

# CORPORATE GOVERNANCE AND SUSTAINABILITY IN GLOBAL PROPERTY MARKETS

Over the past few decades, the role of real estate in the institutional investment portfolio has changed from alternative asset class to mainstream investment. Real estate is now often referred to as the third asset class, besides stocks and bonds. The recent turmoil in the financial markets has all but increased the importance of asset classes other than equities. However, with the institutionalization of the real estate sector and the rise of indirect property investments, the global property sector has become more vulnerable to a conflict of interest between shareholders of property companies and the executives therein.

By Dr. Nils Kok, Maastricht University

The patchwork of operational restrictions that currently applies to the different global

Real Estate Investment Trust (REIT) regimes has distinct effects on the institutional setting in which REITs operate. Most importantly, REITs have to pay out up to 100% of net income. 75% of the income of REITs should be derived

from real estate or related operations, and investments in development activities are not allowed. Moreover, 75% of the value of total REIT assets should consist of real estate assets, cash or cash items. One could argue that the limited investment opportunities for those in control restrict diversification opportunities, which reduces the possibility of management engaging in value-destroying activities outside the focus of operations. Moreover, the value of a REIT portfolio, consisting of appraisable real estate, can be established relatively easily compared to the complex operations of firms in, for example, the manufacturing or pharmaceutical sector. Under the substitution hypothesis, the legal restrictions regarding REITs might mitigate the need for strong internal corporate governance mechanisms,

agency problems as in regular C-corporations, even if these problems probably have a lower magnitude due to the 100% distribution requirement. In this case, it can be hypothesized that the legal setting in which REITs operate should be complemented by internal corporate governance mechanisms – as in regular corporations – to prevent managerial entrenchment and to reduce agency problems to a minimum.

### Corporate governance index

To test these competing hypotheses, the relationship between corporate governance and firm valuation for REITs is examined using a comprehensive corporate governance index – the Corporate Governance Quotient (CGQ) from the RiskMetrics Group. A positive relationship between the strength of the governance structure and firm valuation has been well established for>>>

FIGURE 1: CORPORATE GOVERNANCE QUOTIENT INDEX

Panel A: CGQ Index Scores – All Industries 2005			
Top 5	CGQ	Average standard deviation	
Real estate	64.5	28.6	
Utilities	63.1	28.2	
Banks	60.2	26.7	
Pharmaceuticals & biotechnology	56.7	26.0	
Insurance	54.5	28.2	
Bottom 5	CGQ	Average standard deviation	
Hotels, restaurants & leisure	46.4	27.5	
Telecommunication services	42.4	27.1	
Household & personal products	41.0	26.2	
Food, beverage & tobacco	38.0	30.1	
Media	35.6	29.8	

Panel B: CGQ Index Scores - Real Estate			
	2003	2004	2005
Governance	CGQ	CGQ	CGQ
Mean	50.5	54.6	64.5
Standard deviation	26.8	29.3	28.6
Sub-index means			
Board	3.1	3.5	3.4
Compensation	3.4	3.5	3.4
Takeover defenses	2.7	3.4	3.5
Audit	3.5	3.8	3.3
Sample size	216	210	228

Source: RiskMetrics Group



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Nils Kok currently works as an assistant professor in Finance and Real Estate at Maastricht University, the Netherlands. He recently finished his PhD on 'Corporate Governance and Sustainability in Global Property Markets' at Maastricht University, for which he received the 2009 Best Thesis Award of the French Social Investment Forum. During his PhD, he stayed for a semester at UC Berkeley, USA, and for a summer at National University of Singapore as a visiting scholar. Kok received his Master's degree in International Business Studies from Maastricht University, the Netherlands.

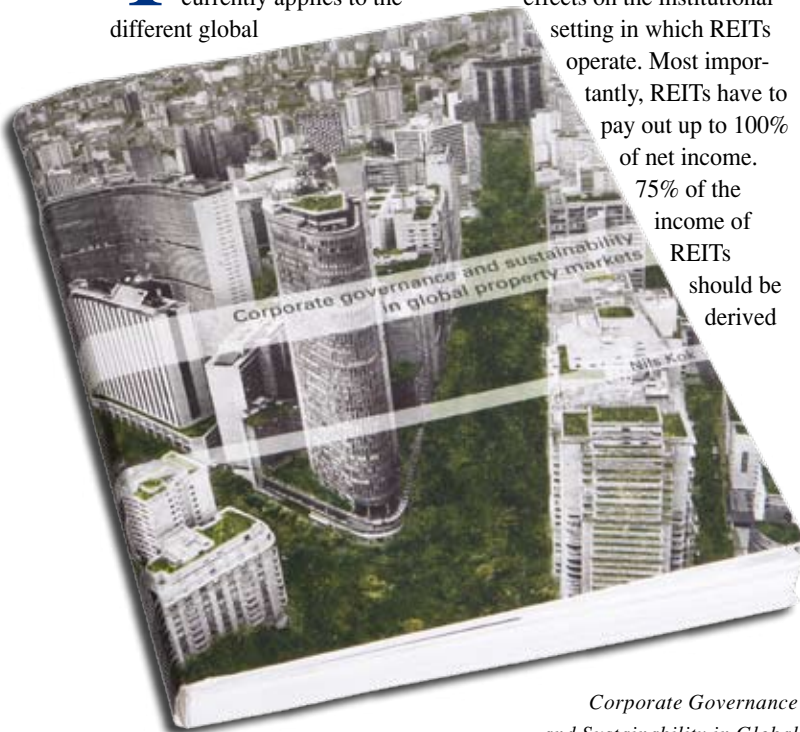
Kok's main research focus is on sustainability issues in the real estate sector, concentrating on the economics of 'green' buildings. Besides, his research includes issues such as transparency of global property markets, property investments and demographics. Kok was the co-author of an influential report proposing a pan-European property fund structure.

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Corporate Governance and Sustainability in Global Property Markets, by Dr. Nils Kok

**FIGURE 2: CORPORATE GOVERNANCE AND FIRM VALUE IN REITS – HIGH VS. LOW PAYOUT RATIO**

Panel A: REITs – High Payout Ratio					
	1	2	3	4	5
CGQ Index	0.001 (1.22)				
Audit Index		-0.016 (1.26)			
Compensation Index			-0.011 (0.79)		
Takeover Index				0.008 (0.48)	
Board Index					-0.002 (0.13)
Constant	1.386 (8.12)***	1.438 (8.34)***	1.384 (8.09)***	1.339 (7.71)***	1.380 (8.08)***
Control Variables	Y	Y	Y	Y	Y
Year Fixed Effects	Y	Y	Y	Y	Y
Sector Fixed Effects	Y	Y	Y	Y	Y
Sample Size	249	249	249	249	249
Adj R2	0.30	0.31	0.30	0.30	0.30
Panel B: REITs – Low Payout Ratio					
	1	2	3	4	5
CGQ Index	0.003 (2.00)**				
Audit Index		-0.004 (0.15)			
Compensation Index			0.019 (0.59)		
Takeover Index				0.022 (0.50)	
Board Index					0.097 (2.60)***
Constant	1.580 (6.16)***	1.669 (6.38)***	1.610 (5.65)***	1.516 (3.62)***	1.403 (6.18)***
Control Variables	Y	Y	Y	Y	Y
Year Fixed Effects	Y	Y	Y	Y	Y
Sector Fixed Effects	Y	Y	Y	Y	Y
Sample Size	233	233	233	233	233
Adj R2	0.12	0.12	0.12	0.12	0.15

Note: Significance at the 0.10, 0.05 and 0.01 levels are indicated by \*, \*\* and \*\*\* respectively.

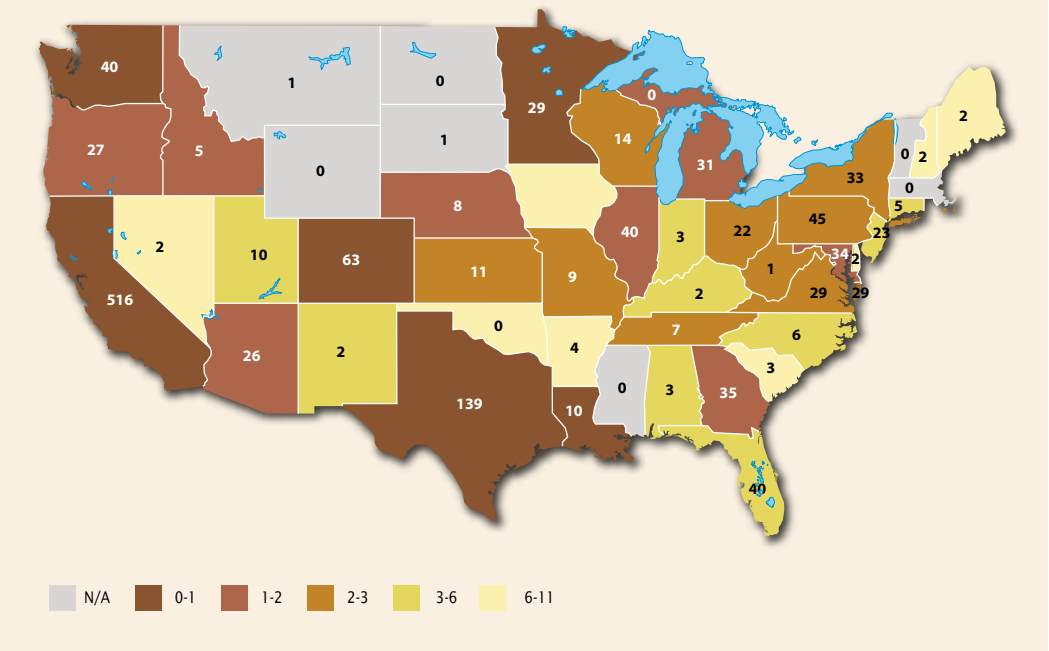
regular firms in corporate finance literature. To get a first insight in the CGQ index, figure 1 provides the average corporate governance scores of industries ranking in the top 5 and bottom 5 in 2005. For the purpose of comparison, the company scores relative to the index to which the company belongs, are used. The real estate sector scores remarkably well,

together with the capital-intensive industry ‘utilities’. Among the low-ranked industries are telecommunication services, media, and personal products. Next, the ratio of dividend payout to free cash flows rather than to net income is calculated for each REIT, where the free cash flows include net income before extraordinary items plus

the depreciation expense. This accurately determines the availability of discretionary cash flows in REITs. Subsequently, the REIT sample is split on the median in a sub-sample of ‘high payout’ REITs and a sub-sample of ‘low payout’ REITs.

Panels A and B of figure 2 show the results for the OLS regression of Tobin’s Q – a measure of firm valuation comparable to the market-to-book ratio – on the CGQ Governance Index and a set of control variables.

Coefficients of year dummies, sector dummies and financial variables are omitted from the table. Panel A contains the REITs that distribute most of their free cash flows – high payout REITs. For these firms corporate governance is not a significant determinant of firm value. Deviating from the optimal governance structure is less costly, as free cash flow is scarce and the capital market frequently scrutinizes managers. In Panel B, results are shown for the sub-sample of REITs that retain more discretionary cash from expenses – low payout REITs. In this case, corporate governance does matter for REIT value. The coefficients in columns 2 to 5 indicate that especially a well-structured board is reflected in REIT valuation. Nevertheless, the results for the cash-rich REITs still differ considerably from the results that are documented for a sample of 5,000 regular C-corporations, for which the audit and compensation indices are significant as well. Moreover, the findings are supported by the positive relationship between corporate governance and firm valuation as documented for companies with relatively high corporate real estate ratios (results not reported here).

**FIGURE 3: DISTRIBUTION OF GREEN OFFICE BUILDINGS IN THE US BY STATE (AND % OF OFFICE SPACE STOCK) 2007**


Source: CoStar and author's calculations

### Corporate governance less important for REITs

In general, corporate governance is less important for REITs than it is for regular corporations, as the payout restrictions act as a safety net for investors. However, the discretionary cash flows created by the various expenses still offer the opportunity for managerial entrenchment. Indeed, for REITs that do not distribute these additional cash flows, a strong internal corporate governance mechanism seems to be value-enhancing, although other governance mechanisms are less important than for regular corporations. The results corroborate with the hypothesis that corporate governance has less impact on firm performance in strongly regulated business environments, this is attributed to the strong institutional governance setting

surrounding REITs: the REIT effect. The results documented are important to better understand the interaction between the REIT structure and corporate governance mechanisms. It is often suggested in real estate literature that the structure of REITs intensifies the principle-agent problem. However, it is argued that operational restrictions under which REITs operate, such as the distribution obligation, rather strengthen the institutional setting. Under the substitute hypothesis, this setting would even allow for weaker firm-level governance mechanisms, but in fact the empirical results show that firm-level corporate governance in the listed property industry is of extremely high quality. Thus, for institutional investors that allocate capital to REITs, corporate governance seems to be less of a concern.

### Sustainability in the real estate sector

In the real estate sector, sustainability and social policies have not yet received the attention of institutional investors compared to other asset classes. This is surprising, as the behavior of the building sector is potentially quite important in matters of environmental sustainability. It is reported, for example, that buildings account for approximately 40% of the consumption of raw materials and energy. In addition, 55% of the wood that is not used for fuel production is consumed in construction. Overall, buildings and the associated materials produced for construction activity account for at least 30% of world greenhouse gas emissions. And once a building is constructed, the energy consumption associated with it continues. >>

**FIGURE 4: COMMERCIAL OFFICE RENTS AND TRANSACTION PRICES: GREEN BUILDINGS VS. REGULAR BUILDINGS**

	Rent/ft <sup>2</sup>	Effective rent/ft <sup>2</sup>	Sales price/ft <sup>2</sup>
Green rating (1 = yes)	0.028 [0.009]***	0.064 [0.023]***	0.165 [0.052]***
Building size (million ft <sup>2</sup> )	0.111 [0.021]***	0.189 [0.027]***	0.200 [0.108]*
Fraction occupied	0.011 [0.016]		
<b>Building class:</b>			
Class A (1 = yes)	0.173 [0.015]***	0.229 [0.030]***	0.104 [0.084]
Class B (1 = yes)	0.083 [0.026]***	0.152 [0.026]***	-0.184 [0.058]***
Net Contract (1 = yes)	-0.051 [0.013]***	0.009 [0.024]	
Employment Growth (fraction)	0.609 [0.189]***	0.682 [0.308]**	-0.006 [0.005]
<b>Age:</b>			
< 10 years	0.131 [0.017]***	0.177 [0.044]***	0.207 [0.147]
10 – 20 years	0.085 [0.014]***	0.146 [0.025]***	0.224 [0.100]**
20 – 30 years	0.049 [0.013]***	0.112 [0.023]***	0.276 [0.070]***
30 – 40 years	0.044 [0.011]***	0.090 [0.018]***	0.251 [0.075]***
Renovated (1 = yes)	-0.008 [0.009]	0.016 [0.018]	-0.087 [0.046]*
<b>Stories:</b>			
Intermediate (1 = yes)	0.009 [0.009]	0.145 [0.021]***	-0.185 [0.092]**
High (1 = yes)	-0.029 [0.014]**	0.086 [0.025]***	-0.183 [0.057]***
Amenities (1 = yes)	0.047 [0.007]***	0.118 [0.015]***	-0.043 [0.049]
<b>Year of sale:</b>			
2006 (1 = yes)			0.016 [0.060]
2005 (1 = yes)			-0.048 [0.055]
2004 (1 = yes)			-0.200 [0.067]***
Constant	2.725 [0.127]***	2.187 [0.050]***	5.406 [0.160]***
Sample size	8182	8182	1816
R2	0.72	0.48	0.44
Adj R2	0.69	0.43	0.37

Notes: Columns (1) and (2) also includes 694 dummy variables, one for each locational cluster. Column (3) includes 199 dummy variables, one for each locational cluster. Standard errors are in brackets. Significance at the 0.10, 0.05, and 0.01 levels are indicated by \*, \*\*, and \*\*\*, respectively.

The impact of energy costs directly affects the bottom-line of tenants and building owners. Energy represents 30% of operating expenses in a typical office building, which makes it the single largest and most manageable operating expense in the provision of office space. Sustainability, or more specifically, energy efficiency, has hardly been empirically addressed for commercial real estate. Although environmental awareness is growing, both real estate developers and institutional investors are understandably uncertain about how far they should go in implementing environmental investments, since the business case for the development of sustainable commercial buildings is based largely on anecdotal evidence. Moreover, with institutional investors increasingly implementing the ESG theme across asset classes, there is a growing need for real estate research on sustainability in the property sector. The study described below provides the first systematic analysis of the impact of environmentally-sustainable building practices upon economic outcomes measured in the marketplace

### Evaluating energy efficiency

The study assembles a national sample of US office buildings that have been evaluated for energy efficiency by one or two leading agencies. This is enabled by the existence of well-established green rating systems – Energy Star of the Environmental Protection Agency and the Leadership in Environment and Energy Design (LEED) of the US Green Building Council. For each building, a control sample of nearby office buildings is identified.

For some 10,000 subject and control buildings, contract rents, effective rents and selling prices are related to a set of objective hedonic characteristics of buildings, holding constant the locational characters of properties. Figure 3 provides a geographic summary of the match between the Energy Star-certified commercial office buildings, the LEED-certified buildings, and the universe of commercial buildings identified in CoStar. The figure reports the number of certified commercial office buildings in each state, as well as an estimate of the fraction of office space in each state which has been rated for environmental sustainability. About 4% of US office building space is green-labeled. As the map indicates, in some states – notably Texas, Washington, and Minnesota – more than 5% of office buildings are rated. The incidence of green office space is almost 9% in California. In a large number of states, however, only a small fraction of office space is certified by Energy Star or the USGBC. States with extreme temperatures are apparently more likely to have rated office buildings.

### Influence on rent and value

To investigate how energy efficiency influences rent and value in commercial office buildings, a standard valuation framework for commercial real estate is used. The analysis of energy-rated office buildings, combined with a control sample consisting of one-or-more nearby non-rated office buildings, is conducted by estimating a semi-log equation relating office rentals (or selling prices) per square foot (ft<sup>2</sup>) to the hedonic characteristics of the buildings (e.g. age, amenities

provided, parking, etc.) and the location of each building. Figure 4 presents the results. Column 1 shows that buildings with a ‘green rating’ command rental rates that are roughly 3% higher per square foot than otherwise identical buildings – controlling for the quality and the specific location of office buildings. Premiums in expected rents, i.e. rents adjusted for building occupancy levels, are even higher – above 6%. Selling prices of green buildings are higher by about 17%. Beyond the average price or rental premium, the methodology also permits to estimate the increment for each ‘green building’ relative to the control buildings in its immediate geographic neighborhood.

Statistical methods are used to decompose the ‘green’ premium into several components. The empirical results suggest that customers may be willing to pay a premium for the actual energy efficiency of buildings (results not reported here). A more energy efficient building commands a significantly higher rental and transaction premium. However, tenants also seem to be willing to pay for ‘socially responsible’ attributes of green buildings. Alternatively, for owners it may be a successful marketing strategy to offer rated and labeled buildings in the marketplace.

### Economic value of sustainability

These results provide the first fundamental evidence on the economic value of sustainability in the real estate sector. The findings have implications for investors as well as policy makers. For property investors with a portfolio of existing

properties, the sustainability of the portfolio should be a major concern. Although an investor has detailed insight in the financial fundamentals of individual properties, he is usually not aware of the cross-sectional variability in the sustainability of his properties. However, this is important information, as this study shows that green buildings are able to obtain better rental rates as compared to less efficient, non-green buildings. The rental premium and lower risk in more sustainable office buildings will increase value in the existing property portfolio of the investor. Therefore, it might well be a profitable investment to retrofit an existing building in order to achieve future savings on utility costs. The results can provide critical mass and speed to the green building movement. Investors generally seem to assume a conflict between greenness and the bottom line, but the results show the contrary. This means that institutional investors can simultaneously pursue doing well and doing good. <<

*This article is based on the book Corporate Governance and Sustainability in Global Property Markets by Nils Kok. Now available in the REP Bookstore: [www.europe-re.com/bookstore](http://www.europe-re.com/bookstore).*