Making the *Case* *for* Private Equity:

findings from the literature

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This briefing looks at some of the key questions that are often asked about private equity (PE) and details some of the academic evidence that demonstrates PE's value both to financial investors and the broader economy.

Q. Do private equity funds increase financial instability/risk?

The short answer is no. There is no proof of a link between PE investments and systemic risk in the classic sense of financial stability. The US **Private Equity Growth Capital Council** provides the following analysis:

- Private equity relies on long-term capital commitments from limited partners, is not dependent on short-term financing, and primarily invests in illiquid assets and thus is not susceptible to the type of "run on the bank" that occurred with Bear Stearns, Lehman Brothers and other financial institutions.
- Because private equity buyout funds do not provide redemption opportunities before the fund matures, they are not forced to sell companies into a down market to fund investor redemptions.
- Private equity funds have little or no debt. Private equity buyout funds generally do not take on leverage at the fund level and the parent companies of private equity partnerships generally have little to no debt either. As a result, private equity buyout funds do not face margin calls from creditors or unsustainable debt burdens.
- Private equity portfolio companies use dramatically less leverage than the financial firms that collapsed. The average gross leverage ratio of private equity deals is historically about 3:1 – while Lehman Brothers was leveraged at approximately 32:1.
- Private equity-sponsored companies are not deeply interconnected with other financial market participants and are not in a position to trigger cascading losses that trigger systemic risk. Neither private equity funds nor portfolio companies are cross-collateralized, meaning the failure of one company would have no knock-on effects on the fund or the other companies held in portfolio.
- Private equity-sponsored companies' borrowing is a small portion of the overall credit market. According to the IMF, leveraged loans, collateralized loan obligations (CLOs) and high-yield bonds comprise about five percent of all U.S. credit market obligations outstanding. And borrowing by PE-sponsored companies is but a fraction of this number.
- Private equity funds are diversified across multiple industries and thus lack concentrated exposure to any single sector. From 2000-2007 consumer-related companies accounted for 14.7% of total private-equity investment; industrial companies, including energy and semiconductor firms, accounted for 21.2% of the total investment; computer firms represented another 9.6% of total investment; and health care concerns accounted for 9.5% of investment. (US data)

Q. Why is private equity fund performance so closely linked to the credit cycle?

- As a business model that utilises leverage, it is inevitable that PE will be affected by changes to credit conditions. However, empirical studies suggest that whilst PE is affected by the credit cycle, this effect is equal or less significant than for other privately-owned and publicly-quoted companies.

The Credit Performance of Private Equity-Backed Companies in the 'Great Recession' of 2008–2009 (Thomas 2010)

- Recent research by Jason Thomas for the Private Equity Council looked at defaults in US PE-backed companies through the recent credit crunch, compared to other privately-held comparable companies. This report analysed a dataset of more than 3,200 private equity-backed companies, acquired in a buyout or similar transaction between 2000 and 2009 and held through 2008-2009. It found that through 2008-2009, private equity-backed businesses defaulted at less than one-half the rate of comparable companies – at just 2.84% compared to 6.17%.

BVCA Research Note Number 05: Benchmarking private equity against public markets (2010)

- In addition, this recent research from the BVCA shows that the credit crunch had a similar impact on private equity returns compared to public market equivalents – since-inception IRRs dropped from 17.5% prior to the recession to 14.3% post recession. Despite this, PE IRRs significantly outperformed their publicly-quoted peers in absolute terms, with a 14.3% IRR compared to 7.3%.

Q. Are economies with a lot of private equity funds more volatile than those without them?

Globalization of Alternative Investments: The Global Economic Impact of Private Equity Report 2010 /Private equity, industry performance and cyclicality (World Economic Forum 2009)

- **Key finding**: Activity in industries with PE backing appears to be no more volatile in the face of industry cycles than in other industries, and sometimes less so. The reduced volatility is particularly apparent in employment. Results and methodology are on p8 of the World Economic Forum report.
- Availability of financing impacts booms and busts in the PE market. If firms completing buyouts at market peaks employ leverage excessively, we may expect industries with heavy buyout activity to experience more intense subsequent downturns.
- Moreover, the effects of this overinvestment would be exacerbated if PE investments drive rivals, not backed by private equity, to aggressively invest and leverage themselves. Chevalier (1995) shows that in regions with supermarkets receiving PE investments, rivals responded by adding and expanding stores.
- Private equity-backed firms may do better during downturns because their investors constitute a concentrated shareholder base, which can continue to provide equity financing in a way that might be difficult to arrange for other companies during downturns.
- A related argument, originally proposed by Jensen (1989), is that the high levels of debt in PE transactions force firms to respond earlier and more forcefully to negative shocks to their business. As a result, private equity-backed firms may be forced to adjust their operations more rapidly at the beginning of an industry downturn, enabling them to better weather a recession. Even if some private equity-backed firms eventually end up in financial distress, their underlying operations may thus be in better shape than their peers. This facilitates an efficient restructuring of their capital structure and lowers the deadweight costs on the economy.
- Consistent with this argument, Andrade and Kaplan (1998) study 31 distressed leveraged buyouts from the 1980s that subsequently became financially distressed, and found that the value of the firms post-distress was slightly higher than the value before the buyout, suggesting that even the leveraged buyouts that were hit most severely by adverse shocks added some economic value.
- The structural differences between PE funds and other financial institutions may make them less susceptible to industry shocks. A major source of concern for financial institutions is the so-called 'run on the bank' phenomenon. It is unlikely that PE investments create dangers through this mechanism. Private equity funds are typically prevented from borrowing themselves, and the funds' only claimants are their limited partners (LPs), which are typically bound by 10-year lock-up agreements. Hence, the funds have no short-term creditors that can run.

Q. To what extent does leverage affect risk-adjusted returns in private equity investing?

Private Equity Fund Level Return Attribution: Evidence from U.K. Based Buyout Funds (O. Gottschalg, E. Talmor and F. Vasvari 2010)

- This report investigates components of private equity buyout fund returns using a unique anonymised dataset provided by a major Fund of Funds, Pantheon Ventures, in collaboration with BVCA.
- The study focuses on returns at the fund level net of fees and carry
- In the sample, the weighted average buyout fund performance generates a net IRR of 19.61% with an Alpha of 4.47%, which represents approximately 23% of the total return.
- The weighted average unlevered buyout fund return is 11.90%. Leverage contributes 7.71% to the return of the average buyout fund which represents 39% of the weighted average buyout fund performance in the sample.
- This magnitude while large suggests that the performance of buyout funds in the sample is not solely attributable to the effect of leverage. Buyout funds benefit from high leverage, but at the same time it is not leverage alone that drives their success.

Private Equity Study: Finding Alpha (Gottschalg/Golding Capital Partners 2010)

- The study examines the relative performance of private equity at the transaction level after taking into account of (a) the cash flow timing, (b) the general performance of the relevant sector and (c) the use of debt.
- The study benefits from the largest dataset to date, covering over 4000 realised transactions across multiple cycles (1977-2009) and geographical areas.
- The study finds a positive alpha of 7.1% on average over the comparable return from the stock market (after adjusting for leverage, timing and sector mix).
- The study further reveals that PE alpha is at its highest (15%) during difficult economic times with a poor stock market performance and the lowest during the boom period with strong positive price development in the stock market.

Benchmarking private equity against public markets (BVCA Issue Note 2010)

- Use of Public Market Equivalent (PME) approach to examine how the UK private equity funds have performed relative to the FTSE All-Share Index.
- Applying the PME approach to benchmark UK private equity against public markets, we find evidence of significant outperformance relative to the FTSE All-Share Total Return Index.
- Collectively all funds in the BVCA's database generated a pooled IRR of 14.3% p.a. from 1986 to 2009. In this instance, the matching PME vehicle maintained a 'long' position throughout the benchmarking period, avoiding the 'shorting' concerns.
- This PME exercise does not ascribe outperformance to leverage, sector-specific developments or other factors.

Private Equity vs PLC Boards in the UK: A Comparison of Practices and Effectiveness (Acharya, Kehoe, Reyner 2008)

- Research by London Business School and McKinsey (Acharya and Kehoe – 2008) has demonstrated that there is more to the success of the best PE houses than pure financial engineering.
- The analysis suggests that less than 30% of the outperformance delivered by the top PE funds over stock market returns (measured by deal-level internal rate of return before any fees) can be attributed to simple financial leverage and market timing; more than 70% represents 'true outperformance' or 'alpha' (and the leverage effects of this alpha).
- This 'alpha' reflects two key performance drivers: the ability of the PE-backed companies to drive EBITDA growth ahead of their public peers for similar levels of sales growth, and their ability to exit at multiples above sector averages, indicating confidence of the subsequent owners that this EBITDA growth is sustainable.

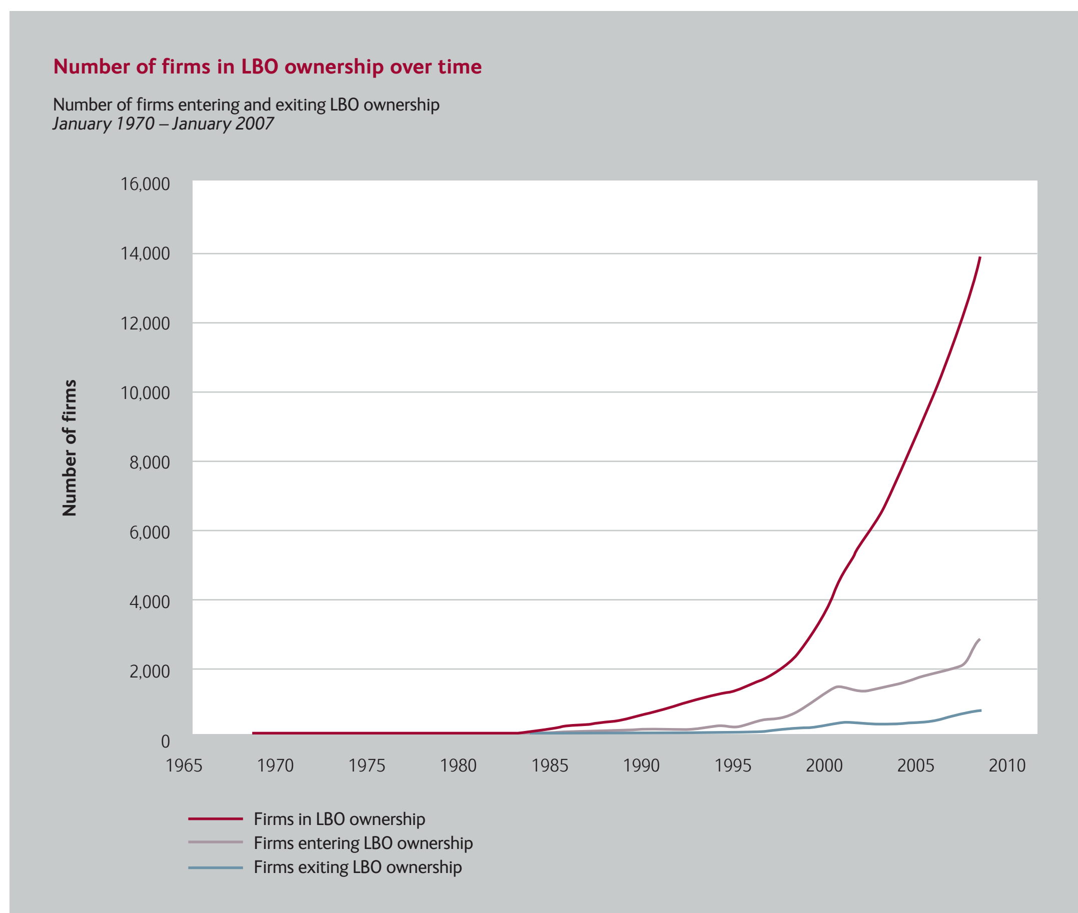
Q. Aren't private equity funds "short-termist"?

Challenges in a new world: How do private equity investors create value? (Ernst & Young 2008)

- The study used a European sample of 287 companies with an average enterprise value at acquisition of €600m.
- The study showed no evidence of short-term behaviour towards troubled investments.
- Not every business performed well under PE ownership. Approximately 10% of investments in the data fell short of minimum returns. However, in examining these deals, there was no evidence of a short-term mentality in PE behaviour.
- PE remained committed to help poorly performing businesses to turnaround. Almost all received additional time with PE owners. The average length of PE ownership of these businesses was seven years, twice that of other investments. While 43% experienced a change in top management, 36% saw further equity injections, as PE investors and management worked hard to change strategies and implement new actions to improve profits and cash flow.

Globalization of Alternative Investments: The Global Economic Impact of Private Equity Report 2008 /Working Paper 1 (World Economic Forum 2008)

- Private equity investors have a long-term ownership bias. 58% of the private equity funds' investments are exited more than five years after the initial transaction. So-called "quick flips" (i.e. exits within two years of investment by private equity fund) account for 12% of deals and have decreased in the last few years.
- With an extended sample from the early Kaplan (1991) study, the LBO organizational form seems more long term than temporary. It is shown that out of all firms ever entering LBO status over the 1980–2007 period, 69% are still in the LBO organizational form by November 2007. Disregarding the 2003–2007 period, which may have had too short a time to exit, the number is still as high as 45%. For a non-trivial fraction of firms, the LBO status seems more or less permanent. For firms undergoing their original LBO before 1990, 10% are still in LBO status by 2007.
- As shown in Figure 4A (below), the number of firms entering LBO status has consistently been substantially higher than the number of firms leaving LBO status over time. At the beginning of 2007, close to 14,000 firms worldwide were in LBO ownership, compared with fewer than 5,000 in 2000 and fewer than 2,000 in the mid-1990s.



Q. Do private equity funds damage companies and jobs?

EMPLOYMENT

The Economic Impact of Private Equity: What We Know and What We Would Like to Know, Forthcoming in Venture Capital (Wright, M., Gilligan, J., and Amess, K. 2008)

- Employment in the MBOs dips initially after the buyout but then continues to rise, on average (Wright et al., 2007; Work Foundation, 2007). These findings are consistent with the notion that MBOs lead to the exploitation of growth opportunities, resulting in higher employment growth.

Creative Destruction? UK Evidence That Buyouts Cut Jobs to Raise Returns (Cressy, Munari and Malipiero 2007)

- The sample consisted of 48 UK buyouts and a matched sample of 84 non-PE-backed UK companies over the period 1995-2000.
- Over the first post-buyout year for example PE companies' employment falls relative to controls by 7% rising to 23% over the first 4 years. In the last year of the study (year +5) employment increases.
- Leveraged buyouts thus bring about quick and substantial reductions in employment in target companies during the period of 'rationalisation'.
- However, initial profitability, 3-year average post-buyout profitability and 3 year sales growth have positive elasticities with respect to future employment. Therefore, buyouts generating higher operating profits from job cuts are associated with compensating job creation as profitability increases and sales expand, thereby helping to offset job losses arising from initial rationalisation of the business.

Globalization of Alternative Investments: The Global Economic Impact of Private Equity Report 2008 / Working Paper 1 (World Economic Forum 2008)

- The report focussed on 300,000 U.S. private equity-backed establishments in the period from 1980 to 2005
- The establishments of target firms that exist at the time of the transaction exhibit lower rates of net employment growth in the years before, of, and immediately after a private equity transaction, when compared to a group of similar control establishments.
- In the second and third years after such transactions, these targets have considerably lower net job growth than control establishments.
- By the fourth and fifth years, job growth of the target firms is slightly above that of the controls.
- Greenfield job creation in the first two years post transaction is 15% of employment for target firms and 9% for control firms. That is, firms backed by private equity engage in 6% more greenfield job creation than the controls.
- Private equity also accelerates the pace of acquisitions and divestitures. In the two-year period after the private equity transaction, the employment-weighted acquisition rate is 7.3% for target firms and 4.7% for controls. The employment-weighted divestiture rate is 5.7% for target firms and 2.9% for controls.
- The results suggest that private equity groups act as catalysts for *creative destruction*.

VALUE CREATION

Globalization of Alternative Investments: The Global Economic Impact of Private Equity Report 2010 /Private equity, industry performance and cyclicality (World Economic Forum 2009)

- The study considers the impact of private equity investments across 20 industries in 26 major OECD nations between 1997 and 2007.
- The claim that private equity-backed firms have improved operations has been supported by a number of empirical studies, which focus on the effects on the individual private equity-backed companies:
  - Kaplan (1989) examines changes in accounting performance for 76 large management buyouts of public companies between 1980 and 1986. He shows that in the three years after the transaction operating income, cash flow and market value all increase. He argues that these increases reflect the impact of improved incentives rather than layoffs.
  - Bloom et al. (2009) survey over 4,000 firms in Asia, Europe and the US to assess their management practices. They show that private equity- backed firms are on average the best-managed ownership group in the sample, though they cannot rule out the possibility these firms were better managed before the PE transaction.
  - Davis et al. (2009) compare all US-based manufacturing establishments that received PE investments between 1980 and 2005 with similar establishments that did not receive PE investments. They show that private equity-backed firms experienced a substantial productivity growth advantage (about two percentage points) in the two years following the transaction. About two-thirds of this differential is due to improved productivity among continuing establishments of the firms.
  - Cao and Lerner (2009) examine the three- and five-year stock performance of 496 RLBOs between 1980 and 2002. RLBOs appear to consistently outperform other IPOs and the stock market as a whole. Large RLBOs that are backed by PE firms with more capital under management perform better, while quick flips – when PE firms sell off an investment soon after acquisition - underperform.
  - These findings might suggest that we would see superior performance for PE firms, regardless of the economic conditions. Moreover, if PE firms represent a significant fraction of the activity in certain industries (and tabulations in several countries, including the US and UK, suggest that this is the case), there may also be a positive effect at the industry level. Investigating the industry level also allows us to capture the 'contagion' effects arising if improvements in bought-out firms spur their competitors to improve.
- The results of the study indicate that industries with PE deals have significantly higher growth rates of production and value added. For instance, in the first regression, the coefficient of 0.906 implies that the total production of an average PE industry grows at an annual rate that is 0.906% higher than a non-PE industry.

The Economic and Social Impact of Private Equity in Europe: Summary of Research Findings (Strömberg 2009)

Review of academic findings:

- The operating profitability of private-equity-backed buyouts was 4.5% higher than comparable non-buyout companies over the first three years. (Cressy, Munari, Malipiero, 2007)
- Buyout-backed companies recorded higher profitability per employee (11.6%) than their quoted peers (5.9%) in terms of average annual growth. In declining industries, private-equity-backed companies performed far better than their public equivalents. (Acharya and Kehoe, 2008)

Challenges in a new world: How do private equity investors create value? (Ernst & Young 2008)

- The study focussed on a European sample of 287 companies with an average enterprise value at acquisition of €600m.
- The average company grew its profit of close to €100m at the time of acquisition by 15% compound annual growth rate (CAGR) to exit three and a half years later. In addition to growth in profit, the average company increased its employment from around 5,000 at acquisition by 5% CAGR, and productivity – measured by profit/employee – grew by 9% CAGR. Finally, the valuation multiple – the ratio of business enterprise value to profits – grew by two times from acquisition to exit.

Private Equity vs PLC Boards in the UK: A Comparison of Practices and Effectiveness (Acharya, Kehoe, Reyner 2008)

- 20 interviews with Chairmen and CEOs in the UK who have been members of both PE and PLC boards of relatively large companies.
- 75% felt that PE boards were clearly superior in the value they added; none felt their public counterparts were better.
- The research suggests that PE boards are typically more effective overall than their PLC counterparts, and in particular in the value they add on strategic leadership and performance management oversight.
- PE boards report almost complete alignment in objectives between executive and non-executive directors, whereas the PLC boards report lack of complete alignment and focus on management of broader stakeholder interests.

Q. Do private equity funds have unhelpful or hidden spillover effects in other parts of the economy (e.g. do companies take "evasive" action through divestment, acquisition or alteration in capital structures?)

The Economic Impact of Private Equity in the UK (BVCA 2007)

- Private equity-backed companies create jobs at a considerably faster rate than other private sector companies. Over the five years to 2006/7, the number of people employed worldwide by UK private equity-backed companies increased by an average of 8% p.a. This compares dramatically with FTSE 100 and FTSE Mid-250 companies, at 0.4% p.a. and 3% p.a. respectively. Furthermore, 84% of responding companies said their growth was organic, rather than by acquisition, since they had private equity backing.
- Private equity-backed companies boost the UK economy. Over the five years to 2006/7, on average private equity-backed companies' sales rose by 8% p.a., compared with FTSE 100 companies (6% p.a.) and FTSE Mid-250 companies (5% p.a.).
- For the financial year 2006/7, it is estimated that private equity-backed companies generated total sales of £310 billion, exports of £60 billion and contributed nearly £35 billion in taxes.

Reinventing venture capital towards a new economic settlement (DEMOS/Reed 2010)

- Start-up firms of the type backed by venture capital are usually by nature highly innovative - they have a total focus on developing successful new products. Innovation is a key determinant of economic growth, both through driving high returns to investment for innovative firms and spillovers in the wider economy

Globalization of Alternative Investments: The Global Economic Impact of Private Equity Report 2010 /Private equity, industry performance and cyclicality (World Economic Forum 2009)

- The findings in this report suggest that we would see superior performance for PE firms, regardless of the economic conditions. Moreover, if PE firms represent a significant fraction of the activity in certain industries (and tabulations in several countries, including the US and UK, suggest that this is the case), there may also be a positive effect at the industry level. Investigating the industry level also allows us to capture the 'contagion' effects arising if improvements in bought-out firms spur their competitors to improve.

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