

Private Equity: Implications for Investment and Efficient Resource Allocation

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I denne artikel analyseres den seneste udvikling i den særlige finansieringsmodel, hvor private kapitalfonde indskyder kapital direkte i produktionsselskaber med henblik på indflydelse i ejerperioden og senere salg af kapitalinteressen, i forventning om et højere afkast end det gældende for børsnoterede selskaber. De traditionelle former – venture kapital og langfristet ejerskab – vurderes normalt som positivt, fordi kapitalfondenes succes afhænger af målselskabets positive udvikling på længere sigt. Den seneste udvikling har været introduktionen af en ny model, der kan karakteriseres som kortsigtet ejerskab, væsentligst finansieret ved lånoptagelse (leveraged buy out) under indtryk af de senere års lave rente og rigelige likviditet på markedet. Analysen af en række aktuelle cases afslører, at private equity-ejerskabet i disse tilfælde ofte medfører en satsning på at maksimere målselskabets gæld, samtidig med radikale omkostningsbesparelser og frasal, der maksimerer den aktuelle pengestrøm, men som kan få fatale konsekvenser for målselskabets langsigtede udvikling. Afslutningsvis sættes udviklingen ind i et teoretisk perspektiv om corporate control, hvor det argumenteres, at den nye private equity-form i realiteten ikke reducerer det principal-agent problem, som børsnoterede aktieselskaber med spredt ejerkreds er underkastet, men forskyder det til et andet niveau, der er mindre gennemskueligt og derfor potentielt mere skadeligt.

Introduction

The current controversy about private equity takeovers of public corporations and their

implications for investment and efficient resource allocation arises primarily from the fact that there are many different forms of private equity investment in firms of varying size in an increasing variety of industries. Thus a generic model of private equity takeover behavior and its implications is not possible. Each type of private equity financing has different implications in different types of industries. This paper identifies the main types of private equity takeovers and their respective implications, focusing on the newest form, the leverage buyout (LBO).

In its broadest interpretation, private equity always has been a key element in capitalist economies even preceding public equity markets, when virtually all investment was either sovereign or private capital. Public equity came into existence only after the development of the corporate form of business organization, and even today most small and medium-sized businesses, as well as some large ones, are financed by the private equity of the owner-managers. The general trend over the 20th century was for most successful privately financed firms -proprietorships, partnerships and family businesses – to finance major

expansions and growth by incorporating and issuing public equity.

Over the last two decades that trend has begun to reverse. Private equity groups (PEG) have been buying up the stock of public companies at an increasing rate, to the point where in recent years private equity has been absorbing about 25 % of available investment funds in the US and Europe, creating concerns about the future liquidity of public equity markets. In what it sees as a reduction in overall capital market efficiency, the UK Financial Services Authority has warned that *»the quality, size and depth of public markets may be damaged by the expansion of private equity. An increasing proportion of companies with growth potential are being taken private and fewer private companies are going public«*.²

There is obviously a big difference between private equity that is used to invest in starting and expanding business ventures, where the capital is directed to investment in the production of goods and services in the real economy, and private equity takeovers of publicly held companies where the capital is directed simply to replacing one set of owners with another. There is little question that the former adds to the productive capacity of the economy, whereas the latter does not.

Private equity takeovers must be assessed in terms of what happens after the change in ownership. PEG claim they improve the efficiency of their target companies freeing up capital for reinvestment in the economy that would be otherwise wasted in inefficiency or missed opportunities. Critics claim that PEG primarily engage in asset stripping that significantly reduces the investment capacity of the target companies.³ This paper outlines the diversity of private equity investment with respect to the different implications for resource allocation and investment as background for a more detailed examination of the LBO.

Private Equity in Modern Times

Venture Capital

The financial sector devoted to private equity consists of three very different models of investment. The first is venture capital which provides seed capital for investment in risky but promising ideas, inventions and innovations. The failure rate is expected to be high, but the returns on successful ventures great, especially when the successful venture issues equity shares through an initial public offering. Google is a well known recent example. PEG venture capital managers and investors have an objective to support the ventures during their initial exploration and development phase with the investment of capital and managerial expertise.

The importance of venture capital to support innovation has long been recognized. The vibrant venture capital market in the US is credited with major contributions to the development of new technologies and improved economic productivity. The information and communication sector has been a major beneficiary of new technologies arising from venture capital financed start-up initiatives. In Europe there has been a general concern that the venture capital market functions less well for a variety of reasons, and is one reason why the improved productivity objectives of the Lisbon Agenda are not being met.⁴

Although venture capital is provided in the form of private equity, its circumstances and implications for investment are very different from private equity takeovers of established firms. Venture capital PEG typically provide capital for investment in the venture, not for buying out existing owners. It confuses the issues immensely to consider venture private equity and takeover private equity as part of the same financial activity. However, in most industry analysis they are not considered different activities. Most statistics about private equity, and especially data from industry associations like the European Private Equity

and Venture Capital Association (EVCA), reflect the combined results of these very different private equity activities. The difficulty is illustrated by a recent survey published in Private Equity News that concluded returns on private equity investment were greater in 2007 than 2006. A breakdown of the underlying data showed that venture capital returns were higher in 2007, but returns on private equity large buyouts were lower. For 2008 returns on venture capital investment are expected to be higher than 2007, while returns on large buyouts are expected to be lower.⁵

Long-term Private Equity Investment

Private equity investment in taking over established public companies also takes several different forms. One model is directed to influencing the long-term growth and profitability profile of the companies taken over. A significant portion, but not necessarily all or even a majority, of public equity voting shares is purchased as a long-term investment. The intention is to be in a position to strongly influence or control the direction of corporate policy. Notable examples include the US financier Warren Buffet who invests through a public share company he controls, Berkshire Hathaway, and the Swedish firm, Investor, which has public shares but is controlled by the Wallenberg family and makes both public and private equity investments.

Investor classifies its private equity investments as those in firms that have been bought out and are no longer listed on a public stock exchange. It invests to achieve »value enhancing growth strategies«. Private equity represents about 5 % of Investor's investment portfolio and is described as follows,

Private equity investments have been made since Investor was established in 1916 but were given their current modern shape and structure in the mid 1990s. The private equity activities generate high returns when exits are implemented, allow for in-

creased diversification of the portfolio, synergies with the core investments and the possibility to discover important new technologies and new business trends early.

Investor conducts two different types of private equity investments: buyouts and venture capital.....which involve more risk by their nature [and] are made with the objective of realizing an average annualized return (IRR) of 20 percent.⁶

The long-term private equity investor earns returns based on a program of investment and growth of the target company and exercises a direct influence on management to achieve that end. This is generally regarded as a positive influence on the target firm as the management will be held more directly accountable for its operational and financial performance by an informed and powerful investor with the same objective.

There are circumstances where private equity investors of this type have bought significant shares of public companies with an objective of maximizing short-term profits from a major restructuring and sale of assets. Sometimes called »corporate raiders«, these investors have seen their investment only as buying ownership of companies whose short-term value can be increased. They have not been concerned with stimulating investment by the target firm for long-term growth. This has prompted a debate over whether the short-term financial discipline imposed by the corporate raiders promotes efficiency or establishes a barrier to efficient long-term investment by imposing a short-term planning horizon on all decisions. However the significance of corporate raiders has remained relatively small.

Private Equity Leverage Buyouts (LBO)

Private equity takeovers of public companies by LBO became significant in the US during the 1980s, expanding to Europe in the 1990s,

then to Asia and Latin America and now to Africa and the rest of the world. Private equity leverage buyouts introduced a new form of »alternative investment«. Its distinctive characteristics are the use of a high degree of leverage to achieve the buyout and the fact that these investments are led by large financial firms primarily interested in financial gains from short-term restructuring transactions, not the long-term growth and profitability of the target firms.

The PEG LBO managers assemble funds from a relatively small number of investors, each committing a large amount of funds. Each fund is a partnership with PEG managers as the general partner and the investors as limited partners. Investors include wealthy individuals and institutions with funds to invest such as pension, insurance, university endowment and other funds. The PEG managers may or may not provide a small share of the funds assembled for investment. They make their money from their management fees, usually 2% per annum of the investment under management plus 20% of the returns above a specified hurdle rate. The assembled funds provide the equity investment that is leveraged with loans to obtain a much larger amount of capital for buying out target firms.

The standard method of financing LBO investments in target firms is for the PEG to establish a shell company which then borrows a large amount of debt capital, secured by the assets of the target firm. A common arrangement is about 80 % debt and 20 % equity supplied by the PEG investors. These funds are used to purchase the stock in the target firm from the public shareholders. After the takeover, the capital structure of the target firm is dramatically altered by the massive amount of new debt it must now assume.

In the vast majority of cases the PEG managers look to invest in target firms where a majority or preferably total ownership can

provide opportunities to realize significantly higher than normal market returns as a result of proactive intervention in restructuring the firm during a short period of ownership, typically 3-5 years. Value for the PEG investors is created by the restructuring activities, the withdrawal of cash and the resale of the residual firm. This is seen primarily as a short-term intervention and restructuring activity, not an activity concerned with long-term investment in productive assets, increased output and growth.

After the LBO, the target firm is typically in a position where its debt ratio is too high and the 3-5 year planning horizon too short to sustain long-term investments. The new cash requirements to cover interest on the new debt mountain, the high fees to the PEG managers and the high returns to be paid out to the new stockholders absorb most internally generated funds that otherwise might have been allocated to long-term investment. The firm's financial risk has escalated and its debt downgraded to »junk« status. The preoccupation of the firm's management must be short-term cash flow. Its financial performance standard is measured by its EBITDA, not its return on invested capital.

The private equity industry claims that LBO force an efficiency discipline on the management of targeted firms that is lacking in companies with widespread public stock ownership where the accountability of management to owners is weak. They free-up capital from targeted firms that is being wasted in inefficiency for reinvestment in the economy, and they sell a restructured firm more capable of competing effectively in its industry. The high returns they have earned justify their activities as both profitable and efficient for the economy.

Concerns have been expressed about the implications of private equity LBO in a number of areas, including the transparency, account-

ability and governance of PEG and their managers; investor protection and understanding of the risks they are assuming; tax avoidance; protection of employment conditions; maintenance of public interest policy objectives; the financial condition of the targeted firms after resale; and incentives to invest in productive assets, especially those requiring long-term investment. This paper focuses on the latter, but that requires attention to some of the other concerns. The sources of benefit to LBO investors are examined and a series of industry case studies assessed as a foundation for outlining the generic model of private equity LBO and drawing conclusions.

Sources of Benefits to Investors in LBO

The funds provided by the PEG investors and the leveraged loans are used to buy out the public stockholders of the target firm, typically at a stock price 20-40 % above the pre-announcement market price. This is an investment in acquiring ownership and control of the target firm, not in expanding its production capacity which remains unchanged. But the firm does acquire the burden of the debt and its associated interest, plus the obligation of providing anticipated high returns on the equity investment and high PEG management fees that will be imposed upon it. This is an enormous financial burden that dramatically impairs the investment capacity of the target firm as evidenced by the immediate downgrading of its credit rating.

The challenge for the PEG managers is to ensure the target firms can pay out sufficient cash to cover the PEG investor and manager requirements within the short-term window of planned ownership. The target firm can be left with most of the debt obligations as long as the residual firm can be sold at a satisfactory price – to another firm in the sector, another PEG, or back to public shareholders. A successful exit sale of the residual firm is essential to the success of a private equity LBO takeover.

By taking control of the target firm, the PEG managers can direct its operational and financial policies and decisions far more forcefully than diversified public shareholders. When a complete buyout is achieved, the firm is de-listed from stock exchanges and avoids securities and public accountability regulations. This provides minor cost savings, but more importantly it dramatically reduces public transparency and accountability. This creates a major market imperfection, an information advantage for the PEG managers that provides an expanded range of discretion and flexibility not present under public stock ownership.

Thus financial and operational policies that would not have been appropriate or acceptable under public stock ownership can be pursued. In particular, debt financing can be raised to much higher levels, operational expenses can be reduced to lower levels, and priority can be given to maximizing short-term cash flow for payouts to investors rather than long-term investment in profitable additions to productive capacity. By focusing virtually entirely on cash management, the target firm can be pressed to be a more »lean and mean efficient machine.« Presumably this is what justifies the willingness of PEG managers to pay stock prices 20-40 % above pre-announcement stock market valuations to achieve a complete buyout.

Applying this unique LBO model, PEG managers generate cash benefits for their fund investors from the following activities,

Financial Engineering: Maximizing Leverage

This is by far the major source of benefit. It has been fostered by the low interest rates of the last 20 years, and the targeting of firms with strong cash flows and relatively low debt ratios. The benefit to investors arises not only through the significantly increased leverage, but also by the income tax deductibility of the interest expense.

The adoption of EBITDA as the key, if not the only performance indicator provides a focus on cash generated from operations that is available for servicing debt, paying taxes and dividends, and funding any new investment in the firm's productive capacity. For maximizing cash available for dividend payments to investors over the short-term project period, the strategy is to drive operating costs down to increase EBITDA cash flow, increase debt to the point where interest deductions reduce income taxes to a minimum, and limit new investment to that which is essential for continued operation.

It is certainly possible that some target firms are following an unnecessarily conservative financing policy and carrying insufficient debt to minimize their cost of capital and increase returns to stockholders. The financial engineering will correct for this inefficiency, but it will also create inefficiency in the other direction. The financial engineering is not directed to finding the optimal capital structure for long-term growth of the firm. It is simply taking advantage of low interest rates to force target firms to leverage beyond industry norms and assume a much higher level of financial risk than they otherwise would, or even could adopt.

Many analysts have concluded that the private equity LBO is a pure financial play. All other changes in the policies, practices, structure and activities of target firms are simply to support the goals of the financial engineering. Instead of the traditional model of finance serving the objectives of the firm's productive activities, the productive activities serve the goals of finance.⁷ This is understandable. Financial engineering is the area of expertise of PEG managers.

Reduced Operating Costs and Focused Cash Management.

This claim by the private equity industry relates to the actions taken to drive down oper-

ating costs and increase the cash flow from operations. This claim is more difficult to justify as the PEG managers rarely have any expertise in the industries in which firms are targeted, and there has been no demonstration that they have access to a superior source of industry-specific managerial expertise. They virtually never claim to have brought about major operational improvements that justified the takeover.

Whether the PEG managers bring in top management from outside the firm or keep the old management depends largely on how co-operative the old management is in facilitating the takeover and implementing the cost cutting program. When outsiders are brought in they are often hired from another firm in the industry. Experience confirms that the CEO, old or new, does not have the independence of the management of a public equity firm and will take detailed instruction from the PEG manager implementing the new financial engineering.

What has changed is a shift from management decision-making employing industry-specific knowledge guided by indicators of return on investment, market position and growth opportunities to a short-term focus on cash management employing financial expertise guided by the EBITDA indicator. Thus, it doesn't really matter who manages the target firm as long as they implement the new financially engineered agenda.

Implementing this agenda via a decision-making process with a short-term cash generation bias has two effects. It tends to eliminate operational inefficiencies evidenced by unnecessary expenditure and inattention to best practice management standards, especially relating to cash management – what microeconomic theory would classify as X-inefficiencies. At the same time, it tends to cut back or cancel commitments for long-term development so as to preserve cash, e.g., the profes-

sional development of staff, research and development. Where possible it tends to reduce the quality of the work environment and the quality of service to customers.

This makes it virtually impossible to sort out how much of the staff reductions, sweating of assets, and outsourcing of activities reflects efficiency improvements and how much reflects the shift in decision criteria from long-term market development to short-term cash management for payout to investors. However, it is the latter that is the driving force for the changes that are imposed on the firm. From the perspective of efficient resource allocation, the former are a potential beneficial by-product of the application of this short-term decision model. But implementation of the model creates its own operational inefficiencies by cutting operating costs below the level needed for the most efficient long-term development of the firm. Whether the inefficiencies created for the firm's long-term development are greater or less than the X-inefficiencies eliminated will depend on individual circumstances.

Reassessing Assets and investments for Cash Generation

When the new decision model is applied to the firm's investments and investment plans, the short-term cash generation objective drives the assessment of investment decisions more in the direction of disinvestment (cashing out investments) than the commitment of cash for new investments to develop markets and realize long-term returns. The major categories to consider are existing assets, existing product/service lines, investments in other companies, and new investment commitments to maintain and expand the firm's productive capacity.

The firm's assets are owned because the long-term benefits to the firm are greater than they would be if they were leased. But for many assets the short-term cash value of selling the

assets and leasing them back is substantial. For example, owning the firm's buildings normally provides the best return as an investment over 10 years or longer, as well as the benefit of control over how the buildings are used. But selling the buildings and leasing them back will generate far more cash for a short-term investor in the firm. This practice of converting efficient long-term investments into cash, i.e., »asset stripping«, is common in private equity LBO cases.

Existing product and/or service lines that could be hived off and sold are assessed as to whether they are likely to bring the best cash return by selling them in the immediate term or as part of the residual firm to be sold in a few years. This depends in part on anticipated market conditions over this period, on any financial synergy benefits among the firm's different product lines, and the cash generating capacity of the product line in comparison to the high returns expected by the PEG investors. This assessment typically leads to the outsourcing of a range of product line activities where market conditions permit.

Investments the target firm may have in other companies are also assessed in terms of the best time to sell them over the short-term. All the investments will be available for sale if market conditions are positive. New investments will only be considered where they will generate a high cash return within the short-term window of ownership.

The assessment of potential new investments in addition to production capacity will be subjected to a higher hurdle rate for short-term cash returns and a much shorter payback period as compared to that used for long-term investments. In addition, they will be the minimum investments necessary to maintain and improve the productive capacity of the firm so as to be sustainable at the time of sale of the residual company when the PEO exits. Significant investments in re-

search and development and new market development are unlikely to be undertaken.

Thus, after the takeover the firm's investment program is likely to be scaled back significantly to a level that is often less than the depreciation and amortization expenses on existing asset investments, i.e., the investment in real assets will decline. PEG managers would argue this is a cut back in the less profitable investment opportunities so the funds can be paid out to investors and invested more profitably elsewhere.

Implications of LBO for Resource Allocation

PEG have attracted investment funds that otherwise would have been invested in equity investments elsewhere, mostly in the stock of public corporations. Individual investors, pension, insurance and other investment funds, and the public stock exchanges have all noted the reallocation of investment capital. It has been driven by a desire to diversify investment portfolios and increase returns. There is no evidence that PEG investment has drawn additional funds into the equity investment market, although it has provided an alternative type of investment that has offered increased diversification for many investment portfolios.⁸

Some PEG funds have provided very high returns to investors, while other funds have lost everything. Although data provided by the private equity industry shows returns on investment in LBO funds that exceed returns on the large stock market indices,⁹ independent studies have reached different conclusions. Kaplan and Schoar concluded that between 1980 and 2001 on average LBO funds returns net of fees are lower than those of the S&P 500.¹⁰ Gottschlag and Phalippou corrected for a bias in the reporting of industry returns in a study of 1,184 private equity funds raised from 1980 to 1995, and considering all investments and cash flows through

2004, concluded that *»funds have historically underperformed broad public market indexes by about 3% per year on average.«*¹¹

All studies document a very wide range of returns between the highest and lowest. About one-third of all funds have a negative return, suggesting a significant degree of risk for fund investors.

The leveraging activity has brought large amounts of new debt funding into play which has been used to buy out the public shareholders in target firms and transfer capital to the private equity fund managers and investors. The former public shareholders of the target firm have received a large amount of capital for their shares for investment or other uses.

The target firm has had its planning horizon for decisions shortened and its priorities changed to focus on debt management and short-term cash generation for payout to the new owners and managers. This tends to significantly reduce the firm's capability for generating cash for, or investment in additions to productive capacity.

It is striking that this myopic short-term focus on cash management for maximum payouts to investors allows for virtually no attention to the dynamic factors that drive market growth, productivity improvements and economic growth. There is no room here for innovation, R&D, new technological developments and applications, building human capital by new skill and professional development, research on changing consumer demands and new market development. Thus these PEG LBO investments are not directly concerned at all with earning returns from investment in expanding the productive capacity for providing goods and services in the real economy.

Experience suggests that most private equity LBO takeovers are overwhelmingly concerned with the financial engineering of a

major redistribution of capital. It has been made possible by historically low interest rates, including low premiums for extraordinary financial risk, the tax deductibility of interest expenses, and the opportunity to impose increased financial risk on target firms. These firms are forced to adopt the largest capital debts that can be sustained by cutting operating costs and long-term investments in productive capacity. The capital generated from this activity, and the cash generated from operations and tax savings, the sale of assets and the residual firm is distributed partly to the public shareholders who were bought out and the rest to the PEG investors and managers.

Moody's Investors' Service, in a special comment on rating private equity transactions, concluded,

While Moody's would agree that leverage is likely to impose discipline and provide higher equity returns, the current environment does not suggest that private equity firms are investing over a longer term horizon than do public companies..... We also question whether there is sufficient evidence to prove that the higher returns provided to private equity are driven by stronger management teams or because, in a benign and liquid credit environment, leverage by itself can provide substantial returns to shareholders. Moreover, many private equity firms pay themselves annual management fees as well as investment banking fees....increasing returns to the private equity firms.....¹²

Case Study Illustrations

A review of selected private equity experience illustrates the differences in the effects of private equity in different industries and circumstances.

Hertz

Hertz, the auto rental company, is seen as one

of the great success stories of private equity LBO in recent years. Hertz had been a wholly-owned subsidiary of the Ford Motor company from 1994 until September 2005 when it was sold to a PEG in a LBO. A public share offering was floated 11 months later after a \$1 billion dividend had been paid to the new owners and debt increased above 70% of capitalization. Carlyle, one member of the PEG group, is reported to have made a return of 128% on the deal.¹³

Despite the substantially increased debt and financial risk, the IPO was successfully floated at a stock price of \$15. It gradually increased to \$27 before declining with the general market in late 2007 to less than \$11 in early 2008. Operational changes are claimed to have reduced staffing requirements and increased cash flow. The new CEO who managed the restructuring of Hertz for the PEG attributed the success of this project to three factors, 1) the PEG was able to buy Hertz at a discount because Ford needed cash quickly as its auto business was not doing well; 2) the Hertz industrial equipment rental business did far better than expected during the PEG holding period because of the US housing construction boom; 3) air travel increased much faster than expected increasing airport auto rentals significantly. Thus, the success is due to leverage and market-related timing, much of it unpredicted.¹⁴

The debt now being carried by Hertz forces it to minimize operating costs and confine itself to essential investments. It leaves the company little flexibility for responding to an unexpected downturn in the economy. Hopefully the new public investors are aware of the higher risk they are assuming. Its investment capacity may be restricted, but Hertz does not really have an investment cycle longer than a few years. With its rapid equipment turnover, it doesn't engage in major long-term investments.

The Hertz deal was essentially a financial play, a flip as some analysts called it. Hertz debt was increased and the funds paid out to the PEG. Favourable market conditions have facilitated the success. This redistribution of capital gives the PEG more funds to invest in more deals, but makes it more difficult for Hertz to finance new investments and growth. But Hertz operates in a competitive industry that will continue to function well if Hertz goes bankrupt. Consumer choice will not be significantly altered. Its stock and bond holders, and employees will suffer the consequences of the PEG imposition of too much long-term financial risk. But there is no broader public interest that would be harmed and require government intervention if Hertz were to fail.

ISS

ISS, the Danish facility services company is the world's largest corporate provider of cleaning services. It was bought out in a LBO in April 2005 by EQT, the private equity arm of Investor and Goldman Sachs Capital Partners. The stated goal is to triple sales in 5-10 years through growth and acquisitions and then sell the company back to the public market.

The new owners invested slightly more than a billion euro in equity and claimed they would provide managerial and financial expertise to implement the plan. They wished to take advantage of the tendency for institutions to outsource their facility services and for trans-national corporations to prefer a single provider. Economies of scale and scope are seen as significant in a fragmented industry. Major new investment in growth and acquisitions has been financed by a high level of leveraged debt. Employment has increased by 41 % since the takeover to 430,000 in 50 countries. No large capital payout dividends have been paid. Evidently the PEG sees its return almost entirely in the sale of shares to the public market when it exits the

company.¹⁵ Progress on its agenda is sufficiently ahead of schedule that it now expects an IPO may be issued earlier than originally planned.

The available information suggests that this is a case where the LBO has provided a positive stimulus to growth and investment in productive capacity, employment and possibly efficiency. The increased leverage has been used to facilitate the major acquisitions program and has benefited from the low interest rates and significant tax savings from interest expenses. Although acquisitions are continuing, a financial de-leveraging plan is being implemented to bring debt down to a sustainable level before the IPO is issued.

The fact that ISS, as a labour intensive firm, has relatively few assets and investments to cash out and limited EBITDA cash flow to exploit makes it a poor target for a LBO focused on cash payouts of its capital. Its investment cycle is short as it does not require major long-term investments. Thus the short-term management of debt and cash flow need not conflict with its »long-term« investment requirements. The PEG will be staying considerably longer than the ISS investment cycle. They see greater value in growth and expansion than in redistributing capital by cashing out the firm's assets and investments. They appear to be having a positive impact on the growth of productive capacity in the real economy.

Copenhagen Airport

In October 2005 the Danish state sold a 53% ownership share in the Copenhagen Airport to the Macquarie private equity investment bank. The state retained a 39 % share with the remaining shares held by public investors. Macquarie did not use leverage financing and has not increased Airport debt to high levels. Debt is about 38 % of total capital and 30% of total assets. Macquarie says it is investing for the long-term and bringing its

superior airport management skills. It has specialized in airport investments. Since Macquarie took over control, investment in the Airport has continued, but some of Copenhagen Airport's investments in other airports have been sold.

Macquarie has pressed airport resources by exercising the Airport's monopoly power to increase its return. Cost reductions may have eliminated inefficiencies, but they have also reduced the quality of passenger services. Prices have been increased to airlines and duty shops. The return on equity has increased from 20% in 2005 to 36% in 2007. Based on the last 3 years results, payouts of 2.6 billion DKK have been made, 1.4 billion to Macquarie. Large bonuses have been paid to the top management. Berlingske Business recently referred to the Airport as a money machine.¹⁶

In essence, the management priorities of Copenhagen Airport have been changed from public service to monopoly profit maximizing, with the Danish State sharing in the profit maximizing. The classic private equity LBO abuses are not evident here. One might argue that public service monopolies should not be permitted to exploit their privileged position, but that is primarily a failure of effective government regulation of a private monopoly supplying an essential public service. In this case the Danish State's conflict of interest apparently has been resolved in favour of profit maximization over public service.

TDC¹⁷

TDC, the incumbent Danish telecom operator, was partly privatised in 1994 and fully privatised in 1998. Denmark always has been regarded as a European and global leader in the provision of telecom services over a technologically up-to-date network with universal service coverage. It is at or near the top of the OECD and EU performance rankings. TDC's corporate vision has been »to be the

best provider of communication solutions in Europe« as Internet and mobile technologies, and EU policies are transforming markets from national to European and global dimensions.

As well as continuing dominance of the Danish market, where it owns both the major national telecom and cable TV facility networks, TDC built an investment portfolio that included significant holdings in telecom service providers in nine other European countries. In 2005 TDC purchased additional operations in Hungary, Sweden and Switzerland. In addition, it is co-owner of several international partnerships covering services in other countries. Its international operations contributed nearly half TDC revenues. TDC has been able to fund its own network improvements, its growth and new acquisitions, and steadily reduce its debt in the early 2000s, with internally generated cash from operations. Its net interest-bearing debt was cut in half, from 38 % to 18 % of total assets.

The PEG LBO of TDC was completed on 1 Feb. 2006 with the purchase of 88.2 % of equity shares in the largest takeover in Europe to that date for just under 12b euro. It was financed by slightly more than 80 % debt. The acquisition increased TDC's net debt to total assets ratio to more than 90 % at substantially increased interest rates. The new owners stated they expected to own TDC for about five years.

On 5 April 2006, two months after the takeover, TDC declared a special dividend of DKK 43.5b, more than 57 % of the share price paid by the PEG, 47 % of TDC total assets, and about twice the equity investment of the PEG. It was funded by TDC sales of some of its investments in other countries, additional debt, and the cash reserve TDC had built up, presumably in anticipation of making additional long-term investments.

The PEG has announced a policy of shrinking TDC back to a core business of a limited range of services in Denmark and the Nordic countries. Its international investments in telecom operators are all on the market and four have been sold so far generating almost DKK 10b. TDC has sold 224 buildings for DKK 4.1b but retained their use on 30 year leases. It has outsourced the management, development and modernization of its entire mobile network to Ericsson, »the first time an incumbent operator has entered a management services agreement with such a broad scope.«¹⁸ It has outsourced the provision of its international voice services to a subsidiary of KPN, the Dutch incumbent operator. This avoids long-term investment, the need for related R&D or staff units with cutting edge technological skills, preserving cash for short-term payouts.

Long-term investment in upgrading TDC's networks to the increasing broadband standards needed for e-commerce and expanded Internet use has not been maintained. TDC is investing less than the cash it is generating from depreciation and amortization allowances. It is reducing staff by 7 % per annum. Denmark's leading ranking on broadband penetration is being lost as other countries move ahead with investments in expanding their broadband capacity and speed.

It seems clear from this evidence that TDC is being hollowed out, converting its resources to cash for payout wherever possible. Fortunately the electric power companies are helping to fill the vacuum by building fibre optic networks, and Telenor, Telia and other international players are expanding their Denmark operations to take up the opportunities provided by TDC's capitulation even in its home market.

The only European incumbent telecom operator in a position similar to TDC is *eircom*, the Irish incumbent. *Eircom* has been subject

to two private equity LBO takeovers since 2001. Investment in network upgrading has been significantly less than depreciation and amortization allowances as priorities for cash flow have gone to pay interest on the high debt and large payouts to the PEG. In comparisons of broadband penetration per capita in EU countries in Q1 of 2006, (when the PEG took over TDC), Denmark ranked first and Ireland ranked 17th.

TDC is unique in that it is the only leading telecom operator shrinking back in one of the fastest growing and dynamic industries in the global economy. Moreover it is shrinking back to the Nordic and Danish markets, the world leading and most developed region in the world in this industry. The other major Nordic operators are building on their leadership positions, taking their telecom sector technological, service development and management skills and investing in countries that do not yet have as fully developed or technologically advanced networks, including those countries where TDC is now selling out its investments. Telenor has been enormously successful in expanding from its home base to become a major global player.

For TDC to exploit these opportunities would require long-term investments, including expenditures on R&D, long-term development of new markets and the professional skill base of its human capital. But this would not maximize cash flow for capital payouts over the planned 3-5 year window of PEG ownership. As a result TDC's unique opportunity and its international competitive advantages are being squandered. Its inherited human capital and its corporate credibility are being wasted. This undoubtedly is due to the fact that the PEG managers are experts at short-term financial engineering, not long-term telecom sector development.

When the PEG took over TDC, it was in a very attractive financial position for a takeover

– debt light and cash heavy. This raises a question as to whether the PEG sought out TDC or TDC sought out the PEG. Between 2003 and 2005 TDC reduced its debt by DKK 12.3b to 27% of capitalization, and reduced its net debt/EBITDA ratio to 1.3, well below industry norms and its own past experience. This was at a time when interest rates were at an all time low and other firms were increasing their debt. Firms with capital they did not want to invest were paying out higher dividends and buying back their own shares to stimulate their stock prices. Why would TDC be engaging in such a patently inefficient financing practice? One possible explanation is that TDC management was trying to make itself attractive for a private equity takeover.

The evidence to date strongly suggests that the TDC takeover is essentially a straightforward asset-stripping exercise. PEG management is confronted by the conflict between its short-term cash flow priority and the long-term investment requirements for network and new market development of 10-20 years that need patient capital providing long-term returns. If the short-term cash values of long-term investments are to be captured by PEG financial engineering, the investment process must be reversed wherever possible, i.e., existing long-term investments sold for cash. The TDC case is essentially a model of disinvestment for capital redistribution to the PEG. When it is completed the residual TDC firm will be either an inconsequential player in the Nordic and Danish markets or absorbed by a larger, probably foreign player.

Other operators and service providers are already beginning to move into the market void being left by TDC. But there will be a significant cost to the Danish economy in terms of its lost position of international leadership in the telecom sector and its implications for R&D, innovation and technical development, cutting edge services applications and the skill base of the human capital in Denmark.

Conclusions from the Case Studies

The case studies illustrate some of the diversity evident in private equity takeovers, especially with respect to LBO. Hertz was essentially a pure financial engineering case. As a standard LBO, the cash payouts to the new owners were financed primarily by an increase in debt. There was no significant conversion of long-term investments to cash as Hertz does not engage in major long-term investments. Hertz is now forced to carry greater financial risk, and its investment capacity and flexibility have been restricted. But overall industry, consumer and public interests are not dependent on Hertz' performance or even survival. This is a fairly straightforward redistribution of capital.

ISS appears to be a standard LBO. But it doesn't qualify as the new owners are staying much longer than the (very short) long-term investment cycle of the industry, investing a significant amount of their own equity and not taking their returns until they exit. The increased leverage is being used for acquisitions to build greater scale and scope to create a foundation for global leadership and growth for the firm, i.e., new investments in the productive capacity of the real economy. A de-leveraging plan is being implemented before the PEG exits. This more closely fits the long-term investment model of private equity with a positive effect on efficient resource allocation.

Copenhagen Airport is distinctive because it has a monopoly over an essential service for the economy and for the broader public interest. It requires significant, continuing investment over a long-term investment cycle. The Macquarie private equity investment is not a LBO but an equity investment in airport management. Its high returns are realized from its ability to introduce operational efficiencies and exploit monopoly rent by leveraging the monopoly power of the airport over clients who have no alternative – airlines, du-

ty-free shops and passengers, minimizing its public interest obligations and ensuring passive government regulation. Airport investment in additions to productive capacity is not likely to change much as a result of the Macquarie management takeover.

TDC may be a worst case illustration of the possible negative consequences of a LBO as it involves short-term financial engineering of a firm with large long-term investment requirements, significant stable cash flow and many assets and investments that can be profitably converted to cash over a 3-5 year ownership term. The attractiveness is enhanced by its monopoly power over infrastructure facilities and the core public service and the fact that it was not generally regarded as a well-managed firm, despite its success.

These are circumstances where the greatest cash returns can be obtained from extensive asset-stripping and a substantial reduction in the residual firm's capabilities and mission. It results in a major redistribution of capital through extensive disinvestment and significant impairment of long-term investment capacity.

As with Copenhagen Airport, TDC's monopoly power over essential infrastructure facilities and core public services is subject to government regulation to protect the public interest which needs to be kept passive during the »restructuring«. Surprisingly, the mission and objectives of a country's incumbent infrastructure provider with significant public interest responsibilities is being fundamentally cut back, not by government policy and regulation, but by a foreign PEG.

The Generic Model of Private Equity LBO

As first documented by Berle and Means in 1932,¹⁹ public equity financing introduces a principal-agent problem. With diversified public shareholders, the owners are not in a position to hold the managers of firms fully

accountable. The CEO and top management have an incentive to pursue their own interest which is not necessarily that of maximizing returns to stockholders. A wide variety of management abuses have been documented over the years, which have led to the establishment of regulatory requirements directed to transparency, accountability, securities issuance and exchange, insider trading, requirements for independent directors on boards, and other matters.

Despite these regulations this principal-agent problem has persisted. Recent abuses involving excessive salary payments to CEOs regardless of firm performance, manipulated stock options, inadequate disclosure and fraud have led to additional regulations and demonstrated that the principal-agent problem for public equity financing remains serious.

It was anticipated that the increasing role of institutions (e.g., pension, insurance, mutual funds etc.) investing large amounts of money on behalf of their members or clients, and employing financial and industry experts, would help overcome this principal-agent problem by providing effective accountability by management to the interest of the owners. Although it has in some cases, in most cases it has not. As the financial performance of these institutions and the fund managers they employ is judged on the basis of annual or even quarterly returns on the invested funds, they have tended to focus on short-term stock price movements and monitor firm managers for information likely to affect the short-term movement of the stock price.

This has stimulated firm managers to focus more on the short-term effects of their decisions and the embellishment of company information. Thus institutional investors have been a rather weak and sometimes misdirected force in reducing the principal-agent problem, and have introduced a second principal-

agent problem between the objectives of the providers of the investment funds and the institutional managers doing the investment for them.

The private equity industry claims that it solves the principle-agent problems of dispersed public investment in firms and the short-term stock price priorities of many institutional investment managers. The PEG is the investor and provides direct control over the firm's management, ensuring that all its decisions are implementing the financial objective of maximizing returns to the investors. But this overlooks the fact that the PEG managers are not the investors. They are the new managers. In essence they are installed as financial super-managers of the firm that has been taken over. The private equity principal-agent relation is between the investors and the PEG super-managers.

The information provided by the private equity firms to investors about the investments varies widely, but often investor commitments are made without even knowing what firm(s) will be targeted for investment. Periodic reporting of performance is subject to negotiation, the presumption being that because the investors are contributing large amounts of funding, »they can look after themselves«. But they are agents of investors also. The relationship of investors to PEG managers is often one of blind trust with little or no required accountability. In virtually all cases the information asymmetry between investors and private equity managers creates a classic moral hazard.

As the private equity firms are trying to attract investor funds, they have an incentive to downplay the risks as they see them, or to acknowledge that they do not know the full nature of the risks in a targeted firm and industry about which they have only limited knowledge. The private equity firms make their money primarily from fees and will be

handsomely rewarded even when investments go sour. Thus, this principal-agent relation may be a much more serious problem than the one it purports to replace.

Most investors, e.g. pension funds, are unlikely to be fully informed about the risks they are assuming. The PEG managers have an incentive to take very high risks in their financial and operational decisions relating to the target firms as the risks are borne almost entirely by the investors but the rewards are shared by the PEG managers, especially the higher returns above the hurdle rate that require the assumption of greater risk.

This moral hazard problem has serious implications for the target firm as the PEG managers have an incentive to impose greater risks on the firm than they would if they had to bear the consequences of their decisions. This is likely to lead to the adoption of higher levels of debt and gambling on favourable future interest rates and market conditions when that debt must be renewed.²⁰ There is also an incentive for excessive cutting of operating costs to maximize cash flow, and wherever possible the deferral of costs and risks to future periods after the PEG has exited the target firm, hoping to benefit upon exit from the purchasers incomplete knowledge of the target firm's condition and future capabilities.

The moral hazard problem in the principal-agent relation associated with private equity LBO also introduces a new problem in the relation between owners and managers of public stock companies. These managers are now provided with a powerful incentive to maximize their personal financial interests by seeking out PEG to buy out their companies under condition that they share in the large payouts of company cash.

To attract the interest and attention of PEG, and increase their ultimate personal pay-

ments, managers can lower the debt ratio to inefficiently low levels so as to increase the benefits that can be realized from future leverage, build up large cash balances, employ inefficient operating practices and reduce commitments for long-term investment in production capacity. They can begin implementing the short-term internal cash generation priorities of the PEG. This may be inefficient in terms of the firm's long-term growth and profitability, but the inefficiency makes the firm more attractive as a buyout target to PEG.

The moral hazard problems arising from the information asymmetries and perverse incentives that characterize private equity LBO invite abuse and stimulate an inefficient allocation of resources. Regulation addressing the causes of this market failure is inevitable. But if history is our guide, it will not come until after a major financial disaster.

Conclusion

This paper has documented the wide diversity of types of private equity financing that have led to much confusion in attempts to describe and analyze its implications for investment in the real economy. Most forms of private equity provide alternative sources of financing different types of economic activity, and the principle-agent problems that arise can be dealt with by appropriate requirements for transparency and accountability comparable to that which has been established for public equity investment.

The area where more serious problems arise is the LBO. They relate to the moral hazard incentives evident in the PEG manager's relations with investors, managers of the firms taken over, and in their stewardship of the assets and on-going business activities of the targeted firms. Here there is considerable analytical and case study evidence that suggests that on balance the LBO are doing more harm than good for the efficiency of resource

allocation in the real economy. Better transparency and accountability can help ensure PEG investors better understand the significant risks they are assuming and the realistic returns they can expect. Aligning PEG manager's fees more directly with their investment performance, and requiring that PEG take a significant minimum equity stake in their investments would help by making them more sensitive to the risks they are imposing on their investors and target companies.

The major problems created by LBO relate to the increase in leverage beyond that which is sustainable for a firm to undertake long-term investment, and the payout of large capital dividends unrelated to earnings performance. The former could be contained somewhat if the tax deductibility of interest was limited to debt representing a maximum percent of capitalization, say 60 %, and the latter by requiring PEG to take their capital payout only at the time of exit, which is what happens with most other forms of private equity investment. This would require greater attention to the value of the firm as a going concern.

In sectors of the economy that require long-term investments, there is a very strong probability that a LBO will be simply trading off long-term value for short-term cash with negative consequences for industry development, efficient resource allocation and the public interest. Recently PEG have entered the traditional public utility industries that provide basic infrastructure services for the economy by taking over incumbent operators and major players. Eircom and TDC are leading examples in Europe. Infrastructure operators in energy, water, pipelines and other sectors have become priority targets currently under scrutiny by the private equity industry.

For these sectors of the economy, already subject to industry specific regulation in many countries, appropriate steps must be

taken to ensure that public interest policy objectives continue to be implemented. In the public utility sector with its requirements for long-term capital intensive investments, its generation of large, stable cash flows, and its significant monopoly power over public necessities, it is difficult to see LBO as anything more than milking cash cows at the expense of the public interest.²¹

At the macro level, there are potential serious problems as well. The widespread threat of LBO takeovers may be forcing many public equity firms to carry higher debt levels than the management thinks appropriate, in order to protect themselves from takeover. This could have negative implications for their willingness to engage in risky long-term innovation, technological and market development, i.e., internal venture capital investment. Rather, their risk assumption capacity will be absorbed by their defensive financing practices. Moreover, if higher levels of financial risk are being forced on businesses generally, could this provide the foundation for the next credit crisis following the sub-prime mortgage crisis now un-folding.

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