

The Disclosure of Non-GAAP Performance Measures and the Adoption of IFRS: Evidence from Japanese Firms' Experience

Yuta Shibasaki and Chikara Toyokura

We investigate whether and how Japanese firms' non-GAAP disclosure practices change when they adopt International Financial Reporting Standards (IFRS). We find that the likelihood that firms disclose non-GAAP performance measures outside financial statements increases after they have adopted IFRS. This is consistent with the view that the proliferation of non-GAAP performance measures is, in part, attributable to the nature of the current IFRS presentation requirements for financial statements. We also show that the exclusion of non-recurring items to arrive at non-GAAP performance measures becomes more common only after firms have adopted IFRS. This finding indicates that many managers regard separating out unusual or infrequently occurring items as important. The practice corresponds to financial statement users' calls for such separation. We also show how the proposed introduction of several subtotals in statements of financial performance by the International Accounting Standards Board (IASB) under the Primary Financial Statements project will improve the comparability and usefulness of financial statements of Japanese firms that have adopted IFRS. These results provide important empirical evidence at a time when the IASB is developing new presentation requirements for statements of financial performance.

Keywords: Non-GAAP performance measures; IFRS; Primary Financial Statements project

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I. Introduction

The central issue this paper addresses is whether and how the adoption of International Financial Reporting Standards (IFRS) by Japanese firms affects their non-GAAP disclosure practices. In Japan, unlike in most other jurisdictions, listed firms are not obliged to use a particular set of accounting standards under the current system. Rather, they are free to choose among (a) Japanese generally accepted accounting principles (GAAP), (b) U.S. GAAP, (c) IFRS or (d) Japan's Modified International Standards (JMIS) for their consolidated financial statements.¹ The number of Japanese firms that have chosen to adopt full IFRS has been growing since 2010.² In this unique setting, Japanese firms will adopt IFRS if they believe they are better off doing so. When Japanese firms switch accounting standards, they are required to accept the whole set of rules. However, for a variety of reasons discussed below, firms may feel that certain aspects of the accounting standards they choose do not adequately reflect the firm's performance, so that they may start to use alternative financial measures outside GAAP. Therefore, should we observe changes in firms' non-GAAP disclosure practices in the wake of a switch in accounting standards, this may signal possible dissatisfaction with the accounting standards they moved to. In this paper, we focus on Japanese firms' non-GAAP disclosure practices and investigate whether and how Japanese firms change their disclosure practices in the wake of having adopted IFRS.

Accounting is an evolved economic institution (Waymire and Basu [2008]). Dichev (2017) highlights the "need to encourage more 'bottom-up' rule making," while the setting of accounting standard currently remains top-down in essence. In this context, Sunder (2016, p. 100) argues that "[t]he complexity and interactivity of social systems and markets makes it difficult for a group of experts to devise accounting solutions to better serve even a simple, much less diverse, economy. Even if it were feasible, solutions could only be developed through bottom-up evolution of accounting and not through top-down imposition of a single method selected by a board of 'experts' with limited accountability and without field trials of their new formulation." While the importance of "bottom-up" rule making also applies in the case of IFRS, such bottom-up rule making may be more difficult to achieve than for national GAAP. As highlighted by Saito (2011, p. 108), "the review of proposed rules based on market tests, though relatively easy within a single country, is far more difficult once adopted across borders." While non-GAAP performance measures can be regarded as a challenge to existing standards, they potentially also allow firms to present their own perspective of how their income should be presented.^{3,4}

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1. JMIS consist of IFRS and modifications by the Accounting Standards Board of Japan (ASBJ). No firms have adopted JMIS so far.

2. In Japan, IFRS firms now represent more than 30 percent of the total market capitalization of the Tokyo Stock Exchange. As of July 2020, 213 listed firms had adopted IFRS.

3. The extent to which firms' non-GAAP disclosure practices can provide insights for the setting of accounting standards depends, among other things, on firms' motivation for using non-GAAP disclosure practices—whether firms disclose non-GAAP performance measures to inform or to mislead—, which in turn depends on the social settings in which firms operate. If firms' motive for the disclosure of non-GAAP performance measures is to inform rather than to mislead, non-GAAP performance measures provide more meaningful information on firms' perspective on how their income should be presented.

4. In fact, Russell, current chairman of the U.S. Financial Accounting Standards Board (FASB) has stated, in

Against this background, the purpose of this study is to examine the relationship between non-GAAP disclosure practices and accounting standards. The aim is to provide financial statement users, financial statement preparers, and standard setters—the International Accounting Standards Board (IASB) and national standards setters alike—with insights regarding ways to develop new presentation requirements for statements of financial performance at a time when the IASB is developing new presentation requirements for statements of financial performance.

The remainder of the paper is organized as follows: Section II provides a brief overview of non-GAAP performance measures and the IASB’s recent Primary Financial Statements project, while Section III develops our research questions. Section IV describes our research design, Section V presents our results, and Section VI concludes.

II. Non-GAAP Measures and the IASB’s Primary Financial Statements Project

A. Non-GAAP Measures

There is growing evidence that the use of non-GAAP performance measures is an increasingly common global phenomenon, especially among large listed companies.⁵ In 2017, 97 percent of S&P 500 firms in the United States used at least one non-GAAP metric. This share represents an increase of roughly 20 percentage points compared to ten years earlier, according to Audit Analytics (2018).^{6,7} In Europe, around 75 percent of a sample of 170 European issuers make use of APMs as a measure of the financial situation or performance outside the financial statements (ESMA [2018]). Moreover, these numbers seem to be widely used in practice by investors: in a survey conducted by the CFA Institute (Papa and Peters [2016]), 63 percent of respondents indicated that they always or often use non-GAAP financial measures. This figure is not far behind the 71 percent of respondents in the survey that said they always or often use GAAP/IFRS measures.⁸

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 relation to firms’ use of non-GAAP performance measures, that “I often ask myself: Are these companies—deliberately or otherwise—sending us a signal about ways to improve GAAP?” (Golden [2017]).

5. The terms “non-GAAP (performance) measures,” “non-GAAP financial measures,” “alternative performance measures (APMs),” “pro-forma (performance) measures” and “street earnings” are often used synonymously. In this paper, we use the term “non-GAAP (performance) measures” to refer to financial performance measures that firms are not required disclose under GAAP. For further discussion of the definition of “non-GAAP (performance) measures,” see Appendix 1.
6. In addition to the use of non-GAAP metrics among S&P 500 firms in 2017, Audit Analytics (2018) also examined the usage of such metrics in 1996, 2006, and 2016 using data from 8-K Item 2.02 filings, when available, and 10-K filings in other cases, in order to understand long-term trends. The results indicate that the use of non-GAAP metrics increased dramatically from 59 percent of S&P 500 firms in 1996 to 76 percent in 2006 and 96 percent in 2016.
7. It should be noted that the share of firms that report non-GAAP measures varies depending, among other things, on the definition used. For example, prior research on non-GAAP disclosure practices of S&P 500 firms, albeit for different years, shows that the share ranges from around 70 to nearly 100 percent. For instance, Gu and Lev (2017) report they collected a sample of 265 S&P 500 firms reporting fourth-quarter 2016 earnings and found that 212 of those (i.e., 80 percent) also disclosed non-GAAP earnings. Similarly, Black *et al.* (2020) found that 71 percent of S&P 500 firms disclosed non-GAAP performance measures in 2014.
8. CFA Institute conducted a global survey on the uses, concerns, and expectations around the reporting of non-GAAP financial measures. On the use of non-GAAP measures (GAAP/IFRS measures), the survey had 558

Non-GAAP measures can be informative in the sense that they provide information that is helpful for stakeholders in understanding profit numbers that managers deem important. Lev and Gu (2016, p. 205), for example, argue that “an SEC regulation (2003) requiring the reconciliation of non-GAAP with GAAP earnings, and empirical evidence documenting that investors respond to non-GAAP earnings *more strongly* than to their GAAP brethren, conferred certain respectability on pro forma earnings and other non-GAAP items” (emphasis in the original).⁹ Supporters of non-GAAP measures argue that firms’ motive for reporting non-GAAP measures is to inform investors: at least under certain circumstances, presenting non-GAAP measures managers deem important allows them to better explain the firm’s future earnings prospects. On the other hand, critics argue that non-GAAP measures can be misleading, opportunistic, and reflect management self-interest. Such critics highlight that non-GAAP earnings are often higher than GAAP earnings and meet or beat earnings benchmarks and/or analysts’ forecasts. Moreover, it is also argued that the adjustments firms make to arrive at their non-GAAP measures are often arbitrary. A number of studies have investigated these issues and have found evidence consistent with both sides of the argument.^{10,11} This is not surprising, because both sets of motives—to better inform investors about the firm’s future earnings prospects on the one hand and to present earnings in a better light—are not mutually exclusive. Firms suffering losses or firms that are at an early stage of growth and development may be more inclined to report non-GAAP measures. Such measures could reflect managers’ overly optimistic views, but they could also be informative in showing the underlying profits that firms regard as recurring. In other words, the measures can be either informative or misleading, or both at the same time. Even the same firm may act differently depending on the situation it is facing.

In response to concerns over the potential misuse of non-GAAP measures, securities regulators around the world, especially the U.S. Securities and Exchange Commission (SEC), have tried to limit the potential for misuse.¹² In the United States, the Sarbanes-Oxley Act of 2002 and Regulation G imposed strict requirements for non-GAAP reporting. While the SEC loosened restrictions on non-GAAP reporting in 2010, it again introduced tighter restrictions by updating its interpretive guidance in May 2016.¹³ In the European Union, the European Securities and Market Authority

(557) respondents, of which 376 (375) were portfolio managers and buy-side analysts, and 182 were sell-side analysts and others.

9. They refer to Bhattacharya *et al.* (2003). Of course, Lev and Gu (2016, p. 205) also recognize the problems associated with non-GAAP measures, arguing that the problem with these voluntary disclosures including non-GAAP measures is “that they are haphazard, inconsistent, and not uniform across the industry, and hence of limited usefulness to investors.”
10. For a review of extant literature on non-GAAP measures, see Coulton *et al.* (2016) for example.
11. For example, Bradshaw and Sloan (2002), Bhattacharya *et al.* (2003), and Lougee and Marquardt (2004) provide evidence consistent with both sides of the argument.
12. Lynn E. Turner, SEC former Chief Accountant noticed ill-intended non-GAAP disclosure practices, calling some of non-GAAP measures EBS—“Everything but Bad Stuff” (Turner [2000]). In more recent years, SEC former Chair Mary Jo White called them “a source of confusion” (White [2015]), and SEC former Chief Accountant James Schnurr states “[t]he SEC staff has observed a significant and, in some respects, troubling increase over the past few years in the use of, and nature of adjustments within, non-GAAP measures by companies as well as prominence that the analysts and media have accorded such measures when reporting on the results of the companies they cover” (Schnurr [2016]).
13. Before the introduction of Regulation G, the SEC issued “cautionary advice” to registrants about including

(ESMA) published its final Guidelines on Alternative Performance Measures (non-GAAP measures) for listed issuers in October 2015, which became effective in July 2016.¹⁴ Moreover, in June 2016, the International Organization of Securities Commissions (IOSCO) issued the Statement on Non-GAAP Financial Measures to assist issuers not only in providing clear and useful disclosure, but in reducing risk that such measures are presented in a way that could be misleading. Despite these efforts by securities regulators, concerns over troubling use of non-GAAP measures persist. Sherman and Young (2018, pp. 57–58), for instance, argue that they have seen “a troubling trend” in the use of alternative measures, saying that “[a]lternative measures, once used fairly sparingly and shared mostly with a small group of professional investors, have become more ubiquitous and further and further disconnected from reality.”

In recent years, non-GAAP disclosures have become the subject of increased focus by standard setters as well.¹⁵ In fact, the IASB in December 2016 added to its work plan a major research project titled “Primary Financial Statements,” which will be briefly outlined.¹⁶

B. The IASB’s Primary Financial Statements Project

Acknowledging that firms use different performance measures in their primary financial statements (hereafter financial statements), often without clarifying what information is included in or excluded from such measures, the IASB is currently developing new presentation requirements for the statement of profit or loss. The IASB published the Exposure Draft of a new standard *General Presentation and Disclosures* that is intended to replace IAS 1 *Presentation of Financial Statements* in December 2019 (IASB [2019a]). In the Exposure Draft, the IASB proposes to require companies to:

- present the new defined subtotals comparable across firms, such as operating profit in the statement of profit or loss.
- disaggregate information in a better way; and
- disclose information about some performance measures defined by management (Management Performance Measures).

Throughout this paper, we will refer to this project as “PFS” and to proposals in this connection as “PFS proposals.”

non-GAAP financial information in their press releases. See Deloitte (2019), for example, for a brief history of the evolution of the SEC’s guidance on non-GAAP measures.

14. The guidelines are aimed at promoting the usefulness and transparency of alternative performance measures included in prospectuses or regulated information (ESMA [2015]). In October 2005, ESMA’s predecessor, the Committee of European Securities Regulators (CESR) published a Recommendation on Alternative Performance Measures (CESR [2005b]). ESMA reviewed this Recommendation with the objective of strengthening the principles contained in it and reissued the principles as ESMA guidelines. National securities regulators in Europe also have addressed the issue before 2016.

15. As early as 2002, the FASB (2002) acknowledged that key measures including adjusted, “normalized,” or “operating” earnings, which are not necessarily well defined, were commonly used.

16. The IASB started addressing the issue of non-GAAP earnings measures in this research project (Kabureck [2017]).

III. Research Questions

Non-GAAP measures are used by firms both in their financial statements and in other communications with users of financial statements—such as management commentary and analyst briefings. The content and presentation of information in the financial statements is determined primarily by the accounting standards. However, since the IFRS makes few prescriptions about the format and minimum line items of income statements, non-GAAP measures can appear on the face of income statements.¹⁷ This is essentially what the IASB's PFS seeks to address. However, more frequent use of non-GAAP measures is found outside financial statements, as we discuss below.

Our research questions relate to firms' use of non-GAAP performance measures both in their financial statements and outside of their financial statements.¹⁸

A. Use of Non-GAAP Measures in Financial Statements

In stark contrast with the IFRS, Japanese GAAP prescribe the format and minimum line items of income statements. Specifically, Japanese GAAP require the statement of profit or loss to be presented in a multi-layered format with defined subtotals.¹⁹ Japanese firms that switch from Japanese GAAP to IFRS are no longer required to present subtotals in their statement of profit or loss. Do such firms continue to use subtotals such as operating profit? This is our first question.

Next, since these subtotals are not defined under the IFRS, firms can self-define the contents of the subtotals (i.e., the calculation of subtotals may differ across firms). Thus, even though firms may use the same name for a subtotal, the items covered potentially differ.^{20,21} Moreover, the same items may be covered under different names for subtotals. This raises the question whether subtotals across firms are more or less comparable. Thus, our first two research questions are:

RQ1: Do Japanese firms continue to use subtotals in their statements of financial performance after they adopted IFRS?

RQ2: Do subtotals in IFRS-based statements of financial performance of Japanese firms cover (more or less) the same items?

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17. See Appendix 1 for further explanation.

18. We use the expression “outside of financial statements” interchangeably with “outside of income statements (statements of profit or loss).”

19. Japanese GAAP *Business Accounting Principles* and ASBJ Statement No. 22 *Accounting Standard for Consolidated Financial Statements* requires firms to present Operating Profit and Ordinary Profit among others. Japan's Ministry of Finance Ordinance on Terminology, Forms and Preparation Methods of Financial Statements, etc. as well as Ordinance on Terminology, Forms and Presentation Methods of Consolidated Financial Statements additionally defines terminology, forms, and presentation for listed Japanese firms. In particular, it is noteworthy that the ordinance specifies which items to be included in a subtotal of non-operating income (expenses) or special income (expenses). See Appendix 2.A for the format the ordinance determines.

20. Hoogervorst (2019a) states that “[s]ubtotals like Operating Profit and EBITDA are very commonly used, but in practice companies define these subtotals **in very different ways**” (emphasis added). IASB staff found that 63 in a sample of 100 companies reported operating profit in the financial statements, using **at least nine different definitions** (IASB [2019b]). They analyzed the 2017–18 annual reports of 100 listed companies applying IFRS from 26 jurisdictions and 12 industries.

21. Until 2016, it was possible for subtotals such as “operating profit” in IFRS-based financial statements to be noncomparable even for the *same firm* from one year to the next. The amendments to IAS 1 *Presentation of Financial Statements*, published in December 2014 and effective since 2016, among other things added the requirement that subtotals presented in financial statements shall be consistent from period to period.

B. Use of Non-GAAP Measures in Investor and Shareholder Presentations

Non-GAAP performance measures are more widely used in firms' communications outside financial statements and are presented alongside, in contrast to, or instead of the GAAP measures (Deloitte [2017]). Moreover, this is where firm-tailored forms of performance measures—typically called “adjusted operating profit,” “normalized earnings,” or “adjusted-EBITDA” and referred to as “adjusted (non-GAAP) measures” below—are commonly presented.²² These measures can appear in analyst reports or articles in the business press without reference to GAAP measures.

Hoogervorst (2019a), the current IASB chairman, has attributed the proliferation of non-GAAP measures in part to the IFRS, observing:

We define Revenue and Profit or Loss but not all that much in between. In practice, both preparers and investors like to use subtotals to better explain and understand performance. **Our lack of guidance in this respect has had the unintended consequence of stimulating the use of self-defined subtotals, also known as non-GAAP measures.** (Emphasis added.)

We do not know whether, by “the use of self-defined subtotals,” Hoogervorst meant inside and/or outside of financial statements. Should we expect, *ex ante*, increased use of non-GAAP measures in the wake of the adoption of IFRS? Because the IFRS do not require or define the subtotals, an increase in self-defined subtotals on the face of statements of profit or loss may be expected, but the potential effect on the use of non-GAAP measures (other than subtotals on the face of profit and loss statements) outside financial statements is not clear.²³ We first investigate whether firms' adoption of IFRS contributes to the proliferation of non-GAAP measures *outside* financial statements. If that is the case, what might firms' motives be? That is, we examine not only why firms provide non-GAAP measures, but why they *began* to provide those measures when they switched their accounting standards. Differences in presentation requirements with regard to financial statements across accounting standards may affect the non-GAAP disclosure practices of Japanese firms.

Our next two research questions are:

RQ3: Does the use of non-GAAP measures (in communications other than financial statements) by Japanese firms increase in the wake of their adoption of IFRS?

RQ4: If that is the case, what are Japanese firms' motives for doing so?

Answering the four research questions presented here will provide important evidence at a time when the IASB is developing new presentation requirements for statements of financial performance. Exploring whether and how Japanese firms change

22. In other words, in this paper measures such as earnings before interest and taxes (EBIT) and earnings before interest, taxes, depreciation, and amortization (EBITDA) are treated as unadjusted non-GAAP measures, as they simply add/subtract defined line items in the income statement.

23. In the context of the adoption of IFRS among European listed firms, it has been argued that the adoption of IFRS should increase the use of non-GAAP measures. For example, the Committee of European Securities Regulators (2005a) states that “[i]t can be observed that European listed companies widely use diverging financial data in press releases and other documents. [...] CESR expects that the adoption of IFRS and the elimination of binding formats will increase the use of alternative performance measures.”

their non-GAAP disclosure practices in the wake of the adoption of IFRS can potentially provide a better understanding of *firms'* perspective of how their income should be presented. Answers to the first two questions are also important in helping us to understand the potential impact of the IASB's PFS proposals on Japanese firms' financial statements.

IV. Research Design

A. Use of Non-GAAP Measures in Financial Statements

We first explore whether and how Japanese firms use subtotals in their financial statements after the adoption of IFRS. Since 2010, 199 Japanese firms have switched to IFRS for their consolidated financial statements (as of July 2019).²⁴ Out of these, 158 firms actually disclosed IFRS-based annual financial statements for fiscal 2017 (i.e., mostly for the accounting period ending March 2018). We use the Securities Reports for fiscal 2017, which are the Japanese equivalent of Form 10-K/Q in the United States. We downloaded the securities reports from Electronic Disclosure for Investors' Network (EDINET).²⁵

B. Use of Non-GAAP Measures in Investor and Shareholder Presentations

The next two research questions relate to whether and how Japanese firms change their non-GAAP disclosure practices in communication other than financial statements in the wake of the adoption of IFRS. For communication other than financial statements, we use firms' actual documents for investor and shareholder presentations (which we refer to as "IR documents" hereafter).²⁶ We first provide an overview of non-GAAP disclosure practices employed by Japanese firms depending on the accounting standards they use. For this purpose, we examine the IR documents disclosed for the six successive fiscal year-ends from 2012 to 2017 (corresponding to the calendar years from 2013 to 2018)²⁷ for the following firms:

- (1) all Nikkei 225 firms (excluding firms in the banking and insurance industries; the same applies below)²⁸ that were using the IFRS (referred to as "Nikkei 225

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24. As of July 2019, there were 198 firms listed on the Tokyo Stock Exchange that use IFRS, according to the Japan Exchange Group's website. Moreover, there was one firm listed on the Sapporo Securities Exchange that uses IFRS.

25. EDINET is an electronic corporate disclosure system under the Japanese Financial Instruments and Exchange Act. All listed or major fund-raising companies and investment funds in Japan are required to file their disclosure system using this system.

26. Our focus here is only on non-GAAP measures other than subtotals on the face of statements of profit or loss. As discussed in Section III. B, an increase in self-defined subtotals on the face of statements of profit or loss—such as "operating profit"—may naturally be expected. See Appendix 1 for further explanation of the criteria we used to consider non-GAAP measures in this study.

27. The reason for starting from fiscal 2012 is that until March 2012 (fiscal 2011), only five Japanese firms had disclosed IR documents with IFRS-based financial statements.

28. Nikkei 225 firms in the banking and insurance industry are excluded for two reasons. First, there are additional regulations which define, among other things, the format of financial statements for these industries specifically (namely, the Ministry of Finance's Ordinance for Enforcement of the Banking Act and Ordinance for Enforcement of Insurance Business Act). Second, related to the first issue, the nature of the business of firms in these industries differs from that of general corporations, because for firms in the banking and

- IFRS firms” below);
- (2) all Nikkei 225 firms that were using either Japanese GAAP or U.S. GAAP (“Nikkei 225 non-IFRS firms”); and
- (3) all listed Japanese firms that were using IFRS (“Japanese IFRS firms”).

All IR documents were downloaded from firms’ websites. In total, we collected and analyzed 1,816 firm-year observations (see Table 1(c)).²⁹ Table 1 describes our sample frame and final sample for Japanese firms’ IR documents.

Table 1 Sample Selection

(a) Nikkei 225 firms

1. Sample frame

	Firm-years 2013–2018	Year					
		2013	2014	2015	2016	2017	2018
Nikkei 225 firms (excluding firms in the banking and insurance industries)	1,248	208	208	208	208	208	208
Nikkei 225 IFRS firms	165	6	12	24	31	39	53
Nikkei 225 non-IFRS firms	1,083	202	196	184	177	169	155
Of which: Firms that currently use IFRS	153	47	41	29	22	14	0

2. Final sample

	Firm-years 2013–2018	Year					
		2013	2014	2015	2016	2017	2018
Nikkei 225 firms (excluding firms in the banking and insurance industries)	1,206	185	195	205	206	207	208
Nikkei 225 IFRS firms	165	6	12	24	31	39	53
Nikkei 225 non-IFRS firms	1,041	179	183	181	175	168	155
Of which: Firms that currently use IFRS	148	43	40	29	22	14	0

- Notes: 1. Because the composition of Nikkei 225 firms varies across times, we select the composition at a given point of time (March 2019) to define our sample firms. Through the period of 2013 to 2018, the same firms are examined.
2. As for “Nikkei 225 IFRS firms,” we regard a firm as having switched to IFRS if it discloses IR documents with IFRS-based annual financial statements.
3. Firms which do not disclose IR documents on their websites are excluded from the final sample.

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insurance industry, providing loans or underwriting insurance is their main business activity.

29. All firms in category (1), “Nikkei 225 IFRS firms,” are included in category (3), “Japanese IFRS firms,” since all Nikkei 225 firms by definition are listed firms. See Figure A-1 for the sample we employed for analyzing Japanese firms’ IR documents.

Table 1 (continued)

(b) Japanese IFRS firms

	Firm-years 2013–2018	2013	2014	Year			
		2015	2016	2017	2018		
Sample frame	467	11	29	60	85	124	158
Final sample	370	11	20	39	66	97	137

Notes: 1. We regard a firm as having switched to IFRS if it discloses IR documents with IFRS-based annual financial statements.

2. Firms which had been unlisted before adopting IFRS are excluded from the final sample.

3. Firms which do not disclose IR documents on their websites are excluded from the final sample.

(c) Total final sample (firm-year observations)

(1) Nikkei 225 IFRS firms	165
(2) Nikkei 225 non-IFRS firms:	1,041
(3) Japanese IFRS firms:	370
Less: observations included in (1)	–165
(4) Japanese IFRS firms before they adopted IFRS:	403
Less: observations included in (2)	–148
(5) Japanese firms that, as of March 2019, were scheduled to adopt IFRS:	115
(6) Japanese firms which had adopted IFRS but have not disclosed IR documents with IFRS-based financial statements:	35
Total	1,816

Notes: 1. This group of a sample in (5) is used as a second set of comparables for our analysis in Tables 8, 9, and 15. As of March 2019, 25 firms were scheduled to adopt IFRS. Four of them are Nikkei 225 firms (included in [1]). This adds an additional sample frame of 126 ([25–4 firms] × 6 years) and final sample (sample frame less missing IR documents) of 115.

2. This group of a sample in (6) is used as a second set of comparables for our analysis in Tables 8, 9, and 15. As of March 2019, 21 Japanese firms have adopted IFRS, but have not disclosed IR documents with IFRS-based financial statements. 12 of them are Nikkei 225 firms (included in [1]). This adds an additional sample frame of 54 ([21–12 firms] × 6 years) and final sample (sample frame less missing IR documents) of 35.

We then compare the use of non-GAAP performance measures by Japanese firms between the year preceding the adoption of IFRS and the year following the adoption of IFRS. Furthermore, in order to examine whether there is a causal relationship between firms' adoption of IFRS and the use of non-GAAP measures, we consider the counterfactual scenario assuming that firms that switched to IFRS actually did not switch. We then investigate how the trend in these firms' use of non-GAAP measures differs from non-GAAP disclosure practices among Nikkei 225 non-IFRS firms and among firms that, as of March 2019, were planning to switch to IFRS. The first comparison aims to examine whether the changes in non-GAAP disclosure practices among firms that switched to IFRS differ from Japanese firms in general. The second comparison is based on the idea that firms that are planning to switch to IFRS likely have similar characteristics to firms that have already made the switch.³⁰ The abovementioned "let the market decide" approach in Japan with regard to the choice of accounting standards provides us with a unique setting in which we can examine whether firms' non-GAAP disclosure practices change in the wake of the adoption of IFRS. Since only some Japanese firms switch to IFRS from one year to another, we are able to make comparisons across firms.³¹

30. Firms that, as of March 2019, were planning to switch to IFRS consist of (1) firms that were scheduled to adopt IFRS, and (2) firms which had adopted IFRS but so far have not disclosed IFRS-based financial statements.

31. This setting provides an ideal environment to examine the causal connection between the adoption of IFRS and non-GAAP disclosure practices. The setting enables us to compare firms' disclosure practices over several

V. Results

A. Use of Non-GAAP Measures in Financial Statements

Table 2 reports the use of subtotals by Japanese IFRS firms in their statements of profit or loss (mostly those as of March 2018).³² More than 90 percent of firms (146 out of 158) use subtotal(s)—in particular “operating profit” (which is used by 143 out of the 158 firms)—in their statements of profit or loss.^{33,34} Nearly 100 percent of firms in all industries other than “finance and insurance” and “trade” use the subtotal of “operating profit.” The five “trade” firms that do not use subtotals are all *sogo shosha* (general trading firms).³⁵ As will be discussed in more detail below, most Japanese IFRS firms use “operating profit” to represent “net income before (net) financial income and taxes.”³⁶ Excluding (net) financial income and taxes from net income helps general corporations to show the profits from their main business activities. In contrast, for the five “finance and insurance” firms, excluding (net) financial income and taxes does *not* help them to show their underlying profits since their main business consists of generating financial income. The same applies to the *sogo shosha*, which engage in a wide range of activities, including finance.

As shown in Table 2, less than a tenth of firms use subtotals other than “operating profit” (12 out of the 158 firms).³⁷ Five use the subtotal “gross profit” minus “selling, general and administrative expense (SG&A).” The five firms use different names for this subtotal, with labels ranging from “business profit” to “core operating profit” and “adjusted operating profit.” Although they use different names, the firms essentially cover the same items under this subtotal. Next, three of the 12 firms use EBIT, while four use firm-tailored forms of operating profit.³⁸ Finally, one of firm labels a line item “business profit” that shows what most other firms call “operating profit.”

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years in the wake of the adoption of IFRS across firms facing a similar economic environment (i.e., doing business primarily in Japan). For a study on the link between the adoption of IFRS and non-GAAP disclosure practices in the European Union, see PricewaterhouseCoopers (2007). Looking into changes in non-GAAP reporting practices among European listed firms between 2004 and 2005, PricewaterhouseCoopers (2007) reports that “[European listed] companies have aligned their choice and presentation of non-GAAP measures as much as possible with what was used in the past.”

32. In Japan, the fiscal year begins in April and ends in March. Most Japanese firms use this fiscal year as their accounting period.
33. Here, the distinction between “operating profit” and subtotals other than operating profit is made based on the name of the line items firms specify.
34. Similarly, Nomura (2019) collected a sample of large-cap Japanese IFRS firms (with a market capitalization of over 500 billion yen) and found that 85 percent (73 out of 86 firms) use “operating profit” as a subtotal in their statements of profit or loss in the latest earnings report (*kessan tanshin*).
35. *Sogo shosha* engage in a wide range of activities. For example, Mitsubishi Corporation, one of the largest *sogo shosha*, introduces itself, on its website, as follows: Mitsubishi Corporation “develops and operates businesses across virtually every industry, including industrial finance, energy, metals, machinery, chemicals, and daily living essentials.”
36. We refer to “‘financial income’ minus ‘financial expenses’” as “(net) financial income”. The classification of financial income and financial expenses will depend on a firm’s accounting practices regarding such items. As discussed below, line items labelled “financial income” or “financial expenses” are used, without definition, in the template in the Illustrative IFRS Consolidated Financial Statements prepared by Japan’s Financial Services Agency.
37. Numbers do not add up to 146, because there are firms which use multiple subtotals.
38. Of the four firms using firm-tailored forms, three use “operating profit” adjusted for specific non-recurring items the firms consider appropriate to exclude. The fourth uses “operating profit” excluding gains from particular funds.

Table 2 Use of Subtotals by Japanese IFRS Firms in their Financial Statements (Total and by Industry, 2018)

Japanese IFRS firms	Number of firms	Firms presenting subtotals		Of which: firms presenting 'operating profit'		Of which: firms presenting other subtotals	
		Number	Percent	Number	Percent	Number	Percent
All firms	158	146	92	143	91	12	8
By industry							
Manufacturing	90	88	98	85	94	9	10
Transportation, Information & Communication	17	17	100	17	100	2	12
Trade	20	15	75	15	75	1	5
Finance & Insurance	8	3	38	3	38	0	0
Real Estate	2	2	100	2	100	0	0
Services	21	21	100	21	100	0	0

Notes: 1. All listed Japanese firms that have disclosed IFRS-based financial statements in Securities Report for fiscal 2017 (mostly for the accounting period ending March 2018).

2. Numbers do not add up to 'firms presenting subtotals', because there are firms which use multiple subtotals.

3. Industry grouping is based on sector classification by Securities Identification Code Committee (SICC).

Sources: Firms' Securities Reports.

Next, taking a closer look at how “operating profit” is calculated in the statements of profit or loss shows that at almost all firms (139 out of the 143 firms presenting “operating profit”), “operating profit” is the line item for “net income before (net) financial income and taxes.”³⁹ Thus, the use of “operating profit” is generally consistent across firms; however, there are differences in terms of whether the share of profit from associates and joint ventures is included.⁴⁰ As shown in Table 3, out of the 143 firms, 113 firms have associates and joint ventures accounted for using the equity method. Moreover, 78 out of the 113 firms (69 percent) present the share of profit from associates and joint ventures independently outside of “operating profit” in the statement of profit or loss, while 31 out of the 113 firms (27 percent) present it as a part of “operating profit.”^{41, 42}

Overall, most Japanese firms continue to use “operating profit” in their financial statements after switching to IFRS, with the notable exception of finance and insurance firms and *sogo shosha*. In addition, almost all firms use “net income before (net) finan-

39. Specifically, the followings were exceptions of the items labeled “operating profit”: (1) gross profit' minus SG&A, (2) net income before (net) financial income and other income that we cannot identify the details from notes, (3) net income before (net) financial income and extraordinary items.

40. IFRS requires “the share of the profits from associates and joint ventures accounted for using the equity method” to be presented as a separate line item on the statement of profit or loss (Paragraph 82 (c) of IAS1). However, they are silent about the exact location of that line item within the statement of profit or loss (they can be either inside or outside of operating profit). In contrast with IFRS, Japanese GAAP defines the exact location of the item, requiring ‘the share of profit from associates and joint ventures’ to be presented as ‘non-operating income’ or ‘non-operating expenses’ (Paragraph 16 of ASBJ Statement No. 16 *Accounting Standard for Equity Method of Accounting for Investments*).

41. For other four firms, we cannot identify whether the share of profit from associates and joint ventures are included in operating profit.

42. Similarly, based on a sample of 86 large-cap Japanese IFRS firms (with a market capitalization of over 500 billion yen), Nomura (2019) finds that of these, 73 use “operating profit” in their latest earnings report (*kessan tanshin*). Further, of the 73, 29 percent (21 firms) report the share of profit from associates and joint ventures as part of their operating profit, while 60 percent (44 firms) report the share of profit from associates and joint ventures separately outside operating profit.

Table 3 Location of the Share of Profit from Associates and Joint Ventures by Japanese IFRS Firms in their Financial Statements (2018)

<i>Japanese IFRS firms</i>	Number of firms	Percent (inside/outside operating profit)
Operating profit presented	143	
(1) Firms with associates or joint ventures accounted for using the equity method	113	100
(a) Above (presented inside) operating profit	31	27
(b) Below (presented outside) operating profit	78	69
(c) Not identifiable from the statement	4	4
(2) Firms with no associates or joint ventures accounted for using the equity method	30	
No operating profit presented	15	
All firms	158	

Notes: 1. All listed Japanese firms that have disclosed IFRS-based financial statements for fiscal 2017 (mostly for the accounting period ending March 2018).

2. Of the 31 firms classified in (1)(a), 4 firms do not present the share of profit from associates and joint ventures as a separate line item.

Sources: Firms' Securities Reports.

cial income and taxes" for "operating profit." With respect to the share of profit from associates and joint ventures, whether such profit is included or excluded in Japanese IFRS firms' operating profit differs across firms. Furthermore, the labelling of subtotals is not entirely consistent across firms, as there are a few firms that use a different name for a subtotal that covers exactly the same items.

A caveat in interpreting these results is that Japan's Financial Services Agency (2016) provides a template of a statement of profit or loss in its Illustrative IFRS Consolidated Financial Statements (referred to as "JFSA Illustration" below). The JFSA Illustration states that "IAS1 does not require the presentation of operating profit, but the template of a consolidated statement of profit or loss here provides an example of how to present it as a subtotal in consideration of how firms present their statements of profit or loss in practice" (translation by authors). As clearly set out in the JFSA Illustration, the template is provided for information purposes only and not binding in nature. Nevertheless, this template may affect how Japanese firms present their statements of profit or loss in two ways. First, it is possible that this template to some extent prompted Japanese firms to use "operating profit." The fact that about a tenth of them do not use "operating profit," however, indicates that the nature of subtotals in an IFRS-based income statement is also well understood. Second, the template should have led to a situation in which almost all Japanese IFRS firms use the same definition for "operating profit" —namely, "net income before (net) financial income and taxes" —as in the template. We also suspect some firms avoid using "operating profit" differently from the way it is used in the template and label "gross profit minus SG&A" as "core operating profit" or "adjusted operating profit."

Furthermore, we can conclude from the findings above that the proposed changes in IFRS will likely only have a limited impact on Japanese IFRS firms' financial statements. Most Japanese firms already use "operating profit" and the definition is very close to the proposed definition in the PFS.⁴³ More than two-thirds of Japanese firms

43. Again, most Japanese IFRS firms use "operating profit" to represent "net income before (net) financial income

(about 70 percent) present the “share of profit from associates and joint ventures” outside operating profit, so that their operating profit is also unaffected by the proposed definition of operating profit.⁴⁴ For the remaining firms (about 30 percent), which currently present the share of profit from associates and joint ventures as part of their operating profit, their stated operating profit will be affected to that extent, but the profit numbers they currently present as “operating profit” will be presented as “operating profit and share of profit of integral associates and joint ventures.”⁴⁵

These findings underscore the importance of the IASB’s PFS project. The current IFRS make few prescriptions about the format and minimum line items of income statements, which has the advantage that firms can present items that they regard as important. In fact, some Japanese IFRS firms make effective use of line items and/or subtotals to take advantage of the flexibility thus provided. Examining the financial statements of all 158 Japanese IFRS firms shows that firms tailor the format in order to better communicate their business situation to stakeholders—for instance by presenting line items such as “research & development expenses” or “gains from remeasurement at fair value after changes in control.” Finding the right balance between flexibility and comparability in the formatting of statements of profit or loss is important. If the aforementioned template in the JFSA’s Illustration—which is not binding—helped in some way to build a common understanding of “operating profit” among Japanese IFRS firms, the PFS proposals will certainly improve the comparability and usefulness of financial statements of IFRS adopters around the world, without impairing flexibility. For Japanese IFRS firms, the change involved will be marginal, but the benefit of the project may nevertheless be important. First, Japanese firms will all use “operating profit” in the same way, without any exceptions. Second, their “share of profit from associates and joint ventures” will be presented clearly, again without exceptions. The proposed format of IFRS financial statement should help users to more clearly understand the content of operating profit.

B. Use of Non-GAAP Measures in Investor and Shareholder Presentations

Our next two research questions relate to the use of non-GAAP measures in communication other than financial statements. Before exploring the relationship between Japanese firms’ non-GAAP disclosure practices and the accounting standards they use, we first take a look at non-GAAP disclosure practices of a representative group of listed Japanese firms regardless of the accounting standard they use. Table 4 shows that about

and taxes.” In the Exposure Draft, operating profit or loss is defined as a default or a residual category. The IASB explains that the operating category comprises all income and expenses included in profit or loss that are not classified as income or expenses from integral associates and joint ventures, investing or financing, and those that are not classified in income taxes or discontinued operations (Basis for Conclusion 54, IASB [2019a]). “The items in the investing and financing categories in the statement of profit or loss will be very similar to the items in “financial income (expenses)” that Japanese IFRS firms use.

44. The fact that Japanese GAAP requires the “share of profit from associates and joint ventures” to be presented as non-operating income/expenses may be partly responsible for the fact that a majority of firms report such profit outside operating profit even after switching to IFRS.
45. The IASB is proposing to introduce the subtotal “Operating profit or loss and income from integral associates and joint ventures” (Appendix 2. C). Assuming that Japanese IFRS firms that currently include their share of profit from associates and joint ventures regard these associates and joint ventures as integral to their business, their current “operating profit” numbers will be shown as “operating profit or loss and income from integral associates and joint ventures.”

one-third of Nikkei 225 firms (72 out of 208 firms) use non-GAAP measures in their IR documents (we mainly relied on IR documents as of March 2018 for this analysis). Recall that the use of non-GAAP measures in the United States is as high as more than 90 percent (see Section II. A). In contrast, a much smaller percentage of Japanese large listed firms use non-GAAP measures.⁴⁶

Table 5 compares the non-GAAP disclosure practices of Nikkei 225 IFRS firms and Nikkei 225 non-IFRS firms. Interestingly, we find clear differences in firms' non-GAAP disclosure practices depending on whether they do or do not use IFRS. Specifically, the percentage of Nikkei 225 non-IFRS firms that report non-GAAP measures in their latest IR documents is as low as 23 percent (36 out of 155 firms). In contrast,

Table 4 Use of Non-GAAP Measures by Nikkei 225 Firms in their IR Documents (Total and by Industry, 2018)

<i>Nikkei 225 firms</i>	Number of firms	Firms presenting non-GAAP measures		Of which: adjusted measures	
		Number	Percent	Number	Percent
All firms	208	72	35	37	18
By industry					
Fishery, Agriculture & Forestry	2	0	0	0	0
Mining	1	1	100	1	100
Construction	9	1	11	1	11
Manufacturing	134	43	32	21	16
Electric Power & Gas	5	2	40	2	40
Transportation, Information & Communication	21	10	48	3	14
Trade	15	7	47	4	27
Finance & Insurance	4	0	0	0	0
Real Estate	5	2	40	0	0
Services	12	6	50	5	42

Notes: 1. All Nikkei 225 firms excluding firms in the banking and insurance industries.

2. Industry grouping is based on sector classification by SICC.

3. 'Finance and insurance' (4 firms) comprises of three 'securities and commodity futures' and one 'other financing business' according to SICC classification.

Sources: Firms' websites.

Table 5 Use of Non-GAAP Measures by Nikkei 225 Firms in their IR Documents (Total and by Accounting Standard, 2018)

<i>Nikkei 225 firms</i>	Number of firms	Firms presenting non-GAAP measures		Of which: adjusted measures	
		Number	Percent	Number	Percent
All firms	208	72	35	37	18
IFRS firms (Nikkei 225 IFRS firms)	53	36	68	21	40
Non-IFRS firms (Nikkei 225 non-IFRS firms)	155	36	23	16	10
Of which:					
Japanese GAAP	146	31	21	13	9
U.S. GAAP	9	5	56	3	33

Note: All Nikkei 225 firms excluding firms in the banking and insurance industries.

Sources: Firms' websites.

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46. This simple comparison does not take into account differences in the definition of non-GAAP measures used in prior research and this paper. Non-GAAP measures in our investigation of IR documents includes EBIT and EBITDA, for example, but exclude subtotals if they are presented in the statement of profit or loss. Recall that in an IFRS-based financial statement, a firm may use subtotals in a unique way. For more details, see Appendix 1.

Table 6 Use of Non-GAAP Measures by Japanese IFRS Firms in their IR Documents (Total and by Industry, 2018)

Japanese IFRS firms	Number of firms	Firms presenting non-GAAP measures		Of which: adjusted measures	
		Number	Percent	Number	Percent
All firms	137	73	53	38	28
By industry					
Manufacturing	82	44	54	24	29
Transportation, Information & Communication	14	8	57	4	29
Trade	17	9	53	4	24
Finance & Insurance	6	2	33	0	0
Real Estate	2	0	0	0	0
Services	16	10	63	6	38

Notes: 1. All listed Japanese firms that have disclosed IR documents with IFRS-based financial statements for fiscal 2017 (mostly for the accounting period ending March 2018).

2. Industry grouping is based on sector classification by SICC.

3. 'Finance and insurance' (6 firms) comprises of three 'other financing business', two 'securities and commodities futures' and one 'insurance' according to SICC classification. The 'insurance' firm does not engage in insurance underwriting and falls outside insurance industry by the definition of Japan's Insurance Business Act.

Sources: Firms' websites.

the proportion of Nikkei 225 IFRS firms that report non-GAAP measures is 68 percent (36 out of 53 firms). Further, the percentage of firms reporting non-GAAP measures remains relatively high for all listed Japanese IFRS firms⁴⁷: Table 6 shows that about half of all Japanese IFRS firms (73 out of 137 firms) use non-GAAP measures in their IR documents, which is more than twice the share among Nikkei 225 non-IFRS firms.

Next, Table 7 investigates trends in the use of non-GAAP measures by Japanese firms over the past six fiscal years. We find that the share of Japanese IFRS firms that use non-GAAP measures hovers at around the 50 percent level, while that of Nikkei 225 non-IFRS firms hovers at around 25 percent throughout the period. Table 7 also reveals that this difference is even more substantial if we focus on *adjusted* non-GAAP measures. Recall from Section III. B that we distinguish firm-tailored forms of non-GAAP measures—typically called “adjusted operating profit,” “normalized earnings,” or “adjusted EBITDA” —, which we will refer to as “adjusted non-GAAP measures” or simply “adjusted measures” below. The proportion of Japanese IFRS firms using adjusted non-GAAP measures is around 30 percent, while the proportion of Nikkei 225 non-IFRS firms using adjusted measures is about 10 percent.

Our research question 3 presented in Section III.B asked whether the use of non-GAAP measures (in communications other than financial statements) by Japanese firms increases in the wake of their adoption of IFRS. The substantial difference in non-GAAP disclosure practices between Japanese IFRS firms and Nikkei 225 non-IFRS firms throughout the observation period suggests that Japanese firms increase the use of non-GAAP measures in communications other than financial statement in the wake of adopting IFRS. However, it is not clear which way causality runs. Does the adoption of IFRS lead firms to increase the use of non-GAAP disclosure practices? Or do firms that have a preference for non-GAAP disclosure practices tend to adopt IFRS? In order to examine whether there is a causal relationship and which direction causality runs, we compare the use of non-GAAP performance measures by firms that switched to

47. Nikkei 225 IFRS firms represents one third of all Japanese IFRS firms (see Table 1).

Table 7 Use of Non-GAAP Measures by Japanese IFRS Firms and Nikkei 225 Firms in their IR Documents (2013–2018)

<i>Japanese IFRS firms</i>	2013 n=11		2014 n=20		2015 n=39		2016 n=66		2017 n=97		2018 n=137	
	#	%	#	%	#	%	#	%	#	%	#	%
Firms presenting non-GAAP measures	6	55	11	55	18	46	36	55	55	57	73	53
Of which: adjusted measures	3	27	7	35	12	31	17	26	29	30	38	28
<i>Nikkei 225 firms</i>	2013 n=185		2014 n=195		2015 n=205		2016 n=206		2017 n=207		2018 n=208	
	#	%	#	%	#	%	#	%	#	%	#	%
Firms presenting non-GAAP measures	39	21	49	25	54	26	60	29	68	33	72	35
Of which: adjusted measures	16	9	18	9	21	10	25	12	30	14	37	18
<i>Nikkei 225 IFRS firms</i>	2013 n=6		2014 n=12		2015 n=24		2016 n=31		2017 n=39		2018 n=53	
	#	%	#	%	#	%	#	%	#	%	#	%
Firms presenting non-GAAP measures	5	83	10	83	14	58	21	68	27	69	36	68
Of which: adjusted measures	2	33	6	50	8	33	12	39	15	38	21	40
<i>Nikkei 225 Non-IFRS firms</i>	2013 n=179		2014 n=183		2015 n=181		2016 n=175		2017 n=168		2018 n=155	
	#	%	#	%	#	%	#	%	#	%	#	%
Firms presenting non-GAAP measures	34	19	39	21	40	22	39	22	41	24	36	23
Of which: adjusted measures	14	8	12	7	13	7	13	7	15	9	16	10

Note: Same as Tables 4, 5 and 6.
Sources: Firms' websites.

IFRS in the year before and the year after the switch, and examine how trends in the use of non-GAAP measures differ between firms that switched to IFRS and two sets of comparables: (1) Nikkei 225 non-IFRS firms, and (2) Japanese IFRS firms that were planning to switch to IFRS (as explained in Section IV. B).

Table 8(a) compares the use of non-GAAP measures by Japanese firms before and after they adopted IFRS. The panel shows that in the year before they adopted IFRS (i.e., year $t-1$), 28 percent of firms reported non-GAAP measures. This share increases to 44 percent for the year in which firms adopted IFRS (year t) and 49 percent in the following year (year $t+1$). In contrast, the shares among our two sets of comparables remain almost unchanged: as shown in Table 8(b) and (c), the shares for both sets of comparables remain more or less unchanged at a level of around 25 percent and 35 percent, respectively.⁴⁸ This clear difference suggests that the likelihood that a firm

48. The number of firms that switched to IFRS during the period 2014–2018 differs from year to year, increasing from 9 in 2014 to 39 in 2018. The use of non-GAAP measures in the year preceding and following their IFRS adoption (Table 8(a)) is measured simply by counting the number of firms that report non-GAAP measures in

Table 8 Use of Non-GAAP Measures by Japanese Firms in their IR Documents (Before and After the Adoption of IFRS)

(a) Japanese firms that switched to IFRS during 2014–2018

	Year preceding IFRS adoption ($t-1$)		Year of IFRS adoption (t)		Year following IFRS adoption ($t+1$)	
	#	%	#	%	#	%
All firms (n=120)	33	28	53	44	59	49
Firms that switched in 2014 (n=9)	3	33	5	56	5	56
Firms that switched in 2015 (n=18)	3	17	6	33	8	44
Firms that switched in 2016 (n=25)	6	24	12	48	15	60
Firms that switched in 2017 (n=29)	8	28	14	48	15	52
Firms that switched in 2018 (n=39)	13	33	16	41	16	41

Notes: 1. A small number of firms (2 in 2015; 2 in 2016; 2 in 2017; 1 in 2018) do not disclose IR documents for the year preceding the switch on their website. Also, firms that switched to IFRS in 2013 are not examined. As a result, the number of observations here (120) is smaller than the number of “IFRS firms” (137) in previous tables.

2. Figures in italic are for year t (2018), since at the time of writing the figure for year $t+1$ (2019) was not yet available.

(b) Nikkei 225 non-IFRS firms (Weighted-average corresponding to Table 8(a))

	Year preceding IFRS adoption ($t-1$)		Year of IFRS adoption (t)		Year following IFRS adoption ($t+1$)	
	#	%	#	%	#	%
Nikkei 225 non-IFRS firms		23		23		23

Note: The proportion of firms that report non-GAAP measures is weighted by the number of firms that switched to IFRS in each year during 2014–2018 to calculate the weighted average percentages for $t-1$ and t (the proportion is weighted by the number of firms that switched to IFRS in each year during 2014–2017 to calculate the weighted average percentages for $t+1$). The unweighted percentages are shown in Table 7.

(continued on next page)

discloses non-GAAP measures in its IR documents increases *after* the adoption of IFRS.

those years. In order to control for the year in which firms adopted IFRS, the comparables in Table 8(b) and (c) are weighted by the number of firms that switched to IFRS in each year. The unweighted percentages for Table 8(b) and (c) are shown in Table 7 and the bottom panel of Table 8(c) respectively.

Table 8 (continued)

(c) Japanese firms that, as of March 2019, were planning to adopt IFRS (Weighted-average corresponding to Table 8(a))

	Year preceding IFRS adoption ($t-1$)		Year of IFRS adoption (t)		Year following IFRS adoption ($t+1$)	
		%		%		%
Japanese firms that were planning to adopt IFRS		32		34		34

Use of non-GAAP measures by Japanese firms that were planning to adopt IFRS (2013–2018)

	2013 n=34		2014 n=37		2015 n=41		2016 n=43		2017 n=43		2018 n=44	
	#	%	#	%	#	%	#	%	#	%	#	%
Firms presenting non-GAAP measures	7	21	11	30	13	32	11	26	17	40	16	36

Notes: 1. The proportion of firms that report non-GAAP measures is weighted by the number of firms that switched to IFRS in each year during 2014–2018 to calculate the weighted average percentages for $t-1$ and t (the proportion is weighted by the number of firms that switched to IFRS in each year during 2014–2017 to calculate the weighted average percentages for $t+1$). The unweighted percentage are shown in the bottom panel of Table 8(c).

2. According to Japan Exchange Group's website, 25 Japanese firms were planning to adopt IFRS as of March 2019; 21 Japanese firms have switched to IFRS, but have not disclosed IR document with IFRS-based financial statements as of March 2019. Both of these groups constitute a sample here. Due to missing IR documents, sample (n) is less than 46 (=25+21).

Furthermore, if we focus on *adjusted* measures, this relationship becomes even clearer. Table 9(a) reveals that the proportion of Japanese firms that report adjusted measures increases from 11 percent in the preceding year ($t-1$) to 19 percent in the year they adopted IFRS (t) and 23 percent in the following year ($t+1$). In contrast, Table 9(b) and (c) indicate that for both sets of comparables, the shares remain almost unchanged at around 10 percent and around 20 percent, respectively. This suggests that the likelihood that Japanese firms provide adjusted non-GAAP measures *after* they adopted IFRS increases. Taken together, the findings in Tables 8 and 9 suggest that the direction of causality runs from the adoption of IFRS to the disclosure of non-GAAP performance measures—that is, once firms have adopted IFRS, they are more likely to disclose non-GAAP measures—rather than the other way around.

Our final research question concerns firms' motives for changing their non-GAAP disclosure practices in the wake of adopting IFRS. To explore this issue, we investigate *which* non-GAAP measures are used with which frequency.

The aim of this analysis is to examine whether a certain kind of non-GAAP measure or a certain type of adjustment becomes less or more common among firms after they adopted IFRS. To this end, the first two sets of columns in Table 10 compare the non-GAAP disclosure practices of firms before and after they adopted IFRS. While only a small proportion of firms used non-GAAP measures before switching to IFRS, a substantial proportion used EBITDA and EBITA (including firm-tailored forms of these measures). Specifically, about 14 percent of firms used EBITDA and 7 percent EBITA. Potentially, this reflects firms' preference to exclude amortization expenses. Goodwill is amortized under Japanese GAAP, but not under the IFRS or U.S. GAAP. Many Japanese firms prefer to show their “before amortization” profit in addition to

Table 9 Use of Adjusted Measures by Japanese Firms in their IR Documents (Before and After the Adoption of IFRS)

(a) Japanese firms that switched to IFRS during 2014–2018

	Year preceding IFRS adoption ($t-1$)		Year of IFRS adoption (t)		Year following IFRS adoption ($t+1$)	
	#	%	#	%	#	%
All firms (n=120)	13	11	23	19	27	23
Firms that switched in 2014 (n=9)	2	22	4	44	4	44
Firms that switched in 2015 (n=18)	1	6	3	17	4	22
Firms that switched in 2016 (n=25)	0	0	1	4	3	12
Firms that switched in 2017 (n=29)	4	14	7	24	8	28
Firms that switched in 2018 (n=39)	6	15	8	21	8	21

Notes: 1. A small number of firms (2 in 2015; 2 in 2016; 2 in 2017; 1 in 2018) do not disclose IR documents for the year preceding the switch on their websites. Also, firms that switched to IFRS in 2013 are not examined. As a result, the number of observations here (120) is smaller than the number of “IFRS firms” (137) in previous tables.

2. Figures in italic are for year t (2018), since at the time of writing the figure for year $t+1$ (2019) was not yet available.

(b) Nikkei 225 non-IFRS firms (Weighted-average corresponding to Table 9(a))

	Year preceding IFRS adoption ($t-1$)		Year of IFRS adoption (t)		Year following IFRS adoption ($t+1$)	
	#	%	#	%	#	%
Nikkei 225 non-IFRS firms		8		9		9

Note: The proportion of firms that report adjusted non-GAAP measures is weighted by the number of firms that switched to IFRS in each year during 2014–2018 to calculate the weighted average percentages for $t-1$ and t (the proportion is weighted by the number of firms that switched to IFRS in each year during 2014–2017 to calculate the weighted average percentages for $t+1$). The unweighted percentages are shown in Table 7.

their GAAP measures.⁴⁹ Of course, since EBITDA and EBITA are widely used as measures of investment value, it is not surprising that many Japanese firms present these measures as well. Still, we suspect that one of the reasons that these measures have gained a certain popularity among these firms is that these measures make it possible to compare their profits with those of firms using other accounting standards. Turning to the use of non-GAAP measures *after* firms have switched to IFRS, use of non-GAAP measures becomes more diverse (shown in the middle set of columns in Table 10). First, many firms present “gross profit minus SG&A,” which is comparable to “operating profit” under Japanese GAAP.⁵⁰ This suggests that many managers

49. This tendency is the same for Nikkei 225 non-IFRS firms (shown in the columns on the right in Table 10). As we saw earlier in Table 7, less than one-third of Nikkei 225 non-IFRS firms use non-GAAP measures. If they do use non-GAAP measures, the most common one—as seen in Table 10—is EBITDA.

50. As discussed in Section V. A, some Japanese IFRS firms present “gross profit minus SG&A” as a subtotal in their financial statements. If a firm presents this on the face of its statement of profit or loss, we do not consider it as a non-GAAP measure. When a firm does *not* present “gross profit minus SG&A” as a subtotal

Table 9 (continued)

(c) Japanese firms that, as of March 2019, were planning to adopt IFRS (Weighted-average corresponding to Table 9(a))

	Year preceding IFRS adoption ($t-1$)	Year of IFRS adoption (t)	Year following IFRS adoption ($t+1$)
	%	%	%
Japanese firms that were planning to adopt IFRS	19	19	20

Use of adjusted measures by Japanese firms that were planning to adopt IFRS (2013–2018)

	2013 n=34		2014 n=37		2015 n=41		2016 n=43		2017 n=43		2018 n=44	
Firms presenting adjusted non-GAAP measures	#	%	#	%	#	%	#	%	#	%	#	%
	3	9	6	16	7	17	7	16	11	26	8	18

- Notes: 1. The proportion of firms that report adjusted non-GAAP measures is weighted by the number of firms that switched to IFRS in each year during 2014–2018 to calculate the weighted average percentages for $t-1$ and t (the proportion is weighted by the number of firms that switched to IFRS in each year during 2014–2017 to calculate the weighted average percentages for $t+1$). The unweighted percentage are shown in the bottom panel of Table 9(c).
2. According to Japan Exchange Group's website, 25 Japanese firms were planning to adopt IFRS as of March 2019; 21 Japanese firms have switched to IFRS, but have not disclosed IR document with IFRS-based financial statements as of March 2019. Both of these groups constitute a sample here. Due to missing IR documents, sample (n) is less than 46 (=25+21).

Table 10 Variety of Non-GAAP Measures Used by Japanese Firms in their IR Documents

	Japanese firms before adopting IFRS n=403		Japanese IFRS firms n=370		Nikkei 225 non-IFRS firms n=893	
	#	%	#	%	#	%
1. Gross profit minus SG&A	0	0	51	14	6	1
2. Net income before (net) financial income and taxes or EBIT	14	4	64	17	30	3
3. EBITA	27	7	39	11	25	3
4. EBITDA	56	14	67	18	101	11
5. Others	31	8	69	19	40	5

Notes: 1. "Japanese firms before adopting IFRS" and "Japanese IFRS firms" correspond to Table 1(b). "Nikkei 225 non-IFRS firms" corresponds to Table 1(a), but excludes the samples included in "Japanese firms before adopting IFRS."

2. "#" indicates the number of firms disclosing non-GAAP measures (including adjusted non-GAAP measures shown in Table 11) from 2013 to 2018 (firm-year basis).

Sources: Firms' websites.

deem presenting "gross profit minus SG&A" as important. Second, we find a notable increase in the use of "net income before (net) financial income" and EBIT (including firm-tailored forms). Recall from the discussion in Section V. A that most Japanese IFRS firms use "operating profit" in their financial statements and almost all of them use it as "net income before (net) financial income and taxes." Since our definition of

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on the face of its statement of profit or loss, but presents it in its IR documents, we regard it as a non-GAAP measure in our discussion of IR documents. Also, see footnote 28.

Table 11 Variety of Adjusted Non-GAAP Measures Used by Japanese Firms in their IR Documents

	<i>Japanese firms before adopting IFRS</i> n=403		<i>Japanese IFRS firms</i> n=370		<i>Nikkei 225 non-IFRS firms</i> n=893	
	#	%	#	%	#	%
1. Adjusted net income before (net) financial income and taxes (i.e. adjusted operating profit) or Adjusted-EBIT	12	3	50	14	26	3
2. Adjusted-EBITA	6	2	39	11	6	1
3. Adjusted-EBITDA	4	1	20	5	6	1
4. Other forms of modified measures	30	7	46	12	39	4

Notes: 1. "Japanese firms before adopting IFRS" and "Japanese IFRS firms" correspond to Table 1(b). "Nikkei 225 non-IFRS firms" corresponds to Table 1(a), but excludes the samples included in "Japanese firms before adopting IFRS."

2. "#" indicates the number of firms disclosing adjusted non-GAAP measures from 2013 to 2018 (firm-year basis).

Sources: Firms' websites.

Table 12 List of Adjustment Items Used by Japanese IFRS Firms in their IR Documents (2013–2018)

<i>Japanese IFRS firms</i> (n=370)	Frequency
<i>Adjustments 1</i>	
Acquisition related gains or charge/merger related gains or charge/restructuring gains or charges	88
Non-recurring gains or losses	69
Impairment losses/casualty losses	68
Impairment of goodwill and other intangibles	39
Gains or losses on disposal of non-current assets	37
Gains or losses from settlement of lawsuit and other compensation	29
<i>Adjustments 2</i>	
Foreign currency translation gains/losses	27
Gains/losses on sales of securities	24
Retirement compensation/stock compensation expense/incentive compensation	17
Inventory revaluation	11
Retirement benefits related charges	5

Notes: 1. Items used more than ten in total in our firm-year samples of Japanese firms are shown.

2. Adjustments 1 comprises adjustments of items in "other income (expenses)" in a typical IFRS-based statement of profit or loss. Adjustments 2 comprises adjustments of line items other than "other income (expenses)" in the statement, that is, adjustments of line items in "revenue," "cost of goods sold," "SG&A," or "financial income (expenses)."

Sources: Firms' websites.

non-GAAP measures, as explained in Appendix 1, excludes subtotals presented on the face of income statements, the increase should be mostly due to the widespread use of firm-tailored forms of non-GAAP measures. Table 11 sheds light on this aspect by distinguishing firm-tailored forms (adjusted measures) from other non-GAAP measures. The table shows that there is a considerable increase in Japanese firms' use of firm-tailored forms of non-GAAP measures, in particular adjusted forms of operating profit, once they have adopted IFRS.

Turning to the nature of adjustments Japanese IFRS firms make to arrive at their adjusted non-GAAP measures, we find that most of Japanese IFRS firms exclude what managers deem non-recurring items, such as acquisition- or merger-related gains/charges, restructuring gains/charges, impairment losses, casualty losses, and

Table 13 List of Adjustment Items Used by Japanese Non-IFRS Firms in their IR Documents (2013–2018)

<i>Japanese non-IFRS firms</i> (<i>n=1,296</i>)	Frequency
<i>Adjustments 1</i>	
Non-recurring gains or losses	15
Impairment losses/casualty losses	13
Gains or losses on disposal of non-current assets	10
Impairment of goodwill and other intangibles	9
Acquisition related gains or charge/merger related gains or charge/restructuring gains or charges	7
Gains or losses from settlement of lawsuit and other compensation	3
<i>Adjustments 2</i>	
Inventory revaluation	46
Retirement benefits related charges	18
Foreign currency translation gains/losses	14
Retirement compensation/ stock compensation expense/incentive compensation	1

Notes: 1. “Japanese non-IFRS firms” are Nikkei 225 non-IFRS firms and current IFRS firms before they adopted IFRS.
2. Items used more than ten in total in our firm-year samples of Japanese firms are shown.
3. Adjustments 1 comprises adjustments of items in “other income (expenses)” in a typical IFRS-based statement of profit or loss. Adjustments 2 comprises adjustments of line items other than “other income (expenses)” in the statement, that is, adjustments of line items in “revenue,” “cost of goods sold,” “SG&A,” or “financial income (expenses).”

Sources: Firms’ websites.

Table 14 Type of Adjustments Used by Japanese Firms in their IR Documents (2013–2018)

	<i>Japanese firms before adopting IFRS</i> <i>n=403</i>		<i>Japanese IFRS firms</i> <i>n=370</i>		<i>Nikkei 225 non-IFRS firms</i> <i>n=893</i>	
	#	%	#	%	#	%
Adjustments 1	17	4	145	39	26	3
Adjustments 2	35	9	10	3	51	6

Notes: 1. “Japanese firms before adopting IFRS” and “Japanese IFRS firms” correspond to Table 1(b). “Nikkei 225 non-IFRS firms” corresponds to Table 1(a), but excludes the samples included in “Japanese firms before adopting IFRS.”
2. “#” indicates the number of firms disclosing adjusted non-GAAP measures from 2013 to 2018 (firm-year basis).
3. Adjustments 1 comprises adjustments of items in “other income (expenses)” in a typical IFRS-based statement of profit or loss. Adjustments 2 comprises adjustments of line items other than “other income (expenses)” in the statement, that is, adjustments of line items in “revenue,” “cost of goods sold,” “SG&A,” or “financial income (expenses).”

Sources: Firms’ websites.

gains/losses from lawsuits (Table 12). In contrast, Japanese non-IFRS firms use such adjustments much less.⁵¹ Instead, Japanese non-IFRS firms tend to exclude what managers deem uncontrollable—i.e. foreign currency translation gains/losses and gains/losses arising from fluctuations in commodity prices (Table 13).⁵² Next, we investigate whether this marked difference is seen in a more systematic way. To do this, we classify firms’ adjustment items into two types based on which component in their statements of profit or loss they are making adjustments to. Adjustments 1 comprises adjustments of items in “other income (expenses)” in a typical IFRS-based

51. Here, we focus on Nikkei 225 non-IFRS firms as well as current IFRS firms before they adopted IFRS, since far fewer of such firms use non-GAAP measures.

52. In Table 13, adjustments to exclude the impact of fluctuations in commodity prices are included in “Inventory Revaluation.”

statement of profit or loss.^{53,54} Adjustments 2 comprises adjustments of line items other than “other income (expenses)” in the statement, that is, adjustments of line items in “revenue,” “cost of goods sold,” “SG&A,” or “financial income (expenses).” This distinction provides us with a sense of the nature of adjustments firms make to arrive at their non-GAAP measures. The results are presented in Table 14 and show that most adjustments Japanese IFRS firms make to their non-GAAP measures fall under Adjustments 1. This result can be interpreted as indicating that firms mostly exclude “unusual or infrequently occurring items.”⁵⁵ These adjustments are most frequently applied to firms’ IFRS-based “operating profit.”⁵⁶ On the other hand, Table 14 also shows that firms make much less use of such adjustments (classified as Adjustments 1) before they switch to IFRS.⁵⁷

Japanese IFRS firms’ motivation to start using non-GAAP measures can be summarized as follows. First, the use of “gross profit minus SG&A” is motivated by the aim to allow comparison with Japanese GAAP peers.⁵⁸ In fact, in their IR documents, some firms explicitly state that the reason for presenting this metric is to provide an equivalent of operating profit in Japanese GAAP. Second, we conjecture that IFRS firms’ use of non-GAAP measures is motivated by the nature of IFRS presentation requirements. Whereas Japanese GAAP prescribe the format and minimum line items of the income statement, the IFRS make few prescriptions in this regard. Therefore, if firms prefer to continue providing information to the same extent as before they adopted IFRS, they can do so either inside or outside financial statements.⁵⁹ Our findings suggest that they choose the latter. It is possible that firms prefer to present information outside financial statements in order to minimize the scope of audit.⁶⁰ More importantly, however, Japanese IFRS firms generally prefer to exclude items that they themselves deem non-recurring. They therefore may have no choice than to present such items outside financial statements, since the IFRS prohibit the presentation, disclosure, or characterization of an item as extraordinary. Thus, the fact that many IFRS firms do present non-recurring items outside financial statements suggests that they deem the separation of

53. See the template of typical IFRS-based statement of profit or loss in Appendix 2. B.

54. Under Japanese or U.S. GAAP, such an adjustment is considered as an adjustment to line items other than “revenue,” “cost of goods sold,” “SG&A,” or “financial income (expenses).”

55. With a few exceptions, such as impairment losses on financial assets (which are generally included in financial expenses), the exclusion of “unusual or infrequently occurring items” falls under Adjustments 1.

56. Shown as ‘Net income before (net) financial income and taxes’ in Table 10.

57. The same is true for Nikkei 225 non-IFRS firms (Table 14).

58. “Operating profit” typically used in Japanese IFRS-based statement of profit or loss (Appendix 2. B) is different from “operating profit” defined in Japanese GAAP (Appendix 2. A).

59. IFRS permits firms to present additional line items, headings, and subtotals in the statement of profit or loss when such information is relevant to an understanding of firms’ performance (Paragraph 85 of IAS 1).

60. Information outside financial statements is not subject to audit. For instance, Deloitte (2019, pp. 54–55) observes: “In general, when registrants include other information, such as non-GAAP measures, in a document containing financial statements covered by the auditor’s report, professional auditing standards require the auditor to read the other information and consider whether it is materially inconsistent with the information in the audited financial statements. [...] Although the external auditor’s report does not currently cover non-GAAP measures, the Public Company Accounting Oversight Board’s standard-setting research agenda contains a project to explore the auditor’s role regarding other information and company performance measures, including non-GAAP measures.” According to Hoogervorst (2019b), the IASB, as part of its PFS project, expects that non-GAAP measures will be brought into the scope of audit and treated as management performance measures.

non-recurring items important. Some IFRS firms, in fact, explicitly state that the reason for presenting non-GAAP measures is to report their underlying performance. Another possible motive for the use of non-GAAP measures is to allow comparison with global peers. For firms that compete globally, switching to IFRS can be a good opportunity for them to start presenting non-GAAP measures, which many of their competitors overseas already use.⁶¹

It is notable that virtually no Japanese IFRS firms use a measure that is equivalent to “ordinary profit” in the Japanese GAAP (i.e., “net income before special items and taxes”).⁶² When firms use Japanese GAAP, they generally do not report adjusted measures and seem to be fairly satisfied with their use of “special items” and “ordinary profit.” Once they depart from Japanese GAAP, however, Japanese firms no longer use “ordinary profit,” not even as a non-GAAP measure. This suggests that firm managers prefer to present separately what *they* regard as recurring and non-recurring items. This corresponds to financial statement users’ call for disclosure of such items.^{63,64} Our findings here also underscore the importance of the PFS project, in which the IASB discusses the introduction of management performance measures as well as ways to improve disaggregation in statements of financial performance.⁶⁵

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61. In interviews conducted by the Japanese accounting magazine *Kigyo Kaikei* with seven Japanese IFRS firms, several interviewees explained that their motivation for starting to use non-GAAP measures, in addition to the motives we discussed here, was to follow global competitors’ presentation practices (*Kigyo Kaikei Henshubu* [2019]).

62. Japanese GAAP requires firms to disclose extraordinary profit or losses and retrospective restatements as “special items.”

63. IASB (2017) provides as follows (underline by authors):

5.25 Users of the financial statements have told the Board that separate presentation or disclosure of unusual or infrequently occurring items is helpful in making forecasts about future cash flows. Consequently, the Board’s preliminary view is that it should allow entities to present such item separately. However, to respond to concerns that entities are presenting unusual or infrequently occurring items inappropriately and/or inconsistently, the Board is also of preliminary view that a general disclosure standard should explain when and how items can be presented in the statement(s) of financial performance as unusual and/or infrequently occurring.

64. Prior studies indicate that special items have been used for the purpose of earnings management by firm managers but also show that such special items are relevant to investors.

An example of earnings management using special items is a “big bath.” Empirical evidence suggests that firm managers use special items for earnings management by overstating current-period expenses to improve the firm’s future income (Burgstahler, Jiambalvo, and Shevlin [2002]). Extending the analysis by Burgstahler, Jiambalvo, and Shevlin (2002), Cready, Lopez, and Sisneros (2012) find that negative special items serve not only as a transfer of expenses but also signal real future performance improvements made within the firm.

A different use of special items to manage earnings is “classification shifting” (McVay[2006]). The study identifies managers’ deliberate misclassification of items within the income statement. However, these prior studies do not necessarily assert that the use of special items or the separation of recurring and non-recurring items are used only for earnings management and hence of little value for investors.

65. The IASB proposes to require companies to disclose, in a single note, for each unusual items: (1) the amount recognized in the period; (2) a narrative description of how it arose and why it meets the definition of an unusual item; (3) in which line item(s) in the statement of profit or loss it is included; and (4) an analysis by nature, if the company presents operating expenses by function in the statement of profit or loss. The proposed definition of “unusual income and expenses” in the Exposure Draft is “income and expenses with limited predictive value. Income and expenses have limited predictive value when it is reasonable to expect that income or expenses that are similar in type and amount will not arise for several future annual reporting periods.” See IASB (2019b) .

Table 15 Use of Non-GAAP Measures by Japanese GAAP Firms in their IR Documents (Before and After the Adoption of IFRS)

(a) Non-GAAP Measures

	Year preceding IFRS adoption (<i>t</i> −1)		Year of IFRS adoption (<i>t</i>)		Year following IFRS adoption (<i>t</i> +1)	
	#	%	#	%	#	%
All firms (n=111)	31	28	50	45	57	51
Firms that switched in 2014 (n=9)	3	33	5	56	5	56
Firms that switched in 2015 (n=14)	3	21	5	36	7	50
Firms that switched in 2016 (n=22)	5	23	11	50	14	64
Firms that switched in 2017 (n=27)	7	26	13	48	15	56
Firms that switched in 2018 (n=39)	13	33	16	41	16	41

(b) Adjusted Non-GAAP Measures

	Year preceding IFRS adoption (<i>t</i> −1)		Year of IFRS adoption (<i>t</i>)		Year following IFRS adoption (<i>t</i> +1)	
	#	%	#	%	#	%
All firms (n=111)	12	11	23	21	27	24
Firms that switched in 2014 (n=9)	2	22	4	44	4	44
Firms that switched in 2015 (n=14)	1	7	3	21	4	29
Firms that switched in 2016 (n=22)	0	0	1	5	3	14
Firms that switched in 2017 (n=27)	3	11	7	26	8	30
Firms that switched in 2018 (n=39)	6	15	8	21	8	21

Note: Figures in *italic* are for year *t* (2018), since at the time of writing the figure for year *t*+1 (2019) was not yet available.

C. Additional Analysis

As shown in the previous sections, once they have adopted IFRS, Japanese firms tend to disclose non-GAAP measures. In the above analysis on Japanese firms that switched to IFRS, however, we made no distinction between firms that switched from Japanese GAAP or U.S. GAAP. It is possible that the accounting standard firms used before switching to IFRS may affect the results. This subsection briefly reports additional findings based on the same analysis underlying Tables 8 and 9 but focusing only on firms that used Japanese GAAP (hereafter Japanese GAAP firms) before switching to IFRS.⁶⁶ The purpose of this analysis is to confirm that our findings remain unchanged when we only consider Japanese GAAP firms. Table 15 shows the result.

Table 15(a) compares the use of non-GAAP measures by Japanese GAAP firms in the year before and the year after they adopted IFRS. The panel shows that the proportion of firms that report non-GAAP measures increases from 28 percent in the year preceding the switch (*t* − 1) to 45 percent in the year they adopted IFRS (*t*) and 51

66. We do not conduct the same analysis focusing only firms that switched from U.S. GAAP, since there are only nine Japanese firms that made such a switch from 2013–2018.

percent in the following year ($t + 1$). We use the same two sets of comparables as above. Recall that for the two sets of comparables, the proportions remain almost unchanged (Table 8(b) and (c)). This difference suggests that the likelihood that firms that previously used Japanese GAAP disclose non-GAAP measures in their IR documents increases following the adoption of IFRS. The same pattern is observed for adjusted measures. Table 15(b) compares the use of adjusted measures by Japanese GAAP firms in the year before and the year after the adoption of IFRS. The panel shows that the proportion of Japanese firms that report adjusted non-GAAP measures increased from 11 percent in the year preceding the switch ($t - 1$) to 21 percent in the year of the switch (t) and 24 percent in the following year ($t + 1$). Again, a clear difference is observed from the two sets of comparables in Table 9(b) and (c). Taken together, our findings on the relationship between Japanese firms' IFRS adoption and changes in non-GAAP disclosure practices remain unchanged when we focus on Japanese GAAP firms only.

VI. Conclusion

This study provides evidence on whether and how Japanese firms change their non-GAAP disclosure practices both inside and outside financial statements in the wake of adopting IFRS.

Investigating the financial statements of all listed firms in Japan that have switched to IFRS, we find that most of these firms continue to use “operating profit” in their statements of financial performance after they have adopted IFRS. Moreover, with only a very few exceptions, such firms use the same definition of operating profit, although there are differences in terms of whether firms include or exclude the share of profit from associates and joint ventures. We also discussed the role of the Illustrative IFRS Consolidated Financial Statements prepared by Japan's Financial Services Agency. We suspect that although they are not binding, the illustrative statements likely have helped to build a widely shared understanding of “operating profit” among firms that have adopted IFRS. Further, the introduction of several subtotals proposed in the PFS project would improve the comparability and usefulness of financial statements.

For our investigation of Japanese firms' non-GAAP disclosure practices outside financial statements, we used IR documents for the past six fiscal years available from firms' websites, focusing on all Nikkei 225 firms as well as all listed firms in Japan that have adopted IFRS. We find, firstly, that only one third of Nikkei 225 firms report non-GAAP measures. Secondly, we find evidence suggesting that, in the wake of adopting IFRS, Japanese firms change their non-GAAP disclosure practices in the following ways:

- Japanese firms increase their use of non-GAAP measures *after* they have adopted IFRS.
- Many Japanese firms start providing adjusted non-GAAP measures *only after* they have adopted IFRS.
- The exclusion of non-recurring items to arrive at non-GAAP measures becomes more common *only after* the adoption of IFRS.

Our findings are important in two respects. First, the evidence we obtain is consis-

tent with the view that the proliferation of non-GAAP measures is, in part, attributable to the nature of the current IFRS presentation requirements for financial statements. Second, our findings indicate that many managers deem the separation of non-recurring items important. Together with our findings on whether and how Japanese firms use subtotals in their statements of financial performance, these results underscore the importance of the IASB's PFS project. Overall, our findings provide important empirical evidence at a time when the IASB is developing new presentation requirements for statements of financial performance.

APPENDIX 1: WHAT IS A NON-GAAP MEASURE?

Firms' financial performance measures that are not required to be disclosed by GAAP (either national GAAP or IFRS) are commonly referred to as "non-GAAP (performance) measures."⁶⁷ There is, however, no universal definition of 'non-GAAP measures'. In this Appendix, we review definitions by major securities regulators and show how those measures may or may not appear inside or outside financial statements when firms use different accounting standards. Next, we explain the criteria we used to consider "non-GAAP (performance) measures" in this study.

Definitions by Major Securities Regulators

The Table below shows the definition of non-GAAP measures by the U.S. SEC, the ESMA and the IOSCO. Japanese securities regulators currently do not directly regulate non-GAAP measures.

Definition of "Non-GAAP measures" by Major Securities Regulators

U.S. SEC (2002)	For purposes of Regulation G, a non-GAAP financial measure is a numerical measure of a registrant's historical or future performance, financial position, or cash flows that: <ul style="list-style-type: none"> • exclude amounts, or is subject to adjustments that have the effect of excluding amounts, that are included in the most directly comparable measure calculated and presented in accordance with GAAP in the statement of income, balance sheet or statement of cash flows (or equivalent statements) of the issuer; or • includes amounts, or is subject to adjustments that have the effect of including amounts, that are excluded from the most directly comparable measure so calculated and presented.
ESMA (2015)	What is an alternative performance measure (APM)? For the purpose of these guidelines an APM is understood as a financial measure of historical or future financial performance, financial position, or cash flows, other than a financial measure defined or specified in the applicable financial reporting framework.
IOSCO (2016)	For the purpose of this Statement, a non-GAAP financial measure is a numerical measure of an issuer's current, historical or future financial performance, financial position or cash flow that is not a GAAP measure.

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67. The terms "non-GAAP (performance) measures," "non-GAAP financial measures," "alternative performance measures (APMs)," "pro forma (performance) measures," and "street earnings" are often used synonymously. U.S. and Canadian securities regulators call them "non-GAAP (financial) measures," while E.U. securities regulators call them "alternative performance measures (APMs)."

Use of Non-GAAP Measures inside and outside Financial Statements

In the United States, the use of non-GAAP measures inside financial statements by SEC registrants is prohibited.⁶⁸ Therefore, U.S. firms that comply with U.S. GAAP normally do not use non-GAAP measures in their financial statements. Use of non-GAAP measures by U.S. firms in other communication than financial statements are permissible as long as they are compliant with SEC's applicable regulations.

In the European Union among other jurisdictions, firms that comply with IFRS may present non-GAAP measures in their financial statements. Since IAS 1 requires firms to present additional line items as needed, IFRS firms can use tailor-made line items accordingly (see below).

IAS 1 *Presentation of Financial Statements*

Paragraph 85	Any entity shall present additional line items (including by disaggregating the line items listed in paragraph 82), headings and subtotals in the statement(s) presenting profit or loss and other comprehensive income when such presentation is relevant to an understanding of the entity's financial performance.
Paragraph 85A	When an entity presents subtotals in accordance with paragraph 85, those subtotals shall: <ul style="list-style-type: none"> (a) be comprised of line items made up of amounts recognised and measured in accordance with IFRS; (b) be presented and labelled in a manner that makes the line items that constitute the subtotal clear and understandable; (c) be consistent from period to period, in accordance with paragraph 45; and (d) not be displayed with more prominence than the subtotals and totals required in IFRS for the statement(s) presenting profit or loss and other comprehensive income.
Paragraph 85B	An entity shall present the line items in the statement(s) presenting profit or loss and other comprehensive income that reconcile any subtotals presented in accordance with paragraph 85 with the subtotals or totals required in IFRS for such statement(s).

There is no definition of non-GAAP measures in IFRS, but such subtotals referred to in Paragraph 85 of IAS 1 and not specified by IFRS, can be referred to as non-GAAP measures.

Use of non-GAAP measures by E. U. firms in other communication than financial statements are permissible as long as they are compliant with ESMA's applicable regulations. ESMA's APMs Guidelines apply to APMs simultaneously presented inside and outside financial statements.⁶⁹ The ESMA states that "under the IFRS framework, measures labelled as 'operating results', 'results of operating activities' or other similar labels are within the scope of APMs Guidelines when presented outside financial statements," because operating results or the like are not defined or specified in IFRS.⁷⁰

In Japan, firms that comply with Japanese GAAP or U.S. GAAP are generally not allowed to use non-GAAP measures in their financial statements, while firms that comply with IFRS may use non-GAAP measures in their financial statements. Use of non-GAAP measures by Japanese firms in other communication than financial statements are not regulated by specific law or regulation.

.....
68. Item 10 (e) of Regulation S-K prohibits presenting non-GAAP financial measures on the face of the registrant's financial statements prepared in accordance with GAAP or in the accompanying notes. SEC permits foreign private issuers (FPIs) to use non-GAAP measures in SEC filings under certain conditions. See, for example, Bogle (2017).

69. Refer to Question and Answer #2 in ESMA (2017).

70. Refer to Question and Answer #11 in ESMA (2017).

Criteria Used to Consider Non-GAAP Measures in this Study

For the purpose of this study, a non-GAAP measure is a numerical measure of a firm's historical performance. A numerical measure of a firm's financial position, or cash flows is outside the scope of the study. A numerical measure of firm's future performance alone is also outside the scope of the study.

Consistent with the definition by U.S. SEC (2012), the amounts in the table to show the impact that certain significant income and expense items have on GAAP measures are not considered non-GAAP measures unless they were subtotaled to a non-GAAP amount or used to derive an adjusted measure. Further, the presentation of year-over-year percentage change of non-GAAP measures alone, without mentioning the amount of it, is not considered non-GAAP measure either.

For our investigation of IFRS-based financial statements (the first part of our analysis), subtotals not specified or defined by IFRS are considered non-GAAP measures. 'Operating profit', for example, is regarded as non-GAAP measures. On the other hand, for our investigation for IR documents (the second part of our analysis), measures presented outside financial statements that are exactly the same as shown in its IFRS-based financial statements—are not considered non-GAAP measures. A measure simultaneously presented inside and outside financial statements, for example 'operating profit' shown in both of their IFRS-based financial statements and IR document is not considered non-GAAP measure.

APPENDIX 2: JAPANESE GAAP AND IFRS COMPARISON FOR INCOME STATEMENT PRESENTATION

In this Appendix, illustrations of the following consolidated income statements are shown:

- (a) Japanese GAAP-based income statement;
- (b) the statement of profit or loss in Illustrative IFRS Consolidated Financial Statements by Japan's Financial Services Agency (JFSA Illustration); and
- (c) the statement of profit or loss with subtotals tentatively defined in the IASB's Primary Financial Statements project.⁷¹

A. Illustration of Japanese GAAP-based Income Statement

Below is an excerpt from Form 5 in Japan's Ministry of Finance Ordinance on Terminology, Forms and Preparation Methods of Consolidated Financial Statements.

Consolidated Income Statement

	(amount unit: Japanese yen)	
	Consolidated previous accounting year for the fiscal year ended **, 20**	Consolidated current accounting year for the fiscal year ended **, 20**
Revenue	***	***
Cost of goods sold	***	***
Gross profit (or gross loss)	***	***
Selling, general and administrative expense (SG&A)		

71. For (a) and (b), translations are provided by authors.

****	***	***
****	***	***
****	***	***
Total selling, general and administrative expense (SG&A)	***	***
Operating profit (or operating loss)	***	***
Non-operating income		
Interest income	***	***
Dividends income	***	***
Gain from sale of investment securities	***	***
Share of profit of joint ventures and associates	***	***
****	***	***
****	***	***
Total non-operating income	***	***
Non-operating expenses		
Interest expenses	***	***
Loss from sale of investment securities	***	***
Share of losses of joint ventures and associates	***	***
****	***	***
Total non-operating expenses	***	***
Ordinary profit (or ordinary losses)	***	***
Special income		
Gain on sale of fixed assets	***	***
Gain on acquisition of business	***	***
****	***	***
****	***	***
Total special income	***	***
Special expenses		
Loss from sale of fixed assets	***	***
Impairment loss	***	***
Loss on disaster	***	***
****	***	***
****	***	***
Total special expenses	***	***
Net income before taxes and minority interests	***	***
The corporation tax, inhabitants tax, and enterprise taxes	***	***
Tax adjustment	***	***
Total taxes	***	***
Net income (or net loss)	***	***
Net income attributable to non-controlling interests (or net loss attributable to non-controlling interests)	***	***
Net income attributable to owners of parent (or net loss attributable to owners of parent)	***	***

B. JFSA Illustration of an IFRS-based Statement of Profit or Loss

Consolidated Income Statement

(amount unit: Japanese million yen)

	Notes	From April 1, 2014 to March 31, 2015	From April 1, 2015 to March 31, 2016
Revenue	6, 25		
Cost of goods sold			
Gross profit			
Selling, general and administrative expense (SG&A)	26		
Other income	27		
Other expenses	27		
Operating profit			
Financial income	28		
Financial expenses	28		

Share of profit of joint ventures and associates	16		
Profit before tax			
Income tax expense	17		
Profit for the period			
Profit is attributable to:			
Owners of parent			
Non-controlling interests			
Profit for the period			
Earnings per share for profit attributable to ordinary equity holders of the company	30		
Basic earnings per share (Japanese yen)			
Diluted earnings per share (Japanese yen)			

C. IASB's Proposed Subtotals in the Statement of Profit or Loss

Below is the illustration of the statement of profit or loss with subtotals proposed in the Exposure Draft *General Presentation and Disclosures* (IASB [2019a]).

Summary of a Statement of Profit or Loss

Revenue	X	
Operating expenses	(X)	Operating
Operating profit or loss	X	
Share of profit or loss of integral associates and joint ventures	X	Integral associates and joint ventures
Operating profit or loss and income and expenses from integral associates and joint ventures	X	
Share of profit or loss of non-integral associates and joint ventures	X	
Income from investments	X	Investment
Profit or loss before financing and income tax	X	
Interest revenue from cash and cash equivalents	X	
Expenses from financing activities	(X)	Financing
Unwinding of discount on pension liabilities and provisions	(X)	
Profit or loss before tax	X	

APPENDIX 3: SAMPLE FRAME FOR JAPANESE FIRM'S IR DOCUMENTS

The Figure A-1 provides a graphic representation of our sample frame. The shaded area in Figure A-1 represents our sample frame. We handcollect all IR documents for the following firms:

- (1) all Nikkei 225 firms (excluding those in banking and insurance) that, as of March 2018, were using IFRS (Nikkei 225 IFRS firms);
- (2) all Nikkei 225 firms that, as of March 2018, were using either Japanese GAAP or U.S. GAAP (Nikkei 225 non-IFRS firms); and
- (3) all listed Japanese firms that, as of March 2018, were using IFRS.

Figure A-1 Sample Frame for Japanese Firms' IR Documents

Japanese Listed Firms			
	IFRS	Japanese GAAP	U.S. GAAP
Nikkei 225 firms	(1), (3)	(2)	(2)
Banking and insurance			
Other firms	(3)		

Nikkei 225 IFRS firms

Japanese IFRS firms

Nikkei 225 non-IFRS firms

Note: "Banking and insurance" in this figure is as defined in Japan's Banking Act and Insurance Business Act. No Japanese firms in banking and insurance have so far adopted IFRS.

Since we analyze how firms change their disclosure practices, we track the above mentioned firms over six successive fiscal year-ends. When we investigate trends in the use of non-GAAP performance measures by type of firm (i.e., Japanese IFRS firms, Japanese non-IFRS firms, Nikkei 225 IFRS firms, or Nikkei 225 non-IFRS firms), our classification is based on the accounting standard that firms used during the year we analyze. To provide an example, the figure below depicts how we classify firms into non-IFRS firms and IFRS firms. In the figure, the firm switched to IFRS in 2016.

	2013	2014	2015	2016	2017	2018
Accounting standard	Japanese GAAP	Japanese GAAP	Japanese GAAP	Firm switches to IFRS	IFRS	IFRS
Our classification	Non-IFRS firm	Non-IFRS firm	Non-IFRS firm	IFRS firm	IFRS firm	IFRS firm

Note: As for "firm switches to IFRS," we regard a firm as having switched to IFRS if it discloses IR documents with IFRS-based annual financial statements.

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