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JFMRA

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Greetings to Our Readers on the Eighth Issue of the *Journal of Japanese Management*

The Japan Federation of Management Related Academies (JFMRA) was established on November 23, 2006. JFMRA is now through the affiliation of 55 academic societies in the fields of management, accounting, commerce, and information management.

One of the main activities of JFMRA is to publish *the Journal of Japanese Management*, the official publication of JFMRA.

Today, a few academic societies in Japan issue publishment solely in English; therefore, by issuing this journal entirely in English, JFMRA aims to contribute to international academic progress through advanced studies in wide-ranging research fields related to management, management information, commerce, and accounting.

To date, social trends such as economic inequality, global environmental issues, the aging and depopulating of societies, Sustainable Development Goals (SDGs), accelerated the development of new and emerging markets and innovations. Innovations, such as the Internet of things (IoT), artificial intelligence (AI), open innovation, and linkages that foster innovation, have changed our lives, and generated numerous research themes for our researchers. Accordingly, a wide-ranging interdisciplinary approach that calls for cooperation beyond the existing academic framework of an individualistic society is needed. Therein lies the significance of JFMRA.

JFMRA has been focusing on the following themes: (1) the development of research and spread of knowledge in fields related to management, management information, accounting, and commerce; (2) research and contributions to society through education related to management; (3) exchanges between various academies and researchers associated with management; (4) cooperation with researchers overseas related to management; and (5) cooperation with the Science Council of Japan and other academic research communities. JFMRA also organizes public lectures twice each year, an occasional meeting for the exchange of ideas among members of the affiliations, as well as an annual symposium.

I rejoice at the release of the eighth issue (Vol.4, No.2) and would like to thank the members of the *Journal of Japanese Management* (JJM) editorial board, especially Professor Fangqi Xu, the Vice-President of JFMRA, and Professor Yukio Takagaki, the Chair of the editorial board. I am confident that this issue will stimulate the readers intellectually. JFMRA, with editorial board members, we sincerely wish this journal will become beyond the expected levels of many academic researchers at home and abroad.

Prof. Akira Uchino
President, Japan Federation of Management Related Academies
Professor, School of Commerce, Senshu University, Tokyo, Japan

Preface

It pleases me to announce the eighth electronic publication (Vol.4, No.2) of the *Journal of Japanese Management* (JJM), the official publication of the Japan Federation of Management Related Academies (JFMRA).

Though many academic associations exist in Japan, few appear to be active in disseminating Japanese knowledge abroad, particularly in the social sciences. It is incumbent on us not only to continue conducting research on those Japanese managerial practices which emphasize sound business management, but also to disseminate relevant strategies to the world.

Needless to say, even though individual academic associations may be interested in actively doing so, limited resources make it difficult to accomplish such a task. Fortunately, many academic associations representing management, commerce, accounting, and management information are participating in the Japan Federation of Management Related Academics (JFMRA). One of the primary means of knowledge dissemination is the publication of an academic journal in English. In today's highly networked society (thanks to the Internet), there is no doubt that electronic journals offer the most appropriate media, potentially accessible to anyone at anytime, anywhere in the world.

There are three categories of JJM papers: (1) a paper of regular and/or equivalent members (such as postgraduate members, etc.) of academic associations affiliated with JFMRA, (2) English translation of best paper from academic associations affiliated with JFMRA, (3) selected paper from the international conference hosted by or sponsored by JFMRA. For further detail, please refer to our web site < http://www.jfmra.org/jjm/>.

On behalf of the editorial board, I would like to acknowledge our appreciation to those academic associations that participated in this effort; additionally, we are grateful to the manuscript contributors and the reviewers for their cooperation. We continue to work hard for the further development of JJM.

Dr. Yukio Takagaki
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Contents

A Study on Using Integrated Reports at Mega Banks: Characteristics as Information Sharing Support Tools Within the Organization

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Abstract

An integrated report gives stakeholders a bird's-eye view of a company's outlook and makes it possible for information to be shared within the company. As such it can play a role in disseminating the perspectives of top management to employees throughout the organization. In this paper, I focus on the roles that an integrated report plays as an information-sharing tool in large organizations that have been established through multiple mergers. I examine issues of in-house reconciliation through analysis of Japanese Mega banking organizations ("Mega Banks"). The information-sharing role of integrated reports is examined from four perspectives. These include having an explicit statement of an easy to comprehend corporate philosophy, posting of the corporations history, posting of top management's vision/mission statement and statements introducing each division. These provide an integrated internal narrative that provided guidance to all employees and a comprehensive and cohesive narrative to outside stakeholders of the Mega Banks. The integrated reports of the Mega Banks are compared with their previous issuance of conventional disclosure magazines. It was found that only the integrated reports provide the cohesive narrative to both internal and external stakeholders. Consequently I found out that the integrated reports of Mega Banks play the role of information sharing support tool. Since integrated reports play the role of information sharing support tool, it can be hypothesized that these reports can be utilized in large organizations where in-house convergences have not progressed after the merging of large organizations into even larger ones.

Key words:
Integrated report, Mega Bank, Information sharing support tool, Corporate philosophy, Disclosure magazine

(1) Introduction

The first purpose of this paper is to understand how the integrated report of an organization, that is primarily used for disclosure, can also be used to support the information sharing function by generating shared narrative for members located anywhere in the organization. The second purpose of this paper is to determine how the shared narrative of the integrate report can accelerate and unify the understanding of organizational members even after the upheaval emanating from the merger of two or more large established organizations[1].

As a company grows, the number of items handled and the number of departments will increase. For companies with remarkable growth, there are cases where the company's business content is not sufficiently known to both inside and outside of the company. This condition is particularly noticeable at the large enterprises reorganized by merging. The merchandise, service contents and departments of the merging partner company are often added all at once, and it takes time to grasp the whole picture after the merger. This holds true not only for the external but also for the internal stakeholders. However, in our rapid changing modern society, we can't afford to wait until merging effects are demonstrated. The merging company is required to steer a new structure integrated with the organization at an early stage. For this reason, large enterprises, which have been rapidly established through merging, need to share information, crucial for operating the organization integrally as well as transmitting information to understand the entire organization, both internally and externally.

For public understanding of the entire organization, in addition to the securities report, listed companies issue annual reports, CSR reports, environmental reports, and recently integrated reports. The number of enterprises introducing the integrated report is gradually increasing, and the awareness of the general society is also increasing. The integrated report includes both financial and non-financial information. "By presenting the information which was disclosed through different channels, in a bird's eye view, stakeholders can read the integrated report first, and then understand the overall picture of the company "(Saka, 2015, p. 98). This means that stakeholders who seeks information could omit the trouble of examining a wide variety of disclosure sources when learning about the company's outline.

Meanwhile, for the corporate as the sender of information, the issuance of the integrated report seems to aim for further "value creation" (IIRC, 2013a; Ito (K), 2014, 2016; Koga, 2015; Kozuma, 2012; KPMG Japan Integrated Reporting Advisory Group, 2017a). In addition, there is a discussion pointing out the effect of "market logic can be introduced to internal management managers by integrated report" (Ito (K), 2014, p. 161). In other previous researches, the integrated report also plays a role as not only disclosure for external but also a strategy tool to share information of top management's ideas within the company to the lower-level employees (IIRC, 2013a, b; Ito (K), 2014; KPMG Japan Integrated Reporting Advisory Group, 2017b; Ochi, 2016; Okamoto, 2015; Uchiyama, 2015).

First of all, in this paper, I analyze the significance necessary for integrated reports not only in the manufacturing industry but also in banks. In recent years, there is an increasing need to disclose information on how companies who are subject to receive investment and loans will affect global warming[2]. There are also

[1] Basically, with reference to Akiyama (2018), which written in Japanese, I analyzed the function of the integrated report as follows.

[2] As ESG issues (acronym for Environment, Society, and Governance), the Integrated Report often covers the viewpoints necessary for sustainable growth.

indications that the structure which is unique to financial institutions that form financial bubbles is similar to drifting pollution, and the significance of issuing integrated reports at banks is gradually drawing attention in terms of social responsibility.

Next, I will examine what significance is given to the roles of the integrated report as information sharing support tool for major banks formed by merging. As examples of large-scale merging in Japan, there are three Mega banking organizations ("Mega Banks") born one after another between 2000 and 2005. The turmoil that occurred immediately after the merging seems to have settled down to some extent. However, it is still believed that it will take time before employees who enter as new graduates after the merging become core staffs, therefore it still seems to be necessary for Mega Banks to devise information sharing. According to the Banking Law, Banks (and bank holding companies) have provided explanatory documents that introduce their business and financial conditions at sales offices as disclosure annual reports, before Mega Banks issued integrated reports. Comparing the conventional disclosure magazines with the integrated reports, I analyzed the comparison of the two in the three major Mega Banks over several years. I focus on the content unique to the integrated report, through the comparison, and analyze the meaning of the integrated report with reference to the examples of the three Mega Banks.

Finally, outside of the Mega Banks, I analyze there is an increasing possibility of utilizing the integrated report in large enterprises through large merging. The newly formed organizations tend to have divided internal systems. For example, employees from the old predecessor may not want to share information with the employees from other predecessor. Therefore, internal harmonization does not proceed, and I explore the future role that the integrated report should fulfill.

(2) Utilization of Integrated Reports at Banks in Japan

In this section, I analyze the necessity of integrated reports at banks in Japan. The International Integrated Reporting Framework (<IR> framework) indicated by IIRC (2013a) described the objective of the integrated report as "to explain to providers of financial capital how an organization creates value over time" (IIRC, 2013a, p. 4 and p. 7). The <IR> framework defined the organizational overview and external environment, governance, business model, risks and opportunities, strategy and resource allocation, performance, outlook, and basis of preparation and presentation, as the eight elements of the integrated report.

According to KPMG Japan Integrated Reporting Advisory Group (2017a), 279 companies adopted the integrated report in 2016, and the content of the report is not only financial information but also a wide range. It is meaningful to provide information collectively to stakeholders. However, the <IR> framework does not provide guidance on the concrete content of the integrated report. Therefore, it is also pointed out that "some adjustments are necessary because it is impossible to compare with other companies in different formats and contents of each company while recognizing autonomy to some extent" (Ito (Y), 2016, p. 335).

The manufacturing industry has been issuing CSR reports and other kinds of reports for a long time. It is said that there is significance in issuing it because such industry stresses the environment with CO_2 emission.

Meanwhile, the necessity of disclosure through integrated reports for financial institutions such as banks is gradually increasing. Ochi (2016) focused on the financial bubble which formed "the structure similar to external issues such as the global environment including pollution" (Ochi, 2016, p. 40), because financial institutions grow unacceptable risks in society in the process of generating bubbles similar to causing pollution. Financial institutions such as banks will become the subject of social responsibility as well as the manufacturing industry. Ochi (2016) referred to the Risk Appetite Framework (RAF) [3] and introduced a movement that Mega Banks and other global large financial institutions, G-SIBs[4], enriched risk-related information in terms of the RAF on integrated reports from FY 2015 (Ochi, 2016, p. 42). Ochi (2016) also pointed out that he could expect that "disclosure of the RAF through integrated report not only has an external effect, but also infiltrates risk culture from the board of directors to the lower-level bank employees by sharing information through integrated report (Ochi, 2016, p. 42). Such statements indicated that Mega Banks can use platform of integrated report not only for external disclosure, but for internal information sharing, and for integrated organization operation through description of risk-related information on the RAF in the integrated report.

Based on the above points, I will pay attention to the role of internal information sharing support tool of the integrated report in the next section.

(3) Role of Integrated Report as Information Sharing Support Tool

In this section, I first focus on the role of the integrated report as information sharing support tool.

According to KPMG Japan Integrated Reporting Advisory Group (2017b), as answers to the question "On what point do you think "Integrated Report" contributes to in improving corporate value?", "For sharing strategies and policies within the company or the group"[5] was consistently listed as second during the past 5 years. I argue that this questionnaire result indicates that the integrated report is used not only as a means for disclosing information outside of the company but also as a tool for supporting information sharing with employees

[3] According to the Financial Services Agency (2015), risk appetite is "the type and total amount of risk that should willingly be accepted in order to achieve the business plan based on the individuality of the company's business model" (Financial Services Agency, 2015, p. 16), and the RAF refers to "the framework of business management to be used as a common language within the company concerning whole risk-taking policies including capital allocation and profit maximization" (Financial Services Agency, 2015, p. 16).

[4] G-SIBs refer to banks that are important on a global system. For details, please see the Financial Services Agency (FSA) website (http://www.fsa.go.jp/news/27/20151204-4.html, viewed on July 7, 2018).

[5] These are the questionnaire results for the participants, from December 2012 to March 2017, at the seminars on integrated report sponsored by the KPMG Japan Integrated Reporting Advisory Group. The seminars were held at the pace once a year with the same theme (the venues were held at 1 to 4 places), and the number of respondents was 1,184 (response rate 83%) against 1,422 participants in the whole group. As detailed in KPMG Japan (2017b), please see that.

within the company.

There are examples of utilization. Nikkei BP (2015) introduced experiences of Mr. Hajime Nakajima, Managing Director of Kirin Holdings, that "I feel that I can use integrated report for internal communication (Nikkei BP, 2015, p. 49). In addition, Fujita (2016) introduced the quote from Mr. Susumu Sakamoto, General Manager of Public Affairs Division in General Affairs Department, Marui Group, in which employees voiced their opinion, (regarding the companies first ever integrated report), "I felt the enthusiasm of the company", "Understand and practice the content of the report, I want to embody on site" (Fujita, 2016, p. 102).

Here I reconfirm the position of employees in the company. Without integrated report, companies cannot put employees as assets[6] in the financial statements, and had difficulty in disclosing their information on employees (skills, experience, knowledge, business processing abilities). There were limited means to communicate. Regarding their employees which is as non-financial information, after various transitions, companies attempt to integrate with financial information as their integrated report. IIRC (2013a) referred to human capital as one of the six capitals presented in the framework for integrated reporting (IIRC, 2013a, pp. 11-13)[7]. In other words, in the integrated report, it can be said that employees belonging to companies are valued as reporting elements.

I am further contemplating on the involvement of employees in companies. Mizuno (2015) denied the idea that employees should be treated merely as a functional group, and referred to executives at Idemitsu Kosan, Panasonic, and Kyocera as an example of business community which is a humanitarian company which values their employees and training them. And they distinguished themselves from so-called profit maximization, capitalism. In contrast to capitalist management accounting, as Human-oriented Management Accounting, Mizuno (2015) defined the situation which "Values human respect and familyism as management philosophy, ... where management managers set up a reasonable management plan, applying appropriate technologies and concepts "(Mizuno, 2015, p. 152). According to Mizuno (2015), in the Human-oriented Management Accounting, the relationship with stakeholders, including employees, is more important than in the capitalist management accounting, therefore the public relation function has greater value, and to create annual report with integrated reporting is important. In addition, Oshika (2016) stated that corporate employees "should not be source of costs, but should be considered as source of corporate value. It is possible for companies to coexist with employees and that is crucial" (Oshika, 2016, p. 208).

What can be interpreted from these arguments is that the relationship with

[6] Lev and Schwartz (1971) pointed out that in economics human capital, for their employees, is regarded as important element, however their employees are not recognized as their assets in financial statements. As for Lev and Schwartz (1971), since it is introduced in detail in Oshika (2016), please see that.

[7] The Ministry of Economy, Trade and Industry (2014) also raised examples showing that it is important to explain human resources, etc., which are invisible assets, by means of an integrated report (The Ministry of Economy, Trade and Industry, 2014, p. 82).

employees is very important in the process of corporate growth, thus it seems that it is indispensable to share information with employees.

When comprehensively summarizing the above, it is evident that a role as an information sharing support tool which considers the employees within the organization is expected for the integrated report. Is there a possibility of utilizing integrated reports inside of an organization, such as a bank, for sharing information reaching to the lower-level employees, as mentioned in the previous sections?

In this paper, I am going to analyze whether the integrated report holds the role of information sharing support tool with the following viewpoints. The first viewpoint is to have an explicit statement of an easy-to-understand corporate philosophy. In organizations where there are a large number of employees, it is an important opportunity for them to recognize what each member should do for the organization by explicitly indicating the philosophy that everyone can recognize. The second viewpoint is to have posting of messages by the top of the organization. Based on the philosophy of the first viewpoint, it becomes easy for their employees to act by expressing and posting elements to the organization members in specific languages. The third viewpoint is to have posting of corporate history. By showing the history of the organization which the employees belong, they can realize that they are doing a job of making one page of company history. The longer the company history, the more the commitment to the roots of their organization, the more inviolable value they feel, and the sense of belonging will increase. The last viewpoint is to have the introduction of each division. In large organizations, each member plays different roles. Because the business section that is nearest to them is posted, it is an opportunity to look at the integrated report and at the same time they will know other business divisions in the company.

In the following sections and onwards, I will compare how the integrated report issued by Mega Banks in Japan differs from their disclosure magazine published previously. In addition, I will pay attention to the role of Mega Banks as information sharing support tool in the integrated report.

(4) Transition of Issued Magazines in Mega Banks

1. The Birth of Mega Banks and Information Sharing within the Organization

In Japan, the birth of Mizuho Holdings (reorganized into Mizuho Financial Group (Mizuho FG) later) was in September 2000, the birth of Sumitomo Mitsui Banking Corporation (later reorganized into SMFG) was in April 2001, and the birth of Mitsubishi UFJ Financial Group (MUFG) was in October 2005, which started the current situation of three major Mega Banks existing[8]. After the merging between large banks there were many

[8] In this paper, for the notation of Mega Bank, I mostly use the abbreviations, "Mizuho FG", "SMFG", or "MUFG", for citations of references, titles, clauses, etc. In addition, disclose magazines, integrated reports, related explanation etc., published by each Mega Bank, are ultimately subjective thought, except for actual facts and data. These subjective considerations are the comprehensive results of my own experiences such as working at banks and information obtained through my relations.

differences in corporate culture, in-house reconciliation did not proceed, and sometimes it is said that "struggle for the next president between old banks becomes intense"[9]. It was inevitable that the competition for successful career advancement became severe. It was not easy for the employees to accept the institution / customs of the opponent's line without resistance, and it is pointed out that such phenomena further delayed the reconciliation[10]. From this chaos, order seems to have emerged to some extent, but it is still thought that it takes time for the new graduate employees after the merging to become the core member, and ingenuity of information sharing might still be necessary.

To the best of the author's knowledge, each Mega Bank uses various internal communication means (for example, conference materials, notices, e-mails, company notices, video messages, etc.), and devises measures such as training together, to share information from the top management to the bottom employees, in order to execute the strategy at the organization. Among them, the integrated report is assumed to have organizational information comprehensible for external communication because it is disseminated in an easy-to-understand manner, and contents are fulfilling, therefore the integrated report can be utilized for sharing information internally, enabling their employees aware of their important matters anywhere[11].

Meanwhile, although from the past, Mega Banks have issued a large amount of disclosure magazines, is it worthwhile to issue an integrated report?

For this reason, I will briefly refer to the requirements of the disclosure magazine in the following sections and compare the elements of the disclosure magazines in Mega Bank and the elements unique to the integrated report, and then I will clarify the significance of the publication of the integrated report in the Mega Banks.

2. About Disclosure Magazine

According to Article 21 and Article 52-29 of the Banking Law, the bank / the bank holding company must provide statutory documents that explain their business and financial conditions at their sales offices as a disclosure magazine.

The website of the Japanese Bankers Association has summarized the contents of the enforcement regulations of the Banking Law as disclosed in Table 1 for disclosure items that must be posted in the disclosure magazine.

In terms of issuance of the settlement of the fiscal year ended in March 2017, the three major Mega Banks issued both 'Main Report', which summarized in colorful and visual design and was about 100 pages long, and 'Data Reference', which covered numerical data and was about 300 to 400 pages long, as 'Disclosure Magazine'. They position 'Main Report' as the integrated

[9] Main article of Mainichi Newspaper (Tokyo morning paper, p. 9) on April 20, 2005, "Between former Sumitomo Bank and former Sakura Bank, Distributed Power, Harmony First".

[10] Okumura (2009) also introduced circumstances where integration does not progress easily, thus please see that in details.

[11] As a method of utilizing further integrated reports in Mega Banks, it can be thought that methods such as thorough distribution to all employees, inclusion in training, and senior promotion test contents can be considered in the future.

report (Mizuho Financial Group, 2017a; Sumitomo Mitsui Financial Group, 2017; Mitsubishi UFJ Financial Group, 2017).

Table 1: Examples of Items (business year) for which Disclosure is Required by the Banking Law

- Management organization
- Name and address of business office
- Main contents of bank's business
- Business overview in the most recent business year
- The following matters in the most recent five fiscal years (ordinary profit / loss, current profit / loss, capital, deposit balance and loan balance, capital adequacy ratio, etc.)
- The following matters in the most recent two fiscal years (balance sheet, profit and loss, gross operating profit, gross margin ratio, fund operating balance, interest margin, balance of so-called bad debt, balance of allowance for doubtful accounts, capital base, etc.)
- Risk management system
- Regulatory compliance system

Source: Japanese Bankers Association Website (https://www.zenginkyo.or.jp/article/tag-h/4007/, viewed on July 7, 2018)

However, there must be a difference between the content of the integrated report, which is issued by a Mega Bank as non-statutory at its own discretion, and the content of the disclosure magazine ('Main Report' plus 'Data Reference'), which is mandated to be issued according to law, because the roles of two are different from each other.

For this reason, I will compare the disclosure magazines and the integrated reports in the next section, and clarify new contents of the integrated reports of Mega Banks.

3. Comparison of Disclosure Magazines and Integrated Reports over Multiple Fiscal Years

In this section, I will analyze whether the integrated report of Mega Bank incorporates elements of information sharing support tool which is not included in the disclosure magazine.

I will focus on the four viewing angles of analysis clarified in the previous section; having an explicit statement of an easy-to-understand corporate philosophy, posting of top message, posting of corporate history, and introducing each division. Then I compare the three types of report, the final disclosure magazines of each Mega Bank, the integrated reports of the settlement of their first fiscal year, and the integrated reports of the settlement of the most recent fiscal year ended in March 2017. Among the Mega Banks, Mizuho FG and MUFG each issued the integrated report from the settlement of the fiscal year ended in March 2015, on the other hand only SMFG issued the report from the settlement of the fiscal year ended in March 2016. As the result of the comparison, I find that the contents which are most common to Mega Banks are as shown in Table 2.

Table 2: Comparison of Disclosure Magazine and Integrated Report for Multiple Years

Viewpoints	The Final Disclosure (D) Magazines	The First Integrated Reports	The Most Recent Integrated Reports
Corporate Philosophy	None	Described Colorfully / Visually	Described Colorfully / Visually
Top Message	Few	More Pages than D Magazines(**)	More Pages than D Magazines(**)
Corporate History	None(*)	Described Colorfully / Visually	Described Colorfully / Visually
Introduction of Each Div.	Few	More Pages than D Magazines(**)	More Pages than D Magazines(**)

Source: Mitsubishi UFJ Financial Group (2014, 2015, 2017); Mizuho Financial Group (2014, 2015, 2017a); Sumitomo Mitsui Financial Group (2015, 2016, 2017).

Note: (*) Only Mizuho Financial Group (2014) introduced the history of Mizuho Group.

(**) There are 10 to 20 pages of top messages in the integrated reports, whereas a few pages in the disclosure magazines. There are 20 or more pages of each division introduction plus facial pictures of division managers in the integrated reports, whereas only 5 pages in the disclosure magazines.

As the result of the comparison, the elements of the integrated reports of Mega Banks that are not in the disclosure magazine are the following four.

- Corporate philosophy expressed visually and clearly
- Top Messages by CEO, CFO, etc. with more than 10 pages

- Visual and easy-to-understand corporate history, etc.
- Facial pictures of the division managers are also posted and contents enhance each division's introduction

I infer that a role as an information sharing support tool can be expected in the integrated report of Mega Banks having these elements, but from the next section onwards, I will analyze the role from concrete contents.

(5) Role of Integrated Report in Mega Bank

In this section, I focus on the roles of the integrated report of Mega Bank as information sharing support tool, and refer to the part which shares information inside the organization from the latest integrated report.

1. Necessity of Mega Bank Information Sharing Support Tool

As I mentioned in the previous section, unless there are legal restrictions in other applications (for example, the role of the bank's disclosure magazine required by the Banking Law), the integrated report is not a statutory disclosure material, the issuance is optional. However, once the company starts to issue the integrated report, they must continue issuing it since they publicly disclose such issuance, unless an event such as delisting occurs. Therefore, it is necessary for companies to be ready for sustained issuance of integrated reports, giving it a great significance.

As mentioned above, Mega Banks are to disseminate their risk culture from the top management to the bottom employees by writing the risk-related information on the RAF in the integrated report, aiming to share information within the organization for integrated organization operation. I think that utilization of integrated report as information sharing support tool with employees in Mega Bank is not limited to this.

As mentioned above, there are many cases where reconciliation within banks does not proceed following the merging between large banks. Meanwhile, the competition with other banks is getting more intense, and some sort of ingenuity is necessary. For this reason, it is necessary to promptly disseminate the decisions made by the management division within the bank, and as information sharing support tool for that, recording actions which have already been released externally in the integrated report, and shift to execution at an early stage is possible. In large organizations such as Mega Banks, although it is possible to deliver messages of top executives to all employees in relay video system, it is only one-way instructions from the top to the bottom. It is not easy for employees to grasp what kind of initiatives their organizations have announced externally.

Therefore, it cannot be said clearly, but if the integrated report could act as part of a strategy tool through its information sharing capability to penetrate to the lower-level employees, it seems to be greatly expected that the integrated report can be utilized in other large organizations, such as the ones established through large-scale merging, but still disjointed.

Below, I would like to refer to the information sharing within the organization through the latest three Mega Banks' integrated reports.

2. Mizuho Financial Group

Mizuho Financial Group (2017a) states the following information.

<Enhance the sense of unity within the organization>

- History introduction since the establishment of three predecessors in the Meiji era
- Corporate philosophy and "Mizuho Value" posted
- Introduction of the first or No.1 items in Japan
- Introduction of research and consulting ability that can differentiate from other Mega Banks

<Always recognizable disclosure of internal information>

- Introduction of management accounting for internal numerical management
- Introduction of current situation analysis, weak points and sense of direction of risk appetite, etc., detailed by each company in Mizuho

I will first analyze the content that will enhance the sense of unity within the organization. In terms of history introduction, Sumitomo Mitsui Financial Group (2016) first posted the history since the establishment in the Edo-Meiji era in the pre-integrated phase, and Mitsubishi UFJ Financial Group (2017), described later, also did. It cannot be concluded yet, but such adhering to their roots, seems to regard the traditional history of the organization as the inviolable values that cannot be imitated, and to enhance the sense of unity within the organization. Also supposed to lead to uplifting feeling of unity may be the posting of corporate philosophy, introducing the first or No.1 items in Japan, and introducing research and consulting abilities that could differentiate Mizuho from other Mega Banks.

In terms of always recognizable disclosure of internal information, I can exemplify that management accounting figures for internal use are introduced as shown in Table 3. Such information is not statutory, unlike the above-mentioned items that are required to be disclosed in the Banking Law as disclosure magazine.

Table 3: Mizuho FG's Net Business Profit by FY 2016 in Each Company (JPY billions)

	FY 2016 (result)	FY 2017 (planned)
Retail & Business Banking Company	13.0	47.0
Corporate & Institutional Company	240.0	218.0
Global Corporate Company	115.0	123.0
Global Markets Company	315.0 (*)	219.0
Asset Management Company	20.0	24.0
In-house Company Total	703.0	631.0
Consolidated Net Business Profits	663.4	640.0

Source: Mizuho Financial Group (2017b, p. 8)

Note: (*) Global Markets Company net business profits including Net Gains related to ETF is JPY345 billion (preliminary).
Recalculated the FY 2016 results based on the FY 2017 management account rules. JPY40 billion difference between In-house Company Total and Consolidated Net Business Profits is due to adjustment of management account which is not attributable to the In-house Companies.

Mizuho FG divides itself into several companies, which are business domain according to customer attributes, like other Mega Banks. Although it cannot be determined because it is not clearly stated, it seems that the management accounting figures are used for any internal management including performance evaluation by the company. It can be said that to publish the information of management account number, originally for internal use, on public information, such as integrated report, aims to share information with Mega Bank employees who can always carry it, and to make them understand the current situation through it. In Mega Banks from the viewpoint of information management, it is prohibited to take internal information, send e-mails, etc., including bringing it to the employee's home, even if it is not personal information or insider information. Under such circumstances, the publicized information including the integrated report is not subject to such restrictions. Similarly, disclosure of internal information that can be accessed at all times may introduce current situation analysis, weaknesses[12], and the sense of direction of risk appetite detailed by each company.

3. Sumitomo Mitsui Financial Group

Sumitomo Mitsui Financial Group (2017) states the following information.

<Issues to always be aware of>

- In the CEO message column, introduction of their DNA as "On-Site Strength", "Spirit of Enterprise", and "Speed"
- Explanation of cost reduction by using diagrams and graphs
- Explanation of transformation of business portfolio to avoid competition with domestic standard banks[13]
- Posting of management philosophy (including five keywords "Five Values") and value creation

I will analyze the posted issues that should always be conscious of. Within the organization, high priority issues that should always be aware of, from the top management to the bottom, needs to be devised so that it does not leave away from employees' awareness. For the reason above, although it cannot be stated, if items with high priority are listed in published information such as integrated reports, Mega Bank employees can always carry such information, then Mega Banks' information sharing could be practically possible.

From such assumptions, the high priority issues that SMFG employees are always aware of are three items introduced as SMFG's DNA, further reduction of costs, and transformation in business portfolio. It can be assumed that there is a message saying that value creation is possible by being always conscious and acting on them.

4. Mitsubishi UFJ Financial Group

Mitsubishi UFJ Financial Group (2017) states the following information.

<Showing common direction within organization>

- Posted a management vision stating the spiritual pillars of all executives and employees
- Clear statement of the MUFG value creation process
- Introduction of about 360 years long history since its establishment of Konoike exchange shop, the originator of Sanwa Bank, MUFG
- Comparison of figures and ratings with overseas financial institutions
- Introduction of efforts for ESG issues

I will analyze the presentation of the common

[12] For example, Mizuho FG's Retail and Industry Company has listed the "high expense ratio" (Mizuho Financial Group, 2017a, p. 35) as a weakness.

[13] Domestic standard banks stand for banks that can operate simply as compared with the International Unified Standards Bank, such as Mega Banks, etc., with the capital adequacy ratio being 4% or more.

direction within the organization. MUFG has background that was established from the giant organization merging between the Mitsubishi Tokyo Financial Group and UFJ Holdings through business integration. It is an assumption at this point, but if they prioritize the process of getting consensus among all employees in such a situation, it will take a tremendous amount of time and effort. For that reason, they will first present the organization's policy and all employees will follow that policy with some minor adjustments. In order to achieve these objectives, it may be necessary to show common direction within the organization. It can be inferred that trying to share information with MUFG employees by describing such direction in published information such as integrated report that can always be carried out is aimed for the employees to be always conscious of such direction.

For further analysis, I assume, the direction that MUFG would like to show in the organization is the management vision first, which is captured at the beginning in the integrated report as the spiritual pillar of all MUFG executives and employees. Mizuho Financial Group (2017a) also posted its corporate philosophy and "Mizuho Value" at the beginning, and divided the triangle pyramid (divided into three from the top to the bottom and described as "Basic Idea", "Vision", and "Value" from the top). Although using a pyramid for easy understanding is the same, the description of the management vision of Mitsubishi UFJ Financial Group (2017) was divided into three, using pyramid (also divided into three from the top to the bottom and described as, "Our mission ", " Our Vision (aiming for medium to long term)", and "Our Values (we should share)"), detailed explanations for each part, so that different ways of interpretation could not occur. In addition, Sumitomo Mitsui Financial Group (2017) also described their management philosophy and value creation, after the history of SMFG and their financial and non-financial highlights.

By showing the whole picture of the value creation process and the history that has survived for about 360 years, MUFG are trying to spread the necessity of sustainable development of the organization in the future with their employees. In addition, it is assumed that making employees aware of the numerical / rating comparisons with competitive overseas major financial institutions [14], and letting employees recognize efforts towards ESG issues as social requirements, are what MUFG wants to have employees in the organization be aware of.

5. Conclusion

I analyzed the contents of the recent integrated reports of all Mega Banks and found out their role of information sharing support tool. As a result of this analysis, I found out that the character of Mizuho FG integrated report is "Enhance the Sense of Unity within the Organization" and "Disclosure of Internal Information that is always accessible", the

[14] According to the Nikkei Newspaper (Morning paper, p. 19) on August 19, 2017, market capitalization of Mizuho FG is about 4.8 trillion yen and that of SMFG is about 5.8 trillion yen, while that of MUFG is about 9.5 trillion yen, which is far apart from the second and the last. Therefore, in MUFG, No. 1 in Japan is commonplace and it can be seen that competition on a global scale is inevitable.

character of SMFG report is "Posted Issues Always to be Conscious of", and the character of MUFG report is “Showing Common Direction within Organization”. Although it can be affirmed, these characters are presumed to be the purpose of utilizing the integrated report in each Mega Bank.

What derives from the discussion so far is that even a huge organization other than Mega Banks can utilize the integrated report if the organization is established through large-scale merging but still disjointed. Japan's Mega Banks are all established through merging of large banks. Although it is difficult to harmonize, it is necessary to promptly disseminate the decisions made by the management division throughout the organization. Also, it is necessary to incorporate matters that employees should always be conscious of, into an always accessible disclosure. In this section, without fear of criticism, I can affirm that the integrated report, which is an information transmission tool intended for external communication, is easy to utilize as information sharing support tool within the still disjointed organization established through merging. Although it cannot be asserted, if it has a role in the integrated report as a strategy tool to penetrate into the lower-level employees, it can be greatly expected to be utilized in gigantic organizations where in-house convergences have not progressed after large merger. This is the conclusion of this paper.

(6) Summary and Future Research

In this paper, I introduced the examples of utilizations of the integrated reports in the major banks newly established through merging where their business contents are not sufficiently recognized both internally and externally, therefore the reports are used as information dissemination and information sharing support tool.

Integrated report that has aspects of both financial information and non-financial information enables us abbreviate the trouble of examining a wide variety of disclosure sources when learning about the company's outline. Meanwhile, the company, which is originally on the issuing side, can not only externally transmit, but also penetrate the top management's perspective into the bottom employees by sharing information using the report as strategic tool.

In the process of expanding companies, it is important to share information with their employees. Mega Banks are expected to share risk information related to the RAF by posting on their integrated report, and to aim at sharing information inside of the organization, and further operating as an integrated organization. Although the relevance of risk-related information on the RAF to the description on the integrated report is not clear, since at the present moment there are no reports of inadequacies in risk governance at each Mega Bank, therefore I assume that the description has some effect.

In Mega Banks, the in-house reconciliation does not proceed in many cases, thus in order to promptly disseminate the decisions made by the management division, the efforts that are announced externally are described in the integrated report and the means to execute are needed. In addition, it is necessary to put down the information that employees should always be conscious of as public information that they can always recognize. In fact, I analyzed the four elements of the integrated report that are different from the disclosure magazine, as well as the characteristics of each of the latest integrated reports of Mega Banks, and the purpose of its utilization. As a result, I found out the role of information sharing support tool with employees in the organization.

Moreover, the conclusion of this thesis obtained through these analyses is that it is possible to utilize the integrated report even for large organizations other than Mega Banks, which are established through large-scale merging but still remains to be disjointed. For future research, study targeting huge organizations, such as property insurance companies and oil resource companies that are also established through large-scale merging could be considered.

However, at this stage, sufficient verification of these points are yet to be completed and a future task remains. For further future research, developing a questionnaire would be required, which would provide primary data to determine if the internal and external use of the integrated reports are fulfilling the roles that I asserted in this paper.

References

Akiyama, M. (2018). Soshiki-nai no Jouho Kyouyu Shien Tool to shiteno Tougo Houkoku-sho no Yakuwari (Role of Integrated Report as Information Sharing Support Tool Within Organization: Significance of Utilization Clarified Through Cases Within Mega Banks). *The Journal of Cost Accounting Research, 42*(2), pp. 79-91. (in Japanese)

Financial Services Agency. (2015). *Heisei 27 Jimu Nendo Kin-yu Gyosei Houshin (Financial Administration Policy in FY Heisei 27).* Tokyo: Financial Services Agency. (in Japanese)

Fujita, K. (2016). Kigyo Karano Comment : ESG Toushi-ka tono Setten ga Kakudai (Comments from Companies: Expanding Contacts with ESG Investors) (Hidemi Tomita (Eds.) "Waza-ari: Learning from the Integrated Reporting No.6: Marui Group”). *Nikkei Ecology, April 2016, 202*, pp. 100-102. (in Japanese)

IIRC. (2013a). *The International <IR> Framework,* International Integrated Reporting Council.

——. (2013b). *Basis for Conclusions; International <IR> Framework,* International Integrated Reporting Council.

Ito, K. (2014). Kanri Kaikei ni okeru Tougo Houkoku no Igi (Importance of Management Accounting Research on Integrated Reporting). *Accounting, 185*(2), pp. 160-172. (in Japanese)

——. (2016). Tougo Houkoku-sho ni Motozuku Kachi Souzou Process no Hikaku Kenkyu (Comparing Research of Value Creation Based on Integrated Reporting). *Commercial Review of Senshu University, 103*, pp. 19-37. (in Japanese)

Ito, Y. (2016). Tougo Houkoku ga Kanri Kaikei Kenkyu Jissen ni Oyobosu Eikyo (The Effects of Integrated Reporting on the Research and Practice of Management Accounting). *The Waseda Commercial Review, 446*, pp. 329-351. (in Japanese)

Koga, C. (2015). Tougo Houkoku Kenkyu no Kadai Houhou no Hyouka to Kongo no Kenkyu Agenda (Integrated Reporting: Insights, Methods and a Future Agenda). *Accounting, 188*(5), pp. 515-529. (in

Japanese)

Kozuma, Y. (2012). Tougo Houkoku wa Dokoe Mukau noka (A New Burden Integrated Reporting Might Lay on Corporate Reporting). *Accounting, 182*(4), pp. 557-573. (in Japanese)

KPMG Japan Integrated Reporting Advisory Group. (2017a). *Survey of Integrated Reports in Japan 2016 (Nihon Kigyo no Tougo Houkoku-sho ni Kansuru Chosa 2016).* Tokyo: KPMG Japan Integrated Reporting Advisory Group.

——. (2017b). *Nihon Kigyo no Tougo Houkoku no Torikumi ni Kansuru Ishiki Chosa 2017 (Awareness Survey on Efforts of Integrated Reporting of Japanese Companies 2017): From the Result of KPMG Japan Integrated Reporting Seminar Questionnaire Survey.* Tokyo: KPMG Japan Integrated Reporting Advisory Group. (in Japanese)

Lev, B. and A. Schwartz. (1971). On the Use of the Economic Concept of Human Capital in Financial Statements. *The Accounting Review, 46*(1), pp. 103-112.

Ministry of Economy, Trade and Industry. (2014). Jizoku-teki Seicho eno Kyousou Ryoku to Incentive (*Final Report of the Ito Review "Competitiveness and Incentives for Sustainable Growth): Building Favorable Relationships Between Companies and Investors"*. Tokyo: Ministry of Economy, Trade and Industry. (in Japanese)

Mitsubishi UFJ Financial Group. (2014). *Mitsubishi UFJ Financial Group Disclosure Shi 2014 (Mitsubishi UFJ Financial Group Disclosure Magazine 2014).* Tokyo: Mitsubishi UFJ Financial Group. (in Japanese)

——. (2015). *MUFG Report 2015 Disclosure Shi 2015 Hon-pen Tougo Houkoku-sho (MUFG Report 2015 Disclosure Magazine 2015 Integrated Report Main Volume)*. Tokyo: Mitsubishi UFJ Financial Group. (in Japanese)

——. (2017). *MUFG Report 2017 Disclosure Shi 2017 Hon-pen Tougo Houkoku-sho (MUFG Report 2017 Disclosure Magazine 2017 Integrated Report Main Volume)*. Tokyo: Mitsubishi UFJ Financial Group. (in Japanese)

Mizuho Financial Group. (2014). *2014 Disclosure Shi (2014 Disclosure Magazine)*. Tokyo: Mizuho Financial Group. (in Japanese)

——. (2015). *Mizuho Financial Group 2015 Tougo Houkoku-sho Disclosure Shi (Mizuho Financial Group 2015 Integrated Report Disclosure Magazine)*. Tokyo: Mizuho Financial Group. (in Japanese)

——. (2016). *Mizuho Financial Group 2016 Tougo Houkoku-sho Disclosure Shi (Mizuho Financial Group 2016 Integrated Report Disclosure Magazine)*. Tokyo: Mizuho Financial Group. (in Japanese)

——. (2017a). *Mizuho Financial Group Tougo Houkoku-sho Disclosure Shi 2017 (Mizuho Financial Group Integrated Report Disclosure Magazine 2017)*. Tokyo: Mizuho Financial Group. (in Japanese)

——. (2017b). *Mizuho Financial Group Integrated Report 2017: Annual Review April 2016 – March 2017*. Tokyo: Mizuho Financial Group.

Mizuno, I. (2015). Kachi Tayou-sei to Kanri Kaikei (Value Diversification and Management Accounting): Possibility of

Human-oriented Management Accounting. *Accounting, 187*(2), pp. 141-155. (in Japanese)

Nikkei BP. (2015). Kankyo / CSR Keiei Interview (Environment / CSR Top Management Interviews): Top Describes 2015. *Nikkei Ecology, February 2015, 188*, pp. 47-57. (in Japanese)

Ochi, N. (2016). Kin-yuu Kikan ni okeru "Tougo Houkoku" Dou-nyu no Igi to Kadai (Significance and Problem of Introducing "Integrated Reporting" in Financial Institutions): Disclosure of the RAF in Integrated Reporting Will Disseminate Risk Culture Inside the Organization). *Kin-yu Zaisei Jijyo (Financial and Fiscal Conditions), 67* (8), pp. 39-42. (in Japanese)

Okamoto, D. (2015). Kigyo Keiei ni okeru Tougo Houkoku to Tougo Houkoku-sho (Integrated Reporting & Integrated Report for Management). *Mita Business Review, 58*(2), pp. 21-31. (in Japanese)

Okumura, H. (2009). *Tettei Kensho Nihon no San Dai Ginko (Thorough Verification: Three Large Banks in Japan)*. Tokyo: Nanatsumori Shokan Inc. (in Japanese)

Oshika, T. (2016). *Hi-zaimu Jouho no Kigyo Kachi (Corporate Value of Non-financial Information): Empirical Exploration of KPI to Be Disclosed in Integrated Reporting*. Tokyo: Doctoral dissertation of Waseda University. (in Japanese)

Saka, C. (2015). Tougo Houkoku no Kokusai - teki na Kenkyu Kaiji Doukou to KPI no Teigen (Research and Disclosure Trend, and KPI Proposal on Integrated Reporting). *Accounting, 187*(1), pp. 97-111. (in Japanese)

Sumitomo Mitsui Financial Group. (2015). *2015 Disclosure Shi (2015 Disclosure Magazine)*. Tokyo: Sumitomo Mitsui Financial Group. (in Japanese)

――. (2016). *2016 Tougo Houkoku-sho Disclosure Shi Hon-pen (2016 Integrated Report Disclosure Magazine Main Volume)*. Tokyo: Sumitomo Mitsui Financial Group. (in Japanese)

――. (2017). *2017 Tougo Houkoku-sho Disclosure Shi Hon-pen (2017 Integrated Report Disclosure Magazine Main Volume)*. Tokyo: Sumitomo Mitsui Financial Group. (in Japanese)

Uchiyama, A. (2015). Kigyo no Shakai-sei Ningen-sei to Kigyo Kachi Souzou (Social and Human Aspects of Corporations and Corporate Value Creation): Roles of Integrated Reporting and Management Accounting. *The Journal of Management Accounting, Japan, 23*(2), pp. 45-59. (in Japanese)

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CEO Successor Characteristics and Issues of the Japanese Management System: A Case of the Pharmaceutical Industry

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Abstract

This study tried to figure out the issues of the Japanese management system through chief executive officer (CEO) characteristics in the pharmaceutical industry. Comparing 164 CEOs in US, European and Japanese firms from 2001 to 2018, the result illustrated that most of firms promoted their CEOs internally, however, in Japanese firms, one third of the CEOs were selected from the former CEO's family members or an executive who was parachuted from parent firms. In addition, it took over 22 years to be selected as a CEO in Japanese firms, which made the oldest new CEOs and retiring CEOs in the three regions. As for CEO performance, the result indicated that the older the CEO that was selected, the lower the performance, and the longer industry tenure, the lower the performance. These results suggested that the way to select a CEO successor in Japanese management system should be reconsidered to survive in the global market by competing with US and European firms.

Keywords: CEO Succession, CEO origin, Japanese Management Structure, Pharmaceutical Industry

(1) Introduction

The Japanese economy has not been doing well for a while. Since the early 1990s after the asset bubble burst, most of the industry in Japan has suffered a slow growth. The 1990s is called the Lost Decade for Japan, and in the 2000s, the situation is still not optimistic.

Japanese style management has led to complicated problems recently. The life time employment, seniority rules, consensus decision-making and heavily saturated domestic market – innovations of the management are needed, however, the changes are not enough to correct the Japanese economy.

At that time when the Japanese industry needed to catch up with the industry in other nations, such as in Europe and USA, there were clear directions and goals of what to produce, develop and how to be efficient to achieve goals. Business owners concentrated their capital to manage and develop firms to grow. There was no need to have their own will to find goals at that time.

After the asset bubble burst, Japanese firms have had a hard time to keep lifetime employment. Some financial institutions went bankrupt, and foreign stock ownership ratio increased. The cross-shareholding system in

Japanese firms started to be eliminated. Temporary worker's market got bigger, the market of full-time workers with full benefits and the contracted workers without benefits got mixed up. People have been having a hard time to have full benefits as a full-time worker as before.

Leveraging the mobility of the labor market, the organization is now facing the time to change. To gain talented workers, firms need to have options to give out benefits not only to full-time workers but also to temporary contracted workers.

The way to raise the capital from the financial market has changed. Following the change, fair evaluation of employee has started to be required, not like the lifetime employment system that never needed fair evaluation. Therefore, although it is still a part of the change, the Japanese style management is facing a time to be reorganized.

Considering this situation that Japanese firms are facing, this study compares the management of firms in Japan and other regions of the pharmaceutical industry. Pharmaceutical firms are longer-lived, compared with the ones in other industries. Therefore, it is a lot easier to keep the Japanese style management compared with a fast moving industry, such as information technology (IT), services and consumer goods.

In contrast, the investment towards research and development (R&D) of the pharmaceutical industry is enormous, and there is a big chance of development failure. In this sense, it is hard for Japanese pharmaceutical firms to survive competition if they keep the traditional Japanese style management. They are required to communicate more often with investors to raise capital, and to acquire firms internationally to expand their business.

The competition of the market gets severe. It means that firms need the better chief executive officer (CEO)[1] to manage strategy and the firm. They need to be a management professional. If Japanese firms keep their CEO as a traditional firm owner, the growth and development of Japanese pharmaceutical firms will not happen in the future.

This issue can apply to any kind of industry in Japan that needs to expand business internationally, not only to the pharmaceutical industry. The objectives of this study is to identify the characteristics of the management structure of Japanese and Western pharmaceutical firms[2] through CEO characteristics, based on the indicators used in the upper echelon theory by Hambrick and Mason (1984).

In the upper echelon theory, Hambrick and Mason (1984) proposed that the firm performance and the strategic choice could be related with the characteristics of top management team. Their age, career backgrounds, educational levels, socioeconomic roots, financial positions, group characteristics were taken as the indicators, and the range of indicators were extended by many others after the theory presented.

[1] In Japanese firms, a chief executive officer can be called as a representative chairman or a president. In this study, the representative named in their homepage and the press release is defined as a CEO in the Japanese firms.

[2] In this study, the firms in USA, Europe, Canada and Australia are categorized as Western.

Although Hambrick and Mason expanded the research object to the top management team of the firm, CEO is the final decision maker after all. The CEO characteristics obviously relates the firm's strategic choices that connects to the firm performance. Therefore, in this study, the CEO characteristics were studied.

This study is structured as follows. First, it reviews the literature of CEO successions, and the CEO characteristics in Japanese firms, then in Western firms. Second, it develops a framework of the empirical research to study CEO successor characteristics of the pharmaceutical industry both in Japanese and Western firms. Third, it presents the analytic data methodology and findings. Finally, it discusses the implications of this research.

(2) CEO successions in Japanese firms

Tanikawa (2015) examined the internal promotion system of Japanese firms, based on the hypothesis that Japanese firms choose their CEO internally unless they have a serious financial crisis or face globalization[3]. As a result, 70% of CEOs were chosen internally in 1,832 Japanese firms in 2014. In addition, 24.69% of CEOs were founders of the firm. Tanikawa predicted that internally promoted CEOs would decrease compared with 1950's, and it did, however the CEOs were still mostly chosen internally although Japanese firms were expanding their facilities and market share since the 1950's.

CEO succession results would reflect the past conditions of the firm (Datta and Guthrie, 1994). Therefore, the condition of the Japanese firms might have not changed drastically for a while.

Mishina, Hino, Dan, Ashida, Ichinari and Wang (2010) examined CEO characteristics in Japanese, American and Taiwanese firms. It compared the CEO's age, gender, educational background, succession origin and functional background among the three countries. The result showed American and Taiwanese firms had a similar way to choose CEO's especially on their education. While the most of the CEOs in Japanese firms graduated from the brand-named universities and obtained only bachelor degrees, the most of CEOs in American and Taiwanese firms have a masters or doctoral degree, especially in business.

Mishina et. al. (2010) also examined 77 CEO backgrounds of 2009 both in Japanese and American firms. The result shows that one out of 44 Japanese CEOs were hired externally, while 15 out of 33 American CEOs were hired externally. The research concluded that Japanese firms need to reform their CEO succession system to make better use of organization ability.

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[3] The definition of internally promoted CEO is different between Japan and the other countries. In Japan, an internally promoted CEO usually entered the firm right after he/she graduated from the college (newly graduated – "Shin-sotsu".) The others who entered the firm after job hopping were not counted as an internally promoted CEO (Tanikawa, 2015). On the other hand, in the Western studies, an internally promoted CEO means the CEO who were an officer of the hiring firm for more than one year prior to their appointment, and an external CEO means the CEO who had a prior history as an officer at another public firm, had at most one year as an officer at the hiring firm (Nagel, 2015).

Horiuchi (2019) researched educational backgrounds of 318 CEOs in 158 pharmaceutical firms among six international regions from 2001 to 2018. The result showed that only 7% of CEOs in Japanese firms had a degree in management while 20% of the CEOs in the other regions had at least one additional degree. It clearly showed that Japanese firms chose their CEOs not because of their management skill.

Mishina and Hino (2011) pointed out that Japanese firms tend to appoint their CEO at an older age. Many first CEOs, , the founders, had a very long tenure. The successors consequently were older when they held the CEO position. To follow these kind of the CEO appointments, firms developed an older age promotion system. In the end, the experience of the CEO as top management became insufficient and it still continues without any change.

These studies showed that the Japanese firms rarely changed their way to choose a CEO since the high economic growth era of 1950's, while firms rapidly expanded their business globally since the 1960's (Akino, 1997).

(3) CEO successions in Western Firms

Lauterbach and Weisberg (1999) examined 165 top management successions in US firms during the period 1989-1991. The result showed that internal successions were more likely in larger firms, which had good economic performance, and offered top management positions, such as CEO, rather than managers.

Also, Lauterback and Weisberg (1999) found that external CEOs often performed better than internal successions when firms had poor performance. It concluded that internal successions weaken the firm, and it might lead to agency problems even though they chose an optimal successor internally as their CEO.

Datta and Rajagopalan (1998) examined that 134 CEO successions in US manufacturing firms during the period 1977-1987. The result showed that CEOs with higher educational levels related to the industry product differentiation. If the industry growth rate was higher, the age of the CEO successor was lower. However, sample firms included any manufacturing industry, non-diversified, therefore the result did not indicate the history of firms, which might affect organizational inertia (Hannan and Freeman, 1984).

Furtado and Karan (1994) researched the relationship of a firm's performance and the origin of CEO successions. The result showed that external CEOs were hired when the firm had the poor accounting earnings, but this was limited to the small firms.

On the other hand, Georgakakis and Ruigrok (2017) researched 109 CEO succession events in large international European firms between 2005-2009. The result showed externally hired CEOs had the performance advantage when the three conditions came together. One was that the CEO and top management team had similar demographic elements, such as gender, age, and nationality. The other was that the CEO needed to have a variety of experience. The last was that the CEO should have been hired from a well-performed firm in a stable industry.

Thus, CEO characteristic studies in Western firms suggest the reason why a successor was chosen, the levels of the performance outcomes, and which CEO characteristics can produce a successful successor. In contrast, studies in Japanese firms indicate the conditions of Japanese management systems rather than testing a CEO's performance or success to select a CEO. These studies of CEO characteristics in each region demonstrate a great difference in a theory of the management literature.

(4) Problems of Japanese pharmaceutical firms, and CEO successions

The main proposition of this study is to examine the characteristics of CEOs in the pharmaceutical industry of the world leading markets, in particular Western countries and Japan from 2001 to 2018. After the Japanese government announced their direction of promoting globalization of the market in 2013[4], the surrounding environment of pharmaceutical firms in Japan changed drastically[5].

Looking into annual securities reports, many Japanese pharmaceutical firms announced promotion of globalization in their business strategies. In 2014 and 2015, 45% of Japanese pharmaceutical firms announced expanding their business outside of the country[6].

Announcing the globalizing strategies both for research and development and the drug sales, the question is whether the management system in Japanese firms could change. The selection of a CEO successor and required characteristics represent an organizational decision (Datta and Rajagopalan, 1998).

The reason of why this study focuses on the Japanese management system is that the pharmaceutical market in Japan had been shrinking compared with the past, and would continue in the next decades due to an aging population and so on. The needs for internationalization had been identified since 1990's (Mahlich, 2007). According to "The Global Use of Medicine in 2019 and Outlook to 2023" by IQVIA[7], the global pharmaceutical market will exceed $1.5 trillion by 2023 growing at a 3–6% compound annual growth rates over the next five years while Japan's topline growth of -3 to 0%, and the medicine spending in Japan is expected to decline by -3 to 0% through 2023, largely due to the effect of exchange rates and the continued uptake of generics. To survive such an upcoming tough environment, a strong dominant logic is required, followed by a qualified CEO as top management (Bettis and Parahalad, 1995).

In this sense, the CEOs in these regions, Western countries and Japan, should be compared to find the better characteristics to advance in the industry on their own. To compare them, the CEO age, origin, firm and industry tenure are examined following these three hypotheses.

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[4] The Japan Revitalization Strategy (Cabinet Decision on June 14, 2013)

[5] According to Data Book 2019 by Japan Pharmaceutical Manufactures Association, three of top eight Japanese pharmaceutical firms have over 60% oversea sales in 2017, which is increased by 15% to 20% compared to 2013.

[6] The data was collected from the annual securities reports of 62 publicity listed Japanese pharmaceutical firms in 2014 and 2015.

[7] IQVIA is formerly Quintiles and IMS Health, Inc., is an American multinational company serving health information technology and clinical research.

1. CEO Age

The aging population has been a problem in Japan since 1970's, and in 2018, the population aged 65 and over was 28.1 percent of the total population[8]. According to the report of Tokyo Shoko Research, the average age of CEOs in Japan was 61.73 in 2018, which was the oldest since the research was started in 2009. Also, it reports that there was a correlation between the firm performance and the age of the CEO. The older the CEO, the lower the firm performance became[9].

Shimizu (2013) researched CEO ages and firm value of the 2209 Japanese firms of four years in 2001, 2004, 2007 and 2010. The result showed that there was a negative correlation between the age of CEOs and firm value, and the higher negative correlation if the firm had a higher percentage of foreign investors.

These studies indicated that the age of CEOs and the performance could be related negatively. This study examines the performance of each CEOs and their ages.

H1: The age of CEOs is negatively correlated with their own performance.

2. Internal Promotion

Zhang and Rajagopalan (2010) reported that there was no significant difference in firm performance between internal and external CEOs, but in a later year of tenure, there was a difference. External CEOs got a relatively lower performance in their later tenure, while internal CEOs kept the level of their performance continuously.

On the other hand, Zajic (1990) had empirical analysis and the result indicated that internal CEOs had higher-performing firms. However, the data of this study of CEOs and the firms occurred in 1987, so the study needs to be updated.

Therefore, CEO performance could be different depending on tenure, however an internal CEO could perform better.

H2: Internal CEOs performs better in their later tenure than External CEOs.

3. Firm Tenure and Industry Tenure

In this study, it takes the definition of the internal CEO as the CEO who transferred into the firm and worked in another position for a while, for more than one year prior to their appointment. It means that each CEO may have a different tenure length, both in the firm and the industry.

The CEOs should be open-minded regarding firm, however, they become close-minded as their tenures continue (Hambrick and Fukutomi, 1991). It indicates that if the CEO candidate stayed at the firm or the industry longer before being promoted to a CEO, the person may develop a close-minded strategy, which leads to the lower performance.

Karaevli (2007) examined that the relationship of the firm performance and external CEOs for 30 years in the airline industry and chemical industry. The result indicated that the "outsiderness" of the CEO did not affect the firm performance.

[8] Statics of Bureau of Japan, https://www.stat.go.jp/english/data/jinsui/2018np/index.html#a15k30-a [2020/1/23 access]

[9] 2018 nen Shacho no Nenrei Chosa (The CEO age in 2018), *Tokyo Shoko Research*, https://www.tsr-net.co.jp/news/analysis/20190214_01.html [2020/1/23 access]

On the other hand, Richard, Wu and Chadwick (2009) reported that there was a positive relationship with CEO industry tenure and the firm performance, and a negative relationship with CEO firm tenure. They targeted the bank industry, and gained samples by questionnaires.

H3: The CEO's industry tenure has a positive relationship with the CEO performance.

(5) Methodology

In this study, classifying and typifying CEOs in each region based on the data, it tried to find out the management structure difference between Japan and Western countries. For the Western countries, it divided into two regions, USA (plus Canada and Australia) and European countries. Therefore, firms in three regions, Japan, USA and Europe, were compared. Then, it tested the hypotheses to find out any relationship between CEO successor characteristics and their performance.

1. Data and Sample

This study was based on 164 CEOs in 62 pharmaceutical firms that mainly handle molecular drugs[10]. They consist of nine US firms, one in Canada, one in Australia, 20 European firms[11] and 31 Japanese firms that were listed in SPEEDA[12]. These firms were publicly listed, and had at least 20% of sales of prescription drugs (not in generic drugs), according to the SPEEDA industry categories. It means that prescription drug sales and R&D were the main business focus of each firm. This study focused on 18 years from 2001 to 2018, which spans the 2010 problem of the pharmaceutical industry[13].

CEOs of each firm in 18 years were studied at S&P Capital IQ Platform[14] (hereinafter referred to Capital IQ) and a firm's own website. The names of 164 CEOs were found, and data was collected about age of onset as a CEO, age of retirement as a CEO at the firm, their succession origins, their firm term and industry term, and their performance. In 164 CEOs, 74 CEOs were from Japan, 34 from USA, and 56 from European countries.

2. Measures

Age to Become a CEO: Most of the CEO's birth year was able to find over the internet by their names. The birth year was subtracted from the first year of tenure to find the age of accession to CEO of the firm.

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[10] Mainline molecular pharmaceutical firms do not include biopharmaceutical firms because most of biopharmaceutical firms focus only on R&D, and they don't have manufacturing facilities.

[11] 20 European firms consist of four from Germany, three each from England, Ireland and Denmark, two from Switzerland, one each from Italy, Bulgaria, France, Finland and Spain.

[12] SPEEDA: Asia's Leading Platform for Analyses on Companies, Industries and M&A Deals, https://www.ub-speeda.com

[13] Most of the drugs in the table were developed and launched in 1990's, which is the time of Japanese bubble economy. When we look at the years of patent expiry, it shows the expiries happened right before and after 2010. That is called "2010 problem of the Pharmaceutical Industry" in Japan.

[14] Capital IQ: A technology and financial services company that acts as the research division of Standard and Poor's, https://www.capitaliq.com/

Age to Retire as a CEO: The birth year was subtracted from the year of retirement as the CEO of the firm.

Succession Origin: By taking the definition in Western firms, an internal CEO was defined as one who had been employed by the firm for at least 2 years before becoming the CEO of the firm. If the CEO was hired just for the position, or became the CEO within a year since entering the firm, they were defined as an external CEO. Just for additional information, if the CEO was a family member of the former CEO, or parachuted from their parent firm, it was noted.

Firm Tenure: It is the number of years with the firm until they became the CEO since they were hired by the firm.

Industry Tenure: It is the number of years that the CEO had spent in the pharmaceutical industry.

CEO Performance: In this study, the compound annual growth rate (CAGR) for sales during the tenure of each CEO was used to examine CEO performance. Generally, stock prices are the central measure of CEO performance. However, stock prices can be influenced by various factors other than CEO's capability. Having the assets growth does not mean that the firm's stock price growth. Profit is always controllable even though operating profit.

The sales growth reflects CEO's strategy rather than the various market factors. It can reflect the strategy such as mergers and acquisitions as the result of the performance. Since it is difficult to compare the CEOs in the large period, CAGR for sales is used in this study.

The performance of the CEO in 2000 would have been represented at the balance of 2001. This study made the balance of 2001 as the starting period of CAGR. CAGR was calculated as below.

$$\text{CAGR}=\sqrt[n]{(\text{Ending balance} \div \text{Beginning balance})}-1 \quad n=\text{Number of Years}$$

To test the hypotheses 1-3, a correlation was established for describing the relationship between two mutually numerical dependent variables. A multiple regression was used to measure the relationship of internal or external CEOs and the other variables.

(6) Results

1. Descriptive Statics and The Management Structure Difference by Regions

The first step in the analysis was to generate the descriptive statics and to compare the variables by regions. Table 1 shows the descriptive statics of the sample data. It clearly indicates that Japanese CEOs had the highest number across the variables. The CEOs in Japanese firms started their position at their older age, the oldest was at 76, and ends their position at the oldest in the comparison.

Table 1: CEO characteristics of the pharmaceutical industry: 2001-2018

		Age to Become the CEO				Age to Retire as the CEO				Firm Tenure				Industry Tenure			
		Mean	S.D.	Min.	Max.	Mean	S.D.	Min.	Max.	Mean	S.D.	Min.	Max.	Mean	S.D.	Min.	Max.
Total		53.06	7.80	32	76	61.59	7.13	42	81	15.78	14.53	0	42	21.10	13.04	0	56
Area	Japan	55.27	8.87	36.00	76.00	65.41	6.55	42.00	81.00	22.61	14.80	0.00	42.00	24.50	14.31	0.00	56.00
	USA	52.71	6.68	32.00	63.00	59.50	6.18	45.00	68.00	12.29	12.85	0.00	33.00	22.68	10.18	0.00	39.00
	Europe	50.38	5.98	38.00	63.00	57.89	5.91	42.00	72.00	8.88	10.81	0.00	36.00	15.66	11.06	0.00	36.00

Table 2: Breakdown of CEO Origins by Regions

		Internal		External		Unknown	
		Sum	% /Total	Sum	% /Total	Sum	% /Total
Total(N=164)		119	72.6%	37	22.6%	8	4.9%
Area	JPN	64		5		5	
	USA	24		10		0	
	Europe	31		22		3	

Table 3: The Detailed Breakdown of CEO Origins by Regions

	Internal	Internal & Family	Internal & Parachuted	External	External & Family	External & Parachuted	Unknown
Japan	45	14	5	3	1	1	5
USA	24	0	0	10	0	0	0
Europe	29	2	0	22	0	0	3

In Japanese firms, if the CEO was old at accession, he had the shorter tenure[15]. A few Japanese CEOs were promoted to the position over 69 years old, and retired after a few years. However, the average CEO tenure was the longest in Japanese firms when comparing the age to become the CEO and the age to retire as the CEO.

In contrast, the CEOs in European firms stayed in their firms and the industry for the shortest in these regions. The mean age to become a CEO was 50.38 years old, which was the youngest among three regions.

The mean age to retire as a CEO was 65.41 years old in Japanese firms while the mean of other two regions was under 60 years old. It is obvious that Japanese firms tend to have older CEOs, and they keep their position till they get around 65 years old. It might relate to the official retirement age of Japanese firms. They set the retirement age at 65 years old.

The mean of the firm tenure was different by each region. Japanese CEOs had the longest firm tenure of 22.61 years. For the USA, 12.29 years, and the shortest was 8.88 years in Europe This result indicates that Japanese firms preferred a CEO promoted internally as well as working for the same firm for a long time, which correlates to the age of accession and retirement as the CEO. If the three regions are compared, the USA firms appear to prefer CEOs who knew the firm well rather than being a new employee. In contrast, European firms had only about 8 years, which meant that no matter how long the person was in the firm, they had a chance to become a CEO if they had the necessary ability.

Regarding industry tenure, in Europe and the USA, it was at least 15 years of industry experience in the pharmaceutical industry. The means of the industry tenure was 22.68 in USA and 15.66 in Europe. It means that the CEOs needed around 7 to 10-years' experience in the industry before joining the firm, and spent another 8 to 10 years before becoming the CEO.

On the other hand, Japanese CEOs had the almost same firm and industry tenure. It means

15 No female CEO was found in Japanese firms in the data.

that most of them did not work in any other firm nor the industry before becoming the CEO of their firm. Compared with USA and Europe, it took more than double to become the CEO.

Table 2 shows the breakdown of CEO origins. The Japanese firms had the most internal CEOs, and European firms had the most external CEOs. USA firms made their CEO profile available, therefore there was no unknown. It indicated that the firms communicated well to the stakeholders without hiding any career history of the CEOs.

Overall, most of the CEOs were internal CEOs. However, as Table 3 shows, Japanese firms were unique. There were 14 internal and family origin CEOs. It meant that the CEO's family member was working for the firm for a while, then they succeeded them in the CEO position after their relative resigned. Obviously, it indicates that most of Japanese firms still depend on family style business while firms need a strong presence for investors, in contrast to the way that European and USA firms were taking.

Thus, by observing the data of CEO origins, it shows the difference among these three regions. Japanese firms preferred CEOs who stay in the firm for a long time and promote them internally, and it takes more than 22 years on average. Accordingly, the age of the CEO was higher both to start and retire. US firms preferred CEOs who were in the same industry for more than 22 years on average, but firm tenure was half of the industry tenure. European firms preferred the CEOs with much shorter tenure both in the firm and the industry.

72.6% of CEOs were internally promoted, however, the characteristic itself was different among the regions. USA and European firm had similar CEO successor origins, no matter if they were hired internally or externally, there was no relationship with the other stakeholders such as a family member and a parent firm. On the other hand, Japanese firms mainly hired CEOs internally but one third of the CEOs were related with the family and parent firms.

2. CEO Successor Characteristics and CEO Performance

Table 4 shows the correlations. There was a negative correlation between the age to become the CEO and CEO performance (r=-0.229). It means H1 was supported, the older the CEO, the lower the CEO performance although table 5 shows the age was not significant for CEO performance.

The other finding was that there was a negative correlation with industry tenure and CEO performance (r=-0.178). It indicated that the longer industry tenure, the lower the CEO performance, which did not support H3.

To test H2, the multiple regression analysis was used. Table 5 shows the result. It showed that there was no relationship with an internal, or an external CEO and the performance. Thus, H2 was not supported.

(7) Conclusion

This study classified the CEOs in three leading pharmaceutical markets, Japan, USA and Europe, and compared their characteristics. Also CEO performance was examined through the characteristics to find out any relationship with their performance.

The literature regarding CEO successions of each region was reviewed. The Japanese firms had not changed their way to select a CEO since the 1950's, and the analysis in this study showed the exact same way persists in the 2000's, even in the pharmaceutical industry which was directed to expand their business internationally.

Table 4: Correlations

	1	2	3	4
1 Age to Become the CEO				
2 Age to Retire as the CEO	.484**			
3 CEO Performance	-.229**	-0.159		
4 Firm Tenure	.451**	.317**	-0.112	
5 Industry Tenure	.611**	.317**	-.178*	.626**

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 5: Multiple Regression Analysis Summary

Variable	B	Beta	p
Age to Become the CEO	-0.511	-0.275	0.150
Age to Retire as the CEO	-0.361	-0.148	0.266
Firm Tenure	0.328	0.296	0.205
Industry Tenure (before becoming CEO)	-0.142	-0.118	0.580
Internal	2.978	0.059	0.813
External	8.693	0.149	0.567

a. Dependent variable: CEO Performance

In contrast, the literature of Western firms mostly examined the CEO characteristics to be a successful successor. Taking some of the results of the studies, this study built hypotheses to examine them in the pharmaceutical industry in 2000's.

As a result, Japanese firms mostly chose older, internal CEOs with longer industry tenure, which reveals a lack of experience in other environments. Also one third of the CEOs were chosen from among the former CEO's family or stakeholders of the parent firm. The Japanese firms were continuously operated by someone who was close-minded. It might have worked well when the pharmaceutical industry targeted only domestic markets. However, in 2000's, the expansion to a global market was deemed critical to survive among international firms.

On the other hand, when reviewing the analysis, there was no relationship with CEO origin and the performance. It meant that whether the CEO was internal or external was not a reason for low performance. Long industry tenure had a relationship with performance, therefore, the lack of the knowledge of the business outside the industry would be a reason of the low performance.

Growing firms expand the scale of the organization, and make functioning complicated. Therefore, the manager will not be able to manage the firm efficiently by expanding and increasing the complexity, if he/she who has involved himself/herself only in a specific business. In short, a management professional is needed for the larger firms.

The competitive environment of firms affects the selection requirements of CEOs. Whether if it's an exclusive or oligopolistic market, a global or a domestic market, a competition in the small businesses or the adjustment for the rapid change in the environment that surrounded the firm, all of these issues are indispensable conditions to select a CEO, and the Japanese management system may not survive fully with their current approach. The result of this study contributed to reconsider the condition of Japanese management system in the global market.

(8) Limitations

There were limitations of this study. One was that it was limited to the pharmaceutical industry, while most of the industry in Japan faced the same situation of expanding into the global market.

Secondly, the hypotheses were tested by correlations and multiple regressions, however, the results did not show the casual relationship. This study tried to find any relationship among various CEO characteristics and the performance. The way to analyze the relationship can be researched more.

Thirdly, it did not compare business strategies such as expenditure for merger and acquisition and R&D, which is the most important business strategy in the pharmaceutical industry. Depending on their characteristics, the way to spend on the strategies may have a difference.

References

Akino, Shoji. (1997). Internationalization of Japanese Company and Change of Production System (III), *Rikkyo Economic Review*, No. 51, p. 29 – 55

Bettis, Richard A. and Prahalad C. K. (1995), The Dominant Logic: Retrospective and Extension, *Strategic Management Journal* Vol. 16, No. 1, pp. 5-14

Datta, Deepak K. and Guthrie, James P. (1994). Executive Succession: Organizational Antecedents of CEO Characteristics, *Strategic Management Journal*, Vol. 15, p. 569-577

Datta, Deepak K. and Rajagopalan, Nandini (1998). Industry Structure and CEO Characteristics: An Empirical Study of Succession Events, *Strategic Management Journal*; Vol. 19: p. 833-852

Furtado, Eugene, P.H. and Karan, Vijay. (1994). Internal/External Top Management Succession and Firm Performance, *Journal of Financial and Strategic Decisions*, Vol. 7, No. 1, p. 1-13

Georgakakis, Dimitrios and Ruigrok, Winfried (2017). CEO Succession Origin and Firm performance: A Multilevel Study, *Journal of Management Studies*, Vol. 54, p. 58-87

Hambrick, Donald C. and Fukutomi, Gregory D.S. (1991). The Seasons of a CEO's Tenure, *Academy of Management Review*, Vol. 16, No. 4, p. 719-742

Hambrick, Donald C. and Mason, Phyllis A. (1984). Upper Echelons: The Organization as a Reflection of its Top Managers, *Academy of Management Review,* Vol. 9; Issue 2: p. 193-206

Hannan, Michael T. and Freeman, John. (1984). Structural Inertia and Organizational Change, *American Sociological Review*, Vol. 49, No. 2, pp. 149-164

Horiuchi, Miyano. (2019). CEO characteristics comparison by region in the pharmaceutical industry: 2001-2018: Why do Japanese pharmaceutical firms have the low sales growth rate in 18 years? *Rikkyo DBA Journal*, No. 10, p. 59-71

Karaevli, Ayse. (2007). Performance Consequences of New CEO 'Outsiderness': Moderating Effects of Pre-and Post-Succession Contexts, *Strategic Management Journal*, Vol. 28, p. 681-706

Mahlich, Jörg. (2007). The Japanese Pharmaceutical Industry in Transition: Has Higher Research Orientation Resulted in Higher Market Value? *Asian Business & Management,* Vol. 6, p. 75–94

Mishina, Kazuhiro and Hino, Emiko. (2011). Nihon Kigyo no Keieisya (The CEOs in Japanese firms), *Nihon Rodo Kenkyu Zasshi*, No. 606, p. 6-19

Mishina, Kazuhiro, Hino, Emiko, Dan, Katsuya, Ashida, Akito, Ichinari, Ayako and Wang Pai Chun (2010). Kigyo Toppu no Bakku Guraundo: Nichi-Bei-Tai Hiaku (Who are the Top Executives? Japan, United States, and Taiwan), *Kokumin Keizai Zasshi*, 201(3), p. 29-47, 2010-03

Nagel, Gregory L. (2015). Agency Conflicts for Outside Directors During CEO Selection, *The Journal of Accounting and Finance*, Vol. 15, Issue 6, pp. 17-45

Shimizu, Hajime. (2013). Do Manager's Age and Globalization have any Impact on Firm Value? *Osaka Keidai Ronshu*, Vol. 64, No. 6, p. 235-246

Tanikawa, Toshiro. (2015). Nihon teki Keiei ni Kansuru Ichi Kousatsu (A study of Japanese-style Management - focusing on internal promotion system), *Rikkyo Bulletin of Business*, No. 12, p. 59-71

Zhang, Yan and Rajagopalan, Nandini. (2010). Once an Outsider, Always an Outsider? CEO Origin, Strategic Change, and Firm Performance, *Strategic Management Journal*, Volume31, Issue3, p. 334-346

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Appearance Process of Relationship between Public Financial Reports and Local Government Bond Market: A Statistical Study Using U.S. States' Data

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Abstract

The purpose of this study is to examine the time-dependent relationship between the financial conditions and bond ratings of local governments and construct hypotheses about the process. To achieve this purpose, this study investigates the time-series behavior of the relationship between financial indicators calculated from net asset information of Public Financial Reports (PFRs) prepared under the Governmental Accounting Standards Board (GASB) Statement No. 34 and state bond ratings, referred to herein as the NA-BR relationship. Results of the empirical analysis show that the NA-BR relationship appears gradually, not immediately, after the implementation of GASB Statement No. 34. The gradual appearance suggests that the NA-BR relationship is caused by gradually increasing factors, such as the variance of the financial conditions of U.S. states.

Keywords:
Public Accounting, Local Government, Financial Condition, Local Government Bond

(1) Introduction

In 2015, the Japanese central government's Ministry of Internal Affairs and Communications (MIC) released uniform accounting standards for local governments, which required that public financial reports (PFRs) be prepared on a full accrual basis no later than the fiscal 2017 (MIC, 2015). This implementation of uniform, full accrual-based accounting standards for local governments is an important event in the history of Japanese local autonomy for several reasons. Prior to the early 2000s, Japanese local governments operated solely with a cash-based accounting system. In addition, PFRs lacked comparability among local governments even after the MIC published its first accounting guidelines in 2001.

Several studies have pointed out

that accrual-based PFRs are useful for assessing the financial condition of local governments (Wang *et al.*, 2007; Rivenbark *et al.*, 2010). Of particular importance is that PFRs enable us to measure stock-based financial conditions that are difficult to be measured using a cash-based accounting system. Thus, with the implementation of accrual-based PFRs in Japan, investors in bond markets are able to obtain information of comparable stock-based financial conditions.

The main focus of our research is the usefulness of accrual-based PFRs for assessing the financial condition of local governments. In this study, we focus on the relationship between government financial condition and credit risk, which is typically represented by bond ratings. Previous studies on U.S. local governments shed light on the relationship between PFRs and bond ratings and showed that financial indicators calculated using information in the PFRs of U.S. local governments have a significant effect on bond ratings (Plummer *et al.,* 2007; Johnson *et al,* 2012; Pridgen and Wilder, 2013; Callahan and Waymire, 2015). Haraguchi (2018a) pointed out that although the relationship between the net asset information from PFRs and bond ratings (NA-BR relationship) was apparent for U.S. states, there was no NA-BR relationship in Japan in 2012 (before the implementation of the uniform accounting standards).

We would like to emphasize that uniform accrual-based PFRs were fully implemented in the U.S. in 1999 by the Governmental Accounting Standards Board (GASB), and the NA-BR relationship appeared in 2012. This suggests the possibility of the future appearance of the NA-BR relationship in Japan(1).

Japanese interest rates significantly depend on bond ratings (Nakazato, 2008). The possibility of the future appearance of the Japanese NA-BR relationship indicates that Japanese local governments with lower net asset ratios should immediately assess the risk of decreasing bond ratings. The investigation of the possibility of the appearance of the NA-BR relationship is very important in Japan, where the uniform accrual-based accounting standard was just implemented in 2017.

Clarifying the factors that cause the appearance of the NA-BR relationship (hereafter, appearance factors) is necessary to investigate the possible appearance of such a relationship. No studies have ever tried to clarify these factors. This study uses a time-series analysis of the NA-BR relationship for clarification. If the relationship appears immediately after the implementation of the uniform accounting standards, the factors must

(1) It should be also noted that the accurate prediction of this appearance is difficult because there are many differences between Japan and the U.S. in terms of autonomy and the local government bond markets.

be ones that are sufficiently present at the time of implementation. On the other hand, if the relationship appears gradually, the factors must be ones that are not present at implementation but gradually increase over time. Therefore, it is necessary to elucidate whether the relationship appears immediately or gradually after implementation in order to clarify the appearance factors. Subsequently, we must develop the hypothesis to explain the appearance process (appearance hypothesis) and verify it. However, as no studies have ever tried to conduct a time-series analysis of the NA-BR relationship, the appearance hypothesis has never been developed.

The purpose of this study is to develop the hypothesis through a time-series analysis of the NA-BR relationship in U.S. states and obtain implications for Japan. The reason to conduct this investigation in the U.S. are as follows. First, U.S. states are appropriate for the benchmark because the appearance of the NA-BR relationship has already been clearly observed. Second, sufficient data is available as the uniform accounting standard of PFRs was implemented 20 years ago, according to Statement No. 34 of the GASB (GASB34). Third, there are several studies that have investigated the relationship between PFRs and bond ratings, and the accumulated knowledge is helpful for developing the hypothesis.

(2) Method

We define a financial indicator and a bond rating indicator to numerically evaluate the net asset information of U.S. states and bond ratings in order to analyze the NA-BR relationship.

1. Financial Indicators

There is little agreement on what indicators definitively represent financial condition (Wang *et al.*, 2007, p.4). We use net asset ratio (NAR) to investigate the NA-BR relationship, as defined in Wang *et al.* (2007, p.8) and also used in Haraguchi (2018a). The definitions of NAR are given below:

Net asset ratio (NAR)
= Restricted and Unrestricted net assets / Total assets
= (Net assets – (Invested in capital assets, net of related debt))/Total assets[2]

There are several reasons to use NAR in this study, the first of which is the importance of NAR in U.S. states. To detect the NA-BR relationship, we have to select financial indicators that significantly affect bond ratings. NAR is adequate since the significance of the effect of NAR on bond ratings has been already detected in a past study (Haraguchi, 2018a). Second, as the purpose of this study is to obtain implications for Japan through the time-series behavior of the NA-BR relationship in the U.S., the

[2] "Restricted and Unrestricted net assets" is equivalent with "Net assets- (Invested in capital assets, net of related debt)" (GASB, 1999).

international comparability of NAR is important. Our analysis requires us to use indicators with sufficient international comparability between the two countries because the results of this study should be able to be compared with Japanese results. Thus, in order to confirm comparability, the indicators in this study must be verified to determine whether modification is necessary considering the characteristics of autonomy in each country. Using NAR allows us to develop an argument more efficiently than selecting (or developing) a new indicator, since the comparability of NAR has been already established in Haraguchi (2017). Third, Wang *et al.* (2007) was one of the representative studies that developed the method to measure the financial condition of states using PFRs. This particular study has been described as "the first large-scale study since the adoption of GASB34" (Stone *et al.*, 2015, p.95), and a number of studies have since made reference to it (see Kravchuk and Stone, 2010; Johnson et al., 2012; Clark, 2015; Tantardini *et al.*, 2017).

2. Bond Ratings

We introduce a new indicator to numerically evaluate bond ratings, "RATING." Table 1 shows the definition of RATING.

Table 1 Definition of RATING

bond rating by S&P	AAA	AA+	AA	AA-
RATING	8	7	6	5
	A+	A	A-	BBB
	4	3	2	1

The ratings of general obligation bonds issued by S&P are used to calculate RATING. A higher RATING indicates a state's greater ability to issue bonds.

3. Evaluation of the NA-BR relationship

We calculate Pearson's correlation coefficients for each year to evaluate the NA-BR relationship using NAR and RATING (COR_NAR). The correlation coefficients between financial indicators and bond rating indicators have been calculated in previous studies (Plummer *et al.*, 2007; Pridgen and Wilder, 2013; Callahan and Waymire 2015); however, none of these studies examined the time-series behavior of states' COR_NAR. The NARs of each year are calculated using the PFRs of the respective fiscal years. The RATINGs of each year are calculated using bond ratings at the end of each year.

4. Data

To examine the time-series behavior of the NA-BR relationship over the long term, we selected 613 PFRs from U.S. states for a 14-year period (2002–2015) in which S&P issued bond ratings for general obligation bonds. Table 2 shows a list of PFRs and bond ratings; the former have been collected from state government websites, and the latter from the S&P website "History of U.S. State Ratings." The bond ratings at the end of each year (after PFRs of each year are published and publicly released) are used to calculate COR_NAR. All these PFRs are based on GASB34 and have comparability.

Table 2 List of PFRs used in this study

States	BBR	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	n
Alabama	**G1**				●	●	●	●	●	●	●	●	●	●	●	11
Alaska	G2		●	●	●	●	●	●	●	●	●	●	●	●	●	13
Arizona	**G1**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Arkansas	G2		●	●	●	●	●	●	●	●	●	●	●	●	●	13
California	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Colorado	G2						●	●	●	●	●	●	●	●	●	9
Connecticut	G2								●	●	●	●	●	●	●	7
Delaware	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Florida	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Georgia	G2											●	●	●	●	4
Hawaii	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Idaho	G2							●	●	●	●	●	●	●	●	8
Illinois	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Indiana	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Iowa	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Kansas	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Kentucky	G2					●	●	●	●	●	●	●	●	●	●	10
Louisiana	G2									●	●	●	●	●	●	6
Maine	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Maryland	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Massachusetts	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Michigan	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Minnesota	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Mississippi	**G1**		●	●	●	●	●	●	●	●	●	●	●	●	●	13
Missouri	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Montana	**G1**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Nebraska	G2					●	●	●	●	●	●	●	●	●	●	10
Nevada	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
New Hampshire	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
New Jersey	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
New Mexico	G2		●	●	●	●	●	●	●	●	●	●	●	●	●	13
New York	G2		●	●	●	●	●	●	●	●	●	●	●	●	●	13
North Carolina	**G1**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
North Dakota	G2			●	●	●	●	●	●	●	●	●	●	●	●	12
Ohio	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Oklahoma	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Oregon	G2				●	●	●	●	●	●	●	●	●	●	●	11
Pennsylvania	G2				●	●	●	●	●	●	●	●	●	●	●	11
Rhode Island	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
South Carolina	**G1**						●	●	●	●	●	●	●	●	●	9
South Dakota	G2				●	●	●	●	●	●	●	●	●	●	●	11
Tennessee	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Texas	**G1**						●	●	●	●	●	●	●	●	●	9
Utah	G2					●	●	●	●	●	●	●	●	●	●	10
Vermont	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Virginia	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Washington	G2				●	●	●	●	●	●	●	●	●	●	●	11
West Virginia	G2								●	●	●	●	●	●	●	7
Wisconsin	**G1**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
Wyoming	G2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14
n		28	33	34	39	42	45	46	48	49	49	50	50	50	50	613

(4) Results and Hypothesis Development

For further analysis, we statistically examine the time-series behavior of the NA–BR relationship using the confidence intervals of COR_NAR and COR_OR. The confidence intervals are calculated using Fisher's Z transformation. The results are shown in Figure 1. The error bars show the 95% confidence intervals of COR_NAR (Figure 1). The broken horizontal lines show the minimum value of the 95% confidence interval of COR_NAR in 2015.

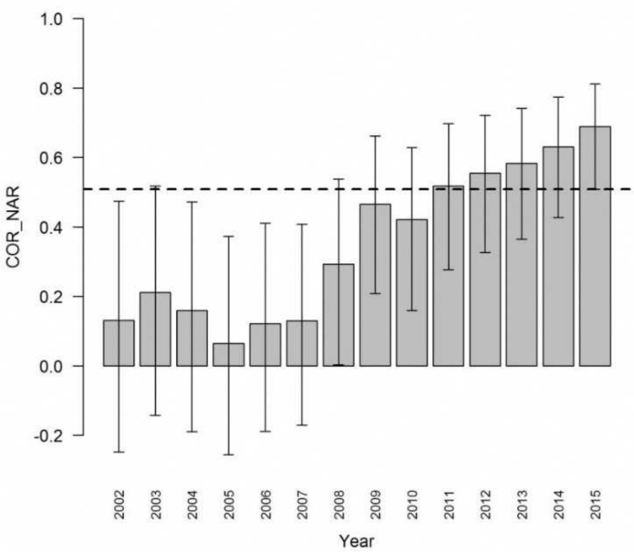

Figure 1 Time-Series Analysis of COR_NAR

In Figure 1, COR_NAR in 2002 is not significant because the minimum value of COR_NAR is less than zero. In addition, all of variation widths of COR_NAR in one year are not significant because all error bars overlap with the following year.

On the other hand, COR_NAR increases gradually over time; this long-term increase is significant because COR_NAR in 2015 is significantly larger than all COR_NAR values prior to 2008, with the exception of 2003 (i.e., the minimum value of the confidence interval of COR_NAR in 2015 is larger than the maximum value of the confidence interval of COR_NAR in 2007 and earlier).

From these results, we develop the hypothesis that the relationship (i.e., the correlation coefficient between the stock measurement (NAR) and the bond rating measurement (RATING)) appears gradually, not immediately. We call this hypothesis the "gradual-appearance hypothesis."

The gradual-appearance hypothesis insists that the appearance of the NA–BR relationship has been caused by gradually increasing appearance factors. This implication (i.e., "gradual increasing of the appearance factors") is an important key to clarifying the appearance factors. As previously noted, as Japan has only recently completed the implementation of full-accrual PFRs, clarifying the appearance factors is very important because they can indicate the future Japanese NA-BR relationship.

(5) Discussion

1. Variance of NAR

We focus on the NAR variances to clarify appearance factors because of their importance to the relationship-appearance. When the differences in the financial conditions (i.e., NARs) among local governments are small, they will have little effect on bond ratings because the ratings are not continuous; they are discrete values. In addition, rating agencies would not reflect NARs in bond ratings if the NAR variances are not material enough. That is to say, a sufficient variance of PFR indicators among local governments is necessary for the appearance of the NA–BR relationship. We also note that the NAR variances indicate the differences in the financial conditions of the individual states, and these are very interesting values to discuss policies related to autonomy. Other appearance factors will be discussed in Section 6 as areas for future research.

If the NAR variances have increased gradually over time, the gradual-appearance hypothesis and the assertion that NAR variances cause the NA–BR relationship can be explained self-consistently. Figure 2 shows the time-series analysis of the NAR variances.

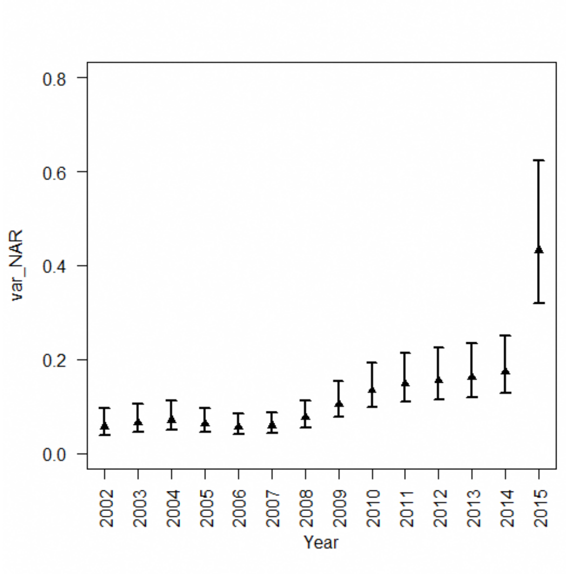

Figure 2: Time-series analysis of var_NAR

The variance "var_NAR" in each year is shown as ▲, and the error bars show the 95 % confidence intervals. Figure 3 shows the plots of NARs and RATINGs in each year. The confidence intervals of var_NARs are calculated using the chi-square distribution.

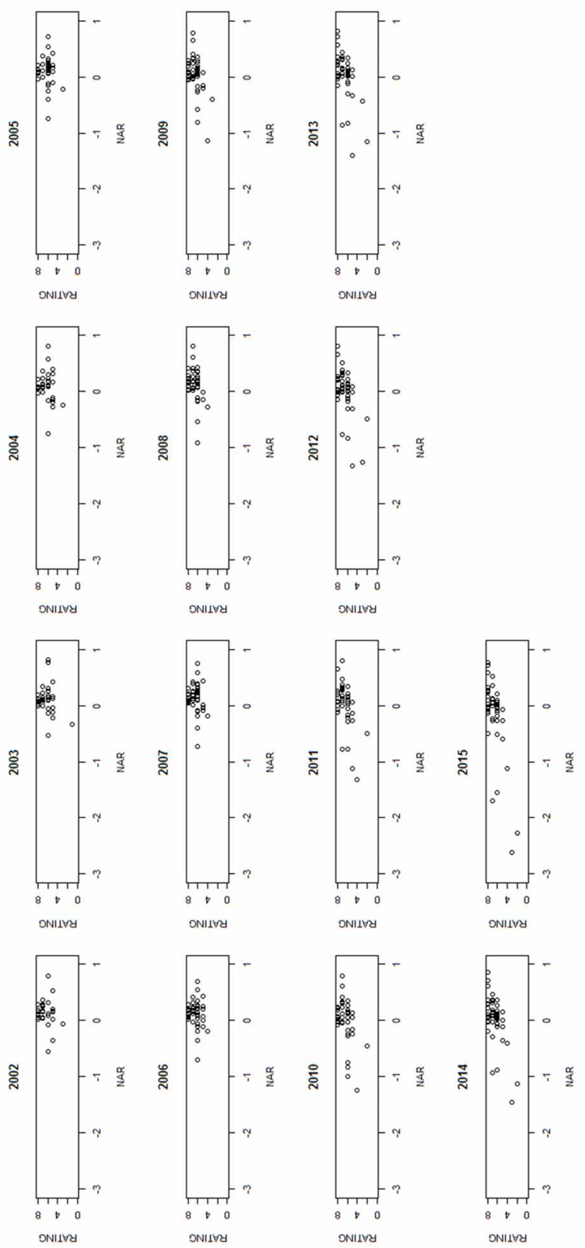

Figure 3 Plots of NAR and RATING

Figures 2 and 3 illustrate the following observations. First, var_NARs in the U.S. tend to increase over time (i.e., the divergence of NARs). This result indicates that the stability of the stock-based financial condition tends to gradually decrease, and states with both higher and lower NARs have existed simultaneously in recent years. As shown in Figure 3, there are several states in which NARs have decreased significantly over time, and these states (with much lower NARs) have driven the divergence of NARs in the U.S.

Second, the differences in var_NARs for each consecutive two-year period are not significant between 2002 and 2014; however, the difference in var_NARs between 2002 and 2014 is significant. This result shows that NARs in U.S. states have diverged over the long term (over ten years) (hereafter, the long-term divergence of NARS). On the other hand, the difference in var_NARs between 2014 and 2015 is significant, unlike in other time periods. The divergence of NARs between 2014 and 2015 is assumed to be caused by the restatement of the net asset information for the beginning value of 2015 PFRs according to the adoption of GASB68, which changed the accounting rule for defined-benefit pension plans.

We recalculate NARs and var_NARs by adding (subtracting) the decreased (increased) value of net assets derived from these restatements to the numerator of the NARs in 2015 and verify the effect of these restatements. The difference in recalculated var_NARs between 2014 and 2015 is not significant. This result strongly suggests that the significant difference between 2014 and 2015 is caused by the restatements of GASB68 (hereafter, the restatement-caused divergence).

The restatements pertained to the accounting treatment of the related debts derived from all activities since the establishments of local governments according to the change of the accounting rules. This resulted in the identification of hidden debt. The restatement-caused divergence is a result of reflecting the financial conditions of each state more appropriately following the PFR restatements (i.e., the identification of hidden debt according to the adoption of GASB68). S&P incorporated GASB68 for analyzing pension liabilities and deciding credit bond ratings for states according to S&P (2013).

Both of these two types of divergences are caused by long-term NAR variations (greater than one year). This means that the significant increase of var_NAR in the U.S. was caused by the long-term accumulation of NAR variations between 2002 and 2015.

The fact that the differences in var_NARs over the long term (short term) are significant (not significant) means that the short-term variations of NARs are significantly lower than long-term variations. The smaller differences in short-term var_NARs (the larger differences in long-term var_NARs) arose from the fact that there are few (several) states in which their NARs varied drastically.

States receive cash inflows from tax revenues each year. This is consistent with our results suggesting that short-term variations in stock-based financial conditions (NARs) are small. On the other hand, it is interesting that the accumulation of these small short-time variations (i.e. long-term variations) seriously worsened states' financial conditions.

As stated above, the correlation coefficients of NARs and RATINGs have been significantly positive in recent years. The change in financial conditions significantly affects states' financial management, as rating agencies tend to decrease the bond ratings of states with worsened financial conditions.

Following the previous discussion, we would like to emphasize the importance of PFRs in contrast to the cash-based financial statements historically used in Japan. Financial statements of local governments are divided into cash-basis financial statements and accrual-basis financial statements (i.e., PFRs in this study). Cash-basis financial statements are able to measure single-year variations in financial conditions. However, they are not able to measure the cumulative value of these variations. As stated above, the single-year variations of states' financial conditions are generally small, and the measurement of the accumulated variations over a longer period is necessary to detect any serious deterioration of financial conditions.

Therefore, cash-basis financial statements are not able to detect material deterioration in financial conditions. On the other hand, accrual-basis financial statements (PFRs) might be able to detect them. Our findings suggest the necessity of PFRs to measure stock-based financial conditions of local governments and the difficulty of measuring them without PFRs. The measurability of PFRs is important for rating agencies in deciding bond ratings.

It should be noted that there are some restrictions for PFRs and their usefulness for rating agencies. PFRs must have sufficient accuracy and comparability between each state since credit bond ratings are relative valuations. Without these, PFRs cannot be used for deciding bond ratings, particularly in cases where PFRs are based on different (not uniform) models.

PFRs based on the uniform accounting standards with sufficient accuracy and comparability provide information on stock-based financial conditions and variances (i.e., detection of states where NAR has deteriorated). This information contributes to the bond rating decision of rating agencies and should result in downgrades for states with worsened financial conditions and the appearance of the NA-BR relationship.

This result sheds light on the importance of measuring the stock-based financial condition of states and the decision-usefulness of PFRs. In addition, the gradual increase of var_NAR self-consistently explains our findings; NAR variance is one of appearance factors of the NA-BR relationship, and the NA-BR relationship appears gradually over time.

2. Implications for Japan

With specific reference to the relevance to Japan, Haraguchi (2018b) revealed that the NAR variance of Japanese local governments was significantly smaller than that of U.S. states in 2012. Haraguchi (2018b) also pointed out that strict balanced budget requirements among Japanese local governments, as defined by Japanese laws, can decrease the NAR variance. The Japanese Local Autonomy Law states that the expenses in each fiscal year shall be financed with the revenues of the current fiscal year. In addition, the Japanese Local Finance Law asserts that the purpose of issuing debt is limited, in principle, to the purchase or maintenance of infrastructure. These pieces of legislation effectively restrict all Japanese local governments from carrying over deficits into the next fiscal year and signify that the balanced budget requirements of Japanese local governments are very strict. Haraguchi and Oishi (2019) investigated NAR variances in Japan and the U.S. They found that the NAR variance in Japanese local governments is much smaller than in U.S. states in both 2012 (before implementation of uniform accounting standards) and 2017 (after implementation). These results suggest that the variances of NARs in Japan are generally smaller than in the U.S. However, the possibility of future divergence of NARs in Japan cannot be denied.

We should also focus on the significant effect of the restatements by GASB68 in the U.S. There is no possibility for similar restatements in Japan since Japanese local governments do not owe debts related to defined benefit pension plans; however, there are several possibilities for other hidden debts unique to Japan. For example, Japanese uniform accounting standards allow local governments to account for obligations of lump-sum payments as the total value of lump-sum payments assuming that all employees retire at the end of the year. The amount of these obligations may vary significantly when the accounting standards require the use of the discounted cash flow method.

Another example is an obligatory assurance (OA) for a multi-year project of Japanese local governments. The Japanese Local Autonomy Law states that a local government must obtain a local assembly's approval for OAs when there is a possibility of future payments from the local government. Japanese uniform accounting standards require local governments to count only defined OA amounts as obligations, and undefined amounts of OA are not included. This means that amounts of future payments that can vary slightly, such as payments for construction projects continuing for several years, may not be accounted for as obligations. These unaccounted future payments may cause obligation amounts to vary when accounted for using adequate estimations.

Our results suggest that future amendments of Japanese accounting standards that result in PFR restatements may cause variations in stock-based financial indicators of local governments. As stated above, we note that single-year variations in financial conditions of U.S. states are generally small, and those of Japanese local governments may be similar because of the stabilizing mechanisms used in local government finance, such as tax allocations from the national government. Thus, the possibility of the future divergence of Japanese NARs may be decreased but cannot be denied, suggesting the possible appearance of the NA-BR relationship in Japan.

The implementation of Japanese uniform PFR accounting standards reveals the stock-based financial condition of Japanese local governments with sufficient comparability and can provide useful information to rating agencies for bond rating decisions. As stated above, our results suggest that the variances in stock-based financial conditions, observed through the implementation of the uniform standards, caused the gradual appearance of the NA-BR relationship in U.S. Not only can PFRs based on uniform accounting standards bring useful information for the ratings decision, they form a core part of the information infrastructure of the bond market in Japan.

(6) Summary and Future Research

This study investigated the time-series behavior of the NA-BR relationship in U.S. states in order to construct a hypothesis that explains the appearance process of the relationship. We built the “gradual-appearance hypothesis” stating that the NA-BR relationship appears gradually, not immediately, after the implementation of the uniform accounting standards. In addition, we revealed the possibility that the gradual appearance of the NA-BR relationship is caused by the gradual increase of the NAR variance by confirming that the variance of NARs in the U.S. increased over time. Our results suggest that PFRs based on the uniform standard bring information to rating agencies that is useful in deciding bond ratings. It is also noted that these results imply the possibility of future appearance of the NA-BR relationship in Japan and contribute to establishing the significance of the implementation of the uniform standards. This study offers a new perspective on time-series behavior for this topic, and the evidence we provide will contribute to clarifying the utility of PFR information in bond markets.

However, additional studies are needed for further verification of the gradual-appearance hypothesis. First, a time-series analysis of the Japanese NA-BR relationship is needed, especially after the implementation of the uniform PFR standard, to verify the applicability of the hypothesis. This study only investigated the NA-BR relationship in U.S. states. The classification analysis in the U.S. can be also useful to verify our conclusion that the NAR variance causes the NA-BR relationship. By classifying the states into two groups, states with lower NAR variance and states with higher NAR variance, we can investigate the appearance process of the NA-BR relationship for each of the respective groups over time.

Second, further clarification of the appearance factors is important. There can be several appearance factors other than NAR variance. The cancellation of divergence between a financial indicator evaluation and a bond rating evaluation is an example. The NA-BR relationship will not appear without the cancellation of divergence. A state with a lower financial indicator evaluation (i.e., NAR of the state is lower than that of other states) and higher bond rating evaluation (i.e., RATING of the state is higher than that of other states) contributes to decreasing COR_NAR for that year, according to Pearson's correlation coefficient. The cancellation of divergence can be caused by rating agencies' recognition of the importance of NARs. In addition, the increase in PFRs' reliability and the accumulation of knowledge, including academic studies and rating agencies' practical knowledge of evaluating financial conditions, also contribute to the cancellation. However, we cannot clearly identify the reason for the cancellation, and theoretical and statistical analyses are needed for further investigation.

Finally, the effect of other PFR-based financial ratios should be also investigated to verify whether the gradual-appearance theory can be applicable to ratios other than NARs.

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References

Callahan, C. M., and T. R. Waymire (2015). The GASB No. 34 Impact of Budget-to-Accrual Variances on Bond Ratings: Evidence from U.S. Cities. *Journal of Governmental & Nonprofit Accounting*. 4(1): 32–52.

Clark, B. Y. (2015). Evaluating the Validity and Reliability of the Financial Condition Index for Local Governments. *Public Budgeting & Finance*. 35(2): 66–88.

GASB (1999). Basic Financial

Statements—and Management's Discussion and Analysis—for State and Local Governments. *Statement No. 34 of the Governmental Accounting Standards Board.*

GASB (2012). Accounting and Financial Reporting for Pensions— An Amendment of GASB Statement No.27. *Statement No. 68 of the Governmental Accounting Standards Board.*

Haraguchi, K. (2017). Koukaikei Zaimusyohyo Bunseki ni yoru Chihou Koukyou Dantai no Zaimu-kenzensei no Sokutei (Measuring Financial Health of Local Governments with Financial Statements Analysis). *Kaikei-kensa Kenkyu*. 55: 117–132.

Haraguchi, K. (2018a). Koukaikei Zaimusyohyo to Chihousai Kakuduke tono Kanrensei – Zaimu Kenzensei ga Kakuduke ni Ataeru Eikyou no Toukeibunseki oyobi Kokusai Hikaku (The Relationship between Financial Indicators of Local Governments' Financial Reports and Credit Bond Ratings - An International Comparison -). *Bulletin of Japanese Association for International Accounting Studies*. 41–42: 131–146.

Haraguchi, K. (2018b). Chihou Koukyoudantai ni okeru Zaimu Kenzensei no Kokusaihikaku – Nihon to Beikoku no Koukaikei Zaimusyohyo ni kakaru Toukei Bunseki (The International Comparison of Financial Condition between Japanese Local Governments and U.S. States: A Statistical Study using Financial Statements). *Kaikei-kensa Kenkyu*. 57:13–35.

Haraguchi, K. (2019). Chihou Koukyoudantai ni okeru Koukaikei Zaimusyohyo to Chihousaishijo tono Kanrensei no Hatsugen Katei – Beikoku Kakusyu no data wo mochiita Jikeiretsu Bunseki — (The Appearance Process of the Relationship between Public Financial Reports and Local Government Bond Ratings: A Statistical Study Using Data of U.S. States). *Accounting Progress*. 20: 6–31.

Haraguchi, K. and K. Oishi (2019). The International Differences in the Relationship between Public Financial Reports and Bond Markets: A Comparison between Japanese Local Governments and U.S. States. *Discussion Paper Series of Kyushu University*. 2019-5: 1–19.

Johnson, C. L., S. N. Kioko and W. B. Hildreth (2012). Government-wide Financial Statements and Credit Risk. *Public Budgeting & Finance*. 32(1): 80–104.

Kravchuk, R. S. and S. B. Stone (2010). How and When Do Structural Deficits Reveal Themselves? The Case of Indiana. *Journal of Public Budgeting, Accounting & Financial Management*. 22(4): 487–510.

Nakazato, T. (2008). Zaisei Shushi to Saiken Shijo – Shijo Koubo Chihousai wo taisyou to shita

Bunseki – (Fiscal Conditions and Credit Spreads in the Japanese Municipal Bond Market). *The Journal of Japan Economic Research*. 58: 1–16.

Plummer, E., P. D. Hutchison, and T. K. Patton (2007). GASB No. 34's Governmental Financial Reporting Model: Evidence on Its Information Relevance. *The Accounting Review*. 82(1): 205–240.

Pridgen, A. K. and W. M. Wilder (2013). Relevance of GASB No. 34 to Financial Reporting by Municipal Governments. *Accounting Horizons*. 27(2): 175–204.

Rivenbark, W. C., D. J. Roenigk, and G. S. Allison (2010). Conceptualizing Financial Condition in Local Government. *Journal of Public Budgeting, Accounting & Financial Management*. 22(2): 149–177.

S&P (2013). Standard & Poor's Approach To Pension Liabilities In Light Of GASB 67 And 68, *RatingsDirect*, July 6, pp.1-6

Stone, S. B., A. Singla, J. Comeaux and C. Kirschner (2015). A Comparison of Financial Indicators: The Case of Detroit. *Public Budgeting & Finance*. 35(4): 90–111.

Tantardini, M., H. Guo, and N. Ganapati (2017). Social Capital and Public Financial Performance: Lessons from Florida. *Public Performance & Management Review*. 40(3): 480–503.

Wang, X., L. Dennis, and Y. S. Tu (2007). Measuring Financial Condition: A Study of U.S. States, *Public Budgeting & Finance*. 27(2): 1–21.

URL

MIC of Japan. 2015. The Implementation of the Uniform Standard PFR model. https://www.soumu.go.jp/main_content/000334402.pdf

S&P History Of U.S. State Ratings https://www.spglobal.com/ratings/en/research/articles/190319-history-of-u-s-state-ratings-2185306

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