

Pension Funds and Private Equity Investments

Application for funding from the EPRU-network

by

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Background

Pension funds have recently both internationally and nationally increased their investments in private equity dramatically. Whereas asset pricing and investment theory long have studied the risk and return characteristics of public equity, little is known about the risk and return to investments in private equity. The lack of knowledge about private equity as an asset class is striking given the fact that the private equity market is as important as the public equity market in terms of size and growth. Without a better understanding of the risk and return characteristics of private equity, the increased flow of pension savings into private equity can be characterized as a risky gamble.

In a preliminary study of the return to pension funds' private equity investments in Denmark, I find compelling evidence of poor historic returns.¹ The most conservative estimate suggests a significant underperformance both statistically and economically: The pension funds' average return on private equity has despite a higher risk been 5 percent *lower* per annum than their return on public equity. However, this preliminary study only provides a rough picture of the aggregate risk and return characteristics, as it focuses on the average return to pension funds' private equity investments and not on which of the underlying investments that are explaining the poor return.

As a response to the historically poor investment performance, the Danish pension funds are airing intentions to change their investment strategy from direct to indirect investment through private equity funds. The organization of private equity funds and their investments has been studied intensively in the venture capital literature. However, while it is well understood how venture capital deals are structured, it still remains an open question under which conditions venture capital adds value. The current research proposal aims at contributing towards filling this gap empirically.

Objectives

This research proposal has two main objectives:

1) To analyse the risk and return characteristics of pension funds' private equity investments. Danish pension funds are currently increasing their investments in private equity through indirect investment in private equity funds. Despite this, we have little empirical evidence suggesting that private equity funds outperform the public equity market to compensate the investors for the greater risk. A better understanding of the conditions under which indirect investments lead to better investment performance will help us understand how pension funds can benefit from adding private equity to their portfolio. A through investigation of this important issue will also help illuminate whether we can expect a significant change in the return to pension funds' private equity investments and thereby a better risk-return trade off than what has been achieved historically.

¹ "The Return to Pension Funds' Private Equity Investments: Another Piece to the Private Equity Puzzle?" by Kasper Meisner Nielsen, CEBR Discussion Paper 2005-25.

2) To analyse the consequences of the recent liberalization of the regulation of the pension funds' portfolio allocation which allows pension funds to increase their investments in private equity dramatically. Private equity investments have historically been extremely costly to the Danish pension savers. Given this, increasing the portfolio weight on private equity might be harmful to the pension savers. Interestingly, increasing the portfolio weight might carry an additional cost, since private equity investments are known to have a long maturity – in the sense that it might take several years before they yield *any* return. Thus, by adding private equity to the portfolio you sacrifice returns in the near-term.

Description of methodology and data

A significant part of this research proposal is to develop a comprehensive dataset that combines data on pension funds' investments on one side with detailed firm level data on the other side. The research proposal utilizes the fact that the Danish legislation since 1995 has obligated pension funds to make public a wide set of information on their investments into different asset classes.

These data on the pension funds investments in private equity have to be collected manually from the pension funds' annual reports, which are available only in paper form from *Erhvervs- og Selskabsstyrelsen*. From the pension funds' annual reports we can collect time-series of investment flows and returns, the identities of the firms which the pension funds have invested in, and information on the management and board members of the pension fund. Since pension funds can either invest directly or indirectly (through funds) in private equity, these data must be supplemented with additional (manually collected) data on the portfolios of the private equity. Together, these datasets form the pension funds' portfolio of private equity firms. To obtain firm level data on the portfolio firms, these data will be merged with *Købmandsstandens Oplysningsbureau's* data already available at CEBR. Finally, to uncover employment and education records of the people employed in pension funds, private equity funds and the portfolio firms, we rely on the *IDA* data from Statistics Denmark.

Together these datasets will form an internationally unique dataset on the pension funds' portfolio of private equity firms. These data will enable us to assess the risk and return characteristics of private equity investments in greater detail and further evaluate the conditions under which pension funds choose to invest directly or indirectly in private equity. An important question since hiring specialized venture capitalists is costly. By combining these data with educational and labor market experience of the employees in the pension funds, the private equity funds, and the portfolio firms, we can take the analysis one step further. Direct investments are likely to be preferred and valuable in firms that rely on blue-color labor, whereas specialized venture capitalist might be adding valuable services to research and development intensive firms.

Policy implications

On the national level my preliminary study of the return to pension funds private equity investments has already achieved significant attention in the media and business community. The current research project may have a number of policy implications:

1. Given the increased focus on pension funds' private equity investments both nationally and internationally, there is a strong need to understand the implications for pension savers. The current research project will be able to both quantify and qualify future investments in private equity from the perspective of pension funds.

2. In a Danish context, the regulation of the pension funds' portfolio choices has already changed – allowing pension funds (as well as individuals' pension accounts) to increase their weight on private equity investments. The need for understanding the risk and return characteristics has therefore as a consequence increased.

Deliverables and expected results

If I obtain the grant, I expect to deliver the following before December 2006:

1. A working paper on pension funds' investments in private equity and the choice between direct and indirect investments, aiming at publication in a good economic or finance journal.
2. A working paper in Danish that evaluates the risk and return characteristics of Danish pension funds' investments and discusses the impact of the recent regulatory changes allowing pension funds and individuals to increase their investments in private equity, aiming at publication in *Nationaløkonomisk Tidsskrift*.

Budget

I apply for the amount of kr. 240.000 to cover: i) data expenses; ii) a research assistant for 1 year to (manually) collect data; and iii) travel expenses for presentation of the research papers at relevant conferences and/or workshops.

Data expenses	75,000 kr
Research assistant	100,000 kr
Conference & workshops	25,000 kr
Overhead (20% of 200,000)	40,000 kr

Total	240,000 kr
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Participants

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