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慶應義塾大学大学院経営管理研究科修士課程

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論文題名

Impact of Psychic Distance on Market Reaction to Cross-Border M&A
-contingent variables and cumulative average abnormal returns-

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論 文 要 旨

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（論文題名）

Impact of Psychic Distance on Market Reaction to Cross-Border M&A
-contingent variables and cumulative average abnormal returns-

（内容の要旨）

The objective of this exploratory study is to identify contingent variables' relation to acquiring firm's short-term cumulative average abnormal return (CAAR) at the time of cross-border (In-Out) M&A announcement. It does so by first examining cross-border M&A acquiring firms' short-term CAARs; second, identifying contingent variables, namely culture and psychic distance factors, pertaining to acquirers' and target firms' countries; lastly confirming relations between aforementioned factors and variation of cross-border M&A short-term CAARs. The empirical data for this study were collected and analyzed from 804 domestic and 395 cross-border (In-Out) M&A deals by Japanese firms between 2005 and 2013. The findings suggest acquirer's nature of industry, target firm's culture distance and institutional environment factors have influence on market's reaction to cross-border M&A.

Keywords: contingent variables; culture distance; psychic distance; cross-border mergers and acquisitions; short-term event study

1.1 Introduction

Globally over the last decade cross-border merger and acquisition (M&A) has become an important form of foreign direct investment (FDI). Despite a sharp decline in 2009 and 2010 immediately after the financial crisis, value of cross-border M&A worldwide has returned to an upward trend and amounted to $332 and $349 billion in 2012 and 2013 (approx. 24.9% and 24.0% of world FDI flows in the respective years). During this period, comparing to developed countries deal value by developing countries has grown from 14% of total world-wide cross-border M&A in 2007 to 37% in 2013 (Centre on Transnational et al., 2014). Regionally, in East and South East Asia (exclusive of Japan) there has been a dramatic year-over-year increase of cross-border M&A activities (in deal value) of 3.3%, 12.3%, and 24.7% in 2011, 2012, and 2013.

In Japan (traditionally one of the biggest and most active M&A markets in East Asia) there has been a salient upward trend both in number and total amount of M&A deals over the same period (appendix 1). Particularly, most of the increase has been attributed to the dramatic increase in (In-Out) cross-border M&A deals since 2004. Data has shown that In-Out cross-border M&A deals accounted only 9.1% of total deal value in 2004, but have increased over the years to 61.4% in 2013. Given this rapid increase, the study and execution of (In-Out) cross-border M&A deals have commanded the interests, attentions and enthusiasm of both researchers and practicing managers.

In the face of increased dedication by both researchers and business professionals, ironically, headline-grabbing cross-border M&A failures also garner equal, if not more public attention. Popular business publication in Japan (平松さわみ, 2014) has recently concluded the failure rate of Japanese firm's cross-border M&A deal at 90%, and went on to state that more than half of the deals end with eventual divesture by Japanese firms within 10 years of deal announcement. Daiichi-Sankyo's sell-off of Ranbaxy Laboratories in early 2014 served as a vivid reminder and example of complexity of cross-border M&A deals and challenges facing Japanese firms. What do companies need to deal with in a foreign environment? In an influential HBR article "Distance Still Matters" Ghemawat (2001) explained how various distances can have a profound impact on Multinational Enterprise (MNE)'s global expansion. The liability of foreignness (Zaheer, 1995) explained that the additional cost of doing business abroad could be a significant disadvantage for MNE.

Therefore, as Japanese firms increase its global expansion through cross-border M&A much of the focuses should not be paid to the discourse of finance and transaction along. The emphasis on the distances, the contingency variables, should take center stage since they appear to be the underlying determinants to the long-term success. For researchers and practitioners in the era of economic globalization and regional integration it has become ever more clear that the study of market and finance could only understand the transaction aspect of M&A deals, it is more important to explore not only the determinants and implications of Japanese firms' cross-border (In-Out) M&A but also how distance (cultural difference) and other contextual variables (factors) impact the deals and their outcomes.

Alas, contrary to the increased need to understand most current (In-Out) cross-border M&A by Japanese firms and their contingent variables, obstacles arise as one intends to research the variables and analyze the implications. Namely, the majority of researches on cross-border M&A draw their conclusions from predominantly Anglo-American empirical data. Yet, those few studies based on Japanese firms' cross-border M&A deals were mostly completed prior to current surge of (In-Out) cross-border M&A wave. Nonetheless, quantitative studies using distances (cultural differences for example) to examine empirical Japanese data are very scarce. Hence, in order to reflect the current dynamic of cross-border M&A deals by Japanese firms it is imperative to conduct a study using updated empirical data while clearly define and state the intended performance measure objectively. Because for any business professional involving in M&A decision making and executions as well as academic researcher aspiring to understand management of Japanese multinational enterprises (MNEs), the up-to-date knowledge of determinants and implications of Japanese firms' cross-border M&A deals will be one of the key aspects of understanding the current and future of Japanese firms' operation in a global economy.

1.2 Definitions and scope

Define M&A performance: To set the scope for this study a clearly defined M&A performance has to be established beyond the non-academic rhetoric of often casually used M&A success and failure. To do so, this paper draws from Zollo and Meier (2008)'s work in defining M&A performance metrics based on time span, level of analysis and objectivity as well as subjectivity. Zollo and Meier (2008) researched the problem of defining M&A performance and concluded their work by providing a proposed classification of measures of M&A performance. For the purpose of quantitatively studying market's expectation of M&A announcement with objective

measures, short-term financial performance (event study method) is selected as M&A performance metrics in this paper.

Contextual Scope: Using Zollo and Meier's classification, this paper will focus on the study related to short-term financial performance. Previously academics studying various aspects of In-Out cross-border M&A by Japanese firms have suggested the reasons for the surge over the last decade to be Japanese firms' responses to economic globalization (井上光太郎, 奈良沙織, & 山﨑尚志, 2013) and growth strategies to counter the domestic market maturation as the result of aging population (淵邊善彦, 2007, pp. 49, 69-73). Moreover, they have pointed the causes behind the failures to national and organizational culture difference in some arguments. However, since M&A is an extensive and multifaceted research topic, and cross-border M&A as a means of foreign direct investment (FDI) adds the complexity of international business factors into the mix, challenges remain as one try to grasp the full extent of Japanese firms' In-Out cross-border M&A (performance). Unlike strategic management and organizational disciplines' long-term research of cross-border M&A activities, this paper will limit its effort to quantitative research related to determinants and analysis of implication and focus on the contextual variables that impact markets' reaction to cross-border M&A announcement.

1.3 Background

For research academics and practicing managers, questions related to quantitatively addressing cross-border M&A deals' short-term financial performance appears to be threefold. First, do acquirer's and target's shareholders gain from M&A? Empirical works done by Jensen and Ruback Jensen (1986), Jarrell, Brickley, and Netter (1988) and Andrade, Mitchell, and Stafford (2001) using event study method have suggested that M&As create value for combined shareholders, with majority of the gains attribute to the shareholders of target firm. Although study by Andrade et al. also showed acquirer's shareholder gain at 0.4%, it was statistically indistinguishable from 0. Second, how do cross-border M&A different from domestic M&A in terms of short-term financial performance? Seth, Song, and Pettit (2000) found results of positive shareholder return to acquirer using data from foreign acquisition of U.S. firms. Researchers Eun, Kolodny, and Scheraga (1996) Cakici, Hessel, and Tandon (1996) using Japanese empirical data showed acquirer shareholder gain following cross-border M&A announcements. Recent work by Inoue, 奈良沙織, and 山﨑尚志 (2013) also suggested wealth creation for acquirer shareholders. Third, how do national and organizational cultural differences impact the outcome of cross-border M&A performance? Although positive

financial gains in relation to cultural difference were suggested by the a few research works (Swenson, 1993) (Wansley, Lane, & Yang, 1983), contrary results by Dewenter (1995); C. C. Markides and Ittner (1994) suggested acquirers' shareholder gain to be unrelated to cultural differences.

It appeared that existing researches built upon empirical data from previous decade are not able to fully address the need for understanding short-term financial performance in relation to the current wave of In-Out cross-border M&A by Japanese firms. Yet, as proposed by many researchers cultural dimensions by G. Hofstede (1980) alone are not comprehensive enough for address the need of understanding the determinants of cross-border M&A deals. Nonetheless, what will be the implication of these contextual variables' causal relation to market reaction to cross-border M&A announcements?

1.4 Purpose of the study

The purpose of this study was to explore how contextual variables, national and organizational cultural factors as defined by culture dimensions, culture distance Kogut and Singh (1988) and psychic distance (Dow & Karunaratna, 2006; Håkanson & Ambos, 2010) impact market reaction to cross-border M&A announcements by Japanese firms and their implication. The needs and rationale for this study were current cross-border M&A performance studies did not address the differences between Angelo-American and Japanese empirical data. The lack of studies covering current surge of In-Out cross-border M&A wave in Japan as well as the need of quantitative studies linking the contextual variables with cross-border M&A performance in Japan. For this study event study method was the main research methodology for the examination of Japanese cross-border M&A acquirer shareholder return. Stock market returns were taken from Bloomberg and Nikkei database.

1.5 Research questions

This study intends to answer following research questions: In Japan do cross-border M&A create short-term value for acquiring firms' shareholders? What are the contextual determinants to the market's reaction? What's the role of cultural dimensions? What are alternative determinants for examining the relation with cross-border M&A financial performance? How do psychic distance factors impact market's reaction to cross-border M&A announcement and what are the implications?

1.6 Significance to the field

For academic communities this study aims to extend the existing contingency variables, mainly culture distance, to the inclusion of various psychic distance factors, and statistically identify their relation to market reaction in cross-border M&A research. For practitioners the intention is to use the findings of this study to emphasize the importance of international business aspects, especially environment factors, of cross-border M&A deals.

The rest of the paper is organized as following: after literature reviews presented in next paragraph, hypotheses will be proposed. Research method and data will be explained and defined before presenting the results of analysis, summary and conclusion.

2.1 Literature review: contextual variables, from culture distance to psychic distance

There have been various studies of culture differences and their impact on cross-border M&A acquirers' shareholder value creation. A meta analysis by Günter K. Stahl and Voigt (2004) summarized and illustrated the mixed results of how culture differences impact the cross-border M&A performance by stock market-based performance measures. This laid the foundation for Günter K Stahl and Voigt (2008)'s later work of building a tentative model for examination of culture differences and their relation to M&A. Their framework led them to critically examine how the organization and definition of culture differences could have greatly impacted the entire body of research regarding the relation between contextual variables and M&A, and as a result proposed to use psychic distance (defined by language, education levels, industrial development, political systems, time zones, and previous colonial ties) by Dow and Karunaratna (2006) as a more comprehensive measurement and research variables for future empirical studies.

Although the number of researches on relation between culture difference and M&A using Japanese empirical data is small comparing ones using Anglo-American data, Japanese researchers also began to explore the linkage between distances and market reaction. 井上光太郎 (2013) in his work of analyzing Japanese firms' cross-border performance proposed and pointed out the importance of inclusion of national and corporate cultures as well as

institutional environment factors into future M&A studies. This demand for a more comprehensive measurement for the study of M&A led to the review of previous and current researches on identifying and defining psychic distance as contextual variables in the following paragraphs.

Recent research by Dow and Karunaratna (2006) used empirical data of trade flows to test and identified potential psychic distance stimuli as differences in culture, language, religion, education levels, industrial development, political systems, religions, and time zones. Their study showed that psychic distance on various levels has positive and negative relation to the trade flow between countries. Håkanson and Ambos (2010) also investigated perceived psychic distance and identified besides geographical distance, culture distance, language, political rivalry, difference in economic development, relative governance quality, and economic, political and cultural influence are crucial to the study of international business.

Since M&A is a multifaceted research topic the expansion from culture difference to the inclusion of psychic distance into the research body of cross-border M&A should help both academics and practitioners better understand the contextual factors of cross-border M&A.

2.2 Literature review: M&A value creation

Researches of shareholder value creation and reduction pertaining to M&A can find their roots in several theoretical principles. Theories based on transaction cost theory (Coase, 1937) and synergy creations generally suggest value creation. Theories based on agency cost of free cash flow (Jensen, 1986) and management entrenchment suggest otherwise.

Researches based on transaction cost theory (Coase, 1937) argue that M&A enables acquirer to internalize target firms' businesses. And by doing so organizations are able to appropriately adjust the balance between market and cost of business operation internally. Consequently, M&A creates value. Synergies from economies of scale as the result of M&A is also argued to create value following M&A (Bradley, Desai, & Kim, 1983). On the other hand, theories suggesting M&A reduce value find their bases in agency cost of free cash flow (Jensen, 1986) and management entrenchment (Shleifer & Vishny, 1989). They suggested that management in firms with excess cash would engage in acquisitions that contradict to principals' interests.

Researchers focusing on acquirer shareholder gains as the results of cross-border (In-Out) M&A found positive results (Seth et al., 2000). Researches using Japanese empirical data

by Eun et al. (1996), Cakici et al. (1996) also found that there were positive return to acquirers' shareholder in cross-border M&A deals. Furthermore, more recent work by Inoue et al. (2013) examined 73 cross-border M&A deals by Japanese firms, and the results suggested that Japanese firms' cross-border M&A create wealth for acquirer shareholders.

Built upon the conclusion of abovementioned culture distances, psychic distance and M&A value creation researches, this study intend to identify and tests culture distance as well as psychic distance contextual factors that can be used to explain the variation of wealth created for acquirer shareholders.

2.3 Hypothesis 1

As the theory of M&A value creation found its basis in the discussion of transaction cost, agency cost and managerial entrenchment, conventional firm- and industry-level considerations, such as horizontal and vertical integration, economies of scale and scope as some of the motives behind M&A deals have always been the main focus of studies related to M&A value creation.

Cross-border M&A, however, added the extra complexity of international business into the mix. For example, trade cost, in the form of tariffs, quota, exchange rate, freight rate, local regulation as well as market entry strategy, in the forms of greenfield investment or progressive equity investment and M&A decisions become some of the factors and determinants linked to cross-border M&A.

Other macro factors such as foreign tax code, government policies, political and economic stability have also impacted the decisions and even the outcomes of multinational enterprises' cross-border M&A deals. With so many added factors and elements in play, for acquirers' shareholders do cross-border M&A really create or destroy value? Prior studies have illustrated mixed pictures. Cakici et al. (1996) tested shareholder wealth gain of foreign firms' acquisition in the U.S. during 1983 and 1992 and found that there is short term (-10,+10) shareholder gains for acquirers; however, their study also found different results for U.S. based acquirers, that is U.S. firms' cross-border M&A in the study did not create value for shareholders.

Moeller and Schlingemann (2005) studied both domestic and cross-border M&A deals of U.S. acquirers between 1985 and 1995 found that although both domestic and cross-border M&A deals create values for acquirer shareholders; however, domestic M&A deals have higher short term market returns than cross-border ones.

While event studies using mainly U.S. acquirers' data did not showed conclusive results on acquirer' shareholder wealth creations, studies using Japanese acquirers' data appear to be different. In the same comparative study, Cakici et al. (1996) found that Japanese firms' acquisition in the U.S. (limiting to a small sample set of 24 deals) created short term shareholder gains for their shareholders. They also argued that favorable tax treatment to goodwill in Japan during the study period could be the reason behind this country factor.

Kang (1993)'s work studying Japanese firms' acquisition in the U.S. also found that cross-border M&A deals contributed to short term gains for Japanese acquirers' shareholders. Kang's work indicated that exchange rate factor (depreciation of U.S. dollar during 1975 to 1988) is useful to explain the acquirer returns. Recent work by Inoue, Nara and Yamasaki (2013) Inoue et al. (2013) using event study method and data between 2003 and 2010 showed Japanese firms' cross-border In-Out M&A creates acquirer gains comparing to Japanese firms' domestic M&A during the same period. Their results suggested Japanese firms' acquisition in developing countries and acquiring full control of the target firms are positively linked to this wealth creation.

Both studies pointed out that although under different macro factors market responded favorably to Japanese firms' overseas merger and acquisition announcements. In short, prior works based on Anglo-American deals might be inconclusive, but researches using previous Japanese data suggest that cross-border (In-Out) M&A taking macro factors, such as favorable tax regulation and target country economic growth, into consideration should be economically beneficial to acquiring shareholders. And as the response to this potential economic gain, the market should react, in the short term, positively. Therefore, the first hypothesis is:

H1a: Cross-Border In-Out M&A create short-term positive market reaction for Japanese acquiring firms' shareholders. And,

H1b: For Japanese firms cross-border In-Out M&A create higher short-term positive market reaction than domestic M&A.

2.4 Hypothesis 2

Culture difference between countries is one of the widely accepted environment factors to MNE's global expansion. One of the most prominent study on culture is the proposition and expansion of culture dimensions by G. Hofstede (1980). Culture, as defined, is the collective programming of the mind distinguishing the members of one group or category of people from

others (G. H. Hofstede, 2001). Different cultures exist in different countries as well as organizations. And the merging and acquiring of a foreign business entity presents various daunting challenges, and one of them is to manage the newly acquired business and its employees to realize the reasons for M&A. Different organizational culture could be a differentiator to the economic performance of post-merger and acquisition process.

Culture compatibility in M&A by Cartwright and Cooper (1993) modeled culture fit and implicated that culture differences can become significant barriers for integration in the M&A process. The general assumption is that as culture distance increases different costs also increase for interaction among different individuals, groups and organizations.

This difference has been a much-emphasized aspect in examining market reaction following cross-border M&A announcements. And researches by academics have tried to examine the causal relation between culture distance and M&A performance. C. C. Markides and Ittner (1994) used Hofstede's four culture dimension indexes, PDI, UAI, IDV and MAS, as variables to examine 276 U.S. firms' cross-border M&A performance by event study method, but found no direct connection between acquirers' shareholder gains and the four culture dimension indexes.

Datta and Puia (1995) examined 112 large cross-border M&A deals by U.S. acquirers between 1978 and 1990 using culture distance proposed by (Kogut & Singh) and found that culture fit to be an importance differentiator to acquirer shareholder gains. The findings using event study method suggested that market react more positively to acquisition of target firms in low culture distance countries than in high culture distance countries. In summary, despite the lack of rich source of quantitative studies on culture distance's effect on M&A announcement effects, the lack of culture fit, both national and organizational culture, can be expected to generate significant hurdles to post-merger integration process. Hence, lowering the economic benefit of M&A for the acquiring firms' shareholders. Therefore, the second hypothesis is:

H2a: Japanese firms' cross-border M&A will create more positive market reaction when target firms are in low culture distance countries than in high culture distance countries.

Also as Datta and Puia (1995) C. Markides and Oyon (1998) implemented industry level variables to test how industry difference impacted M&A market reactions,

H2b: Japanese acquirer's industry and business category would impact how market reacts to cross-border M&A announcement in the short term.

2.5 Contextual analysis and variables

Contextual analysis will build on the findings of the first and second hypotheses and further explore, using contingency variables, why some cross-border M&A creates value while others don't. In other words, this study will explore contextual variables to explain the variance of short-term market cumulative average abnormal returns. While contextual variables can trace their roots in the discourse of organization management (Lawrence & Lorsch, 1986), study of MNE has clearly been influenced by contingency theory. The consideration of national responsiveness is an example of contingency theory's influence on the study of MNE (Bartlett & Ghoshal, 1999). Hence, the proposition of contextual variables vary by country is regarded a generally accepted concept (Collinson & Rugman, 2008). Following the testing of hypothesis 2 on cultural dimension, OLS regression analyses were conducted to discover how contingent factors impact market's reaction following cross-border M&A announcement.

This study examines selected contextual variables, proposed by Dow and Karunaratna (2006) Drogendijk and Slangen (2006), Håkanson and Ambos (2010), to test if macro level national and country level differences between acquirer's and target firm's countries can directly impact market's reaction to cross-border M&A effect. The selected contextual variables, termed psychic distance variables, for testing against cross-border M&A acquirer short term CAARs are as following:

1) Psychic distance[i]
2) Geographical distance[ii]
3) Difference in economic development[iii]
4) Economic development[iv]
5) Relative governance quality[v] (WGI)
6) Volume of export from Japan to target firm's country[vi]
7) Euclidean distance[vii]

Additionally, following firm- and deal- level variables will also be introduced to test the effect on M&A short term value creation.

8) Announced deal total value (data from Bloomberg terminal)

9) Percentage seek in target firm' equity (data from Bloomberg terminal)

10) Fraction of deal value to acquirer's market capital (data from Bloomberg terminal)

11) Acquirer's market capital (data collected from Nikkei NEEDS)

12) Exchange rate (strong / weak yen dummy, data collected from Bloomberg terminal)

13) Event of 2011/3/11 East japan earthquake (event dummy, Period_311)

3.1 Sample and data

Samples for this study (H1) were selected from both In-Out cross-border and domestic M&A deals by Japanese firms announced between Jan 1st 2005 and Dec 31st 2013. In-Out cross-border M&A deals will be used solely for testing H2 and additional analysis. Japanese firms are referred to as publicly traded companies listed in Japan, and for cross-border deals target firms must be foreign-based business entities. M&A deals have to meet below criteria to be included in this study. First, the public announcement regarding M&A has to be recorded by Bloomberg terminal M&A database. Second, the common stock returns for acquirer firms must be available on both Bloomberg terminal and Nikkei NEEDS. Third, M&A is defined as acquirer gaining control of the target firms, which refers to either one of the followings: acquiring or investing an interest of 20% or over in the target, or increasing interest from below to over 20% (By Japanese accounting rules acquiring over 20% of the equity in target firms implies that acquiring firms have influence over the target firms (Kotaro Inoue)). Finally, M&A deal samples used for this study are limited to deal value over ￥50 billion. M&A Deals involving multiple targets in more than one country and target firms listed in Cayman Island and British Virgin Islands are removed from the selection. These criteria resulted in a sample of 395 In-Out cross-border M&A deals and 804 domestic M&A deals.

Of the 395 cross-border in-out M&A deals, 146 were in the U.S., 24 in Australia, 20 in the U.K., 16 in Germany, 14 in Brazil, 12 in India, 11 in Singapore, 10 in Canada, 10 in France, and the rest were from other countries. Year-wise, 20 were in 2005, 46 in 2006, 37 in 2007, 38 in 2008, 36 in 2009, 43 in 2010, 61 in 2011, 62 in 2012, and 52 in 2013. The average announced deal value was YEN 66.3 billion for cross-border M&A deals. Of the domestic M&A deals, 85 were in 2005, 100 in 2006, 133 in 2007, 113 in 2008, 98 in 2009, 60 in 2010, 52 in 2011, 79 in 2012, and 84 in 2013. The average announced deal value was YEN 47.8 billion for domestic M&A deals.

3.2 Methodology

The market model method is used to calculate the cross-border M&A announcement effect in this study. This event study method is based on market model (Fama, 1976) assuming capital markets are efficient (in the semi-strong form). The market model is presented by:

$$R_{jt} = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt}$$

where,

R_{jt} = market return on the security of firm j for date t.

R_{mt} = market return on the market index (In this study, TOPIX) for date t.

α_j & β_j = parameters of the relationship between the return on the individual security and that of the market (α_j measures the mean return over the period not explained by the market; β_j measures the sensitivity of firm j to the market).

ε_{jt} = residual return on firm j for date t.

The regression produces estimates of α_j and β_j ; call these $\widehat{\alpha}_j$ and $\widehat{\beta}_j$. They are estimates of the intercept and slope of the market model. The predicted return for firm j for date t is:

$$\widehat{R_{jt}} = \widehat{\alpha}_j + \widehat{\beta}_j R_{mt}$$

where now R_{mt} is the return on the market index (TOPIX) for the actual day in the event period. This is also called the expected return for security j on date t. The difference between the actual returns and the expected returns are called abnormal returns (AR_{jt}) for security j on date t, and are presented by:

$$AR_{jt} = R_{jt} - (\widehat{\alpha}_j + \widehat{\beta}_j R_{mt})$$

Cumulative abnormal returns (CAR) between date t_1 and t_2 are illustrated as:

$$CAR_{j(t_1, t_2)} = \sum_{t_1}^{t_2} AR_{jt}$$

The cumulative average abnormal returns (CAAR) for the various event periods are calculated as follows (N is the number of observations):

$$CAAR_{(t_1,t_2)} = (1/N) \sum_{i=1}^{N} CAR_{j(t_1,t_2)}$$

Finally, a t-statistic is computed for the CAAR as ($S_{car(t_1,t_2)}$ is standard deviation of the abnormal return):

$$t = CAAR_{(t_1,t_2)} / (S_{car(t_1,t_2)} / \sqrt{N})$$

Intuitively, positive CAARs indicate that market reacts positively to the event and create gains for shareholders. Oppositely, negative CAARs indicate that market reacts negatively to the event, hence, destroy value for shareholders.

Simple regression analysis is used to examine the variation in the abnormal returns. We define CAR in the event window as dependent variable. The independent variables will be discussed and defined in following paragraph.

The cultural distance proposed by Kogut and Singh (1988) is used to calculate the numerical cultural distance between Japan and target firms' countries in this study.

$$CD_j = \sum_{i=1}^{4} \{(I_{ij} - I_{iu})^2 / V_i\} / 4$$

where,

I_{ij} = index for the i th culture dimension and j th country

V_i = variance of the index of the i th dimension

U = Japan

CD_j = cultural difference of the j th country from Japan

Latest update including all 6 dimensions of culture indexes were taken from The Hofstede Centre (2014a) for computation. Therefore, the expanded cultural distance formula in this study is as following:

$$CD_j = \sum_{i=1}^{6} \{(I_{ij} - I_{iu})^2 / V_i\} / 6$$

Median of all foreign countries' cultural distance was taken as the separator for low cultural distance country and high cultural distance country.

4.1 Results

The first step of this study intended to examine the effect of wealth creation in various event periods related to M&A announcement by event study method. Commonly used event windows are (-30, +30), (-20, +20), (-15, +15), (-10, +10), (-5, +5), (-1, +1). Studies with different consideration have argued that different event windows (shorter and broader) can be useful in capturing the prior- and post-event effect for statistical analysis.

This study tried to take a more focus view on the cross-border M&A announcement wealth effect; therefore, a closer attention is paid to the shorter event windows - around and immediately after announcement periods. Table 1a illustrates the average abnormal returns (AARs) and cumulative abnormal returns (CAARs) for the different event days for all Japanese firms domestic M&A in selected sample.

Table 1a. AARs and CAARs for Japanese firms in domestic M&A

Event Day	AAR(%)	CAAR(%)	Event Day	AAR(%)	CAAR(%)
-15	-0.05	-0.05	1	0.35	0.69
-10	-0.05	-0.03	2	0.09	0.79
-9	0.05	0.02	3	-0.02	0.76
-8	-0.09	-0.07	4	-0.04	0.73
-7	-0.09	-0.16	5	0.12	0.84
-6	-0.05	-0.21	6	-0.05	0.80
-5	0.14	-0.07	7	-0.08	0.72
-4	0.15	0.09	8	-0.06	0.66
-3	0.00	0.09	9	0.09	0.75
-2	0.01	0.09	10	-0.01	0.74
-1	0.02	0.11	15	0.06	0.71
0	0.23	0.34			

Table 1b. CAARs for different event windows surrounding domestic M&A announcement

Period	CAAR(%)	t-statistic	
(-15,+15)	0.71	1.633	
(-10,+10)	0.71	1.937	**
(-5,+5)	1.04	4.121	***
(-2,+2)	0.69	3.359	**
(-1,+1)	0.59	3.465	**
(-1,0)	0.24	2.152	**
(-1,+2)	0.69	3.485	***
(-1,+3)	0.67	3.124	**
(-1,+5)	0.75	3.383	**
(-1,+10)	0.66	2.208	**
(-1,+15)	0.63	1.964	**

    *   Significant at the 0.10 level
    **   Significant at the 0.05 level
   ***   Significant at the 0.01 level

Table 1b shows the CAARs from table 1a and provides the associated t-statistics for selected time periods. Table 2a illustrates the average abnormal returns (AARs) and cumulative abnormal returns (CAARs) for the different event days for all Japanese firms cross-border In-Out M&A in the sample. Table 2b shows the CAARs from table 2a and provides the associated t-statistics for selected time periods. Except for (-15, +15) period the results showed in Table 1a and 1b suggested that domestic M&A CAARs are significantly positive in listed event periods.

Table 2a. AARs and CAARs for Japanese firms in cross-border In-Out M&A

Event Day	AAR(%)	CAAR(%)	Event Day	AAR(%)	CAAR(%)
-15	-0.07	-0.07	1	0.22	0.74
-10	0.00	-0.03	2	0.03	0.77
-9	0.04	0.01	3	-0.03	0.73
-8	0.02	0.03	4	0.10	0.84
-7	0.10	0.13	5	0.01	0.85
-6	-0.01	0.12	6	-0.11	0.74
-5	0.16	0.28	7	0.07	0.81
-4	0.05	0.33	8	0.04	0.85
-3	0.06	0.39	9	-0.12	0.73
-2	0.11	0.50	10	0.01	0.74
-1	-0.15	0.35	15	0.08	0.99
0	0.17	0.53			

Table 2b. CAARs for different event windows surrounding cross-border In-Out M&A announcement

Period	CAAR(%)	t-statistic	
(-15,+15)	0.98	2.10	**
(-10,+10)	0.75	1.90	*
(-5,+5)	0.73	2.25	**
(-2,+2)	0.36	1.31	
(-1,+1)	0.23	1.04	
(-1,0)	0.01	0.11	
(-1,+2)	0.26	0.98	
(-1,+3)	0.22	0.82	
(-1,+5)	0.34	1.20	
(-1,+10)	0.22	0.69	
(-1,+15)	0.46	1.30	

    *   Significant at the 0.10 level
   **   Significant at the 0.05 level
  ***   Significant at the 0.01 level

Particularly, CAARs were significant at the 0.01 level at (-5, +5) and (-1, +2) event periods. They indicated event study using samples in listed test periods that Japanese firms' domestic M&A lead to positive market reaction, hence, statistically significant positive acquirer shareholder gains. Results in Table 2a and 2b showed that cross-border In-Out M&A CAARs are positive in all examined event windows, but they are only statistically significant at 0.05 and 0.10 level in (-15, +15), (-5, +5) and (-10, +10) event periods.

Graphic presentation in Figure 1 showed event period of (-15, +15) and comparison of domestic and cross-border M&A CAARs. Table 3 listed independent t-test used as additional statistical analysis for comparison and verification.

The comparison of independent t-test in Table 3 does not showed any between group statistical significance, yet, the combined results from table 2b suggested that study samples showed significant positive CAARs in (-15, +15), (-5, +5) and (-10, +10) event periods; however, in shorter term event windows surrounding and post announcement day (-1, 0) and (-1, +1) the market reaction to cross-border M&A is very close to zero at 0.01 and 0.23.

To test the hypothesis 2a, 395 cross-border in-out M&A deals were categorized into two groups based on Kogut and Singh (1988) culture distance formula. Target firms' culture distance to acquirers' were calculated with updated 6 culture dimensions and using median to determine smaller distance as low culture distance countries, larger distance as high culture distance countries. Of the 395 cross-border M&A deals, 182 were low culture distance, 213 were high culture distance.

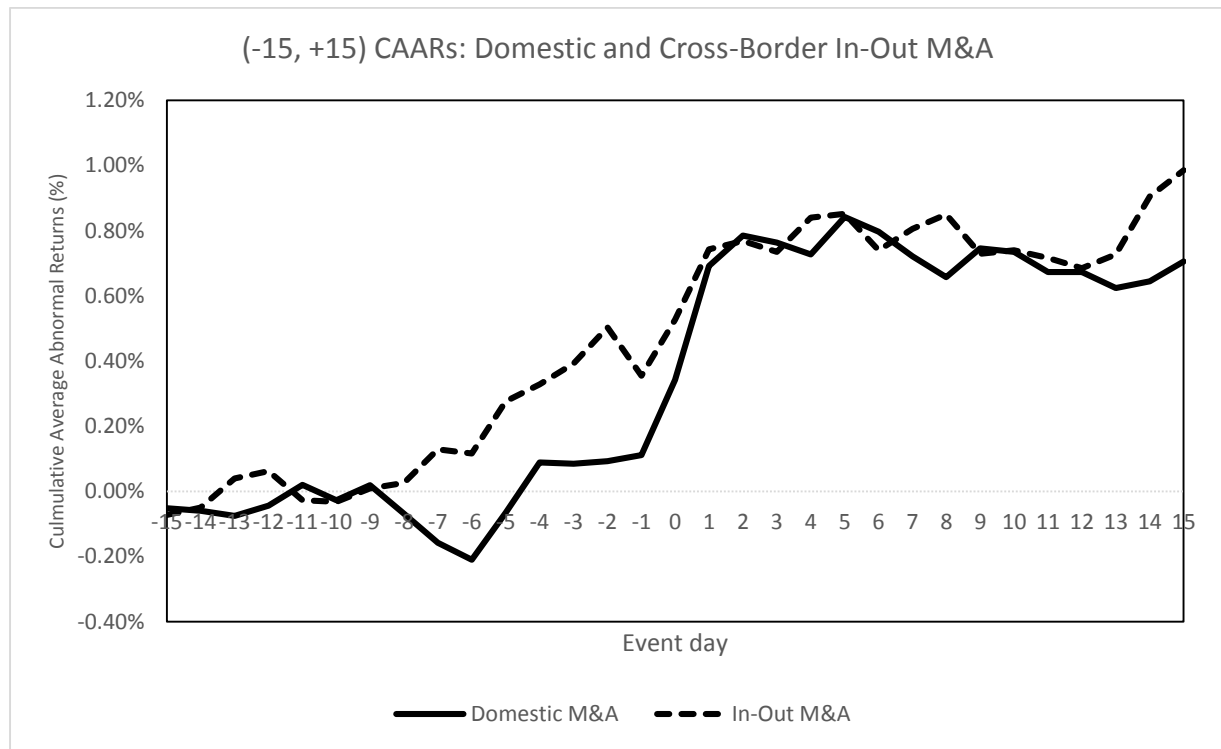Figure 1. Plot of CAARs for Japanese firms in Domestic and Cross-Border M&A

Table 3. Difference in CAARs for various periods surrounding the M&A announcement

Factor	Time period	Findings	Difference (CAAR%)	t-statistic
1. Domestic vs In-Out	(-15,+15)	No significant difference	0.28	-0.44
	(-10,+10)	No significant difference	0.04	0.06
	(-5,+5)	No significant difference	0.31	0.77
	(-2,+2)	No significant difference	0.33	0.96
	(-1,+1)	No significant difference	0.36	1.25
	(-1,0)	No significant difference	0.23	1.17
	(-1,+2)	No significant difference	0.43	1.28
	(-1,+3)	No significant difference	0.44	1.30
	(-1,+5)	No significant difference	0.41	1.13
	(-1,+10)	No significant difference	0.44	0.97
	(-1,+15)	No significant difference	0.17	0.36

*	Significant at $p< 0.10$	
**	Significant at $p<0.05$	
***	Significant at $p<0.01$	

Table 4a lists the cumulative average abnormal returns (CAARs) for low and high culture distance sub groups and the relevant t-statistics. The results show that comparing to cross-border M&A target firm in high culture distance countries, while high culture distance target firm CAARs return negatively surrounding the announcement date (-2, +2), (-1, +1), (-1, 0), (-1, +2), (-1, +3) (though statistically insignificant), low culture distance deals have positive CAARs for all examined event periods, and they are significant at 0.05 and 0.10 level

Table 4a. CAARs for various periods surrounding M&A announcement

Period	High Culture Distance			Low Culture Distance		
	CAAR(%)	t-statistic		CAAR(%)	t-statistic	
(-15,+15)	0.96	1.548		0.61	0.858	
(-10,+10)	0.77	1.492		0.33	0.570	
(-5,+5)	0.54	1.188		0.54	1.384	
(-2,+2)	-0.17	-0.560		0.67	1.977	**
(-1,+1)	-0.17	-0.673		0.57	2.086	**
(-1,0)	-0.14	-0.746		0.13	0.713	
(-1,+2)	-0.25	-0.834		0.62	1.961	*
(-1,+3)	-0.16	-0.499		0.47	1.587	
(-1,+5)	0.04	0.104		0.49	1.606	
(-1,+10)	0.03	0.073		0.26	0.585	
(-1,+15)	0.19	0.408		0.59	1.146	

* Significant at the 0.10 level
** Significant at the 0.05 level
*** Significant at the 0.01 level

Table 4b. Difference in CAARs for various periods surrounding the M&A announcement

Factor	Time period	Findings	Difference (CAAR%)	t-statistic	
2. Culture distance	(-15,+15)	No significant difference	0.35	-0.37	
	(-10,+10)	No significant difference	0.44	-0.55	
	(-5,+5)	No significant difference	0.01	0.01	
	(-2,+2)	Low culture > High culture	0.84	1.85	*
	(-1,+1)	Low culture > High culture	0.74	1.98	**
	(-1,0)	No significant difference	0.27	1.02	
	(-1,+2)	Low culture > High culture	0.87	1.99	**
	(-1,+3)	No significant difference	0.63	1.40	
	(-1,+5)	No significant difference	0.05	0.91	
	(-1,+10)	No significant difference	0.29	0.36	
	(-1,+15)	No significant difference	0.78	0.57	

* Significant at $p<0.10$
** Significant at $p<0.05$
*** Significant at $p<0.01$

in (-2, +2), (-1, +1) and (-1, +2) periods. Figure 2 illustrates the (-1, +15) event period and Table 4b lists the independent t-test statistics of comparing low culture distance deals to high culture distance ones.

To test and investigate the hypothesis 2b, NIKKEI industry code was matched to 395 cross-border M&A deals' acquirers. They are allocated into two sub groups according to NIKKEI industry coding chart: manufacturing industry and non-manufacturing industry. Acquirers of 207 deals were categorized into manufacturing industry; acquirers of remaining 188 deals were categorized into non-manufacturing industry.

Figure 2. Plot of CAARs for Japanese firms' M&A deals in low and high culture countries
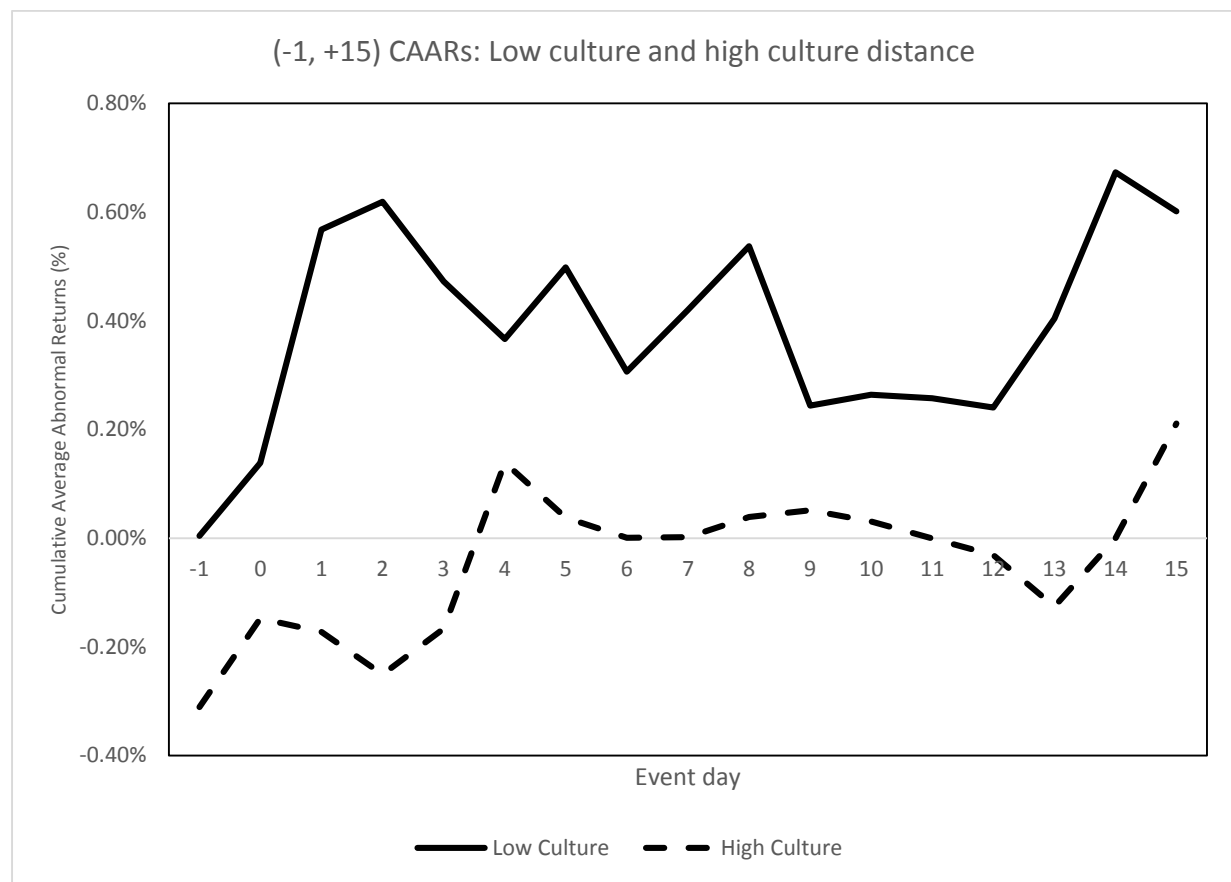

(-1, +15) CAARs: Low culture and high culture distance

Table 5a. CAARs for various periods surrounding M&A announcement

Period	Manufacturing In-Out			Non-Manufacturing In-Out		
	CAAR(%)	t-statistic		CAAR(%)	t-statistic	
(-15,+15)	1.86	2.784	**	-0.36	-0.554	
(-10,+10)	1.71	3.340	**	-0.68	-1.168	
(-5,+5)	1.63	4.087	***	-0.65	-1.441	
(-2,+2)	1.04	3.116	**	-0.69	-2.359	**
(-1,+1)	0.65	2.507	**	-0.35	-1.326	
(-1,0)	0.24	1.415		-0.3	-1.398	
(-1,+2)	0.81	2.621	**	-0.57	-1.882	*
(-1,+3)	0.89	3.074	**	-0.71	-2.058	**
(-1,+5)	0.91	2.732	**	-0.48	-1.277	
(-1,+10)	0.96	2.470	**	-0.77	-1.538	
(-1,+15)	1.27	2.700	**	-0.61	-1.195	

*	Significant at the 0.10 level
**	Significant at the 0.05 level
***	Significant at the 0.01 level

Table 5b. Difference in CAARs for various periods surrounding In-Out M&A announcement

Factor	Time period	Findings	Difference (CAAR%)	t-statistic	
3. Industry	(-15,+15)	Manufacturing > Non-Manufacturing	2.22	-2.37	**
	(-10,+10)	Manufacturing > Non-Manufacturing	2.39	-3.09	**
	(-5,+5)	Manufacturing > Non-Manufacturing	2.28	-3.80	***
	(-2,+2)	Manufacturing > Non-Manufacturing	1.73	-3.87	***
	(-1,+1)	Manufacturing > Non-Manufacturing	1.00	-2.69	**
	(-1,0)	Manufacturing > Non-Manufacturing	0.54	-1.99	**
	(-1,+2)	Manufacturing > Non-Manufacturing	1.38	-3.18	**
	(-1,+3)	Manufacturing > Non-Manufacturing	1.60	-3.57	***
	(-1,+5)	Manufacturing > Non-Manufacturing	1.39	-2.78	**
	(-1,+10)	Manufacturing > Non-Manufacturing	1.73	-2.76	**
	(-1,+15)	Manufacturing > Non-Manufacturing	1.88	-2.71	**

* Significant at $p<0.10$
** Significant at $p<0.05$
*** Significant at $p<0.01$

Figure 3. Plot of CAARs for cross-border market effect by Japanese manufacturing and non-manufacturing industry acquirers
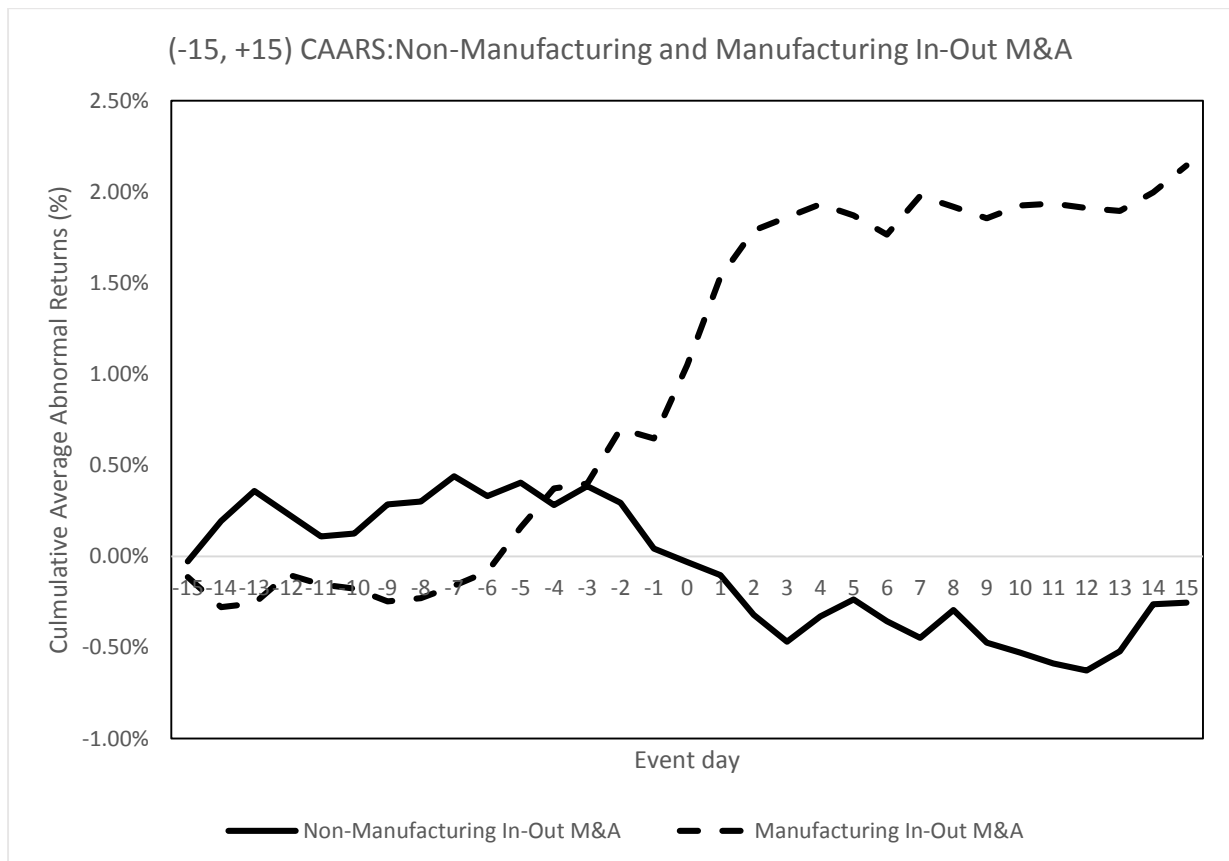
Table 5a, 5b and Figure 3 present the CAARs, t-statistic and graphic plot of manufacturing industry acquirers' and non-manufacturing acquirers' cross-border in-out M&A market returns of various event periods. The listed CAARs in (-15, +15) event period in Table 5a correspond to the graphic presentation in Figure 3, Table 5b listed the t-statistic results of different CAARs between manufacturing and non-manufacturing industry acquirers. The differences between different industry acquirers' market reactions are all significant at 0.05 level. In three event periods, (-5, +5), (-2, +2), and (-1, +3), they are statistically significant at 0.01 level.

Considering both the categorical results of hypothesis 2a and 2b, in order to confirm interaction effect, a two-way between groups analysis of variance (two-way ANOVA) was conducted to explore the impact the nature of acquirer's industry on culture difference using (-1, +2) CAARs as dependent variable. The interaction effect between acquirer's industry and target firm's culture distance was not statistically significant, $F(2, 391)=0.212$, $p=0.646$. There was statistically significant main effect for both acquirer's industry $F(2, 391)=11.904$, $p=0.001$ and target firm's culture distance $F(2, 391)=5.552$, $p=0.019$. However, the effect sizes were small on both categories (partial eta squared= 0.030 and 0.014).

For contextual variable analysis (statistically insignificant results were removed from presentation and discussion), selected variables are treated as independent variables to test the variance of 395 cross-border In-Out deals' CAARs (results from testing hypothesis H1). Table 6 presents descriptive statistics and correlations for the selected contextual variables and dependent variable. The low intercorrelation suggested that there is no issue with multicollinerarity among selected variables.

Table 7 reports OLS regressions testing the CAARs of (-1, +1) event window as well as the adjusted R^2 and F-statistic for each regression. Manufacturing industry (using relatedness as moderator) and culture distance were input into first regression, and it demonstrated that acquirer shareholder gains are significantly related to industry and culture distance. This concurred with results from hypothesis H1 and H2 testing. Moreover, the positive relation between CAARs and relative size of target firm to acquirer firm, consistent with Asquith, Bruner, and Mullins Jr (1983), suggested that relative size impacts market's reaction to M&A deals. The negative relation of total deal value to CAARs implied that excess premium actually diminishes acquirers' shareholder value (Jensen, 1986).

Second regression added specific culture dimension index, MAS, and service industry dummy variable. The inclusion of masculinity index increased the explanatory power of the

regression, yet analysis in this paper could not clearly identify that its causality to variance of CAARs. The impact of service industry dummy (as categorized by Nikkei industry code) suggested it's negatively associated with negative market reaction to acquirers' cross-border M&A announcements.

The WGI in regression 3, statistically significant at 0.05 level, demonstrates the combined index of measuring (1) Voice and Accountability, (2) Political Stability and Absence of Violence, (3) Government Effectiveness, (4) Regulatory Quality, (5) Rule of Law, and (6) Control of Corruption (Kaufmann et al., 2008) is positively related market reaction. In other words, market favors cross-border M&A deals with target firms in high governance quality countries. This can be translated to market considers less risky contingent overseas environment would at least preserve value, or more favorable for creating economic value for Japanese acquirers.

To test if rapid fluctuations of YEN and major social/economic event have any impact on market's reaction during sampling period, Strong_YEN and 2011 East Japan Earthquake were entered as dummy variables to regression analysis (as presented in regression 4). The results showed that the fluctuations of YEN and 2011 East Japan Earthquake have no statistical significance to actual market reaction to sampled cross-border M&A announcements.

5. Discussion

This exploratory study using latest empirical Japanese data showed statistically that acquirer firm's industry nature, culture distance between acquirer and target firms and target firm country governance quality matter to market reaction. Although not all selected contextual variables could be correlated to the variance of short-term CAARs, the objective of identifying at least a few of the contingency variables' relations to market's collective decision has been accomplished. Using an interdisciplinary quantitative approach, this study tried and partially succeeded in showing to both researchers and practitioners that contingency factors are not to be underestimated in this ever growing global economy.

The notion of contingency theory and the results of this study are general in nature, in this paper, the adapted research methods and proposed research questions did not allow further exploration of why does domestic M&A by Japanese firms create on average higher CAARs than cross-border ones. Neither did this paper try to pin point the exact reason of higher CAARs

by manufacturing industry acquirers than non-manufacturing industry acquirers. While these questions are not within the scope of this exploratory research, using research by Beechler and Yang (1994) summarized in the next paragraph, this paper intends to draw some existing insights based on case studies of Japanese firms to help explain results from quantitative analysis.

Beechler and Yang (1994), studied the transfer of Japanese management practices overseas using contingency theoretical model, found that contextual variables, such as local environmental and subsidiary characteristics, can become the constraints to transfer of firm specific advantages (FSA). They defined Japanese human recourse management (HRM) practice as firm specific advantages, and using survey and interview of Japanese subsidiaries in the U.S. (five in manufacturing industry and five in service industry) to test whether contingent environment had any impact to transferring FSA. Results from their empirical works suggested that 1) industry specific characteristics in service industry, such as high employee turnover rates and highly competitive labor and product market condition had a strong negative impact on firm's ability to transfer Japanese HRM practices. 2) On the other hand, survey on manufacturing industry showed that the industry emphasis on job security and long-term employment fit with the Japanese style of HRM. Supported by other institutional factors, such as favorable local government policies and low turnover rate in surveyed manufacturing industry, it provided opportunities to develop Japanese style HRM.

Their results could help explain quantitative findings in this paper. First, in general comparing to service industry, nature of manufacturing industry facilitates Japanese firms' transfer of firm specific advantage (FSA) to overseas subsidiaries. Hence, create the linkage to long-term economic benefits. Second, an external institutional environment which is familiar or beneficial to Japanese MNEs could also be a favorable condition for transferring FSA, consequently, long-term economic benefits.

Results from H1, H2 and contingency variable exploration are consistent with, or not contradict to Beechler and Yang (1994). By using the framework of contingency theory and inclusion of transfer of firm specific advantage, the difference between market reaction to domestic and cross-border M&A as well as the difference between CAARs to low-culture and high-culture distance target firm countries, the difference between CAARs to manufacturing industry acquirer and non-manufacturing industry acquirer became much clearer and easier to comprehend.

Table 6. Means, Standard Deviations and Intercorrelations

Variable	Mean	Standard Deviation	1	2	3	4	5	6	7	8	9
1. (-1,1) days CAR	0.002	0.037									
2. Manu_Related	0.520	0.500	.139**								
3. Low High CD(6) Median	0.540	0.499	-.100*	.116*							
4. Total Value / Market Cap	0.094	0.205	.047	.193**	-.011						
5. Announced Total Value	66332	216956	-.219**	.011	.023	.391**					
6. MAS diff	38.680	12.213	.107*	.041	-.008	-.116*	-.075				
7. Service_Industry	0.020	0.141	-.178**	-.149**	.025	.030	-.003	-.051			
8. WGI	1.054	0.633	.059	.117*	.368**	.111*	.064	-.131**	.050		
9. Period_311	0.420	0.495	-.024	-.038	-.011	.078	.037	.071	.059	-.020	
10. Strong_YEN	0.180	0.389	-.054	.015	.034	.059	.078	.050	.070	.059	.556**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 7. OLS regression results for selected variables

Independent variables	Dependent variable = CAAR (−1, +1)							
	1		2		3		4	
Constant	−0.019		0.029		0.088		0.102	
	−(0.226)		(0.349)		−(1.016)		−(1.056)	
Manu_Related	0.130		0.097		0.088		0.088	
	(2.618)	**	(1.949)	*	(1.775)	*	(1.775)	*
High_Low_C_D	−0.107		−0.098		−0.143		−0.143	
	−(2.205)	**	−(2.054)	**	−(2.810)	**	−(2.795)	**
Total Value/Market Cap	0.125		0.148		0.138		0.139	
	(2.340)	**	(2.792)		(2.610)	**	(2.612)	**
Total Value	−0.267		−0.270		−0.271		−0.269	
	(-5.081)	***	(-5.212)	***	−(5.281)	***	−(5.205)	***
MAS diff	−		0.091		0.106		0.108	
			(1.899)	*	(2.206)	**	(2.245)	**
Service_industry	−		−0.162		−0.167		−0.165	
			-(3.363)	**	-(3.493)	**	-(3.493)	**
WGI	−		−		0.126		0.128	
					(2.435)	**	(2.468)	**
Period_311	−		−		−		0.05	
							(0.089)	
Strong_YEN	−		−		−		-0.42	
							(-0.738)	
N	395		395		395		395	
Adj R_square	0.084		0.114		0.125		0.122	
F	10.015		9.477		9.073		7.110	

*	t-statistic P<0.10
**	t-statistic P<0.05
***	t-statistic P<0.01

6. Limitations

As a bold undertaking for a graduate school thesis, this exploratory research cannot be considered a success. The findings linking contingency variables, especially WGI, to market reaction using latest empirical data from Japan, which the writer deemed as a first in identifying contingent variables, indicated that there are more latent elements left to be discovered by quantitative approach. Moreover, perhaps a different research design with alternative statistical analysis methodology can lead to more promising results associating contextual variables with market reactions.

Researchers and practitioners should be reminded that numerical numbers quantifying distances between countries, cultures and organizations cannot truly represent the actual barriers. And what is more, although the statistical significance seems promising, the

elimination of the other selected psychic distance variables only amplifies the difficulty of defining cognitive difference with quantitative method and indicates that more work has to be done.

Regrettably, the lack of time and resources, in the form of data availability, became the biggest limitations to furthering this exploratory work.

7. Summary and suggestions for future research

This study tried to answer three questions: 1) do cross-border In-Out M&A create value for Japanese acquiring firms' shareholders? And how do they compare to the domestic ones? 2) How does culture distance between Japanese acquirers and target firms impact market's reactions to cross-border M&A short term stock performance? 3) What are the contingency variables' (culture and psychic distance) relations to the variance of acquirers' short term returns?

This exploratory study comparing 804 domestic to 395 cross-border In-Out M&A deals by Japanese firms between 2005 and 2013 found that, in general cross-border In-Out M&A do not necessarily create short term value for acquirers' shareholders. Our founding suggested that on average cross-border M&A by Japanese firms in manufacturing industries have positive short term shareholder gains comparing to deals by Japanese firms in non-manufacturing industries.

This study also tested argument that acquiring target firms in low culture distance countries have a more favorable market response than target firms in high culture distance countries. Although the gains were only proven statistically significant surrounding and post M&A event day, the result confirmed with previous researches that distance, as an important contingency variable to organization, matters to short term market reaction to cross-border M&A announcements.

The third part of this study tried to explore causal relations between various contingency variables and cross-border acquirers' short term CAARs. Besides the categorical variables-acquirer industry and high/low culture distance-examined in the first part of this study, a positive relation between relative deal value and acquirer shareholder returns is confirmed. However, the larger the total deal value the smaller the acquirer CAARs has also shown

statistical significance. The discovery of the positive relation between environment variable, WGI, and acquirer shareholder returns could be a foundation for future research.

In short, the study finds that cross-border M&A acquirer shareholder gain is related to the nature of the acquirer industry, the perceived culture distance between acquirers' and target firms' countries. Also governance indexes of target firms' country is positively associated with short term market's reaction to cross-border M&A announcements. This suggested that, as contingency theory proposed, environment factors could be important elements to organizations' performance, even market's reaction.

The discovery of acquirer industry type's relation to market reaction could suggest an area for future study of management's and employees' industry-level psychology and culture. Industry specific qualitative and quantitative studies, with both long-term and short-term focuses, can be a new avenue for researching the market effect of Japanese firms' cross-border M&A announcement. As Weber and Drori (2008) proposed there are inconsistencies of findings about the different effects of national versus corporate cultural differences on M&A performance; their work tried to emphasize and bring researchers' attentions to individual behavioral issues as the factors that affect the long-term performance of M&A deals.

As a parallel study, research on Japanese firms' cross-border M&A deals can try to use industry specific Herfindahl index to examine acquirer's industry (Caves, 1991). By doing so researchers should be able to identify industrial background based on economic frameworks for current wave of Japanese firms' cross-border M&A.

Based on this, within the context of contingency theory, future study could also attempt to be more specific on industrial-level culture and psychological difference and identify how these differences impacted market's reactions to M&A deals.

8. Acknowledgements

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[i] As defined by Håkanson and Ambos (2010).

[ii] As defined by Håkanson and Ambos (2010) using data from "Centre d'études prospectives et d'informations international" 2014)

[iii] As defined by Håkanson and Ambos (2010) using data from "Centre d'études prospectives et d'informations international" 2014).

[iv] As defined by Håkanson and Ambos (2010) using data from "Centre d'études prospectives et d'informations international" 2014).

[v] As defined by Håkanson and Ambos (2010), calculated as the average of the size 'Worldwide Governance Indicators' for the year 2013 collected by the World Bank. They are (1) Voice and Accountability, (2) Political Stability and Absence of Violence, (3) Government Effectiveness, (4) Regulatory Quality, (5) Rule of Law, and (6) Control of Corruption (Kaufmann, Kraay, & Mastruzzi, 2008).
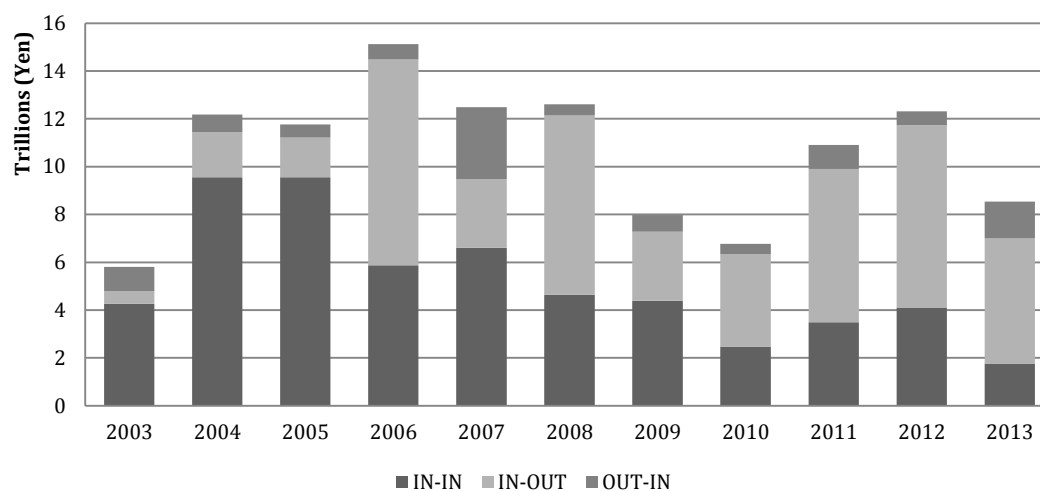
[vi] As defined by Dow and Karunaratna (2006) using data from Dow (2010)

[vii] Proposed by Drogendijk and Slangen (2006), Euclidean distance is computed as following:

$$CD_j = \sqrt{\sum_{i=1}^{4}\{(I_{ij} - I_{iN})^2 / V_i}$$

Appendix 1

Japanese Market M&A Total Amount

YM	IN-IN	%	IN-OUT	%	OUT-IN	%	Total (Million Yen)
2003	4,262,721	73.5%	528,630	9.1%	1,009,386	17.4%	5,800,737
2004	9,557,983	78.5%	1,881,779	15.4%	743,432	6.1%	12,183,194
2005	9,558,057	81.3%	1,652,396	14.0%	553,226	4.7%	11,763,679
2006	5,873,637	38.8%	8,608,978	56.9%	643,671	4.3%	15,126,286
2007	6,616,193	53.0%	2,858,810	22.9%	3,018,745	24.2%	12,493,748
2008	4,642,575	36.8%	7,500,626	59.5%	469,211	3.7%	12,612,412
2009	4,385,747	55.0%	2,895,984	36.3%	699,068	8.8%	7,980,799
2010	2,478,289	36.6%	3,860,376	57.0%	433,796	6.4%	6,772,461
2011	3,489,830	32.0%	6,413,082	58.8%	1,000,884	9.2%	10,903,796
2012	4,110,603	33.4%	7,632,873	62.0%	567,811	4.6%	12,311,287
2013	1,761,230	20.6%	5,243,581	61.4%	1,536,089	18.0%	8,540,900
2014/01/01～2014/04/30	340,186	10.2%	2,513,891	75.2%	490,430	14.7%	3,344,507
Total (Million Yen)	83,077,986	48.8%	62,580,670	36.8%	24,611,410	14.5%	170,270,066

(Source: RECOF Database)