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# **Buyout Longevity and Post-exit Performance<sup>1</sup>**

Ranko Jelic, Mike Wright, Victor Murinde and Wasim Ahmad

# Introduction

Consistent with predictions (e.g. Jensen, 1989), the buyout market has grown tremendously into a global phenomenon (Stromberg, 2008). The extraordinary growth in the last two decades was supported by private equity (PE) investments in buyouts. Buyout transactions, for example, account for more than half all PE investments which were worth just below \$3 trillion worldwide.<sup>2</sup> Globally, US still receive the highest amount of PE investments followed by UK, China, France and India (Cumming & Fleming, 2012). While the European market is dominated by investors that focus on late stage investments in management buyouts, the US market is dominated by venture capital (VC) investing in young ventures (EVCA, 2001).<sup>3</sup>

The success of PE model raised the profile of the industry but at the same time created controversy. Trade unions, for example, often describe PE firms as asset strippers who destroy jobs and load companies with debt (Amess & Wright, 2012). Opinions about the

<sup>&</sup>lt;sup>1</sup> Acknowledgements: We thank participants of the 30th Anniversary Conference of the Centre for Management Buyout Research (CMBOR), at Imperial College London, June 2016, for their helpful comments and suggestions. Victor Murinde also acknowledges funding under the DFID-ESRC Growth Research Programme (ESRC Grant: ES/N013344/1). Every effort was made to include all relevant papers on selected topics; any errors or omissions are unintentional.

<sup>&</sup>lt;sup>2</sup> Source: Preqin, as cited in The Economist, 22<sup>nd</sup> October 2016. This compares to \$2.5 trillion estimated by TheCityUK for 2010 as well as Cambridge Associates estimates in 2010.

<sup>&</sup>lt;sup>3</sup> Terms private equity and venture capital have no consistently applied definitions. Metrick and Yasuda (2011), for example, treat VC firms and buyout specialists as subsets of broader PE industry. In the European literature, however, term venture capital seems to be more inclusive and often includes both late (i.e. investments in buyouts) and early stage investments (i.e. investments in start-ups). Both European (EVCA) and British Venture Capital (BVCA) associations have venture capital in their titles although their respective memberships are dominated by PE firms. Therefore, when discussing the results of previous studies, we refer to terms used by their authors.

longer term effects of PE investments and, in particular, whether the benefits for PE funds come at the expense of the longer term health of companies, are also divided. The British Private Equity and Venture Capital Association (BVCA, 2000), provided statistics suggesting that companies backed by PE have grown employment and sales faster than other companies. Others, however, argue that shareholders and employees do not benefit mainly due to myopic behavior of PE firms. The controversy contributed to calls for more transparency and a tighter regulation of the PE industry (TSC, 2007). PE firms however still benefit from lower taxes and lighter disclosure requirements compared to public firms.

The above controversy is partly fueled by the relative paucity of research and conclusive empirical evidence, especially relating to the recent period of PE activity which peaked in mid-2007. In this paper we therefore present results of both early and more recent literature relating to the peak and aftermath of the second PE wave in the UK. We review research on the following topics: longevity of buyouts, choice of various exit routes from buyout organizational forms, and post (buyout) exit operating and financial (i.e. stock prices) company performance.<sup>4</sup> We survey studies that examine all management buyout types (buyout (MBO), buy-in (MBI), and leveraged buyout (LBO)), buyouts originated from various sources (privately owned, divestment, privatization and receiverships), and all exit routes from buyout structures (initial public offerings (IPO), trade sales, secondary management buyouts (SMBO), and liquidations).

Our focus is on the UK private-to-private and private-to-public as opposed to public-toprivate buyout transactions for the following reasons. First, while public-to-private buyout

<sup>&</sup>lt;sup>4</sup> We, therefore, do not review literature on public to private buyout transactions, performance of PE funds, various corporate governance issues related to buyout transactions, and performance of VC backed start-ups. For broader survey papers that include above topics see Kaplan and Lerner (2010), Kaplan and Stromberg (2009), Cumming et al. (2007), Gilligan and Wright (2014), and Metrick and Yasuda (2011).

transactions tend to receive most of the attention by media and regulators, they represent less than 7% of all buyout transactions, worldwide (Stromberg, 2008). The vast majority of buyout targets, therefore, are private companies and these transactions often use little leverage. Second, neither going private (from public) nor highly leveraged financing are necessary ingredients of a buyout transaction. Agency costs of free cash flow (Jensen, 1989), therefore, are unlikely to explain the reasons for buyouts of privately held targets as ownership is already concentrated in these companies prior to buyouts. The same applies to declining analysts' coverage and low stock turnover which are often identified as reasons for public to private buyouts. It is, therefore, important to understand the economic rationale and performance of non-public-to-private buyouts. Finally, the need for more research and a better understanding of non-public-to-private buyout transactions was also highlighted in previous survey papers on private equity (see Metrick & Yasuda, 2011).

The alignment of incentives leading to improved performance lies at the heart for management buyout organizational form (Jensen & Meckling, 1976; Jensen, 1989). At the same time, economic literature recognizes that activities of PE investors (e.g. monitoring, advising, etc.) could increase firms' market value (Kaplan & Stromberg, 2009). It is, therefore, important to highlight whether (and if yes how) PE backing contributes over and above the benefits of buy-out ownership associated with a reduction in the conflicts of interest between managers and owners in closely held companies. To the best of our knowledge, this is the only survey paper that treats PE-backed and non-PE backed (i.e. pure) buyouts separately.

We survey research that is based on company level (i.e. deal level) rather than at PE investor (fund) level data. Aggregation of data at the PE fund level inevitably leads to loss of

information regarding timing of original investments and exits from the buyout structure. Lack of daily pricing for PE funds makes their performance assessment based on the internal rate of return (IRR) very difficult. Company level data, on the other hand, allows us to examine post deal changes in performance and to address questions such as whether buyouts are short or long term organization forms. The deal level data also allows researchers to control for the fact that PE investors tend to prefer investments in companies with certain characteristics.

The London Stock Exchange is one of the most successful world's IPO markets. This is, to a great extent, due to its Alternative Investment Market (AIM).<sup>5</sup> AIM, however, has 'light touch' listing rules thus allowing listings of many high risk firms. We, therefore, present evidence for the main LSE board and AIM separately.

The chapter proceeds as follows. We begin, by surveying evidence on the decision to exit buyout structure together with the evidence on longevity of buyouts. In the subsequent section we focus on the operating and financial post exit performance of buyouts. We also survey evidence on importance of PE backing (and characteristics of PE firms) on the post exit performance. In the final section we summarize key findings and conclude.

# Buyout exits and longevity<sup>6</sup>

<sup>&</sup>lt;sup>5</sup> Since 1995, there were over 3,000 AIM listings.

<sup>&</sup>lt;sup>6</sup> This section draws on Jelic (2011).

The literature on the duration of early stage VC investments is extensive (Cumming, 2008; Schwienbacher, 2002; Cumming & Johan, 2010; Mohamed, 2009). However, there is a relative paucity of research on the longevity of PE late stage investments in buyouts and the different exit routes from buyouts. A separate examination of the duration of PE investments in buyouts is important since investments in buyouts (i.e. established companies) require different skills from investments in new companies (Jelic, 2011). For example, investments in buyouts (e.g. privatizations and receiverships) could be burdened with complicated ownership and other issues less likely to be present in VC investments in start-ups. PE investments are also larger and normally require significant incremental direct and overhead costs in comparison to investments made by VC firms. Finally, PE financing model is different from the VC model which potentially can affect duration of respective investments.

We review literature on exit routes together with four groups of determinants of buy-outs' longevity: determinants associated with PE backing and characteristics of the PE firms (reputation and association with investment banks) and PE deals (syndicated and highly leveraged deals); buyout specific characteristics such as size, industry, and source of the buy-outs (privatization, divestment, and receivership); buyout type (LBO, MBO, and MBI); and determinants related to the market conditions (changes in the stock market, hot IPO periods and supply of PE funding).

# Buyout exits

Jelic (2011) reports median time to exit of 36 months for UK buyouts. Around 35% of UK buyouts remained in a buy-out organizational form, whilst 47% remained in private ownership for at least 7 years after the original buyout transactions. IPOs are the preferred exit route for UK buyouts, followed by sale, SMBOs, and lastly liquidation. SMBOs are

rarely the first exit choice for PE firms (Wright et al., 2000; Jelic, 2011). Most recently, SMBO exits exhibited steady growth, reaching 29% of all exits in the 2000s (Jelic, 2011). The most popular exit routes from UK SMBOs are trade sales (40%) and tertiary buyouts (34%) (Zhou et al., 2014).

The UK has the most liquid stock market in Europe which helps to explain the popularity of IPO exits in UK compared to other European countries. The reported evidence on the importance of IPOs as an exit route for UK buyouts, however, varies significantly. Wright et al. (1995b), for example, report that IPO exits constitute 10% of all exits from UK buyouts. The reported percentages in subsequent studies were 16% in Nikoskelainen and Wright (2007), 11% in Stromberg (2008) and 47% in Jelic (2011). The direct comparison of results reported in the above studies is difficult due to differences in the sample coverage. For example, while Jelic (2011) includes 205 deals from the AIM, Nikoskelainen and Wright (2007) report only 2 AIM exits in their subsample of 52 IPO exits. Furthermore, Capital IQ database (e.g. used in Stromberg, 2008) underreports deals from the 1970s and 1980s and deals without PE backing thus resulting in possible underreporting of IPO exits.

Stromberg (2008) reports that only 2.9% of PE backed deals worldwide exited within 12 months of the original transaction. Jelic (2011) reports a higher percentage of early exits for UK buyouts, of 5.1%. The UK early exits tend to be associated with IPOs of relatively smaller buy-outs on AIM (Jelic, 2011). Both studies report that the number of early exits exhibited a decreasing trend over the last three decades. The reported failure rates for UK buyouts (e.g. Jelic, 2011) are similar to failure rates of 3% reported for other UK private

firms.<sup>7</sup> Stromberg (2008) reports 6% failure rate for UK buyouts, after adopting a broader definition of failure that includes bankruptcy filings, financial restructuring and liquidations. The author, however, describes the LBO failure rates as modest, similar to those reported for corporate bond issuers.

# PE backing and longevity

Gottschalg (2007) reports average time to exit of 5 years for PE backed buyouts, worldwide. Jelic et al. (2005) report that PE-backed buyouts tend to be larger and exit earlier than their non-venture backed counterparts. The results were echoed in Jelic (2011) who also reports that UK PE-backed buyouts exhibit higher exit rates, fewer early exits and liquidations compared to their pure counterparts. The same study reports an average (mean) longevity of UK PE-backed buyouts at 40 months, compared to 52 months for pure buyouts. Although the order of preference of exit routes is the same for PE backed and pure buyouts, IPOs and SMBOs tend to play a less important role for pure buyouts (Jelic, 2011).

Given lower opportunity costs associated with the alternative use of capital, incumbent managers are expected to have a lower exit propensity. Non PE-backed buyouts are therefore expected to have longer duration in comparison than PE firms (Ronstadt, 1986). In addition, in the absence of PE backing, the pure buyouts may be lacking advice and skills required for a successful exit. On the other hand, the greater value added provided by the PE firms normally requires longer time (Cumming & Johan, 2010). Early exits (e.g. within 12 months) could therefore be associated with less skilled PE firms and/or incidences where PE firms force early exits (e.g. grandstanding).

<sup>&</sup>lt;sup>7</sup> Jelic (2011) adopts a narrower definition of failures, considering only the buy-outs that were reported to have ceased trading (i.e. the write-down of a portfolio company's value to zero).

Shorter longevity in subsamples of pure buyouts could be related to insiders' motivation to maximize their private benefits by taking companies public (Berglof, 1994; Black & Gilson, 1998). The above scenario is particularly plausible in the AIM with less stringent listing rules. The early exits in AIM should therefore be examined separately. Espenlaub at al. (2012) is a rare study that examines role of nominated financial advisors (NOMADs) in AIM listed companies. They report significant positive impact of NOMAD reputation on the survival in their sample of all (buyout and non-buyout) UK IPOs. Since NOMADS tend to substitute role of PE firms, a comparison of the survival of pure buyout IPOs supported by NOMADs and their PE backed counterparts can be of interest for both investors and regulators.

# Buyouts longevity and characteristics of PE firms

One of the important questions is whether the reputation of PE firms matters. Kaplan (1991) reports differences between US IPO exits of reputable and less well-known LBO partnerships.<sup>8</sup> For example, buyouts sponsored by more well-known LBO partnerships are more likely to go public within a particular time period than those sponsored by less well-known LBO financiers, although the differences are not significant. Reputable private equity firms may be more adept at picking good deals and/or more effective at implementing the changes necessary to grow and exit them (reputation hypothesis). Reputable PE firms are, therefore, more likely to take buyouts to market sooner. Evidence for the UK is inconclusive. Early evidence (Jelic et al., 2005) supports reputation hypothesis while more recent evidence (Jelic, 2011) does not.

<sup>&</sup>lt;sup>8</sup> LBO partnerships typically combine closed end equity funds with debt and lead the buy-out transactions.

Kaplan (1991) considers captive PE firms (i.e. subsidiaries of investment banks) to be the more reputable. The more established UK PE firms, in 1990s, were also subsidiaries of larger financial organizations. The possible interaction between the reputation and captivity of PE firms is consistent with two scenarios. In the first scenario the captivity enhances the reputation of PE firms and thus shortening longevity in line with the reputation hypothesis (Jelic, 2011).

In the second scenario, captive PE firms are facing less pressure to exit due to their links with investment banks and more 'dry-powder' (Jelic et al., 2005). The captive PE firms therefore exhibit the lower marginal costs of not investing which in turn may translate into longer duration of investments. More recent UK evidence (Jelic, 2011) reports no significant differences between captive and independent PE firms. The evidence regarding the association of PE firms' reputation and their links with investment banks should be examined within historical perspective (i.e. in different decades) given that many UK captive funds changed their status in early 1990s.

# PE syndication and longevity

Literature on VC deals suggests that syndications enhance the skills required for IPO exits and higher valuation (Lerner, 1994; Giot & Schwienbacher, 2007; Cumming, 2006; Xuan, 2007). Syndicates also reduce the effort made by any individual member of the syndicate and therefore shorten the duration of the investment (Cumming & Johan, 2010).

LBOs acquired by syndicates of PE firms also tend to accelerate exits (Stromberg, 2008). On the other hand, accelerated exits could also be due to agency conflicts among the syndicate members (Wright et al., 1995b; Stromberg, 2008).<sup>9</sup> The early exits from the original buy-out structure in those cases are part of the solution for the conflicts among PE firms in the syndicate. More recent results for IPO and SMBO exits are in line with the above conjectures. For example, Jelic (2011) reports significant negative association of PE syndication and buyout longevity, for IPO and SMBO exits.<sup>10</sup> The author also documents an increasing trend in both the number of syndicated deals, number of financing rounds and the average investment per deal during the 1990s and 2000s.<sup>11</sup> Among UK syndicated deals, SMBOs tend to be an important exit route (23%) coming second following IPOs and before sale exits. SMBOs also tend to have the highest average number of PE firms in the syndicates.

# Characteristics and sources of buy-outs

# Buy-out size and industry classification

Larger UK buyouts tend to exit earlier (Wright et al., 1994; Stromberg, 2008; Jelic, 2011). The evidence is in line with higher marginal costs of investments (i.e. greater fixed costs) and, due to less monitoring, lower marginal value added (Cumming & Johan, 2010).

Importance of industry classification has also been highlighted in the previous literature on longevity of VC investments (Bayar & Chemmanur, 2006; Gompers et al., 2008). For example, the VC support is particularly important in less concentrated (e.g. service industry). Furthermore, PE tend to create higher value added by their facilitating networks regarding potential strategic investors within service industry. The above arguments are in line with

<sup>&</sup>lt;sup>9</sup> The negative association between agency costs and syndication, to some extent, could be alleviated by the reputation of the lead PE firm (Meuleman et al., 2009).

<sup>&</sup>lt;sup>10</sup> Interestingly, it takes longer for PE syndicates to exit buyouts via trade sales.

<sup>&</sup>lt;sup>11</sup> For example, percentage of syndicated deals reached 52% in 2000s.

popularity of UK buyouts from service industries.<sup>12</sup> Jelic (2011), however, find no significant association between industry classification (i.e. services) and longevity of buyouts.<sup>13</sup>

Sources of buy-outs and longevity

Buyouts arising from divestments are often burdened with constraints on decision making imposed by parent companies (Gailen & Vetsuypens, 1989). The adoption of a buyout structure, followed by a quick exit, may help in addressing the constraints within relatively short period of time. Both early and more recent UK evidence are in line with the above scenario (Wright et al., 1994; Jelic, 2011).

Distressed companies are riskier and require more time for turnaround. They should, therefore, be expected to remain longer in their original buyout structure. However, deals originating from distressed acquisitions are more likely to end up again in financial distress compounded with significant conflicts of interest between insiders and PE investors. PE firms, therefore, are more likely to write-off those transactions in cases of high carry costs (Stromberg, 2008; Jelic, 2011).

Due to an extensive privatization program in the 1980s, state owned firms represent an important source of UK buyouts. These companies are clearly different from an average privately-owned company, both in terms of size and ownership structure. Jelic (2011),

<sup>&</sup>lt;sup>12</sup> The UK buyout market was traditionally dominated by manufacturing firms until 1990s. Since then, service industries have now become the main source of UK buyouts.

<sup>&</sup>lt;sup>13</sup> Industry classification in this study follows that of Gompers et al. (2008) which re-classified numerous industry codes into nine industry groups more in line with well documented specialisation within the VC industry.

however, finds no evidence for different longevity of privatization buyouts, after controlling for size, industry and other potential determinants of the longevity.

# Longevity of different types of buyouts

# Longevity of highly leveraged buyouts (LBOs)

The heavy use of leverage in PE model is well documented in the literature and represents an important buyout corporate governance mechanism (Nikoskelainen & Wright, 2007). The high leverage however creates high interest costs. Highly leveraged PE investments are therefore profitable only if the exit is within the planned holding period. Significantly shorter duration for highly leveraged UK buyouts, reported in Jelic (2011), is in line with the above assertion.

One of the important challenges for researchers in this area is lack of an agreed definition of a LBO transaction, in the UK institutional context (Jelic, 2011). Amess and Wright (2007), for example, define LBOs as transactions with high leverage, highly concentrated equity held by managers, and the PE firm's active monitoring role at board level. Thomson One Banker database, defines LBOs as deals when an investor funds acquisition with an extraordinary amount of debt, with plans to repay it with funds generated from the company or with revenue earned by selling off the newly-acquired company's assets. The level of extraordinary amount of debt however is not defined. In addition, the same database identifies a deal as an LBO if the transaction is identified as such in the financial press and a majority interest of the target company is acquired. In the US, the LBO definition includes all MBIs and highly leveraged PE backed buy-outs (Renneboog et al., 2005). Again, what exactly is the 'high leverage' is not specified.

# Longevity of MBIs

Managers undertaking MBIs often encounter substantial unexpected problems (Wright et al., 1995a). This is in line with the fact that incumbent managers are better informed and aware of potential problems related to the buy-out deals. MBIs are, therefore, more likely to exit via crisis sales and/or liquidation and are expected to have shorter longevity. Evidence reported in Jelic (2011) supports the above view. On the contrary, Wright et al. (1995a) report that MBIs which avoid liquidation, require a longer time to turnaround, and thus remain longer in their original buy-in structure. Overall, the evidence on longevity of MBIs is inconclusive.

# Market conditions and buyouts longevity

Favorable market conditions provide prospects of higher market valuation and are therefore particularly important for IPO exits. For example, the IPO literature report easier valuation during IPO waves (i.e. hot markets) (Lowry & Schwert, 2002) and when information asymmetry is reduced (Stoughton et al., 2001). IPO literature documented that the relative 'hotness' of public markets increases the probability of IPO exits (Brau et al., 2003; Poulsen & Stegemoller, 2008).

In line with the above, IPO exits tend to be more popular when market-wide demand for growth capital is high, adverse selection costs of equity issues are low and the value of protecting private information is low (Ball et al. , 2008). 'Hotness' of market conditions is negatively association with duration of VC investments (Cumming & Johan, 2010). The negative association of public market conditions and duration of VC investments is consistent with the conjecture that the strong market conditions increase the opportunity costs of maintaining prior investments.

Strong market conditions measured by stock market returns and 'hot' exit years are also important determinants of the longevity of UK buyouts. For example, favorable market conditions increase the hazard of IPO exits by more than one-third, but cut the hazard of sale exit to a half (Jelic, 2011). Similarly, PE firms tend to take advantage of 'hot' market conditions by taking their companies to IPO exits during years with exceptional volumes and a degree of underpricing. On the other hand, managers in pure buyouts tend not to take their companies to IPO exits during years with 'hot' IPO market. The results reported for UK buyouts in Jelic (2011) are in line with evidence from the US and Canadian markets suggesting that private exits are not popular in times of strong market conditions (Cumming & Johan, 2010).

Availability (and growth) of investment capital should increase the opportunity cost of not investing and hence shorten investment duration (Cumming & Johan, 2010). Some studies, therefore examine, the amount of money available for PE firms to invest. Results for US and Canadian studies support the view that increasing amount of investment capital tend to accelerate exits (Gompers, 1996; Cumming & Walz, 2010). Similarly, negative and highly significant association between availability of PE capital and longevity of UK buyouts is reported in Jelic (2011).

# **Post-exit performance**

*Post-exit operating performance*<sup>14</sup> Performance of IPO exits<sup>15</sup>

Negative long term operating performance of IPOs has been well documented in IPO literature. For example, Jain and Kini (1994) and Mikkelson et al. (1997) report long term deterioration in operating performance for the US IPOs. The results for UK IPOs echoed the US evidence (Khurshed et al., 2005).

Evidence from studies that examine buyout IPO exits separately is less conclusive. For example, Nikoskelainen and Wright (2007) report an internal rate of return of enterprise value of 22.2% and the average equity internal rate of return of 70.5% for the sample of 321 UK buyouts exited during the period 1995-2004. The authors also report that buyouts exited via IPO outperformed trade sale exits and SMBO exits. Jelic and Wright (2011) examine performance 3 years before and up to 5 years after the exits. They find strong evidence suggesting significant improvements in output, employment, and dividends after IPO buyout exits, while efficiency ratios remain unchanged. They also document better performance of PE backed buyouts exiting via IPOs. Buyouts exiting via IPO also significantly reduced gearing levels after coming to market, in line with US evidence reported in Kaplan (1991). The results for return on assets (ROA) and return on sales (ROS) suggest negative and statistically significant changes in profitability. These findings in respect of profitability contrast somewhat with US evidence by Holthausen and Larcker (1996) who find continued

<sup>&</sup>lt;sup>14</sup> This section draws on Jelic and Wright (2011).

<sup>&</sup>lt;sup>15</sup> IPO exits are sometimes referred to as reverse LBOs. The term reverse LBOs, arose in US when many LBOs were of listed firms. The term IPO exits, however, is more general and also includes pure buyouts exited from private ownership via IPOs. When discussing the results of previous studies, we refer to terms used by their authors.

profit outperformance (compared to non-buyout companies from the same industries) of 90 reverse L/MBOs for up to four years post IPO. The outperformance is unrelated to changes in leverage and positively related to changes in insider equity ownership of IPOs. Similarly, Muscarella and Vetsuypens (1990) find that 72 US reverse L/MBOs (during 1983-87) exhibited a significant increase in operating profitability.

Association between PE backing and post exit performance is less clear. Greater value added provided by PE firms (e.g. strategic, marketing, financial, and human resource advice) normally requires longer investment duration (Cumming & Johan, 2010). On the other hand, PE firms tend to balance the cost of continued monitoring involvement against the potential negative market reaction to insider selling during an IPO (Lin & Smith, 1998).<sup>16</sup> Consequently, over the longer term post-exit, the influence of PE firm monitoring should dissipate. This further may lead to deterioration in performance after the exit and, therefore, a negative association between PE backing and post IPO performance.

The above highlights the importance of tracking the performance of IPO firms for long periods after IPOs (Jelic & Wright, 2011). Lyon et al. (1999) also suggest that IPO may create a large increase in the book value of the firm's assets as they invest in additional operating assets, but no commensurate increase in profit, since these assets have not been employed long enough to generate profit. Tracking the performance over a longer period of time would ascertain whether erosion in operating performance is the result of a temporary build-up in assets.<sup>17</sup>

<sup>&</sup>lt;sup>16</sup> The authors also report a decline in PE's board seats after the US IPO exits from 13.6% to 4.9%.

<sup>&</sup>lt;sup>17</sup> Scaling profit by sales rather than total assets can be a better measure of performance after IPO since it avoids the 'build up in assets' measurement problem.

# Performance on AIM vs. main LSE board

Jelic and Wright (2011) report a similar performance of buyouts exiting on both markets showing significant increases in output and employment in the post IPO period. The buyouts listed on the main board tend to outperform the sample buyouts listing on AIM in terms of efficiency, in the first two years following listing. PE backed buyout IPOs from the main market exhibit no statistically significant changes in industry adjusted ROA.<sup>18</sup> Unlike previous IPO studies, Jelic and Wright (2011) report that non-PE backed buyouts (including those on AIM) exiting via IPOs do not underperform as well.<sup>19</sup> Furthermore, their results also show no evidence of a significant difference in median industry adjusted ROA between PE backed and buyouts supported by NOMADS.

# SMBO performance<sup>20</sup>

SMBOs are means to continue the PE-backed ownership form but with a different set of investors. The incentive and control mechanisms introduced in the first buyout likely result in initial efforts to reduce costs and improve efficiencies, which seem to be most pronounced in the first 2-3 years after buyout (Wiersema & Liebeskind, 1995). Beyond this period it would likely be that further performance improvements from these sources would be achievable but at declining rates (Jelic & Wright, 2011). Introduction of revised incentive structures (increased managerial equity stakes) and the looser controls by PE firms, may shift the focus to pursuit of growth opportunities but may also lead to greater entrenchment behavior by management.

<sup>&</sup>lt;sup>18</sup> The evidence is in line with results that document an absence of financial underperformance of PE backed buyouts going public (Jelic et al., 2005; Cao & Lerner, 2009).

<sup>&</sup>lt;sup>19</sup> Brav and Gompers (1997), for example, report that underperformance tends to be concentrated in smaller, non-PE backed IPOs.

<sup>&</sup>lt;sup>20</sup> This section draws on Zhou et al. (2014).

More recent evidence on the performance of SMBOs is mixed. For example, Achleitner and Figge (2014) use worldwide data and report that SMBOs still generate improvements in operational performance, compared to primary buyouts. Bonini (2012), however, reports lack of any significant performance improvements for European SMBOs. UK evidence suggests report improvements in output and dividends (Jelic & Wright, 2011), accompanied by significant deterioration in profitability (Jelic & Wright, 2011; Wang, 2012).

Zhou et al. (2014) report that UK SMBOs perform worse than primary buyouts in terms of growth, profitability, and labor productivity. Authors find no evidence for superior performance of PE backed SMBOs compared to their non-PE backed counterparts. PE firms' reputation and change in management, however, are important determinants of the performance. The results are in line with Axelson et al.'s (2013) view that general partners with unused funds (i.e. 'dry powder') at the end of their mandate 'go for broke' by taking underperforming deals. SMBOs that arise from buyouts that have taken longer to exit, therefore, may be indicative of companies that are the leftover in the PE's portfolio which need to be exited by the fast approaching end of the fund's life.

More recently research is moving towards the resource based strategic entrepreneurship perspective (Ireland et al., 2003) that emphasizes managers' and PE firms' strong motivation to employ their idiosyncratic knowledge and skills. Zhou et al. (2017), for example, report that human capital of PE directors tend to play statistically and economically significant roles in the performance of UK SMBOs. Specifically, PE directors' financial (rather than operational) experience tends to improve post-SMBO profitability while high level of business education is especially important for post-SMBO growth.

# *Post-exit financial performance*<sup>21</sup>

# Short term financial performance

Theoretical literature on well-documented IPO underpricing tend to focus on the information asymmetry, regulatory issues, ownership issues, and market-related issues (see Ibbotson & Ritter, 1995). The US evidence on the association of venture capital backing and underpricing is inconclusive. Megginson and Weiss (1991), for example, report lower degree of underpricing for VC backed IPOs compared to non-VC backed IPOs.<sup>22</sup> Other studies report absence of the association between VC backing and degree of underpricing (Barry et al., 1990; Ljungqvist, 1999). IPOs of UK VC firms, with links to issuing houses, tend to exhibit lower degree of underpricing but only if those houses do not sponsor the IPOs (Espenlaub et al., 1999).

None of the above mentioned studies, however, differentiate IPO exits of buyouts (i.e. reverse buyouts) from other (i.e. non-buyout) IPOs. IPOs originated from buyouts, however, are quite distinct and are less likely to suffer from an information asymmetry problem due to their longer operating history. Furthermore, PE investors involved in buyouts face a two-level principal-agent relationship: between themselves and the managers of the companies in which they invest; and between themselves and their providers of capital (Sahlman, 1990). This further implies rather complex roles that PE investors play in buyout-IPO transactions. For the above reasons, IPOs that arise from buyouts are not representative of a typical firm going public, and it is important to study them separately.

<sup>&</sup>lt;sup>21</sup> This section draws on Jelic et al. (2005).

 $<sup>^{22}</sup>$  The authors explain the results by the certification role of VCs.

Jelic et al. (2005) examine IPOs originated from UK buyout deals separately. They report positive and highly statistically significant initial premiums for VC backed IPOs, regardless of measurement matrix. Based on equally weighted average initial returns, there are no statistically significant differences between VC-backed and non-VC-backed IPOs. However, VC backed companies seem to be more underpriced than buyouts without venture capital backing based on average value-weighted returns.<sup>23</sup> In contrast to the grandstanding hypothesis, authors also report that private to public buyouts backed by more reputable VCs in the UK tend to exit earlier. Buyouts are more established businesses than is the case for early stage VC-backed investments and are facing less information asymmetry than other IPOs. Given the buyouts' dominance of the UK venture capital market the certification hypothesis, therefore, may be less important and venture backing might not be associated with underpricing. Finally, VCs' reputation does not seem to be a statistically significant variable in explaining cross sectional differences in underpricing.

# Long term financial performance

Irrational strategies by investors and information asymmetry between insiders and investors are some of theoretical explanations for the IPO long-term financial underperformance (see Ibbotson and Ritter, 1995). UK IPO studies highlighted importance of industrial factors (Levis, 1993; Espenlaub, et al., 1999), the initial returns (Levis, 1993), the proportion of shares sold by the VC and the reputation of the VC (Espenlaub et al., 1999) for the long term financial performance. Studies have examined other variables but results have been less

<sup>&</sup>lt;sup>23</sup> This is consistent with more recent international evidence on the VCs involvement in the IPO process (e.g. Hamao, et al., 2000; Francis, et al., 2001).

conclusive. Iqbal (1998), for example, found little evidence of a significant relationship between underwriters' and auditors' reputation and long term performance of UK IPOs.

Holthausen and Larcker (1996) find evidence of significant (mean) positive abnormal share price performance, during the 24 month period after the reverse US L/MBOs. <sup>24</sup> DeGeorge and Zeckhauser (1993) show that a sample of 62 US L/MBOs do not underperform (in terms of share price performance) non-L/MBOs, over a two-year period post-IPO. Similarly, Cao and Lerner (2009) find that three and five year stock performance of US reverse LBOs' is at least as good as that of other IPOs, during 1981-2003. There is, however, a paucity of research on the long-term financial performance of IPOs that arise from buyouts.

Jelic et al. (2005) report lack of evidence for a significant underperformance for UK buyout IPOs in the long run and find no evidence that VC backed buyout IPOs perform better than their non-VC backed counterparts in the long run. The results remain robust after using the matching firm portfolio benchmark and after controlling for sample selection bias. Subsequently, Drathen and Faleiro (2008) report that IPOs originated from LBOs outperform the market as well as non- LBO IPOs. The factor most significantly explaining the superior performance is percentage ownership by the buyout group after the offering. The lack of significant underperformance contradicts the findings reported in UK IPO studies which do not examine buyout IPOs separately (Levis, 1993; Khurshed, 1999; Espenlaub et al., 2000). Overall, UK IPOs that arise from buyouts tend to perform better compared to other IPOs.

<sup>&</sup>lt;sup>24</sup> Reverse L/MBOs are also known as 'secondary IPOs'.

# Financial performance and reputation of PE firms

More reputable intermediaries (VC, PE, and underwriters) are repeatedly involved in IPOs and avoid being associated with failures since they want to maintain their reputation. They should therefore be less likely to overprice IPO issues. Empirical evidence for US IPOs, for example, report a better short term performance of IPOs sponsored by more prestigious underwriters (Michaely & Wayne, 1994).

Espenlaub et al. (1999), suggest that backing by well-connected UK VC firms with links to issuing houses reduces the need for underpricing but only if those houses are not sponsoring/underwriting the IPOs. Authors also report that UK IPOs backed by captive VCs perform better in the long run compared with IPOs underwritten by independent issuing houses. The long run performance is also positively related to the reputation of the VC firms. Barnes (2003) provides only weak evidence to suggest greater underpricing for UK IPOs backed by younger VCs, during 1992-99. Overall, the author report insufficient evidence to support the grandstanding hypothesis (Gompers, 1996). Jelic et al. (2005) report that VCs' reputation does not play an important role in explaining cross sectional differences in underpricing of UK buyout IPOs. The reputation, however, seems to play an important role in long term performance: buyout IPOs backed by more prestigious VCs performed better than those backed by less prestigious VCs.

One of the challenges for researchers in this area is lack of consensus regarding the best proxy for the reputation of PE and/or firms.<sup>25</sup> For example, the number of deals criterion (on its own) discriminates against some reputable firms specializing only in certain types of deals. On the other hand, the total funding proxy allows a few outliers to disproportionately

<sup>&</sup>lt;sup>25</sup> For more see Krshnan and Masulis (2010) and Jelic (2011).

influence classification. Capital under management and/or total capital available for investment (used in Gompers & Lerner, 1999) and age (used in Stromberg, 2008) are better suited for limited partnerships than for captive PE firms. This is due to the fact that the latter can use the resources and expertise available in parent banks. An additional difficulty in using age is that, until recently, many of the captive PE firms were not legally separated from their parent banks. The question then is whether to use the age of the parent banks or the age of PE firms (i.e. the number of years since they became a separate legal entity).

There is also some evidence that more reputable PE firms could pick and choose better deals and/or co-investors, thus creating sample selection bias. Recent UK evidence, for example, shows that more reputable PE firms tend to participate in more syndicated deals than the sample average (Jelic, 2011). The most reputable PE firms also exhibit a lower percentage of buy-outs ending in liquidation (1%) than their less reputable counterparts (Jelic, 2011). Studies on the association of PE reputation and performance, therefore, should control for the possibility of sample selection bias.

# Conclusions: Summary of findings, methodological issues, and emerging themes

# Buyout exits and longevity

The evidence on UK longevity is presented in Table 27.1. Evidence for UK PE backed buyouts is in line with the evidence for other countries suggesting the longevity between 3 and 5 years. More recently, the evidence suggest an increase in longevity of PE backed buyouts (around 5 years). Non-PE backed buyouts remain in a buyout form longer than their PE-backed counterparts.

[Insert Table 27.1 about here]

For UK PE investors, IPOs remained a preferred exit route, followed by trade sales. IPOs are more popular with PE backed than non-PE backed deals. PE backed buyouts also tend to go public earlier than their non-PE backed counterparts. Compared internationally, IPOs were more popular exit route for UK buyouts than elsewhere (except US). Direct comparison with other routes (e.g. sales) is difficult due to sample bias (focus on large and PE-backed deals) and classification issues (some studies combine sales with SMBOs).

In the aftermath of the second wave SMBOs became increasingly popular. For example, SMBOs increased from 2% (in 1980s) to 24% of all world buyout transactions in 2007 (Stromberg, 2008). By 2011, one in four PE deals in Europe was an SMBO (Smith & Volsovych, 2013). It is, however, still not clear as to what the true motivation for SMBO transactions is and what their overall effect on the performance is. A combination of company level with PE fund level data could be a promising avenue answering the above question.

One of the difficulties in comparing studies internationally is that some studies report the length of time that buyouts tend to remain in their original buyout structure while others report how long buyouts remain in private ownership (Jelic, 2011). Furthermore, different studies often consider exits over different holding periods. In Table 27.2, we present results that are directly comparable both in terms of methodology and holding periods (table adopted from Jelic, 2011).

# [Insert Table 27.2 about here]

Evidence for duration of PE backed UK buyouts is comparable to the evidence for European VC backed deals. For example, the average (mean) time to exit in UK PE backed subsamples ranges from 3.3 years (Jelic, 2011) to 3.5 years (Nikoskelainen & Wright, 2007). This compares to the average (mean) of 3.7 years reported for European VC backed deals (Schweinbacher, 2002). The average (mean) duration of PE backed IPOs (3.25 years as reported in Jelic, 2011) is similar to the average duration reported for VC backed European deals (3.3 years as reported in Cumming, 2008). The average (mean) duration of UK PE backed liquidations (4.4 years as reported in Jelic, 2011) is longer compared to the duration of write-offs reported for European VC deals (3.58 years as reported in Cumming, 2008). Finally, the average duration of SMBO exits was 4.3 years (Jelic, 2011). Overall, there is no evidence for 'myopic' behavior of UK PE firms. Buyout size, characteristics of PE backing (syndicated and highly leveraged deals) together with market conditions are the most important determinants of longevity (Jelic, 2011). A recent study by Ahmad and Jelic (2014) highlighted the importance of lockup characteristics on the subsequent survival of UK IPOs. An interesting area for further research could be examination of the importance of various contractual clauses and arrangements between investors and managers for the longevity of buyouts.

Some buyouts exit in a relatively short period of time (e.g. up to 24 months), while others remain with their original buyout structure for a very long period of time (e.g. more than seven years). Majority of early exits is associated with the exit of smaller buyouts on the AIM. There is also evidence that occurrence of early exit (i.e. short term flipping of assets) has been decreasing over past three decades. The evidence suggesting that buyouts represent both long and short term form should not be surprising. For example, some firms fail shortly after buyout deals prompting investors to 'cull' their investments as soon as possible. Others

become targets of acquisitions soon after buyouts. Some companies, however, go through patient restructuring benefiting from concentrated ownership over a long period of time. Overall, more research on pure (non-PE backed) buyouts is need. The pure buyouts are not constrained to exit within certain period thus provide the ultimate test of longevity of this organizational form.

As noted in the literature (Kaplan et al., 2002; Jelic et al., 2005; Ball et al., 2008; Stromberg, 2008), limitations of the alternative databases remain one of the key obstacles for researchers in this area. For example, several databases (with the exception of the CMBOR database) have a specific threshold for size of transaction. Furthermore, some databases (e.g. Thomson One Banker, Capital IQ and SDC M&A) cover more recent data and/or miss specific items (e.g. enterprise values in Capital IQ). The above mentioned limitations create issues related to sample selection bias and need to be controlled for. In addition to the above sample selection bias, researchers in this area need to be aware of a potential endogeneity problem related to the possibility that financial intermediaries (PE, VC, underwriters) do not randomly select buy-outs they are backing (Cumming & MacIntosh , 2001; Jelic et al., 2005).

Another important methodological issue is related to use of probit models in samples consisting of exited investments only (see Cochrane, 2005). Unlike probit, survival models consider exited and non-exited buyouts and are therefore better suited to studies on buyouts longevity.<sup>26</sup> With the survival models, the important choice is between survival models with constant hazard rates (i.e. non-parametric and semi-parametric) and models that allow hazard

<sup>&</sup>lt;sup>26</sup> Exited buyouts contribute the likelihood function via density function whilst non-exited contribute via their survival.

to change over time (i.e. parametric models with, for example, Gamma distribution) (see Jelic, 2011).

# Post exit performance

Summary of studies on post-exit operating performance of UK buyouts is presented in Table 27.3 (Panel A). Evidence suggests significant improvement is output, employment and dividends, while efficiency of buyout IPOs remain unchanged. There is, however, some evidence for negative changes in profitability. Lack of evidence for deterioration in operating performance (except profitability) of UK IPOs originated from buyouts performance contradicts evidence reported in IPO literature (e.g. Jain & Kini, 1994). There is also lack of evidence for superior/inferior performance of PE backed buyout IPOs (including employment). Operating performance of AIM IPOs does not significantly differ from main LSE IPOs. The lack of differences in performance, therefore, does not lend support to critics of AIM and their listing rules. There is some evidence that second round investors could still create wealth by improving performance. Given increasing importance of SMBOs this topic requires more research. Some of more recent studies (e.g. Zhou et al., 2017) provide a promising avenue for future research in this area by combining agency with entrepreneurship perspective.

# [Insert Table 27.3 about here]

Summary of studies on post-exit financial performance of UK IPOs that arise from buyouts is presented in Table 27.3 (Panel B). In the short run IPOs of PE-backed buyouts tend to be more underpriced than pure buyout IPOs. There is no evidence for difference in underpricing between more and less reputable PE backed buyout-IPOs. Following the IPO, share price is

above average stock market performance and the performance of non-buyout IPOs. In the long run, therefore, buyout IPOs do not significantly underperform thus contradicting the evidence reported in IPO literature. Performance of PE-backed buyout-IPOs is not different from non-PE backed buyout-IPOs. This further raises questions regarding the extent to which benefits of PE ownership extend once the buyout structure ends. More research on this topic is needed.

US evidence suggests that large PE-backed reverse LBOs perform better than other IPOs (Muscarella & Vetsuypens, 1990; DeGeorge & Zeckhauser, 1993; Holthausen & Larcker, 1996; Cao & Lerner, 2009). UK evidence is scarce but it seems to be in line with the US evidence (Jelic et al. 2005; Drathen & Faleiro, 2008). There is however lack of more recent, post crisis, evidence on UK buyouts that exit via IPOs.

One of the promising areas for further research is related to the importance of lock-up agreements for the long term performance of UK buyout IPOs. Evidence from IPO literature shows that UK lock-up/lock-in agreements tend to be less standardized compared to their US counterparts (Espenlaub et al., 2001). The evidence on market reaction to expiry of lock-ups in UK IPOs is inconclusive. Whilst Espenlaub et al. (2012) and Ahmad et al. (2017) report negative but not statistically significant change in price, Hoque and Lasfer (2009) report highly significant change in price (-1.85%) during 4 day window around lockup expiry. Further research might, therefore, usefully examine how the nature of PE involvement in buyout IPOs changes after the lock-up period and the consequences for financial performance. It is plausible that differences in the performance of buy-outs could be associated with the length of time PE firms remained locked (i.e. involved) with the portfolio companies. The examination of the performance over a longer period of time (i.e. before and

after lock-up expiry) would be in line with the results of some of the key methodological papers (Barber & Lyon, 1996; Lyon et al., 1999).

Overall, buyouts continue to be an important organizational form and their longevity has been increasing over time. Most recently, SMBOs have emerged as a very important exit route (at the expense of IPOs and sales). The research agenda is moving towards SMBOs and comparison of PE and non-PE backed buyouts. From a theoretical point of view, complementing agency with entrepreneurship perspective provides the most promising avenue for further research.

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# Table 27.1: UK – Buyout Longevity

This table summarises some of the leading research on buyout longevity in the UK, presenting the sample periods of the papers and highlighting the main findings.

Authors	Period / Sample	Findings
Wright et al. (1994)	434 large and small MBO (exits only), during 1981-90	Larger and buyouts originated from divestments tend to exit sooner; heterogeneous longevity.
Wright et al. (1995b)	158, exited and non-exited, large PE-backed MBO/MBI	Most buyouts exited within 3-5 years; exits affected by economic conditions; 71% of buyouts privately owned 7 years after buyouts.
Gottschalg (2007)	Worldwide; early and late stage PE-backed deals	Average time to exit of PE-backed buyouts is 5 years.
Wright et al. (2007)	European, including UK buyouts	Partial sales accounted for <sup>1</sup> / <sub>4</sub> of total UK exit value, in 2005; In continental Europe partial sales accounted for less than 1/20 of total exit value, in 2005.
Stromberg (2008)	Worldwide; PE-backed buyouts, during 1970- 2002; 2,229 UK buyouts, including buyouts without data on deal valueTime to exit longer than five years in 58% of cases. Most LBOs are acquisit of private firms and divisions of other companies. The most common exit re are trade sales, followed by SBOs 4. LBOs sponsored by PE investors exit e than those without financial sponsors. Deals sponsored by PE funds are mon likely to go bankrupt. LBO organization form seems to be a long-run govern 	
Jelic (2011)	1,089 PE-backed and pure MBO/MBI/LBO/SMBO, during 1966-2004 (866 exits (including liquidations) and 223 non- exits).	The median time to exit is 36 months. 56% of pure buyouts remained in buyout from for at least 7 years after the original buyouts. The most popular exit routes are IPOs, followed by sales, SMBOs, and liquidations. PE-backed buyouts show higher exit rates, fewer early (within 12 months) exits, and less liquidation in comparison to pure buyouts. Buyouts backing by PE syndicates tend to have a shorter longevity. Characteristics of buyouts and PE-backing, with the stock market and PE market conditions, significantly impact buyouts' longevity.

 

 Table 27.2: Comparison of Longevity and Exits from Original Buy-outs, Private Ownership, and Buy-out Ownership Structure

 This table presents a comparison of results on longevity, exits, and exit routes reported in studies on buyout and studies on PE/VC exits. Evidence for PE backed buy-outs (i.e. late stage investments) comparable to

evidence on VC exits, in bold. Source: Jelic (2011).

	Longevity	Exit status/routes
Panel A: Exits of UK buy-outs		
Wright et al.,1993; (1981-91)	Exits peaked 3-5y	26% exits (7y)
Wright et al., 1994; (1981-90)	Heterogenous longevity	40% exits
Wright et al., 1995b; ( <b>PE backed</b> -1983-86)	Heterogenous longevity; exits peaked 3-5y	42% exits; Sales (18.4%); IPO (10%); SMBO (3.8%); failed (9.5%); 29% exits from <u>private ownerhsip</u> (7y)
Jelic et al., 2005; (1964-97)	4y (median 3.33y)-IPO	
Nikoskelainen and Wright, 2007; (PE backed-1995-2004)	3.5y; 2.6y-IPO	IPOs (16%); Sales (28%); SMBO (18%); failed (38%)
Jelic and Wright, 2011; (PE and non-PE backed-1980-2009)		<b>IPOs (42%;</b> Main 35% and AIM 17%); Sale (19%); SMBO (18%); Liquidation (3%)
Jelic, 2011; (PE and non-PE backed- 1966-2004)	3.75y (median 3y)-all exits; 3.8y-IPO; 3.3y-sale; 4.4y-SMBO; 3.2y- liquidations; 3.6y-private exits (sale & SMBO); <b>PE backed</b> <b>subsample: 3.3y (median 2.9y)-all exits; 3.25y-IPO; 3y-sale;4.3y-</b> <b>SMBO; 4.4y-liquidations;</b> non-PE backed: 4.3y (median 3.7); 4.8y- IPO; 3.8y-sale; 4.3y-SMBO; 2.9y-liquidations 3.68y in <u>buy-out organizational form</u> – all exits ( <b>PE backed</b> <b>subsample: 3.2y;</b> non-PE backed: 4.3y); 3.69y in <u>private ownership</u> – all exits ( <b>PE backed subsample: 3.2y;</b> non-PE backed: 4.3y)	65% exits from <u>original buy-out structures</u> (70% of PE backed and 58% of non-PE backed) (7y); IPO (47%); sales (21%); SMBOs (9%); liquidation (3%); PE backed subsample: IPO (52%); sales (18%); SMBOs (11%); liquidation (2%); non-PE backed: IPO (39%); sales (28%); SMBOs (6%); liquidation (5%) 50% exits from <u>any buy-out organisational form</u> (55% of PE backed; 44% of non-PE backed) (5y); 53% exits from <u>private</u> <u>ownership</u> (54% of PE backed; 51% of non-PE backed) (7y)
Panel B: Buy-out exits internatioanally		
World data; Stromberg 2008 (Predominantly PE backed- 1970-2007)	World - 6-7y (median) in 1980s and 9y during 1995-99	World - 40% exits (IPO-13%; sale -38%; SMBO-24%; failed- 6%); UK- 67% exits (IPOs -11%; sale-42%; SMBO-22%; failed -8%; unknown -10%) World - 55%- exits from <u>LBO organisations form</u> (5y); UK- 59% exits from <u>LBO organisations form</u> (5y)
US data; Kaplan, 1991; (PE backed- 1979-86)	Exits peaked in y4; 6.8y longevity in private ownership	44% exits (7y); 38% exits from private ownership (7y)
Panel C: VC exits internatioanally		
US data; Cumming and Johan, 2010; (1991-2004)	2.95y-IPO; 3.2y-sale & smbo; 2.9y-write-offs	IPO (35.7%); sale & smbo (54.6%); write-offs (9.7%)
Canadian data; Cumming and Johan, 2010; (1991-04)	2.5y-IPO; 4.1y-sale & smbo; 3.2y-write-offs	IPO (5.85%); sale & smbo (74.2%); write-offs (19.9%)
World data; Mohamed, 2009; (1990-2006)	4.6y-IPO; 5.3y- M&A 5.9y-write-offs	M&A and IPOs are most the popular exit routes.
European data; Cumming, 2008; (1995-2005)	3.33y-IPO; 3.38y -sale & SMBO; 3.58y- write-offs	IPOs (17%); sale & SMBO (49%); write-offs (34%)
Australasia data; Cumming et.al, 2006; (1989-2001)	2.8y-IPO; 3.4y-sale & smbo; 4.6y-write-offs	IPO (23%); sale & smbo (60%); write-offs (17%)
European data; Schweinbacher, 2002; (1990-2001)	3.7y-all exits	IPO (25%); sale & SMBO (54%); write-offs (21%)

**Table 27.3: UK Buyouts Post- exit Performance**This table highlights some contrasting findings on post-exit performance of UK buyouts, in terms of post-IPO operating performance as well as financial performance.

# Panel A: Post-IPO operating performance

Authors	Period / Sample	Findings
Jelic and Wright (2011)	1,225 Buyout IPOs; MBO/MBI/LBO;	The buyouts which exited via IPOs outperformed trade sales and SMBOs in terms of IRR; better
	PE-backed and pure buyouts, during	performance of PE backed buyouts exiting via IPOs. Buyouts exiting via the IPOs experience
	1980-2009	improvement in employment and output and lack of significant changes in efficiency and
		profitability. IPOs on Main market outperform the AIM only in terms of changes in output. AIM
		IPOs do not experience performance differences between PE backed and non PE backed buyouts.

# Panel B: Post-IPO financial performance

Authors	Period / Sample	Findings
Jelic et al. (2005)	167 IPOs of reverse MBO/MBI;	PE-backed buyouts are more underpriced than pure buyouts Buyout IPOs do not underperform in
	PE-backed and pure buyouts,	the long run. No significant difference between the performances of PE-backed and non-PE-
	during 1964-1997	backed buyouts. Buyouts backed by more reputable PE-firms exit earlier and perform better.
Drathen and Faleiro (2008)	128 LBO backed IPOs and	The LBO backed IPOs outperform the market as well as non LBO backed IPOs. The factor most
	1,121 non LBO backed IPOs,	significantly explaining the superior performance is percentage ownership by the buyout group
	during 1990-2006	after the offering.