

Socially Connected Holding and Stock Return

Gigi Wang*

ABSTRACT

blab lab lab lab lbblab lab lab lab blab lab lab lab blab lab lab lab blab lab lab
lab blab lab lab lab blab lab lab lab blab lab lab lab blab lab lab lab blab lab lab
lab blab lab lab lab blab lab lab lab blab lab lab lab lbblab lab lab lab blab lab lab
lab blab lab lab lab blab lab lab lab blab lab lab lab blab lab lab lab blab lab lab
lab blab lab lab lab blab lab lab lab blab lab lab lab blab lab lab lab

*Email: ywang19@gsb.columbia.com

I. Introduction

Social networks plays an important role in the financial market. A seminal paper by Cohen, Frazzini, and Malloy (2008) uses social networks between mutual funds and their holding company to identity information transfer in security markets. They find that portfolio managers place larger bets on connected firms and this portfolio allocation behavior have significant impact on fund performance.

Cohen et al. (2008) find a systematic pattern across the entire uinverse of U.S. mutal fund portfolio managers: fund managers place larger concentrated bets on socially connected firms. Moreover, they create calender time portfolios that mimic the aggreate portfolio allocations of the mutual fund sector in connected and nonconnected stocks and show the connoned aggregate portfolio outperform the nonconnected one.

Cohen et al. (2008) mainly ask how information disseminates through agents in financial markets and into security prices. The information flow could move though social networks in multiple ways. The first channel is a direct transfer from senior firm officers to portfolio managers. The second channel is less information gathering effort imposed on portfolio managers. The third channel, which is similar to the second one, is social networks makes it cheaper to access information on managers of the holded firms and to evaluate managerial quality.

What is missing from Cohen et al. (2008) is, as written in their paper, “not able to rule out any of these mechanisms” through which infomation move through social networks. The goal of my paper is to shed light on those missing mechanisms and to provide firm-level return evidence on the impact of social networks.

There are two major differences of my paper from Cohen et al. (2008). First, I provide firm-level evidence of how social networks affect firm’s future stock return. To the best of my knowledge, this is the first paper that investigate the relationship between social networks and individual stock return. Second, I invesigate the the change in socially connected holdings and explore its predictive power on future stock return. While Cohen et al. (2008) assumes constant holdings between report dates and focus on contemporaneous aggregate connected versus nonconnected portfolio performance.

This paper replicates several key results of Cohen et al. (2008) and confirms that mutual fund managers do place larger portolio weights on connected firms copmared with nonconnected ones.

However, I do not find systematic outperformance of the aggregate connected portfolio versus aggregate connected portfolio in the most recent decade sample.

Apart from not being able to find similar pattern of aggregate portfolio performance in the recent decade, most surprisingly, I find contradicting firm-level response compared with Cohen et al. (2008) aggregate portfolio performance. My preliminary tests indicate that an increase in connected holding measure for a specific company negatively predicts future returns. The puzzling observation is worth for further investigation and future research.

One possible explanation of the negative predicting effect of firm level social connection is company directors' slackness. Instead of a direct transfer from company officers to fund portfolio managers, a reverse rent extraction could exist between the two agents (company officers and fund managers). When a company becomes more socially connected, the managers of the company might simply rely on those social connections and reduce privately costly effort that improves firm performance. Social connection serves as a safety net against bad performance and firm manager's incentive to exert costly effort is reduced. Social connection is compared to an insurance mechanism that ensures slightly higher probability (compared with no social connection) of accessing the capital market.

II. Literature Review

This paper contributes to several strands of the literature. Firstly, it is related to the analysis of social networks on economic outcomes. The importance of social networks, often also referred to as social capital, have been drawing much attention among economists. There is a growing body of research documenting significant correlations between "social capital" variables and important outcome. Bloom, Sadun, and Van Reenen (2012) document that high social capital increases decentralized decision-making within firms. Guiso, Sapienza, and Zingales (2004) show that trust, a measure of social capital, affects stock market participation and international trade. Jackson (2005) provide a survey on the economics of social networks.

There are contradicting views on the impact of social capital in the literature. Some scholars such as Putnam, Leonardi, and Nanetti (1994) argue that social connection within a group induces trusts and cooperative attitude, which helps better communication among individuals and thus re-

ducing information transfer frictions. In contrast, other researchers like Olson (1982) suggest that socially connected individuals tend to foster self-serving interest groups. Such socially connected groups creates informational barriers against outsiders. Cartels, for example, distort market efficiency and usually reduce social economic welfare. My paper provide new empirical evidence on the two conflicting view.

The finance literature also document the importance of social networks in mutual fund behavior. Hong, Kubik, and Stein (2005) show mutual fund managers in the same city hold similar portfolio due to word-of-mouth effect. Kuhn (2005) find mutual fund manager connection with advisory firms is correlated with preferential contracting decision.

Secondly, this paper also links to the mutual fund literature. Social connection can be viewed as another channel to explore fund performance and fund manager abilities. Chevalier and Ellison (1999) uses mutual fund managers' biographical data such as Scholastic Aptitude Test (SAT) score to test fund performance. Similar to Cohen et al. (2008), this paper explore social connections between mutual fund managers and holding company directors as measurable characteristic for mutual fund.

Thirdly, the empirical measure is related to a broad network sociology literature. For example, Useem (1984) uses corporate board linkages as a measure of personal network.

The empirical work on social capital has focused on two types of evidence. The first type of evidence is based on survey questions. Researchers asks respondents questions such as their perception on trusts. However, Glaeser, Laibson, Scheinkman, and Soutter (2000) shows with laboratory experiments that this survey measure is not reliable. A second empirical approach to social capital investigates organization membership.

H

One of the key aspects underlying the two views come from information flow. A natural laboratory to ask how information disseminates is the stock market. Information moves security prices. Welfare-increasing social connections reduces information transmission frictions and improves market efficiency. While self-serving interest among socially connected market participants raises the concern of impeding information distribution outside the socially connected group.

Putnam et al. (1994)

III. Data

I collected data from four different sources. A standard database used in mutual fund research literature is the CRSP Survivorship Bias Free Mutual Fund Database. The CRSP Mutual Fund Database includes mainly fund characteristics, such as fund returns, total net assets, expense ratios, investment objectives, fund manager names, and etc. One constraint imposed on researchers using CRSP is that it does not include detailed information about fund holdings. My data on mutual fund holdings come from the Thomson Reuters CDA/Spectrum S12 database, which includes all registered mutual funds filing with the Securities and Exchanges Commission (SEC). The third database I use for this study, Morningstar Direct, provides mutual fund managers' biographical information including educational background. On the holded company side, I obtain data from BoardEx of Management Diagnostic Limited, a research company specialized in social networks data on company officials in U.S. and European public and private companies and other types of organizations. BoardEx provide employment history and educational information of senior company officers (such as Chief Executive Officer, Chief Financial Officer, Chief Technological Officer, Chief Operating Officer and Chairman) and board of directors.

Following Wermers (2000), I merge the CRSP Survivorship Bias Free Mutual Fund database with the Thomson Reuters CDA/Spectrum S12 database using the MFLINKS table. The focus of my analysis is on actively managed U.S. equity funds, with the investment objective of aggressive growth, growth, or growth and income in the Thomson Reuters CDA/Spectrum dataset¹. I apply several filters to form my sample (following Kacperczyk, Sialm, and Zheng (2006)). I remove passive index funds by manually searching through fund name, index fund indicator, and Lipper objective name. I only include common stock² holdings of mutual funds. Education history of mutual fund managers from Morningstar is linked to the combined CRSP/Thomson Reuters data by matching manager names. My final mutual fund sample includes survivorship-bias-free data on holdings and biographical information for 1,408 funds and 3,220 mutual fund managers and spans the period from 2006 to 2016³.

For companies in the mutual fund holding, I map the identities and educational background information of board members and senior directors from BoardEx by firm CUSIP identifier⁴. My final matched company data contains educational background on 52,583 directors for 6,257 stocks

between January 2006 and December 2016⁵.

complication: TR holding data: 1. matching (with mflink2) using fdate, fundno 2. prc correspond to fdate (quarter-end) don't use this! since fdate is legacy date no meaning!! 3. shares correspond to rdate (actual (effective) date of the holdings)

Appendix A. An Appendix

Here's an appendix with an equation. Note that equation numbering is quite different in appendices and that the JF wants the word “Appendix” to appear before the letter in the appendix title. This is all handled in `jf.sty`.

$$E = mc^2. \tag{A1}$$

Appendix B. Another Appendix

Here's another appendix with an equation.

$$E = mc^2. \tag{B1}$$

Note that this is quite similar to Equation (A1) in Appendix A.

REFERENCES

- Bloom, Nicholas, Raffaella Sadun, and John Van Reenen, 2012, The organization of firms across countries, *The quarterly journal of economics* 127, 1663–1705.
- Chevalier, Judith, and Glenn Ellison, 1999, Are some mutual fund managers better than others? cross-sectional patterns in behavior and performance, *The journal of finance* 54, 875–899.
- Cohen, Lauren, Andrea Frazzini, and Christopher Malloy, 2008, The small world of investing: Board connections and mutual fund returns, *Journal of Political Economy* 116, 951–979.
- Glaeser, Edward L, David I Laibson, Jose A Scheinkman, and Christine L Soutter, 2000, Measuring trust, *The quarterly journal of economics* 115, 811–846.
- Guiso, Luigi, Paola Sapienza, and Luigi Zingales, 2004, The role of social capital in financial development, *American economic review* 94, 526–556.
- Hong, Harrison, Jeffrey D Kubik, and Jeremy C Stein, 2005, Thy neighbor’s portfolio: Word-of-mouth effects in the holdings and trades of money managers, *The Journal of Finance* 60, 2801–2824.
- Jackson, Matthew O, 2005, The economics of social networks .
- Kacperczyk, Marcin, Clemens Sialm, and Lu Zheng, 2006, Unobserved actions of mutual funds, *The Review of Financial Studies* 21, 2379–2416.
- Kuhnen, Camelia M, 2005, Social networks, corporate governance and contracting in the mutual fund industry, Technical report, Working paper, Stanford University.
- Olson, Mancur, 1982, The rise and decline of nations: Economic growth, *Stagflation, and* .
- Putnam, Robert D, Robert Leonardi, and Raffaella Y Nanetti, 1994, *Making democracy work: Civic traditions in modern Italy* (Princeton university press).
- Useem, Michael, 1984, *The inner circle*, volume 617 (New York: Oxford University Press).
- Wermers, Russ, 2000, Mutual fund performance: An empirical decomposition into stock-picking talent, style, transactions costs, and expenses, *The Journal of Finance* 55, 1655–1695.

Notes

¹These funds have Investment Objective Code (IOC) of 2,3,or 4.

²Stocks with share code 10 or 11 in CRSP.

³A sanity check: The base sample of ? includes survivorship-bias-free data on holdings and biographical information for 1,648 US actively managed equity funds and 2,501 portfolio managers between January 1990 and December 2006. My sample size is comparable to theirs in magnitude

⁴BoardEx use ISIN, which is derived from CUSIP

⁵A sanity check: In ?, the matched sample of combining company officials' biographical information to stock return data from CRSP includes educational background on 42,269 board members and 14,122 senior officials (56,391 combined senior directors) for 7,660 CRSP stocks between January 1990 and December 2006. My sample size is comparable to theirs in magnitude



Figure 1. Structure of model: capital can be invested in a bank sector and an equity sector. An intermediary has the expertise to reallocate capital between the sectors and to monitor bank capital against bank crashes.