

Report on Bachelor Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University

Student:	Jan Pacák
Advisor:	doc. Martin Gregor
Title of the thesis:	Shareholder Heterogeneity and Shareholder Democracy

OVERALL ASSESSMENT (provided in English, Czech, or Slovak):

Short summary

The thesis looks into a fundamental and timely issue of the operation of equity markets with socially responsible but heterogeneous investors. In these markets, companies produce non-financial values for their owners, and this production depends on the composition of owners. The key question is about the endogenous structure of ownership in the presence of free trading. In particular, the question is whether the equilibrium structure is unique or not and, consequently, whether the initial composition of the shareholder base matters or not.

To analyze this problem, the thesis builds on a tractable and elegant model by Levit et al. (2024, Journal of Finance), and provides 4 extensions to the model. Each extension is properly motivated and solved using the techniques in the baseline model, and the results are discussed.

Contribution

I consider each of the extensions relevant and interesting. While Chapters 4 and 6 are, in my view, more straightforward robustness checks, the more interesting are Chapters 5 and 7. I only think that the interpretation of the extensions is not always fully correct – see also my comments below.

Methods

The analytical methods required for solving problems of financial market equilibria are beyond the core curriculum of our program. To make the analysis feasible, we have chosen a baseline model such the analysis didn't require any extra instruments (such as treatment of incomplete information) on top of those in my my undergraduate course. Also, the author has come up with extensions that were tractable given these elementary methods.

In some places, the presentation of the baseline model is unfortunately a bit too condensed. For example, in the construction of the value function on p. 4, the parameter ϕ identifies where the shareholders' disagreement is concentrated; for intermediate values, the disagreement is present for both policies (symmetry), whereas for extreme values, the disagreement is concentrated in one policy only (asymmetry). At the same, the parameter doesn't affect the individual differences in the financial and non-financial values of policies. (For each shareholder, the difference between the financial values is q , and the difference between the non-financial values is b ; the former is state-dependent and the latter is state-independent.) This is a clever normalization that needs to be explained before one proceeds to more complex non-financial preferences.

In particular, this is important in Chapter 5, where non-financial (private) value is said to be both state- and policy-independent. But this is not entirely correct; a private value that is both state- and policy-independent would be introduced simply by heterogeneity in v_0 which is not the case here. In what is presented in Chapter 5, the state-independent difference in the non-financial value of policies is still present, but it is no longer b ; now it involves the parameter, namely it is $(1 - 2\phi)b$. (The difference exists unless the parameter ϕ is right in the middle, i.e., when it effectively disappears.) Therefore, the asymmetry parameter now captures two phenomena. First, like in the baseline model, relative risk/variance of financial payoffs (the larger the parameter, the larger the relative risk of the status-quo policy $d = 0$). Second, it captures the extent of shareholders' non-financially-driven disagreement policy (the more is the parameter far from the middle value, the larger is the heterogeneity over policies).

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Chapter 5, therefore, models the private values that involve two components: a company-specific value component and a policy-specific value component. For example, suppose $\phi = 1/4$. Company-lovers ($b > 0$) have a company-specific benefit $b/4 > 0$ and a ($d = 1$)-policy-specific benefit $b/2 > 0$. Company-haters ($b < 0$) have a company-specific cost $3b/4 < 0$ and a ($d = 0$)-policy-specific benefit $-b/2 > 0$. In a word, this is a model of two correlated private value components.

Literature

The problem analyzed here is connected to two broad classic literatures, one from economics (general equilibrium with incomplete markets) and another from political science (voice vs. exit in democracy). As the thesis closely follows the baseline model, I find it sufficient that it gives only a brief perspective on related papers, essentially based on how Levit et al. (2024) themselves see their contribution within the two literatures.

Manuscript form

There are minor shortcomings given that the thesis was written in haste. Sometimes italics is missing, such as in „G“ on p. 4 and „b“ on p. 29. I would also recommend creating the figures from Levit et al. (2024) anew instead of copying them. On page 7, there is „Bolton et al.(2020)Bolton *et al.* (2020)“.

Overall evaluation and suggested questions for the discussion during the defense

In my view, the thesis fulfills the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University. I recommend it for the defense and suggest a grade B.

Question for the defense: In the model, the trading friction is modeled in a classic way as a position limit, i.e., as a limit on the number of shares that can be purchased. When this friction is abandoned, the company is in the baseline model owned by only 1 investor. Is this case also in Chapter 5? The intuition is that by excluding any investor with a positive non-financial preference destroys welfare.

SUMMARY OF POINTS AWARDED (for details, see below):

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	25
<i>Methods</i> (max. 30 points)	27
<i>Literature</i> (max. 20 points)	19
<i>Manuscript Form</i> (max. 20 points)	15
TOTAL POINTS (max. 100 points)	86
GRADE (A – B – C – D – E – F)	B

NAME OF THE REFEREE: doc. Martin Gregor

DATE OF EVALUATION: August 23, 2024

Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Overall grading:

TOTAL	GRADE
91 – 100	A
81 - 90	B
71 - 80	C
61 – 70	D
51 – 60	E
0 – 50	F