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研究課題名（和文）Non-executive Employee Stock Ownership, Corporate Governance, and Debt Pricing  
  
研究課題名（英文）Non-executive Employee Stock Ownership, Corporate Governance, and Debt Pricing  
  
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研究成果の概要（和文）：本プロジェクトにより執筆した論文が、査読付き学術誌（Journal of Corporate Finance）に掲載された。本論文によって、従業員の株式所有は、コーポレート・ガバナンスの改善、経営者のリスクテイクの抑制、情報の非対称性の低減、従業員の定着率の向上などにより、スプレッド融資に影響を与える可能性があることが明らかとなった。一方、ストックオプションによる従業員の株式所有は、スプレッド融資の拡大と関連しており、おそらくその凸型ペイオフ構造によるものであると考えられる。全体として、本論文の結果は、従業員の株式所有の水準と構造が企業ローンの価格決定に重要であることを強調している。

#### 研究成果の学術的意義や社会的意義

This paper examines the link between non-executive employee ownership and the terms and pricing of corporate loans. The negative effect of employee stock ownership on loan spreads suggests that non-executive ownership can significantly reduce financing costs using private loans.

研究成果の概要（英文）：One paper derived from this project has been published in a refereed journal. The paper is titled "Non-executive ownership and private loan pricing" and is published in the Journal of Corporate Finance. Results of the paper reveal that employee stock ownership may affect loan spreads by improving corporate governance, curbing managerial risk-taking, reducing information asymmetry, and improving employee retention. In contrast, we find that employee ownership via stock options is associated with greater loan spreads, perhaps owing to their convex payoff structure. Overall, our results underscore the importance of the level and structure of employee ownership for pricing corporate loans.

研究分野：Finance

キーワード：non-executive ownership loan pricing debt financing cost

## 1. 研究開始当初の背景

Employees' ownership of a firm consists of executive ownership and non-executive ownership. The existing literature examining the effects of employee's ownership mainly focuses on exploring how the executive's incentives can be altered against/aligned with the interests shareholders (Coles et al., 2012; Core and Larcker 2002). The effects of executive ownership on debt financing are also documented in the existing literature (Bagnani et al., 1994; Ortiz-Molina, 2006; Kabri et al., 2013). Non-executive ownership is the other major component of employee's ownership that can generate incentives to monitor the managers' decision-making process and can create its corresponding effects.

In terms of the effects from the incentives of non-executive ownership on shareholders, the existing literature has provided two contrasting views. On the one hand, the study by Oyer (2004) suggests that non-executive employee stock options may have no incentive effects. In addition, Hochberg and Lindsey (2010) argue that the ownership created via non-executive employee compensation, may be too diffuse to create incentive effects and even if it creates incentives, the free-rider problem may weaken their incentive effects. On the other hand, the study by Bova et al., (2015) suggests that in terms of its size and capacity, non-executive ownership is large enough to generate incentives to non-executives for risk-reduction and is able to alter firm risks. In addition, they conclude that the adoption of non-executive ownership may subsequently alter stock returns in a positive way (Kim and Ouimet, 2004; Chang et al., 2015; Kato, Miyajima, and Owan, 2016).

Nevertheless, the existing literature examines the effects of the incentives created through nonexecutive ownership mainly on the equity side. This current project intends to fill the gap by examining the effects of non-executive ownership on the liability side.

## 2. 研究の目的

This project will focus on the effects of the nonexecutive ownership through the participation in employee stock ownership plan (ESOP) on the cost of debt financing. In addition, this project will examine the channels through which nonexecutive ownership plays its essential role on affecting the cost of debt. In particular, this project will explore the research question whether ESOP can be utilized as an effective governance mechanism to deter managerial risk-taking behaviors. This is to show whether there exists interest coalition between the executive managers and nonexecutive employees. Moreover, the project will examine whether the utilization of ESOP may cause wealth transfer between stockholders and debtholders.

This project intends to explore the following research questions:

- (i) Whether the non-executive ownership through ESOP can create any significant effects on the cost of debt financing?
- (ii) How the use of ESOP can further portrait the firm's risk profiles and serve as a governance mechanism to subsequently affect the firm's cost of debts?
- (iii) Whether there exists any wealth transfer between shareholders and debtholders?

In other words, is it likely that the documented positive effects of on increasing shareholder values (Kim and Ouimet, 2004; Chang et al. 2015; Kato, Miyajima, and Owan, 2016) are at the expenses of debtholders?

### 3 . 研究の方法

It is evidenced that the incentives for non-executives to reduce stock volatility are even more heightened in the case when a higher executive ownership creates even a higher risk-taking incentives (Bova et al., 2015). This project extends this view and considers the effects of non-executive ownership may vary with different degrees of risk level. We further illustrate the non-linear effects of non-executive ownership on debt spreads based on different categories of risks. In other words, for firms that are more sensitivity to credit risks, such firms can benefit more from non-executive ownership in the way of reducing their debt financing costs. We postulate such hypothesis by categorizing firms with different risk levels and compare their debt spreads. For the managers in Japanese firms and US firms may carry different degrees of risk-taking incentives, we will extend this hypothesis by comparing the effects of ESOPs of Japanese and US firms with respect to the firm risks.

Another important feature embedded in non-executive ownership is that it offers an alternative internal governance mechanism (Babenko and Sen, 2016). We intend to examine whether such governance feature can reinforce or ease the concerns to debtholders in the way of affecting the firm's debt financing costs. The governance feature can be illustrated as follows: as a firm faces a hostile takeover threat, employees' retirement plans containing non-executive ownership can be effectively utilized by the managers to form a worker-management alliance to deter hostile takeover. This line of research suggests that employees' retirement plan can mitigate the agency problems between nonexecutives, managers, and shareholders.

We are motivated to examine whether such mitigation of agency problem resulting in an effective deterrence of hostile takeover is likely to extend the benefits to the debtholders. In this sense, non-executive ownership can be considered as an alternative mechanism for internal governance that can effectively deter hostile takeover as well as deter managerial risk-taking incentives. To this end, we postulate that for firms with weak governance structure, they are more likely to benefit more from the implementation of non-executive ownership.

We investigate this hypothesis through further categorizing firms to weak and strong governance groups and compare the results for Japanese and US firms to recognize their regulation difference. This paper examines the link between non-

executive employee ownership and the terms and pricing of corporate loans. Results show that the increase in employee stock ownership is associated with a decrease in loan spreads and one fewer restrictive loan covenant. Overall, the results from this paper underscore the importance of the level and structure of employee ownership for pricing corporate loans.

The project set up three major hypotheses as follows:

(H1) There exists a negative association between non-executive ownership and the cost of debt due to the risk-reduction function of the non-executive employees' incentives.

(H2) The reduction impact of non-executive ownership on loan spread is due to its attenuating effects of the managerial risk-taking incentives.

(H3) The reduction impact of non-executive ownership on loan spread is due to the improvement of information disclosure and quality.

To examine these hypotheses, the project has applied multivariate regression models and the following models to ease the endogeneity concern such as (1) the lagged variables regression and (2) instrumental variables (IV) regressions. This paper examines the link between non-executive employee ownership and the terms and pricing of corporate loans. Results show that the increase in employee stock ownership is associated with a decrease in loan spreads and one fewer restrictive loan covenant. Overall, the results from this paper underscore the importance of the level and structure of employee ownership for pricing corporate loans.

#### 4 . 研究成果

One paper has been derived from this project has been published in a refereed journal. The paper is titled " Non-executive ownership and private loan pricing" and is published in the Journal of Corporate Finance. Results of the paper reveal that employee stock ownership may affect loan spreads by improving corporate governance, curbing managerial risk-taking, reducing information asymmetry, and improving employee retention. In contrast, we find that employee ownership via stock options is associated with greater loan spreads, perhaps owing to their convex payoff structure. Overall, our results underscore the importance of the level and structure of employee ownership for pricing corporate loans.

Before the paper has been published, the paper has been presented at a major international finance conference, 2018 annual meeting of FMA (Financial Management Association). In addition, the paper was also presented in IFABS Chile Conference. I was also invited to give a talk at Department of Quantitative Finance, National Tsing-Hua University, Taiwan.

This project also promoted the international collaboration with the researchers from North Dakota State University and University of North Carolina at Charlotte.

5. 主な発表論文等

〔雑誌論文〕 計1件（うち査読付論文 1件 / うち国際共著 1件 / うちオープンアクセス 0件）

1. 著者名 Jun Chen, Tao-Hsien Dolly King, Min-Ming Wen	4. 巻 64
2. 論文標題 Non-executive ownership and private loan pricing	5. 発行年 2020年
3. 雑誌名 Journal of Corporate Finance	6. 最初と最後の頁 1-30
掲載論文のDOI（デジタルオブジェクト識別子） 10.1016/j.jcorpfin.2020.101638	査読の有無 有
オープンアクセス オープンアクセスではない、又はオープンアクセスが困難	国際共著 該当する

〔学会発表〕 計3件（うち招待講演 2件 / うち国際学会 2件）

1. 発表者名 WEN, Min-Ming
2. 発表標題 Non-executive Ownership Effects on Private Loan Pricing
3. 学会等名 Department of Quantitative Finance, National Tsing-Hua University (招待講演) (国際学会)
4. 発表年 2019年

1. 発表者名 WEN, Min-Ming
2. 発表標題 Non-executive Ownership Effects on Private Loan Pricing
3. 学会等名 IFABS Chile Conference (招待講演)
4. 発表年 2019年

1. 発表者名 WEN, Min-Ming
2. 発表標題 Non-executive Ownership Effects on Private Loan Pricing
3. 学会等名 2018 Annual Meeting of Financial Management Association (国際学会)
4. 発表年 2018年

〔図書〕 計0件

〔産業財産権〕

〔その他〕

<https://belkcollege.uncc.edu/directory/tao-hsien-dolly-king>  
[https://www.ndsu.edu/business/our\\_people/directory/jchen/](https://www.ndsu.edu/business/our_people/directory/jchen/)

6. 研究組織

	氏名 (ローマ字氏名) (研究者番号)	所属研究機関・部局・職 (機関番号)	備考
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7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8. 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関			
米国	University of North Carolina, Charlotte	University of North Dakota		