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Accounting Comparability and Cash Holdings of Japanese firms

Wenjun Kuang

Osaka University

Abstract

I examine how accounting comparability affects the cash holdings of Japanese firms in this study. Using a sample of 16,542 observations during 2008-2019, I find that accounting comparability is negatively related to the cash holdings. This result indicates that financial statement comparability reduces managers' precautionary and agency motives for cash holdings. My findings suggest that financial statement comparability plays an important role in decreasing information asymmetry and facilitating external monitoring of corporate resource allocation. Overall, the results of this study provide investors and regulators with useful implications on the importance of comparability in the capital market.

Keywords: accounting comparability; cash holdings; external monitoring; information asymmetry

1 Introduction

Large corporate cash saving of Japanese firms is getting much attention in the industry and academia. For example, Honda and Uesugi (2022) find that the average ratio of cash holdings to assets is about 20% for Japanese firms during 2019-2020, which is higher than the average ratio of

16.8% for 26 mostly advanced countries in 2018.[1] Since large cash holdings are symptomatic of poor governance and prevent firms from efficient resource allocation and capital investment opportunities (Kato et al., 2017; Aoyagi and Ganelli, 2017), it hurts the country's longstanding growth strategy.[2] According to the Securities and Exchange Commission (SEC, 2000), the efficient allocation of capital can be facilitated when investors make judgments about comparable investments. Comparability enables investors to detect managers' expropriations of corporate resources and discipline managerial misconduct (Kim et al., 2021). Given the decreased information asymmetry and enhanced governance resulting from comparable financial reporting, managers are less likely to misuse corporate resources and destroy shareholder value. Therefore, I argue that comparability affects managers' resource allocation decisions, as reflected in the more efficient use of cash.

Specifically, I hypothesize that there is a negative association between accounting comparability and corporate cash holdings. Prior studies indicate two primary motives for corporate cash holdings: (1) the precautionary motive and (2) the agency motive (Bates et al., 2009; Amess et al., 2015). On one hand, comparability improves firms' information environments and decreases external financing costs (Kim et al., 2013; Imhof et al., 2017), which may mitigate firms' precautionary motives for holding cash. On the other hand, comparability reduces monitoring costs and enhances external governance (Kim et al., 2016). This helps mitigate the agency problem associated with cash (Ann et al., 2020). Therefore, I predict that accounting comparability is negatively related to the cash holdings.

To test this prediction, I follow De Franco et al. (2011) and measure comparability as the degree to which firms with similar economic characteristics have similar accounting information. Using a sample of 16,542 firm-year observations from 2008 to 2019, I show that firms with comparable financial statements hold less cash. Specifically, I find that a one standard deviation increase in comparability measures reduces cash holdings by 3.550% from the mean, which is economically significant. The results are robust to alternative measures of comparability and cash holdings.

This study adds to the literature in the following ways. First, this study contributes to the research on the determinants of cash holdings by using the Japanese setting, where extremely large cash holdings have resulted in a low growth rate.[3] Second, this study enriches the literature on the effect of comparability on firms' real operation decisions. Although prior studies have investigated the influence of accounting comparability on analyst behaviours (De Franco et al., 2011) and crash risk (Kim et al., 2016), there is limited evidence on whether comparability affects managers' real

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[1] Particularly, Japanese firms have increased their cash holdings since the outbreak of the COVID-19 crisis. For example, Honda and Uesugi (2022) show that the cash holdings of Japanese firms increased from 19.5% of total assets in the pre-crisis period to 21.4% in the second quarter of 2020, suggesting that the ratio of cash to assets increased significantly after the outbreak of the pandemic.

[2] Please see "A $2.5 trillion problem", The Economist, September 27, 2014. Available at: https://www.economist.com/leaders/2014/09/27/a-25-trillion-problem (June 10, 2023)

[3] For example, Yasui (2021) indicates that the real GDP growth rate has been below the government's goal of 2%, and the nominal GDP has fallen far short of the target of 600 trillion yen in 2020.

operating decisions. This study addresses this question by examining the effects of comparability on cash management policy. Finally, my findings should be important to investors and regulators who are interested in the mechanisms that can improve the growth of firms.

2 Literature Review and Hypothesis Development

Japanese firms are known for their high cash holdings compared to other advanced countries. For example, Aoyagi and Ganelli (2017) find that the average ratio of cash and cash equivalent holdings to the market capitalization of listed companies during 2004–2012 was above 40% in Japan, larger than 15–27% in other G-7 countries. Kato et al. (2017) find that the mean ratio of cash to assets for Japanese firms is 17.2% (median 13.1%) in 2005, higher than 16.0% for US firms (median 9.6%). The numbers then increase to 18% (15%) in 2010 and 2011.

According to the prior studies, there are two key theoretical perspectives on corporate cash holdings: (1) the precautionary motive and (2) the agency motive (Bates et al., 2009; Amess et al., 2015). The first motive relates to future financial constraints and the retention of cash for investment purposes, which is suggested to be an important factor for cash holdings in Japan, especially after influential economic events such as the collapse of Lehman Brothers in 2008 and the Great East Japan Earthquake in 2011 (Kawase et al., 2015; Nakaoka, 2019). The second motive relates to the potential misuse of corporate resources by managers for personal interests, which is constrained by the corporate governance system (Kato et al., 2017; Nguyen and Rahman, 2020). Prior studies document that the weak corporate governance system contributes to the high cash holdings in Japanese firms (Aoyagi and Ganelli, 2017; Kato et al., 2017).[4]

Accounting comparability may affect the above two motives of corporate cash holdings. First, comparable financial information can reduce the precautionary motive of firms. According to the pecking order theory, firms prefer internal financing over external financing and debt over equity (Myers and Majluf, 1984). Due to the information asymmetry between firms and outside investors, firms may face higher expected financing costs when raising external finance (Ozkan and Ozkan, 2004). As a result, managers tend to hold cash to accommodate economic uncertainty and unexpected investment opportunities (Clarkson et al., 2020; Honda and Uesugi, 2022).[5] Since accounting comparability enables the users of financial reporting to make sharper inferences about economic similarities and differences across comparable firms and helps investors better evaluate the valuation of firms relative to other peer firms (De Franco et al., 2011), greater financial statement com-

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[4] For example, Aoyagi and Ganelli (2017) find that improved corporate governance could reduce corporate cash holdings in Japan. Kato et al. (2017) find that Japanese firms have reduced their cash holdings by 3% to 4% since 2000 (governance reform). Moreover, they indicate an inverse relationship between changes in the excess cash holdings and improvement in firm performance since 2000.

[5] Particularly, Honda and Uesugi (2022) argue that the macroeconomic uncertainty index and the economic policy uncertainty index have reached the tipping point in two decades in Japan, which leads to an increase in demand for precautionary cash holdings.

parability decreases the information asymmetry and improves the information environment (Kim et al., 2016). This can reduce firms' costs of equity (Imhof et al., 2017) and costs of debt (Kim et al., 2013). Specifically, Imhof et al. (2017) find that there is a negative association between comparability and cost of equity and this relation is stronger when information asymmetry is high. Kim et al. (2013) find that comparability is significantly negatively associated with firms' credit risk by reducing debt market participants' information uncertainty. Therefore, firms with higher accounting comparability can use external financing at a cheaper cost and are disincentivised to hold cash to minimize the financing costs.

Second, comparability can constrain managerial agency motive to hold excess cash. According to the agency theory framework, managers may hold large reserves of cash to undertake inefficient investments such as negative NPV projects, which can be regarded as an important agency problem-the free cash flow problem (Jensen, 1986).[6] The improvement in corporate governance can mitigate this free cash flow issue (Kato et al., 2017). For example, investors may force managers to distribute excess cash to utilize it more effectively elsewhere (Nguyen and Rahman, 2020). As comparability enables investors to better identify and understand the profitability of a firm's projects by making comparisons with the disclosure of its peer firms (Kim et al., 2021), investors can monitor managers' behaviours more easily and it would become difficult for managers to conceal the results of their poor resource allocation decisions related to cash holdings. For example, Ann et al. (2020) find that firms with higher accounting comparability have a higher marginal value of cash holdings, suggesting that comparability mitigates the agency problem associated with cash holdings. Similarly, Kim et al. (2021) find that corporate cash holdings in firms with higher comparability are valued higher by the capital market than in firms with lower comparability. Given that high comparability improves corporate governance by enhancing monitoring by investors and enabling shareholders to better discipline managerial behaviours when using corporate resources (Kim et al., 2021), managers are less likely to use their discretion in holding excess cash.

The above arguments lead to the following hypothesis:

H1: Accounting comparability is negatively related to the cash holdings.

3 Research Design

3.1 Measures of accounting comparability

I follow De Franco et al. (2011) to measure financial statement comparability. Specifically, I first estimate the following regression using the most recent 16 quarters of earnings and stock returns:

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[6] Consequently, shareholders value firms' cash holdings at a considerable discount, which makes the market value of an additional dollar of cash holdings less than $1 (Ann et al., 2020).

$$Earnings_{i,t} = \ \alpha_i + \beta_i Return_{i,t} + \varepsilon_{i,t} \tag{1}$$

where $Earnings_{i,t}$ is the quarterly net income before extraordinary items scaled by the market value of equity at the beginning of the quarter, and $Return_{i,t}$ is the raw buy-and-hold stock return during quarter t.[7] The estimated coefficients α_i and β_i proxy for firm i's accounting system. Then I measure the expected earnings of two accounting systems of firms i and j ($(Earnings)_{i,i,t}$ and $(Earnings)_{i,j,t}$) by using the economic events of firm i and the estimated coefficients of both firm i and firm j, as follows:

$$E(Earnings)_{i,i,t} = \ \hat{\alpha}_i \ + \hat{\beta}_i Return_{i,t} \tag{2}$$

$$E(Earnings)_{i,j,t} = \ \hat{\alpha}_j \ + \hat{\beta}_j Return_{i,t} \tag{3}$$

The closeness (comparability score) between two accounting systems of firms i and j is measured as the average absolute difference between expected earnings for each firm i - j pair over the previous 16 quarters multiplied by negative one, as follows:

$$CompAcct_{i,j,t} = \ -\frac{1}{16} \sum_{t-15}^{t} |E(Earnings)_{i,i,t} - E(Earnings)_{i,j,t}| \tag{4}$$

$CompAcct_{i,j,t}$ captures the distance between two firms' accounting functions. If two firms have comparable accounting systems, their financial statements will be similar if they have experienced the same economic events (De Franco et al., 2011). Thus, the distance between functions will be smaller for more comparable accounting systems. Therefore, $CompAcct_{i,j,t}$ represents the comparability level between the firms.

Following prior studies (Kim et al., 2016; Ann et al., 2020; Kim et al., 2021), I generate two firm-year measures of comparability for each firm i in year t: (1) the average $CompAcct_{i,j,t}$ for all firms j in the same industry as firm i during year t (ACC_IND) and (2) the median $CompAcct_{i,j,t}$ for all firms j in the same industry as firm i during year t (ACC_Median). Greater values of comparability measures indicate higher comparability between firm i and its peers.

3.2 Research Model

To investigate the effect of accounting comparability on cash holdings, I follow previous literature (Habib et al., 2017; Nguyen and Rahman, 2020; Clarkson et al., 2020) to estimate the following model to test H1:

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[7] Following previous studies (Kim et al., 2016; Habib et al., 2017; Neel, 2017), I use the raw quarterly stock returns to calculate comparability. Specifically, I employ the buy-and-hold stock return as in previous literature (e.g., Brochet et al., 2013; Neel, 2017). As prior studies (e.g., Brochet, et al., 2013) have also used cumulative monthly returns to calculate comparability, I also repeat the analysis using comparability measures estimated on cumulative monthly returns. Please refer to Panel E, Table A-1 in the Online Appendix.

$$CASH_{i,t} = \alpha + \beta_1 ACC_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 MTB_{i,t} + \beta_4 NWC_{i,t} + \beta_5 CAPIX_{i,t}$$
$$+ \beta_6 RD_{i,t} + \beta_7 CFO_{i,t} + \beta_8 Variability_{i,t} + \beta_9 CCC_{i,t} + \beta_{10} LEV_{i,t} + \beta_{11} Dividend_{i,t} \quad (5)$$
$$+ \beta_{12} AQ_{i,t} + Industry + Year + \varepsilon_{i,t}$$

where the dependent variable is a firm's cash holdings ($CASH$) measured as cash and cash equivalents scaled by total assets. ACC is accounting comparability measured using ACC_IND or ACC_Median. Since I hypothesize that comparability decreases corporate cash holdings, a negative coefficient on ACC supports H1. Following Habib et al. (2017) and Nguyen and Rahman (2020), I include year and industry dummies to the model. I also include a set of control variables that have been suggested by prior studies (e.g., Ozkan and Ozkan, 2004; Habib et al., 2017; Ann et al., 2020; Kim et al., 2021; Honda and Uesugi, 2022). The definitions of control variables are listed in Appendix A.

4 Results

4.1 Sample selection

I obtain financial information and stock data from the Nikkei NEEDS Financial QUEST database. Following prior studies, I exclude the following observations: (1) firms working in banking, securities, and insurance, (2) firm-year observations with the number of months in a fiscal period not equal to 12 and observations that changed the accounting period during the analysis period, (3) observations with missing values related to accounting comparability and cash holdings, and (4) observations with missing data for control variables. My final sample consists of 16,542 firm-year observations from 2008 to 2019. All continuous variables are winsorized by 1% to reduce the influence of outliers.[8]

4.2 Descriptive statistics

Table 1 presents the descriptive statistics of the variables used in Model (5).[9] Panel A shows the distributional statistics for full samples. The measure of cash holdings ($CASH$) has a mean (median) of 0.169 (0.140).[10] The mean (median) values of ACC_IND and ACC_Median are −0.018

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[8] I follow Wakabayashi (2016, 2018) to include firms applying IFRS and GAAP due to the following reasons: First, J-GAAP can be considered equivalent to IFRS since the Accounting Standards Board of Japan and the International Accounting Standards Board launched a project to achieve convergence between J-GAAP and IFRS in 2005 (Gu, 2021). Second, Mukai (2017) finds that the application of IFRS does not decrease comparability with J-GAAP firms. Thus, I conjecture that accounting standards are unlikely to significantly affect the main results. Additionally, I also repeat data analysis on J-GAAP firms and find my main results hold.

[9] Please note that I follow previous studies (e.g., Shin and Kolari, 2004; Moriyasu and Uchida, 2011) to replace the missing values of RD with zero for samples without missing values in main variables (e.g., Earnings and Sales) in financial data.

[10] The trend in cash holdings (untabulated) shows that firms have significantly increased cash holdings after the collapse of Lehman Brothers in 2008 and the Great East Japan Earthquake in 2011, which is consistent with those reported in prior studies (Kawase et al., 2015; Kato et al., 2017; Nakaoka, 2019; Nguyen and Rahman, 2020). Moreover, the sample distribution (untabulated) also shows that the time trend of comparability and the sample distribution by industries are consistent with the results of Wakabayashi (2018).

(−0.015) and −0.015 (−0.011), respectively, which are larger than those documented in prior studies (e.g., Kim et al., 2016; Habib et al., 2017; Ann et al., 2020). Panel A also shows that the average operating cash flow (*CFO*) is 0.058 and the mean of cash flow variability (*Variability*) is 0.034. These results are consistent with those reported by Nguyen and Rahman (2020) and Harford et al. (2008), respectively.[11]

Panel B reports the test statistics for the comparison of two groups with high and low accounting comparability.[12] As shown in Panel B, the mean value of cash holdings for the high-comparability group is 0.165, while the low-comparability group has a mean of 0.173, indicating that samples with high comparability have significantly lower cash holdings than those with low comparability.

Table 1 Descriptive statistics

Panel A: Summary statistics

	N	Mean	SD	Min	p25	Median	p75	Max
CASH	16,542	.169	.122	.005	.083	.140	.221	.811
ACC_IND	16,542	−.018	.011	−.104	−.020	−.015	−.011	−.005
ACC_Median	16,542	−.015	.011	−.102	−.016	−.011	−.008	−.004
SIZE	16,542	10.342	1.671	5.939	9.108	10.140	11.427	14.977
MTB	16,542	1.233	1.349	.148	.613	.893	1.368	21.790
NWC	16,542	.071	.152	−.584	−.024	.076	.170	.521
CAPEX	16,542	.038	.032	0	.015	.030	.051	.252
RD	16,542	.020	.044	0	0	.007	.026	1.444
CFO	16,542	.058	.057	−.368	.031	.059	.088	.331
Variability	16,542	.034	.033	.001	.014	.025	.042	.382
CCC	16,542	.530	.256	.045	.340	.530	.680	1.800
LEV	16,542	.475	.193	.049	.325	.475	.621	1.185
Dividend	16,542	.003	.037	0	0	0	.001	1.265
AQ	16,542	−.023	.020	−.205	−.027	−.017	−.011	−.003

Panel B: Summary statistics by group

	Low Accounting Comparability			High Accounting Comparability			T-Statistic
	N	Mean	Median	N	Mean	Median	t-value
CASH	8,269	.173	.144	8,273	.165	.136	4.347***
SIZE	8,269	9.888	9.689	8,273	10.795	10.647	−36.288***
MTB	8,269	1.236	.844	8,273	1.230	.950	0.275
NWC	8,269	.059	.062	8,273	.083	.088	−10.234***
CAPEX	8,269	.036	.026	8,273	.039	.033	−6.716***
RD	8,269	.019	.005	8,273	.021	.010	−2.082**
CFO	8,269	.050	.053	8,273	.066	.064	−17.417***
Variability	8,269	.041	.029	8,273	.027	.021	27.962***
CCC	8,269	.552	.547	8,273	.508	.513	11.197***
LEV	8,269	.516	.525	8,273	.434	.428	28.186***
Dividend	8,269	.004	0	8,273	.003	0	1.825*
AQ	8,269	−.028	−.021	8,273	−.018	−.014	−32.358***

All continuous variables are winsorized at 1 and 99 percentiles. Please see Appendix A for all variable definitions.

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[11] Specifically, Nguyen and Rahman (2020) find that the average of operating cash flows over assets is 0.0569. Harford et al. (2008) show that the volatility of cash flows has a mean of 0.040.

[12] Specifically, I divide the full samples into two groups (high-comparability group and low-comparability group) based on the median value of *ACC_IND* by year. Then I test the difference in variables between the two groups.

Table 2 provides the Pearson correlation matrix. The correlations between *CASH* and two comparability measures (*ACC_IND* and *ACC_Median*) are -0.071 and -0.068, respectively. The above results indicate that firms with higher comparability are likely to have less cash. This is consistent with the prediction in H1.

Table 2 Pearson correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) *CASH*	1.000													
(2) *ACC_IND*	-0.071***	1.000												
(3) *ACC_Median*	-0.068***	0.979***	1.000											
(4) *SIZE*	-0.144***	0.315***	0.331***	1.000										
(5) *MTB*	0.239***	-0.012	-0.017***	0.204***	1.000									
(6) *NWC*	0.010	0.145***	0.160***	0.109***	-0.149***	1.000								
(7) *CAPEX*	-0.171***	0.085***	0.078***	0.167***	0.086***	-0.180***	1.000							
(8) *RD*	0.176***	-0.017**	-0.017***	0.139***	0.143***	0.189***	0.008	1.000						
(9) *CFO*	0.076***	0.197***	0.221***	0.250***	0.094***	-0.077***	0.219***	-0.115***	1.000					
(10) *Variability*	0.193***	-0.296***	-0.286***	-0.224***	0.090***	-0.103***	0.086***	-0.155***	1.000					
(11) *CCC*	-0.087***	-0.062***	-0.058***	-0.006	-0.143***	0.449***	-0.200***	0.248***	-0.204***	0.102***	1.000			
(12) *LEV*	-0.417***	-0.242***	-0.252***	-0.084***	0.052***	-0.571***	0.029***	-0.222***	-0.146***	0.053***	-0.038***	1.000		
(13) *Dividend*	0.119***	-0.035***	-0.021***	-0.072***	0.033***	0.008	-0.015*	0.013*	0.059***	0.093***	-0.034***	-0.060***	1.000	
(14) *AQ*	-0.203***	0.361***	0.344***	0.221***	-0.184***	-0.022***	0.097***	-0.054***	0.141***	-0.539***	-0.097***	-0.084***	-0.091***	1.000

All continuous variables are winsorized at 1 and 99 percentiles. *, ** and *** refer to significance level at 10%, 5% and 1%, respectively. Please see Appendix A for all variable definitions.

4.3 Tests of Hypothesis 1

Table 3 presents the regression results from estimating Model (5).[13] Columns (1) and (2) show that the coefficients for *ACC_IND* and *ACC_Median* are negative and significant at the 1% level. In terms of economic significance, the result in column (1) indicates that a one standard deviation increase in *ACC_IND* decreases corporate cash holdings (*CASH*) by 0.006 (-0.559×0.011, where -0.559 is the regression coefficient and 0.011 is the standard deviation of *ACC_IND*). Similarly, the result in column (2) indicates that a one standard deviation increase in *ACC_Median* decreases corporate cash holdings (*CASH*) by 0.006 (-0.528×0.011, where -0.528 is the regression coefficient and 0.011 is the standard deviation of *ACC_Median*). Given that the mean *CASH* is 0.169, the regression results suggest that a one standard deviation increase in *ACC_IND* or *ACC_Median* reduces *CASH* by 3.550%, which is economically significant.[14] Overall, the above results support H1 that comparability improves the allocation of corporate resources, as reflected in the decrease in cash holdings.

The results of the control variables are generally consistent with those reported in previous studies. For example, *CAPEX* and *NWC* have a significantly negative impact on cash holdings, which is in line with Clarkson et al. (2020) and Honda and Uesugi (2022). *RD* and *CFO* have a significantly positive impact on cash holdings, which is consistent with Nguyen and Rahman (2020). In addition, the coefficients of *Variability* are positive and statistically significant. This find-

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[13] To address the concern for collinearity, I check the variance inflation factor (VIF) for variables. The results show that VIF ranges from 1.040 to 2.410, with a mean value of 1.900. Since multi-collinearity exists when VIF exceeds 10, there is no problem with multi-collinearity between the data of variables in this study.

[14] These results are consistent with Habib et al. (2017). In their study, they find that a one standard deviation increase in the decile version of comparability reduces cash holdings by 4.94% from the mean.

ing is consistent with the notion that firms with volatile cash flows are likely to hold more cash to mitigate the risk of cash flow uncertainty (Ozkan and Ozkan, 2004; Honda and Uesugi, 2022).[15]

Table 3 Accounting comparability and corporate cash holdings

	(1)	(2)
	CASH	CASH
ACC_IND	−0.559***	
	(−2.922)	
ACC_Median		−0.528***
		(−3.021)
SIZE	−0.007***	−0.007***
	(−6.420)	(−6.355)
MTB	0.014***	0.014***
	(7.636)	(7.628)
NWC	−0.323***	−0.323***
	(−17.436)	(−17.413)
CAPEX	−0.718***	−0.717***
	(−16.529)	(−16.518)
RD	0.309***	0.308***
	(5.442)	(5.409)
CFO	0.134***	0.136***
	(4.506)	(4.597)
Variability	0.314***	0.313***
	(6.362)	(6.350)
CCC	0.006	0.006
	(0.551)	(0.559)
LEV	−0.400***	−0.401***
	(−25.877)	(−25.894)
Dividend	0.146***	0.147***
	(4.171)	(4.218)
AQ	−0.510***	−0.510***
	(−5.906)	(−5.891)
Constant	0.341***	0.340***
	(20.596)	(20.601)
Year, Industry	Control	Control
Observations	16,542	16,542
Adj. R-squared	0.507	0.507

The t-values in all columns are based on standard errors clustered by firm. *, ** and *** refer to significance level at 10%, 5% and 1%, respectively. Please see Appendix A for all variable definitions.

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[15] I then conduct a series of robustness tests. The following results are presented in Table A-1 in the Online Appendix. First, I follow Habib et al. (2017) and Clarkson et al. (2020) to generate the log value of the cash-to-assets ratio (LN_CASH) to measure cash holdings. Panel A of Table A-1 shows the results of the robustness test based on LN_CASH. The coefficients of comparability are significantly negative at the 1% level. Second, I follow Kim et al. (2016) and Ann et al. (2020) to use the following two alternative measures of comparability: (1) Prices Lead Earnings measures of comparability (ACC_IND_PLE and ACC_Median_PLE) and (2) comparability measures based on the top-four firms for firm i in year t (ACC_4 and ACC_4_PLE). As shown in Panel B, the coefficients of alternative comparability measures remain significant, suggesting that my findings are not affected by the use of alternative measures of comparability. Third, I attempt to mitigate the concern that my results might be affected by different sample periods. Specifically, I repeat the analysis for different periods: (1) use the sample from 2006 and (2) exclude samples in 2008 to mitigate the effects of the financial crisis. The results are shown in panel C. Fourth, it is plausible that the relationship between stock return and earnings is stronger for annual data than quarterly data in Japan because annual data is more important in the Japanese capital market. To alleviate this concern, I conduct the analysis based on the accounting comparability estimated on the annual financial database, the results of which are shown in Panel D. Panel E shows the results of accounting comparability estimated on cumulative stock return. Overall, Table A-1 shows that my results are robust to the above tests. Please see Table A-1 in the Online Appendix for details.

5 Conclusion

Extremely large cash holdings in Japan have resulted in a low growth rate in the economy (Yasui, 2021). Thus, it is necessary for Japanese firms to stop cash hoarding and engage in investment activities. In this study, I examine how accounting comparability affects corporate cash holdings.

Using a sample of 16,542 firm-year observations from 2008 to 2019, I show that accounting comparability is negatively related to the cash holdings. Specifically, I find that a one standard deviation increase in comparability measures reduces cash holdings by 3.550% from the mean, which is economically significant. These results are robust to alternative measures of comparability and cash holdings. My findings suggest that financial statement comparability plays an important role in decreasing information asymmetry and facilitating external monitoring of resource allocation. Overall, the results of this study provide investors and regulators with useful implications on the importance of comparability in the capital market.

References

Amess, K., Banerji, S. and Lampousis, A. 2015. Corporate cash holdings: Causes and consequences. *International Review of Financial Analysis* 42: 421-433.

Ahn, H., Choi, S. and Yun, S.C. 2020. Financial statement comparability and the market value of cash holdings. *Accounting Horizons* 34(3): 1-21.

Aoyagi, C. and Ganelli, G. 2017. Unstash the cash! Corporate governance reform in Japan. *Journal of Banking and Financial Economics* 1(7): 51-69.

Bates, T.W., Kahle, K.M. and Stulz, R.M. 2009. Why do US firms hold so much more cash than they used to? *The Journal of Finance* 64(5): 1985-2021.

Brochet, F., Jagolinzer, A.D. and Riedl, E.J. 2013. Mandatory IFRS adoption and financial statement comparability. *Contemporary Accounting Research* 30(4): 1373-1400.

Clarkson, P., Gao, R. and Herbohn, K. 2020. The relationship between a firm's information environment and its cash holding decision. *Journal of Contemporary Accounting & Economics* 16(2): 100201.

De Franco, G., Kothari, S.P. and Verdi, R.S. 2011. The benefits of financial statement comparability. *Journal of Accounting research* 49(4): 895-931.

Dechow, P.M. and Dichev, I.D. 2002. The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review* 77(s-1): 35-59.

Gu, J. 2021. Voluntary IFRS adoption and accounting quality: Evidence from Japan. *Economic Research-Ekonomska Istraživanja*, 34(1), 1985-2012.

Habib, A., Monzur Hasan, M. and Al-Hadi, A. 2017. Financial statement comparability and corporate cash holdings. *Journal of Contemporary Accounting and Economics* 13(3): 304-321.

Harford, J., Mansi, S.A. and Maxwell, W.F. 2008. Corporate governance and firm cash holdings in the US. *Journal of Financial Economics* 87(3): 535-555.

Honda, T. and Uesugi, I. 2022. COVID-19 and precautionary corporate cash holdings: Evidence from Japan. *Japanese Journal of Monetary and Financial Economics* 10: 19-43.

Imhof, M.J., Seavey, S.E. and Smith, D.B. 2017. Comparability and cost of equity capital. *Accounting Horizons* 31(2): 125-138.

Jensen, M.C. 1986. Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review* 76(2): 323-329.

Kato, K., Li, M. and Skinner, D.J. 2017. Is Japan really a "buy"? The corporate governance, cash holdings and economic perfor-

mance of Japanese companies. *Journal of Business Finance & Accounting* 44(3-4): 480-523.

Kawase, H., Otomasa, S. and Iwasaki, T. 2015. Cash holding trends in Japanese firms and precautionary motive. In *2015 2nd Asia-Pacific World Congress on Computer Science and Engineering (APWC on CSE)*: 1-7.

Kim, J.B., Li, L., Lu, L.Y. and Yu, Y. 2016. Financial statement comparability and expected crash risk. *Journal of Accounting and Economics* 61(2-3): 294-312.

Kim, J.B., Li, L., Lu, L.Y. and Yu, Y. 2021. Financial statement comparability and managers' use of corporate resources. *Accounting & Finance* 61(S1): 1697-1742.

Kim, S., Kraft, P. and Ryan, S.G. 2013. Financial statement comparability and credit risk. *Review of Accounting Studies* 18(3): 783-823.

Moriyasu, H. and Uchida, K. 2011. Stock option grants and managerial risk taking: Evidence from Japanese intraday stock return data. Available at SSRN 1913454.

Mukai, I. 2017. IFRS application and the comparability of financial statements. *Journal of Accounting and Finance* 17(5): 52-63.

Myers, S.C. and Majluf, N.S. 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics* 13(2): 187-221.

Nakaoka, T. 2019. An examination of corporate cash holdings behavior: A survey of theory and empirical research (in Japanese). *Kinki University Journal of Business and Economics* 65(4): 959-1009.

Neel, M. 2017. Accounting comparability and economic outcomes of mandatory IFRS adoption. *Contemporary Accounting Research* 34(1): 658-690.

Nguyen, P. and Rahman, N. 2020. Institutional ownership, cross-shareholdings, and corporate cash reserves in Japan. *Accounting & Finance* 60(S1): 1175-1207.

Ozkan, A. and Ozkan, N. 2004. Corporate cash holdings: An empirical investigation of UK companies. *Journal of Banking & Finance* 28(9): 2103-2134.

Securities and Exchange Commission (SEC). 2000. SEC Concept Release: International Accounting Standards. Available at https://www.sec.gov/rules/concept/34-42430.htm (June 10, 2023)

Shin, G.H. and Kolari, J.W. 2004. Do some lenders have information advantages? Evidence from Japanese credit market data. *Journal of Banking & Finance* 28(10): 2331-2351.

Wakabayashi, H. 2016. Research on measures of the financial reporting comparability (in Japanese). *Konan Business Review* 57(3): 77-103.

Wakabayashi, H. 2018. IFRS and the financial reporting comparability (in Japanese). *Bulletin of Japanese Association for International Accounting Studies* 2017(1-2): 117-130.

Yasui, Y. 2021. Corporate Cash Retention Behavior in Japan. *JRI Research Journal* 4(3): 1-30.

Appendix A

Variable	Definition of variable
Cash holdings	
CASH	Cash and cash equivalents scaled by total assets in year t.
Accounting Comparability	
CompAcct	Negative one multiplied by the absolute difference between the expected earnings using firm i's and j's estimated coefficients, respectively. Firms i and j are in the same two-digit Nikkei industry.
ACC_IND	The average $CompAcct_{i,j,t}$ for all firms j in the same industry as firm i during year t.
ACC_Median	The median $CompAcct_{i,j,t}$ for all firms j in the same industry as firm i during year t.
Control Variables	
SIZE	The log value of the market value of equity in year t.
MTB	The market value of equity scaled by the book value of equity.
NWC	Working capital minus cash and cash equivalents divided by total assets.
CAPEX	The capital expenditure divided by total assets.
RD	Research and development expenses divided by total assets.
CFO	The ratio of operating cash flows to total assets.
Variability	The standard deviation of operating cash flows scaled by total assets over the previous 3 years.
CCC	The sum of the inventory conversion period, receivable collection period, and the payable deferral period.
LEV	The sum of short and long-term debt scaled by total assets.
Dividend	The ratio of dividend payments to total assets.
AQ	Accrual quality measure calculated as the standard deviation of residuals from the following Dechow and Dichev's (2002) model during the past five years and multiplied by - 1: $$TCA_{i,t} = \beta_0 + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \varepsilon_{i,t}$$
Robustness Tests	
LN_CASH	The log value of the cash-to-assets ratio.
ACC_IND_PLE	*Prices Lead Earnings* measure of *ACC_IND* that is calculated based on the prices leading earnings model.
ACC_Median_PLE	*Prices Lead Earnings* measure of *ACC_Median* that is calculated based on the prices leading earnings model.
ACC_4	The average of firm i's four highest comparability scores during year t.
ACC_4_PLE	*Prices Lead Earnings* measure of *ACC_4* that is calculated based on the prices leading earnings model.