

SBOs between private equity funds. Economic effects on the re-acquired target companies.

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*Abstract*

Using a sample of 190 leveraged buyouts that include two rounds of private equity ownership, the objective of this study is to analyze the effects of secondary buyouts

(SBOs) on acquired target companies that had already enjoyed/suffered the governance of a private equity fund. We do it from a comparative/accumulative point of view, that is, considering the effects of the previous (primary) buyouts (PBOs). Our results indicate that SBOs do not create value for the target companies and that their effects do not differ significantly from those of PBOs. Target companies enter SBOs in a much worse financial status than they do in their previous PBOs, so there is a negative chain effect over their two stages of private equity ownership. SBOs do not improve the operating performance. On the other hand, the prices paid in SBOs are as high as those paid in PBOs, which reproduces the multiplicative effect on assets with a very damaging effect on the return on assets (ROA). However, goodwill is significantly higher for SBOs. Finally, SBOs also leave companies at very high debt levels. Given the damage in ROA, this turns into a worsening of their Financial Leverage Gain. The idea that under SBOs the increase in financial leverage risk makes up for the reduced operational value creation (Achleitner and Figge, 2014) does not hold here.

## 1. Introduction

The debate on the effects of leveraged buyouts (LBOs), far from being solved and, if necessary regulated, has been magnified in recent years by the emergence of a new phenomenon derived from them. These are known as Secondary Buyouts (SBOs), that is, those cases in which not only the buyer but also the seller is a private equity fund. An SBO is an LBO where the private equity sponsor, who had previously taken control of a target through a previous LBO (identified as primary buyout, PBO), sells the target firm to a second private equity firm instead of selling it back to the public market or to an industrial group. Tagged as *pass the parcel* (pass the ball), it is about the transfer of ownership of companies from some private equity funds to others.

Although SBOs have always been an exit alternative for target companies acquired in LBOs, their importance has traditionally been minor. With the maturity of the private equity industry, however, and, especially in the last decade, SBOs have become one of the most repeated alternatives for both buying and selling funds.

The secondaries market began to form in the US in the early 1980s to provide the liquidity that some limited partners (LPs) were seeking. By 2006, secondaries fundraising had crossed the \$20 billion threshold with 33 funds. Annual totals stayed around this level until 2016, when there was a spike to \$37.0 billion across 62 funds. Global annual secondaries transaction volume jumped from \$60 billion in 2020 to a peak of \$134 billion in 2021.

Despite the rapid growth of SBOs and the interest of both academics and practitioners in the field, there is not a great variety of studies yet and in general results do not clarify what are the actual effects of SBOs. There is concern on the authentic role of these repeated buyouts. If we carefully analyze the reasons that explain its spectacular development, it does seem logical to think that these *LBOs in chain* might obey the interests of the private equity industry and not reasons of genuine economic development (value creation). Wang (2012) poses that SBOs do not occur for the benefit of improving the target firms, but rather as a way for private equity firms to help each other solve their investing and exiting problems. We are, therefore, before an “unprecedented phenomenon” that, given its political and social connotations, it is necessary to study.

Many are sceptical of this type of purchase as they consider it too expensive and potentially underperforming since value creation would have already occurred in the initial round (PBO, primary buyout) (Achleitner and Figge, 2014). On the other hand, for their success, SBOs require extra work at the operational level and therefore longer holding periods and the evidence suggests that such periods are shorter for SBOs (Bonini, 2015).

Furthermore, given the equity/debt market conditions under which most SBOs occur, prices paid and leverage used to finance the operations are also at very high levels which only enhances the aggressiveness so criticized in LBOs (Appelbaum and Batt, 2014,

2019; Phalippou, 2019; Canderle, 2012, 2016, 2018). Similar to what happens with LBOs, both prices and leverage are also ingrained into the SBO-target company<sup>1</sup>.

The objective of this study is to analyze the actual effects of SBOs. Most studies do it by considering the returns of the PE funds (IRRs) as their main reference (Degeorge, Martin and Phalippou, 2013, 2016; Eschenröder, 2019; Eschenröder, Hartmann-Wendels, 2019). Our main interest, however, is in the effects of SBOs on the acquired target companies which have already enjoyed/suffered the governance of a preceding private equity fund<sup>2</sup>. We do it from a comparative/accumulative point of view, that is, considering the effects of the previous PBOs. We thus study to what extent SBOs hold a value creation potential after a presumably efficient PBO or just obey strategic interests of the funds that would not have been possible under a different exit scenario and that disregard their cumulative effects over the target companies. We apply a comprehensive (interactive) value-creation approach that considers not only the purely operational aspects (cost-cutting efficiency vs. strategic growth), but also the influence that both the prices paid for the target companies and the leverage used to finance them have in the process of value creation/destruction.

We use a sample of 95 Spanish target companies that experienced two subsequent private equity acquisitions, a PBO and a subsequent SBO. We test operating, pricing and leverage proxies for both situations. Spain is an adequate scenario for this purpose because the SBO phenomenon, although with a slight delay in relation to other countries, has also happened in a significant way (Figure 2). According to data from the annual publications of the Spanish Venture Capital Association (ASCRI, now known as SPAINCAP), SBOs have gone from constituting 4% of total exits in 2001 to do so by 33% from 2018 (with the sole exception of 2020 due to the covid). So far in 2022 (data not yet collected by ASCRI) transfers between private equity funds have already reached 7,000 million euros. The year 2022 will *go down in history as the year of secondary mega-purchases among private equities in Spain*. (Capital Privado, 2022). This is due to the strong competition between funds fuelled by the strong interest of international investors who already concentrate more than 88% of the volume invested in the first half of the year in Spain.

Our results indicate that SBOs do not create value for the target companies and that their effects do not differ significantly from those of PBOs. Target companies enter SBOs in a much worse financial status than they do in their previous PBOs, so there is a negative chain effect over their two stages of private equity ownership. SBOs do not improve the operating performance. Ebitda variation is negative and even though sales might increase at the beginning of the holdout period, Ebitda margins do not improve. On the other hand, the prices paid in SBOs are as high as those in PBOs, which reproduces the multiplicative effect on assets with a very damaging effect on assets turnover and the

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<sup>1</sup> As we will explain later, the balance sheet of the target company experiments a radical change as a consequence of both circumstances.

<sup>2</sup> The US-company Simmons Bedding went through five LBOs in less than two decades. Each time the deal got larger and the debt load got heavier. The company ended filing for Chapter 11 (bankruptcy proceeding) while various private equity firms have profited \$750 million from the five buyouts.

return on assets (ROA). Goodwill is significantly higher for SBOs. Finally, SBOs also leave companies at very high debt levels. Given the damage in ROA, this turns into a worsening of their Financial Leverage Gain and of final ROEs. The idea that under SBOs the increase in financial leverage risk makes up for the reduced operational value creation (Achleitner and Figge, 2014) does not hold here.

This study contributes to the SBO literature with a comprehensive view of the effects on target companies. Most studies focus on the effects on the internal rates of returns (IRR) for the funds and only partially at the target level (operational performance only). They lack a thorough discussion on the effects of SBO prices and leverage on the financial status of the second-round-acquisition companies. Our study is relevant not only because of the swift ascent of SBOs, but also because the geopolitical and economic crisis of 2023 is witnessing a deceleration of the economy and in the activity of the private equity funds, especially those that base their strategy on the abuse of financial leverage.

The remainder of the paper is organized as follows. Section 2 shows a review of literature and hypothesis. Section 3 explains data sample and methodology. Section 4 shows the main results of the analysis and we end up with some conclusions and implications.

## *2. Literature review and hypotheses*

The literature on SBOs is quite coincidental in the factors that lead to SBOs but not that explicit on their actual effects, even less so in the case of target companies. Most of these studies compare the role of SBOs on the IRRs of the funds considering that of their previous PBOs (Degeorge, Martin and Phalippou, 2013, 2016; Eschenröder, 2019; Eschenröder, Hartmann-Wendels, 2019).

As for the factors that drive SBOs, Bonini (2015) indicates that the likelihood of exiting transactions through SBOs increases quickly in response to upward movements in LBO market leverage and downward movement in the cost of acquisition financing. Obviously, the favourable conditions of the debt market over the last two decades (easy access and near-zero cost) have encouraged the volume of SBOs. Additionally, the first-round deal's duration, the deal size and the buyer's reputation are positive determinants of secondary transactions.

Following Kaplan and Strömberg (2009), the value creation achieved in LBOs is usually split between three drivers: operational performance improvements, the leverage effect and governance. We consider governance a driver already ingrained in the operating section but include an additional factor, the prices paid in the buyouts.

Different authors show arguments opposite to SBOs in each of these three aspects (Bonini, 2010; Sousa 2010; Wang 2012; Achleitner and Figge, 2014). First, the operational value creation potential in SBOs is thought to be limited, since the first private equity sponsor will already have realised all the easily realised value creation measures with the largest impact. Second, SBOs only present an attractive deal option if the second

financial sponsor is able to take advantage of attractive debt market conditions to increase the financial risk of the transaction to make up for the reduced operational value creation potential. Finally, they argue that SBOs are overpriced, which obviously does not help the returns of the private equity funds.

### *Operating performance (hypothesis 1)*

Both Bonini (2015) and Eschenröder (2019) analyse the impact of the operating performance of a portfolio company during a PBO on the performance of the following SBO and derive value drivers and their influence on the SBO. Bonini (2015) results allow the rejection of the hypothesis that operating value creation can be the main driver of an SBO. Likewise, Eschenröder (2019) says that the reasons to engage in an SBO from a buying perspective are not that obvious. The underlying portfolio company should have been optimised and only limited potential to create additional value is left for another consecutive financial investor (Wang, 2012; Jenkinson and Sousa, 2015; Bonini, 2015).

It is worth thinking, however, that with the rapid growth experienced by SBOs it is not possible that the reasons that lead to this type of purchase are always negative even for the target company. Some explanations to understand the economic logic behind secondary buyouts would be that the PBO fund approaches the end of its lifetime and decides to leave the company even if there is significant operational performance improvement potential left (Sousa, 2010, Jelic and Wright, 2011; Achleitner and Figge, 2014). This potential would come from new private equity funds that would better utilize the assets or that show differing skills from the previous financial sponsor that allow for different value creation strategies (Achleitner and Figge, 2014; Degeorge et al., 2016; Eschenröder and Hartmann, 2018). Financial sponsors may exit an investment early with the aim to generate a tangible track record to facilitate fundraising (Sousa, 2010; Wang, 2012) or to try to achieve a stable cash flow profile (Strömberg, 2007).

Other aspects are also pointed, but more centred in the yielding of the funds<sup>3</sup>. Some of them would be liquidity-based market timing, private equity firms' efforts to "time" market conditions and their liquidity needs (Wang, 2012) or the aim of the sponsor to generate a tangible track record to facilitate fundraising (Achleitner and Figge, 2014; Sousa, 2010; Wang 2012) or to achieve a stable cash flow profile (Achleitner and Figge, 2014; Strömberg, 2007).

Faced with such a variety of pro and against arguments, it is worth considering whether the operating performance of SBOs is worse or at least not different from the performance of PBOs. We thus center our first hypothesis in the operating performance of the company. We limit our view of operating performance to the operating section of the income statement, that is, the evolution of Ebitda, sales and their mutual relation (operating margin). We thus open our arguments to either cost-cutting efficiency or to a

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<sup>3</sup> As in the LBO claims there might be positive effects for the sponsors or even the funds but simultaneously negative for the target companies (Canderle, 2018).

sales growth strategy. Wang (2012) says that the seasoned management team in a SBO might focus on operational improvement in the form of sales growth and subsequent economic margin expansion (operating leverage), since the efficiency (cost-cutting) will most likely have been realised in the first buyout.

*Hypothesis 1: SBOs exhibit lower improvement in operating performance than primary buyouts.*

#### *Prices paid in the buyouts (hypothesis 2)*

We leave the study of asset turnover and ROA for this second hypothesis. Our second driver related with value creation refers to the prices paid in the buyouts. Wang (2012) shows that secondary buyouts are associated with a 19% higher enterprise value and an approximately 14% higher enterprise multiple, compared to first-time buyouts. These results are consistent with the idea that more SBOs occur when the market conditions are favourable. Furthermore, the strong competition between the funds themselves has led to a significant increase in the prices paid for them (the Ebitda multiples paid have risen 8 times in recent years).

We hypothesize on the effect of pricing before that of leverage as we follow the stages of the classical DuPont profitability analysis as shown in Figure 1. From a target company standpoint, prices paid are assumed by the own acquired target companies thus suffering a notable increase in their recognized assets (goodwill mostly). Therefore, if the price of the SBO is high, it will have a penalizing effect on the asset turnover ratio and consequently on the return on assets (ROA)<sup>4</sup>.

*Hypothesis 2: Prices paid in an SBO affect value creation at the target level more than in its previous PBO.*

#### *Financial leverage used in the buyouts (hypothesis 3)*

A final driver for value creation/destruction in an LBO target company is the leverage effect (Kaplan and Strömberg, 2009). SBOs are an attractive deal option when the new private equity sponsor is able to take advantage of attractive debt market conditions to increase the financial risk of the transaction to make up for the reduced operational value creation potential (Achleitner and Figge, 2014). From the target company standpoint, a

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<sup>4</sup> The dramatic increase suffered in the balance sheet of the post-buyout version of target is the consequence of its accounting integration with the Special Purpose Vehicle (Newco) created to execute the acquisition (see Sample section). Although some researchers consider it necessary to eliminate the effect of this accounting formality (fair value revaluation plus goodwill recognition) the target is in fact compromising cash flows for a mere appraisal of its pre-LBO net assets.

high leverage ratio should thus lead to a favourable Financial Leverage Gain. This will only occur, however, if ROA is not seriously damaged<sup>5</sup>.

LBOs usually generate significant tax shields due to increased leverage and higher tax deductible interest payments that may intuitively motivate repeated buyouts. However, as demonstrated in Kaplan (1989) and Renneboog et al. (2007), expected tax savings are highly correlated with premiums paid to shareholders at the moment of the buyout. This evidence suggests that the tax benefits of increased debt are largely embedded in the price paid to existing equity holders, leaving very limited room for tax driven returns to second round private equity investors. In the light of these contributions and consistent with DeGeorge et al. (2013), Jenkinson and Sousa (2011), and Jenkinson and Stucke (2011), we think that tax savings are not a significant differential factor in explaining the impressive growth in SBO activity.

Since private equity in SBOs benefit from existing relationships with lenders, they will tend to bear higher levels of indebtedness. That is, all the criticisms made about leveraged buyouts are multiplied in the case of SBOs. The situation and therefore the need for an investigation that justifies its regulation is critical, not only because of its volume but also because of the expected scenario of interest rate rises and geopolitical instability that may further aggravate the effects on the business fabric.

*Hypothesis 3: Financial leverage used in an SBO affects value creation at the target level more than in its previous PBO.*

INSERT FIGURE 1 HERE

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<sup>5</sup> From a Return on Assets (ROA) perspective, overpayment seriously penalizes the denominator but does not give any reward in the numerator. This negative ROA effect reduces seriously the probability that the target company enjoys the financial leverage gain derived from its maximized level of debt.



### *3. Spanish SBOs and sample construction*

#### *SBOs in Spain*

In Spain, the SBO phenomenon, although with a slight delay in relation to other countries, has also been observed (Figure 2). According to data created from the annual publications of the Spanish Venture Capital Association (ASCRI, now known as SPAINCAP), SBOs have gone from constituting 4% of total exits in 2001 to do so by 33% from 2018 (with the sole exception of 2020 due to the covid). So far in 2022 (data not yet collected by ASCRI) transfers between private equity funds have already reached 7,000 million euros. According to private capital, 2022 will go down in history as the year of secondary mega-purchases among private equities in Spain. This is due to the strong competition between funds fuelled by the strong interest of international investors who already concentrate more than 88% of the volume invested in the first half of the year in Spain. To this is added "the high liquidity" that the managers treasure after several years of record capture of new funds and the urgency exhibited by the venture capital funds to rotate their portfolios in Spain as well.

INSERT FIGURE 2 HERE

#### *Sampling process*

We first identify private equity backed buyout deals occurring during the years 2000 to 2018, a broad period that includes different macro scenarios that affect the volume and level of debt utilized in the buyouts (Axelson et al., 2013). The source of use to identify buyouts is the press release section of Asociación Española de Capital, Crecimiento e Inversión (ASCRI)<sup>6</sup>. To be included in our sample of private equity buyouts the transaction must meet the following criteria:

1. The target firm must be headquartered in Spain.
2. A private equity fund or syndicate (club deal) must acquire controlling ownership in the target company. Cases where the percentage stake acquired is below 50% are excluded as our objective is to focus exclusively on private equity controlling activities.
3. We exclude venture capital cases by identifying targets that are less than 5 years old.
4. We also exclude cases where the private equity fund acquires a minority stake.

Next, a detailed process is carried out to reconstruct the technical features of each buyout transaction. First, we identify the legal registration number (LRN) of the target

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<sup>6</sup> ASCRI (SPAINCAP since 2022) is the professional association that brings together venture capital and private equity firms in Spain. Other EU studies have also used a publicly available industry-based source as their first step (e.g. Battistin *et al.*, 2017 in Italy use Private Equity Monitor).

company, which requires a painstaking attention to detail, because in a considerable number of cases the names through which companies are commonly known do not correspond to their registered legal names.

With LRN in hand, we determine whether a special purpose vehicle (SPV, Newco) has been used for the LBO execution. SPVs are a trick-strategy used by private equity funds to transfer the risks and responsibilities of the buyout (debt mostly) to the target company without breaking the financial assistance legislation in Europe<sup>7</sup>. This is a necessary step to consider the buyout as a leveraged one as in LBOs the leverage is initially set in the SPV. Given its subsequent consolidation/merger with target, SPVs became, at all effects, the post-LBO version of target. We then gather the accounting information from the SABI<sup>8</sup> database from 2 years pre-buyout (t-2) to 5 years post-buyout (t+5). We eliminate cases where financial statements are not available for a minimum of one year before and one year after the buyout.

The second part of the sampling process consists of identifying which of the above list of buyouts are in fact SBOs. For that purpose, we require that the seller is a private equity fund and that the previous PBO is also included in the sample. We find 95 companies that suffered two subsequent rounds of private equity acquisition. For each PBO/SBO we also obtain the price paid in the acquisition by looking up the disclosure notes related with the business combination, which also give us a breakdown of the price components: book value, revaluation and goodwill. A high percentage of goodwill indicates the existence of overpayment which is a signal of potential value destruction.

The existence of an SPV originates the problem of which set of financial statements (target vs. SAV, individual vs. consolidated) use for the post-buyout years. In our opinion, post-buyout data should encompass not only the actions (strategic/operating) carried out by the new (private equity-supervised) management team but also the risk and responsibilities that lie within the target but are initially registered by SPV (high price and high leverage, mostly). For buyouts where SPV is used but the target is not merged into it, the effects will be allocated over two different sets of financial statements (aggressiveness of entrance in SPV and subsequent economic actions in target) so the right option to join these effects is the consolidated statements of SPV. If the target merges into SPV and is thus legally dissolved, the alternative will be the individual (post-merger) financial statements of SPV. Target disappearance does not justify the elimination of the case as many studies might be doing. In any case, for both pre and post LBO data, we try to avoid the use of individual financial statements if long-term investments (that could refer to subsidiaries below the target) exceed 40% of the total assets. For these cases we try to use consolidated statements, although these are not always available. Gaspar (2012) recognizes that an unconsolidated basis can be a problem

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<sup>7</sup> Since 1976 the Second Company Law EU Directive (now Directive 2006/68/CE) contains a prohibition against companies advancing funds, making loans or providing security with a view to the acquisitions of their own shares. In Spain this financial assistance prohibition is further regulated in art. 143 of Spanish Corporate Law (Ley de Sociedades de Capital, 2010).

<sup>8</sup> SABI (Sistema de Análisis de Balances Ibéricos) is a database with financial information of more than 2.6 million public and private companies in Spain and Portugal.

because buyers often use acquisition vehicles to acquire the targets and restructure the assets purchased after the acquisition and that a case by case verification of the consistency between reported accounts.

Table 2 presents the final composition of the PBO-SBO sample. Panel A shows the buyouts divided in four periods, early 2000s, the 2004-2008 boom years, the 2009-2015 recession and the final 2016-2018 period. As it is obvious unlike the PBOs which are more centered, most SBOs occur during the last two periods. Panel B organizes them by the length of the holding period. Around half of the PBOs have a holding period of at least 5 years. On average the holding period is shorter for SBOs as stated in the literature. Table 1 presents definitions for all the variables used in the analysis. The main variable Financial Dummy is a 1,0 variable used to differentiate between SBOs (1) and their previous PBOs (0). Other variables are....

INSERT TABLES 1 and 2 HERE

#### *4. Results*

Table 3 presents median values for different fundamentals (Sales, Ebitda, Total assets) and the basic financial ratios of the DuPont analysis for the period (t-2, t+5) where t is the year of the buyout. Panel A presents values for PBOs and panel B does the same for the SBOs. Panel C shows a statistical test of the PBO-SBO differences.

##### *Financial status pre-buyout*

The financial situation pre-buyout is clearly better for the target of the first round (PBO, panel A) than that of the second round (SBO, panel B). Target companies entering a PBO have a higher Ebitda margin (0.14 vs. 0.12) and ROA (0.15 vs. 0.10) than targets entering an SBO. Debt levels are lower before the first round (0.57 vs. 0.70). This evidence is confirmed in Panel C as most differences are statistically significant only in the pre-buyout years. Altogether, we can see that a PBO deteriorates the health of the target companies so they enter the SBO round in a more delicate state. Evidence of what happens in the PBO (value creation/destruction) is a fundamental step for a proper discussion of the role of the subsequent SBOs.

##### *PBO pre-post analysis*

In absolute terms, PBOs (panel A) generate a rapid increase (t+1) in all three fundamentals, Ebitda (53%), Sales (63%) and especially in total assets that triple their value with the accounting recognition of the business combination (68,369 vs. 23,486).

This sudden increase in Total assets is the consequence of target companies assuming the high price of its own acquisition in their own balance sheet. Especially shocking is the increase in the ratio of intangibles to total assets (0.02 to 0.349) that stems from the notorious goodwill included in the price. From an operating standpoint, Ebitda margin increases the first year but then goes on a downward slope over the rest of the holding period. Even more intense is the decrease in ROA (Ebitda/Total assets) that drops almost six percentage points. Finally, the leverage ratio (Debt/Equity) rises a lot (0.57 to 0.74) but average target companies do not seem to benefit from it for value creation purposes.

### *SBO pre-post analysis*

Panel B shows comparative results for SBOs. Initial increases occur post-SBO in sales (up to t+2) and in Ebitda (t+3). Ebitda margin increases up to the third year post-SBO. However once Total assets are incorporated into the analysis, the SBO gives rise to a noticeable decrease in ROA. Once again, and also for SBOs the effect of prices in total assets is decisive (total assets increase 48%, but they multiply almost 7-fold over the two rounds). This increase in the balance sheet dimension is economically fictitious as it is not accompanied by an equivalent increase of the operating performance in the income statement. In fact, tangible assets remain virtually unchanged and the increase is mostly in goodwill. Debt/Equity ratio levels hold post SBO, which means that SBOs are also using a high proportion of debt. This debt, however does not turn into a favourable Financial leverage gain, so they do not create value either.

INSERT TABLE 3 HERE

### *PBO vs SBO pre-post analysis*

Table 4 shows variations of both Sales, Ebitda and of the main DuPont ratios between different versions of pre-post buyout period. Each column indicates the ending point of the variation period with t-1 as the beginning point in all cases. The last column defines the ending point as of the year of exit. As in Table 3, panels A and B refer to PBO and SBO, respectively. For PBOs, we observe how companies achieve increases in both Sales and Ebitda in all periods but (i) the accumulated increases wane with the length of the period meaning that actual increases occur only the first year and (ii) the increase in Ebitda is always lower than that of sales, which turns into a continuous decrease in Ebitda margin (actual value creation). A similar pattern is observed with SBOs, except for years 2 and 3. Confirming the evidence in Table 3, once we incorporate the effect of buyout prices into total assets, ROA follows a negative trend which is more clear for PBOs. This eventually pulls down the Financial leverage gain (always decreasing) despite the strong levels of debt.

INSERT TABLE 4 HERE

*PBO vs SBO price paid and leverage*

Table 5 shows mean and median values for Ebitda multiples of leverage, prices and goodwill. Whereas prices and leverage show very close values, a clear difference is observed in goodwill. This means not only that prices and the proportion of debt are also high in SBOs but also that there is more potential overpayment in them.

INSERT TABLE 5 HERE

*Multivariate regressions*

*Operating performance results.*

Table 6 shows multivariate regressions of operating value-creation proxies on the dependent variable Financial Dummy and on control variables. Financial Dummy takes value 1 for SBOs and 0 for their previous PBOs. The first two columns include the pre-post buyout increase in Sales and in Ebitda and the last one is pre-post buyout variations in Ebitda margin. The variations are calculated as the annual increase between the entry and exit moments. For unrealized transactions, the last valuation date is used instead of the exit value.

INSERT TABLE 6 HERE

In none of the regressions the Financial Dummy variable is significant which means that there is no difference between PBOs/SBOs. In both cases it seems that there is potential to increase Sales and Ebitda but the increase in Ebitda is lower than the increase in Sales, thus reducing the margin. Hence, none of the two possible strategies (cost-cutting and organic growth), have a positive effect on the operating margin.

*Prices paid and ROA results.*

Table 7 includes the results for the multivariate regressions of goodwill and price multiples and of asset turnover ratio (that measures their effect on profitability). SBO deals seem to pay the same multiples than their previous PBOs but with a higher

percentage of goodwill. Higher goodwill multiples could negatively affect profitability since the evaluation of goodwill could include non-economic assets. However, the insignificant coefficient of the financial dummy shows that there are no differences in the assets turnover between both groups of LBOs.

INSERT TABLE 7 HERE

*Leverage multiples and Financial leverage gain results.*

Table 8 exhibits the multivariate estimations of leverage multiples, and the possible gains obtained by using high leverage levels. The SBO dummy variable is non-significant for both specifications. That is, PBOs and SBOs maintain similar high leverage levels and there are no differences in the Financial leverage gain. Taking in account the descriptive statistics from table 5, it seems that far from adding value, the injection of high levels of debt value is reducing the profitability of the target firms.

INSERT TABLE 8 HERE

Overall, and given the lack of significance of the Financial Dummy variable, the above results might seem irrelevant. However, they have, in fact, serious implications. They indicate that SBOs repeat the pattern of their previous PBOs, which could have a two-fold reading depending on what actually occurs in the PBOs. If PBOs create value, this would mean that SBOs are likewise doing it at similar levels, which would contradict the low-hanging fruit theories of the SBO literature. On the contrary, if PBOs destroy value, the results would mean that SBOs are reproducing the destruction. The evidence in Tables 3 and 4 leads us to opt for the second version. Confirming the data in Table 3, the three important ratios of the DuPont analysis decrease. The fact that at certain stages of the holding period there could be positive variations in Sales or even Ebitda could come from aggressive cost-cutting with very short-term extent or from inorganic growth that in no case achieves the reward in the form of operating margin of a significant/lasting operating leverage effect. In fact this means that SBOs are in fact an extensión of PBOs in the deteriorating process of the acquired target companies.

*5. Conclusions*

Using a sample of 95 SBOs and their previous PBOs, the objective of this study has been to analyze the effects of SBOs on the acquired target companies which have already

enjoyed/suffered the governance of a preceding private equity fund<sup>9</sup>. We have done it from a comparative/accumulative point of view, that is, considering the effects of the previous (primary) buyouts (PBOs).

Our results show that SBOs do not create value for the target companies and that their effects do not differ significantly from those of PBOs. Target companies enter SBOs in a much worse financial status than they do in their previous PBOs, so there is a negative chain effect over their two stages of private equity ownership. SBOs do not improve the operating performance. Ebitda variation is negative and even though sales might increase at the beginning of the holdout period, Ebitda margins do not improve. On the other hand, the prices paid in SBOs are as high as those in PBOs, which reproduces the multiplicative effect on assets with a very damaging effect on assets turnover and the return on assets (ROA). Goodwill is significantly higher for SBOs. Finally, SBOs also leave companies at very high debt levels. Given the damage in ROA, this turns into a worsening of their Financial Leverage Gain and of final ROEs. The idea that under SBOs the increase in financial leverage risk makes up for the reduced operational value creation (Achleitner and Figge, 2014) does not hold here.

## *6. References*

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<sup>9</sup> The US-company Simmons Bedding went through five LBOs in less than two decades. Each time the deal got larger and the debt load got heavier. The company ended filing for Chapter 11 (bankruptcy proceeding) while various private equity firms have profited \$750 million from the five buyouts.

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*Figures and Tables*

$\text{ROE} = \text{ROA} + \text{Financial Leverage Gain}$ $= \text{ROA} + (\text{ROA} - \text{Cost of debt}) * \text{Leverage}$		
<i>Stage 1 (H1) Operating performance</i>		
Ebitda, Sales	Operating margin	
<i>Stage 2 (H2) Transaction prices</i>		
Total assets	Assets turnover	ROA
<i>Stage 3 (H3) Financial leverage</i>		
Debt, Equity	Financial Leverage Gain	ROE

Figure 1: Sequence of hypotheses following DuPont profitability analysis

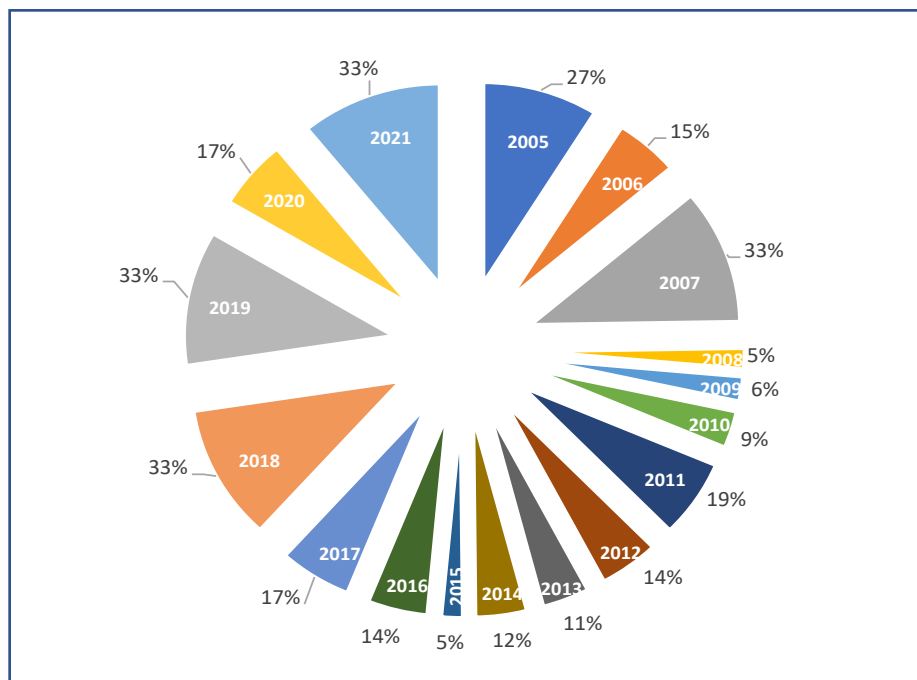


Figure 2. SBO exit percentage evolution in Spain  
Source: Own elaboration from ASCRI publications.

Table 1. Definitions for the variables used in this paper.

Financial Dummy	This dummy takes a value of 1 if the target firm is acquired in a Secondary Leverage Buyout and 0 otherwise.
Sales	Portfolio company's sales from t-2 to t+5, reported in EURm.
Sales Growth	Portfolio company's compound annual sales growth, achieved between t-1 and exit. For unrealized transactions, the sales figure reported at the last valuation date is used instead of the exit value.
Sales Growth entry	Portfolio company's sales growth at investment entry
Size	Portfolio company's total assets from t-2 to t+5, reported in EURm.
Size entry	Portfolio company's logarithm of total assets at investment entry.
EBITDA	Portfolio company's EBITDA from t-2 to t+5, reported in EURm.
EBITDA Growth	Portfolio company's compound annual EBITDA growth, achieved between investment entry and exit. For unrealized transactions, the EBITDA figure reported at the last valuation date is used instead of the exit value.
EBITDA Margin	Portfolio company's EBITDA/sales margin at investment entry.
Margin Delta	Portfolio company's change in EBITDA margin between entry and exit, i.e. $\text{Log}(1+\text{EBITDA Margin@Exit}) - \text{Log}(1+\text{EBITDA Margin@Entry})$ . For unrealized transactions, the EBITDA figure reported at the last valuation date is used instead of the exit value.
Turnover	Portfolio company's EBITDA/total assets from t-2 to t+5.
Turnover Delta	Portfolio company's change in Turnover between entry and exit, i.e. $\text{Log}(1+\text{Turnover@Exit}) - \text{Log}(1+\text{Turnover@Entry})$ . For unrealized transactions, the EBITDA figure reported at the last valuation date is used instead of the exit value.
FLG	Portfolio company's financial leverage gain from t-2 to t+5.
FLG Delta	Portfolio company's change in Financial Leverage Gain between entry and exit, i.e. $\text{Log}(1+\text{FLG@Exit}) - \text{Log}(1+\text{FLG@Entry})$ . For unrealized transactions, the EBITDA figure reported at the last valuation date is used instead of the exit value.
Intangible	Portfolio company's intangible/total assets from t-2 to t+5.
ROA	Portfolio company's operating results to total assets at investment entry.
Current ratio	Portfolio company's current assets to current liabilities ratio at investment entry.
Debt_EBITDA	Portfolio company's total debt to EBITDA ratio at investment entry.
Debt_at	Portfolio company's total debt to total assets ratio at investment entry.
Price_EBITDA	Portfolio company's price to EBITDA ratio at investment entry.
GW_EBITDA	Portfolio company's goodwill to EBITDA ratio at investment entry.
Duration	Holding period measured in number of years
Time Dummies	Time dummies variable used to control for year fixed effect.

Note: when need we use the variable in t-1, the year t present some missing value or the accounting period is less than 12 months. Furthermore, all variables have been winsorized at the 1% level.

Table 2. Sample composition

	0		1		2		3		4		5		Total
PBO	2	2%	6	6%	9	9%	16	17%	12	13%	50	53%	95
SBO	8	8%	18	19%	11	11%	16	17%	11	11%	32	33%	96
Total	10		24		20		32		23		82		191

	1998-2003		2004-2008		2009-2015		2016-2022		Total
PBO	7	7%	35	37%	44	46%	3	3%	95
SBO	0	0%	7	7%	32	33%	46	48%	96
Total	7	4%	42	22%	76	40%	49	26%	191

Table 3. Pre-post median values for the main variables

	-2	-1	1	2	3	4	5							
<b>Panel A: PBO</b>														
Sales	30,852	30,377	49,180	50,569	45,852	44,574	40,392							
Total Assets	25,176	23,486	68,369	69,038	74,185	73,133	73,466							
Ebitda	3,503	4,484	6,867	5,096	5,966	3,851	3,171							
Intang_TA	0.032	0.024	0.341	0.401	0.421	0.420	0.421							
TD_TA	0.610	0.578	0.745	0.852	0.872	0.834	0.830							
Ebitda_Sales	0.147	0.148	0.154	0.136	0.133	0.121	0.107							
Ebitda_TA	0.140	0.150	0.095	0.093	0.096	0.091	0.077							
FLG	0.139	0.171	0.169	0.136	0.192	0.141	0.039							
N	84	86	86	86	79	62	52							
<b>Panel B: SBO</b>														
Sales	74,497	82,393	93,517	112,498	107,915	92,013	61,407							
Total Assets	104,983	114,176	169,372	159,861	155,605	115,131	93,106							
Ebitda	8,782	8,560	8,403	7,709	10,688	8,094	8,465							
Intang_TA	0.317	0.299	0.427	0.423	0.404	0.415	0.383							
TD_TA	0.742	0.752	0.737	0.765	0.830	0.914	0.769							
Ebitda_Sales	0.127	0.127	0.137	0.135	0.142	0.118	0.114							
Ebitda_TA	0.097	0.109	0.086	0.076	0.086	0.080	0.064							
FLG	0.145	0.161	0.086	0.126	0.104	0.084	0.051							
N	89	89	73	59	44	30	21							
<b>Panel C: SBO - PBO</b>														
Sales	43,645	***	52,017	***	44,337	***	61,929	***	62,063	***	47,439	**	21,015	
Total Assets	79,807	***	90,691	***	101,003	***	90,823	***	81,420	***	41,997	*	19,640	
Ebitda	5,278	***	4,075	***	1,537	**	2,613	**	4,722	**	4,243		5,294	**
Intang_TA	0.286	***	0.275	***	0.085	**	0.022	**	-0.017	**	-0.006		-0.038	**
TD_TA	0.132	***	0.173	***	-0.008	**	-0.087	**	-0.043	**	0.079		-0.062	**
Ebitda_Sales	-0.020	***	-0.021	***	-0.017	**	-0.002	**	0.009	**	-0.003		0.008	**
Ebitda_TA	-0.043	**	-0.042	**	-0.009	**	-0.017	**	-0.010	**	-0.011		-0.013	**
FLG	0.006	**	-0.011	**	-0.083	**	-0.010	**	-0.088	**	-0.057		0.011	*
N	84		86		73		59		44		30		21	

Table 4. Median variation values for different pre-post periods

	1	2	3	4	5	Total
<b>Panel A: PBO</b>						
Sales_g	0.473	0.287	0.147	0.130	0.116	0.170
Ebitda_g	0.328	0.220	0.106	0.076	0.034	0.096
Ebitda_sales_g	-0.001	-0.002	-0.009	-0.009	-0.011	-0.005
Ebitda_TA_g	-0.017	-0.027	-0.029	-0.039	-0.055	-0.018
FLG_g	-0.005	-0.024	-0.002	-0.035	-0.046	-0.015
N	78	77	70	54	44	84
<b>Panel B: SBO</b>						
Sales_g	0.177	0.140	0.122	0.094	0.071	0.153
Ebitda_g	0.063	0.106	0.081	0.059	-0.053	0.144
Ebitda_sales_g	-0.001	0.000	0.002	-0.007	-0.008	-0.002
Ebitda_TA_g	-0.011	-0.011	-0.003	-0.006	-0.012	-0.012
FLG_g	-0.024	-0.018	-0.006	-0.006	-0.007	-0.013
N	71	56	41	27	19	45
<b>Panel C: SBO – PBO</b>						
Sales_g	-0.296 **	-0.147 **	-0.025	-0.036	-0.045	-0.018
Ebitda_g	-0.264	-0.114	-0.025	-0.017	-0.087	0.048
Ebitda_sales_g	0.000	0.002	0.010	0.002	0.003	0.002
Ebitda_TA_g	0.007	0.017	0.027 **	0.033 ***	0.043 ***	0.006
FLG_g	-0.019	0.006	-0.004	0.029	0.038 **	0.002
N	71	56	41	27	19	45

Table 5. Ebitda multiples of leverage, price and goodwill

	TD_ebitda_t_1	Price_ebitda_t_1	Goodwill_ebitda_t_1
<b>Panel A: PBO</b>			
mean	17.753	8.203	3.315
median	10.678	6.897	3.289
N	68	68	67
<b>Panel B: SBO</b>			
mean	16.488	9.169	5.772
median	9.268	6.679	4.250
N	67	55	53

Table 6. Regression results operational performance

	Sales Growth		EBITDA Growth		EBITDA Delta	
Financial Dummy	-0.005		-0.210		-0.010	
Size entry	-0.100	***	0.120		0.003	
ROA	0.113		1.108	*	-0.085	**
Debt_TA	-0.230		-0.095		0.011	
Sales growth entry	0.006	***	-0.001		0.000	***
Current ratio	-0.002		-0.017		0.000	
Duration	-0.257	***	-0.215	**	0.000	
N	121		116		118	
r2	0.441		0.227		0.2955	

Table 7. Regression results for turnover and prices paid

	Turnover Delta		Goodwill		Price	
Financial Dummy	-0.003		3.227	**	3.132	
Size entry	0.000		-0.700	*	-1.000	
ROA	-0.180	***	3.358		-9.610	
Debt_TA	-0.012		-0.620		-4.460	***
Sales growth entry	0.000	*	2.060		3.348	
Current ratio	0.003		-0.370		-0.590	
Duration	-0.003					
Intangible			-5.010	*	-3.260	
N	121		121		124	
r2	0.5266		0.2764		0.2091	

Table 8. Regression results for financial leverage gains and leveraged level

	FLG Delta		Leverage	
Financial Dummy	0.010		-0.080	
Size entry	0.009		-8.010	**
ROA	-0.354	***	-17.100	
Debt_TA	-0.207	***	-2.700	
Sales growth entry	0.000		-0.050	
Current ratio	0.008		-6.200	***
Duration	0.000			
Intangible			-7.260	
n	116		139	
r2	0.413		0.2666	