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Private Equity: Accomplishments and Challenges

by Greg Brown, University of North Carolina; Bob Harris, University of Virginia; Tim Jenkinson, University of Oxford; Steve Kaplan, University of Chicago; and David Robinson, Duke University

Since the 1980s, there has been an ongoing discussion about the role of private equity (PE) in the economy. As investors have flocked to the asset class, voices critical of the negative social impact of PE have grown louder. In this article, we examine what is known from the academic literature about the effects of private equity on corporate productivity, the returns for investors, and possible broader economic and social consequences. We catalogue what we believe to be strong evidence of the overall benefits of PE-backed companies and investors in private equity, as well as spillovers in the form of broader gains in economic productivity. We also describe apparent instances of PE shortcomings in some specific industries where negative social impacts can be measured in some way.

In our view, private equity is “capitalism in high gear” and, as such, subject to most of the same debates concerning economic and social conditions in a free enterprise system. While some argue that the 2020 version of capitalism (as practiced in the U.S. and much of the world) is ineffective in coping with current social needs, much of the impetus behind today’s critique of PE reflects the same forces and feelings driving the unrest about a system in which capital is said to have “too much” power, there is high and growing inequality, labor has too little voice, and antitrust enforcement is lax. Markets, at least in some cases, do not have sufficiently strong incentives to consider externalities that affect society.

That said, conversations in the public about what markets can and should accomplish are often muddled. Although the issues are certainly not unique to PE, and it is unreasonable to expect the industry to provide comprehensive solutions to such problems, PE does appear to accelerate and amplify market effects. Thus, while it is very important to understand the generally positive role of PE in the business and investment space, there are broader social considerations that we think are important to examine.

Back to the 1980s

Our account of private equity begins at the end of the 1980s, when hostile takeovers and other often highly leveraged transactions, including a relative newcomer called the leveraged buyout (or LBO), came under fierce attack in both the press and conventional business circles. Some of the deals done at the end of the ’80s—like Robert Campeau’s takeover of Federated Stores (which had the audacity to include Bloomingdale’s)—were already beginning to show signs of stress. But the event that concentrated populist anger and set off the first coordinated political response to highly leveraged transactions was the LBO in 1988 of RJR-Nabisco, a large, household-name public company, by a small and still relatively unknown private partnership called Kohlberg, Kravis and Roberts. The price paid by KKR to take control of what then appeared, at least to outsiders (and most of the investment community), a profitable and well-run company, was the astounding sum of \$25 billion, almost double RJR’s market value at the time. That transaction, thanks in part to the account of it provided in a business bestseller called *Barbarians at the Gate*, became the visible embodiment of a general threat posed by activist investors to corporate Amer-

ica—and to its spokesman the Business Roundtable and the many constituencies beholden to it.

Such leveraged transfers of corporate control were perceived to be enough of a threat to the public welfare that the U.S. Senate and House saw fit to conduct hearings on “LBOs and Corporate Debt” in early 1989, when the economy was headed into recession. The first to testify was then Fed Chairman Alan Greenspan. While voicing concern about the unprecedented levels of corporate debt, Greenspan viewed the developments as a more or less continuous extension of corporate America’s long history of financial and operating restructuring—one dating at least as far back as the turn of the 20th century. Viewed as such, leveraged takeovers and buyouts were a mostly positive development that appeared to be producing significant productivity gains.¹

Next up was Harvard Business School Professor Michael Jensen, whose view of LBOs was not only consistent with, but dramatically amplified, Greenspan’s message. “The fact that a firm the size of KKR, with 30 or 40 professionals,” as Jensen told the lawmakers,

*was willing to bid—and able to raise—\$25 billion for the purchase of a company like RJR Nabisco was a revelation to me. After all, that \$25 billion represented an almost 100% premium over RJR’s value under its CEO Ross Johnson, which was about \$13 billion before the firm was put in play. What I learned from reading Barbarians at the Gate—and I’m not sure the author ever realized what he had found—is that the sheer waste of value under Johnson, and thus the gain from taking the company private, was enormous; it was well in excess of \$10 billion, even if KKR’s investors never made a dime on the deal. The true barbarians in this story were not at the gate, they were already inside.*²

Jensen went on to view the growth of LBOs in the 1980s as part of a general U.S. phenomenon he identified as “the rebirth of active investors,” American financiers who had been forced to surrender most of their ownership and influence during the Great Depression of the 1930s. “Active investors,” according to Jensen,

were people who...in the 1920s held large positions in both the debt and the equity of an organization, often served on the

*board, and were actively involved in the strategic direction of the firm. A series of laws and regulations dating back to the Depression, including the 1934 SEC Act and the Investment Company Act of 1940, had the effect of driving active investors off of corporate boards and pretty much out of the corporate governance arena. And the consequence of these laws and regulations, as I argued in a number of papers and forums, was a corporate America that was largely unmonitored and uncontrolled by outside investors. The result was massive inefficiencies—inefficiencies that were both reflected in and made worse by the conglomerate movement of the late 1960s and ’70s. These inefficiencies in turn provided opportunities for the so-called “raiders” and restructurings of the ’80s, of which LBOs and private equity were an important part.*³

The paper for which Jensen is best known among his academic colleagues is called “Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure.”⁴ That paper, written with colleague Bill Meckling at the University of Rochester in the mid-1970s, revolutionized the theory of corporate finance by identifying and analyzing conflicts of interests and incentives between the management and shareholders of large public companies. Unless managed effectively, such conflicts—particularly over the optimal size and diversification of such companies—were likely to produce very large costs and reductions in value. And as Jensen and Meckling saw it, the primary responsibility, and most formidable challenge, facing the boards and internal governance systems of public companies was to manage these conflicts in ways that end up increasing long-run efficiency and value.

About ten years later, in a 1986 *American Economic Review* article called “The Agency Costs of Free Cash Flow: Corporate Finance and Takeovers,” Jensen extended this analysis to the shareholder activism of the ’80s by documenting the tendency of managers of companies in mature industries to reduce their efficiency and value by hoarding excess cash and capital—or, with even worse consequences, reinvesting it in low-return businesses, including diversifying acquisitions—instead of returning it to shareholders. In Jensen’s view, the highly leveraged acquisitions, LBOs, and other leveraged recaps of the ’80s represented solutions to this “free cash flow” problem by effectively converting the smaller, “discretionary” dividend payments paid by most public companies into much larger, *contractual* payments of interest and principal. Pointing to the standard capital structure in the LBOs of the ’80s, Jensen

1 Alan Greenspan, “Selections from the Senate and House Hearings on LBOs and Corporate Debt,” *Journal of Applied Corporate Finance*, Vol. 2 No. 1 (Spring 1990).

2 Michael Jensen, “Active Investors, LBOs, and the Privatization of Bankruptcy,” *Journal of Applied Corporate Finance*, Vol. 2 No. 1 (Spring 1990). As things turned out, Jensen appears to have been right. The value of the operating efficiencies created by the KKR-RJR were estimated to be around \$11-\$12 billion. But because the premium over market paid by KKR to acquire RJR was roughly the same, the returns to KKR and its limited partners from the deal were close to zero.

3 Jensen, “Active Investors, LBOs, and the Privatization of Bankruptcy,” cited earlier.

4 Jensen, Michael C. & Meckling, William H., 1976. “Theory of the firm: Managerial behavior, agency costs and ownership structure,” *Journal of Financial Economics*, Elsevier, vol. 3(4), pages 305-360, October.

noted that paying a 40% premium for a public company and then leveraging its equity 9 to 1 had the effect of making the cost of capital “both explicit and contractually binding.”

Jensen also viewed the heavy use of debt financing as providing what amounts to an automatic internal monitoring-and-control system. That is, if problems were developing, top management would be forced by the pressure of the debt service to intervene quickly and decisively. By contrast, in a largely equity-financed company, management could allow much of the equity cushion to be eaten away before taking the necessary corrective action. What’s more, the fact that the typical LBO fund had a fixed life of from seven to ten years effectively forced the sponsors—the general partners, or GPs—to either sell or refinance their portfolio companies and return the capital to their investors—the limited partners, or LPs—an important governance feature that we come back to.

“

With close to a trillion dollars of dry powder available, private equity arguably has the capital as well as the managerial capability needed to deal with the financial and operational challenges emerging from the pandemic.

”

The Rise of LBOs and Private Equity

So impressed was Jensen by the first wave of LBOs that, near the end of 1989 (the same year he testified before Congress), he published an article in the *Harvard Business Review* called “The Eclipse of the Public Corporation.” There he hailed the rise of “LBO partnerships” like KKR and Clayton & Dubilier as a “new organizational form”—one that, in acquiring and operating companies across a broad range of industries, was competing directly with, and threatening to supplant, public conglomerates. With fewer than 50 professionals, such LBO partnerships were said to do a better job of providing the same coordination and monitoring function performed by corporate headquarters staffs numbering, in some cases, in the thousands. As Jensen saw it, “The LBO succeeded by substituting incentives held out by compensation and ownership plans for the direct monitoring and often centralized decision-making of the typical corporate bureaucracy.”⁵

⁵ Michael Jensen, “The Eclipse of the Public Corporation,” *Harvard Business Review*, 1989.

In the average Fortune 1000 company, as Jensen had reported (in a study with Kevin Murphy) in the early ’80s, the CEO’s total compensation changed by less than \$3 for every \$1,000 change in shareholder value. By comparison, the average operating head of an LBO in the ’80s experienced a change of roughly \$64 per \$1,000—and the entire operating management team, which owned about 20% of the equity, experienced a \$200 change. What’s more, the partners of the LBO firm itself (the KKR’s of this world), which is the proper equivalent of a conglomerate CEO, owned about 60% of the equity, and thus earned close to \$600 for each \$1,000 increase in value.

For corporate operating managers, then, the LBO amounted to a bold new proposition: greater decision-making autonomy and ownership incentives in return for meeting more demanding performance targets. Although the profits of LBOs were—and continue routinely to be—attributed to “asset-stripping” and the “gutting” of viable businesses, the ownership structure was designed in part to encourage managers to resist the temptation, potentially strong in cases of high leverage, to produce short-term profits at the expense of the corporate future. And precisely *because* the business must be sold to or refinanced by some outside party at some point during the next seven to ten years, even in those LBOs whose exit strategies are clearly defined at the outset, operating managers who are also significant owners should have strong incentives to devote the optimal, or value-maximizing, level of corporate capital—neither too much nor too little—to expenditures with longer-run payoffs such as advertising and plant maintenance. Regardless of how an LBO is eventually cashed out—whether by means of an IPO, sale to another firm, or a recapitalization involving another private investment group or management team—the greater the level of productive investment undertaken by managers, the higher the value of their shares when traded in.

Consider, for example, what Robert Kidder, CEO of Duracell, had to say about his firm’s goals and methods a few years after it was purchased from Dart & Kraft by KKR in the late ’80s:

The debt schedule is very effective in forcing management to attend to profitability in the near term. But, let me emphasize that another important consideration—in some sense, more important than short-term cash flow—is carrying through on strategic commitments. There is a widespread public misconception that because you’re an LBO, you have to do everything possible to generate short-term cash flow, and that LBOs thus simply represent a means of sacrificing future profit for immediate gain....

Now, I don’t mean to suggest that we don’t do everything possible to reduce waste and cut costs. But when I talk with

*Henry Kravis at lunch, we don't spend our time talking about cost reductions. We talk about how we're increasing the strategic value of the company—and by that I mean our long-term cash flow capability.*⁶

As Kidder's comments about Kravis suggest, on top of the discipline of debt and stronger management incentives, the boards of companies owned by buyout firms are designed in large part to overcome the information problems that beset the directors as well as the shareholders of public companies. The directors of a typical LBO don't merely *represent* the outside shareholders, they *are* the principal shareholders—and they have become the principal owners only after having participated in an intensive “due diligence” process intended to reveal the true profit potential of the business.

“Unlike the boards of public companies,” as James Birle, at that time a GP at Blackstone, said about the LBO governance process:

our board members come to the table already knowing a great deal about the operations and expected behavior of the businesses in various economic and competitive situations. This knowledge comes from the extensive due diligence process we have conducted just prior to the acquisitions. So we are able to determine when management has really gotten off the track far more quickly and confidently than most public company directors.

*We [also] have a much tighter performance measurement system, by necessity, than most public companies I'm familiar with. The pressure to ensure that goals are being met is just far greater than that which exists in most public companies. At the same time, this sense of urgency does not prevent us from setting and pursuing long-term goals. Our goal at the Blackstone Group is maximizing shareholder value, and you can't command a high price for a business if all you've been doing is liquidating its assets and failing to invest in its future earnings power. And since management are also major equity holders in the company, we are confident that they are constantly attempting to balance short-term and long-term goals in creating value.*⁷

What's more, if one of the portfolio companies gets into financial trouble or has operating problems, the board intervenes quickly, often appointing one of its members to step in as CEO until the crisis passes. And as in the case of venture capital, from which the buyout governance model has largely evolved, the board members in LBOs also typically handle

the corporate finance function, including negotiations with lenders and the investment banking community. In this sense, managing financial risk and restructuring distressed companies might be described as core competencies of LBO firms.

Much, of course, has changed since Jensen identified the main features of this “new organizational form” with its “better model of corporate governance.” The term “LBO” is rarely heard these days, having been absorbed into a broader class called “private equity”—a category which includes traditional buyouts and “growth equity” (investing in companies that are established but still growing strongly). And the financial structures and kinds of companies involved in such transactions have also changed somewhat over the years.⁸

But the growth and global expansion of private equity during the past 40 years has been extraordinary. Back in the late 1980s, there were only a handful of private equity firms with more than a \$1 billion in assets under management. Today there are several hundred institutional-quality PE firms that have collectively raised, or are in the process of raising, some 2,300 funds with an estimated \$3.0 trillion in committed capital.⁹ While LP capital commitments to PE still represent just a modest share of global equity, when you add the leverage that can be put on top of these funds, today's PE firms have a substantial amount of purchasing power.

Before the outbreak of the coronavirus, today's financial sponsors, with all this equity capital available, and with the help of remarkably forgiving leveraged finance markets, had been paying historically high transaction prices as multiples of operating cash flow or EBITDA. PE's “dry powder” may well now play a big role in the recovery of post-COVID markets—particularly, (1) credit markets, distressed as well as routine; (2) real estate, distressed and otherwise; (3) infrastructure; and (4) traditional buyouts.

In the pages that follow, we provide an overview of the main accomplishments of private equity since the emergence of LBOs in the early '80s, and the challenges it now faces—challenges that, as discussed below, have been encountered before during three major growth waves and two full boom-and-bust cycles. More specifically, we review a large and growing body of academic studies, including a number by the authors of this article, in responding to questions like these:

1. How have PE buyout companies performed relative to their public counterparts? And to the extent there have been improvements in operating performance and productivity

6 Robert Kidder, in “CEO Roundtable on Corporate Structure and Management Incentives,” *Journal of Applied Corporate Finance*, Vol. 3 No. 3 (April 18, 1990).

7 James Birle, in “The Role of Corporate Boards in the 1990s,” *Journal of Applied Corporate Finance*, Vol. 4 No. 3 (February 29, 1992).

8 We do not include other private capital asset classes such as real estate, natural resources, infrastructure, and private debt in our treatment of private equity. These asset classes have governance attributes and motivations that are somewhat different from those identified by Jensen in buyouts and growth equity.

9 Data from Burgiss Manager Universe as of December 31, 2019.

gains, how have such gains been achieved? What role have PE firms played in this process?

2. Especially in light of the large fees and profit shares paid to the PE firms, or GPs, and the significant “control” premiums over market paid to the selling companies, how have the returns to the LPs that provide the bulk of the funding for PE funds compared to the returns earned by the shareholders of otherwise comparable public companies?

3. Why is PE so controversial? Beyond their effects on productivity and benefits for investors, what are the employment and other social effects of buyouts and PE?

4. What are the prospects for future PE returns to their LPs, especially in light of the volume of capital commitments and high purchase multiples that were being paid, at least until the onset of the COVID pandemic? And what role, if any, should PE activity be expected to play in the recovery from the pandemic?

How Have Buyout Companies Done?

The first major study of the performance of LBO companies was conducted by one of us (Steve Kaplan). After gathering as much data on the operating performance of all U.S. companies with more than \$50 million in sales that were bought by U.S. buyout firms between the start of 1981 and the end of 1986, Kaplan found that these larger LBOs and management buyouts—76 in total—were followed by significant increases in operating margins and cash flows, both in absolute terms and relative to the public companies operating in their industries. Such increases were sustained at least over the three- or four-year period covered by the study.

For the deals in Kaplan’s sample that could be tracked after the buyouts, these operating gains resulted in increases in enterprise values of roughly 100%. According to Kaplan’s estimates, the gains from these deals were divided pretty evenly between the selling shareholders and the new investors—and they were attributed to three main factors: (1) increases in operating efficiency and cash flow; (2) increases in debt tax shields; and (3) transaction prices that were low enough to preserve a significant fraction of the value added for the private equity firm and its LPs.¹⁰

What Kaplan’s study also reported—and we will come back to this later—is little evidence of a decline in employment levels after LBOs. As for the claim that much of their operating gains come from cutbacks in R&D, it turns out that LBOs were not R&D intensive to begin with; only about one in ten of Kaplan’s sample companies were engaging in

enough R&D before the LBO to report it separately in their financial statements. Finally, the study reported that LBO boards typically have eight or fewer members who collectively represent about 60% of the equity, on average.

Many of the findings of Kaplan’s study have been replicated and confirmed by not only later studies of the 1980s—but also by more recent studies of both U.S. and European deals done in the 1990s and in the 2000s. One of these studies, published by Quentin Boucly, David Sraer, and David Thesmar in 2011, examined the performance of 839 French buyouts completed during the period 1994–2004.¹¹ The authors reported that during the three years that followed the buyouts, the PE-backed companies reported operating profitability (as measured by both EBITDA and EBITDA/total assets) that was 18% higher, and revenue growth rates 12% faster, than those of a control group of companies matched by size, industry, and prior profitability.¹² These findings were viewed as supporting the argument that PE creates value mainly by expanding its companies’ access to capital, and so enabling them to exploit profitable growth opportunities.

In another particularly prominent pair of studies—the first published in 2014 and its successor in 2019—Steven Davis, John Haltwanger, Kyle Handley, Ben Lipsius, Josh Lerner, and Javier Miranda examined the establishment-level productivity of a large fraction of all U.S. buyouts from 1980 to 2011. Both studies found that buyouts were associated with increases in productivity that were achieved mainly by exiting less productive establishments and entering more productive ones. More specifically, the authors report that the buyout firms increased their total factor productivity (by 2.1 log points), and that roughly three quarters of these gains could be attributed to more effective resource reallocation across units inside the firms.¹³

One limitation of this line of PE research is the relative lack of insight it provides into changes in the sources of value added over time. We continue to attribute much of the success of the 80’s buyouts to the incentive effects of high leverage and concentrated equity, or to what we like to call “financial and governance engineering.” “In the deals of the ’80s,” as

11 Quentin Boucly, David Sraer, and David Thesmar, “Growth LBOs,” *Journal of Financial Economics*, Vol. 102 No. 2 (2011).

12 This matching methodology gave them 3,994 control firms for the sample, or 4.76 control firms per target. Boucly et al. acknowledged that their matching approach was limited in the sense that it does not rule out the possibility that PE funds target firms that are on the verge of expanding. Nevertheless, they pointed out that the “fact that growth occurs precisely at the moment of the LBO is comforting” and that “the timing of the improvement offers convincing evidence that something massive happens to LBO targets around the deal.”

13 Steven J. Davis, John C. Haltwanger, Kyle Handley, Ben Lipsius, Josh Lerner, and Javier Miranda “The Economic Effects of Private Equity Buyouts,” *National Bureau of Economic Research* (2014, 2019).

10 Steve Kaplan, “The Effects of Management Buyouts on Operating Performance and Value,” *Journal of Financial Economics*, Vol. 24 No. 2 (1989).

Carl Ferenbach, cofounder of Berkshire Partners, one of the most effective PE operators (and perennial sources of David Swensen's alternatives portfolio at Yale), summed things up,

*we viewed most of the change in value as happening on the day you closed the deal; we created value mainly by changing the financial structure and managers' incentives. There wasn't much growth in those companies. It was mainly about improving the existing operations of mature, fundamentally sound businesses that produce a lot of cash flow. But somewhere in the '90s, we and most of the PE industry all started to move toward growth as part of the objective.*¹⁴

In the late '80s and early '90s, the recession combined with growing competition among PE firms forced them to develop new sources of competitive advantage and value added. When the recession hit at the end of the '80s, the industry experienced its first major correction. As Kaplan reported in a 1993 study with Jeremy Stein, roughly a third of the deals transacted in the latter half of the '80s ended up defaulting, and the returns to LPs were disappointing. What's more, in their postmortem of PE's first major boom-and-bust cycle, Kaplan and Stein also found clear signs of "overheating" in the late '80s buyout market, including progressively higher valuations (as multiples of operating cash flow) and the use of higher leverage in transactions in increasingly risky industries. Kaplan and Stein also reported significant reductions in the net equity contributed by LBO sponsors to their own deals—a finding Jensen identified as a clear prescription for "too many deals," a phenomenon he described as "LBO overshooting."¹⁵

But the industry collectively appears to have learned from this experience and responded with at least two important adjustments. The first was a reduction of leverage ratios and other increases in financial flexibility. The second, and perhaps even more important, adjustment was the PE firms' growing recognition of the value of operational engineering, and their efforts to develop or acquire this capability. PE firms have done this in an increasing number of ways.

Some firms—among the first, Bain Capital, Berkshire Partners, and the old Clayton & Dubilier (now CD&R)—developed an "operational" capability by recruiting former senior corporate executives and consultants to gain indus-

try operating expertise that could be used to improve the performance of their portfolio companies. KKR, by contrast, committed itself around 20 years ago to developing Capstone, an "in-house consulting firm" whose principals participate in transactions from their inception and due diligence to the final sale of the firm, and who are compensated in exactly the same ways as the partners on the deal-making side of the business.

The development of managerial experience and expertise, together with the reduction in leverage, also gave PE firms greater ability to realize growth opportunities in their portfolio companies as well as performing their traditional cost-cutting function. To continue Ferenbach's earlier statement about Berkshire Partners,

*In the '90s, we and most of the PE industry all started to move toward growth as part of the objective... And once we started to think about growth instead of just cash flow, we then had to think much more about strategy and management. We now had a business plan—one that included growth as well as efficiency—that we had to deliver on.*¹⁶

This new emphasis on growth, while reducing the amount of leverage in PE's portfolio companies, opened the door to entire new industries. Take the case of Silver Lake, whose early partners saw themselves as building "a category killer investment firm around technology investing," with an investment model committed to "an unswerving focus on growth." According to partner Mike Bingle,

*Something like half of our investments and more than half of our profits to date have come from unleveraged investments, where the value creation was driven by growth and business transformation and not by financial engineering.*¹⁷

Or consider this statement by Phil Canfield of Chicago-based GTCR, which specializes in healthcare and information services and technology:

*We spend a lot of time trying to find really talented leaders, and matching those leaders with companies where we believe there are big opportunities for transformation that can produce higher growth and significant value added.*¹⁸

14 Carl Ferenbach, "Morgan Stanley Roundtable on Private Equity," *Journal of Applied Corporate Finance*, Vol. 23 No. 4 (Fall 2011).

15 Steve Kaplan and Jeremy Stein, "The Evolution of Buyout Pricing and Financial Structure in the 1980s," *Quarterly Journal of Economics*, Volume 108, May 1993, 313-358. For Jensen's explanation, in his AFA Presidential Address, of PE's boom-and-bust cycle, which he saw operating in all financial markets, particularly real estate, see Michael Jensen, "The Industrial Revolution, Exit, and the Politics of Corporate Control," *Journal of Applied Corporate Finance*, Vol. 4 No. 2 (Summer 1991).

16 Carl Ferenbach, "Morgan Stanley Roundtable on Private Equity," *Journal of Applied Corporate Finance*, Vol. 23 No. 4 (Fall 2011).

17 See Mike Bingle, in "Morgan Stanley Roundtable on The State of Global Private Equity," *Journal of Applied Corporate Finance*, Vol. 23 No. 4 (Fall 2011).

18 See Phil Canfield, in "Morgan Stanley Roundtable on The State of Global Private Equity," *Journal of Applied Corporate Finance*, Vol. 23 No. 4 (Fall 2011).

Statements like the above are consistent with the findings of a survey of U.S. PE firms that was conducted at the end of 2012 by Kaplan with Harvard's Paul Gompers and Georgetown's Vladimir Mukharlyamov. After getting responses from the partners of 79 firms with a collective \$750 billion under management, the authors reached conclusions like the following:

- PE investors expect to provide strong equity incentives to their management teams and believe those incentives are very important.
- PE investors regularly replace top management, both before and after they invest.
- PE investors structure smaller boards of directors with a mix of insiders, PE investors, and outsiders.
- PE investors place heavy emphasis on adding value to their portfolio companies, both before and after they invest. The sources of that added value, in order of importance, are identified as increasing revenue, improving incentives and governance, facilitating a high-value exit or sale, making additional acquisitions, replacing management, and reducing costs.
- PE investors, on average, commit meaningful resources to add value, using a considerable variety of different ways and approaches.¹⁹

This picture of the private equity model, while consistent with Jensen's "active investors," appears to have been expanded, if not transformed, in ways Jensen might not have foreseen.

But to come back to our earlier statement, a large and growing number of studies have provided clear confirmation of productivity increases in the companies or assets controlled by PE firms. Most recently, a study published in 2020 of 288 U.S. PE-backed companies using corporate tax return data for the years 1995–2009 finds both "significant post-buyout improvements in operating performance *and* rapid growth."²⁰ And a recent study of a large sample of small European buyouts reports that "company operations and profitability improve in ways consistent with successful execution" of those plans.²¹

The lone exception to these general findings of increased productivity involves public-to-private transactions, where a number of studies have reported finding only modest (and statistically insignificant) gains.²² But again, apart from those

studies, the bottom line of academic studies of the operating performance of the portfolio companies owned or controlled by private equity firms has been significant improvement, on average. This was true of the U.S. deals in the '80s; it proved to be true of the second great wave of buyouts in the U.K. and continental Europe; and it has been true for U.S. buyouts in the '90s and 2000s. Because it takes from five to seven years for PE funds to realize their returns, it is still too soon to know how the many deals transacted during the boom of the mid-2010s will turn out. But the main finding from these more recent studies is consistent with Kaplan's main finding for U.S. buyouts in the 1980s—namely, significant and sustainable improvements in the productivity and operating performance of PE-funded companies.

Have Limited Partners Gotten Their Due?

But this brings us to a different, and still somewhat contentious, question: Have the operating gains in PE portfolio companies documented by the studies translated into high enough returns, *net of fees*, for the limited partners who supply most of the equity capital for the deals? After all, PE firms charge fees, including carried interest, that are estimated to average from 3% to 5% per year over the life of the fund; and the combination of such fees with the "control" premiums paid to acquire (at least publicly traded) companies could more than offset the value of the operating gains achieved by the firm's new owners, resulting in below-market returns for LPs. To put the above question a bit differently, have the net returns to the LPs been large enough—relative to what they would have earned just by investing in a diversified portfolio of public equities like the S&P 500—to justify the possibly significantly greater financial risk and illiquidity that come with PE funds and investing?

In 2014, three of the present writers (Bob Harris, Tim Jenkinson, and Steve Kaplan) published a study of 1,400 PE buyout funds raised between 1984 and 2008. Using Burgiss data, a relatively new and more reliable source of information about returns to limited partners, the study reports that the average returns to LPs outperformed the S&P 500 by 300 to 400 basis points per year.²³

A 2015 study by yet another of us (David Robinson) and Berk Sensoy provided more evidence of PE outperformance using data from a large limited partner with capital commitments to 837 buyout and VC partnerships during the period 1984–2010. Like Harris, Jenkinson, and Kaplan,

19 Steve Kaplan, Paul Gompers, Vladimir Mukharlyamov, "What Do PE Firms Say They Do?," Volume 121 3, *Journal of Financial Economics* (2016).

20 Jonathan Cohn, Edith Hotchkiss and Erin Towner, "The Motives for Private Equity Buyouts of Private Firms: Evidence from U.S. Corporate Tax Returns," *Journal of Financial Economics* (2020).

21 Markus Biesinger, Çalatay Bircan, and Alexander Ljungqvist, "Value Creation in Private Equity," European Bank for Reconstruction and Development, *Working Paper* 242, April 2020.

22 The Davis et al. (2019) study cited earlier finds that although public-to-private firms increase productivity as much as other buyouts, the increase is not statistically significant. And two earlier studies also cited earlier, Cohn and Towner (2014) and Guo et al. (2011) find only modest (and insignificant) operating gains for public-to-private

transactions.

23 Robert S. Harris, Tim Jenkinson, and Steven N. Kaplan (2014). "Private Equity Performance: What Do We Know?" *The Journal of Finance*, 69(5), 1851–1882 (2014).

Figure 1

Direct Alphas and PME of U.S. Buyout Funds against the S&P 500 by Vintage Year



Source: Burgiss Private iQ, as of September 30, 2018.

Robinson and Sensoy found excess performance of roughly 300 basis points per year for buyouts (though considerably less for VCs).²⁴

But much of these returns were earned in deals transacted *before* the global financial crisis, when PE faced a “wall of debt” that appeared to cast doubt on its future. Although the industry has clearly recovered, the question asked in the past few years is this: have the returns to LPs since the crisis continued to justify the large capital commitments and massive amounts of “dry powder” the GPs now have at their disposal?

In a fairly recent paper called “Demystifying Illiquid Assets—Expected Returns for Private Equity,” three partners of the hedge fund AQR (henceforth Ilmanen et al.) expressed considerable skepticism, reporting that “private equity does not seem to offer as attractive a net-of-fee return edge over public market counterparts as it did 15-20 years ago from either a historical or forward-looking perspective.”²⁵ They also offer the suggestion—one we fail to find plausible, much less useful—that the continuing and, indeed, steadily rising popularity of private equity among institutional investors reflects nothing more than “investors’ preference for the return-smoothing properties of illiquid assets in general.”

Using the latest fund cash flow data from Burgiss as of the third quarter of 2018, two of us (Brown and Kaplan) provided a different picture in an article published in the *Journal of Private Equity* in 2019.²⁶ For the 29 vintage years from 1986 through 2014—the most recent year for which we would have had a five-year investment cycle—our calculations show an average “Direct Alpha” of almost 500 basis points (4.8%) and an average PME (public market equivalent) of 1.22.²⁷ And after accounting for the different amounts of capital in each vintage year, the study reports an annual average (value-weighted) excess return of 3.5%, and a PME of 1.15. In other words, the LPs’ returns from U.S. buyouts have historically outperformed the returns to the stockholders of the S&P 500 by a fairly wide margin—on the order of 350 to 400 basis points per year. Perhaps most important, this finding, unlike Ilmanen et al.’s, is completely consistent with a world where allocations to private equity and other “alternatives” by endowments, sovereign wealth funds, and institutional investors of all kinds have been steadily growing for years, while allocations to public equities—not to mention the numbers of public companies themselves—have been in steady decline.

As shown in Figure 1, for the vintages from 1994-2014,²⁸ the average excess returns were 3.6% and the average PME

26 Greg Brown and Steve Kaplan, “Have Private Equity Returns Really Declined?” *Journal of Private Equity*, Fall 2019.

27 For a derivation of Direct Alpha, see Steven N. Kaplan and Antoinette Schoar, “Private Equity Performance: Returns, Persistence, and Capital Flows,” *The Journal of Finance*, (2005); and Oleg Gredil, Barry E. Griffiths, Rüdiger Stucke, “Benchmarking Private Equity: The Direct Alpha Method,” *SSRN Electronic Journal* (2014).

28 Our decision to exclude earlier (pre-1994) vintage years reflects their greater volatility due to a much smaller number of funds in each vintage year. The capital-

24 David T. Robinson and Berk Sensoy, “Cyclicality, Performance Measurement, and Cash Flow Liquidity in Private Equity,” *Journal of Financial Economics* (2017).

25 Antti Ilmanen, Swati Chandra, and Nicholas McQuinn, “Demystifying Illiquid Assets: Expected Returns for Private Equity,” *The Journal of Alternative Investments*, 22(3), 8-22 (2019).

was 1.15. The highest excess returns were for the vintages from 2000-2004; the lowest returns, not surprisingly, were for those from the peak activity years of 2006-2008 during the lead-up to the global financial crisis. The post-crisis returns for the 2009-2014 vintages look more like the returns of the vintages of the mid- to late-1990s, though slightly lower.

Ilmanen et al., in making their case, also cite a 2016 study that found U.S. buyout fund returns for 2009-2014 vintage years roughly equal to those of the S&P 500.²⁹ But as things have turned out, and as the authors of the 2016 study acknowledged was a clear possibility, their findings were driven mainly by the immaturity of those more recent vintages; the 2013 and 2014 vintages would have been in only their second or third years at the time of the study. As of the third quarter of 2018, Brown and Kaplan reported that funds from 2009-2014 had generated an average Direct Alpha of 3.9% and a PME of 1.11—in other words, quite healthy performance, and in line with expectations of returns 2% to 3% above public markets.

What's more, when we recently updated these Brown-Kaplan findings to include another five quarters of Burgiss data (from September 2018 through December 2019), our results were unaffected, identical in all important respects to those reported in the 2019 *JPE* article. But one note of caution: since the funds for more recent vintage years have not been fully realized, the PMEs could change over time.

Skeptics, including Ilmanen et al., have pointed out that buyouts are more leveraged and are smaller than the typical company in the S&P 500. And there is also a widespread perception that buyouts are more like value investments than growth investments. Historically both small stocks and value stocks have provided return premiums relative to large stocks and growth stocks. To the extent that any of these claims is true, even if the primary goal of institutional investors is to generate returns in excess of their public equity portfolios, the S&P 500 may not be the appropriate benchmark for evaluating the performance of buyout fund investments.

Ilmanen et al. take these claims to heart by simply assuming that the market risk inherent in a portfolio of U.S. buyout funds is equivalent to having a public market fund with beta of 1.2 and then adjust accordingly.³⁰ And given that the stock market tends to go up, on average and over time, this use of a

beta above 1.0 has the effect of lowering the PMEs and Direct Alphas of buyout funds.

Another proposed alternative has been to make adjustments for the smaller average size and value (as opposed to growth) orientation of buyout companies—and for the tendency of smaller cap and value stocks to outperform larger stocks during certain periods. If U.S. buyouts are indeed subject to a size and value premium in public equity markets, Brown and Kaplan suggest that this can be accounted and adjusted for by using the Russell 2000 indices as benchmarks.

But as Brown and Kaplan then go on to show, the excess returns of U.S. buyout funds have in fact been consistently *higher* when measured against the Russell 2000 index than against the S&P 500 *in all vintage years since 2008*. And the buyouts' excess returns have also consistently exceeded the Russell 2000 *Value* index for vintages as far back as 2004's. Thus, whatever advantage small-cap value stocks may have had—and whatever corresponding benefit for buyout funds—over the S&P 500 was largely limited to the 1997 to 2001 vintages—a fact that is typically ignored by research that attempts to replicate long-term buyout returns with small-cap value stocks.³¹

Kaplan and Brown also follow Ilmanen et al. in estimating the effects on Direct Alphas and PMEs of assuming a beta of 1.2 using the S&P 500, the Russell 2000, and the Russell 2000 Value indices. After making that adjustment, as reported in Figure 2, the performance of buyouts has exceeded the leveraged indices for the vintages from 1986 to 2014 as well as over the two more recent different sub-periods.

It seems worth noting, again, that the outperformance of PE buyouts against the Russell 2000 Value index has been the greatest for the most recent (2009-2014) vintages—and smallest during the earliest periods, especially near the end of the 1990s. This last observation raises questions as to how closely, if at all, buyout returns are linked to the small-cap and value premiums documented for observed for public equities, particularly when one recognizes the increased size of buyout deals and the increasing focus on growth of the buyout industry during the past ten to fifteen years.³² It will be interesting to see what happens to all of these results and relationships during the COVID pandemic.

weighted average Direct Alphas and PMEs during the 1980-1993 vintages were 4.1% and 1.19, respectively.

29 Jean-François L'Her, Rossitsa Stoyanova, Kathryn Shaw, William Scott, and Charissa Lai, "A Bottom-Up Approach to the Risk-Adjusted Performance of the Buyout Fund Market," *Financial Analysts Journal*, Volume 72, 2016 - Issue 4.

30 The academic literature on this is inconclusive with betas typically ranging from 1.0 to 1.3. See Steven N. Kaplan and Berk A. Sensoy, "Private Equity Performance: A Survey," *Annual Review of Financial Economics*, 7, 597-614; and Arthur Korteweg, "Risk Adjustment in Private Equity Returns," *Annual Review of Financial Economics*, 11, 131-152 (2019); for a survey of this and other evidence.

31 See Brian Chingono and Daniel Rasmussen, "Leveraged Small Value Equities," Available at SSRN 2639647 (2015); and Erik Stafford, E., "Replicating Private Equity with Value Investing, Homemade Leverage, and Hold-to-Maturity Accounting," Available at SSRN: 2720479 (2017).

32 Using a benchmark with a greater size and value tilt, such as customized Fama-French portfolios of small-cap value stocks, also generates positive PMEs and Direct Alphas for post-2000 vintages.

Figure 2

Direct Alphas and PME's against a Simulated Beta of 1.2

Direct Alpha					KS-PME			
From	1986	2000	2000	2009	1986	2000	2000	2009
To	2014	2014	2008	2014	2014	2014	2008	2014
S&P 500	2.1%	1.9%	2.0%	1.3%	1.09	1.07	1.09	1.04
Russell 2000	0.8%	1.0%	0.6%	2.4%	1.03	1.04	1.03	1.07
Russell 2000 Value	0.9%	1.8%	1.2%	3.9%	1.04	1.07	1.06	1.11

Source: Burgiss Private IQ, as of September 30, 2018. Direct Alphas and PME's are calculated based on capital-weighted, vintage year concurrent cash flows.

Do GPs Deserve What they Get?

But if there is a broad consensus in the academic literature that private equity has outperformed public markets on average over the long run, what is equally clear in the data is the large variation in the performance of PE managers. A 2016 study by Robinson and Sensoy reports, for example, that although the average PME in their buyout sample was 1.19, the top quartile funds produced a PME of about 1.40 while the bottom quartile earned just 0.82.³³ This kind of spread in performance, combined with the inherent opaqueness of the asset class and the long periods over which returns are realized, naturally raises the question of whether investors are getting a good deal by investing in PE.

Critics argue that the standard “2 and 20” private equity contract allows GPs to earn excessive compensation while doing too little to discipline underperforming GPs or provide them with effective incentives to maximize LP returns. Some critics claim that there is too much “fixed” compensation in the form of management fees versus carry, while others have suggested that the sheer complexity of some management contracts has effectively allowed GPs to charge high fees for mediocre or even substandard performance.³⁴

But whatever the arguments, one testable implication is that PE funds that charge higher fees should end up providing lower net returns to their LPs. Such concerns about fees are especially acute in the case of the largest funds, and particularly during boom fundraising periods. The fact that PE contractual arrangements and performance are typically shielded from public disclosures not only helps fuel these claims, but also makes them inherently difficult to evaluate.

33 David Robinson, and Berk Sensoy, “Cyclicality, Performance Measurement, and Cash Flow Liquidity in Private Equity,” *Journal of Financial Economics* 122(3) (2016).

34 Ludovic Phalippou and Oliver Gottschalg, “The Performance of Private Equity Funds,” *Review of Financial Studies*, 2009, Vol. 22, Issue 4, 1747-1776.

In their 2014 study cited earlier, Robinson and Sensoy used the same 837 commitments to venture and buyout partnerships by a single large LP to explore the relationship, if any, between the size of the fees paid by the LPs to the GPs and the net returns to the LPs. After linking GPs’ performance to the fee and carry provisions laid out in the management contracts underlying the funds—and assuming that all LPs actually paid these “headline fees”—the authors found that while fees tended to rise during periods of strong fundraising, there was no relationship between the level of the fees written into the partnership agreements and the net-of-fee performance of the funds. In other words, on average, expensive partnerships delivered stronger gross-of-fee performance than lower-fee partnerships. And in this sense, the LPs can be seen as getting what they paid for, no more, no less. (On the other hand, for those larger, more influential LPs who have proved more effective in negotiating concessions from the “headline” fees, there is the clear possibility for significant “consumer surplus.”)

But does this mean that the partnership agreement perfectly aligns incentives between LPs and GPs, and that there are no agency problems in private equity? Far from it. As funds have become significantly larger, management fees have fallen much less than might be expected, given economies of scale. Many GPs can do very well even if they deliver little in the way of profits to their investors. When combined with the huge spread in performance, our findings confirm and reinforce the importance of careful manager selection: Since high fees are no *guarantee* of correspondingly high net return—only an indication of average outcomes—the terms of the contract offer cannot be used to screen funds effectively.

What’s more, Robinson and Sensoy also note that the LPs’ contracts with GPs recognize agency conflicts and are written specifically in ways designed to manage them. As one example, there are “kinks” in the partnership agreement—points in time

where the “accelerated-carry” portion of the GPs’ carry kicks in—and the authors find that distributions increase dramatically at those points. The authors also find that partnership agreements that call for step-downs in management fees as assets are sold lead GPs to put off their asset sales until later in their funds’ lives.

In sum, the authors’ findings show that, yes, there are important agency conflicts at work in PE. But they also suggest that, on average, the partnership agreements are alert to such conflicts and seek to align GPs’ incentives with their LPs’. That is to say, PE outperforms *in spite of* the agency frictions it encounters with its own LPs.

Then What Accounts for PE’s PR Problems?

For all the successes of private equity firms in increasing the productivity of their portfolio companies, and in providing high enough returns to keep LPs expanding their PE allocations, the industry has long had a bad name in the press and continues to provide a scapegoat for politicians. Mitt Romney’s ties to Bain Capital, the firm he founded in the late ’70s, proved to be a major political handicap during his run for president in 2012. And seldom does a week go by without a sensational account of the role of PE firms in aggravating, if not actually creating, an industry’s shortcomings and problems.

What are the major charges against private equity? The most common is that the high leverage used in many deals puts pressure on the portfolio companies themselves to cut productive investment and forgo even profitable growth. And in their relentless quest for efficiency, PE is regularly chastised for “gutting companies,” selling off valuable assets, and cutting jobs and reducing overall employment.

In their 2019 study of U.S. PE-owned establishments that we mentioned earlier, Steve Davis and his five colleagues began by distinguishing between the employment at buyout firms’ existing plants and operations and employment in the new operations they start or acquire. In the existing operations, employment declines by 4% relative to that of other companies in the same industry. But because employment actually *increases* (by 2.3%) relative to competitors’ in the new operations of these same portfolio companies, the net effect on employment is a decline of 1.7%. This finding is consistent with productivity gains achieved by companies operating in relatively mature sectors that begin by laying off people in inefficient operations, but end up hiring more people in growing more productive operations.

But perhaps a bigger source of controversy surrounding the PE industry is the amount of money made by the top PE firms and their partners. This controversy echoes much of the public debate about high wealth and income inequality across

society. And large fortunes have been built in the PE business, as they have in other sectors.

One specific issue facing PE is the long-running call for reforming the taxation of “carried interest,” which is subject to the lower capital gains rate (in most countries). While most tax authorities we know seem to believe that the case for taxing carried interest as ordinary income is ambiguous—and so can be argued either way—we suspect that if the IRS changes its treatment, carried interest is unlikely to be a major source of tax revenue. The industry will likely find a way to convert much of what is now carried interest into some kind of common stock equivalent that will qualify for capital gains treatment. And so we’re left with the larger question of how to create an equitable tax system, including whether capital gains should continue to be taxed at a lower rate than ordinary income. These issues will no doubt remain at the heart of a public discussion that extends well beyond PE.

Apart from the questions of jobs and taxes, there is also a growing number of studies of the non-performance-related effects of private equity. For example, studies of consumer and worker safety in the past decade have shown that PE-funded restaurants have had fewer health violations,³⁵ and PE-operated companies in general have experienced declines in workplace injuries, relative to their public competitors.³⁶ Studies have also reported that PE-backed companies have increased human capital by improving technical job skills that are more valued by subsequent employers,³⁷ and that PE firms have been more likely to achieve growth with new products and in new geographic markets instead of raising prices for consumers.³⁸

35 See Shai Bernstein and Albert Sheen, “The Operational Consequences of Private Equity Buyouts: Evidence from the Restaurant Industry,” *Review of Financial Studies*, May 19, 2016, Vol. 29, Issue 9, Pages 2387-2418. The authors analyzed operational changes in restaurant chain buyouts between 2002 and 2012 using comprehensive health inspection records in Florida. Store-level operational practices improved after PE buyouts, and restaurants became cleaner, safer, and better maintained. This effect was stronger in chain-owned stores than in franchised locations, suggesting that the new PE owner made a significant difference. Such operational changes require monitoring, training, and better alignment of worker incentives, suggesting PE firms improve management practices throughout the organization.

36 Jonathan B Cohn, Nicole Nestoriak, Malcolm Wardlaw, “Private Equity Buyouts and Workplace Safety,” Available at SSRN 2728704, June 29, 2019. These scholars found a large, persistent decline in establishment-level workplace injury rates after PE buyouts of publicly traded U.S. firms. PE-owned firms also had fewer safety inspection violations after buyouts. Interestingly, firms that reduced injury rates after their buyouts were *more* likely to exit via an IPO while higher-injury risk establishments reduced employment *less* than lower-injury risk establishments. In sum, the effects on total employment and worker safety appear to go in opposite directions.

37 Ashwini Agrawal and Prasanna Tambe, “Private Equity and Workers’ Career Paths: The Role of Technological Change,” *Review of Financial Studies*, 29, 2455-2489 (2016). This analysis found evidence that many employees of companies acquired by PE firms gain transferable, IT-complementary human capital. Workers at PE-owned firms experience increases in both long-run employability and wages relative to what they would have realized in the absence of PE investment, strongly suggesting that PE management practices mitigate the effects of workforce skill obsolescence due to technological change.

38 Cesare Fracassi, Alessandro Previtera, and Albert Sheen, “Barbarians at the

On the negative side of the ledger, however, there is growing evidence that PE companies have profited by taking advantage of government regulations in ways that turn out to have significant social costs. For example, a study published in 2018 found that buyouts in the for-profit college education industry were associated with worse outcomes for students, including higher tuition, higher per-student debt, lower education inputs, and lower graduation rates and per-graduate earnings. One thing that these PE-backed for-profit educators have turned out to be especially good at—securing funding through a generous, and what now appears to have shown itself to be a very poorly designed, government-subsidized student loan program—has proved a mixed blessing at best.³⁹

Another stain on PE's record is its performance in the nursing home industry. A 2014 study of almost 3,000 nursing facilities during the period of 2000-2007 reported that PE-owned nursing homes had fewer and, on average, less-skilled Registered Nurses and worse health outcomes than their non-PE counterparts.⁴⁰ Consistent with this finding, a more recent study using facility-level data from 2000 to 2017 found a negative impact of PE buyouts on patient health and compliance with care standards, a finding the authors attribute to fewer front-line nursing staff and higher bed utilization.⁴¹ In these cases, the authors point to a kind of “arbitraging” of nursing home regulations and Registered Nurse classifications that effectively encourages excessive reliance on highest-skilled (Level I) and minimally skilled Level (III), with too little use of higher-paid, mid-tier (Level II) caregivers.

Another picture of PE's dual capacity for good and ill is provided by a newly released study that aims to document the effect of private equity on long-run worker health. After examining the career paths of some 55,000 Dutch employees after the PE-led buyouts of 274 Dutch companies between 2007 and 2013, Ernst Maug and two Erasmus University colleagues reached the following conclusions: (1) the companies became more efficient and profitable; (2) healthier-than-average

workers experienced gains in wages and ascending career paths; (3) less healthy workers experience reduced wages and further declines in health and employment; and (4) government transfer payments were estimated to compensate less healthy workers for roughly half of their losses.⁴²

In both the positive and negative cases we've just described, then, the PE-backed companies appear to operate in a profit-maximizing way that, although compliant with laws and regulation, is not always what most of us would view as socially optimal. One might interpret these results as consistent with our view of private equity, stated at the outset, as “capitalism in high gear.” That is to say, PE is a high-powered way to optimize operations, financing, governance, and, ultimately, returns. But this view also carries an important message for policymakers: make sure your policies are not creating “loopholes” or “uneven playing fields,” given the propensity for PE firms to find and take advantage of them.

Back to the Future of Private Equity (and the Economic Challenges It Now Faces)

The greatest internal challenge facing the industry collectively—and this was true well before the coronavirus showed up—is likely to be the boom-and-bust cycle that appears to have become an established feature of the industry. Such cycles appear to be driven by the amounts of new capital flowing into the industry, and the competition for deals that such capital flows create. High returns tend to attract new capital commitments. And because returns tend to be highest when interest rates are low relative to stock prices, the high returns and abundance of capital in turn tend to lead to more deals at higher prices. In the third quarter of 2019, the average buyout transaction paid a record-high EBITDA multiple of 12.9 times. And it is only when the high prices paid in transactions at the peak of a cycle lead to predictably lower returns that LPs start to commit less capital to the industry—and the resulting drop in the number of deals and transaction prices allows returns to come up again. And so the cycle goes.

From the late 1970s until the present, there have been three major waves of private equity deals and, thus arguably, at least two complete boom-and-bust cycles. The first wave, as mentioned earlier, peaked at the end of the '80s. New capital flowed into the industry, attracted by the high returns earned by firms like KKR and Berkshire Partners. When the economy

Store? Private Equity, Products, and Consumers,” Indiana University, *Kelley School of Business Research Paper* No. 17-12 (2017). After analyzing price and sales data for an extensive number of consumer products, the authors found that, following a buyout, target firms increased sales 50% more than matched control firms. Contrary to many popular impressions, however, price increases on existing products were small, only about 1%. Sales growth at PE-owned firms thus came mainly not raising prices, but from the launch of new products and geographic expansion. By contrast, non-PE-owned competitors lost shelf space and marginally raised prices.

39 Charlie Eaton, Sabrina T. Howell, and Constantine Yannelis, “When Investor Incentives and Consumer Interests Diverge: Private Equity in Higher Education,” *Working Paper #24976, National Bureau of Economic Research* (2017).

40 Rohit Pradhan, Robert Weech-Maldonado, Jeffrey S. Harman, and Kathryn Hyer, “Private Equity Ownership of Nursing Homes: Implications for Quality,” *Journal of Health Care Finance*, 42(2) (2014).

41 Atul Gupta, Sabrina T. Howell, Constantine Yannelis, and Abhinav Gupta, “Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes,” *NYU Stern School of Business* (2020).

42 Pilar Garcia-Gomez, Ernst Maug, and Stefan Obernberger, “Private Equity Buyouts and Employee Health,” *Finance Working Paper Number 680/2020, European Corporate Governance Institute*, (2020). This paper can be downloaded without charge from: http://ssrn.com/abstract_id=3601813 or <https://ecgi.global/content/working-papers>.

went down at the end of the '80s, something like a third of the deals transacted in the late '80s ended up defaulting.

But the most important point about this first correction in private equity is that the industry collectively learned from the experience and made at least two important adjustments. First, as noted earlier, it was after the first wave of defaults that most of the PE firms were forced to recognize the value of operational engineering. They came to the realization that financial and governance engineering had become, if not “commodities,” then capabilities that even second- and third-tier competitors could acquire.

The second major adjustment in response to the defaults of the early '90s was that the deals began to use less leverage, and to build more flexibility into covenants and other elements of deal structure. And these two adjustments helped the industry weather the next serious downturn: the collapse of the second great wave of private equity during the global financial crisis in 2008. During this period, the pundits focused on a looming “wall of debt” and projected default rates as high as 50%—and the popular press responded with story after story about the imminent death of private equity.

But once again, the rumors of PE's demise proved premature. Even though the second wave of PE deals peaked with the large transactions of 2006 and 2007—like TXU (now Energy Future Holdings), which ended up in Chapter 11—the overall losses turned out to be quite manageable, and for a number of reasons. First, as mentioned earlier, the deals transacted in the '90s and after were less leveraged than the '80s buyouts. Interest coverage ratios were roughly double their lowest levels in the '80s deals, and there was more flexibility built into the capital structures. In addition, the combination of operational capabilities and general financial management expertise, including experience in restructuring distressed debt, proved to be more effective in managing the “wall of debt” than was initially expected.

So that's where private equity has been. What about the future? How will the industry avoid the temptation to put the massive amounts of “dry powder” to work in deals that end up shortchanging their LPs?

Barring significant regulatory developments, we expect the PE industry to continue to be an important part of the economy going forward. There are three main reasons for this. First, PE firms will continue to bring the core competencies of financial, governance, and operational engineering to their portfolio companies. And they continue to upgrade and improve those operating capabilities. The massive economic dislocation associated with the COVID-19 pandemic may provide additional opportunity. Many companies are being forced to fundamentally restructure their business models and

deal with unprecedented financial challenges and uncertainties. It is plausible that many companies will benefit from PE's concentrated ownership and governance model.

Second, private equity continues to be more attractive to public company CEOs and other senior management than in the past. The populist attack on public company CEO pay continues in full fury, even as the CEOs of successful PE-controlled private companies can earn more than their public counterparts. And for public company CEOs, the large costs associated with public ownership—including the burden of regulatory compliance and public scrutiny of communication with investors and other stakeholders—show no sign of going away. As a consequence, we expect the trend toward companies staying private longer—perhaps forever—to continue.

A third important feature of private equity is that, by design, the duration of its investments in portfolio companies roughly matches the duration of the capital supplied by LPs. PE funds invest in companies for five to eight years, and the capital is tied up for that period. And that's quite different from, say, hedge funds, where the capital flows in and out, often without regard to the time horizon of the investments. For many if not most hedge funds—and for most investment banks as well—the mismatch between their investments and funding sources caused big problems during the global financial crisis. The contracts between GPs and LPs in private equity are designed to prevent such a mismatch; and with close to a trillion dollars of dry powder available, private equity arguably has the capital as well as the managerial capability needed to deal with the financial and operational challenges emerging from the pandemic.

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