How Institutional Dual-Holders Affect Companies: Evidence from U.S. Mutual Funds?

(the outline of the working paper)

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Introduction

- The divergence of objectives between shareholders and creditors can result in a conflict of interest that affects the total value of the firm.
- Shareholder-creditor conflict of interest induces agency costs and leads to wealth transfer from creditors to shareholders and vice versa.
- The measurement of shareholder-creditor conflict of interest remains empirically difficult – but we can use the existence of dual-holders – investors who hold equity and debt claims of the same firm – as a measure of shareholder-creditor conflict of interest (Jiang et al., 2010; Bodnaruk and Rossi, 2016; Chu, 2018; Anton and Lin, 2020).
- Institutional investors hold 2/3 of equity traded on the U.S. stock market and large fraction of corporate bonds - holdings of U.S. Mutual funds can be an indicator of institutional shareholder-creditor conflict.
- Mutual funds have diverse portfolios with corporate stakes rarely exceeding 10% per portfolio.
- The paper answers *how the presence of mutual fund dual-holdings and the increase in dual-ownership stakes affects public companies, and whether dual-holdings can alleviate corporate financial difficulties.*
- As an addition, the paper elaborates on *dual-holders heterogeneity, e.g. (1) dual-holders with block equity stakes, (2) activist dual-holders, (3) passively managed dual-holders, and (4) dual-holders connected to the company they hold via business ties.*

Hypotheses Development

1. Institutional dual-holders
   - Dual-holders mitigate shareholder-creditor conflict of interest because they serve as 'mutual friend' that reduces costs of managerial misbehaviour for both shareholders and creditors.
   - Dual-holders are better equipped to confront risk-shifting by non-dual-holding shareholders due to a combination of control power on equity and debt sides.
   - Joint holdings of debt and equity result in the coordination of decisions between shareholders and creditors (Bodnaruk and Rossi, 2016), and allow easier resolution of financial distress (Chu et al., 2019).

   H1: Dual-holders should mitigate shareholder-creditor conflict affecting the company they hold.

   – Presence of dual-holders should positively affect company value and performance, this effect should be increasing in the number of dual-holders and in the stakes they hold.
2. Dual-holders with blocks
   - Investor with a larger stake in the firm has stronger incentives to undertake monitoring activities, (Gillan and Starks, 2000), but also such investor reduces the free-rider problem and has better incentives to intervene (Tirole, 2010).
   - Block-dual-holder that will be able to mitigate shareholder-creditor conflict by internalising the features of a dual-holder without an equity block and a blockholder without a debt stake.
   - Block-dual-holdings can result in wealth expropriation from other minority investors – if the firm is far from financial distress, then the presence of dual-holders can potentially result in conflict with non-dual-holders (Keswani et al., 2019).

   H2: Block-dual-holders should mitigate shareholder-creditor conflict around financial distress but can cause it far from a distress situation.

   – Presence of block-dual-holders should facilitate distress resolution better compared to other investors and positively affect company value, but in a firm far from financial distress would exaggerate conflict with minority investors pushing the company value down.
3. Activist dual-holders
   - Activists are successful in initiating and affecting changes in the firm's governance structure (Song and Szewczyk, 2003).
   - Following market-wide liquidity shocks, firms with activist investors experience better performance relative to other firms (Clifford and Lindsey, 2016).
   - The features of activist monitor will leverage the capabilities of dual-holders to combat agency threats.

   H3: Activist dual-holders would have a higher impact on the company than non-activist ones.
4. Passive dual-holders
   - Passive funds are attentive to firms' corporate governance and they use their large blocks to exercise voice and exert influence (Appel et al., 2016).
   - Passive funds can engage in widespread but low-cost monitoring of firms' compliance with what they believe "the best governance practices" (Black, 1991 and 1998).

   H4: Passive dual-holders would have a significant impact on company value and performance.
5. Connected dual-holders
   - The voting of mutual funds is influenced by their business ties with portfolio firms – a demand-driven mechanism for biased proxy voting in which firm management use existing ties with mutual funds to influence voting on proposals for which they fear defeat (Cvijanovic et al., 2016).
   - Business ties of dual-holders with company management harms their ability to be a 'mutual friend' that reduces agency conflicts for both shareholders and creditors.

   H5: Connected dual-holders are going to be less efficient in shareholder-creditor conflict resolution.

Data and Research Design

- U.S. public companies listed on major American Exchanges from 2010 to 2019 available in Compustat.
- Compustat-CRSP merged database to get main firm's identifiers, e.g. gvkey, permco, CUSIP and ticker.
- CRSP Mutual Funds Database to calculate the level of equity or bonds in a mutual fund's portfolio and determine the 'dual-holder' status.
- Assign the security type either 'equity' or 'bond' based on last 2 digits of the holding security CUSIP number - if they include only numerical valuer ranging from 00 to 99, then the security is 'equity', if there is at least one letter – the security is 'bond'.
- Sample consists of 7313 listed firms that account for 174,688 firm-quarter observations and is matched with almost 12m fund-security-quarter observations.
- Dual-holder is classified in following ways:
  - 'any dual-holder' if a mutual fund holds any level of stakes in company equity and debt *('DH');*
  - 'significant dual-holder' if a mutual fund holds at least 1% of firm's shares outstanding and at least 1% of firm's bonds outstanding (or $2ml market value of the corresponding stake) *('SigDH');*
  - 'block-dual-holder' is assigned based on mutual fund 5% threshold of firm's equity ownership *('BlockDH');*
  - 'activist dual-holder' is assigned based on mutual fund's SEC filings - Schedule 13D filing defines an activist dual-holder (Albuquerque et al., 2020) *('ActDH');*
  - 'passive dual-holder' is assigned if the dual-holder's fund name includes a string that identifies it as an index fund or if the CRSP Database classifies the fund as an index fund (Appel et al., 2016) *('PasDH');*
  - 'connected dual-holder' is assigned according to fund's past business ties with the management of companies they hold using BoardEx (Cvijanovic et al., 2016) *('ConDH').*
- I measure the quarterly performance and value of every company in my sample using Tobin's Q, its log value, return on equity (ROE) and return on capital (ROC), cost of equity (Re) and a weighted average cost of capital (WACC).
- Dual-holders are measures by (1) presence (dummy variable), (2) number of dual-holders in each company, (3) equity and bond stakes, and (4) relative bond exposure (what portion of the average dual-holder's position value is derived from bond holdings).
- Distance to distress is measured by Altman's Z-score and controls include size, age, profitability and cash holdings of company.
- I estimate linear models by OLS with one-way (firm) and two-way (firm-quarter) clusterization of errors:

$$Y_{i,t} = \alpha_i + \alpha_t + \beta_1 DH_{i,t} + \beta_2 DD_{i,t} + \Gamma \mathbb{X}_{i,t-1} + \epsilon_{i,t}$$

$$\begin{cases} Y_{i,t} = \alpha_i + \alpha_t + \beta DH_{i,t} + \Gamma \mathbb{X}_{i,t-1} + \epsilon_{i,t} & \text{if } DD = 0 \\ Y_{i,t} = \alpha_i + \alpha_t + \beta DH_{i,t} + \Gamma \mathbb{X}_{i,t-1} + \epsilon_{i,t} & \text{if } DD = 1 \end{cases}$$

$$Y_{i,t} = \alpha_i + \alpha_t + \beta_1 DH_{i,t} + \beta_2 DD_{i,t} + \beta_3 DH_{i,t} \times DD_{i,t} + \Gamma \mathbb{X}_{i,t-1} + \epsilon_{i,t}$$

$Y_{\{i,t\}}$ - measures of company value and performance, α_i α_t - firm and time fixed effects, respectively, *DH* – measure of dual-holders, *DD* – measure of distress, X – matrix of controls.

- Depending on the classification of dual-holders, the variable '*DH'* changes to (1) *SigDH,* (2) *BlockDH* and *nonBlockDH*, (3) *ActDH, nonActDH, OtherDH,* (4) *PasDH* and *nonPasDH,* and (5) *ConDH* and *nonConDH.* These equations are shown in the main paper *Section 4.*

Preliminary Results

- Consistent with the argument that dual-holders can mitigate shareholder-creditor conflict, I find the positive correlation between company value and the existence of dual-holders for distressed companies.
- Presence of block-dual-holders has a negative correlation with a company value showing higher magnitude for companies far from distress:
  - level of equity and bond stakes of block-dual-holders is associated with a positive impact on a value of distressed company.
  - presence of block-dual-holders across financially constrained companies is associated with a positive influence on company value - this impact decreases when I control for presence of other dual-holders without block equity stakes.
- The empirical part of the research regarding dual-holders activism, passively managed dual-holders and dual-holders with connected business ties is not yet conducted.

Endogeneity Analysis

- To mitigate the potential endogeneity issues regarding dual-holders and their heterogeneity, I will attempt to use an instrumental variables (IV) approach (*Section 6 of Working paper*).

1. Merger between financial institutions as an instrument for dual-holder status (*Section 6.1*)
2. IV approach regarding the identification of block-dual-holders following the work of Volkova, 2018 (The detailed algorithm and explanation regarding exclusion restrictions are shown in *Section 6.2.*)
3. IV approach regarding the identification of activist dual-holders is based on the level of investor's dissatisfaction proposed by Frazzini, 2006 (The detailed algorithm and explanation regarding exclusion restrictions are shown in *Section 6.3.*)

Conclusions

- Preliminary results predominantly support the highlighted hypothesis and my predictions.
- Proposed alternative approaches to address the endogeneity should bring additional credibility to my findings.

- This research will help to understand whether dual-holders can alleviate shareholder-creditor conflict of interest from many perspectives, e.g. size of investor stakes, monitoring activity, trading strategy and connectedness.
- It will bring several useful insights for researchers, industry professionals, institutions and policymakers.

Acknowledgement

This outline of the working paper consists of the literature review, hypotheses development and research design. Some of preliminary results prove most predictions derived from hypotheses. I currently continue conducting the estimations of econometric models adding some extensions and robustness tests. Some parts of the research are still discussive in nature due to some challenges of sourcing data.

In addition, I tend to confront each hypotheses addressing the endogeneity concerns. The details of suggested approaches and instruments I explained in the working paper available on the ASSA portal (or upon the request).

I will highly appreciate any suggestion and comments.

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