Companies' Financial Surpluses and Cash/Deposit Holdings

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Abstract

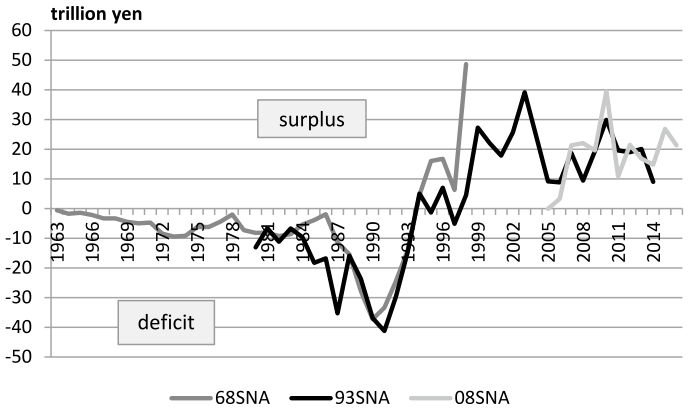
Japanese corporations have increased their financial surpluses and cash/deposit holdings dramatically in recent years. Financial surpluses increased because Japanese firms have achieved earnings recovery to enhance their financial soundness. However, most financial surpluses are held in the form of liquid deposits carrying interest rates close to zero, leading to Japanese firms' slack return on equity. This paper analyzes what caused growing corporate cash/deposit holdings and considers what corporate governance is desirable for Japanese companies. After reviewing previous related studies, the paper uses a three-period model to theoretically explain the mechanism by which firms hold highly liquid assets. It then looks into why Japanese firms increased highly liquid deposits in recent years using industry-level data and individual firm-level data. The empirical analysis shows that Japanese firms showing a sharp increase in liquid deposits is in marked contrast between small and medium-sized enterprises (SMEs) and large enterprises. That is, SMEs tended to hold liquid deposits by precautionary motivation to mitigate future borrowing constraints. In contrast, large firms tended to hold liquid deposits because they have failed to realize potential investment opportunities in the domestic market while facing such opportunities. We find that some blue-chip companies have raised long-term, low-interest funds to increase liquid deposit holdings as growth funds for potential new investment opportunities.

Key words: Financial surpluses, companies' cash and deposits, corporate governance
JEL Classification: G32, G34

I. Introduction

In recent years, the financial surpluses of Japanese firms have grown, while at the same time, so have their cash/deposit holdings. The number of firms with essentially zero debt, whose liquidity assets exceed their interest-bearing debt, has increased substantially. The corporate sector, which has traditionally seen financial deficits, now finds itself in a financial surplus. Fig. 1 presents the trend of financial surplus/deficit (on a flow basis) of private non-financial corporations since 1963 using data from the Bank of Japan's (BOJ) *Flow of Fund Accounts*. The financial surplus/deficit of private non-financial corporations illustrates the regular ups and downs associated with the economic cycles occurring over the period. However, looking at the fund flow for Japanese firms reveals a transition from chronic financial deficits (negative) until the early 1990s to chronic financial surpluses (positive) from the mid-1990s onwards. In particular, financial surpluses of Japanese firms expanded in the

Figure 1. Trends in financial surpluses and deficits (flow) of private non-financial corporations

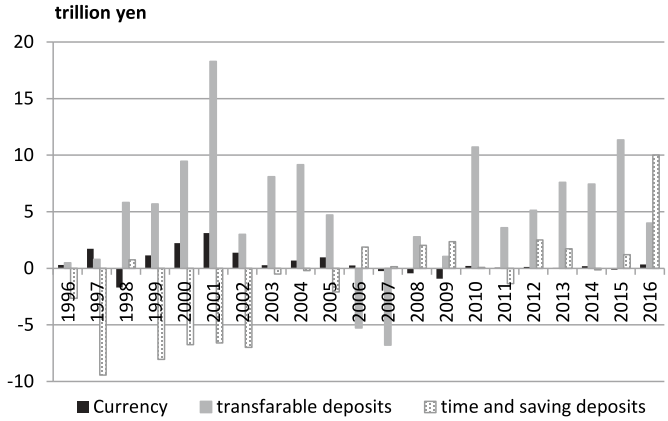


Note: Positive figures indicate a financial surplus; negative figures indicate a financial deficit.
Source: *Flow of Fund Accounts*, the Bank of Japan

2000s and in some years exceeded 20 trillion yen. It has been recently recognized that the increase in companies with the aforementioned financial surpluses has occurred not only among large corporations, but among small and medium-sized enterprises (SMEs) as well.

The chronic corporate financial surpluses are consequently linked to the increase in Japanese corporate cash/debt holdings. For example, using data from *Flow of Fund Accounts* (the BOJ), Fig. 2 illustrates how cash, liquid deposits, and time and savings deposits held by private non-financial corporations have changed since 1996 on a flow basis (positive figures indicating an increase, negative figures indicating a decrease). As the figure reveals, even in years of financial surplus, *cash* and *time and savings deposits* held by Japanese firms remained largely unchanged, whereas for some years, Japanese firms' liquid deposit holdings

Figure 2. Trends in cash and deposits (flows) of private non-financial corporations



Source: *Flow of Fund Accounts*, the Bank of Japan

increased significantly. In particular, liquid deposits exceeding 10 trillion yen were accumulated among Japanese firms for fiscal years 2001, 2010 and 2015.

One may interpret that financial surpluses in the corporate sector signal the financial soundness of Japanese firms. However, it is also true that, in a majority of the cases, large amounts of financial surpluses are held in near-zero interest rate deposits (liquid deposits in particular), thus leading to sluggish returns on equity (ROE) for Japanese firms. The *Final Report* of the *Competitiveness and Incentives for Sustainable Growth: Building Desirable Relationships between Corporations and Investors (Ito Report)*, published by the Ministry of Economy, Trade and Industry in August 2014, suggests the reason for low corporate valuation lies in the low ROE of Japanese firms and recommends that "Japanese firms, at the very least, should commit to an ROE of over 8%." Considering individual companies' circumstances, ROE is but one corporate valuation criterion; however, many are calling for the necessity of effectively utilizing the abundance of cash/deposits on hand and increasing its profitability.

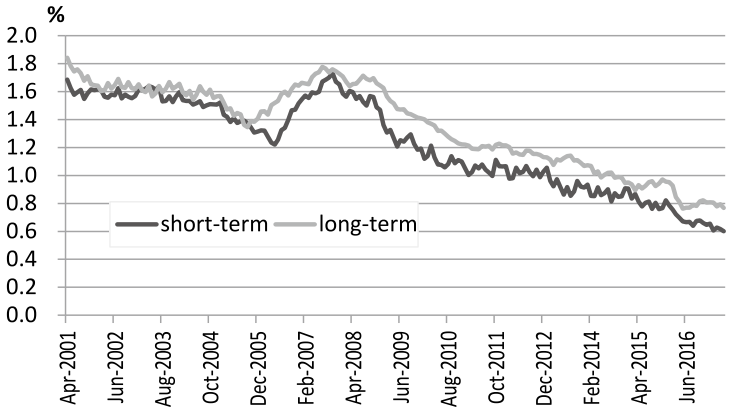
Among the various macroeconomic indicators that have improved since installation of the second Abe administration in December 2012, there are signs of a recovery in the amount of outstanding loans. However, the speed of recovery has been slow, and as deposits have outpaced lending over the same period, the lending-deposit ratio (the ratio of banks' loans to deposits) is on a declining trend. The more serious problem is that the interest rate on loans continues to decline. For example, according to the BOJ statistics, lending rates, which exceeded 1.6% in the first half of the 2000s, continued their decline and fell below 1%, first in the short-term rates and then in the long-term rates.

The BOJ's ultra-low interest rate policy is one of the reasons for the stagnating lending rates. However, the extremely weak demand for corporate borrowing is probably a more important reason. The increases in firms' financial surpluses underlie the weak demand for loans. So long as companies maintain excess cash and deposits, the demand for borrowing will not rise. However, it is far from clear why a number of Japanese firms have increased their liquid assets and maintain them excessively. It is thus important to examine the factors attributing to rising corporate cash/deposit holdings and discuss desirable corporate governance practices for modern Japanese enterprises.

The paper proceeds as follows. After overviewing previous related studies in Section II, Section III will theoretically discuss the mechanisms by which companies hold highly liquid assets using a three-period model. We then examine the motives behind modern Japanese firms' cash/deposit holdings using industry-level data in Section IV and using case studies of individual firms in Section V.

The results of the analysis indicate that the factors underlying the large increase in Japanese firms' cash/deposit balances are in marked contrast between SMEs and large enterprises. In the case of SMEs, the existence of potential borrowing constraints is the major factor for them to hold cash/deposits as a precautionary motive. Meanwhile, large enterprises hold cash/deposits because they potentially face various investment opportunities but are ultimately unable to act upon them. Large enterprises have various potential investment oppor-

Figure 3. Trends of domestic banks' short-term and long-term lending rates



Note: Smoothed by moving averages.
Source: the Bank of Japan

tunities, which result in holding huge liquid assets. In particular, there are some blue-chip companies that raise long-term funds at extremely low interest rates to maintain their huge cash/deposit balances as capital for growth in the event of new investment opportunities.

II. Related previous studies

The trend of rising corporate financial surpluses and large increases in cash/deposit holdings has been observed recently not only in Japan, but also in several major developed countries.[1] For example, Bates, Kahle, and Stulz (2009) demonstrate that, in US companies from the early 1980s to the mid-2000s, cash/deposits more than doubled and comprised approximately 25% of total assets, while Ferreira and Vilela (2004) show that 15% of total assets of continental European companies in the early 2000s comprised of cash and other highly liquid assets. Furthermore, in their analysis of the trends of 5,000 listed companies (manufacturing firms) in Germany, France, Italy, Japan and the UK between 1997 and 2011, Brufman, Martinez, and Artica (2013) reveal a correlation between decreased capital investment and increased corporate savings. In addition, Gruber and Kamin (2015) point out that the trend for firms to hold cash/deposits in major developed countries became more pronounced in the wake of the global financial crisis of 2007-2009 and is clearly evident among prominent IT companies such as Apple, Microsoft and Google.

Previous literature discussing the determinants of corporate cash/deposit holdings can be broadly divided into two viewpoints. The first viewpoint focuses on holding cash/deposits

[1] In a comparison of flow of funds accounts among Japan, the US, and the Euro area, only Japanese private non-corporate businesses exhibit a substantially positive ratio of financial surpluses to GDP during the 2000s. However, as pointed out by Hayashi (1992), the gross savings of Japanese firms tends to be higher due to high capital depletion. Taking this point into consideration, it cannot necessarily be said that Japanese private non-corporate businesses stand alone in having large financial surpluses.

as a "precautionary motive." Its key point lies in the constraints on a firms' access to external financing and the frequent inability to raise the sufficient capital necessary to make profitable investments when opportunities arise. An incentive is consequently provided for companies anticipating profitable investment opportunities in the future to hold the highly liquid assets as a precautionary measure. Holding cash/deposits presents costs (opportunity cost), given its lower returns than other assets. However, firms do not want to miss out on profitable future investment opportunities, which results in holding cash/deposits as a precautionary measure.

Many empirical studies support a firm's "precautionary motive" for holding cash/deposits. For example, in their analysis of US companies from the 1970s to the 1990s, Opler, Pinkowitz, Stulz, and Williamson (1999) reveal the importance of this precautionary motive, when cash/deposits rose as growth opportunities increased and fell as external financing became easier to secure. Kim, Mauer, and Sherman (1998) focus on the trade-off between the opportunity cost of holding cash/deposits (the cost of lower returns) and borrowing cost (the cost associated with increased borrowing), and using US company data, they reveal similar results. Almeida, Campello, and Weisbach (2004) demonstrate that an increase in cash flow led to higher cash/deposits only in companies with borrowing constraints. A large number of researchers share a consensus that the presence of both borrowing constraints and growth opportunities is an important factor leading firms to hold cash/deposits as a precautionary motive.

Meanwhile, the second viewpoint focuses on the "agency cost" associated with holding cash and deposits. Agency cost refers to the costs that may arise when company shareholders and other stakeholders (principals) are unable to closely monitor and evaluate the activities of managers (agents). When agency cost is present, even if it were to lower the company's valuation, managers have the incentive not to distribute excess surpluses to shareholders in the form of dividends, but to hold cash and deposits for greater discretionary powers and personal profits.

Following the seminal work of Jensen and Meckling (1976), there have been a number of studies that discussed the possibility of management pursuing its own personal interests at shareholders' expense in shareholding companies with separate ownership and management. In literature, the idea that excess cash/deposit holdings—which are difficult to monitor externally—may lead to inefficient investments by managers seeking personal interests has been coined the "free cash flow hypothesis."

In previous empirical studies, several international comparisons supported this view. For example, based on 1998 data from 11,000 companies across 45 countries, Dittmar, Marth-Smith, and Servaes (2003) reveal a trend of higher cash/deposit ratios in countries where shareholder rights are not well protected. Similarly, using data from 5,000 companies in 31 countries, Kalcheva, and Lins (2007) reveal a trend of higher cash/deposit ratios in companies with stronger corporate controls by management groups or families.

However, empirical analyses on US companies fail to find this tendency that higher cash/deposits are held by firms with weak shareholder rights protections (for example,

Opler, Pinkowitz, Stulz, and Williamson (1999)). Using data from 1,952 US manufacturing firms, Dittmar and Mahrt-Smith (2007) discover larger cash/deposit holdings among firms with less entrenched management (i.e., firms with effective corporate governance in place). Harford, Mansi, and Maxwell (2008) point out that even if managers were to pursue personal interests, rather than hold cash and deposits, they might be more inclined to use them immediately for private purposes; moreover, in the United States, firms with stronger shareholder rights hold more cash and deposits for proactive use in corporate acquisitions. Thus, there is no clear consensus among previous literature whether the presence of agency costs increases firms' cash/deposit holdings.

Previously, the cash/deposit ratio of Japanese firms tended to be higher than firms from other major countries. Pinkowitz and Williamson (2001) argue that the strong monopoly power exercised by Japanese banks was a factor in higher cash/deposit holdings of borrowing firms. Moreover, Luo and Hachiya (2005) demonstrate the trend of higher cash/deposit ratios for Japanese firms with weak protections on shareholder rights (see also Ando, Hori, and Saito (2009)). In recent years, however, as a result of major increases in corporate cash/deposit holdings in other major countries, the cash/deposit ratios of Japanese firms no longer stand out as being markedly higher than international standards. Kato, Li, and Skinner (2017) reveal increased payouts in firms with strong corporate governance, which has led to performance improvements. However, as outlined in Section I, in terms of amounts outstanding, average cash/deposit holdings of Japanese firms have continued to increase significantly even into the 2000s. Thus, it is crucial to consider the determinants of Japanese corporate cash/deposit holdings from a broader perspective.

III. 3-period model

III-1. Overview of the model

Before empirically discussing the underlying motives of Japanese corporate cash/deposit holdings, this section will theoretically discuss the mechanisms by which companies hold highly liquid assets. We consider a 3-period model, consisting of dates 0, 1 and 2. As expressed by Eq. (1), a listed firm that holds a sufficiently large amount of internal funds X_0 at the beginning of date 0 must decide whether to distribute it to shareholders in the form of dividends D_0, to invest I_0, or to hold it as liquid assets L_0.[2]

$$X_0 = D_0 + I_0 + L_0. \tag{1}$$

When liquid assets L_0 are held from date 0 to date 1, it generates no interest but makes the same amount L_0 available for use at the beginning of date 1. On the other hand, if invest-

[2] Even with low internal funds held at beginning of date 0, if the firm can borrow sufficiently, X_0 will rise without changing the following essential results.

ments I_0 are made, the gains are realized at both date 1 and date 2. The output at date 1 is known as $A_1 f(I_0)$ at the beginning of date 0. However, the output at date 2 is uncertain during date 0, and whether its productivity A is high or low will not be identified until date 1. Thus, the firm's decision at date 1 depends on whether the identified productivity is high or low.

If the date 2 productivity is identified as sufficiently high (that is, $A = A_H$), the firm will use the date 1 output $A_1 f(I_0)$, liquid assets L_0, and a new borrowing B to make additional investment I_1 at date 1, which will subsequently realize a output of $A_H f(I_0 + I_1)$ at date 2. On the other hand, if the date 2 productivity is identified as sufficiently low (that is, $A = A_L$), the firm will not undertake financing activities and will instead distribute most of the liquid assets to shareholders as dividend D_1 at date 1; date 2 production will depend solely on date 0 investment I_0 to produce $A_L f(I_0)$. However, in either case, by carrying liquid assets L_1 to date 2, the company's manager can acquire a personal gain of $\theta g(L_1)$ at date 2 for their interest, where θ is a parameter representing the magnitude of manager's personal benefit.

In order to simplify the discussion, the following analysis assumes that the identified date 2 productivity is either sufficiently low (hereinafter referred to as "recession") or sufficiently high (hereinafter referred to as "boom"). Here, if date 2 is identified as a "recession," as shown in Fig. 4(1), borrowing B and additional investment I_1 will not be undertaken (that is, $B = I_1 = 0$) at date 1. Further, the date 1 output $A_1 f(I_0)$ and liquid assets—excluding the amount used for the manager's personal interest—will be distributed to shareholders in the following manner:

$$D_1 = A_1 f(I_0) + L_0 - L_1, \tag{2}$$

However, investment I_0 at date 0 is irreversible and cannot be cancelled during date 1. Consequently, even in the absence of additional investment, output from investment I_0 is realized at date 2 and is distributed to shareholders as D_2 at the end of date 2. At the same time, managers acquire personal benefit of $\theta g(L_1)$ from liquid assets carried over to date 2.

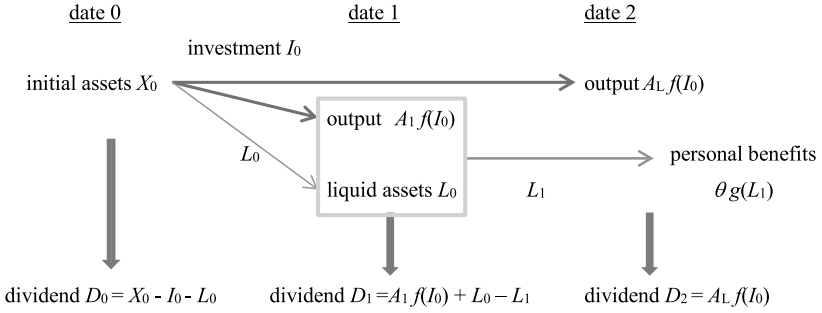
On the other hand, if date 2 is identified as a "boom," dividends will not be paid to shareholders at date 1 (that is, $D_1 = 0$). Rather, additional investment I_1 will be carried out during date 1 using date 1 output $A_1 f(I_0)$, new borrowing B, and liquid assets $(L_0 - L_1)$ as follows (Figure 4(2)):

$$I_1 = A_1 f(I_0) + B + L_0 - L_1. \tag{3}$$

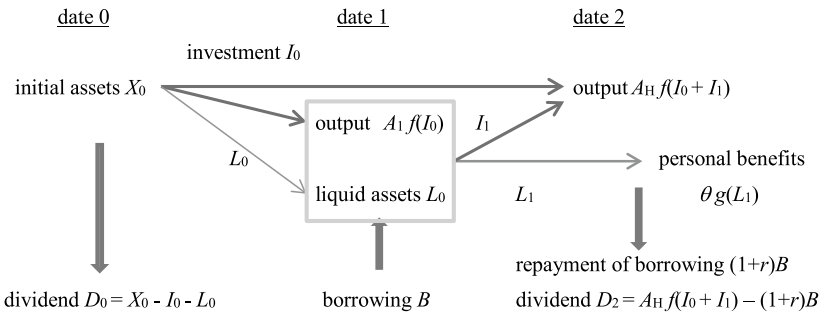
As a result of the additional investment I_1, the output realized during date 2, less repayment of debt $A_H f(I_0 + I_1) - (1+r)B$, will be paid to shareholders as D_2. Once again, the manager will simultaneously acquire $\theta g(L_1)$ in personal benefit.

Figure 4. Outline of 3-period model

(1) The case where date 2 is identified as a recession at date 1



(2) The case where date 2 is identified as a boom at date 1



III.-2. Firms' maximization problem

Under the model established above, the risk-neutral corporate manager maximizes the expected discounted present value of dividends and personal profits through the three periods described below.

$$\text{Max} \quad D_0 + E_0\left[\frac{D_1}{1+r} + \frac{D_2 + \theta g(L_1)}{(1+r)^2}\right] \tag{4}$$

Here, r is the risk-free rate and E_0 is the conditional expectation operator based on the information available at date 0.

However, due to borrowing constraints at date 1, the firm is unable to borrow its desired amount, even if they are able to identify date 2 as a "boom" during date 1. Below, it is assumed that $\overline{B}$ is the maximum amount of new financing during date 1 and that B must satisfy the following condition:

$$B \leq \overline{B}. \tag{5}$$

Before the productivity of date 2 is identified at date 1, date 2 is expected to be a "boom" (that is, $A = A_{\mathrm{H}}$) with probability p and a "recession" (that is, $A = A_{\mathrm{L}}$) with probability $1–p$, where $A_{\mathrm{L}} < A_1 < A_{\mathrm{H}}$. Assuming functions f and g are both quasi-concave increasing functions, the problem for the corporate manager to solve is to maximize the following expressions with respect to I_0, L_0 and L_1:

$$\begin{aligned}&(X_0 - I_0 - L_0) + p\left[\frac{A_H f(I_0 + A_1 f(I_0) + \bar{B} + L_0 - L_1) - (1+r)\bar{B}}{(1+\gamma)^2}\right] \\ &+ (1-p)\left[\frac{A_1 f(I_0) + L_0 - L_1}{1+r} + \frac{A_L f(I_0)}{(1+r)^2}\right] + \frac{\theta g(L_1)}{(1+r)^2}.\end{aligned} \tag{6}$$

Assuming an interior solution, the first-order conditions of the maximization problem solution lead to the followings:

$$f'(L_0 + \bar{B} + I_0 + A_1 f(I_0) - L_1) = \frac{(r+p)(1+r)}{pA_H} \tag{7}$$

$$f'(I_0) = \frac{(1-p)(1+r)}{A_1(1+r)^2 + (1-p)A_L} \tag{8}$$

$$g'(L_1) = (1+r)^2/\theta \tag{9}$$

The three equations above are useful in understanding why firms hold liquid assets at date 0. First, Eq. (7) determines L_0, given I_0 and L_1. Meanwhile, Eq. (8) and Eq. (9) determine I_0 and L_1, respectively, both of which impact L_0.

Liquid assets L_0 determined from Eq. (7) is a decreasing function of $\bar{B}$ but an increasing function of A_{H}. Moreover, I_0 and L_1 are not dependent on the values of $\bar{B}$ or A_{H}. Therefore, the following properties hold:

Property 1: Date 0 liquid assets L_0 will increase as the borrowing constraints at subsequent dates are expected to be tighter (i.e., $\bar{B}$ is small) and as the profitable investment opportunities in a boom are expected to be greater (i.e., A_{H} is large).

It should be noted, however, that liquid assets at date 0 (that is, L_0) do not always increase even if higher productivity is expected in future. In fact, liquid assets at date 0 increase when the productivity A_{H} at date 2 is expected to be high but decrease when the productivity A_1 at date 1 is expected to be high. The latter can be demonstrated from the fact that I_0 is an increasing function of A_1 in Eq. (8) and that L_0 decreases as I_0 increases in Eq. (7). Therefore, while highly profitable investment opportunities in the long term increase the demand for liquid assets, a highly profitable outlook in the short term has the opposite effect of

decreasing liquid assets. Thus, the following property holds:

Property 2: The presence of long-term investment opportunities increases a firm's demand for liquidity assets to capitalize on those opportunities. However, since the output can be used as liquid assets, the presence of short-term high productivity lowers the demand for liquidity assets.

In addition to the above two properties, increased uncertainty in long-term investment opportunities increases liquid assets L_0, even when average productivity is constant. For example, when pA_H and $(1\text{-}p)\ A_L$ are constant, the decrease in p has a mean-preserving spread effect, where the date 2 productivity increases its variance but keeps its average constant. In this case, L_0 increases not only in Eq. (7) but also through decreases in I_0 in Eq. (8). This explains how increased uncertainty in long-term investment opportunities increases a firm's necessity to secure liquid assets. This effect arises because increased long-term uncertainty decreases date 0 investment I_0 but may increase date 1 investment I_1.

Moreover, a decrease in the risk-free rate r increases liquid assets L_0 both directly and indirectly. The direct effect is that L_0 is a decreasing function of r, given I_0 and L_1 in Eq. (7). The indirect effect is that while I_0 is an increasing function of r in Eq. (8) and L_1 is a decreasing function of r in Eq. (9), L_0 is a decreasing function of I_0 and an increasing function of L_1 in Eq. (7). Both the direct and indirect effects reflect the fact that the opportunity cost of holding liquid assets decreases when the risk-free rate falls.

Finally, it should be noted that while L_0 is an increasing function of L_1, $L_1$is an increasing function of θ. Therefore, it can be confirmed that L_0 is also an increasing function of θ. As θ represents the magnitude of profits personally gained by managers at date 2, it can be considered as a proxy variable for future agency cost. This suggests that managers will be more inclined to increase current liquid assets when they have a greater incentive to use cash and deposits for future personal benefit.[3]

IV. Analysis based on the *Financial Statements Statistics of Corporations by Industry*

IV-1. Overview

Based on the above discussion, the following sections will empirically examine the motives for Japanese firms to hold cash and deposits in recent years based on industry-level data and on case studies of individual companies. First, this section will provide an overview of recent trends in corporate cash/deposit holdings in Japan—by firm size and by industry—using data from the Ministry of Finance's *Financial Statements Statistics of Corporations by Industry* and investigate the factors that have impacted these trends using

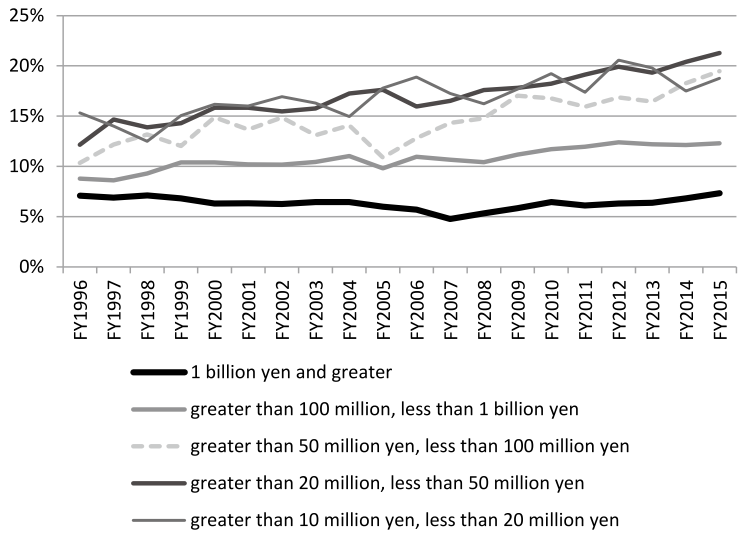
[3] This conclusion, however, does not hold when the timing of manager's pursuit of personal interests is set to the present, as opposed to in the future.

industry-level data.

Using data from the *Financial Statements Statistics of Corporations by Industry* (for all industries), Fig. 5 calculates the cash/deposit holding ratios (≡ cash and cash equivalents ÷ total assets) from fiscal years 1996-2015 for large corporations, and SMEs. From the figure, we can observe that the cash/deposit holding ratios for SMEs are higher than those of large enterprises and that the difference grows over time. The cash/deposit holding ratios for large corporations (equity capital of greater than 1 billion yen) temporarily fell below 5% in FY 2007, but they otherwise remain steady at around 6% to 7% throughout the period. By contrast, despite some fluctuations, the cash/deposit holding ratios for medium-sized enterprises (equity capital between 100 million and 1 billion yen) and SMEs (equity capital of less than 100 million yen) exhibit an increasing trend. This trend is more pronounced for SMEs than for medium-sized businesses.[4]

In the latter half of the 1990s, the cash/deposit holding ratios for SMEs, which were between 12% to 15%, were already at a much higher level than for large corporations and medium-sized enterprises. However, the cash/deposit holding ratios of SMEs with equity capital between 10-20 million yen and those with equity capital between 20-50 million yen

Figure 5. Trends in cash/deposit ratio by firm size



Source: Created by the author based on the Ministry of Finance's *Financial Statements Statistics of Corporations by Industry (for all industries)*.

[4] The use of "SMEs" in this paper is not strictly defined. The Small and Medium-sized Enterprise Basic Act defines: "manufacturing industry, and other industries" as "any company whose amount of equity capital or total amount of capital contribution is 300 million yen or less, or any company or individual whose number of regular employees is 300 or fewer"; "wholesale industry" as "any company whose amount of equity capital or total amount of capital contribution is 100 million yen or less, or any company or individual whose number of regular employees is 100 or fewer"; "retail industry" as "any company whose amount of equity capital or total amount of capital contribution is 50 million yen or less, or any company or individual whose number of regular employees is 50 or fewer"; and "service industry" as "any company whose amount of equity capital or total amount of capital contribution is 50 million yen or less, or any company or individual whose number of regular employees is 100 or fewer."

exceeded 15% in the 2000s and continued its rising trend, reaching nearly 20% from FY 2010 onwards. On the other hand, while the cash/deposit holding ratios for SMEs with equity capital between 50-100 million yen did not exhibit a clear rising trend in the first half of the 2000s, they increased sharply from 2006, nearly doubling over ten years, climbing to approximately 20%, a figure comparable to their smaller SME counterparts.

In general, SMEs tend to have lower credit ratings than large enterprises, and to that extent, they face tighter borrowing constraints than larger firms. Particularly, in Japan, the severe "credit crunch" brought on mainly for SMEs during the late-1990s financial crisis. SMEs also experienced a serious economic downturn as a result of the global financial crisis in fall 2008. The cash/deposit holding ratios characterized by SMEs, as illustrated in the figure, may reflect the disparity in borrowing constraints of these SMEs and larger enterprises.

Furthermore, the cash/deposit holding ratios vary not only according to the size of the company, but also by industry. Using data from the *Financial Statements Statistics of Corporations by Industry* (all firm sizes) to calculate the cash/deposit holding ratios (≡ cash and cash equivalents ÷ total assets) of each industry for FY2015, several industries in the non-manufacturing sector exhibit a trend of possessing high cash/deposit holding ratios (Fig.6). The trend was especially conspicuous in several service industries, such as *lifestyle-related services*, *education and learning support*, *medical, health care and welfare*, and *worker dispatching services*. These service industries exhibit high cash/deposit holding ratio levels of over 15%. Since these industries are labor-intensive, it is conceivable that the high cash/deposit ratios arise from the necessity to constantly maintain sufficient working capital for employees' salaries.

Meanwhile, in the manufacturing sector, printing-related industries and machinery-related industries exhibit a trend of high cash/deposit ratios. In particular, the 11.6% cash/deposit ratio for *IT machinery and equipment* is the highest among manufacturing, alongside *printing-related* and *other transportation machinery*. *IT machinery and equipment* is an industry with a tremendous growth outlook in the near future, suggesting higher cash/deposit ratios in such growing industries.

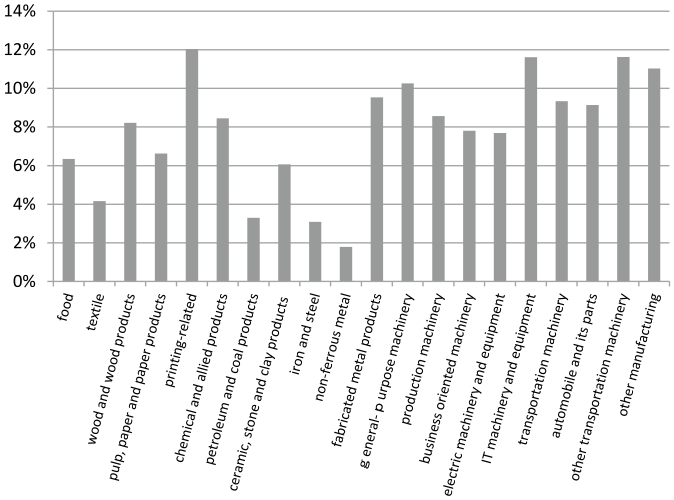
Below, we will calculate the cash/deposit holding ratios (≡ cash and cash equivalents ÷ total assets) for each industry using the data from the *Financial Statements Statistics of Corporations by Industry* and examine what factors have influenced these trends. The factors considered below are: (1) the degree of borrowing constraints, (2) short-term performance outlook, and (3) long-term growth rates.

IV-2. The effects of borrowing constraints

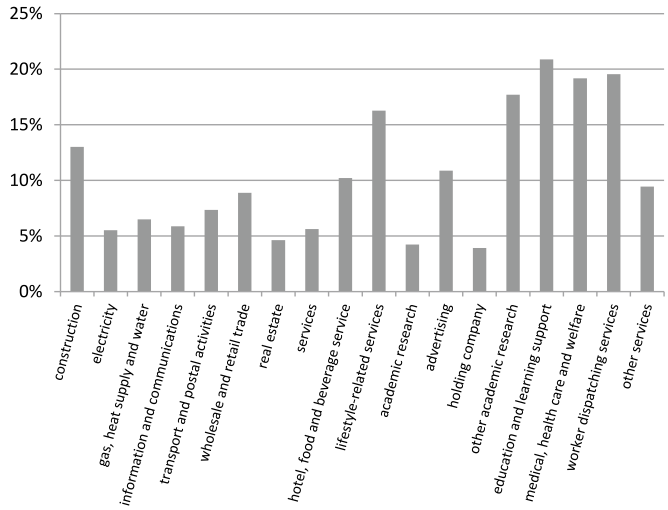
In this section, we examine the relationship between the degree of borrowing constraints and the cash/deposit holding ratio by industry-level data. As discussed in previous sections, a number of studies pointed out that the presence of borrowing constraints is a major incentive for companies to hold cash and deposits. In particular, in Japan, the financial crisis that occurred in the late 1990s was accompanied by a severe "credit crunch." Also, in the after-

Figure 6. Cash/deposit ratios by industry in FY 2015

(1) Manufacturing industries



(2) Non-manufacturing industries



Source: Created by the author based on Ministry of Finance's *Financial Statements Statistics of Corporations by Industry* (for all firm sizes).

math of the global financial crisis in 2008, the lending attitudes of financial institutions temporarily tightened. In the following, we will use industry-level data from the "Lending Attitude DI of Financial Institutions (="accommodating" - "severe")" in the BOJ's *Tankan Survey* (Short-Term Economic Survey of Enterprises in Japan) (for all firm sizes) to examine whether there were higher cash/deposit holding ratios in industries identifying themselves as being subject to severe lending attitudes by financial institutions. The "Lending

Attitude of Financial Institutions" from the BOJ's "Tankan Survey" polls private enterprises (about 210,000 companies excluding financial institutions) with equity capital of 20 million yen or more to investigate the judgment ("recent conditions") of financial institutions' lending attitudes as perceived by responding firms. While there is an element of arbitrariness, it is one representative index that captures the degree of borrowing constraints faced by borrowers. Smaller lending attitude DI values are indications that the borrower is faced with stronger borrowing constraints.

In Fig. 7, the horizontal axis represents "lending attitude DI of financial institutions" by industry (FY 1995-2015, average), while the vertical axis represents "change in the cash/deposit holding ratio" (difference in the ratio between 1995 and 2015). This relationship is plotted for both manufacturing and non-manufacturing industries. The vertical axis represents the *change* in the cash/deposit holding ratio, as opposed to the level of the cash/deposit holding ratio, to eliminate the fixed effect on the cash/deposit holding ratios that may be caused by industry-specific factors.

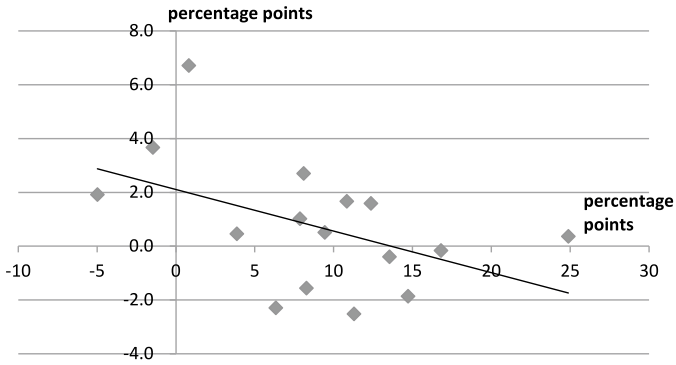
We need some reservation for interpreting the figure because it does not control for other factors. In particular, outliers are observed in several industries in the non-manufacturing sector. However, a downward sloping relationship is observed for both manufacturing and non-manufacturing industries. This indicates that industries with higher proportions of firms perceiving lending attitudes as "severe" tend to have higher cash/deposit holding ratios, and conversely, that industries with higher proportions of companies perceiving lending attitudes as "accommodating" tend to exhibit lower cash/deposit holding ratios.[5]

Among manufacturing industries, the lending attitude DI (1995-2015, average) was low for *textiles*, *lumber and wood products*, and *other transportation machinery and equipment*, at -5.0 points, -1.5 points and 0.8 points, respectively. The increases in the cash/deposit ratios for these industries between fiscal 1995-2015 were 1.9, 3.7 and 6.7 percentage points, respectively, far above the average for the manufacturing sector. This indicates that larger increases in the cash/deposit holding ratios were exhibited in industries where lending attitudes were severe. On the other hand, among manufacturing industries, the cash/deposit ratios decreased for *foodstuffs*, *oil and coal products*, *nonferrous metals*, *business-use machinery*, *electrical machinery*, *motor vehicles*, and *parts and accessories* from FY 1995-2015. In these industries, the "lending attitude DI of financial institutions" (FY 1995-2015, average) all exceeded 6.0 points, indicating that financial institutions' attitudes were not severe. From the above results, particularly among the manufacturing industries, whose constraints on borrowing were not all that severe, we observe a tendency for the cash/deposit holding ratios to decrease.

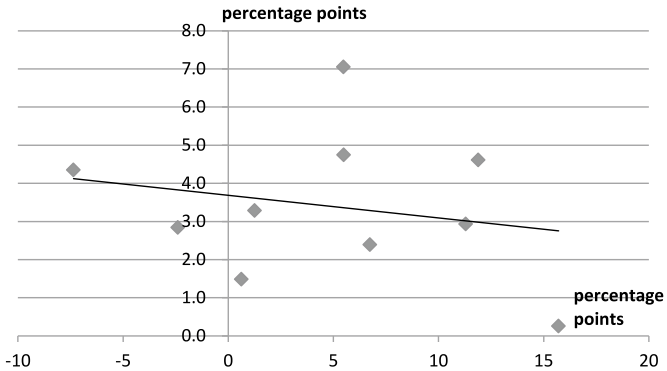
[5] A similar downward sloping relationship was also observed when drawing a graph of the average lending attitude DI from FY 1997 to 1999, when banking crisis worsened.

Figure 7. Changes in lending attitudes of financial institutions and the cash/deposit ratio

(1) Manufacturing industries



(2) Non-manufacturing industries



Note 1: Horizontal axis = "lending attitude DI of financial institutions" (FY 1995-2015, average) by industry. Vertical axis = Change in cash/deposit ratio by industry (the difference in ratio from FY 1995 to that of 2015).

Note 2: Industries that could not be matched between *Tankan Survey* and the *Financial Statements Statistics of Corporations by Industry* were excluded from the sample.

Note 3: Created by the author based on the Bank of Japan's *Tankan Survey (Short-Term Economic Survey of Enterprises in Japan) (for all firm sizes)* and the Ministry of Finance's *Financial Statements Statistics of Corporations by Industry (for all firm sizes)*.

IV-3. Impact of short-term business outlook

As we saw in the theoretical analysis (Property 2) in Section III, the impact of improved productivity outlooks on liquid asset holdings differs greatly depending on whether the improved productivity is for the short-term or long-term. In this section, we consider the relationship between short-term earnings forecasts and the cash/deposit holding ratios. Short-term productivity outlook is considered as being reflected in business conditions associated

with the business cycles. Thus, we examine whether a tendency exists for lower cash/deposit holding ratios in industries with more favorable business outlooks using industry-level data from the BOJ's "Future Outlook for Business Conditions DI" (= "favorable" - "unfavorable") in the *Tankan Survey*.

Similar to the "Lending Attitude of Financial Institutions" in the *Tankan Survey*, the BOJ conducts a nationwide survey on the judgment on business conditions ("favorable," "not so favorable," or "unfavorable") for private enterprises with equity capital of 20 million yen. Moreover, the survey asks respondents for their judgments not only regarding "recent conditions (at the time of response)," but also on "future conditions (three months later)." For this reason, the "Future Business Conditions DI Lending Attitude" in the *Tankan Survey* is one representative indicator capturing firms' short-term business outlook. The larger its value for a given industry, the better the short-term business outlook.

In Fig. 8, the horizontal axis represents "future business conditions DI" (FY 1995-2015, average) while the vertical axis represents "change in the cash/deposit holding ratio" (difference in the ratio between 1995 and 2015). This relationship is plotted for both manufacturing and non-manufacturing industries. As in Fig. 7, the fixed effect caused by industry-specific characteristics are eliminated by plotting *changes* in the cash/deposit holding ratio on the vertical axis.

While outliers are observed for several industries in this figure, a downward sloping relationship is observed for both manufacturing and non-manufacturing industries. This indicates that industries with a higher proportion of firms perceiving their future business conditions as "unfavorable" tend to have higher cash/deposit holding ratios, and conversely, that industries with higher proportions of companies perceiving their future business conditions as "favorable" tend to exhibit lower cash/deposit holding ratios.

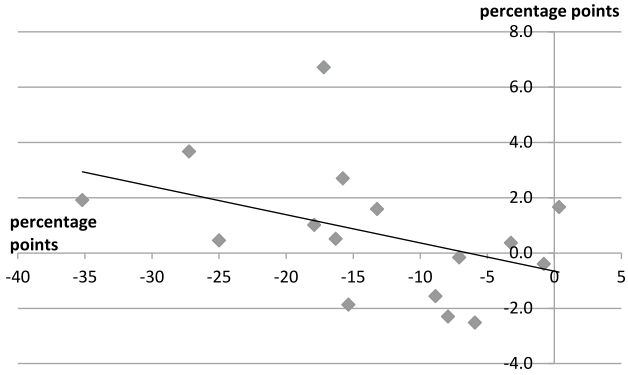
Among manufacturing industries, the average "future business conditions DI" was extremely unfavorable for *textiles* and *lumber and wood products* between FY 1995-2015, with values of -35.2 points and -27.2 points, respectively. Their cash/deposit holding ratios increased by 1.9 percentage points and 3.7 percentage points, respectively. At the same time, while a reduction in the cash/deposit holding ratio of more than 2% was observed for both *foodstuffs* and *electrical machinery*, the "future business conditions DI" for those industries was -5.9 points and -7.9 points, respectively, both of which are relatively modest declines in the manufacturing sector.

Among non-manufacturing industries, the "future business conditions DI" for the construction industry was the worst, with an average of -24.9 points over the period, while its 7.1 percentage point rise in the cash/deposit holding ratio was the largest of all industries over the same period. Conversely, the "future business conditions DI" for *information communications* was the best among all industries, with an average of 4.1 points over the period, while its 0.3 percentage point rise in the cash/deposit holding ratio was the smallest among non-manufacturing industries over the same period.

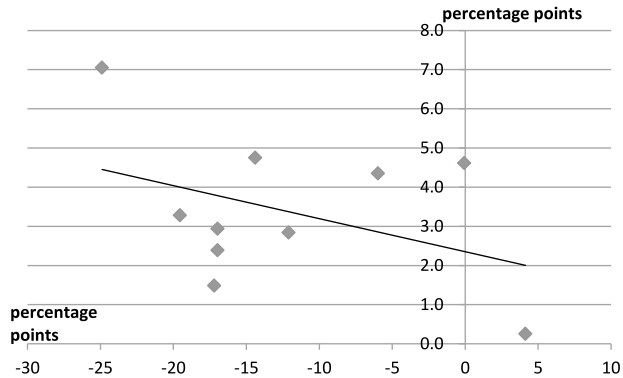
As demonstrated by the theoretical analysis in Section III, short-term business downturns weaken a firm's financial position in the immediate future. Thus, if business perfor-

Figure 8. Changes in future business outlook and the cash/deposit ratio

(1) Manufacturing industries



(2) Nonmanufacturing industries



Note 1: Horizontal axis = "lending attitude DI of financial institutions" (FY 1995-2015, average) by industry. Vertical axis = Change in cash/deposit ratio by industry (the difference in ratio from FY 1995 to that of 2015).

Note 2: Industries that could not be matched between *Tankan Survey* and the *Financial Statements Statistics of Corporations by Industry* were excluded from the sample.

Note 3: Created by the author based on the Bank of Japan's *Tankan* Survey *(Short-Term Economic Survey of Enterprises in Japan) (for all firm sizes)* and the Ministry of Finance's *Financial Statements Statistics of Corporations by Industry (for all firm sizes)*.

mance is anticipated to worsen in the next few months, firms tend to increase their cash/deposit holdings. On the other hand, a boost in short-term business performance can be expected to improve the immediate financial position. Thus, if business performance is expected to improve in the next few months, the firms would reduce their cash/deposit holdings. The above results indicate that such tendencies are observed to a certain extent in the analysis of Japanese industries.

IV-4. Impact of long-term outlook

As we have already seen, upturns in business performance as a consequence of improved short-term productivity tend to result in lower cash/deposit holdings. By contrast, improved long-term productivity is an indication of potential investment opportunities. Therefore, as witnessed in the theoretical analysis in Section III, we would expect an increased likelihood of firms holding highly liquid cash and deposits as a precautionary measure. In this subsection, we consider the relationship between long-term productivity outlook and the cash/deposit holding ratio.

Trends in actual production activity will influence the long-term productivity outlook. Thus, we looked up the average growth rate for each industry between 1995-2015 in the Cabinet Office's *Annual Estimate of National Accounts* (real, chain-linked) to examine whether industries with higher values tend to exhibit larger increases in cash/deposit holdings. Even in the past quarter century—the so-called "lost two decades" in the Japanese economy—each industry was highly heterogeneous in its growth rate.

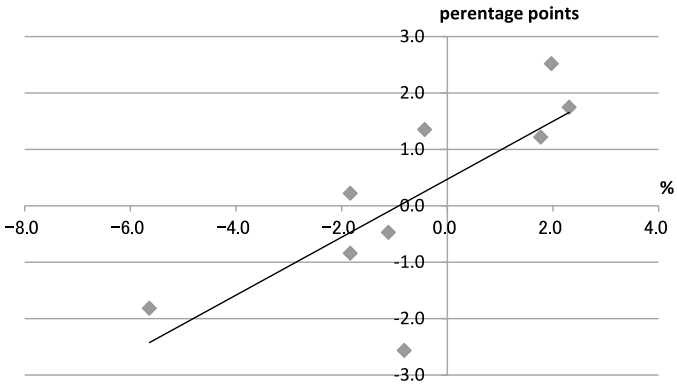
For example, in the manufacturing sector, the average growth rate between 1995 and 2015 was negative for eight of the 15 industries and positive for seven. The average annual growth rates for *electrical components/devices* and *telecommunication devices* were extremely high, at 12.0% and 9.1%, respectively. Similar variation among industries is observed in the non-manufacturing sector as well, with negative average growth rates from 1995-2015 for *electricity*, *construction,* and *accommodations/food service*s, which fall below -1.0%, and a high average annual growth rate of 4.7% observed for the telecommunications industry. To the extent that the expectations are static, these differences in industry growth rates over the past 20 years determine an industry's long-term productivity outlook. Thus, we will examine whether they had a positive correlation with the change of the cash/deposit holding ratio over the same period.

In Fig. 9, the horizontal axis represents average growth rate from FY 1995-2015, while the vertical axis represents "change in the cash/deposit ratio from FY 1995-2015." The relationship is plotted for both manufacturing and non-manufacturing industries. Similar to Figures 7 and 8, we plot *changes* in the cash/deposit holdings on the vertical axis to eliminate an industry-specific fixed effect. However, unlike Figures 7 and 8, the vertical axis represents not a change in the cash/deposit holding ratio (≡ cash and cash equivalents ÷ total assets), but rather the rate of change of cash/deposit balances over ten years. This is to adjust for the fact that sufficient changes may not be observed in the form of a ratio because when high long-term growth is expected, both cash/deposit holdings as well as other asset items increase.

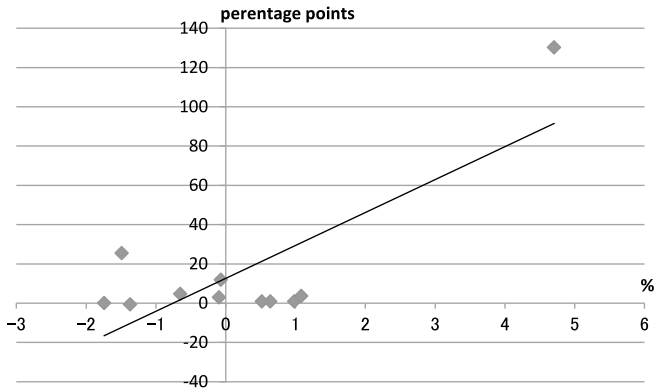
In the figure, outliers are observed for several industries. Furthermore, the presence of industries with remarkably high growth rates in the non-manufacturing sector, such as the telecommunications industry, may be exerting a large effect on the correlation. However, an upward slope is observed for both manufacturing and non-manufacturing industries. This indicates that industries with higher long-term economic growth tend to exhibit greater in-

Figure 9. Variance magnification of mid- to-long-term growth and the cash/deposit ratio

(1) Manufacturing industries



(2) Nonmanufacturing industries



Note 1: Horizontal axis = average growth rate (real, annual rate) from FY 1995 to 2015 by industry. Vertical axis = Change in cash/deposit ratio by industry from FY 1995 to 2015.
Note 2: Industries that could not be matched between the *National Accounts Statistics* and *Financial Statements Statistics of Corporations by Industry* were excluded from the sample.
Note 3: Created by the author based on the Cabinet Office's *Annual Estimate of National Accounts (real, chain-linked)* and the Ministry of Finance's *Financial Statements Statistics of Corporations by Industry (for all firm sizes)*.

creases in their cash/deposit holdings, and conversely, that industries with stagnant mid- to-long-term economic growth tend to exhibit lower increases in their cash/deposit holdings. In particular, within the manufacturing sector, *textiles*, with an average growth rate of -5.6%, saw a rate of change of cash/deposit holdings of about -40 percentage points (i.e. cash/deposit holdings decreased by 40 percentage points), whereas industries with large, positive average growth rates—*steel*, *chemical* and *transportation machinery*—saw large increases in cash/deposit holdings.

Industries with high average growth rates between FY 1995 and 2015 tend to be highly profitable and dedicated in their capital expenditure activities. The above results indicate that these promising industries are more likely to have accumulated cash/deposit holdings. This suggests that in the presence of many potential investment opportunities in promising industries, firms tend to hold highly liquid assets as a precautionary measure in order to exploit these new opportunities.

V. Case Studies

The previous section examined the determinants of increased corporate cash/deposit balances in Japan using industry-level data. This section will consider similar issues through case studies of two individual companies. The companies covered in this section are the Toyota Motor Corporation and the Softbank Group Corporation. Both companies stand out among non-financial private Japanese enterprises in that they both have large cash/deposit balances. According to their consolidated statements for FY 2014 and 2015, the companies' cash/deposit balances were 2.43 trillion yen and 3.97 trillion yen for Toyota, and 3.30 trillion yen and 2.64 trillion yen for the Softbank Group. According to the Ministry of Finance's *Financial Statements Statistics of Corporations by Industry*, the aggregated cash/deposit balances for FY 2014 and 2015 were 5.17 trillion yen and 6.32 trillion yen for the *motor vehicles, parts and accessories industry*, and 9.84 trillion yen and 9.95 trillion yen for the *telecommunications industry*. Thus, the proportion for which each company's cash/deposit balance accounted for their entire industry was approximately 50% for Toyota and 30% for the Softbank Group. Over the same period, the aggregated cash/deposit balances were 47.36 trillion yen and 51.80 trillion yen for all manufacturing industries, 32.28 trillion yen and 32.79 trillion yen for all service industries, and 43.27 trillion yen and 48.92 trillion yen for all wholesale and retail industries. Taking this into account, we can see how enormous the amounts of cash and deposits amassed by these two companies are among Japanese corporations.

As the largest manufacturing company in Japan, Toyota has long accumulated cash/deposit holdings and other liquid financial assets.[6] Softbank, on the other hand, is an emerging corporation belonging to the information and communication industry. It has achieved tremendous growth in recent years, having actively developed their businesses worldwide through M&As. Both being superb companies, it is unimaginable that they would face similar borrowing constraints as SMEs. However, in a dynamically evolving global economy that requires intricate management decisions, we presume both companies face various investment opportunities which are unsuitable to be reviewed by banks and other financial institutions. In these circumstances, in order to expedite investment opportunities, even outstanding enterprises find it necessary to hold in advance highly liquid cash/deposits and other financial assets that can be utilized immediately rather than through costly and timely

[6] For more on Japanese firms' financing behavior through the early 1990s, see Fukuda and Cong (1994).

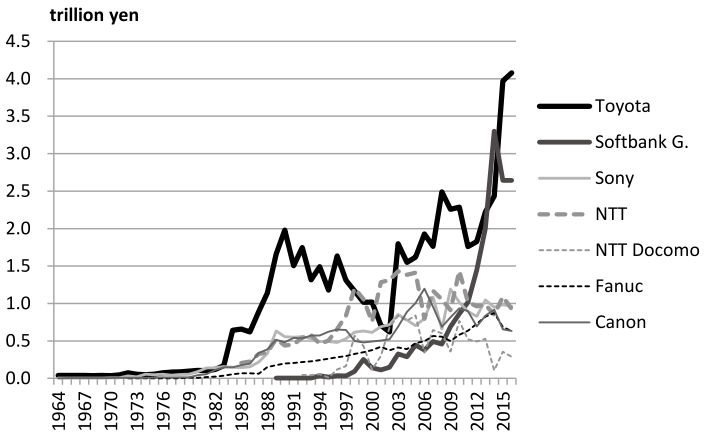
external financing.

When comparing the cash/deposit holding characteristics by the consolidated statements, there is no marked difference between the two firms and other financially-sound Japanese companies (such as Sony, NTT, NTT Docomo, Fanuc, Canon) in the early 2000s. However, the cash/deposit balances of the two firms grew immensely throughout the 2000s, and the rate of increase accelerated upon entering the 2010s (see Fig. 10). Comparing FY 2015 cash/deposit balances to those of FY 2000, Toyota's increased nearly 3.9 times, while the Softbank Group's increased 18.7 times.

However, it is worthwhile to note that during this period, the ratio of cash/deposit holdings to total assets did not necessarily keep rising for the two companies. Using the consolidated statements of Toyota and the Softbank Group, Fig. 11 illustrates the trends in the cash/deposit holding ratio (≡ cash and cash equivalents ÷ total assets) from FY 2000 to 2016. For the sake of comparison, the figure also plots the cash/deposit holding ratio for all industries over the same period. The figure illustrates that Toyota's cash/deposit holding ratio hovering around 5% was not largely different than that for all industries. Meanwhile, Softbank's cash/deposit holding ratio was much higher than that for all industries, exceeding 10% in most years, and 20% in some. However, even for the Softbank Group, there was no observed trend in increasing the cash/deposit holding ratio. Taking the average for the entire period, even Softbank's cash/deposit holding ratio was around 15% in the first half of the 2000s and after 2010. This indicates that while cash/deposit balances greatly increased during the 2000s, other assets increased too.

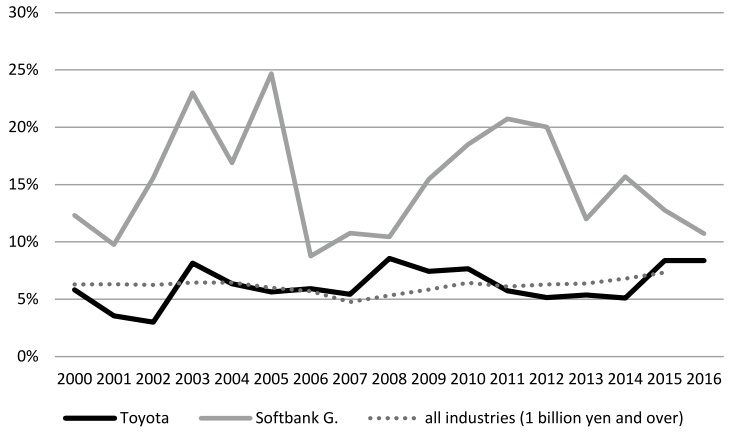
However, unlike the trend for the all-industry average in the 2000s, both firms experienced large, short-term fluctuations in their cash/deposit holding ratios. This was especially pronounced for Softbank, which had the cash/deposit holding ratio in FY2005 of nearly 25% that decreased to below 10% in FY 2006. Toyota's cash/deposit holding ratio also fell well below the all-industry average during FY 2001, 2002 and 2014, while largely surpass-

Figure 10. Cash/deposit balances of major Japanese companies



Source: Nikkei NEEDS - Financial QUEST.

Figure 11. Cash/deposit ratio trends for Toyota Motor Corporation and Softbank Group



Source: Nikkei NEEDS - Financial QUEST.

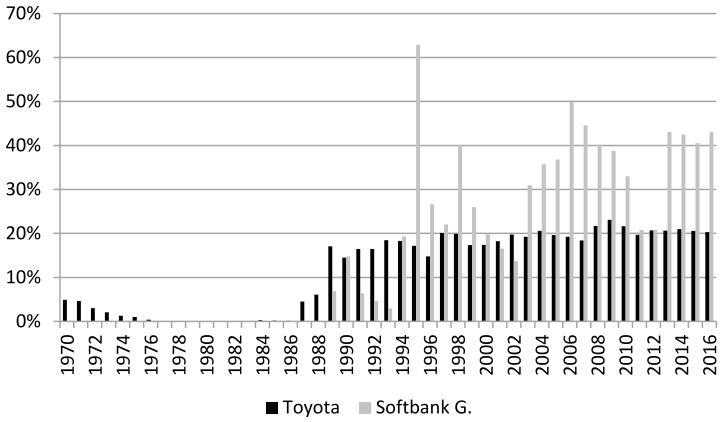
ing the all-industry average in FY 2003, 2008 and 2015. This suggests that both firms did not merely continue holding cash and deposits; rather, they made significant withdrawals in some years, while amassing large amounts in other years.

More interestingly, not only did liquid assets increase for both companies during this period, but so too did non-liquid assets. For example, the amount of increase in tangible fixed assets (machinery, buildings, etc.) from FY 2000 to 2015—about 4.9 trillion yen for Toyota and 4.2 trillion yen for the Softbank Group—largely outpaced increases in the cash/deposit holdings over the same period (3.0 trillion yen for Toyota and 2.4 trillion yen for the Softbank Group). This suggests that both companies amassed their cash/deposit balances with the support of strong business performance, while expanding the scale of their businesses through aggressive investments.

Furthermore, while both companies increased their total assets, this was outpaced by increases in their outstanding liabilities. In particular, long-term borrowings and corporate bonds of both companies increased dramatically. Based on the consolidated statements of Toyota and the Softbank Group, Fig. 12 depicts the ratio of long-term borrowings, corporate bonds and convertible bonds to total assets (= (long-term borrowings + corporate bonds + convertible bonds) ÷ total assets) from FY 2000-2016. Once a debt-free enterprise, Toyota's long-term borrowings, corporate bonds and convertible bonds between FY 1977 and 1983 were extremely low, totaling zero in some years. The Softbank Group also had very few long-term liabilities when listed on the Tokyo Stock Exchange in July 1994. However, during the latter half of the 1990s, long-term liabilities rose sharply for both companies, with ratios for long-term borrowings, corporate bonds and convertible bonds trending at approximately 20% for Toyota, and except for a few years, between 20%-40% for Softbank.

From FY 2000-2015, the balances of long-term borrowings, corporate bonds and convertible bonds increased approximately 3.4 times for Toyota and 27.7 times for the Softbank Group. These upward trends are in sharp contrast to the period's sluggish lending and cor-

Figure 12. Trends in long-term debt ratio for the Toyota Motor Corporation and the Softbank Group



Source: Nikkei NEEDS - Financial QUEST.

porate bond markets in Japan.

An even more significant feature is that the amounts of long-term borrowings, corporate bonds and convertible bonds from FY 2000-2015 totaled 6.1 trillion yen for Toyota and 8.2 trillion yen for the Softbank Group, greatly outpacing increases in the cash/deposit holdings and tangible fixed assets during the same period. In particular, the increases in the Softbank Group's long-term borrowings, corporate bonds and convertible bonds were much larger than their increases in the cash/deposit holdings and tangible fixed assets. This suggests that by increasing their long-term liabilities, both firms were able to increase their tangible fixed assets while also increasing their cash/deposit holdings.

Most of the periods coincide with the BOJ's zero interest rate policy. In this environment, the two companies—with their strong business performances and excellent credit ratings—were able to expand the scale of their businesses by securing long-term financing at extremely low interest rates, while at the same time increasing their cash/deposit holdings to fund new investment opportunities.

VI. Capital investment and corporate savings

From an macroeconomic perspective, Toyota and the Softbank Group are outliers. For most Japanese companies, financial surpluses and cash/deposit holdings have grown in recent years because capital investment has continued to remain sluggish for a long time. Capital investments had exceeded depreciation expenses (that is, replacement investment) by a significant margin until the early 1990s. However, this difference shrank rapidly during the first half of the 1990s following the collapse of the bubble, and on the macroeconomic level, capital expenditures, on average—with the exception of replacement investment—have rarely been made since the end of the 1990s.

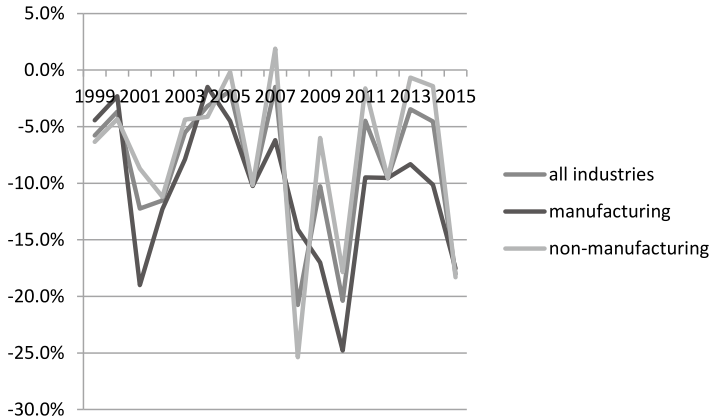
Most Japanese companies became conservative about their capital investment after the

mid-1990s partly because of the worsening of macroeconomic fundamentals and increased uncertainty. Deteriorating fundamentals reduce domestic and foreign demand along with prospective earnings, playing a significant role in diminishing motivation for capital investment. Increased uncertainty also has contributed to management's overly conservative stance on capital investment. However, taking into consideration the results verified in the previous sections, when considering the factors contributing to Japanese firms' recent cash/deposit holdings from a more microeconomic view, it would be inappropriate to attribute the increases in those balances solely to a conservative stance on capital investment. Although there are many negative views on the current macroeconomic fundamentals, the presence of potential investment opportunities in the long term plays a significant role behind the substantial accumulation in Japanese firms' cash/deposit balances in recent years.

This is a prominent trend in various questionnaire surveys as well. For example, the Development Bank of Japan's *Survey on Planned Capital Spending* (for large enterprises) is a representative questionnaire survey on capital investment of listed Japanese firms. The survey, which is conducted annually by the Development Bank of Japan's Economic & Industrial Research Department, covers private enterprises with equity capital of 1 billion yen or more (excluding the agriculture, forestry, finance and insurance industries), and surveys firms' attitudes and outlook, with a focus on capital investment.[7] Survey forms are sent to over 3,000 listed firms, from which, over 2,000 responses are received from companies regarding their capital investment plans and actual implementation.

Using the data from this survey, Fig. 13 summarizes the annual percentage difference between the amount of planned capital investment at the beginning of the fiscal year and the actual investment amount for each fiscal year. The difference was calculated as 100×("actual

Figure 13. Differences between planned and actual domestic capital investment



Source: Created by the author based on the Development Bank of Japan's *Survey on Planned Capital Spending (large enterprises)*.

[7] The survey was conducted twice annually in years prior to FY 2005.

value" - "planned value") ÷ "planned value." From the figure, it is easy to see that, for each year through the 2000s, the actual implementation was significantly lower than what was anticipated at the beginning of the year.

While the difference varies from year to year, actual implementation fell well below the planned amounts for FY 2001 (collapse of the IT bubble), 2008 (global financial crisis) and 2010 (Great East Japan Earthquake). Even in subsequent fiscal years, we observe that actual implementation still fell short of planned amounts by about 5% to 10%. In particular, after the global financial crisis, the differences were especially pronounced in the manufacturing industry. In FY 2011 and 2013, non-manufacturing industries exhibited smaller differences between actual and planned amounts, whereas a difference of nearly 10% was observed in manufacturing industries. These results suggest that potential capital investment opportunities far exceeded actual implementation amounts, particularly among Japanese manufacturing firms. However, since most of them were not implemented, large financial surpluses and cash/deposit holdings were accumulated during the lost two decades in Japan.

VII. Agendas for the Japanese economy

In recent years, the financial surpluses of Japanese companies have grown, while at the same time, so have their cash/deposit holdings. Thus, this paper investigated why corporate cash/deposit holdings increased and considered what the ideal form of corporate governance is for modern Japanese companies. The results of the analysis revealed that underlying the recent large increases in cash and deposits held by Japanese firms is the presence of a precautionary motive for SMEs faced with potential borrowing constraints. Meanwhile, a number of large corporations potentially face various investment opportunities but are unable to act upon most of them, which result in accumulating substantial amounts of cash and deposits.

Even in the lost two decades, many Japanese firms faced various potential investment opportunities in the domestic market but were unable to act upon them. This is in marked contrast to Japanese firms' overseas activities. For example, the Development Bank of Japan's *Survey on Planned Capital Spending (large enterprises)* shows that in the case of overseas capital investment, actual amounts implemented frequently exceeded planned values for Japanese firms. Particularly, in the manufacturing industries, while the actual amounts for domestic capital investment fell below the planned values for all years, the actual values of implemented overseas capital investment greatly exceeded the planned values in 2012 and 2013. This suggests that Japanese firms were not necessarily too risk averse to implement capital investment in the 2000s. Rather, under the dramatic monetary easing policy, Japanese firms held highly liquid financial assets in order to take advantage of potential domestic investment opportunities, but the proactive utilization of highly liquid financial assets never materialized as long-term domestic markets remained highly uncertain. This suggests that no matter how much corporate governance is strengthened, without definitive belief in domestic growth, Japanese firms will not utilize their cash/deposit holdings for

domestic investment opportunities.

There is a growing uncertainty about the future of Japanese domestic markets in light of the potential growth rate. In particular, a rapidly declining birth rate, aging population and mounting financial deficits are major concerns that are likely to constraint growth of the Japanese economy. Therefore, when considering the issues associated with Japanese corporate cash/deposit holdings, the role of growth strategies in eliminating these long-term domestic economic concerns are vital to realize the effective utilization of cash/deposit holdings. We must confront head-on the structural problems of Japan's economy with a resolute attitude that does not preclude painful deregulation and/or structural reforms to transform these financial surpluses into capital for business growth.

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