# 科研費

# 科学研究費助成事業 研究成果報告書

令和 6 年 6 月 1 6 日現在

機関番号: 3 2 6 8 9 研究種目: 若手研究 研究期間: 2020~2023 課題番号: 2 0 K 1 3 5 3 0

研究課題名(和文) Venture Capital Financing and Methods of Payment in Mergers and Acquisitions.

研究課題名(英文) Venture Capital Financing and Methods of Payment in Mergers and Acquisitions

#### 研究代表者

NGUYEN GIANG (NGUYEN, Duc Giang)

早稲田大学・政治経済学術院・その他(招聘研究員)

研究者番号:70835462

交付決定額(研究期間全体):(直接経費) 2,900,000円

研究成果の概要(和文): 私の研究提案は、対象企業のベンチャーキャピタル(VC)投資家と合併・買収の経済的成果との関係に焦点を当てています。 私は、ベンチャーキャピタル(VC)投資家が支援する対象企業は合併・買収の支払い方法として株式を好み、対象企業がVCのシンジケートから資金提供を受けている場合には株式の比率が大きくなることを示しました。 全体として、私の研究は、ベンチャーキャピタル(VC)投資家が自身の投資嗜好に合った買収者の株式を保有する戦略を明らかにしました。

### 研究成果の学術的意義や社会的意義

My research is the first investigation into the effect of VC investments on transaction terms and economic outcomes of M&As. It reveals the value creation of VC syndication and explains how VC firms' investment strategies in target firms affect the wealth of acquirer shareholders.

研究成果の概要(英文): My research proposal focuses on the relationship between venture capital (VC) investors in target firms and the economic outcomes of mergers acquisitions. I show that venture capital (VC)-backed targets prefer stock as the method of payment in mergers and acquisitions, and the ratio of stock is larger when the targets are financed by a syndicate of VCs. Overall, my research reveals the investors' strategies to hold shares of the acquirers that meet their investment preferences.

研究分野: Corporate Finance, Entrepreneurial Finance

キーワード: Corporate Finance Venture Capital Merger and acquisition Syndication Method of Payment Social Network

科研費による研究は、研究者の自覚と責任において実施するものです。そのため、研究の実施や研究成果の公表等に ついては、国の要請等に基づくものではなく、その研究成果に関する見解や責任は、研究者個人に帰属します。

#### 1.研究開始当初の背景

This research provides an investigation on the decision of Venture Capital(VC) firms to choose stock or cash proceeds, when they exit their investments through mergers and acquisitions or trade sales. VCs are investment management firms investing their raised funds in selected portfolio companies and often aim to exit through IPO or merger and acquisition (M&A). When M&A is the exit channel, VCs face the decision of receiving cash or holding stock of acquirers. If VC funds under the management of VC firms mature, they can choose cash as the method of payment and return the cash proceeds to VC partners who contribute capital to the VC funds. VCs may also liquidate their assets to decrease the cost of capital or increase the internal rate of returns. However, VCs can hold the the shares of acquirers to gain long-term benefits if the share value of the acquirers increases in the future. The project's main objective is to understand the decision to choose the method of payment by VCs in M&A exits and how it affects the benefits of target shareholders, acquirer shareholders, and other stakeholders.

## 2.研究の目的

In this research project, I aim to answer the following research questions: Do VCs prefer cash or stock when they exit through mergers and acquisitions? How do investors' investment preferences affect the decision to hold the acquirers' stock? Which types of VCs that prefer stock as the method of payment? How does the method of payment affect the acquirer's performance in the short-term and the long-term? In addition, I explore the relationship between the syndication of VC investments in VC-backed targets and the outcomes of M&A exits. Finally, I examine whether VC firms allocate capital through the social network channel and how the network-driven allocation affects investment outcomes.

### 3.研究の方法

I use both multivariate regressions and Tobit regressions to analyze the relationship between VC investments and methods of payment in M&As. I use advanced research methods, such as difference-in-difference analysis (DID), IV-2SLS, and propensity score matching to identify the causal relationship. Using well-established VC and M&A databases, I compute the ratio of stock payment in each M&A transaction and create a dummy variable indicating whether a transaction paid with stock. I also identify whether the target is backed by at least one VC firm. I follow the existing literature on M&As to control for known acquirer characteristics that determine methods of payment, such as the acquirer's asset size, Tobin's Q, liquidity, the ratio of debts, the return on total assets, and investment. I will further control for deal characteristics that have been identified as determinants of methods of payment, including the business relatedness between the target and the acquirer, transaction size, the similar sate of location between the target and the acquirer, and stock price run-up. I also include industry and year fixed effects in all regressions.

## 4. 研究成果

I have published three research papers in internationally peer-reviewed journals. In the first paper "Does venture capital syndication affect mergers and acquisitions", I find evidence that takeover targets that receive financing from VC firms have higher premiums and spend more time to complete the acquisitions. The acquirers of syndicate-backed targets have lower announcement returns but better long-term performance, suggesting that acquisitions of syndicate-backed targets create wealth for the acquirers' shareholders. I show that acquirers of syndicate-backed targets have better corporate governance during the post-acquisition period, and the syndicate-backed targets prefer stock as the method of payment. These are potential mechanisms for value creation in syndicate-backed acquisitions. Collectively, the findings

indicate that VC syndication creates value for both entrepreneurial firms and their acquirers in the long-term.

In the second project "Venture capital and method of payment in mergers and acquisitions", I show that VC firms prefer stock of acquirers as the method of payment in VC-backed acquisitions. They select acquirers that meet their investment preferences. Particularly, they hold stock of acquirers that are small, young, risky or invest intensively. I find that VC-backing positively contributes to the acquirers' wealth in the short term and the long term. Overall, the findings are consistent with the investment preference hypothesis that VCs may prefer acquirers' shares and benefit from future increases in the shares' value.

In the third project "Navigating investment decisions with social connectedness: Implications for venture capital", I show that social connectedness is one of the channels through which VC firms allocate their capital, i.e., they invest more in targets that are socially connected to them, i.e., the targets that have a high level of social proximity. Specially, I use Facebook data in this project to measure social connectedness between the locations of VC firms (investors) and portfolio companies (investees), and examine the impact of social connectedness on the amount of capital the VC firms allocate to the portfolio companies. While I document a positive impact on the proportion of allocated capital, I show that such investments are not efficient and suggest investors to use different methods to navigate investments.

In addition to three published papers, I have one manuscript that is currently under revision at an international journal. It is a Kakenhi-funded project with a publication anticipated in six to twelves months.

This research will also form the foundation for future research investigations as a part of ongoing work to identify the value creation strategies of venture capital investors.

#### 5 . 主な発表論文等

Hitotsubashi University (招待講演)

4 . 発表年 2022年

雑誌論文〕 計3件(うち査読付論文 3件/うち国際共著 3件/うちオープンアクセス 1件) 1.著者名	4.巻
—	_
Giang Nguyen and Le Vu	67
2.論文標題	5 . 発行年
Does venture capital syndication affect mergers and acquisitions?	2021年
3.雑誌名	6.最初と最後の頁
Journal of Corporate Finance	101851
Southar of corporate i mance	101031
引載論文のDOI(デジタルオブジェクト識別子)	査読の有無
10.1016/j.jcorpfin.2020.101851	有
↑ープンアクセス	国際共著
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	該当する
	T . W
l. 著者名	4.巻
Giang Nguyen, My Nguyen, Anh Viet Pham, Man Duy Pham	155
	5 . 発行年
Navigating investment decisions with social connectedness: Implications for venture capital	2023年
5 5 - 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	
3.雑誌名	6.最初と最後の頁
Journal of Banking & Finance	106979
引載論文のDOI(デジタルオブジェクト識別子)	<u></u> 査読の有無
10.1016/j.jbankfin.2023.106979	有
10.1010/j.jbankt 111.2020.1000/3	l B
t − プンアクセス	国際共著
オープンアクセスとしている(また、その予定である)	該当する
1.著者名	4 . 巻
Giang Nguyen, Hung Pham	" - "
- AA N ITEE	77./= -
2. 論文標題	5.発行年
Venture capital and methods of payment in mergers and acquisitions	2023年
) h/t±+-<7	( 見知に見然の百
3.雑誌名 Journal of Business Finance & Accounting	6.最初と最後の頁 "-"
	· - ·
Souther of Eurinese Change & Accounting	
- 『最大のDOI(デジタルオブジェクト識別子)	査読の有無
	査読の有無 有
。 弱載論文のDOI(デジタルオブジェクト識別子) 10.1111/jbfa.12750	有
a 動載論文のDOI(デジタルオブジェクト識別子) 10.1111/jbfa.12750 Tープンアクセス	有 国際共著
B 載論文のDOI(デジタルオブジェクト識別子) 10.1111/jbfa.12750	有
   載論文のDOI(デジタルオプジェクト識別子)   10.1111/jbfa.12750   トープンアクセス   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	有 国際共著
   載論文のDOI(デジタルオブジェクト識別子)   10.1111/jbfa.12750   コープンアクセス	有 国際共著
   載論文のDOI(デジタルオブジェクト識別子)   10.1111/jbfa.12750   コープンアクセス	有 国際共著
最載論文のDOI(デジタルオブジェクト識別子)   10.1111/jbfa.12750   オープンアクセス	有 国際共著
   載論文のDOI(デジタルオブジェクト識別子)   10.1111/jbfa.12750   オープンアクセス	有 国際共著
動戦論文のDOI(デジタルオブジェクト識別子)   10.1111/jbfa.12750   オープンアクセス	有 国際共著
載論文のDOI(デジタルオブジェクト識別子) 10.1111/jbfa.12750 - 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 - 学会発表〕 計4件(うち招待講演 2件 / うち国際学会 2件) . 発表者名 Nguyen Giang 発表標題	有 国際共著
載論文のDOI(デジタルオブジェクト識別子)	有 国際共著
載論文のDOI(デジタルオブジェクト識別子) 10.1111/jbfa.12750 - 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 - 学会発表〕 計4件(うち招待講演 2件 / うち国際学会 2件) . 発表者名 Nguyen Giang 発表標題	有 国際共著
載論文のDOI(デジタルオブジェクト識別子) 10.1111/jbfa.12750  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  学会発表〕 計4件(うち招待講演 2件 / うち国際学会 2件) . 発表者名 Nguyen Giang  . 発表標題 Social networks and venture capital investments around the world	有 国際共著
載論文のDOI(デジタルオプジェクト識別子) 10.1111/jbfa.12750 - 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 - 学会発表 ] 計4件(うち招待講演 2件/うち国際学会 2件) . 発表者名 Nguyen Giang . 発表標題	有 国際共著

Giang Nguyen
Social Connectedness in Mergers and Acquisitions
Midwest Finance Association Annual Meeting Chicago 2022(国際学会)
4.発表年
2022年
1.発表者名
1.光衣有名   Giang Nguyen
Crang Nguyen
2. 発表標題
Social networks and Venture Capital Investment Around the World
3.学会等名
City University of Hong Kong(招待講演)
4 . 発表年 2022年
20224
1.発表者名
Giang Nguyen
2 . সংযক্ষিত্র Venture Capital and Methods of Payment in Mergers and Acquisitions
1

〔図書〕 計0件

3 . 学会等名

4 . 発表年 2020年

1.発表者名

〔産業財産権〕

〔その他〕

-

6.研究組織

<u> </u>	. 竹九組織		
	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

#### 7. 科研費を使用して開催した国際研究集会

Nippon Finance Association 28th Annual Conference (国際学会)

〔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
---------	---------