

Report Type: End of Award Report

Full Name

Prof. Bart Lambrecht (award holder)

Dr Shiqi Chen (co-investigator)

Your E-Mail Address [b.lambrecht@jbs.cam.ac.uk](mailto:b.lambrecht@jbs.cam.ac.uk)

Faculty/Department CJBS

Project Title The dynamics of corporate financial policies, group decisions, and coalition formation.

Project Start Date Mon, 01/02/2021

Project End Date Mon, 31/07/2023

Project Abstract

This research studies the dynamics of the three main corporate policies: the investment, financing and payout decisions. We first study how these decisions interact, and whether the theories of corporate capital structure and payout can be reconciled with each other given these interactions. Next, we study investment and payout decisions made by a group of investors, such as a partnership. We examine the formation, composition, organizational and legal structure of the decision-making coalitions.

Traditionally, the finance literature has studied the firm's three main financial policies in isolation. However, in reality these three key corporate decisions are not independent as they are linked by the firm's sources and uses of funds constraint. The interdependencies between the firm's policies raise many questions that have not been recognized in the existing literature. For example, if we believe that firms follow a target leverage ratio, what are the implications for the dynamics of payout and investment? Alternatively, what are the implications for payout and investment if firms follow a pecking order policy? Our research aims to explore these questions from a theoretical perspective, with a view to produce empirical predictions as to how payout, investment and capital interact.

In the second project, we study partnerships. In particular, we examine how the partners' personal liability, their sharing rule, personal taxes, and capital constraints determine the partnership's optimal size, financing, and investment decisions, and the partners' optimal degree of personal liability.

Activities and Achievement

We have concluded our first project, which has been published in the Annual Review of Financial Economics (vol.13, November, 2021). The paper titled "Do capital structure models square with the dynamics of payout?" is available at

<https://www.annualreviews.org/doi/abs/10.1146/annurev-financial-010421-085556>.

Our second project focuses on partnerships, which make up approximately 10% of UK businesses. Despite their prevalence, there is a lack of research on the financing of partnerships. Our project aims to fill this gap by examining the optimal financial decisions

of partnerships. We are currently in the write-up stage, and a complete draft of the paper will be available by July.

Partnerships have unique features compared to corporations. In particular, partnerships are composed of partners who own and control the firm, unlike public corporations, where management is often separated from ownership. This means that partners' human capital is vital for the firm's operation, like what we observe in law firms, consultant firms etc. All partners together share the profits, and therefore partnerships tend to optimize with respect to value per partner rather than total firm value. Additionally, general partnerships are subject to unlimited liability, meaning that the partners are liable for all partnership debt with their personal assets. However, partners can limit their liability by choosing how many personal assets to pledge to the firm, either by setting up a limited liability partnership or transferring their assets to a trust or a family member. The partners' personal liability affects, however, the partnership's debt capacity and cost of borrowing. Therefore, partners need to determine the exposure of their personal assets to the partnership along with the firm's financial policies.

Our research shows that the optimal debt level and size for partnerships depend on the degree of the financing constraint. When partners are financially unconstrained, the optimal debt level is always safe, and the optimal partnership size is below the efficient level. Enlarging the partnership size increases the total value of the firm, but it dilutes the value per partner, making the partners reluctant to increase the number of partners.

When partners are financially constrained, we find that exposing personal assets to the partnership is optimal if it allows the partnership to keep debt safe, thereby avoiding costly bankruptcy upon closure. For a severely capital-constrained partnership that need to adopt risky debt, a limited liability partnership that ringfences the partners' personal assets from the partnership is optimal. Costly bankruptcy therefore creates a link between the optimal size and the optimal debt level when the partnership is financially constrained.

Partnerships can raise more funding by increasing the number of partners, by raising more debt, or by a combination of the two. Each of these three strategies can be optimal, but for different degrees of financing constraint. Increasing the partnership size raises more equity capital and potentially enlarges the pool of personal assets the partnership's creditors have a claim on, thereby increasing the debt capacity of the partnership. Increasing partnership size leads to dilution but does not necessarily imply a loss of efficiency, as partners who are not capital-constrained keep the partnership size inefficiently small. An increase in bankruptcy cost and the degree of financial constraint increases underinvestment of the partnership compared to the efficient level.

In summary, our first project has been successfully concluded, and the second project is ongoing. During the past one year, Shiqi Chen has left Cambridge and joined Lancaster University Management School as an Assistant Professor in Finance in August, which has caused some delay in the second project. In addition, we have been delayed recently by the revision of another related project on group decisions and tensions between heterogeneous

investors in startups. We have now finished revising this paper, and are now focusing again on the partnership paper.

#### Dissemination

The first paper is published at the Annual Review of Financial Economics (vol.13 Nov, 2021). The printed version is available on the ARFE website. The pre-print paper version is available on SSRN. The paper is also available as CEPR discussion paper DP16199.

During the past academic year, joint research was presented by Bart Lambrecht at the Cambridge–Nova workshop (24/9), and in seminars (in person) at Humboldt University, School of Business and Economics (Berlin, 17/11/2022) and (in person) at the Collegio Carlo Alberto, University of Turin (Turin, Italy, 22/3/2023). The paper was presented by Shiqi Chen at the Northern Finance Association Annual Meeting (Banff, 27/09/2022, in person).

#### Outputs

Do Capital Structure Models Square with the Dynamics of Payout?

Shiqi Chen and Bart M. Lambrecht

Annual Review of Financial Economics 2021 13:1, 271–299

ARFE:

<http://www.annualreviews.org/eprint/QHPiGMHME6TBACVJ2K7V/full/10.1146/annurev-financial-010421-085556>

SSRN: <https://ssrn.com/abstract=3854109> or <http://dx.doi.org/10.2139/ssrn.3854109>

Major Difficulties and Any Other Issues none

#### Web Links

Do Capital Structure Models Square with the Dynamics of Payout?

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SSRN: <https://ssrn.com/abstract=3854109> or <http://dx.doi.org/10.2139/ssrn.3854109>

Optional – detailed findings and output

#### Additional Information

Declaration Details of relevant outputs of this award have been submitted to the CERF Database and details of any ensuing outputs will be submitted in due course.

Signature – Main Award Holder Signature – Main Award Holder