REIT Equity Offerings and Capital Investment in the Presence of the Central Bank Put*

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December 19, 2025

Abstract

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JEL codes: G31, G32, E52, R33

Keywords: seasoned equity offerings, price pressure, capital investment, real estate investment trusts, unconventional monetary policy, LSAP, Japan

* We thank Brent Ambrose, Eva Steiner, Liang Peng, Tim Riddiough, Stanimira Milcheva, Pedro Gete, participants at the Econometric Society North America Summer Meeting and seminars at MIT, the University of Cambridge, Boston Fed, the University of Hawaii, Penn State, Rice, and University of Nevada-Reno.
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Abstract

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1. Introduction

Real Estate Investment Trusts (REITs) provide a unique laboratory-like environment for studying corporate capital budgeting for several reasons. First, REITs do not face significant income-tax distortions because they are tax pass-through entities unlike other listed corporations. Second, REITs do not face significant agency problems between insiders and outside investors because REITs are designed to be transparent in assets and income sources and leave little free cash flow to retain (Bauer et al., 2010). In particular, Japanese REITs are notably transparent regarding the use of equity funds; most equity offering announcements are accompanied by the disclosure of specific property acquisitions, including predetermined dates and prices. As a result, Japanese REITs offer a rare empirical setting to identify the effects of exogenous stock demand shocks on capital budgeting decisions under minimal frictions.

The present study demonstrates that REITs, operating with minimal tax distortions and information asymmetries, actively issue equity to finance capital investment when positive equity demand shocks reduce their cost of capital. While Japanese REITs generally issue equity more frequently than typical corporations, presumably due to lower adverse selection risks, their issuance activity nonetheless exhibits cyclical patterns driven by time-varying equity costs. A distinctive feature of our empirical setting is the Bank of Japan's (BOJ) creation of clearly identifiable counter-cyclical demand shocks for REIT shares through its unconventional monetary policy of direct REIT share purchases on the Tokyo Stock Exchange. We find that these counter-cyclical equity demand shocks exert a stabilizing effect on REIT capital investment but do not find evidence of value destruction or deterioration in operating performance. Our findings contribute to the ongoing debate regarding whether stock market price pressures significantly influence SEOs

and corporate investment (Baker et al., 2003; Khan et al., 2012; Dessaint et al., 2019; Evans et al., 2023) and whether such pressures lead to inefficient resource allocation (Wardlaw, 2020; Lou and Wang, 2018; Dittmar et al., 2020; Soyeh et al., 2021). Moreover, our results provide direct evidence of how unconventional monetary policy can affect real economic activity through equity market channels.

The large literature on corporate capital budgeting is fundamental in corporate finance. Neoclassical theory suggests that firms should invest capital when Tobin's q is large enough, irrespective of the source of capital (Modigliani and Miller, 1958, 1963). However, for corporations, large investments beyond internal cash flows are typically constrained by the availability of different sources of capital. A corporation typically prioritizes issuing debt over equity due to various distortions (Titman and Wessels, 1988), including the interest tax shield (e.g., Kraus and Litzenberger, 1973; Graham, 2000) and information asymmetry between insiders and outside investors (e.g., Myers and Majluf, 1984; Myers, 2001; Frank and Goyal, 2003).

In contrast, REIT investments are very sensitive to Tobin's q, as predicted by the neoclassical theory (Kim and Wiley, 2019), and are often funded with proceeds from equity offerings in addition to public debt offerings (Brown and Riddiough, 2003; Ott et al., 2005). These equity offerings are driven by future investment opportunities and capacity utilization from a lower cost of equity capital (Hartzell et al., 2005, Boudry et al., 2010). Although agency problems still matter for US REITs as evidenced by the underpricing of seasoned equity offerings (Ghosh et al., 2000) and the importance of capital market frictions and retained earnings (Riddiough and Wu, 2009), more transparent Japanese REITs experience rather positive equity pricing around the property acquisition announcements (Ooi et al., 2011).

Our study leverages a unique setting in which the Bank of Japan (BOJ) directly purchases shares of publicly traded real estate investment trusts (REITs) as part of its unconventional monetary policy. Unlike the BOJ's broader program of exchange-traded fund (ETF) purchases, this intervention exerts directly observable price pressure on individual REIT shares.

We first characterize the Bank of Japan's REIT purchasing behavior following Hattori and Yoshida (2022). The BOJ purchases shares of a subset of publicly traded REITs following a significant negative return on the aggregate REIT index, measured between the previous day's market close and the morning close of the current trading day. This counter-cyclical response constitutes a clear instance of the "central bank put" (Cieslak and Vissing-Jorgensen, 2021) along with the BOJ's other tools, including ETF purchases and yield curve control (Barbon and Gianinazzi, 2019; Harada and Okimoto, 2019; Charoenwong et al., 2021; Hattori and Yoshida, 2023a, 2023b; Katagiri et al., 2025). The recognition of the endogeneity of the BOJ's intervention helps us design an empirical strategy to identify its causal impact on equity prices, SEOs, and capital investments.

Second, we show that the BOJ's purchases generate price pressure; that is, they mitigate negative intraday returns and reduce volatility for the targeted REITs, consistent with the literature on fund flows and price pressures (e.g., Coval and Stafford, 2007). We exploits both the intra-day timing and cross-sectional variation of the BOJ's fund allocations. Purchases are made after the close of the morning trading session, allowing us to focus on returns during the lunch break and the afternoon session. The BOJ allocates funds only to a subset of REITs and based on market capitalization (treatment with varying intensity), providing a cleaner identification strategy than that available in studies relying on differences in constituent weights across broad-based ETFs

(Charoenwong et al., 2021). Overall, the BOJ's demand shock has a positive effect on share prices, mitigating unfavorable market conditions for capital investment and equity issuance.

Third, using monthly data, we find that a larger allocation of the BOJ's funds is associated with increased equity issuance and capital investment, particularly when individual REIT volatility is reduced. Because equity offerings are influenced by both market timing and the corporate life cycle (DeAngelo et al., 2010), our analysis controls for life-cycle effects and other time-invariant REIT characteristics using firm fixed effects, as well as for broader market dynamics using year and month fixed effects and aggregate control variables. Our results suggest that REITs time the market not only in terms of price levels but also with respect to return volatility when conducting seasoned equity offerings (SEOs), consistent with previous studies (Baker and Wurgler, 2002; Boudry et al., 2010; Ooi et al., 2010; Harrison et al., 2011). We find that both the first and second moments of the return distributions matter for SEO and investment decisions, consistent with predictions from the real options framework. Moreover, we find that transparent firms tend to allocate equity proceeds to productive investments rather than holding cash or short-term securities. These results also provide new insights to the literature on the BOJ's unconventional monetary policy (e.g., Charoenwong et al., 2021); it smooths SEO activity by providing downside protection during periods when equity issuance would otherwise be constrained by negative market-wide returns.

Overall, this study documents a case in which equity demand shocks affect corporate investment and equity issuance through price pressure and volatility reduction while maintaining stock market valuation and operational efficiencies. In addition, it contributes to the literature on unconventional central bank interventions in equity markets, representing the first study to

examine the effects of such interventions in the REIT market. More generally, it contributes to the literature on large-scale asset purchases (LSAPs) by shedding light on several key transmission channels: the scarcity channel (D'Amico et al., 2012; Krishnamurthy and Vissing-Jorgensen, 2011, 2013; Hamilton, 2018), the risk-taking channel (Bauer et al., 2023), the credit channel (e.g., Peek and Rosengren, 2000; Gan, 2007), the risk-sharing channel (Peng and Zervou, 2022), announcement and portfolio rebalancing effects (Hancock and Passmore, 2011; Selgrad, 2023), a signaling channel (Krishnamurthy and Vissing-Jorgensen, 2011). Finally, our study contributes to the growing literature on the real economic effects of LSAPs (Borio and Zabai, 2016; Gambetti and Musso, 2020; Schenkelberg and Watzka, 2013; Weale and Wieladek, 2016).

The remainder of this paper is organized as follows. Section 2 describes the BOJ REIT purchase program, and Sections 3 and 4 analyze the effect of the BOJ's purchase on returns, SEOs, and capital investment. Section 5 concludes.

2. The REIT Purchase Program

2.1 The Japanese REITs

The establishment of Japanese REITs was facilitated by the 2000 amendment to the Act on Investment Trusts and Investment Corporations, as outlined by Hattori and Yoshida (2022). The first two REITs, Nippon Building Fund and Japan Real Estate, were listed on the Tokyo Stock Exchange (TSE) in September 2001. Since then, the Japanese public REIT market has grown significantly in terms of the number of listed REITs and market capitalization. As of December 31, 2022, there were 61 listed REITs with a total market capitalization of JPY 16 trillion, which constituted approximately 2% of the TOPIX market capitalization at the end of the year, raking

the second in market size after the US REIT market. Except for the Global Financial Crisis and COVID-19, the TSE-REIT Index (ex-dividends) generally exhibited an upward trend.

Using Japanese REIT data has several advantages for the present study. First, using the BOJ's purchases of individual REIT shares, we can directly identify shocks to equity demand for each REIT. These shocks have both time-series and cross-sectional variations. Second, each REIT offers equity shares much more frequently than listed corporations, possibly because of the absence of SEO-related price discounts for REITs. The difference is more pronounced during the unconventional monetary policy than before.

Third, unlike listed corporations, REITs explicitly associate SEOs with capital investment by specifying detailed investment plans for each SEO. For example, Nippon Building Fund issued the "Notice Concerning Issue of New Investment Units and Secondary Offering of Investment Units" on October 9, 2020 (Appendix A). Section 4 of this notice (Amount of Capital, Use and Schedule of Expenditure of Funds to be Procured) specifies that "[p]rocured funds are scheduled to be used to fund acquisition of specified assets which NBF contemplates acquiring as published today in the "Notice of Acquisition and Commencement of Lease of Domestic Assets (Acquisition of Shinjuku Mitsui Building and Gran Tokyo South Tower)." In turn, the acquisition announcement specifies the name of the assets to be acquired, the acquisition price, the seller, the contract date, the acquisition date, the acquisition financing, and the payment method. Thus, Japanese REITs typically raise equity to finance specific asset acquisition deals. For this type of equity financing, REIT prices do not decrease because issues stemming from asymmetric information are minimal. Thus, Japanese REITs provide a unique environment to test whether the equity cost of capital affects investments.

2.2 The BOJ program

The BOJ's REIT purchase program started in October 2010 when it set up a fund and purchased REITs and exchange traded funds (ETFs). The BOJ states three objectives for purchasing risky assets. First, the BOJ aims to stimulate firms' and households' spending by decreasing funding costs and reducing long-term interest rates and risk premiums. Second, the BOJ expects investors and financial institutions to increase their portfolio allocations to risky assets such as stocks, REITs, and loans to ease the private sector's funding. Third, the BOJ aims to eliminate deflationary expectations and decrease real interest rates. The BOJ is the only central bank that purchases REITs.

The BOJ increased the amount of REIT purchases in April 2013 under Quantitative and Qualitative Easing (QQE), in which the BOJ significantly increased the monetary base and the amount of unconventional asset purchases and implemented Yield Curve Control (YCC).[1] Before QQE, the BOJ initially purchased REITs up to a limit of 50 billion JPY, which was increased later by 10 billion JPY in April 2012. Under QQE, the BOJ changed the limit to an annual purchase of 30 billion JPY. Furthermore, from October 2014, the BOJ tripled the annual purchase amount to 90 billion JPY under QQE2. During the COVID pandemic, the BOJ further doubled the limit to 180 billion. As a result, the BOJ's REIT holdings and ownership ratio increased significantly during QQE2. However, the frequency of the BOJ purchase decreased considerably after the BOJ conducted an assessment for further effective and sustainable monetary easing at the Monetary

[1] More details about QQE and QQE2 are available in Hattori and Yoshida (2023b), Hattori (2020), and Hattori and Takahashi (2022). For more information, see https://www.boj.or.jp/en/announcements/release_2013/k130404a.pdf and https://www.boj.or.jp/en/announcements/press/koen_2013/data/ko130412a1.pdf.

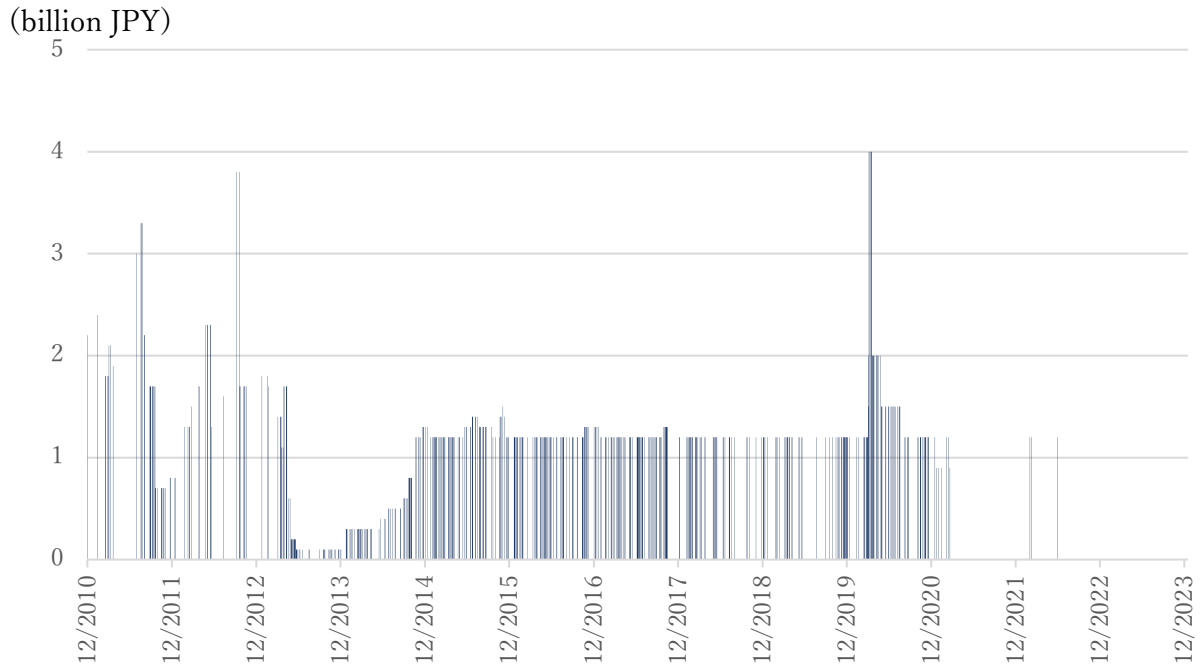
Policy Meeting on March 19, 2021. Eventually, the BOJ discontinued the REIT purchase program on March 19, 2024.

The BOJ imposes several conditions for the purchase of REITs. For a REIT to be eligible for purchase, the BOJ purchases the REIT with an AA or higher credit rating. Specifically, according to "Guidelines on Eligible Collateral," the BOJ purchases the REIT issued by a firm that must be rated AA or higher by a recognized rating agency.[2] REIT management companies tend to take credit ratings from R&I and JCR, the Japanese rating agencies.

Figure 1 shows the amount of daily REIT purchases. The BOJ purchased approximately 1.2 billion JPY of REIT shares for each operation between November 2014 and December 2019. Thus, there is no time-series variation in each operation amount, but there is a large variation in the frequency of operations, making the monthly purchase amount vary significantly. The purchase amount increased significantly in March 2020 and remained high during the COVID pandemic. However, there were virtually no purchases after the BOJ assessment in March 2021.

[2] Additionally, the BOJ must have traded for over 200 days with an annual trading value of JPY 20 billion or more.

Figure 1 The BOJ's REIT Purchase Amount



Source: Bank of Japan

2.3 Data

Table 1 shows the descriptive statistics of the dummy variable for the BOJ's REIT purchases, and Table 2 shows the descriptive statistics of REIT returns. The BOJ's purchase data are collected from the BOJ website, and intraday prices for individual REIT stocks listed on the Tokyo Stock Exchange are obtained through Bloomberg. The BOJ's purchase operations occurred on less than 20% of trading days between 2012 and 2014 but on more than 20% of trading days after QQE2. In 2020, the proportion increased to 43.9% due to the COVID-19 pandemic. However, it sharply decreased to 2% in 2021. We restrict our sample to the period between November 2014 and December 2019 because of the program was somewhat stabilized during this period. The

period after December 2019 includes the unusual COVD-19 pandemic period and the period of inaction after the March 2021 assessment. Therefore, we limit our analysis to a sample period between November 2014 and December 2019.

Table 1 The Descriptive Statistics of the REIT Purchase Dummy Variable

Year	Obs	Mean	Std.dev
2010	13	0.17	0.61
2011	260	0.25	0.66
2012	261	0.17	0.59
2013	261	0.11	0.36
2014	261	0.14	0.30
2015	261	0.35	0.57
2016	257	0.35	0.55
2017	252	0.36	0.55
2018	260	0.22	0.46
2019	260	0.20	0.45
2020	261	0.44	0.82
2021	260	0.02	0.15
2022	260	0.01	0.13
2023	260	0.00	0.00

This table shows the number of observations (trading days) and the mean and standard deviation of the dummy variable for REIT purchases between 2010 and 2023. The mean value represents the empirical probability of the BOJ's REIT purchase for each year. The daily data are obtained from the BOJ's website.

Table 2 Descriptive Statistics of REIT Returns

	Obs.	Mean	Std.dev.	Min.	Max.
Daily (15:00 previous day–15:00)	3,192	0.0226	1.1670	-18.5076	13.7517
Overnight and morning (15:00 previous day–11:30)	3,192	-0.0007	0.9697	-14.8954	14.4729
Lunchtime (11:30–12:30)	3,193	-0.0042	0.2660	-2.8785	3.0609
Afternoon (12:30–15:00)	3,193	0.0279	0.6638	-8.0467	6.1989

This table shows the descriptive statistics of pooled REIT returns between 2010 and 2023. Intraday REIT price data are obtained from Bloomberg.

2.4 Estimating Purchase Rule

The BOJ does not make advance notice regarding the date and amount of its REIT purchase, unlike Japanese government bond (JGB) auctions (Hattori, 2020; Hattori and Takahashi, 2022). Instead, the BOJ publicly discloses the ex-post aggregate amount of REIT purchases. However, the BOJ does not disclose its purchase amount for each REIT or the specific time of purchase. Thus, we estimate the BOJ's purchase rule using a linear probability model by following Hattori and Yoshida (2022). We divide each trading day into five subperiods: the overnight period (from 15:00 on the previous trading day to 09:00), the morning market (from 09:00 to 11:30), the combined overnight and morning period (from 15:00 on the previous trading day to 11:30), the lunchtime (from 11:30 to 12:30), and the afternoon market (from 12:30 to 15:00). For each subperiod k, we estimate:

$$\mathbb{I}_t = \alpha_1^k + \sum_{d=\{1,\ldots,5,7,\ldots,10\}} \beta_1^{k,d}\, \mathbb{r}_t^{k,d} + \varepsilon_t^k, \qquad (1)$$

where $\mathbb{I}_t$ denotes a dummy variable for a REIT purchase on date t, and $\mathbb{r}_t^{k,d}$ denotes a dummy variable for decile-group d of a subperiod-k REIT index return on date t. We use the sixth-decile group as the reference group. Using the TSE-REIT Index obtained from Bloomberg, we compute REIT returns from November, 2014, to December, 2019.

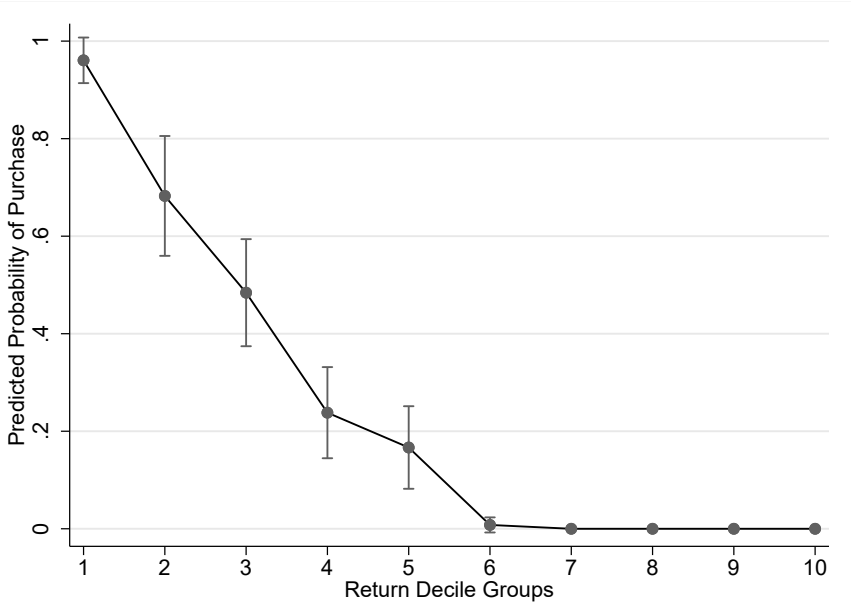
Figure 2 shows the predicted purchase probabilities for the return decile groups based on Eq. (1) for the combined overnight and morning periods.[3] The results demonstrate an apparent

[3] The results for other subperiods are available upon request. The results are almost identical to those in Hattori and Yoshida (2022).

contingency of REIT purchases on the cumulative overnight and morning returns. The purchase probability is approximately 0.7 when the cumulative return is in the first decile. The probability monotonically and almost linearly decreases to 0.00 for the sixth return decile group. The purchase probability is consistently about zero, with minimal standard errors from the sixth to tenth decile groups. The decile groups 1-5 roughly correspond to negative returns, whereas groups 6-10 roughly correspond to positive returns.

We have revealed a clearer decision rule of the BOJ than the one reported by Hattori and Yoshida (2022) by using the cumulative return for the overnight and morning periods instead of separately examining each period. In Appendix D, we provide an additional analysis of the BOJ's purchase rule by examining the four combinations of the signs of returns for the overnight, morning, and cumulative overnight-morning periods. The analysis confirms that only the sign of a cumulative overnight-morning return matters, not the sign of overnight or morning returns in isolation. The BOJ intervenes in the market countercyclically only for the negative return range. Furthermore, because the amount of each intervention is almost constant, the expected amount of purchase is driven by the probability of purchase. Thus, the BOJ's expected amount of purchase looks like a put option payoff function. Thus, Figure 2 is an explicit representation of the central bank put, which is often discussed as an abstract concept.

Figure 2 The BOJ Purchase Probability by Return Decile Groups



This figure depicts the predicted probability of the Bank of Japan's REIT purchase corresponding to 10 decile groups of cumulative REIT index returns during the overnight and morning periods. The first decile represents the lowest (negative) return, whereas the tenth decile represents the highest return. The linear probability model is specified in Eq. (1). The sample period is November 2014, to December 2019. The 95% confidence intervals are based on Newey and West's (1987) standard errors.

3. The Effect on Returns and Volatility

3.1 Returns

We identify the effect of BOJ REIT purchases on returns by exploiting the program's eligibility rule: only REITs rated AA or above qualify for purchases, which are then allocated proportionally to market capitalization. This allocation rule creates a natural comparison between eligible REITs (which receive demand shocks proportional to their size) and ineligible REITs (which receive no BOJ purchases).[4] Our identification strategy parallels recent studies of the BOJ's

[4] About 40-60% of J-REIT was targeted by the BOJ in our sample for the regression (see Appendix for the detail).

ETF programs (Charoenwong et al., 2021; Harada and Okimoto, 2022; Hattori and Yoshida, 2023a; Katagiri et al., 2025), but offers a more direct source of variation. Whereas those studies rely on component stock weights across broad-based equity indexes (TOPIX and Nikkei 225), our setting provides a sharp allocation variation. This generates cleaner identification of demand shock effects with less confounding from index rebalancing or correlated fundamentals.

However, a simple regression of daily returns on the BOJ purchase dummy is subject to an endogeneity issue because of our finding in the previous section that the BOJ's purchase is contingent on a negative cumulative overnight and morning REIT return. We address this endogeneity issue by using lunchtime and afternoon returns based on our finding that the BOJ decides to purchase REITs after the morning market closes. Furthermore, Hattori and Yoshida (2023a) find that the BOJ's similar ETF program increases trades only at the opening of the afternoon market (12:30). Because lunchtime orders are cleared at the beginning of the afternoon session, we primarily focus on lunchtime returns (11:30-12:30). However, we also estimate the effect on afternoon returns (12:30-15:00) to capture continued price adjustments.

We run a panel regression for REIT i percentage return r_{it}^{k} on the BOJ allocation weight w_{it} and the BOJ REIT purchase amount (in trillion yen) $purchase_t$ for subperiod $k = \{lunchtime\ (11{:}30 \text{ to } 12{:}30), afternoon\ (12{:}30 \text{ to } 15{:}00)\}$ on date t between November 2014 and December 2019:

$$r_{it}^{k} = \alpha_2^k + \beta_2^k w_{it} + \gamma_2^k purchase_t + \delta_2^k w_{it} \times purchase_t + \eta_i + \tau_v + \varepsilon_{it}, \qquad (2)$$

where w_{it} denotes the allocation weight that equals zero for non-eligible REITs and equals REIT

i's share of total market capitalization among all targeted REITs, $purchase_t$ denotes the amount of the BOJ's purchase in trillion JPY on date t, η_i denotes REIT fixed effects capturing time-invariant heterogeneity in risk, liquidity, and other characteristics, τ_v denotes year and month fixed effects, and ε_{it} denotes the error term. The interaction term $w_{it} \times purchase_t$ represents the allocation of the BOJ fund.

Table 3 shows the estimation result. Columns (1) and (2) show the results when the dependent variable is the lunchtime return. The coefficients on $w \times purchase$ are positive and statistically significant at least at the 5% level, with or without time fixed effects. Thus, after controlling for the unconditional mean return differences by REITs and low-frequency time trends, a 100 million JPY allocation to a REIT (1% of a one-trillion JPY purchase) increases the lunchtime return for a targeted REIT by 0.06073 percentage points. Columns (3) and (4) show even a larger and statistically more significant effect on afternoon returns. The estimated coefficients suggest that a 100 million JPY allocation to a REIT further increases the afternoon return by 0.1746 percentage points for a targeted REIT. This suggests that the BOJ's REIT purchase increases REIT prices after the REIT market experiences negative overnight and morning returns.

Table 3 Returns and BOJ's fund allocation

	(1)	(2)	(3)	(4)
	Lunchtime returns		Afternoon returns	
w	0.00364	0.00354	0.00602	0.00672
	(0.00322)	(0.00361)	(0.00912)	(0.00874)
BOJ purchase	0.0351	0.0279	0.0226	0.00519
	(0.0417)	(0.0426)	(0.0860)	(0.0868)
w× BOJ purchase	6.076**	6.069**	17.41***	17.72***
	(2.425)	(2.422)	(4.502)	(4.515)
Fixed effects (firm)	Yes	Yes	Yes	Yes
Fixed effects (Year, month)	No	Yes	No	Yes
Observations	70,585	70,585	70,585	70,585
R-squared	0.004	0.007	0.004	0.008

This table shows the results of the panel regressions for lunchtime returns and afternoon returns (Eq. (2)). The data is from November 2014 to December 2019. Robust standard errors are shown in parentheses.

3.2 Volatility

One implication of the positive effect on returns for targeted REITs is that the large negative return until the morning market close will be mitigated by the end of the afternoon market. In other words, intraday and daily volatility can be reduced by the BOJ purchase. We define volatility for date t, $vol_{it}^{k} \equiv (ClosingPrice_t - OpeningPrice_t)^2$ for $k = \{intraday\}$ and $vol_{it}^{k} \equiv (ClosingPrice_t - ClosingPrice_{t-1})^2$ for $k = \{daily\}$. We estimate the following model:

$$vol_{it}^{k} = \alpha_3^k + \beta_3^k w_{it} + \gamma_3^k purchase_t + \delta_3^k w_{it} \times purchase_t + \eta_i + \tau_v + \varepsilon_{it}, \qquad (3)$$

where the interaction term $w_{it} \times purchase_t$ represents the allocation of the BOJ fund.

Table 4 shows the estimation results. The coefficient β_3^k for BOJ purchase is positive and

statistically significant at the 1% level for both intraday and daily volatilities. In particular, the daily volatility is almost twice as large as intraday volatility on the day of the BOJ purchase, suggesting a return autocorrelation (continued price declines) for the overnight and intraday periods. This result also confirms the countercyclical nature of the BOJ purchase. The coefficient δ_3^k on the allocation of BOJ fund is negative and statistically significant at the 1% level for intraday volatility. Thus, the BOJ's price pressure mitigates the increased volatility during the trading day. However, the coefficient is smaller in magnitude and only marginally significant for daily volatility although the sign is still negative. Overnight volatility dynamics seem to be more heterogeneous across REITs.

Table 4 Volatility and BOJ's fund allocation

Dependent Variable: Volatility	(1)	(2)	(3)	(4)
	Intraday		Daily	
w	0.00134	0.00001	0.000577	-0.000840
	(0.00228)	(0.000571)	(0.00262)	(0.000717)
BOJ purchase	0.0206***	0.0142***	0.0402***	0.0336***
	(0.00305)	(0.00262)	(0.00328)	(0.00286)
w× BOJ purchase	-0.462***	-0.483***	-0.156	-0.184*
	(0.105)	(0.0964)	(0.103)	(0.101)
Fixed effects (firm)	Yes	Yes	Yes	Yes
Fixed effects (Year, month)	No	Yes	No	Yes
Observations	70,585	70,585	56,540	56,540
R-squared	0.015	0.066	0.018	0.061

This table shows the results of the panel regressions for intraday and overnight volatility (Eq. (3)). The data is from November 2014 to December 2019. Robust standard errors are shown in parentheses.

4. Effects on SEOs and Capital Investment

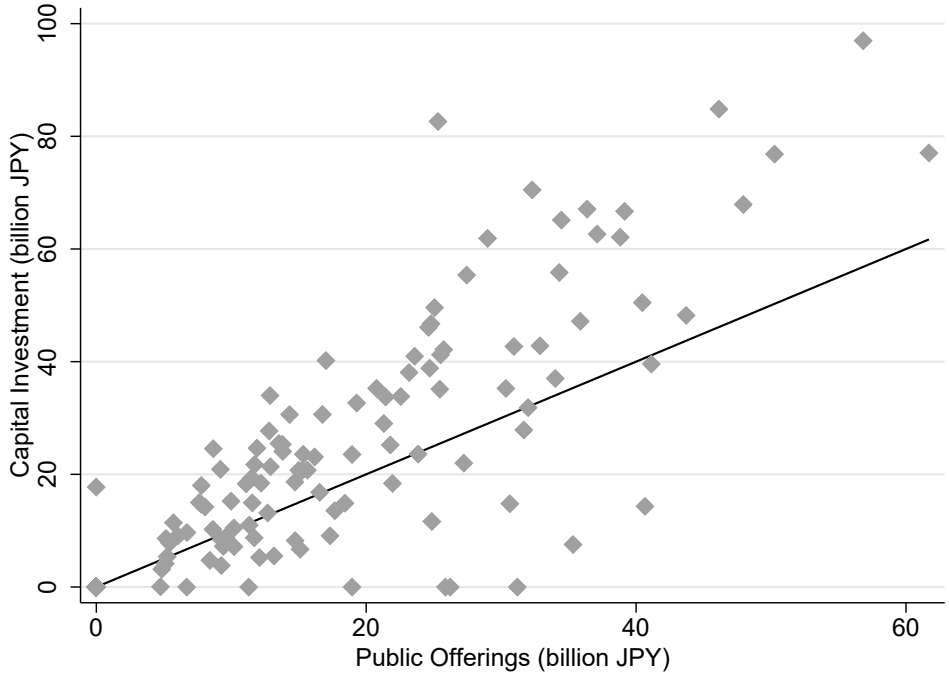
REITs time the market in making seasoned equity offerings frequently. Most SEOs are directly linked to specific capital investment plans such as property acquisitions (Appendix A for an example). We use this feature to study the effect of the BOJ's purchase on seasoned equity offerings and capital investment.

4.1 General Characteristics of REIT SEOs

We test whether the targeted REITs issue a larger amount of equity shares (investment units) to finance capital investment in response to the BOJ's REIT purchase. The BOJ's potential impact on SEOs and capital investment is due to its impact on REIT's cost of capital. We construct monthly data on the amount of public offering for REIT i in month t (PO_{it}) and the amount of capital investment associated with this SEO ($Invest_{it}$), using the information on each REIT's website. As we explain in Section 2 and Appendix A, there is usually a direct relationship between a REIT's SEO and capital investment, typically property purchase. At the same time, there is a certain degree of divergence because property purchases are usually leveraged with debt financing, and thus, the investment amount is greater than the associated equity amount. Alternatively, part of equity can be used for non-investment purposes such as debt repayment.

Figure 3 shows the scatter plot of the capital investment amount against the associated public equity offering amount. There is a strong positive relationship between these two variables, but the correlation is imperfect because of the abovementioned reasons. Observations can be above the 45-degree line due to leverage and below the line due to non-investment uses.

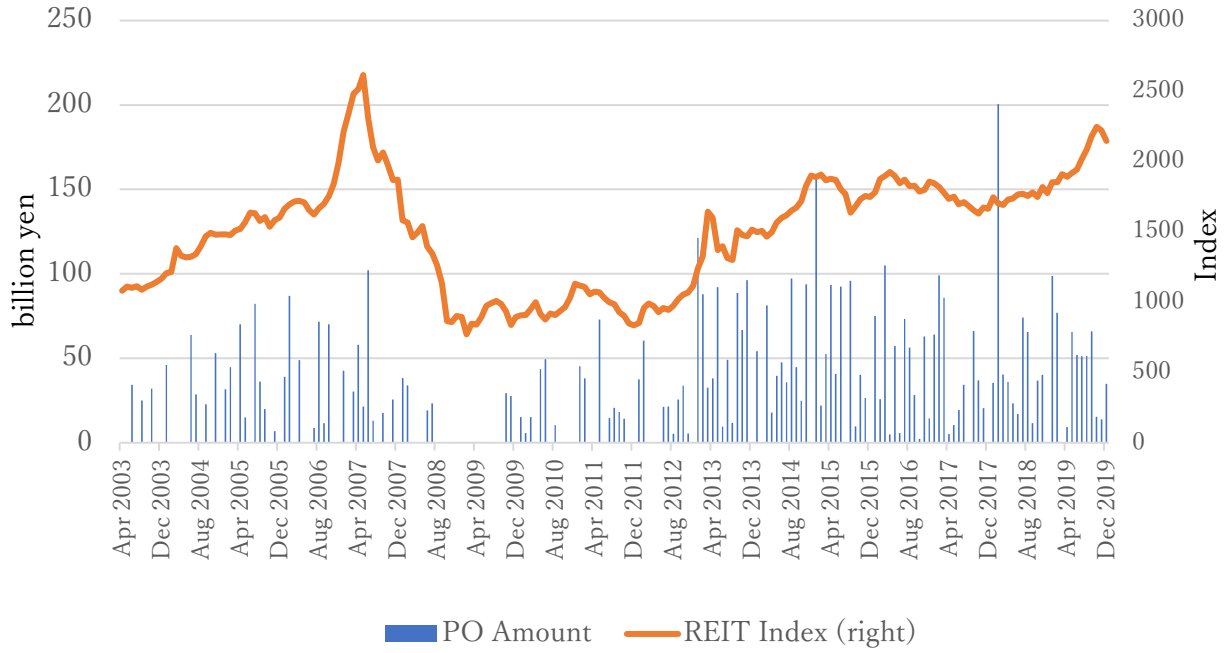
Figure 3 Capital Investment and the Associated Public Equity Offering



This figure shows the scatter plot of the capital investment amount against the associated public equity offering amount between November 2014 and December 2019. The solid line is a 45-degree line.

Figure 4 shows the amount of REIT SEOs and the REIT price index between April 2003 and December 2019. The REIT index, which is inversely related to the cost of capital, is positively correlated with SEO amounts. Because the funds from SEOs are mainly used for capital investment, this positive correlation between the REIT index and SEOs suggests that Tobin's Q—the ratio of the market value of capital to its replacement cost—explains business investment. In other words, REITs tend to issue equity to acquire real assets when the cost of equity capital becomes lower than the expected rate of return to real assets.

Figure 4 Seasoned Equity Public Offerings (PO) and REIT Index



This figure depicts the amount of REIT public equity offerings (blue bars) and the Tokyo Stock Exchange REIT Index (the orange line on the right axis) between April 2003 and December 2019.

Because the BOJ REIT purchase program mitigates an increase in the cost of equity capital, it would support equity-financed capital investment. However, a challenge in estimating this effect is that the BOJ purchases REIT shares exactly when share prices drop and equity-financed capital investment tends to be less active. Unlike our return analysis, we cannot use post-morning responses because REITs will not change the SEO schedule within a day. Thus, we use cross-sectional variations in the impact of the BOJ purchase.

4.2 The Effect on SEOs and Capital Investment

To test whether the BOJ REIT purchase affects REIT SEOs and capital investment, we focus on the allocation of the BOJ fund to each REIT i, as calculated by the product of weight w_{it} for REIT i and the BOJ purchase amount $purchase_t$. We first run the following panel regression

for REIT i during month t with two-way fixed effects:

$$y_{it} = \alpha_4 + \beta_4 w_{it} + \gamma_4 purchase_t + \delta_4 w_{it} \times purchase_t + \eta_i + \tau_y + \mu_m + \varepsilon_{it}, \qquad (4)$$

where the outcome variable y_{it} equals the amount of SEO_{it} for the equity issuance regression and the amount of capital investment $Invest_{it}$ for an investment regression.[5] We focus on coefficient δ_4 for the interaction term $w_{it} \times purchase_t$, which represents the increase in SEO or investment in response to the allocated amount of the BOJ's purchase.

Furthermore, we test whether the effect of BOJ allocation is larger if a REIT's relative volatility is reduced more significantly. As demonstrated in Section 3, the BOJ's purchase reduces the volatility of the targeted REITs. If a REIT chooses the optimal timing for equity financing and capital investment, reduced volatility associated with the BOJ's purchase will reduce the value of the option to wait and promote equity financing and capital investment.

$$\begin{aligned} y_{it} = {} & \alpha_5 + \beta_5 w_{it} + \gamma_5 purchase_t + \delta_5 w_{it} \times purchase_t \\ & + \theta_5 w_{it} \times purchase_t \times relartivevol_{it} + \zeta_5 indexvol_t + \xi_5 relartivevol_{it} + \eta_i \\ & + \tau_y + \mu_m + \varepsilon_{it}, \qquad (5) \end{aligned}$$

where $indexvol_t$ denotes the aggregate REIT index volatility for month t based on daily returns for 20 trading days until the end of each month. Idiosyncratic volatility $relartivevol_{it}$ denotes

[5] In the main specification, we do not include year-month fixed effects to estimate coefficient γ_5 for monthly aggregate $purchase_t$. The use of year-month fixed effects does not significantly alter the result.

the difference between REIT $i's$ individual volatility in month t and the REIT index volatility in the same month. If the estimated value of θ_5 for the triple interaction is negative, the effect of BOJ fund allocation $w_{it} \times purchase_t$ is more pronounced for a REIT whose idiosyncratic volatility is reduced more significantly. In this case, both the first and second moments of targeted REITs affect their investment and equity financing decisions. With this specification, coefficient δ_5 for $w_{it} \times purchase_t$ represents the estimated effect for the case of zero idiosyncratic volatility; that is, individual REIT volatility coincides with the aggregate REIT index volatility.

Table *5* shows the estimation results for SEOs. Based on Eq. (4), the estimated coefficient of interest δ_4 for BOJ purchase $\times w$ is positive and statistically significant at the 10% level, with or without fixed effects (columns (1) and (2)). These results show that a REIT with a larger allocation of the BOJ fund tends to issue a larger amount of equity. However, coefficient γ_4 for $purchase_t$ is not statistically significant but is slightly negative. This coefficient, which represents the effect for non-targeted REITs, reflects both the BOJ's countercyclical rule to purchase REIT shares in the downturn and the insufficient price pressure for non-targeted REITs to justify SEOs.

When volatility is included in Eq. (5) (columns (3) and (4)), the positive coefficient δ_5 becomes statistically significant at the 5% level. This coefficient corresponds to the effect of the BOJ fund allocation on SEOs for a REIT with zero idiosyncratic volatility; that is, when individual volatility is reduced to the same level as the aggregate REIT index volatility. Furthermore, coefficient θ_5 for the triple interaction, BOJ purchase$\times w \times$Idiosyncratic volatility, is negative at least at the 10% level. This coefficient suggests that the effect of a BOJ purchase on a REIT's SEO is larger when the purchase reduces this REIT's idiosyncratic volatility more significantly, even after controlling REIT fixed effects and the market-wide dynamics. Overall, these results indicate

that the BOJ purchase promotes SEO and capital investment by targeted REITs with positive allocation weights, as intended by the BOJ.

Table 5 Seasoned equity offerings and BOJ's fund allocation

Dependent Variable: Equity Offerings	(1)	(2)	(3)	(4)
BOJ purchase × w	2.166*	2.495*	4.697**	4.528**
	(1.272)	(1.286)	(1.848)	(1.812)
BOJ purchase × w × Idiosyncratic volatility			-740.0**	-611.7*
			(347.0)	(351.3)
BOJ purchase	-0.018	-0.0322	-0.035	-0.02
	(0.0294)	(0.0303)	(0.0335)	(0.0319)
w	-10.27	-42.45	-7.83	-32.87
	(9.346)	(36.31)	(8.495)	(34.33)
Aggregate volatility			23.36	-38.27
			(21.69)	(32.98)
Idiosyncratic volatility			308.6***	286.8***
			(65.85)	(70.03)
Fixed effects (firm)	No	Yes	No	Yes
Fixed effects (year, month)	No	Yes	No	Yes
Observations	2,480	2,480	2,480	2,480
R-squared	0.002	0.045	0.032	0.068

This table shows the results of the monthly panel regression for seasoned equity offerings based on the estimation Eq (4) (columns 1 and 2) and Eq (5) (columns 3 and 4). The BOJ purchase is the monthly purchase amount, *w* is the allocation weight for REIT i, aggregate and idiosyncratic volatilities are measured over 20 business days until the end of each month. The sample period is from November 2014 to December 2019. Standard errors, clustered by REIT tickers, are shown in parentheses.

Table *6* shows the estimation results for the investment equation. The results are consistent with those for SEOs. The estimated coefficient of interest δ_4 for BOJ purchase $\times w$ is positive and statistically significant at the 10% level when fixed effects are controlled for (column (2)). A REIT with a larger allocation of the BOJ fund tends to make a larger capital investment. Coefficient γ_4 for $purchase_t$ is statistically insignificant and negative, again, suggesting that the BOJ's price pressure is insufficient for non-targeted REITs to overturn the market-wide downturn and justify capital investment.

When volatility is included (columns (3) and (4)), the positive coefficient δ_5 becomes statistically significant at the 5% level. Thus, for the REIT whose individual volatility is reduced to the same level as the aggregate REIT index volatility, the BOJ's price pressure has a significantly larger effect on capital investment. Furthermore, coefficient θ_5 for the triple interaction, BOJ purchase $\times w \times$ Idiosyncratic volatility, is negative, suggesting that the investment reaction is generally larger when volatility is reduced more. Overall, these results indicate that the BOJ purchase promotes SEOs and capital investment for targeted REITs, as intended by the BOJ.

Table 6 Capital investment and BOJ's fund allocation

Dependent Variable: Investment	(1)	(2)	(3)	(4)
BOJ purchase ×w	2.957	3.369*	5.929**	5.658**
	(1.819)	(1.857)	(2.422)	(2.334)
BOJ purchase×w×Idiosyncratic volatility			-863.5*	-682.7
			(441.5)	(465.6)
BOJ purchase	-0.0419	-0.0455	-0.0677	-0.0339
	(0.0535)	(0.0530)	(0.0588)	(0.0545)
w	-15.41	-43.94	-12.48	-32.46
	(14.64)	(44.60)	(13.66)	(43.22)
Aggregate volatility			46.43	-23.67
			(31.51)	(51.03)
Idiosyncratic volatility			378.3***	356.7***
			(93.08)	(109.9)
Fixed effects (firm)	No	Yes	Yes	No
Fixed effects (year, month)	No	Yes	No	Yes
Observations	2,480	2,480	2,480	2,480
R-squared	0.001	0.048	0.023	0.065

This table shows the results of the monthly panel regression for capital investment based on the estimation Eq (4) (columns 1 and 2) and Eq (5) (columns 3 and 4). The BOJ purchase is the monthly purchase amount, w is the allocation weight for REIT i, aggregate and idiosyncratic volatilities are measured over 20 business days until the end of each month. The sample period is from November 2014 to December 2019. Standard errors, clustered by REIT tickers, are shown in parentheses.

4.3 The Effect on REIT performance

An important question is whether REIT SEOs are associated with better or worse firm performances in Japan. We use two REIT performance measures, a Price-to-Earnings Ratio (P/E Ratio) and Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA), from semi-annual earnings reports obtained through S&P Capital IQ and Bloomberg. We construct a semi-annual balanced panel of SEO amounts from 2014 to 2019 and regress these performance measures

on lagged SEO amounts normalized by total asset.

$$y_{it} = \alpha_6 + \sum_{k=1}^{K} \beta_6^k \, (SEO/Asset)_{i,(t-\mathrm{k})} + \eta_i + \varepsilon_{it}, \qquad (6)$$

where y_{it} denotes either EBITDA/Asset or P/E Ratio for REIT i in period t, $(SEO/Asset)_{it}$ denotes the SEO amount normalized by total asset, and $K = \{1,2,3\}$ denotes the number of lags.

Table 7 presents estimation results for EBITDA scaled by total assets. Point estimates are consistently positive and statistically significant in specifications without firm fixed effects. These positive coefficients likely reflect cross-sectional heterogeneity that more profitable REITs tend to issue equity more frequently. Consistent with this interpretation, when firm fixed effects are included to control for time-invariant REIT characteristics, coefficients diminish in magnitude and lose statistical significance. Critically, however, the coefficients are never significantly negative, suggesting that SEOs do not lead to operational deterioration.

Table 7 Seasoned Equity Offerings and EBITDA

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	EBITDA/Asset					
SEO/Asset						
(1-period lag)	0.0186***	0.0161**	0.0160**	0.00308	0.000779	0.00307
	(0.00657)	(0.00703)	(0.00759)	(0.00416)	(0.00307)	(0.00342)
(2-period lag)		0.0109**	0.0122**		-0.00357*	-2.18e-05
		(0.00487)	(0.00592)		(0.00176)	(0.00198)
(3-period lag)			0.0146**			0.00307
			(0.00563)			(0.00240)
Constant	0.0215***	0.0213***	0.0211***	0.0217***	0.0218***	0.0217***
	(0.000203)	(0.000223)	(0.000235)	(7.09e-05)	(4.97e-05)	(0.000110)
Fixed Effects (firm)	No	No	No	Yes	Yes	Yes
Observations	260	231	202	260	231	202
R-squared	0.053	0.056	0.110	0.887	0.891	0.904

This table reports semi-annual panel regression estimates of Equation (6) with EBITDA scaled by total assets as the dependent variable. SEO denotes the amount of seasoned equity offerings. Standard errors clustered by REIT are shown in parentheses.

Table 8 corroborates this finding using the price-to-earnings (P/E) ratio as an alternative valuation measure. Estimated coefficients for SEOs are positive and statistically significant when all three lags are included (Column 3), but become statistically indistinguishable from zero once firm fixed effects absorb time-invariant heterogeneity. We find no evidence of value destruction following SEOs. This null result stands in contrast to concerns about SEO-related underperformance in the U.S. REIT literature (Ghosh et al., 2000).

Table 8 Seasoned Equity Offerings and P/E Ratio

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
			PER			
SEO/Asset						
(1-period lag)	6.687	7.737	8.361*	-2.030	-1.034	-0.916
	(4.025)	(5.270)	(4.111)	(1.506)	(1.981)	(2.504)
(2-period lag)		6.855	6.836		-2.553	-2.046
		(4.501)	(5.593)		(1.719)	(2.203)
(3-period lag)			6.905*			-0.723
			(3.724)			(2.053)
Constant	5.535***	5.449***	5.381***	5.681***	5.739***	5.774***
	(0.159)	(0.162)	(0.177)	(0.0252)	(0.0503)	(0.0773)
Fixed Effects (firm)	No	No	No	Yes	Yes	Yes
Observations	259	230	201	259	230	201
R-squared	0.042	0.095	0.158	0.645	0.668	0.670

This table reports semi-annual panel regression estimates of Equation (6) with the price-to-earnings ratio as the dependent variable. SEO/Asset denotes seasoned equity offerings scaled by total assets. Standard errors clustered by REIT are shown in parentheses.

These null results carry substantial economic significance. They indicate that when Japanese REIT SEOs are driven by reductions in the cost of equity capital, they do not generate the efficiency costs documented in other price pressure contexts (e.g., Dittmar et al., 2020). This absence of value destruction reflects the unique institutional features of Japanese REITs, including minimal information asymmetries due to transparent asset holdings, limited tax distortions from pass-through status, and regulatory constraints that reduce agency conflicts. These characteristics enable REITs to respond efficiently to cost-of-capital shocks, making them suited as targets for the BOJ's counter-cyclical interventions aimed at smoothing capital costs and stabilizing investment cycles.

5. Conclusion

This study demonstrates that real estate investment trusts (REITs), operating with minimal tax distortions and information asymmetries, actively issue equity to finance productive capital investment in response to positive stock demand shocks. We exploit a unique setting in which the Bank of Japan generates identifiable counter-cyclical demand shocks through direct REIT share purchases on the Tokyo Stock Exchange. Our findings establish three key results. First, BOJ purchases create measurable price pressure, mitigating negative returns and reducing volatility for targeted REITs. Second, greater BOJ allocations are associated with increased seasoned equity offerings and capital investment, particularly when idiosyncratic volatility declines. Third, these SEOs do not result in value destruction or operating underperformance.

These results have important implications. They suggest that when firms operate with transparent information environments and minimal agency conflicts, equity demand shocks translate efficiently into productive investment without value destruction. For monetary policy, our findings indicate that central bank equity market interventions can affect real economic activity by reducing the cost of equity capital, lowering return volatility, and smoothing investment cycles. The absence of efficiency costs suggests that targeted interventions in transparent sectors can stabilize investment without generating misallocation concerns. This study demonstrates that when capital market frictions are minimized, equity demand shocks can efficiently translate into productive investment, supporting the neoclassical prediction that investment responds to cost-of-capital signals when imperfections are reduced.

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Appendix A: Example Announcements of REIT Equity Finance and Asset Acquisitions

Nippon Building Fund Inc., Notice Concerning Issue of New Investment Units and Secondary Offering of Investment Units, October 9, 2020. Available at https://www.nbf-m.com/nbf_e/ir/index.html?cate=1&year=2020.

October 9, 2020

To All Concerned Parties

Name of REIT Issuer:
Nippon Building Fund Inc.
Koichi Nishiyama, Executive Director
(TSE Code: 8951)
Contact:
Asset Management Company
Nippon Building Fund Management Ltd.
Yoshiyuki Tanabe, President and CEO
Person to Contact:
Yasushi Yamashita, General Manager
(TEL. +81-3-3516-3370)

Notice Concerning Issue of New Investment Units and Secondary Offering of Investment Units

Nippon Building Fund Inc. ("NBF") provides notice of its decision at the board of directors meeting held on October 9, 2020 to issue new investment units ("Units") and conduct a secondary offering of Units, as outlined below:

Description

1. Issue of New Units through a Public Offering

(1) Total number of new Units to be offered: 229,000 units

(2) Paid-in amount (issue amount): To be determined
(The issue amount for the new Units will be determined by a resolution of the Board of Directors at a meeting to be held on any day from October 20, 2020 (Tuesday) through October 22, 2020 (Thursday) (inclusive) (the "Pricing Date") in accordance with the methods provided for in Article 25 of the Regulations Concerning Underwriting of Securities set forth by the Japan Securities Dealers Association.)

(3) Total paid-in amount (aggregate issue amount): To be determined

(4) Offering method: Offerings to be made simultaneously within Japan and abroad
(i) Domestic Primary Offering
The offering in Japan (the "Domestic Primary Offering") will be a primary offering in which all Units subject to the Domestic Primary Offering will be underwritten and purchased by domestic underwriters (the "Domestic Underwriters"). Certain of the underwriters will serve as joint lead managers ("Joint Lead Managers").
(ii) International Offering
The international offering (the "International Offering") will be an offering in international markets, mainly in the U.S., Europe and Asia. However, within the U.S., the Units will be sold only to qualified institutional buyers in reliance on Rule 144A under the U.S. Securities Act of 1933, as amended. All Units subject to the International Offering will be underwritten severally and not jointly in the total amount by international managers (the "International Managers", and collectively with the Domestic Underwriters, the "Underwriters").
Although NBF plans to offer 171,000 units in the Domestic Primary Offering and 58,000 units in the International Offering, the actual number of Units to be offered as described in (i) and (ii) above will be determined on the Pricing Date by taking into consideration, among others factors, market demand of the units.
The joint global coordinators of the Domestic Primary Offering and International Offering, as well as the secondary offering through over-allotment stated in 2. below, are hereinafter referred to as the "Joint Global Coordinators".
The issue price for the Domestic Primary Offering and the International Offering (the "offer price") will be determined on the "Pricing Date", taking into consideration, among other factors, market demand of the units and will be determined in accordance with the methods provided for in Article 25 of the Regulations Concerning Underwriting of Securities set forth by the Japan Securities Dealers Association, based on the closing price for ordinary transactions of Units of NBF on the Tokyo Stock Exchange on the Pricing Date (or if no closing price is available on that date, then the closing price on the most recent date prior to the Pricing Date) multiplied by a factor of 0.90 to 1.00 (amounts less than ¥1 shall be rounded down) as provisional pricing.

(5) Underwriters' fees: An underwriting fee will not be paid. Instead, underwriting fees applicable to the issue will be the difference between the total issue price (aggregate offer price) for the Domestic Primary Offering and International Offering and the total paid-in amount (aggregate issue amount) to be paid by the Underwriters to NBF.

(6) Application unit: At least one Unit or in multiples of one Unit.

(7) Application period: (Domestic Primary Offering) From the business day immediately following the Pricing Date to the second business day following the Pricing Date.

(8) Payment date: A day between October 26, 2020 (Monday) and October 28, 2020 (Wednesday) (inclusive), which shall be the fourth business day following the Pricing Date.

(9) Delivery and Settlement date: The business day immediately following the payment date described in (8) above.

(10) The paid-in amount (issue amount) and other matters necessary for this issue of new Units will be determined at a board of directors meeting to be held hereafter.

(11) The Domestic Primary Offering among the aforementioned items will be subject to the effectiveness of the securities registration statement in accordance with the Financial Instruments and Exchange Act.

(12) In the event the International Offering is suspended, the Domestic Primary Offering shall also be suspended. In the event the Domestic Primary Offering is suspended, the International Offering shall also be suspended.

2. Secondary Offering (through Over-Allotment) (Please refer to <Reference> 1. below.)

(1) Seller and number of Units to be offered: One of the Joint Lead Managers: 11,500 units
The number of Units to be offered represents an upper limit which may be reduced, or the secondary offering through over-allotment itself may be suspended, depending on demand conditions of the Domestic Primary Offering. The number of Units to be offered will be determined at the board of directors meeting held on the Pricing Date by taking into consideration the demand of the units in the Domestic Primary Offering.

(2) Offer price: To be determined on the Pricing Date. Such offer price will be the same price as the issue price (offer price) for the Domestic Primary Offering.

(3) Total amount of offer price: To be determined

(4) Offering method: In conducting the Domestic Primary Offering, and after considering, among other factors, demand conditions of the units, one of the Joint Lead Managers of the Domestic Primary Offering, will undertake the sale of Units in Japan borrowed from a certain NBF unitholder with 11,500 units as the upper limit.

(5) Application unit: At least one Unit or in multiples of one Unit.

(6) Application period: Identical to the application period for the Domestic Primary Offering.

(7) Delivery and Settlement date: Identical to the delivery and settlement date for the Domestic Primary Offering.

(8) The offer price and other matters necessary for this offering of Units will be determined at a board of directors meeting to be held hereafter.

(9) The aforementioned items shall be subject to the effectiveness of the securities registration statement in accordance with the Financial Instruments and Exchange Act.

(10) In the event the Domestic Primary Offering is suspended, the secondary offering through over-allotment shall also be suspended.

3. Issue of New Units by Third Party Allocation (Please refer to <Reference> 1. below.)

(1) Total number of new Units to be offered: 11,500 units

(2) Paid-in amount (issue amount): To be determined at a board of directors meeting to be held on the Pricing Date. Such paid-in amount (issue amount) will be equivalent to the paid-in amount (issue amount) for the Domestic Primary Offering.

(3) Total paid-in amount (aggregate issue amount): To be determined

(4) Allottee and number of Units: One of the Joint Lead Managers: 11,500 units

(5) Application unit: At least one Unit or in multiples of one Unit

(6) Application period (Application date): Any day during the period from November 5, 2020 (Thursday) through November 9, 2020 (Monday) (inclusive).
Such date shall be the seventh business day immediately following the payment date of the Domestic Primary Offering.

(7) Payment date: A day during the period from November 6, 2020 (Friday) through November 10, 2020 (Tuesday) (inclusive).
Such date shall be the eighth business day immediately following the payment date of the Domestic Primary Offering.

(8) Issue of any Units not applied for on or before the last date of the application period (the application date) set forth in (6) above will be cancelled.

(9) The paid-in amount (issue amount) and other matters necessary for this issue of new Units will be determined at the board of directors meeting to be held hereafter.

(10) The aforementioned items shall be subject to the effectiveness of the securities registration statement in accordance with the Financial Instruments and Exchange Act.

(11) In the event the Domestic Primary Offering is suspended, the issuance of new units by third party allocation shall also be suspended.

Nippon Building Fund Inc., Notice of Acquisition and Commencement of Lease of Domestic Assets (Acquisition of Shinjuku Mitsui Building and Gran Tokyo South Tower), October 9, 2020

October 9, 2020

To All Concerned Parties

Name of REIT Issuer:
Nippon Building Fund Inc.
Koichi Nishiyama, Executive Director
(TSE Code: 8951)
Contact:
Asset Management Company
Nippon Building Fund Management Ltd.
Yoshiyuki Tanabe, President and CEO
Person to Contact:
Yasushi Yamashita, General Manager
(TEL. +81-3-3516-3370)

Notice of Acquisition and Commencement of Lease of Domestic Assets (Acquisition of Shinjuku Mitsui Building and Gran Tokyo South Tower)

Nippon Building Fund Inc. ("NBF") and Nippon Building Fund Management Ltd. ("NBFM"), to which NBF entrusts asset management services, hereby provide notice of the decision on October 9, 2020 to acquire and lease certain assets as follows:

Furthermore, the seller of Shinjuku Mitsui Building is Mitsui Fudosan Co., Ltd., the major shareholder of NBFM ("Mitsui Fudosan"). Mitsui Fudosan is an interested party under Article 201 of the Investment Trust Act ("ITA") as well as Article 123 of the Enforcement Order of the ITA. As such, NBFM has obtained necessary prior approval by the board of directors of NBF in connection with the acquisition of Shinjuku Mitsui Building subject to Article 201-2 of the ITA.

Description

1. Outline of the Acquisition

Names of Assets	(1) Shinjuku Mitsui Building (2) Gran Tokyo South Tower
Acquisition Price	(1) ¥ 170,000,000,000 (2) ¥ 47,000,000,000 ¥ 217,000,000,000 in total (Miscellaneous acquisition costs, adjusted amount of fixed assets tax and city-planning tax as well as consumption tax are excluded.)
Seller	Mitsui Fudosan Co., Ltd.
Date of Contract	October 9, 2020
Date of Acquisition	January 8, 2021 (scheduled)
Acquisition Funding	Proceeds of issuing new investment units (*1), loans, own funds (tentative)
Payment Method	One time, lump-sum payment at the time of acquisition

Intermediary	None

*1 Please refer to the "Notice Concerning Issue of New Investment Units and Secondary Offering of Investment Units", which has also been released today.

2. Reason for Acquisition and Lease, and Outline of Assets to be Acquired

<Shinjuku Mitsui Building>

1. Reason for Acquisition and Lease

The acquisition and leasing are being undertaken with the intention of enhancing NBF's portfolio of properties in the 23 wards of Tokyo in accordance with the asset management objectives and policies set forth in NBF's Articles of Incorporation. In pursuing the acquisition set forth herein, NBF deemed the following points especially attractive:

① Location

The property offers high transport convenience, located within a six-minute walk from the west exit of Shinjuku Station on the JR lines, Odakyu line and Keio line, a two-minute walk from Nishi-shinjuku Station on the Tokyo Metro Marunouchi line, and a one-minute walk from Tochomae Station on the Toei Subway Oedo line. The property is considered a landmark office building located in Nishi-shinjuku. The Nishi-shinjuku area is one of the major office areas in Tokyo and includes high-rise buildings and is expected to be further developed as an office area due to the increase of new office building supply given the recent redevelopment in the neighboring area.

② Building and Facilities

The property was completed in 1974 (building age of 46 years), but it maintains competitiveness through various measures taken since 2000. For example, interiors such as the entrance lobby, elevator halls, and hallways in common areas have been renovated, and basic specification of the property such as air conditioners and electrical capacity has been enhanced. Furthermore, NBF invested in business contingency plans such as the introduction of a 72-hour emergency generator and large-scale vibration control device following the Great East Japan earthquake. The property has specifications such as a rentable standard floor area of approximately 254 *tsubo* (840m^2) of pillar-free space consisting of two zones allowing for flexible office layouts, a ceiling height of 2,560mm (with a raised floor of 80mm), an air conditioning system which allows adjustment of temperatures in four blocks split into 20 zones per floor, OA breaker capacity of 50VA/m^2, and two-line high voltage power supply.

2. Outline of the Asset

Name of Asset	Shinjuku Mitsui Building
Type of Specified Asset	Real Property
Type of Ownership	Land: Ownership interest Building: Ownership interest
Location	(Description in Real Property Registry) Land: 1 Nishishinjuku 2-chome, Shinjuku-ku, Tokyo Building: 1 Nishishinjuku 2-chome, Shinjuku-ku, Tokyo (Street Address) 1-1 Nishishinjuku 2-chome, Shinjuku-ku, Tokyo

Use (Description in Real Property Registry)	Offices
Area (Description in Real Property Registry)	Land: site area:14,449.38 m^2 Building: total floor space: 179,696.87 m^2
Structure (Description in Real Property Registry)	Steel framed reinforced concrete structure, flat roof, 56 floors above ground and 3 floors below ground
Completion of Construction (Description in Real Property Registry)	September 30, 1974
Matters Related to Earthquake Resistance	Earthquake Probable Maximum Loss ("PML") 1.3% (according to the earthquake risk evaluation report prepared by Engineering & Risk Services Corporation)
Existence of Secured Interests (liens)	None.
Appraisal Value (Date of Valuation)	¥173,000,000,000 (August 31, 2020)
Appraiser	Daiwa Real Estate Appraisal Co., Ltd.
Description of Tenants	Mitsui Fudosan will be the sole tenant as NBF intends to lease the entire Property to Mitsui Fudosan. Mitsui Fudosan will sub-lease the same spaces to its sub-lessees. In addition, the subtenants meet the selection criteria described in NBF's Annual Securities Report dated on September 29, 2020, which is referred to in the "Report regarding the operation system of the Real Estate Investment Trust Issuer" dated September 29, 2020. The situation of the tenant as of July 31, 2020 is as follows.
Total number of End Tenants	93 companies (67 general business companies, 25 stores, one other company)
Total rental revenues	Approximately 10,233 million yen / year (*2)
Lease deposit	Approximately 11,996 million yen (*2)
Total rentable area	101,255.03 m^2
Total rented area	99,013.96 m^2
Occupancy Rate	97.8%
Other Special Matters	・The property uses spraying materials containing asbestos that should be checked and recorded. The spraying materials, however, are in a stable state and do not currently pose a health hazard. NBF will remove or control them depending on the situation.

*2 Total rental revenues and lease deposit were calculated based on the rent roll (as of July 31, 2020) received from the seller, and differ from the amount NBF receives from Mitsui Fudosan after delivery of the property.

<Gran Tokyo South Tower>

1. Reason for Acquisition and Lease

The acquisition and leasing are being undertaken with the intention of enhancing NBF's portfolio of properties in the 23 wards of Tokyo in accordance with the asset management objectives and policies set forth in NBF's Articles of Incorporation. In pursuing the acquisition set forth herein, NBF deemed the following points especially attractive:

① Location

The property is directly connected to JR Tokyo Station, and thus easily accessible on foot from multiple Tokyo Metro Toei Subway lines and enjoys excellent transportation accessibility. The property is located in Marunouchi, where multiple redevelopment projects are scheduled, including the ongoing Yaesu 2-chome Central District Category-I Urban District Redevelopment project near the property. Therefore, it can be evaluated that the location is in one of the best business area in Japan and the property is expected to capture stable office demand for a long time

② Building and Facilities

The property's specifications also make it highly competitive in terms of leasing due to being a relatively new building (age of 13 years) and having a rentable standard floor area of approximately 626 *tsubo* (2,069m^2), a ceiling height of 2,950mm (with a raised floor of 150mm), and electrical capacity of 60VA. The property is also has BCP functions such as vibration control device using oil dampers, an emergency power supply system, an emergency power receiving system and a stock of emergency supplies.

2. Outline of the Asset

Name of Assets	Gran Tokyo South Tower
Type of Specified Asset	Real Property
Type of Ownership	Land: Co-Ownership interest : approximately 51.17% of Ownership(1,800.85m^2), quasi-co-ownership: approximately 5.22% of leasehold right (20,778.92m^2) Building: Compartmentalized co-ownership interest (from fifth to ninth floor 10,853.40 m^2) (compartmentalized interest: approximately 13.33%)
Location	(Description in Real Property Registry) Land: Ownership: 26-3, 26-4, and 26-11, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 13-1, 13-2, 13-3, and 19 other parcels of land, Yaesu 2-chome, Chuo-ku, Tokyo Leasehold: the six plots above and other nineteen plots Building: 26-3, 26-4, and 26-11, Marunouchi 1-chome, Chiyoda-ku, Tokyo,13-1, 13-2, 13-3, and eight other parcels of land, Yaesu 2-chome, Chuo-ku, Tokyo (Street Address) 9-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo
Use (Description in listed in Real Property Registry)	Offices and storage

Area (Description in Real Property Registry)	Land: site area:20,778.92 m^2 (entire site of Gran Tokyo Complex) Building: total floor space: 137,662.87 m^2 (entire building of Gran Tokyo South Tower)
Structure (Description in Real Property Registry)	Steel frame and steel framed reinforced concrete structure, flat roof, 42 floors above ground and 4 floors below ground
Completion of Construction (Description in Real Property Registry)	October 10, 2007
Matters Related to Earthquake Resistance	Earthquake PML 1.0% (according to the earthquake risk evaluation report prepared by Engineering & Risk Services Corporation)
Existence of Secured Interests (liens)	None.
Appraisal Value (Date of Valuation)	¥48,500,000,000 (August 31, 2020)
Appraiser	Daiwa Real Estate Appraisal Co., Ltd.
Description of Tenants	The subtenants meet the subtenant selection criteria described in NBF's Annual Securities Report dated on September 29, 2020, which is referred to in the "Report regarding the operation system of the Real Estate Investment Trust Issuer" dated September 29, 2020. The tenancy situation of the Property as of July 31, 2020 is as follows.
Total number of Tenants	4 companies (4 general business companies)
Total rental revenues	Approximately 1,785 million yen/ year (*3)
Lease deposit	Approximately 1,382 million yen (*3)
Total rentable area	10,955.29 m^2
Total rented area	10,955.29 m^2
Occupancy Rate	100%
Other Special Matters	・The property has been developed integrally with the adjacent Gran Tokyo North Tower, and the sites of the property and Gran Tokyo North Tower are certified as one estate under Building Standards Act as a complex ("Gran Tokyo Complex"). Certain regulations will be applied by regarding the complex as the site of this property (e.g., floor area ratio and building coverage) under Building Standards Act. ・As the leasehold of the Gran Tokyo Complex is jointly held by each unit owner and land owner, they are allowed to use the entire grounds in free. ・An agreement regarding the Gran Tokyo Complex was entered into among the unit owners of this property and Gran Tokyo North Tower. Other unit owners have a preferential negotiation rights in case of a transfer of compartmentalized ownership under such agreement. The property is held by unit owners and such owners who also own land are subject to management

	rules and agreements concerning each compartmentalized ownership as applicable. The management rules stipulate prohibition of separation and disposition of individual ownership space and land, while the agreements specify other unit owners' preferential negotiation rights when transferring compartmentalized ownership.

*3 Total rental revenues and lease deposit were calculated based on the rent roll (as of July 31, 2020) received from the seller and differ from the amount NBF receives after the delivery of the property.

3. Outline of Seller

①	Name	Mitsui Fudosan Co., Ltd.
②	Location	1-1, Nihonbashi Muromachi 2-chome, Chuo-ku, Tokyo
③	Name and Title of Representative	President and Chief Executive Officer Masanobu Komoda
④	Description of Business	Real estate
⑤	Capital	339,897 million yen (as of July 22, 2020)
⑥	Date of Establishment	July 15, 1941
⑦	Net Assets	2,498,239 million yen (as of June 30, 2020)
⑧	Total Assets	7,653,809 million yen (as of June 30, 2020)
⑨	Major Investor and Investment Ratio	The Master Trust Bank of Japan, Ltd. (trust account) 10.29%(as of March 31, 2020)
⑩	Relationship between NBF/Asset Manager and Mitsui Fudosan	
	Capital Relationship	Shareholder of NBFM (investment ratio: 46%, as of the date of this press release). Holds 47,630 investment units of NBF.
	Personnel	Assignor company of Asset Manager employees.
	Business Relationship	NBF's consignee concerning office management business, new tenant arranger, real estate broker, tenant of NBF's properties, etc..
	Related parties	Not a related party to NBF. Parent company of Asset Manager and a related party.

4. Status of Owners of the Properties

Name of Assets	Status of Owners of the Properties		
		Previous owner (seller)	Earlier previous owner
Shinjuku Mitsui Building	Corporate Name	Mitsui Fudosan Co., Ltd.	N/A
	Relationship with a specially interested party	Interested party of the Asset Manager	N/A
	History/Reason for acquisition	Newly constructed	N/A
	Acquisition Price	—	N/A
	Date of Acquisition	September 30, 1974	N/A
Gran Tokyo South Tower	Corporate Name	Mitsui Fudosan Co., Ltd.	Other than special interested party
	Relationship with a specially interested party	Interested party of the Asset Manager	—
	History/Reason for acquisition	Acquired for investment purposes	—
	Acquisition Price	Omitted, as the previous owner held the asset for over 1 year	—
	Date of Acquisition	February 22, 2013	—

5. Overview of Forward Commitments

The forward commitments (settlement/handover occurring one month after the execution of the contract) apply to the acquisitions of the above assets, and in case the sales contract is terminated due to a violation of contractual commitments by NBF, NBF shall be required to pay 10% of the sales price to the seller as a penalty. However, even if NBF has difficulties in raising the fund for the payment of the sales price, NBF will not have an obligation to pay such penalty due to the difficulty of such payment of the sales price because NBF will bear such obligation on the condition that the fund procurement of NBF is certain.

6. Forecasts of Operating Results for the Periods ending December 31, 2020 and June 30, 2021

For information on the impact of the current acquisition upon NBF's results of operations for the periods ending December 31, 2020 and June 30, 2021, please refer to the Company's press release dated as of the date hereof and titled "Notice Concerning Revision of Forecasts of Operating Results and Distributions Per Unit for the Periods ending December 31, 2020 and June 30, 2021".

7. Summary of Appraisal Reports

<Shinjuku Mitsui Building>

Property Name	Shinjuku Mitsui Building
Appraisal Value	¥173,000,000 thousand
Appraiser	Daiwa Real Estate Appraisal Co., Ltd.
Date of Valuation	August 31, 2020

Item				Breakdown (in thousands of yen)	Remarks
Appraisal value based on income method				173,000,000	Estimated by combining the appraisal values under the DCF method and the direct capitalization method
	Appraisal value based on direct capitalization method			174,000,000	
		(1) Operating Revenue ((i)- (ii))		11,097,187	
			(i) Effective gross income	11,448,068	Estimated based on income consisting of rents, common area charges, utility charges, parking rents, etc. which are deemed stable on a mid-and-long-term basis
			(ii) Losses from vacancy , etc.	350,881	Estimated based on vacancy rates which is deemed stable on a mid-and-long-term basis
		(2) Operating Expenses		3,942,477	
			Building Maintenance Costs/ Property Management Fees	1,456,166	Estimated based on past results verified applying the level of maintenance costs/property management fees for similar real properties
			Utilities Expenses	906,036	Estimated based on past results verified applying the level of utilities expenses for similar real properties
			Repair Expenses	42,517	Estimated based on the Engineering Report as well as the level of leasing expenses for similar real properties
			Leasing Expenses, etc.	87,130	Estimated based on the assumed turnover rate and the level of leasing expenses for similar real properties
			Taxes & Public Duties	1,439,148	Estimated based on actual taxes in fiscal 2020 etc.
			Insurance Premiums	11,481	Estimated based on insurance rates etc. for similar properties
			Other Expenses	0	-
		(3) Net Operating Income ((1)-(2))		7,154,710	
		(4) Investment Income from Temporary Deposits		103,877	Estimated applying investment return of 1.0%
		(5) Capital Expenditure		1,530,942	Estimated based on the Engineering Report as well as the level of renewal expenses for similar real properties
		(6) Net Income ((3)+(4)-(5))		5,727,645	
		(7) Capitalization Rate		3.3%	Estimated taking into consideration examples of transactions for similar real properties , as well as conditions e.g. location, building condition, rights, contractual terms etc. of the Property
	Appraisal value based on DCF method			172,000,000	
		Discount Rate		3.1%	Estimated based on comparison with examples of transactions for similar real properties as well as returns on financial assets adjusted by individual characteristics of the Property
		Terminal Capitalization Rate		3.4%	Estimated taking into consideration the characteristics of net income adopted in determining the capitalization rate as well as future uncertainty, liquidity and marketability
Integrated value based on cost method				206,000,000	
	Proportion of land			98.5%	
	Proportion of building			1.5%	

*Amounts less than one thousand yen are rounded to the nearest thousand.

Matters specifically considered in adjustment of estimated amounts and determination of appraisal value	None.

(Note) The maintenance fees and PM fees for the property are combined, as the disclosure of each fee on a separate basis may impact the businesses of the anticipated providers of building management and PM operations, as well as impair efficient outsourcing by NBF and harm the interests of unitholders.

<Gran Tokyo South Tower>

Property Name	Gran Tokyo South Tower
Appraisal Value	¥48,500,000 thousand
Appraiser	Daiwa Real Estate Appraisal Co., Ltd.
Date of Valuation	August 31, 2020

Item			Breakdown (in thousands of yen)	Remarks
Appraisal value based on income method			48,500,000	Estimated by combining the appraisal values under the DCF method and the direct capitalization method
	Appraisal value based on direct capitalization method		49,200,000	
		(1) Operating Revenue ((i)- (ii))	1,808,572	
		(i) Effective gross income	1,864,425	Estimated based on income consisting of rents, common area charges, utility charges, parking rents, etc. which are deemed stable on a mid-and-long-term basis
		(ii) Losses from vacancy , etc.	56,853	Estimated based on vacancy rates which is deemed stable on a mid-and-long-term basis
		(2) Operating Expenses	413,685	
		Building Maintenance Costs/ Property Management Fees	159,704	Estimated based on past results verified applying the level of maintenance costs/property management fees for similar real properties
		Utilities Expenses	47,722	Estimated based on past results verified applying the level of utilities expenses for similar real properties
		Repair Expenses	11,616	Estimated based on the Engineering Report as well as the level of leasing expenses for similar real properties
		Leasing Expenses, etc.	14,792	Estimated based on the assumed turnover rate and the level of leasing expenses for similar real properties
		Taxes & Public Duties	178,641	Estimated based on actual taxes in fiscal 2020 etc.
		Insurance Premiums	1,124	Estimated based on insurance rates etc. for similar properties
		Other Expenses	3,087	Includes common area rents
		(3) Net Operating Income ((1)-(2))	1,394,887	
		(4) Investment Income from Temporary Deposits	14,577	Estimated applying investment return of 1.0%
		(5) Capital Expenditure	32,496	Estimated based on the Engineering Report as well as the level of renewal expenses for similar real properties
		(6) Net Income ((3)+(4) (5))	1,376,967	
		(7) Capitalization Rate	2.8%	Estimated taking into consideration examples of transactions for similar real properties , as well as conditions e.g. location, building condition, rights, contractual terms etc. of the Property
	Appraisal value based on DCF method		48,200,000	
		Discount Rate	2.5%	Estimated based on comparison with examples of transactions for similar real properties as well as returns on financial assets adjusted by individual characteristics of the Property
		Terminal Capitalization Rate	2.9%	Estimated taking into consideration the characteristics of net income adopted in determining the capitalization rate as well as future uncertainty, liquidity and marketability
Integrated value based on cost method			41,500,000	
	Proportion of land		91.9%	
	Proportion of building		8.1%	

*Amounts less than one thousand yen are rounded to the nearest thousand.

Matters specifically considered in adjustment of estimated amounts and determination of appraisal value	None.

(Note) The maintenance fees and PM fees for the property are combined, as the disclosure of each fee on a separate basis may impact the businesses of the anticipated providers of building management and PM operations, as well as impair efficient outsourcing by NBF and harm the interests of unitholders.

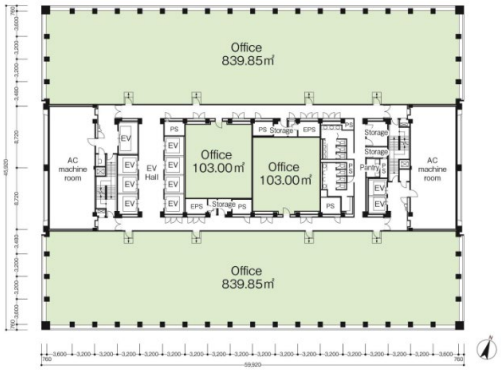
【Reference Material 1】 Map, Exterior Appearance, Standard Floor Plan, etc. of the Assets to be Acquired

1. Shinjuku Mitsui Building

Map

External Appearance

Standard Floor Plan



Gran Tokyo South Tower

Map

External Appearance

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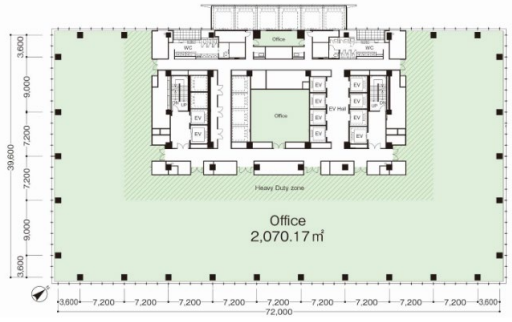
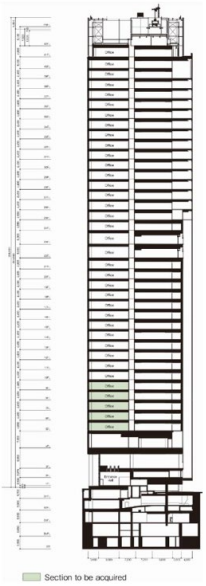
Standard Floor Plan



Cross Section



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【Reference Material 2】 Summary of Portfolio after Acquisition of the Assets to be Acquired

Area	Property Name	Acquisition Price (¥ in thousands) (Note 1)	Percentage	Percentage of each area	Value (Real Estate Appraisal Value) (¥ in thousands) (Note 2)
Central 5 Wards	Shinjuku Mitsui Bldg.(Note 3)	170,000,000	12.3%	57.4%	173,000,000
	Roppongi T-CUBE	62,800,000	4.5%		63,800,000
	Gran Tokyo South Tower (Note 3)	47,000,000	3.4%		48,500,000
	Nishi-Shinjuku Mitsui Bldg.	45,271,040	3.3%		45,400,000
	Celestine Shiba Mitsui Bldg.	42,000,000	3.0%		51,700,000
	NBF Shinagawa Tower	36,300,000	2.6%		49,400,000
	Shiba NBF Tower	32,000,000	2.3%		29,800,000
	NBF Platinum Tower	31,000,000	2.2%		63,700,000
	NBF Minami-Aoyama Bldg.	31,000,000	2.2%		20,300,000
	NBF COMODO Shiodome	28,800,000	2.1%		36,100,000
	G-BASE TAMACHI	28,200,000	2.0%		28,300,000
	Toranomon Kotohira Tower	24,543,000	1.8%		35,800,000
	NBF Ochanomizu Bldg.	20,840,000	1.5%		14,300,000
	NBF Shibuya Garden Front	20,269,000	1.5%		34,000,000
	NBF Ginza Street Bldg.	17,000,000	1.2%		17,500,000
	Shinjuku Mitsui Bldg. No.2	16,285,400	1.2%		20,200,000
	Kowa Nishi-Shinbashi Bldg. B	13,473,200	1.0%		15,200,000
	River City M-SQUARE	13,350,000	1.0%		14,000,000
	NBF Toranomon Bldg.	13,337,000	1.0%		17,900,000
	Shinbashi M-SQUARE	11,900,000	0.9%		15,300,000
	NBF ALLIANCE	9,126,000	0.7%		12,300,000
	Yotsuya Medical Bldg.	8,800,000	0.6%		7,970,000
	NBF Shibuya East	8,000,000	0.6%		8,240,000
	NBF Shibakouen Bldg.	6,770,000	0.5%		8,490,000
	NBF Takanawa Bldg.	6,667,200	0.5%		7,510,000
	NBF Akasaka Sanno Square	6,250,000	0.5%		7,380,000
	NBF Kandasudacho Bldg.	5,950,000	0.4%		8,730,000
	Sumitomo Densetsu Bldg.	5,385,000	0.4%		6,070,000
	NBF Higashi-Ginza Square	5,200,000	0.4%		8,340,000
	Panasonic Tokyo Shiodome Bldg.	5,075,000	0.4%		5,990,000
	NBF Ogawamachi Bldg.	4,940,000	0.4%		6,320,000
	Nihonbashi Kabuto-cho M-SQUARE	4,850,000	0.4%		5,420,000
	NBF Shinkawa Bldg.(Note 4)	4,424,281	0.3%		5,690,000
	Ryukakusan Bldg.	4,050,000	0.3%		5,010,000
	Jingumae M-SQUARE	3,700,000	0.3%		4,840,000
23 Wards of Tokyo	NBF Osaki Bldg.	66,860,000	4.8%	82.9%	86,800,000
	Gate City Ohsaki	57,281,060	4.1%		70,800,000
	Nakanosakaue Sunbright Twin	41,230,488	3.0%		31,400,000
	NBF Toyosu Canal Front	35,200,000	2.5%		38,800,000
	NBF Toyosu Garden Front	25,918,000	1.8%		29,800,000
	Osaki Bright Core - Bright Plaza	24,380,000	1.8%		25,000,000
	Nakameguro GT Tower	23,856,000	1.7%		23,000,000
	Ueno East Tower	21,600,000	1.6%		22,600,000
	OSAKI BRIGHT TOWER(Note 5)	13,970,000	1.0%		14,200,000
	NBF Ueno Bldg.	10,400,000	0.8%		9,830,000
	NBF Ikebukuro East	8,630,000	0.6%		13,500,000
	Higashi Gotanda Square	8,350,000	0.6%		8,600,000
	Toyo-cho Center Bldg.	7,800,000	0.6%		8,790,000
	NBF Ikebukuro Tower	4,695,000	0.3%		5,740,000
	NBF Ikebukuro City Bldg.	4,428,000	0.3%		5,890,000
Other Greater Tokyo	Chofu South Gate Bldg.	9,320,000	0.7%	6.0%	9,970,000
	Shin-Kawasaki Mitsui Bldg.	25,820,000	1.9%		23,700,000
	Yokohama ST Bldg.	13,529,300	1.0%		17,100,000
	Parale Mitsui Bldg.	3,800,000	0.3%		4,580,000
	Tsukuba Mitsui Bldg.	8,875,500	0.6%		8,780,000
	S-ino Omiya North Wing	16,816,345	1.2%		22,500,000
	NBF Urawa Bldg.	2,000,000	0.1%		2,160,000
	NBF Matsudo Bldg.	2,455,000	0.2%		2,820,000
Other Cities	Sapporo L-Plaza	4,404,405	0.3%	11.1%	7,840,000
	NBF Sapporo Minami Nijo Bldg.	1,870,300	0.1%		1,540,000
	NBF Unix Bldg.	4,028,900	0.3%		3,410,000
	NBF Niigata Telecom Bldg.	3,957,500	0.3%		2,750,000
	Sumitomo Mitsui Banking Nagoya Bldg.	14,900,000	1.1%		16,700,000
	Nagoya Mitsui Main Building (Note 5)	13,050,000	0.9%		13,300,000
	Nagoya Mitsui New Building (Note 5)	13,200,000	1.0%		13,500,000
	NBF Nagoya Hirokoji Bldg.	7,232,000	0.5%		6,790,000
	Aqua Dojima NBF Tower	17,810,000	1.3%		19,800,000
	Nakanoshima Central Tower	14,900,000	1.1%		18,900,000
	Shinanobashi Mitsui Bldg.	14,400,000	1.0%		13,400,000
	Sakaisuji-Honmachi Center Bldg.	12,700,000	0.9%		14,400,000
	Sun Mullion NBF Tower	10,500,000	0.8%		8,800,000
	NBF Hiroshima Tatemachi Bldg.	2,930,000	0.2%		2,530,000
	Hiroshima Fukuromachi Bldg.	2,215,000	0.2%		2,540,000
	NBF Matsuyama Nichigin-mae Bldg.	3,310,000	0.2%		3,830,000
	Hakata Gion M-SQUARE	8,000,000	0.6%		11,700,000
	NBF Kumamoto Bldg.	4,500,000	0.3%		4,040,000
Total		1,384,568,920	100.0%	100%	1,551,590,000

(Note 1) "Acquisition Price" represents in principle the price for which NBF acquired the property. As for the property to be acquired the future represents the sale and purchase price set forth in the relevant sale and purchase contract etc. at the time of the decision to acquire the said property (excluding miscellaneous acquisition costs, fixed assets tax, city-planning tax and consumption tax etc.).

(Note 2) "Value (Real Estate Appraisal Value)" represents the appraisal value as of the end of 1H'20 (as of June 30, 2020) The "Appraisal Value" of "OSAKI BRIGHT TOWER", "Nagoya Mitsui Main Building.", and "Nagoya Mitsui New Building." is as of July 31, 2020. The "Appraisal Value" of "Shinjuku Mitsui Bldg." and "Gran Tokyo South Tower" is as of August 31, 2020.

(Note 3) "Shinjuku Mitsui Bldg.", "Gran Tokyo South Tower", will be acquired as of January 8, 2021.

(Note 4) "NBF Shinkawa Bldg. (East Building and Residential Tower)" will be disposed 50% per disposition date (December 25, 2020 and March 31, 2021). Furthermore, "Acquisition Price" and " Value (Real Estate Appraisal Value)"shown as West building.

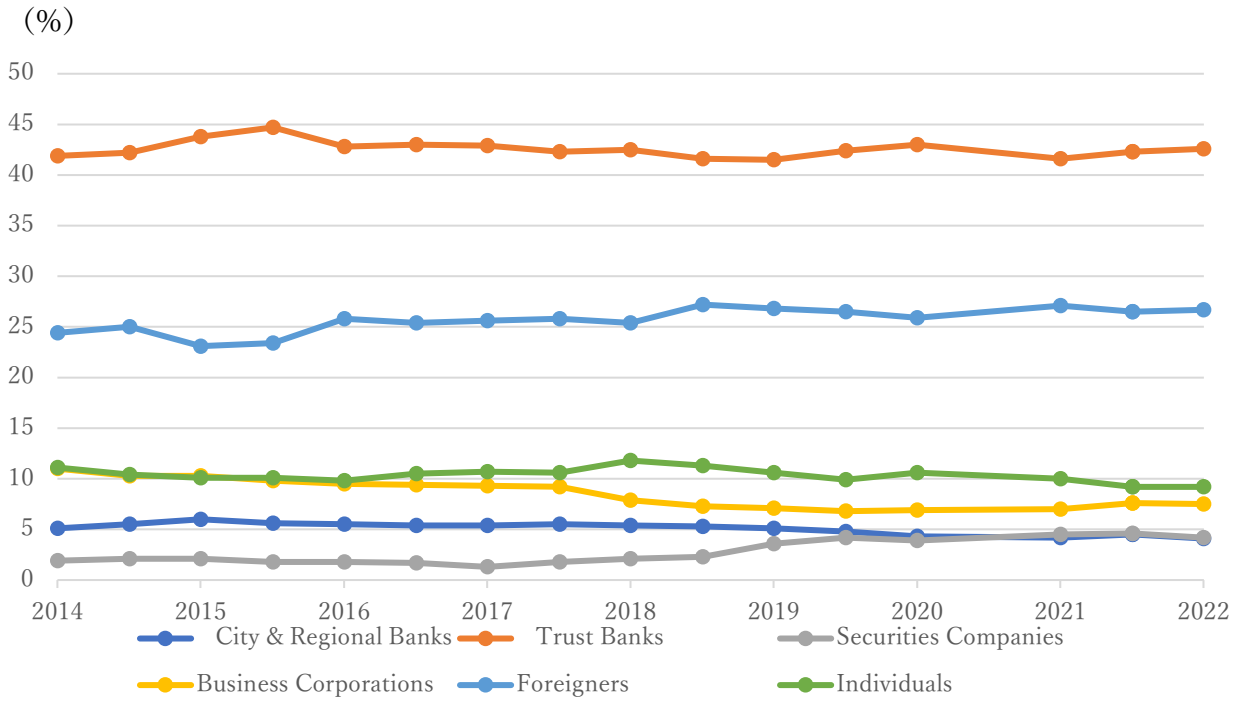
(Note 5) Acquisition of "OSAKI BRIGHT TOWER", "Nagoya Mitsui Main Building.", "Nagoya Mitsui New Building." were completed on October 1, 2020.

End

This English language notice is a translation of the Japanese language notice dated October 9, 2020 and was prepared solely for reference purposes. The Japanese language release should be referred to as the original. Neither NBF nor Nippon Building Fund Management Ltd. makes any warranties as to the accuracy or completeness of this English language notice.

Appendix B: Additional Figures

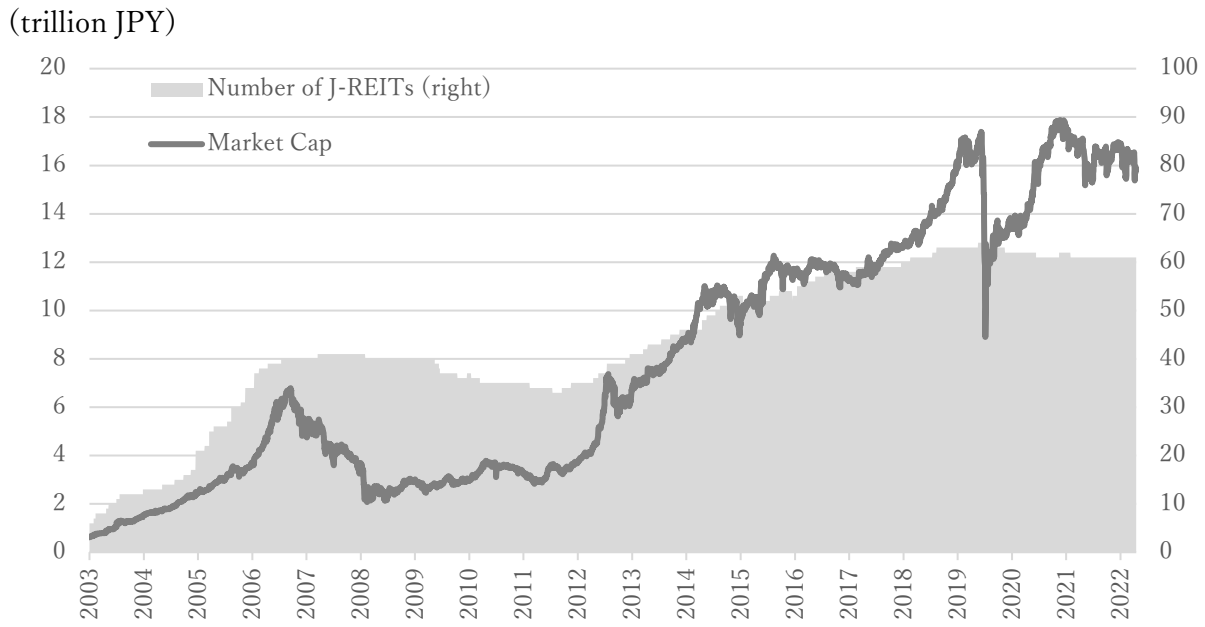
Figure B1 REIT Investor Types



Source: Japan Exchange Group

Note: Figure B1 shows the time series of proportion of each investor type in the number of corporate common shares. An important characteristic of the Japanese REIT market is that domestic individuals primarily own Japanese REITs. As the figure indicates, the proporrtions are relatively stable. For example, in 2023, the share of foreign investors is 26.5% for REITs compared to 30.4% for common shares. Trust banks own the largest share of REIT investment units (42.3%), most of which are for investment and annuity trust accounts (33.8%), although the share of direct individual ownership is small (9.2%). The sum of trusts and direct individual holdings accounts for 43.6% of REITs as compared to 27.4% for common shares. Thus, REIT share prices affect individual wealth more directly than stocks.

Figure *B1* Number and Market Capitalization of REITs

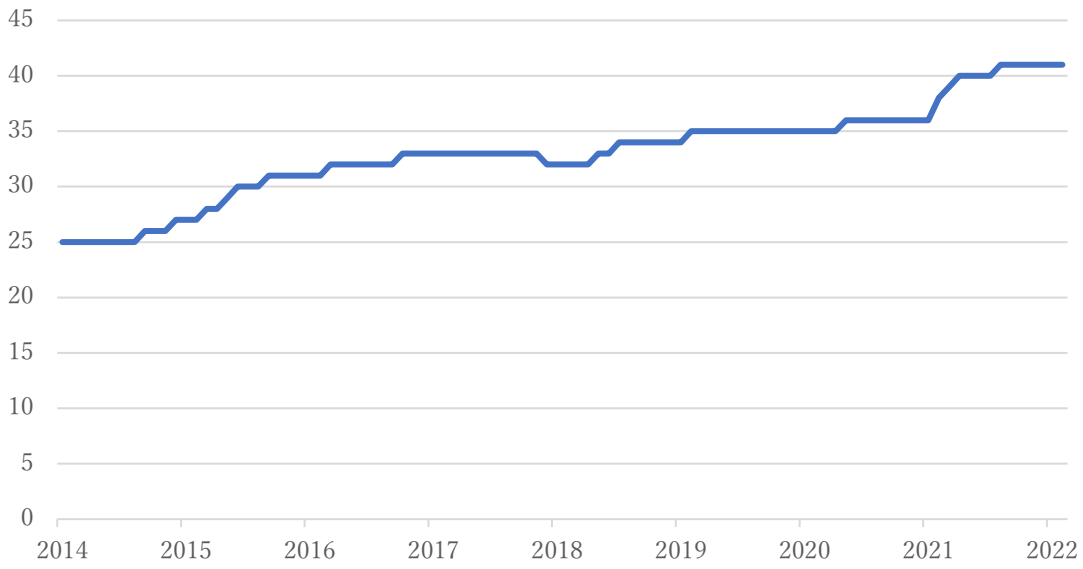


Source: Bloomberg

Figure *B2* TOPIX and REIT price returns

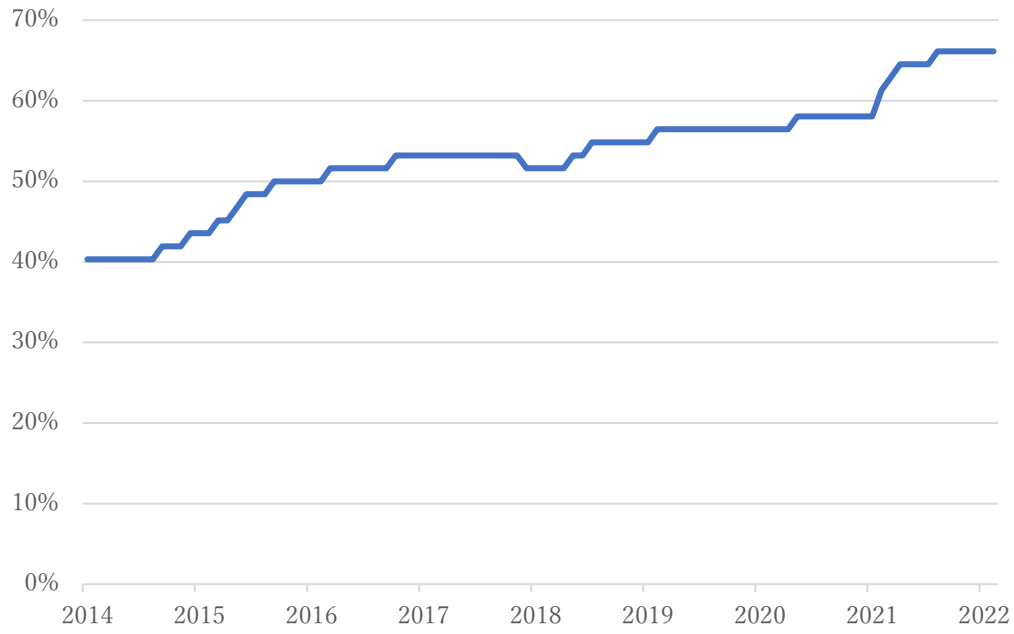
Source: Bloomberg

Figure B3 The number of AA credit ratings of REIT



This figure depicts the number of REITs that are rated AA or above.

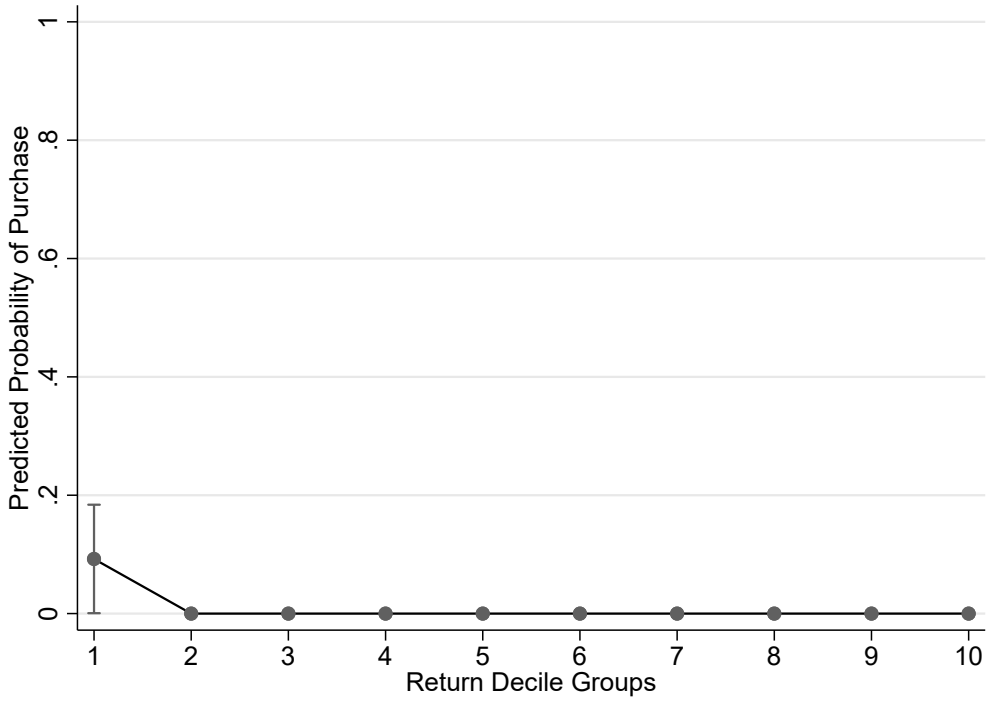
Figure B4 The ratio of the number of REITs purchased by the BOJ



This figure shows the ratio of the number of REITs purchased by the BOJ to the total number of REITs. We restrict our sample to 62 J-REIT to obtain the balanced panel.

Appendix C: BOJ Purchase Probability between March 2021 and December 2022

Figure C1 BOJ Purchase Probability by Return Decile Groups after 2020



This figure depicts the predicted probability of the Bank of Japan's REIT purchase corresponding to 10 decile groups of cumulative REIT index returns during the overnight and morning periods. The first decile represents the lowest (negative) return, whereas the tenth decile represents the highest return. The linear probability model is specified in Eq. (1). The sample period is March 1, 2021, to December 31, 2022. The 95% confidence intervals are based on Newey and West's (1987) standard errors.

Appendix D: Additional Analysis of the BOJ's Purchase Rule

We further analyze the sign of combined (cumulative) returns during the overnight and morning periods. In particular, we pay particular attention to cases when an overnight return and the subsequent morning return have the opposite signs. Similar to the results for the BOJ's ETF purchases (Hattori and Yoshida, 2023a), we hypothesize that the REIT purchases also depend on cumulative overnight and morning returns instead of overnight returns or morning returns separately. We estimate the mean purchase frequency α^i from the estimation equation for subsample i with different combinations of overnight and morning returns as follows:

$$\mathbb{I}_t^i = \alpha_2^i + \varepsilon_{2,t}^i. \tag{2}$$

We consider four subsamples: (1) the cumulative return is positive, but the overnight return is negative; (2) the cumulative return is positive, but the morning return is negative; (3) the cumulative return is negative, but the overnight return is positive, and (4) the cumulative return is negative but the morning return is positive.

Table D1 presents the result. In columns (1) and (2), the purchase frequency is zero regardless of return combinations. In other words, the BOJ does not purchase REITs as long as the overnight-to-morning cumulative return is positive, even if either an overnight return or a morning return is negative. In contrast, when an overnight-to-morning cumulative return is negative (columns (3) and (4)), the BOJ's purchase frequency is significantly different from zero, even if either an overnight return or a morning return is positive.

These results strongly suggest that the BOJ's REIT purchase decision is based on the

cumulative REIT return during the overnight and morning periods. Furthermore, the lunchtime and afternoon returns do not show the same result. Thus, we conclude that the BOJ submits REIT purchase orders during lunchtime based on the cumulative overnight-morning returns.

Table D1. The Average Frequency of REIT Purchases by the Sign of Returns

	(1)	(2)	(3)	(4)
Cumulative Return	Positive		Negative	
Overnight Return	Negative	Positive	Positive	Negative
Morning Return	Positive	Negative	Negative	Positive
REIT Purchase Frequency	0.0000	0.0000	0.3946***	0.4322***
			(0.0389)	(0.0402)
Observations	234	150	223	192

This table shows the mean of the REIT purchase dummy variable for the subsamples with different combinations of overnight and morning REIT returns. The sample period is April 1, 2013, to December 31, 2019. Columns (1) and (2) show the results for subsamples with positive cumulative returns, which include a sample with negative overnight and positive morning returns (column (1)) and a sample with positive overnight and negative morning returns (column (2)). Similarly, columns (3) and (4) show the results for subsamples with negative cumulative returns, including a sample with positive overnight and negative morning returns (Column (3)) and a sample with negative overnight and positive morning returns (column (4)). Newey and West's (1987) standard errors are shown in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.