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

Prof. Bart Lambrecht (award holder), Dr Shiqi Chen (co-investigator)

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## 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. The paper is now published at the Annual Review of Financial Economics (vol.13, November, 2021). The paper is

entitled: " Do capital structure models square with the dynamics of payout?" A link to the paper can be found here:

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

Over the past year, we have been focusing on the second project and have made significant progress. The paper is in the write-up stage, and a complete draft will be available in the next few months. The paper focuses on partnerships. Even though partnerships constitute some 10% of UK businesses, there are few studies on partnerships. For example, there is a huge literature on the optimal capital structure of corporations, but very little on the financing of partnerships. Corporations are subject to corporate and personal taxes, whereas partnerships are entitled to pass-through treatment, which means that partnership income is attributed to the partners and not the partnership. Thus, the partnership is not subject to tax and partners only pay personal taxes, unlike corporations which are subject to double taxation. Shareholders in corporations enjoy limited liability. General partnerships have unlimited liability, i.e. the partners are liable for all partnership debt with their personal assets. Partners can limit their liability by setting up a limited liability partnership or by transferring their assets to a trust or a family member.

We show that exposing personal assets to the partnership is optimal if it allows capital constrained partners to raise more safe debt for the partnership and avoid costly bankruptcy upon closure. For severely capital constrained partnerships that adopt risky debt, a limited liability partnership that ringfences the partners' personal assets from the partnership is optimal.

We show that capital constraints create a link between the optimal partnership size and its optimal debt level. Financially constrained partnerships can either raise more funding by increasing the number of partners, by raising more debt, or by a combination of the two. We show that each of these three strategies can be optimal, but for different degrees of financing constraint. We show that increasing the partnership size not only raises more equity capital but it potentially also enlarges the pool of personal assets the partnership's creditors have a claim on. The latter in turn increases the debt capacity of the partnership. Increasing the partnership size does not necessary imply a loss of efficiency as partners that are not capital constrained keep the partnership size inefficiently small (a partnership maximizes the value per partner, not the total firm value).

Introducing heterogeneity in the partners' productivity rate, we show that the partnership with the most productive members is also the smallest

(largest) partnership if the production rate is convex (concave) in the number of partners within the industry. This has implications for the size distribution of partnerships within an industry.

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, the paper was presented by Bart Lambrecht in seminars at Lancaster University Management School (29/10/2021, in person), the school of Business of the University of North Carolina at Charlotte (29/4/2022, online), Fanhai International School of Finance, Fudan University (Shanghai, 27/5/2022, online), Xiamen University (Xiamen, Fujian, China, 7/7/2022, online), and as part of the keynote speech at the annual conference of the British Accounting and Finance Association meetings on 12/4/2022. The paper will also be presented at the Cambridge-Nova workshop later this month.

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? 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