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Essays on the efficiency of pension funds and financial markets

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2018

document version

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

citation for published version (APA)

Rijsbergen, D. R. (2018). *Essays on the efficiency of pension funds and financial markets*. Vrije Universiteit.

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Chapter

SUMMARY

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This thesis presents work on the efficiency of pension funds and financial markets. Understanding the efficiency of financial intermediaries – such as banks, insurance companies and pension funds – and financial markets is important as they play an integral role in allocating scarce capital and distributing risk. The thesis consists of two parts that focus on different aspects of efficiency.

Part I concentrates on the operational efficiency of pension funds. Pension funds aggregate assets from their plan sponsor(s) and beneficiaries with the aim of providing retirement income insurance in an efficient manner. As the pension sector is a vital part of the financial system in most countries, the assessment of its operational efficiency is important. High costs and persistent inefficiencies can substantially lower the pension outcome. This is even more relevant since the financial crisis as pension funds are under intense public scrutiny because they find it increasingly challenging to safeguard a sustainable funding level. What binds the chapters in Part I together is their empirical focus on different determinants of pension fund operational efficiency. For that, we use cross-sectional and panel datasets that are free from self-reporting biases and contain detailed information on Dutch occupational pension funds. The Dutch occupational pension system provides an interesting case study as it is well-developed and relatively large in terms of size. The results suggest that pension funds can gain considerable benefits from economies of scale. Larger pension funds benefit from economies of scale in the investment costs for standardized asset classes such as fixed income and equity, while they pay less performance fees for a given level of excess return for most alternative asset classes. This may be because their size gives them a better negotiating power towards asset managers. The findings do not aim to prescribe an optimal pension fund size or investment amount for asset classes, but they do highlight that it is important for pension fund boards to include cost structures and the economies of scale within these structures when determining their asset allocation. This will help ensure that risks, returns and costs are balanced and the asset allocation matches the pension fund's strategy.

Part II of this thesis focuses on a different aspect of market efficiency, namely the informational efficiency of financial markets and specifically examines the influence of the U.S. presidency on financial markets. Academic evidence suggests that the U.S. presidency influences stock and bond markets and forms an important consideration for institutional investors such as pension funds. We document a clear presidential cycle pattern in U.S. stock and bond markets which consists of significantly higher returns (and lower credit spreads) during the second half of a presidential term compared to the first. Given the economic significance of the effect it is relevant for institutional investors when determining their asset allocation, most notably from a market timing perspective. Moreover, the effect remains robust after controlling for multiple rational explanations, such as differences in business conditions or time-varying risks. Why there is a relation between the presidential cycle and financial markets thus remains a puzzle.

The first part of this thesis starts with Chapter 2 where we provide an analysis of operational efficiency through a cross-sectional examination of the relation between investment costs and pension fund size. We use a dataset of 225 Dutch occupational pension funds with a total of 928 billion euro of assets under management. Using the dataset, we distinguish between two key

components of investment costs for six asset classes, namely management costs and performance fees. We find that a pension fund that has 10 times more assets under management on average reports 7.67 basis points lower annual investment costs. These economies of scale are solely driven by management costs and appear constant over pension fund size. We also document that economies of scale differ per asset class. Size is an important driver for economies of scale in fixed income, equity and commodity portfolios, but not in real estate, private equity and hedge funds. The first group of asset classes tend to have a higher level of liquidity and standardization and are therefore probably more easily scalable.

Chapter 3 concentrates on operational efficiency in investment cost structures by analyzing the relation between investment returns and performance fees. Pension funds typically pay these fees for active investment strategies and alternative asset classes with the aim of mitigating the agency conflict between investors and asset managers by linking the manager's payoffs to her actions. We have a dataset consisting of 218 Dutch occupational pension funds with an average total of 985 billion euro in assets under management from 2012 to 2015. We find that large and more specialized pension funds pay less performance fees for a given level of excess return for alternative asset classes such as hedge funds and private equity. This is possibly the result of better negotiation power due to their larger scale or higher level of expertise. We also document no statistical evidence that the returns of pension funds that pay performance fees to asset managers are significantly higher or lower than the returns of pension funds that do not pay performance fees. This is true for most asset classes and robust if we correct for risk and persistence in asset class returns. As the dataset consists of returns aggregated at the asset class level and does not contain the individual mandates per pension fund within each asset class, the performance related effects reported in this chapter are likely to represent a lower bound on the actual effects. Future research using data on individual mandates could shed further light on this issue.

Chapter 4 focuses on the ability of pension funds to efficiently provide indexation by examining the key factors influencing indexation decisions within defined benefit plans. We use a dataset of 166 Dutch pension funds from 2007 to 2010. Key drivers of indexation are the funding ratio, inflation and real wage growth. The type of pension fund and the interest rate exposure are also statistically significant, although the latter effect is nonlinear. The asset allocation has no significant effect on the level of provided indexation as this is already captured by the funding ratio. We also examine the relation between policy ladders and the actual level of provided indexation. This chapter finds that a policy ladder with an upper limit equal to a 100 percent real funding ratio is able to predict the actual level of indexation more accurately than a ladder with an upper limit based on a pension fund's required nominal funding ratio. The latter tends to overestimate the actual level of indexation. This suggests that pension funds in their indexation policies indeed seem to cater for the price or wage indexed consumption needs of their clients.

The second part of this thesis comprises Chapter 5, which concentrates on the informational efficiency of financial markets by analyzing the presidential cycle effect in U.S. stock and credit markets. Using data between 1948 and 2008, we find that the annual excess return of the S&P

500 is almost 10 percent higher during the last two years of the presidential cycle than during the first two years. We find a similar pattern in U.S. credit spreads. These patterns cannot be explained by business-cycle variables capturing time-varying risk premia, differences in risk levels, or by consumer and investor sentiment. We formally test the presidential election cycle (PEC) hypothesis as an alternative explanation. The PEC states that incumbent parties and presidents have an incentive to manipulate the economy (via budget expansions and taxes) to remain in power. We formulate eight testable propositions relating to the fiscal, monetary, tax, unexpected inflation and political implications of the PEC hypothesis. However, we do not find statistically significant evidence confirming the PEC hypothesis as a plausible explanation for the presidential cycle effect. The presidential cycle effect in U.S. financial markets thus remains a puzzle of informational inefficiency that cannot be easily explained by politicians employing their economic influence to remain in power, as is often believed.

