection and portfolio construction are imperative
4. We discuss qualitatively three primary sources of outperformance: wider scope for value creation; wider opportunity set; more attractive entry valuations and potential for multiple expansion at exit

It is, however, important to note that while SMBO deals may generate better performance, an investor in this market segment may also be exposed to increased risk, as the dispersion of potential returns is greater than it typically is in the LMBO market. Manager selection and portfolio construction in the mid market are therefore essential tools if investors are to access the best potential returns.
Do Small and Mid-Market Buyouts Outperform? Data

This study uses proprietary Pantheon data on buyout deals executed between 2000 and 2012 by GPs committed to by Pantheon across USA, Europe and Asia/ RoW; the vintage range is cut off at 2012 to ensure that the dataset includes deals that are mature enough to provide reliable data. All data is as of Q1 2019.

The use of deal-level data has three main advantages relative to fund-level data. First, deal-level data allows the classification of buyout investments as SMBO or LMBO without ambiguity. This is not always possible at the fund level, since the same fund may invest in deals belonging to both sub-stages. Second, fund level data does not usually come with a commonly defined sub-stage classification. It may be proposed that fund size is a good proxy for the sub-stage strategy pursued by the fund: smaller buyout funds tend to pursue SMBO deals, while larger funds tend to pursue LMBO deals. While there is some merit to this approach, we believe fund size is generally a poor proxy of fund substage. Third, dissecting funds into deals increases the number of observations, which strengthens the validity of the tests.

We consider two approaches to determine deal substage. The first sub-stage classification approach uses an Enterprise Value (EV) threshold of $500m for all deals in the dataset: we classify as SMBO and LMBO all deals with an entry EV below and above $500m, respectively. While consistent with current market practice, the $500m threshold does not capture nuances across geographies and vintages; our second deal sub-stage classification approach overcomes this limitation by using as thresholds the median entry EV of vintage and geography deal peers. Since the results are consistent across approaches, we report the results only for the approach based on the $500m threshold.

Figures 1 and 2 summarize the SMBO and LMBO data. Figure 1 displays the number of deal observations by deal vintage. The figure shows a steady increase in deals made from the early 2000s to the Global Financial Crisis (GFC), followed by a sharp drop that reflects its trough in 2009. There are a total of 2,237 deals, ranging from a minimum of 46 per vintage (in the 2001 vintage) to a maximum of 358 per vintage (in the 2007 vintage).

Figure 2 shows the evolution of average TVPIs, weighted by entry EV. The average TVPI across vintages hovers around 2.2x, ranging from a trough of 1.1x in the 2008 vintage to a peak of 3.5x in the 2002 vintage.

---

1 When applying size-based substage classifications to Pantheon funds, we find an accuracy (F1 score) of approximately 50% with respect to the ‘ground truth’ substage labels assigned by the investment team.

2 In technical terms, the statistical power of the tests is increased.
Do SMBOs perform better than LMBOs?

Table 1 provides an overview of the performance of SMBO and LMBO by vintage. The first four columns show the number of deals and average performance (TVPI CAGR) for SMBOs and LMBOs; the last two columns show the difference in performance between SMBO and LMBO and indicate when it is statistically significant.

Initial inspection suggests that both SMBOs seem to provide an attractive return profile compared to LMBOs: except for the 2000 vintage, SMBO deliver positive CAGRs in all vintages considered, including in the vintages marred by the GFC. When looking at differences in performance, SMBOs outperform LMBOs in a statistically significant way in three vintages (2003, 2008, 2012), while LMBOs never outperform SMBOs in a statistically significant way.

Table 1: SMBO and LMBO performance by vintage

This table shows summary statistics of SMBO and LMBO performance by vintage. Statistically significant differences in SMBO vs LMBO performance are highlighted in aqua. Deal data from Pantheon as of Q1 2019.

<table>
<thead>
<tr>
<th>Vintage</th>
<th>SMBO Deals</th>
<th>Average performance</th>
<th>LMBO Deals</th>
<th>Average performance</th>
<th>Difference in performance</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>25</td>
<td>-0.39</td>
<td>23</td>
<td>-0.16</td>
<td>-0.23</td>
<td>0.13</td>
</tr>
<tr>
<td>2001</td>
<td>32</td>
<td>0.09</td>
<td>14</td>
<td>0.24</td>
<td>-0.15</td>
<td>0.37</td>
</tr>
<tr>
<td>2002</td>
<td>44</td>
<td>0.41</td>
<td>19</td>
<td>0.43</td>
<td>-0.02</td>
<td>0.86</td>
</tr>
<tr>
<td>2003</td>
<td>49</td>
<td>0.52</td>
<td>33</td>
<td>0.27</td>
<td>0.25</td>
<td>0.06</td>
</tr>
<tr>
<td>2004</td>
<td>87</td>
<td>0.32</td>
<td>47</td>
<td>0.34</td>
<td>-0.02</td>
<td>0.88</td>
</tr>
<tr>
<td>2005</td>
<td>110</td>
<td>0.07</td>
<td>80</td>
<td>0.17</td>
<td>-0.10</td>
<td>0.37</td>
</tr>
<tr>
<td>2006</td>
<td>172</td>
<td>0.06</td>
<td>143</td>
<td>-0.01</td>
<td>0.07</td>
<td>0.17</td>
</tr>
<tr>
<td>2007</td>
<td>171</td>
<td>0.02</td>
<td>187</td>
<td>-0.06</td>
<td>0.08</td>
<td>0.15</td>
</tr>
<tr>
<td>2008</td>
<td>124</td>
<td>0.11</td>
<td>101</td>
<td>-0.12</td>
<td>0.22</td>
<td>0.03</td>
</tr>
<tr>
<td>2009</td>
<td>59</td>
<td>0.13</td>
<td>34</td>
<td>0.18</td>
<td>-0.05</td>
<td>0.41</td>
</tr>
<tr>
<td>2010</td>
<td>139</td>
<td>0.10</td>
<td>93</td>
<td>0.07</td>
<td>0.03</td>
<td>0.57</td>
</tr>
<tr>
<td>2011</td>
<td>143</td>
<td>0.09</td>
<td>92</td>
<td>0.10</td>
<td>-0.01</td>
<td>0.85</td>
</tr>
<tr>
<td>2012</td>
<td>122</td>
<td>0.16</td>
<td>94</td>
<td>0.04</td>
<td>0.12</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Formally, we test whether we can reject the null hypothesis of no difference in performance between SMBOs and LMBOs via Welch mean difference tests, and report the p-values of the test statistics. We use the Welch test and highlight in aqua statistically significant differences at the 10% level.
Do Small and Mid-Market Buyouts Outperform? Do SMBOs perform better than LMBOs?

To corroborate further the analysis of whether SMBOs outperform LMBOs, we perform regression analysis. The results of the regression indicate that the CAGR on SMBOs is 5% higher than the CAGRs of LMBOs, and that the effect is statistically significant; please see the Technical Appendix for further details.

Despite their attractive return profile, SMBOs may have a different risk profile than LMBOs. To assess the potential risk differential, Figure 3 shows the inter-quartile ranges (IQR) of deal CAGRs by vintage. Indeed, the CAGR IQR of SMBO is consistently above that of LMBOs, suggesting a higher dispersion in deal performance. A practical consequence of this finding suggests that, in order to harvest performance, LPs need more fund selection skills in SMBO portfolios than in LMBO portfolios of similar size.

In order to harvest performance, LPs need more fund selection skills in SMBO portfolios than in LMBO portfolios of similar size.

To corroborate further the analysis of whether SMBOs outperform LMBOs, we perform regression analysis. The results of the regression indicate that the CAGR on SMBOs is 5% higher than the CAGRs of LMBOs, and that the effect is statistically significant; please see the Technical Appendix for further details.

Despite their attractive return profile, SMBOs may have a different risk profile than LMBOs. To assess the potential risk differential, Figure 3 shows the inter-quartile ranges (IQR) of deal CAGRs by vintage. Indeed, the CAGR IQR of SMBO is consistently above that of LMBOs, suggesting a higher dispersion in deal performance. A practical consequence of this finding suggests that, in order to harvest performance, LPs need more fund selection skills in SMBO portfolios than in LMBO portfolios of similar size.

**Figure 3: SMBO and LMBO risk by vintage**

This figure plots the IQR of CAGR of SMBO and LMBO by vintage. Deal data from Pantheon as of 2019 Q1.

---

4 The IQR is calculated as the difference between the 75th and 25th percentile of the CAGR distribution.
Sources of value-add

The previous section has shown that there is strong statistical evidence in support of SMBO outperformance; this section takes a more qualitative perspective and explores the economic rationale behind the results. In particular, we hypothesize three potential sources of SMBO outperformance: wider scope for operational improvements; larger opportunity set; more attractive valuations. We discuss each channel in turn.

1. Wider scope for operational improvements

A first source of SMBO vs LMBO outperformance may stem from a wider scope for operational improvements. Operational improvements represent an ever-increasing share of the value-add of PE deals: Figure 4 illustrates the point by documenting that such improvements now account for half of the value creation\(^5\). In fact, the current high valuation environment may reduce potential prospects for achieving significant multiple expansion upon exit, placing even greater emphasis on achieving operational improvements. By improving the operations of the business, managers may also benefit from a valuation multiple rerating as the quality of the company cash flows improve.

In our experience, SMBO deals may have greater prospects for operational improvements given they involve companies with fewer resources, less experienced management teams, and inefficient processes. Typically, SMBO PE managers have the opportunity to implement industry best practices across a firm’s operations, improve corporate governance, strengthen the company’s board, recruit suitable management teams to implement business strategy, leverage their network to source new suppliers and customers, and introduce industry sector experts to assist the company. All these value creation levers may be present in the larger, more efficient companies involved in LMBO deals, but some of these actions may already have been implemented, especially in the case of larger companies that have been the subject of previous buyouts. In other words, there may be more “low hanging fruit” for PE managers to pick in SMBOs than LMBOs.

Finally, SMBOs may benefit more from “buy and build” strategies. In the “buy” phase of the strategy, a PE manager typically buys a “platform company”, which can be quite small, and then makes accretive acquisitions, often at quite low entry valuations; in the “build” phase, the PE manager focuses on successfully integrating the acquired businesses, with the aim to gain synergies and critical mass. At exit there is usually a premium paid in terms of the valuation multiple, on a significant larger earnings base. Although both SMBO and LMBO managers target build-ups, arguably there may be more scope to make many smaller acquisitions that have an impact on a small business, rather than search for the perfect add-on of sufficient size to impact a large business.

---

\(^{5}\) Pantheon’s study on ‘Value Creation and the Business Cycle’ shows similar results.

\(^{6}\) The analysis is cut off at the 2012 vintage as later deals may not be mature enough to draw meaningful conclusions.
2. Larger opportunity set
A second source of SMBO vs LMBO outperformance may depend on the breadth of the opportunity set. The opportunity set for small- and mid-market managers has historically tended to be larger than in the large/mega space, as shown in Figure 5. This diversity may offer managers more scope for sourcing interesting deals and an opportunity to adopt sector-focused investment strategies. In fact, sector specialism tends to be more likely in the SMBO rather than LMBO space. In an increasingly competitive private equity environment, a manager’s ability to demonstrate deep expertise in a focused field has become a key differentiating factor for some GPs, and such specialism seems to be bearing fruit.

3. More attractive valuations and potential for multiple expansion at exit
A final source of SMBO vs LMBO outperformance may depend on structural differences in valuation levels. Historically, small- and middle-cap companies have tended to offer more attractive entry valuations relative to larger companies as shown in Figure 6 below, which highlights that the transaction valuations paid for smaller businesses have tended to be lower than for larger companies. As mid-market companies expand and move up into the large space, this may offer them the opportunity for multiple expansion on exit.

---

7 However, we do note that some generalist funds, more so the large private equity groups, may have sector teams or experts that they can leverage when making investment decisions.
Conclusion

Our analysis shows that SMBO funds have historically offered the opportunity to achieve attractive returns, potentially because SMBO managers have access to more levers for value creation, a wider investment opportunity set, and cheaper valuations with the potential for multiple arbitrage upon exit. However, we also find that investing in SMBOs may be riskier than for LMBOs: investors should exercise prudence when selecting managers given the wide dispersion of returns, and the abundance of managers to choose from: for instance, for the 2018 vintage, Preqin tracked 250 SMBO funds and 57 LMBO funds. As always, disciplined manager selection remains at the heart of implementing any successful investment program.

Technical appendix

To formally address the question whether SMBOs outperform LMBOs, we run a simple regression:

$$CAGR_i = \alpha + b \times SMBO_i + \sum_{v=2001}^{2012} VINTAGE_{v(i)} + \epsilon_i,$$

where the $i$ subscripts refer to the $i$-th deal observation. Our dependent variable is the CAGR on a deal. Explanatory variables include a constant, a dummy variable equal to 1 if the deal is a SMBO and 0 otherwise, and deal vintage dummy variables. The vintage dummy variables control for the fact that deal performance may behave differently depending on the deal vintage. Our key variable of interest is the coefficient on the SMBO dummy variable: it can be interpreted as the outperformance of SMBOs relative to LMBOs, after controlling for vintage effects.

Table 2 summarizes the results of the regression. The estimate of the SMBO coefficient is 0.05, suggesting a high economic significance of the SMBO effect: the TVPI CAGR on SMBOs is 5% higher than the CAGRs of LMBOs. Importantly, such outperformance is also highly statistically significant: the null hypothesis of no effect is rejected at the 5% confidence level.

In unreported results (available upon request), we additionally verify that the results are robust to the exclusion of outliers and substage classification approach.

---

8 Preqin does not capture the substage of buyout funds directly but uses a $1.5bn threshold as a proxy to distinguish between SMBO and LMBO funds in vintages from 2005.

9 The 2000 vintage dummy is dropped as standard practice to avoid multi-collinearity.
IMPORTANT DISCLOSURE

This publication has been prepared solely for illustration, educational and or discussion purposes. It does not constitute independent research and under no circumstances should this publication or the information contained in it be used or considered as an offer, inducement, invitation, solicitation or recommendation to buy or sell any security or financial instrument or service or to pursue any investment product or strategy or otherwise engage in any investment activity or as an expression of an opinion as to the present or future value or price of any security or financial instrument. Nothing contained in this publication is intended to constitute legal, tax, securities or investment advice.

This publication may include “forward-looking statements”. All projections, forecasts or related statements or expressions of opinion are forward looking statements. Although Pantheon believes that the expectations reflected in such forward-looking statements are reasonable, it can give no assurance that such expectations will prove to be correct, and such forward-looking statements should not be regarded as a guarantee, prediction or definitive statement of fact or probability.

Pantheon has taken reasonable care to ensure that the information contained in this document is accurate at the date of publication. However, no warranty or guarantee (express or implied) is given by Pantheon as to the accuracy of the information in this document, and to the extent permitted by applicable law, Pantheon specifically disclaims any liability for errors, inaccuracies or omissions in this document and for any loss or damage resulting from its use. Unless stated otherwise, any opinions expressed herein are current as of the date hereof and are subject to change at any time. Unless stated otherwise all views expressed herein represent Pantheon's opinion.

This document is distributed by Pantheon which is comprised of operating entities principally based in San Francisco, New York, London and Hong Kong. Pantheon Ventures Inc. and Pantheon Ventures (US) LP are registered as investment advisers with the U.S. Securities and Exchange Commission (“SEC”) and Pantheon Securities LLC, is registered as a limited purpose broker-dealer with the SEC and is a member of the Financial Industry Regulatory Authority (“FINRA”) and the Securities Investor Protection Corporation (“SIPC”). Pantheon Ventures (UK) LLP is authorised and regulated by the Financial Conduct Authority (FCA) in the United Kingdom. Pantheon Ventures (Ireland) DAC is regulated by the Central Bank of Ireland (“CBI”). Pantheon Ventures (HK) LLP is regulated by the Securities and Futures Commission (“SFC”) in Hong Kong.

The registrations and memberships described above in no way imply that the SEC, FINRA, SIPC, FCA of the SFC have endorsed any of the referenced entities, their products or services, or this material.

All materials published on the Site are protected by copyright, and are owned or controlled by Pantheon as the provider of the materials. If you download any information or software from this Site, you agree that you will not copy it without the prior written consent of Pantheon or remove or obscure any copyright or other notices or legends contained in any such information.

Copyright © Pantheon 2019. All rights reserved. PVL 12355