REAL ESTATE MARKET TRANSPARENCY IN THE ASIA - PACIFIC REAL ESTATE MARKETS

Professor Dr. Graeme Newell
Western Sydney University (WSU), Australia
Professor of Property Investment

Email address: G.Newell@westernsydney.edu.au

ABSTRACT

Improved real estate market transparency is fundamental to innovation in the real estate sector. Importantly, a key ingredient for increased investor confidence in the Asia-Pacific real estate markets has been the improved real estate market transparency in the Asia-Pacific markets in recent years. Using the JLL global real estate transparency index, countries are classified as high transparency, transparent, semi-transparent, low transparency and opaque.

This paper assesses changes in the real estate transparency for 21 Asia-Pacific real estate markets over 2001-2014. This is also assessed in a regional and global real estate market context. Differences in real estate transparency between the developed and emerging Asia-Pacific markets are also highlighted. The positioning of Malaysia in the global and Asia-Pacific real estate market transparency context is also discussed.

Keywords: *Real Estate Market Transparency, JLL, Asia-Pacific, Developed Markets, Emerging Markets, Malaysia.*

1.0 INTRODUCTION

With an increased emphasis on international real estate investing, a fuller understanding of the unique characteristics of these global markets is important. Information such as real estate market performance information, market players, legal system, planning system and the transaction process are key ingredients in defining the transparency and sophistication of real estate markets, with real estate transparency being an important factor in strategic real estate investment decision-making by institutional investors.

In this global context, the Asia-Pacific real estate markets are important. In 2011, investable real estate in Asia-Pacific was estimated to be $7.0 trillion or 27% of global markets; by 2021, the Asia-Pacific market share is expected to be $17.5 trillion or 37% of global markets (Pramerica REI, 2012). This has seen active involvement by a wide range of players in the Asia-Pacific real estate investment landscape including local, international, REITs/PCs, unlisted real estate funds, private equity funds, pension funds, sovereign wealth funds, insurance companies and high wealth individuals. Table 1 lists some of the major real estate investment managers, with their global rank (I&P RE, 2015). Often these investors have significant Asia-Pacific real estate exposure in their portfolios, via country-specific funds, Asia-Pacific funds or global funds with an Asia-Pacific component.

Table 1: Major Real Estate Investment Managers: 2015

- Brookfield : #1
- Blackstone: #2
- CBRE Global Investors : #3
- Pramerica REI : #10
- LaSalle : #13
- CapitaLand : #15
- Mapletree : #41
- Gaw : #57

The various professional real estate associations have also played a key role in improving real estate transparency; this includes ANREV and APREA in Asia; with their mandates of supporting the unlisted and listed real estate markets. This has been supported by increased real estate information at a real estate market level by leading real estate players such as JLL, CBRE, Real Capital Analytics and GRESB. In particular, the JLL real estate transparency index (JLL, 2014) has been a key ingredient in facilitating real estate market transparency assessment.

Previous real estate market transparency research has been limited. Only Brounen et al (2007), Lieser and Groh (2011, 2014), Newell (2008) and Farzanegan and Fereidouni (2014) have assessed this key issue, with only Newell (2008) and Farzanegan and Fereidouni (2014) using the JLL real estate transparency index. Other related research has been in the broader area of real estate market maturity (e.g.: Chin et al, 2006; Ke and Sieracki, 2015; Keogh and D'Arcy, 1999); particularly focused on the emerging markets. Equivalent transparency research in the listed real estate markets has largely focused on corporate governance and disclosure issues (e.g.: An et al, 2011; Eichholtz et al, 2011; Lecomte and Ooi, 2013; Newell and Lee, 2012).

The purpose of this paper is to assess real estate transparency over 2004 – 2014 around four specific research questions:

RQ1: are the real estate markets becoming more transparent?
RQ2: are the Asia-Pacific real estate markets becoming more transparent in a regional and global context?

RQ3: which Asia-Pacific real estate markets have shown most improvement in real estate transparency?

RQ4: where does Malaysia position in the global real estate transparency landscape?

The real estate investment implications of improving real estate market transparency are also highlighted.

2.0 DATA SOURCES

JLL Real Estate Transparency Index

The JLL real estate market transparency index is produced every two years, with the 2014 index being the 8th edition (JLL, 2014). The 2014 JLL index assessed the real estate transparency for 102 real estate markets, based on the principal city in each country. The market coverage has increased significantly in subsequent years (e.g.: 2001: # = 47 markets; 2008: # = 81; 2012: # = 97), as well as several markets classified into distinct tiers (e.g.: Tier 1, 2, 3 for China, India, Russia; Tier 1, 2 for Brazil). The 2016 JLL real estate transparency index will be available in June 2016.

Real estate markets are classified into five (5) levels of transparency; high transparency, transparent, semi-transparent, low transparency and opaque. This is based on each market's real estate transparency index, scored as 1.0 (high transparency) to 5.0 (low transparency), with lower scores indicating higher transparency. Five transparency sub-indices contribute to the overall index, comprising performance measurement (25% weighting), market fundamentals (20%), governance of listed vehicles (10%), regulatory and legal (30%) and transaction process (15%). This sees 13 transparency topics assessed using 115 transparency measures (see JLL, 2014), comprising both quantitative measures (56) and qualitative measures (59), based on market data and survey information from JLL/LaSalle staff in their global network (see Table 2). These transparency measures have improved considerably over time; both in terms of number of questions and depth of questions. Importantly, real estate markets can improve their transparency level over time; e.g.: opaque to low transparency, semi-transparent to transparent.

Table 2: Profile of JLL real estate transparency index: 2004

Total number of markets: 102
Market maturity: Developed (21); Emerging (81)
Regions: Americas (20); Europe (33); **Asia-Pacific (21)**; Middle East/ North Africa (16); Sub-Sahara Africa (12)

Transparency levels:

Levels	#	%
High transparency	9	8.8%
Transparent	19	18.6%
Semi-transparent	33	32.4%
Low transparency	21	20.6%
Opaque	20	19.6%
Total	102	

Transparency category cut off-points:
High transparency: 1.00 – 1.70
Transparent: 1.71 – 2.45
Semi-transparent: 2.46 – 3.46
Low transparency: 3.47 – 3.97
Opaque: 3.98 – 5.00

Transparency sub-indices and topics:

- Performance measurement (25%): direct real estate performance indices; listed real estate securities indices; unlisted real estate fund indices; valuations
- Market fundamentals (20%): market fundamentals data for office, retail, industrial, hotel and residential sectors
- Governance of listed vehicles (10%): financial disclosure; corporate governance
- Regulatory and legal (30%): real estate tax; land use planning; building controls, enforceability of contracts; property registration; compulsory purchase; debt regulation
- Transaction process (15%): pre-sale information; bidding processes; professional standards of agents; occupier services.

Source: Author's compilation from JLL (2014)

The 2014 profile of the JLL real estate transparency index is given in Table 2. Of the 102 markets, there is extensive coverage of developed markets (21) and emerging markets (81), with Asia-Pacific accounting for 21 markets (5 developed; 16 emerging). Overall, the high transparency/transparent markets account for 27% of real estate markets, with the semi-transparent/low transparency/opaque markets accounting for 73% of real estate markets.

Table 3: Examples of real estate market transparency: 2014

High transparency:

#1: UK: 1.25
#2: US: 1.34
#3: Australia: 1.36
#4: New Zealand: 1.44
#5: France: 1.52
#6: Canada: 1.52
#7: Netherlands: 1.57
#8: Ireland: 1.62
#9: Finland: 1.69

Opaque (bottom 10):

#93: Pakistan: 4.25
#94: Belarus: 4.29
#95: Angola: 4.36
#96: Honduras: 4.41
#97: Iraq: 4.45
#98: Ethiopia: 4.46
#99: Mongolia: 4.47
#100: Myanmar: 4.48
#101: Senegal: 4.52
#102: Libya: 4.63

Source: Author's compilation from JLL (2014)

Table 3 presents the nine high transparency markets, representing the mature and developed markets across the Americas, Europe and Asia-Pacific. The UK is the most transparent global real estate market, with Asia-Pacific accounting for two of the top 9 markets (i.e.: Australia (3rd), New Zealand (4th)). Marginal differences are evident in these top end markets, with the US and Australia having previously been classified as the most transparent markets in 2012 and 2004 – 2010 respectively. Table 3 also shows the bottom ten most opaque real estate markets; largely focused on the emerging markets in Africa, Asia and Middle East/North Africa. Some countries are currently not assessed; e.g.: Syria, Sudan.

The transparency levels for the various 21 Asia-Pacific real estate markets are shown in Table 4; both by rank (Panel A) and score (Panel B). Importantly, the Asia-Pacific real estate markets figure prominently in the high transparency (2/9; 22%) and transparent (4/19; 21%) categories, with the emerging Asia-Pacific real estate markets mainly in the semi-transparent (11), low transparency (2) and opaque (2) categories.

Table 4: Asia-Pacific real estate market transperancy: 2014

Panel A: By rank

- **High transparency (2/9)**: Australia (3), New Zealand (4)
- **Transparent (4/19)**: Singapore (13), Hong Kong (14), Japan (26), Malaysia (27)
- **Semi-transparent (11/33)**: Taiwan (29), China-Tier 1 (35), Thailand (36), Philippines (38), Indonesia (39), India-Tier 1 (40), India-Tier 2 (42), South Korea (43), China-Tier 2 (47), India-Tier 3 (50), China-Tier 3 (54)
- **Low transparency (2/21)**: Vietnam (68), Macau (71)
- **Opaque (2/20)**: Mongolia (99), Myanmar (100)

Panel B: By score:

- **High transparency**: Australia (1.36), New Zealand (1.44)
- **Transparent**: Singapore (1.81), Hong Kong (1.87), Japan (2.22), Malaysia (2.27)
- **Semi-transparent**: Taiwan (2.55), China-Tier 1 (2.73), Thailand (2.76), Philippines (2.84), Indonesia (2.85), India-Tier 1 (2.86), India-Tier 2 (2.90), South Korea (2.90), China-Tier 2 (3.04), India-Tier 3 (3.14), China-Tier 3 (3.26)
- **Low transparency**: Vietnam (3.59), Macau (3.65)
- **Opaque**: Mongolia (4.47), Myanmar (4.48)

Source: Author's compilation from JLL (2014)

As such, the JLL real estate transparency index is the global benchmark for real estate transparency across over 100 real estate markets. The JLL real estate transparency index is assessed for 102 markets over 2004 – 2014 to examine the issue of changing real estate transparency in an Asia-Pacific and global context.

3.0 REAL ESTATE TRANSPARENCY ANALYSIS

Regional Analysis

Table 5 (Panel A) presents the average transparency scores by market maturity and regions. Across the 102 real estate markets, the average transparency was 3.08, being mid-range in the semi-transparent category. Clear differences in transparency were evident for the developed markets (1.75; top end of transparent) and the emerging markets (3.42; bottom end of semi-transparent). With a transparency spread of 1.67 between the developed and emerging markets, this basically represents a difference of one transparency category. Differences are also evident across the regions. In particular, Asia-Pacific had the second highest level of transparency (2.81; mid-range of semi-transparent), only exceeded by Europe (2.50; top end of semi-transparent), with both Europe and Asia-Pacific having higher average transparency than the global average transparency (3.08).

Differences were also evident between the developed and emerging markets in the three major regions (see Table 5: Panel B). This saw the developed markets in Asia-Pacific with an average transparency of 1.74 (top end of transparent) and the emerging markets in Asia-Pacific with an average transparency of 3.14 (mid-range of semi-transparent). On a regional basis, this saw the developed versus emerging market transparency spread for Asia-Pacific (1.40) as being the second smallest spread compared to the spreads for Europe (1.21) and Americas (2.13).

The emerging markets in Asia-Pacific (3.14) were also the second most transparent amongst the emerging markets in the three regions, compared with Europe (3.01) and Americas (3.56). This highlights the levels of transparency seen in the emerging markets in the Asia-Pacific; particularly as institutional investors seek increased exposure to the global emerging real estate markets for enhanced returns and real estate portfolio diversification benefits.

Table 5: Sub-Category Real Estate Transparency Analysis

Panel A: Market maturity and region

Category	Average transparency
All	3.08
Developed	1.75
Emerging	3.42
Americas	3.35
Asia-Pacific	**2.81**
Europe	2.50
MENA	3.81
Sub-Sahara Africa	3.72

Panel B: Region x market maturity

Category	Average transparency	Spread (Dev. vs Emerg.)
Asia-Pacific:		
Developed (# = 5)	**1.74**	**1.40**
Emerging (# = 16)	**3.14**	
Europe:		
Developed (# = 10)	1.80	1.21
Emerging (# = 23)	3.01	
Americas		
Developed (# = 2)	1.43	2.13
Emerging (# = 18)	3.56	

Source: Author's compilation from JLL (2014)

Improvements in real estate transparency: 2012 – 2014

Table 6 (Panel A) presents the top improvers in real estate transparency in the Asia-Pacific over 2012 – 2014. India-Tier 1 and Tier 2 were the main improvers in real estate transparency, with no top 10 Asia-Pacific real estate markets improving transparency categories. It is important to note that the high transparency/transparent Asia-Pacific real estate markets such as Australia, New Zealand, Singapore, Hong Kong and Japan are already mature, developed real estate markets and improvements in their real estate transparency are expected to be marginal; particularly compared to the scope for improvements in the transparency of the emerging real estate markets in the Asia-Pacific.

Table 6: Asia-Pacific and Global Real Estate Transparency: Top Improvers: 2012-2014

Panel A: Asia-Pacific

#1: India-Tier 1: 3.07 → 2.86
#2: India-Tier 2: 3.08 → 2.90
#2: Thailand: 2.94 → 2.76
#4: Vietnam: 3.76 → 3.59
#4: Japan: 2.39 → 2.22
#6: China-Tier 1: 2.83 → 2.73
#7: Indonesia: 2.92 → 2.85

Panel B: Global

#1: Nigeria: 4.58 → 4.03
#2: Peru*: 3.95 → 3.44
#2: Colombia: 4.05 → 3.54
#4: Qatar*: 3.82 → 3.37
#5: Zambia: 3.93 → 3.49
#6: Ghana: 4.41 → 3.98
#7: Romania: 2.96 → 2.56
#8: Portugal: 2.54 → 2.18
#9: Jordan: 3.97 → 3.62
#10: Ireland*: 1.96 → 1.62

Source: Author's compilation from JLL (2014)
*: improved real estate transparency level

At a global level for the top 10 improvers in real estate transparency over 2012 – 2014, the Asia-Pacific markets figure less prominently (see Table 6: Panel B). No Asia-Pacific markets made the top 10 improvers, with the main improvers being the sub-Sahara Africa countries (e.g.: Nigeria, Zambia, Ghana) and several Latin-American countries (e.g.: Peru, Colombia).

These markets were mainly in the opaque and low transparency categories, reflecting the significant recent real estate developments in these markets. In two cases, they were also able to improve their transparency categories; i.e. Peru (low transparency to semi-transparent) and Qatar (low transparency to semi-transparent).

Improvements in Real Estate Transparency: 2008 – 2014

Table 7 (Panel A) presents the top improvers in real estate transparency in the Asia-Pacific since the GFC over 2008 – 2014. The main improvers over this 6-year period were China, Vietnam and Indonesia, as well as China – Tier 3, Indonesia, China-Tier 2 and India-Tier 3 improving their transparency category.

Table 7: Asia-Pacific and Global Real Estate Transparency: Top Improvers: 2008-2014

Panel A: Asia Pacific

#1: China-Tier 3*: 3.97 → 3.26
#2: Vietnam: 4.29 → 3.59
#3: Indonesia*: 3.51 → 2.85
#4: China-Tier 2*: 3.68 → 3.04
#5: China-Tier 1: 3.33 → 2.73
#6: Taiwan: 3.07 → 2.55
#7: India-Tier 3*: 3.65 → 3.14
#8: India-Tier 2: 3.38 → 2.90
#9: India-Tier 1: 3.34 → 2.86

Panel B: Global

#1: Turkey*: 3.75 → 2.72
#2: China-Tier 3*: 3.97 → 3.26
#3: Vietnam: 4.29 → 3.59
#4: Indonesia*: 3.51 → 2.85
#5: China-Tier 2*: 3.68 → 3.04
#6: China-Tier 1: 3.33 → 2.73
#7: Algeria: 4.76 → 4.20
#8: Taiwan: 3.07 → 2.55
#9: India-Tier 3*: 3.65 → 3.14
#10: Brazil*: 2.92 → 2.44, **India-Tier 2: 3.38 → 2.90, India-Tier 1: 3.34 → 2.86**

Source: Author's compilation from JLL (2014)
*: improved real estate transparency level

At a global level of the top 10 improvers in real estate transparency over 2008 – 2014, the Asia-Pacific real estate markets figured prominently (see Table 7: Panel B), being four of the top five improvers. The main improvers in real estate transparency were the Asian emerging markets (e.g.: China, Vietnam, Indonesia), reflecting the significant enhancements in these Asian markets since the GFC. In four of the top 7 Asia-Pacific improvers, they were also able to improve their transparency category; e.g.: China-Tier 3 (low transparency to semi-transparent), Indonesia (low transparency to semi-transparent).

Improvements in Real Estate Transparency: 2004 – 2014

For the 10-year period of 2004 – 2014, Table 8 (Panel A) presents the top 10 improvers in real estate transparency in the Asia-Pacific. Indonesia (1st) and India (2nd) were the top improvers; in both cases, also improving their transparency categories. Importantly, each of the top five Asia-Pacific improvers were all able to improve their transparency categories.

In a global context over 2004 – 2014, Table 8 (Panel B) presents the top improvers in real estate transparency over the 10-year period. Importantly, from an Asia-Pacific perspective, Indonesia was 3rd in this global context, with the Asia-Pacific having 4 of top 11 improvers in real estate transparency over this 10-year period. All of the top improvers were able to improve their transparency category; in some cases by two transparency categories e.g.: Romania (opaque to semi-transparent), Turkey (opaque to semi-transparent) and Brazil (low transparency to transparent). The top improvers were a diverse range of countries, covering Eastern Europe, Asia, Americas and MENA.

Importantly, over these 2-year, 6-year and 10-year timeframes, the Asia-Pacific countries were seen to be amongst the top improvers; often being in the top three in this global context for improvements for real estate market transparency. In addition to the high levels of real estate transparency seen in the mature developed real estate markets in the Asia-Pacific (e.g.: Australia, New Zealand, Singapore, Japan and Hong Kong), this presents a positive context for institutional investors seeking to include both the developed and emerging markets in the Asia-Pacific in their significant real estate portfolios.

Table 8: Asia-Pacific and Global Real Esatate Transparency: Top Improvers: 2004-2014

Panel A: Asia-Pacific

#1: Indonesia*: 4.11 → 2.85
#2: India*: 3.90 → 2.86
#3: Vietnam*: 4.60 → 3.59
#4: China*: 3.71 → 2.73
#5: Japan*: 3.08 → 2.22
#6: Thailand: 3.44 → 2.76
#7: Philippines: 3.43 → 2.84
#8: Taiwan: 3.10 → 2.55
#9: South Korea: 3.36 → 2.90
#10: Malaysia: 2.30 → 2.27

Panel B: Global

#1: Romania**: 4.71 → 2.56
#2: Turkey**: 4.50 → 2.72
#3: Indonesia*: 4.11 → 2.85
#4: Brazil**: 3.62 → 2.44
#5: Abu Dhabi*: 4.31 → 3.20
#6: Poland*: 3.12 → 2.02
#6: Saudi Arabia*: 4.67 → 3.57
#8: India*: 3.90 → 2.86
#9: Vietnam*: 4.60 → 3.59
#10: Egypt*: 4.67 → 3.67
#11: China*: 3.71 → 2.73

Source: Author's compilation from JLL (2014)

*, **: improved real estate transparency level

Is Real Estate Market Transparency Improving?

To examine this key research question, this issue was assessed in the short-term (2012 – 2014) and long term (2004 – 2014).

Over the 2 year period of 2012 – 2014, 96 real estate markets were assessed and 72% (69/96 markets) improved their real estate transparency. On a regional basis, Asia-Pacific was the 2nd best region for improvement, with 79% (15/19 markets) improving their real estate transparency. Asia-Pacific was only exceeded by Sub-Sahara Africa (89%; 8/9 markets), with less improvement seen in Europe (73%; 24/33 markets) and Americas (55%; 11/20 markets).

Over the 10-year period of 2004 – 2014, careful consideration needs to be given to the real estate markets selected to ensure an unbiased comparison. While the number of real estate markets has increased from 51 in 2004 to 102 in 2014, it is important to only consider those real estate markets that were assessed each two years. This is due to the additional markets added in each two years by JLL as typically being emerging markets in the low transparency and opaque categories, which has the effect of artificially dragging down the average transparency scores. Thus using these "benchmark" countries across all years ensures a consistent comparison. This sees 49 real estate markets considered in this 10-year transparency analysis, comprising Europe (23 markets), Asia-Pacific (14), Americas (8), MENA (3) and Sub-Sahara Africa (1).

Table 9 presents the average real estate transparency scores over 2004 – 2014 for the three major regions of Europe, Asia-Pacific and Americas. Overall, globally, real estate transparency has improved from 2.81 (mid-range of semi-transparent) to 2.37 (bottom end of transparent) over this 10-year period; being an overall 16% improvement. At a regional level, the Asia-Pacific improved from an average real estate transparency score of 2.89 (mid-range of semi-transparent) to 2.43 (bottom end of transparent); an improvement of 16%. This sees Asia-Pacific as the most improved region in real estate transparency, exceeding both Europe (2.34 to 2.05; 12% improvement) and Americas (3.06 to 2.76; 10% improvement). This strong Asia-Pacific performance reflects the significant growth and maturity in the Asian real estate markets in the last ten years, reflected in the establishment of significant REIT markets, improved regulatory environments, active role by institutional investors, increased real estate market information and strong leadership roles by ANREV and APREA.

Table 9: Is Real Estate Transparency Improving?

Region	2004	2006	2008	2010	2012	2014	Improvement 2004 - 2014	Percentage improvement 2004 - 2014
All	2.81	2.58	2.40	2.32	2.45	2.37	+0.44	16%
Asia-Pacific	**2.89**	**2.69**	**2.66**	**2.61**	**2.51**	**2.43**	**+0.46 (#1)**	**16% (#1)**
Europe	2.34	2.26	2.00	1.85	2.14	2.05	+0.29 (#3)	12% (#2)
Americas	3.06	2.83	2.75	2.73	2.83	2.76	+0.30 (#2)	10% (#3)

Source: Author's compilation from JLL (2014)

4.0 REAL ESTATE INVESTMENT IMPLICATIONS

This paper has clearly highlighted the improved real estate transparency seen in the global real estate markets in recent years. In particular, it has highlighted the strong evidence of improved real estate transparency in the Asia-Pacific real estate markets, as evidenced by some of the Asia-Pacific emerging markets being amongst the top improvers in real estate transparency in a global context; often seeing Asia-Pacific countries improve their real estate transparency category over this 10-year period.

With real estate transparency being a critical factor considered by institutional investors in their strategic real estate investment decision-making, the high levels of real estate transparency in the developed markets in the Asia-Pacific and the significant improvements in real estate transparency in the emerging markets in the Asia-Pacific set a very positive context for Asia-Pacific real estate investment by institutional investors. In particular, for those institutional investors seeking Asia-Pacific real estate exposure as part of their regional and global real estate mandates.

Importantly, going forward, there are opportunities for further improvements in real estate transparency and improved levels of transparency categories for several Asia-Pacific real estate markets. In the next JLL real estate transparency index report (to be released June 2016), there is the potential for upgrades in real estate transparency categories in the following Asia-Pacific real estate markets:

- Transparent → High transparency: Singapore, Hong Kong
- Semi-transparent → Transparent: Taiwan, China-Tier 1
- Low transparency → Semi-transparent: Vietnam

In addition, other global real estate markets with the potential to see upgrades in their real estate transparency categories in 2016 are:

- Transparent → High transparency: Switzerland, Sweden, Germany
- Semi-transparent → Transparent: Romania
- Low transparency → Semi-transparent: Slovenia, Zambia, Colombia
- Opaque → Low transparency: Ghana, Nigeria;

These cover real estate markets in Europe, Sub-Sahara Africa and Latin America.

Overall, these improvements in real estate transparency in the Asia-Pacific real estate markets and global markets have facilitated more informed real estate investment decision-making by institutional investors. Continued improvements in real estate transparency in the global markets are also expected to further support this strategic real estate investment process.

REFERENCES

An, H., Cook, D. and Zumpano, L. (2011), "Corporate transparency and firm growth: evidence from real estate investment trusts", *Real Estate Economics*, Vol. *39*, pp. 429-454.

Brounen, D., Op't Veld, H. and Raitio, V. (2007), "Transparency in the European non-listed real estate funds market", *Journal of Real Estate Portfolio Management*, Vol. 13, pp. 107-118.

Chin, W., Dent, P. and Roberts, C. (2006), "An exploratory analysis of barriers to investment and market maturity in Southeast Asian cities", *Journal of Real Estate Portfolio Management*, Vol. 12, pp. 49-58.

Eichholtz, P., Gugler, N. and Kok, N. (2011), "Transparency, integration and the cost of international real estate investment", *Journal of Real Estate Finance and Economics*, Vol. 43, pp. 152-173.

Farzanegan, M. and Fereidouni, H. (2014), "Does real estate transparency matter for foreign real estate investments?", *International Journal of Strategic Property Management*, Vol. 18, pp. 317-331.

I&P Real Estate (2015), *Top 100 Investment Manager Survey*, I&P RE, London.

JLL (2014), *Global Real Estate Transparency Index 2014*, JLL, Chicago. (and previous copies; 2002 – 2012).

Ke, Q. and Sieracki, K. (2015), "Market maturity: China commercial real estate market", *Journal of Property Investment & Finance*, Vol. 33, pp. 4-18.

Keogh, G. and D'Arcy, E. (1999), "Property market efficiency: an institutional economics perspective", *Urban Studies*, Vol. 36, pp. 2401-2414.

Lecomte, P. and Ooi, J. (2013), "Corporate governance and performance of externally managed Singapore REITs", *Journal of Real Estate Finance and Economics*, Vol. 46, pp. 664-684.

Lieser, K. and Groh, A. (2011), "The attractiveness of 66 countries for institutional real estate investments", *Journal of Real Estate Portfolio Management*, Vol. 17, pp. 191-212.

Lieser, K. and Groh, A. (2014), "The determinants of international commercial real estate investment", *Journal of Real Estate Finance and Economics*, Vol. 48, pp. 611-659.

Newell, G. (2008), "Assessing the linkages between economic competitiveness and property market transparency", *Pacific Rim Property Research Journal*, Vol. 14, pp. 322-333.

Newell, G. and Lee, C. (2012), "Influence of the corporate social responsibility factors and financial factors on REIT performance in Australia", *Journal of Property Investment & Finance*, Vol. 30, pp. 389-403.

Pramerica Real Estate Investor (2012), *A Bird's Eye View of Global Real Estate Markets: 2012 Update*, Pramerica REI, Newark, NJ.

May 2010, from http: //www.ahuri.edu.au/nrv/nrv3/NRV3_Assoc_docs.html