

Real Estate Analysis Report

Factor Analysis of the JREIT Direct Cap Rate

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Summary

The appraised valuation of JREIT assets plummeted immediately after the collapse of Lehman Brothers. For office assets, the change in valuation can be equally attributed to changes in NCF (net cash flow) and DCR (direct cap rate). On the other hand, the change in JREIT residential and retail valuations is mostly attributed to the change in DCR.

By JREIT asset type, we found a strong correlation between the office DCR and lending attitude DI of financial institutions toward real estate (*BOJ Tankan Survey*) with a lag of 2H to 3H (half-year periods). Moreover, there is a strong correlation between the lending attitude DI and change in gross rent at large office buildings in Tokyo's three major wards.

We also found the residential DCR to be correlated to the lending attitude DI with a 1H lag, while the retail DCR is correlated to the office DCR. These results imply that for residential and retail assets, the DCR is also influenced by the effect of office rent on the lending attitude of financial institutions, rather than by their relatively stable NCF.

Based on the above, we forecast the office DCR will peak out in 2010 H1 at 5.2%, the residential DCR in 2009 H2 at 5.2%, and the retail DCR in 2010 H1 at 5.6%.

The JREI survey indicates that the office DCR has stabilized since 2009 H1. However, the office DCR has not yet reached the level indicated by our analysis, suggesting that Japanese financial institutions could be trying to stabilize the office cap rate below this level. If so, we are concerned that it could discourage foreign investment in the real estate market.

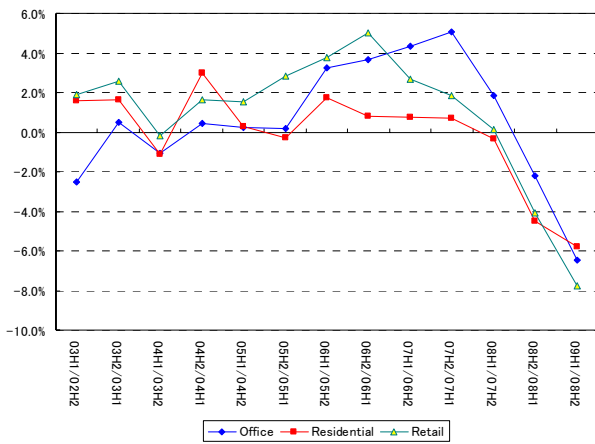
¹ The original Japanese version was released on November 9, 2009. The author wishes to thank James Parker of NLI Research Institute for his generous assistance with editing this translation.

1. Analysis of the Change in JREIT Asset Valuations

(1) JREIT Asset Depreciation

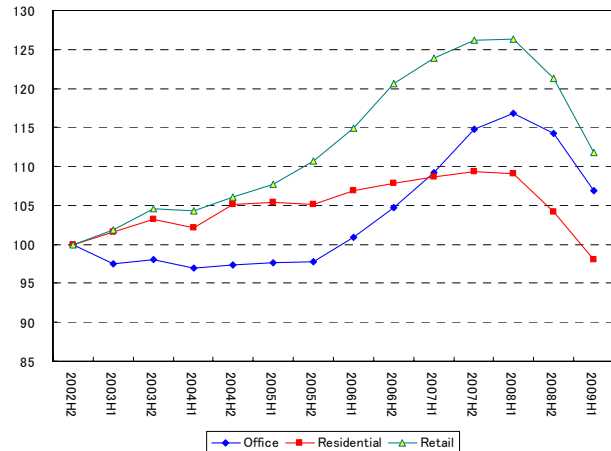
The Lehman Brothers crisis dealt a sharp blow to JREIT asset values. From 2008 H2 to 2009 H1, appraised values fell -6.5% in office, -5.8% in residential, and -7.8% in retail assets (Figure 1). By comparison, according to valuation indices (2002 H2 = 100) estimated by us, the decline from the previous peak through 2009 H1 was -8.5% for office assets, -10.3% for residential assets, and -11.5% for retail assets.

Figure 1 Change in JREIT Asset Valuations (year-on-year)



Note: Shows percent change from one year ago.
Source: Compiled by NLI Research Institute from JREIT data.

Figure 2 JREIT Asset Valuation Indices (2002 H2 = 100)



Source: Compiled by NLI Research Institute from JREIT data.

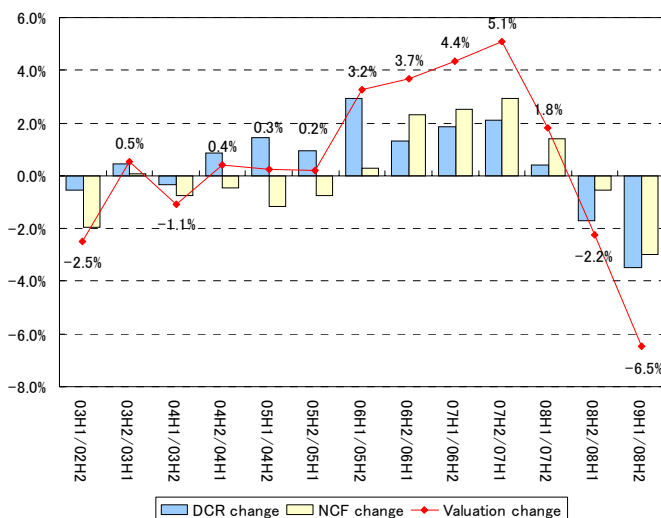
(2) Factors Causing the Decline of JREIT Asset Values

Based on the identity “Appraised value rate of change = NCF rate of change – DCR rate of change,” we performed a factor analysis of the change in JREIT asset valuations.

The change in office valuations is due in equal part to changes in both NCF and DCR (Figure 3). On the other hand, the change in residential and retail valuations is due primarily to the DCR change (Figure 4 and Figure 5).

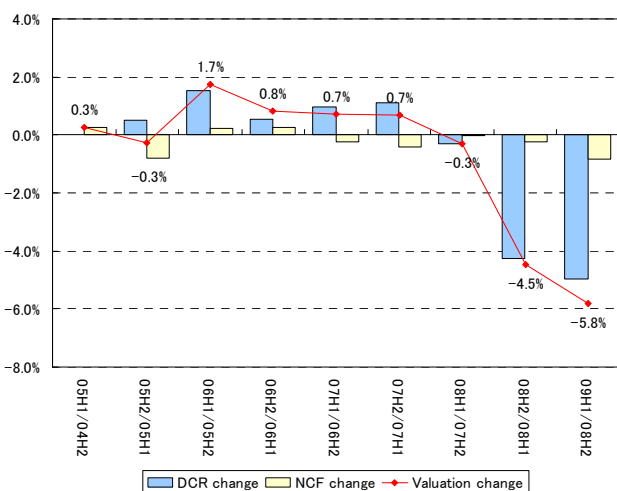
We compiled valuation indices (Figure 6) using the data from Figure 3, Figure 4 and Figure 5. Both the residential and retail valuation indices clearly show a stable NCF and volatile DCR. That is, residential and retail valuations tend to be volatile despite their income stability.

Figure 3 Factor Analysis of Change in JREIT Office Valuations



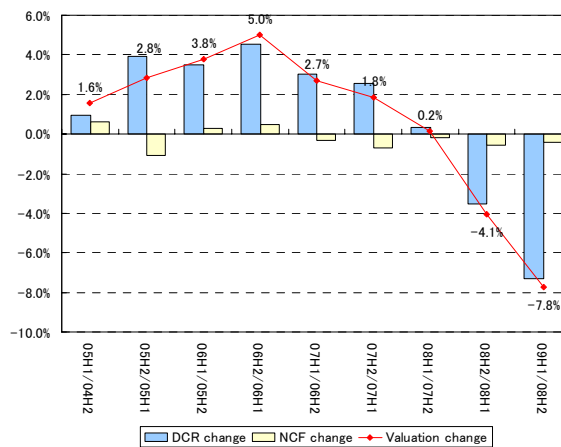
Note: We estimated NCF change using the equation, "NCF change = Valuation change + DCR change."
 DCR is shown with sign reversed.
 Source: Compiled by NLI Research Institute from JREIT Data

Figure 4 Factor Analysis of Change in JREIT Residential Valuations



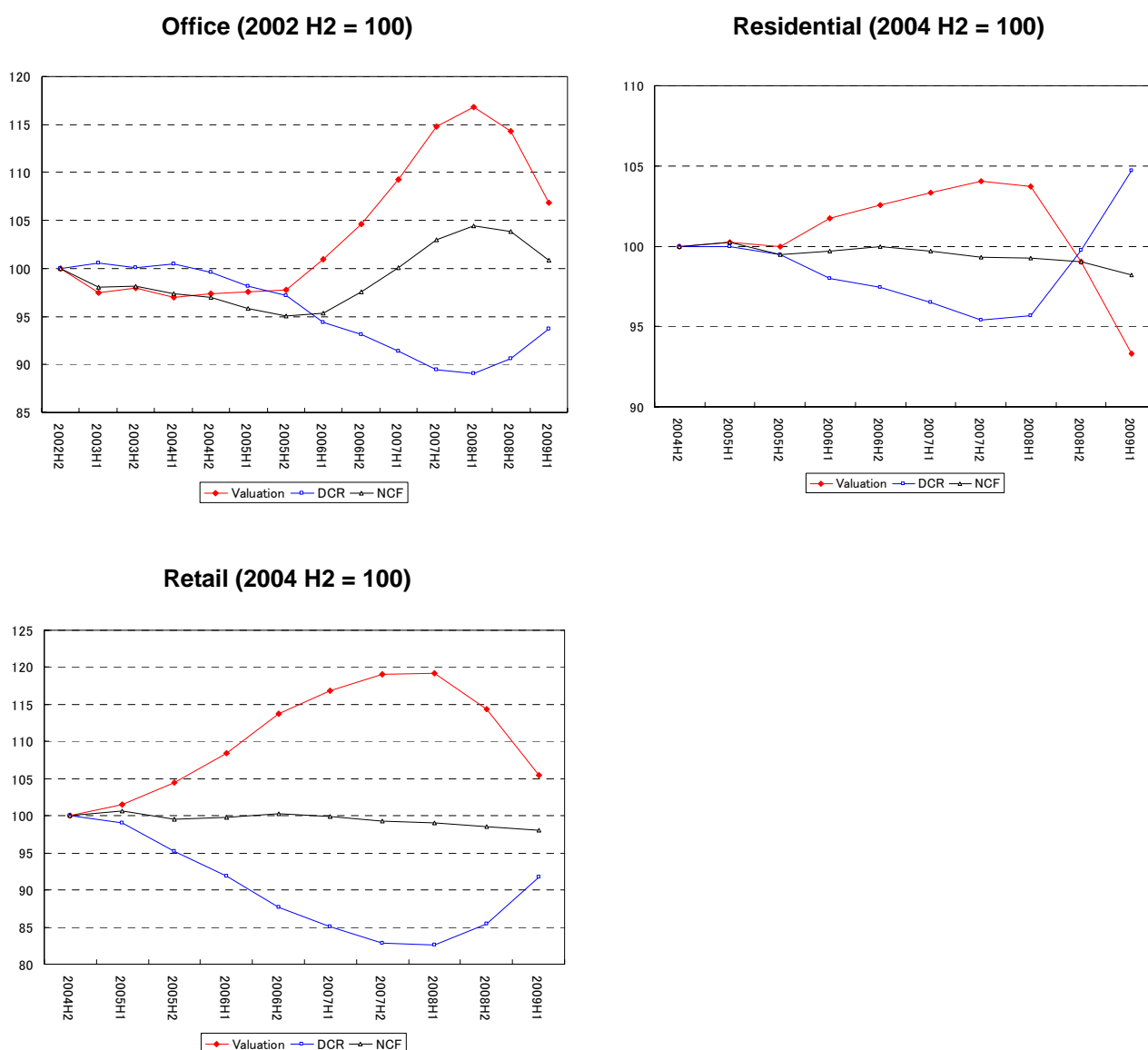
Note: Same as in Figure 3.
 Source: Compiled by NLI Research Institute from JREIT Data.

Figure 5 Factor Analysis of Change in JREIT Retail Valuations



Note: Same as in Figure 3.
 Source: Compiled by NLI Research Institute from JREIT Data.

Figure 6 Indices of Valuation, DCR and NCF by JREIT Asset Type

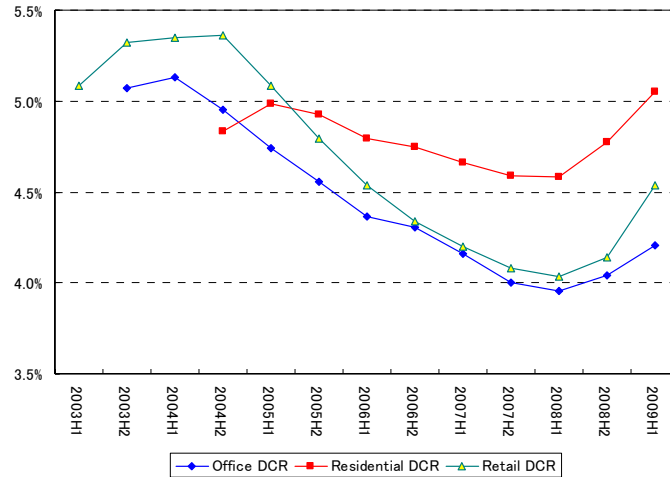


Source: Compiled by NLI Research Institute from JREIT Data.

2. Factor Analysis of the JREIT Direct Cap Rate

To analyze the factors affecting the DCR of JREIT assets, we estimated DCR Hednic indices, which adjust for differences in property characteristics such as location, size, and number of years since construction. The DCR indices of office, residential and retail assets all bottomed out in 2008 H1, and have subsequently risen by 25bp, 47bp, and 51bp respectively (Figure 7).

Figure 7 DCR Trends of JREIT Office, Residential and Retail Assets

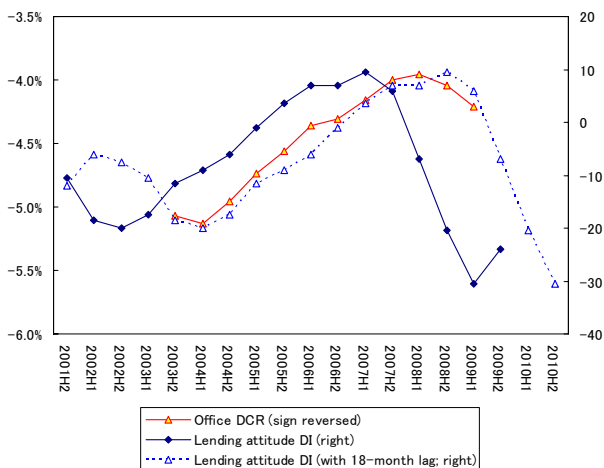


Notes: DCR indices track sector trends. Office DCR relates to large new office buildings in business core of Tokyo; residential DCR relates to apartments for single persons and DINKS in southwest Tokyo; retail DCR relates to retail assets in downtown Tokyo.
Source: NLI Research Institute

(1) Office DCR Factor Analysis and Forecast

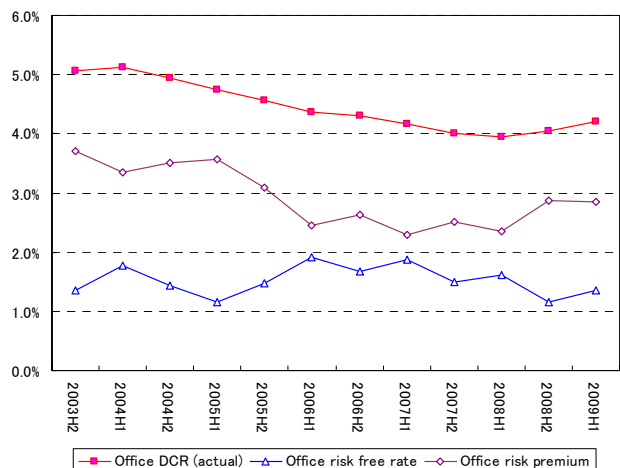
The JREIT office DCR is most strongly influenced by the lending attitude DI lagged by 2H to 3H (Figure 8). The office risk premium (DCR – risk free rate) is weakly correlated and thus disregarded (Figure 9). Thus we forecast the office DCR using the lending attitude DI (with 2H and 3H lags) and change of NCF as independent variables (Figure 10). Assuming a 2H lag, the office DCR will peak in 2010 H1 at 5.2% (up from 4.2% in 2009 H1).

Figure 8 JREIT Office DCR (sign reversed) and Lending Attitude DI



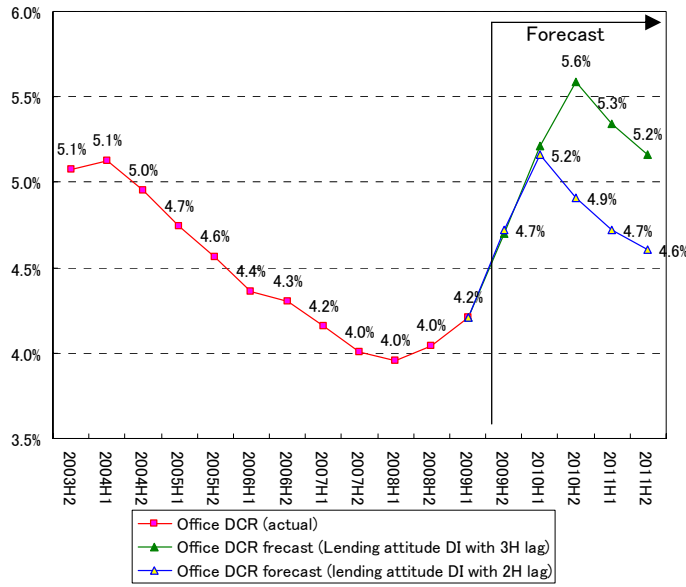
Sources: BOJ; NLI Research Institute

Figure 9 JREIT Office DCR, Risk Free Rate, and Risk Premium



Sources: BOJ; NLI Research Institute

Figure 10 Forecast for Office DCR



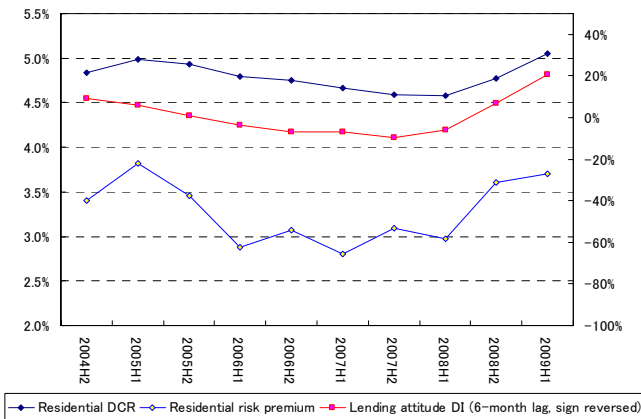
Source: NLI Research Institute

(2) Residential and Retail DCR Factor Analysis and Forecast

We found that the residential DCR is correlated to the lending attitude DI toward real estate with a 1H lag. In addition, we found that the retail DCR is correlated to the office DCR (Figures 12 and 13). Again, risk premiums appear to be weakly correlated and are disregarded.

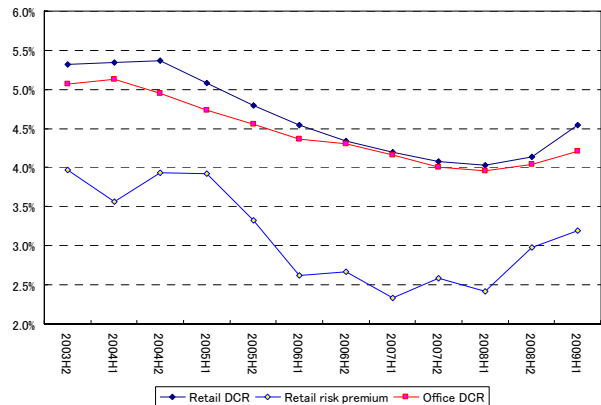
Our forecast calls for the office DCR to peak out in 2010 H1 at 5.2% (up from 4.2% in 2009 H1), while the residential DCR will peak out in 2009 H2 at 5.2% (up from 5.1% in 2009 H1), and the retail DCR in 2010 H1 at 5.6% (up from 4.5% in 2009 H1; Figure 13).

Figure 11 Residential DCR, Risk Premium, and Lending Attitude DI (with 1H lag, sign reversed)



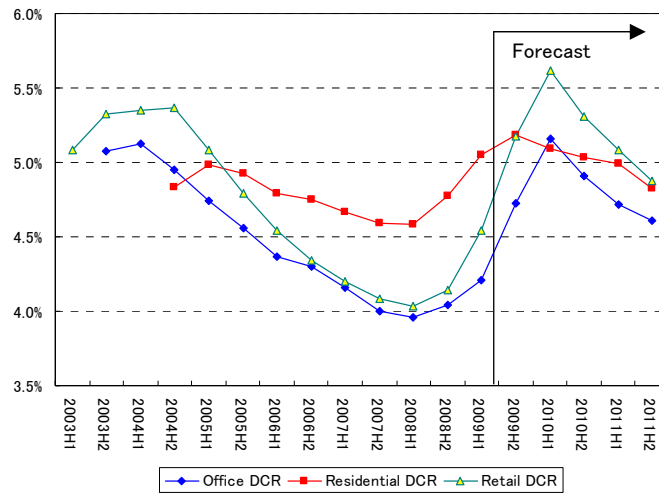
Sources: BOJ; NLI Research Institute

Figure 12 Retail DCR & Risk Premium, and Office DCR



Sources: BOJ; NLI Research Institute

Figure 13 DCR Forecast for JREIT Office, Residential, and Retail Assets



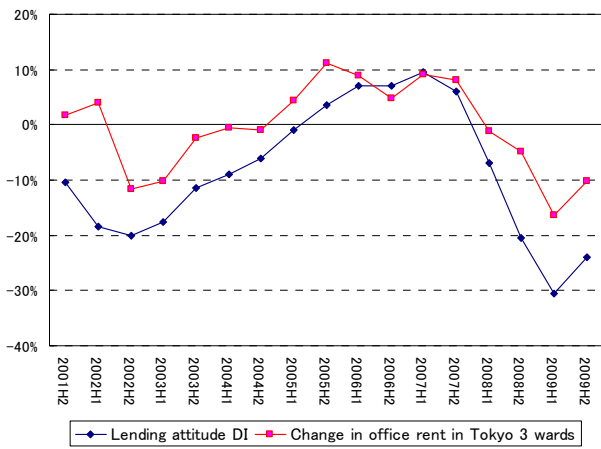
Source: NLI Research Institute

3. Factor Analysis of JREIT Direct Cap Rate

According to our simplified analysis, the DCR in all three sectors appears to be strongly influenced by the lending attitude DI of financial institutions toward real estate in Japan. The lending attitude DI is in turn shaped by the rate of change in gross rent at large office buildings in Tokyo’s three major wards (Figure 14). Interestingly, the DCR of residential and retail assets is also influenced by the same volatile factor—the lending attitude of financial institutions and office rent trends—rather than by their own relatively stable NCF.

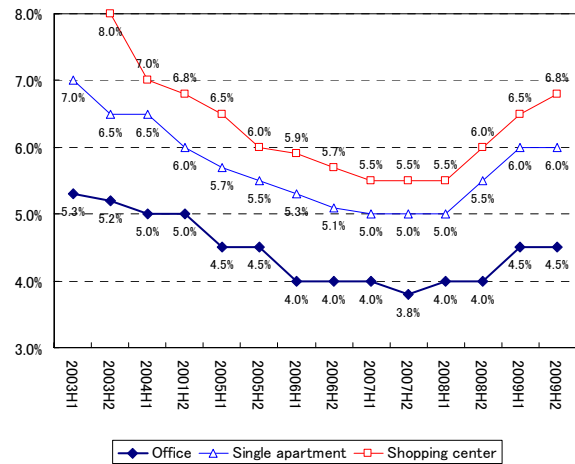
According to the JREI survey, we now know the office DCR has stabilized from 2009 H1 (Figure 15). However, it recently stopped moving toward the appropriate level, which we estimate as the 2003 level. If the office DCR is indeed influenced by the lending attitude of finance institutions, it is possible that Japanese financial institutions may be trying to stabilize the office cap rate below the appropriate level. Such a situation could be less than optimal, since it would discourage foreigners from investing in Japan’s real estate market.

Figure 14 Lending Attitude DI and Change in Office Rent in Tokyo 3 Wards



Note: Tokyo 3 wards are Chiyoda-ku, Chuo-ku and Minato-ku.
Sources: BOJ; NLI Research Institute

Figure 15 Expected Cap Rate of Investors for Office, Residential and Retail Assets



Source: Japan Real Estate Institute, *The Japanese Real Estate Investor Survey*.